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“ *DONNER LA MAIN ”:**
A PARTICIPATORY ANALYSIS OF EXTENSION AND
SUPPORT SERVICES IN MARÉ ISLAND
NEW CALEDONIA

A thesis
submitted in partial fulfilment
of the requirements for the Degree of
Master of Applied Science
at
Lincoln University

by

Benjamin P. Cousin

Lincoln University

2003

* *Literally 'Give the hand', this idiom is used in Maré in place of the French equivalent for 'Giving a hand'.*

“DONNER LA MAIN^{*}”

A PARTICIPATORY ANALYSIS OF EXTENSION AND SUPPORT SERVICES IN MARÉ ISLAND – NEW CALEDONIA

By B.P. Cousin

Abstract of a thesis submitted in partial fulfilment of the requirements for the Degree of
M.Appl.Sci.

Maré Island is one of the four Islands that constitute the Neo-Caledonian Province of Loyauté. The development of commercial agriculture in Maré is constrained by limited water resources and land tenure issues. The island's water is mainly sourced from the fragile ground water lens, which is vulnerable to leaching of chemicals used in commercial agriculture, principally avocado and lychees orchards. Furthermore, ground water is brackish close to the shore, where most tribes are located, and not suitable for irrigation. Hence, orchards must preferably be established in the inland areas of the island.

In Maré, planting a tree is traditionally understood as a way to claim the land, and the development of orchards is limited by traditional land tenure. Land is owned by clans, the primary social entity. People who do not belong to one of the major land owner clans have limited access to land for commercial agriculture.

In 2001, the rural development services of the provincial administration working closely with the customary authorities, helped 6 farmers, males and females, establish orchards on a 30 hectares shared piece of land in the GDPL Paradise project. Because of the environmental constraints to which Maré is subject, these 6 Recently Established Farmers (REF) were encouraged to develop organic practices. As part of this unique project, the 6 REFs benefited from financial, training and technical advisory support provided by the local Extension and Support Services (ESS), largely managed and sponsored by the Province.

** Literally 'Give the hand', this idiom is used in Maré in place of the French equivalent for 'Giving a hand'.*

This thesis describes research, which is a case study based on a mid-term participatory evaluation of the GDPL Paradise Project in which the 6 REFs are involved. The research sought to provide the Province with information regarding the project's implementation and its potential contribution to sustainable development on the island. The research also analysed the present ESS system in Maré, its merit, effectiveness and weaknesses. Lessons learnt, which can contribute to the project's implementation, upturn of the ESS system and future development endeavours, are derived from the study.

The mid- term participatory evaluation allowed REFs to express the problems they are facing and the way they experience them. Though REFs of the GDPL Paradise declared they were satisfied with the training they received, observations during the field research revealed training was incomplete. Most of these REFs experience management difficulties and have not fully understand organic practices. Though the introduction of organic practices was meant to be in line with the local traditional approach to agriculture, most farmers involved with the project still make a strong differentiation between traditional agriculture and organic practices they were trained in. The existing links between traditional knowledge and an organic approach to commercial agriculture have not been amply demonstrated to farmers during training. Extension and support services in Maré, are still based on *functional participation* and would benefit from a move towards an *interactive* approach to participation (Pretty J., 1995). In the present ESS system, problem solving resides in the hand of extension agencies and institutions. Farmers are often told what to do and are seldom given confidence to think for themselves and take over the responsibility of problem solving. Increased communication and coordination among ESS agencies, the Province and farmers, and farmers themselves, would improve the success of the project. The GDPL Paradise project has the merit to be a leader and an example project in terms of tackling land tenure and environmental issues in the context of the agricultural development of the island. The lack of proper management tools undermined the first half of this ambitious project's implementation. However the positive attitude and responsiveness of the provincial service and partner extension agencies involved in the project augur well for sustainable change for the better.

Key words: Extension and Support Services - Project's Participatory Evaluation - Organic Practices - Recently Established Farmers - Land Tenure - Loyauté Islands New Caledonia.

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Abbreviations and Acronyms

AMAC	Applied Management and Computing
CADRL	Centre d'Appui au Developpement Rural des Loyautés <i>Rural Development Suport Centre for the Loyauté</i>
CFPPA	Centre de Formation Professionnelle et de Promotion Agricole <i>Professional Training and Agricultural Promotion Centre</i>
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement - <i>International Development and Agronomic Research Centre</i>
DAE	Direction des Affaires Economiques – <i>Economic Affairs</i> <i>Division</i>
DEA	Direction de l'Equipement et de l'Amenagement – <i>Equipment and Spatial Planning Division</i>
DEFIP	Direction de l'Enseignement de la Formation et de l'Insertion Professionnelle <i>Education, Training and Professional Insertion Division</i>
DFID	Department For International Development of the United Kingdom.
DIA	Dotation Installation aux Agriculteurs – <i>Farmer Establishment Grant</i>
ERPA	Etablissement de Regulation des Prix Agricoles <i>Agricultural Prices' Regulation Establishment</i>
ESS	Extension and Support Services
EW	Extension Worker
FAO	Food and Agriculture Organisation
FF	French Francs
GDP	Gross Domestic Product
GDPL	Groupement de Droit Particulier Local <i>Local Particular Rights' Group</i>
GoP	Group of Producers
Hab.	Inhabitant
IAC	Institut Agronomique néo- Calédonien - <i>New Caledonian Agronomic Institute</i>
Km²	Square Kilometres
LEF	Long Established Farmers
NM	Nautic Miles
NZ\$	New Zealand Dollar
REF	Recently established Farmers

Abbreviations and Acronyms

SLF	Sustainable Livelihoods Framework
SOA	Sustainable and Organic Agriculture
SSI	Semi Structured Interviews
TOM	Territoire d’Outre Mer - <i>Overseas Territory</i>
XPF	Pacific Francs Currency

Chapter One: Introduction

1.1. Introduction

The Loyauté Islands is one of the three Provinces of New Caledonia. These islands are administered by a local institution called *Province des Iles*. Agriculture on these Islands is mainly traditional, and the population is predominantly indigenous (ie. Kanak people, the first people of New Caledonia). Commercial agricultural practices exist under major environmental constraints given the high permeability of soils and the consequent vulnerability of the unique fresh-water aquifer, which is used for drinking and irrigation. Via Extension and Support Services (ESS), the Province endeavours to support the organisation of the rural world, facilitate the process of establishment of commercial agriculture for project holders and encourages farmers to develop sustainable farming practices such as organic farming. The Province provides some of these services directly and others indirectly when ESS are provided by agencies under contract. These services focus on training and technical advisory, commercialisation and network development.

In 2001, the Province helped six local farmers from Maré who each had a project to establish an organic orchard. The GDPL Paradise project was designed to allow the six project holders, male and female, to establish on a 30 hectare block of land. The GDPL Paradise project embodies recent efforts made by the Province to help commercial farming development on the island. After two years of the project's implementation, the Province wished to evaluate the ESS this group of farmers has benefited from. The Province also wished to know whether the contracted agencies and the Province itself have adopted methods and approaches that suit local farmers. The evaluation of the project is a way to allow a better understanding of farmers' satisfaction and problems, and the way that they experience them. Assessing the efficiency of ESS in the context of a mid-term participatory evaluation also brings to light the strengths and weaknesses of the current ESS system in Maré.

This research is a case study of the ESS system in Maré, based on a participatory evaluation of the GDPL Paradise Project. Focus is put on the 6 REFs of the GDPL Paradise project because they are representative of the efforts made by the Province to provide extension and support services. Furthermore these farmers' work is set within an alternative system expected

to suit the local environment and social-economic context. The evaluation of the project showed how REFs had benefited from and highlighted issues related to the ESS. This case study will contribute to a better understanding of sociological issues involved in project implementation on Maré Island and of ESS issues relating to sustainable and organic farming practices in Loyauté, and more specifically in Maré. Based on this understanding, propositions to improve project management and the ESS system in Maré and possibly in Loyauté can be advanced.

1.2. Research Questions

Because the research was exploratory, there were no predefined objectives for the case study. However, throughout the study, three questions appeared as central and were used to articulate the research. These questions are related to the GDPL Paradise itself, the relation between the project and the ESS system and finally the general approach and organisation of the ESS system in Maré.

1.2.1. Question regarding the GDPL Paradise project

To what extent does the GDPL Paradise project contribute to the sustainability of the livelihoods of the primary stakeholders (the six REFs and their families)?

How do the project's beneficiaries feel about the GDPL Paradise project?

- What are the relations between the project and the sustainability of the livelihoods of the beneficiaries?
- What are the Relevance, Efficiency, Effectiveness and Impacts of the GDPL Paradise project (Stephens A., 1990)?
 - Relevance: does the project address local needs?
 - Efficiency: is the project using the resources wisely?
 - Effectiveness: are the desired results achieved?
 - Impact: what are the positive or negative effects of the project on its participants and their community?

1.2.2. Question regarding the relation between the Project and the ESS system

According to the beneficiaries, to what extent does the ESS system (technical, financial, social and land related services) contribute to the project's achievements?

What do the project's beneficiaries think about the ESS system?

- Are the REFs **satisfied** with the ESS they benefit from?
- What are the **REFs' problems** and how can one understand these problems in the way that farmers perceive them?
- How was the project managed?
- How is the **ESS system** managed and organised in Maré?

1.2.3. Question regarding the ESS system in Maré

Are the ESS for REFs and other farmers managed by the Province adapted to the organic production and sustainable agriculture context in which Loyauté Islands are attempting to fit?

What is the relation between ESS and sustainability in Loyauté?

- How adequate are the **methods and approaches** used by ESS agencies with regard to organic and sustainable agriculture and farmers' expectations?
- What are the **differences** between extension approaches and types of support for SOA?
- What are the farmers' objectives in terms of **sustainability**?
- Are there any differences among the **agendas** of the farmers, the province and partner extension agencies in terms of sustainability and agricultural development?

Do the approaches taken by these services allow envisaging farmers' problems the way farmers experience them?

What are the socio-cultural impacts of ESS and Sustainable and Organic farming?

- How can **Indigenous Knowledge** contribute to the given context?
- What are the impacts of **land attribution** out of the customary rights on the regarded community?
- What is the place of **women** in the evolving rural picture?

1.3. Research issues

The issues addressed by the study can be summarised as follows:

- Feeling of participants regarding the implementation of the GDPL Paradise project.
- Problems and expectations of farmers, alternatives from their point of view.
- Land tenure issue and the contribution of the alternative GDPL system in which the 6 REFs are involved to the local context.
- Adaptability of ESS to organic and sustainable agriculture.
- Satisfaction of farmers regarding ESS.
- Awareness of farmers in terms of environmental impacts.
- Assets of Indigenous Knowledge in the given context.
- Women's role and place in the evolving structure of the rural community.

1.4. Importance of research

Loyauté Province administration has expectations from this study as its results will be used for further ESS planning and implementation. Loyauté Province is managing the ESS system in Loyauté and as a local democratic institution is wishing to provide effective services that will respond to the clients' needs. Because of the participatory approach is used for the evaluation purposes, the study should directly benefit farmers involved.

Therefore this research is an applied study, but will nonetheless provide information and theoretical background on extension services for sustainable farming. Little can be found in the literature about extension services related to organic farming, revealing an obvious need for further research in terms of adaptability of existing extension approaches to these practices, which are becoming increasingly important.

This research is a case study, which distinctly limits the possibility of making generalisations from its results. It is, however open to being used by other students, researchers or extension agencies as a contextual experience and adapted to local conditions in other Pacific Islands.

1.5. Thesis Structure

Following the introduction, Chapter 2 will allow the reader to get a better understanding of the Neo-Caledonian and Loyauté islands' context, in which the project and Maré Island fit.

Chapter 3 puts together findings from the literature on ESS and the Project Cycle, in order to provide a background and context to ESS in the study project. Chapter 3 also contains a description of the Sustainable Livelihoods Framework (SLF), which will be used as a basis for analysis in the discussion chapter.

The methodology of the present research is described in Chapter 4. The whys and hows of the GDPL Paradise project in which 6 REFs from Maré Island are involved, will first be depicted in Chapter 5, followed by the results from the fieldwork, which are discussed in Chapter 6.

Finally, conclusions and recommendations for the improvement of the GDPL Paradise project and ESS in Maré are brought together in Chapter 7 along with lessons learnt from the study.

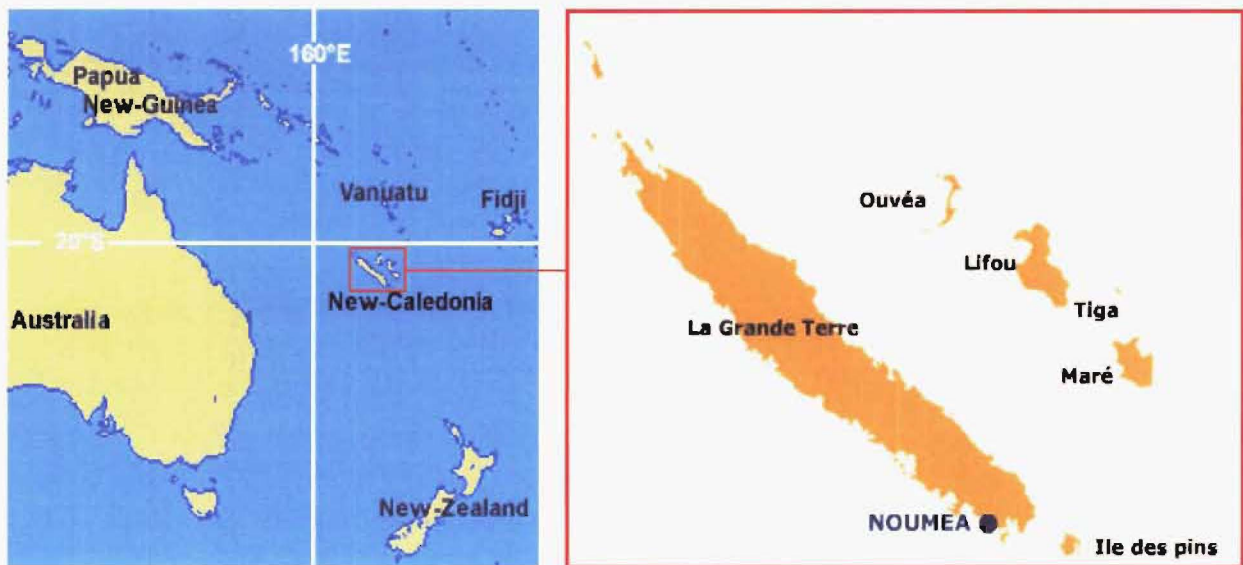
Chapter Two: New Caledonia, Loyauté Islands, Maré

2.1. New Caledonia, a French territory heading towards an increasingly autonomous status

2.1.1. Geography

New Caledonia is a Melanesian territory lying north of the Tropic of Capricorn, between 19 and 23 degrees of south latitude, 158 and 172 degrees of west longitude. The total area of New Caledonia is 18 575.5 km², which ranks the island as the third biggest island in the Pacific, after Papua New Guinea and New Zealand (Haut-Commissariat – web page).

Figure 1. Situation of New Caledonia in the Pacific



Adapted from Haut-Commissariat de la République en Nouvelle Calédonie web resources – 2003
and Gouvernement de Nouvelle Calédonie web resources – 2003

The archipelago consists of the main island, commonly referred to as *Grande Terre* or *le Caillou* [the Rock], the four Loyauté islands (*Ouvéa*, *Lifou*, *Maré* and *Tigea*), the *Belep* archipelago and other islets (Haut-Commissariat – web page). The main city, Nouméa, is located in the south of the main island.

2.1.2. Historical background

In 1774, James Cook was the first European to identify the territory. He named it “New Caledonia” (Chappell D., 1999) after the name of Scotland under the Roman Empire, “*Caledonia*”. France annexed the island in 1853 and used it as a destination for thousands of convicts from 1864 until 1894. Some of these convicts settled on the island after serving their sentences, while other French settlers arrived to become cattle ranchers, nickel miners and coffee farmers (Chappell D., 1999).

It has been widely acknowledged that France has despised the presence of the indigenous people of New Caledonia, *Kanaks*, during the century following settlement (Chappell D., 1999). Kanaks were considered at best as “*cheap and exploitable labour*” and were deprived of advancement, notwithstanding the rhetoric about French “*civilising-mission*” (Saussol A. (1995), in Chappell D., 1999). French settlers, later called *Caldoches*, and Kanaks were then living “*juxtaposed*” [abutted but disparate] as Thompson and Richard described it (in Chappell D., 1999). As for the Loyauté Islands, they were immediately considered as non-exploitable and classed indigenous reserves, which indigenous people could not leave without permission. This “*bipolar confrontation*” and the subsequent frustration for Kanak people, among an increasing immigrant Asian and Melanesian population, is often described as one of the factors for the strengthening of the independent feeling among Kanaks and the building up of related political units (Chappell D., 1999).

In 1946, New Caledonia became a TOM, *Territoire d’Outre Mer*, a status that acknowledged French citizenship and gave voting rights to all inhabitants of the island, including Kanaks (Faugère A., 1996). This new status empowered local political groups, and the motto “*Two colours, One people*” was first used on the island (Chappell D., 1999). The feeling of a Caledonian Nation was growing in some people’s mind. However polarisation was also increasing on the Island, splitting the nationalist Kanaks on one side and the loyalist European along with the latest Asian and Melanesian immigrants on the other.

The social history of New Caledonia is said to have remained relatively calm until the 1970’s (Chappell D., 1999). At this point, thanks to a political reinforcement of the separatist movement among the Kanak population, the first uprisings took place (Chappell D., 1999).

The political world, which produced this uprising, was wide and diverse, ranging from political units wishing New Caledonia would remain a French protectorate to extremist separatist units. In the middle stood Jean-Marie Tjibaou, a Kanak political leader who believed in Caledonian cohesion for independence. He emerged in the seventies as “*the ideologist of a nationalist movement*” endeavouring to revalue indigenous culture (Chappell D., 1999). Violence between the two rival coalitions reached a peak in the mid-eighties, Lafleur and Tjibaou, leaders of the loyalist and nationalist movements respectively, were led to sign the first Matignon accords in 1988. The accords signed with French Prime Minister Michel Rocard “*postponed the independence issue for a decade and increased aid flows from Paris to Kanak-inhabited regions*”. Tjibaou was later assassinated by a Kanak separatist (Chappell D., 1999).

A reorganisation of the governmental and administrative status was decided which led to the constitution of local government and institutions through the *Loi organique* [Organic Law] (Gouvernement de Calédonie, web page). Accordingly, the first Matignon accords led to the creation of three Provinces in 1992, each of them having its own local administration. Two have been created on the main island (Northern Province and Southern Province). The third one, *Province des Iles* [Loyauté Islands’ Province] is responsible for the four Loyauté islands (Maré, Lifou, Ouvéa and Tiga - *see figure 1*), which are located 100 kilometres from the eastern coast of the main island (Gouvernement de Calédonie, web resources). Members of the Provincial assemblies are elected for five years (Gouvernement de Calédonie, web resources). Provincial administrations are awarded all responsibility in terms of development. Elected representatives are responsible for policy making while provincial agents are in charge of policy application and implementation. The principal sponsor of the Provinces is the French State (Faugère E., 1996). A Congress is formed by the reunion of 54 members of the 3 Provincial assemblies, 15 from the Northern Province, 32 from the Southern Province and 7 from the Islands’ Province. The members of the Congress elect the members of the Caledonian government, which is responsible for the Executive power. This collegial government is elected for a 5 years period (Gouvernement de Calédonie, web resources). A *diagram presenting the governmental structure of New Caledonia is available in appendix 2.*

The second Matignon Accords were signed in 1998 with French Prime Minister Lionel Jospin. Ensuring a “*gradual devolution of governments power from Paris to Nouméa*” (Chappell D., 1999), these new accords reinforce the role of local institutions. In the

subsequent document France recognises that the annexation in 1853 did not “*constitute a legal agreement with the indigenous people; that the Kanak had their own valid civilisation, which was marginalised and traumatised despite the progress colonisation may have brought*” (Chappell D., 1999). Kanak customary laws are now regarded as having equal status to French civil right. A customary Senate was created and has power over issues related to Kanak traditions. Kanak culture is meant to become the “*centerpost*” of the new nation, and therefore Kanak language will be given official status (Chappell D., 1999) A vote on independence will occur by the year 2013.

Chappell (1999) describes these new accords as “*realistic, even progressive by some standards*”. Cook Islander Iveta Short has called this new notion of autonomy “*a long way away from where the Cook Island was in 1965*” (Chappell D., 1999). In 1998, Cook Island Prime Minister suggested, with regard to the evolving status, that New Caledonia could become a full member of the Pacific Forum in the coming years (Chappel D., 1999). Faugère (1996) has some rather cynical statements about the decolonisation process of New Caledonia, both with respect to the Caledonian and Parisian side. She wonders whether this slow decolonisation process is not a way for the new Kanak generation to preserve the precious allowance given by the French State (Faugère A., 1996) and a way for France to keep its interests - Nickel resources and a strategic position in the Pacific - on the Island.

2.1.3. Social facts

With an estimated population of 207 858 (July 2002 estimation – CIA, web resource) and around 197 000 at the last official census of 1996 (Roos W., 1997), New Caledonia is not highly populated but can definitely be defined as a pluriethnic nation. The 2003 census was postponed after President Chirac’s first visit on the territory (July 2003). The French president expressed concerns about a section of the census’s questionnaire dedicated to respondent’s ethnic origin. Jacques Chirac’s point was that people from New Caledonia are Caledonian, regardless of the ethnic group they belong to. But many Kanaks fear withdrawing this section would make New Caledonia’s first people less visible.

The three major ethnic groups are Europeans, Melanesians (*Kanaks*) and Wallisians-Futunians (from the archipelago of Wallis and Futuna). Together, they represent 87 per cent of the population (Roos W., 1997). Other ethnic groups include Tahitians (2.6%), Indonesians

(2.5%) and others such as Vietnamese, Vanuatuan, Chinese and Indians (7.6%) (Gouvernement de Calédonie, web resources). Melanesians are a majority, as they represent 44 per cent of the Caledonian population (Roos W., 1997). Among Europeans one will distinguish long established Europeans (*Caldoches*) and French people established for less than 20 years. Often these last ones are working for French companies or governmental agencies and do not settle in New Caledonia. The Nickel boom (1968-1971) brought a large immigration flow both from France and the Pacific to the Island. However, in 1996 three quarters of the enumerated population was born on the territory (Roos W., 1997).

According to the latest census (Roos W., 1997) the population in New Caledonia has a remarkably young population, with 40 per cent of the population under 20 years of age in 1996. The Melanesian community particularly contributes to this, as 47 per cent of the Melanesians are under 20 years old (Roos W., 1997).

2.1.4. Economy

In 1994 the New Caledonian GDP reached 16.87 billion French Francs (~2.5 billion Euros), with a GDP per habitant ratio of 91840 FF (~14000.9 Euros/hab). In 1998, New Caledonia exported for 2.3 billion FF (400 million Euros) of goods and imported for 5.4 billions FF (~800 millions Euros) - (Gouvernement de Calédonie, web resources). The major sectors contributing to the New Caledonian GDP are public services, commerce and services (Temu I., 1996).

Nickel is the main resource of the territory and accounts for 10 per cent of the Caledonian GDP, yet it represents more than 90 per cent of the Caledonian exports (Gouvernement de Calédonie, web resources). New Caledonia contributes to 12.3 per cent of the world production and represents around 20 per cent of the world reserves of Nickel (Gouvernement de Calédonie, web resource). The mineral is exclusively extracted on the main island. Other mineral resources of New Caledonia include iron, chrome, copper, and zinc (Gouvernement de Calédonie, web resources).

Agriculture may still play a central part in Caledonian society, from subsistence farming in Kanaks tribes to large extensive cattle farms on the West Coast of the territory, yet it comprised only 1.9 per cent of the 1994 GDP. The principal agricultural products of the

country in 1996 were coffee (44 tonnes), copra (345 tonnes) and beef cattle (4260 tonnes) (Gouvernement de Calédonie, web resources). Commercial farming of livestock (beef and deer) is an important component of the agricultural industry, occupying as much as 97 per cent of the total land area under agriculture (Temu I., 1996).

Fisheries are also an important part of the socio-economical structure. Three types of fishing industries can be identified; traditional (within the lagoon), coastal (behind the reef) and industrial (in the 200 NM exclusive economical zone of the territory). Most of the fish products, essentially tuna, are exported to Japan (Gouvernement de Calédonie, web resource). Aquaculture is seen as an increasing economic asset for New Caledonia. Shrimp is the main produce and became the second highest export activity in 1996. That year, the production had reached more than 950 tonnes (Gouvernement de Calédonie, web resource)

Tourism accounts now for almost 10 per cent of the Caledonian GDP. In 1998 New Caledonia welcomed over a hundred thousand visitors from Japan, France, Australia and New Zealand among other countries (Gouvernement de Calédonie, web resources).

2.1.5. Summary

New Caledonia still relies to a certain extent on the financial assistance of the French State. In order to achieve a sustainable independence, New Caledonia will need an increased economic development, via the organisation and diversification of the present industries such as tourism and agriculture. The many resources of New Caledonia should allow development in a sustainable manner.

Many now fear the territory would base its economy on mining resources solely. In fact, it is already an issue of political discord. This fear is rationally based on the various examples of mining-based economy's instability in other former colonies around the world.

2.2. Loyauté Islands

2.2.1. Geography

The *Province des Iles* (Islands' Province) is one of the three Caledonian Provinces and encompasses the four Loyauté Islands (Mare, Lifou, Ouvéa and Tiga) located 100 kilometres from the Main Island's eastern coast, along with other small archipelagos and islets (Gouvernement de Calédonie, web resources). The Loyauté islands represent a total surface of 1.981 km², the three main islands of this archipelago are Ouvéa, Lifou et Maré respectively 132, 1.207 and 642 km². The fourth one is Tiga.

The Islands are reef-originated atolls located on top of a volcanic chain (Brunel J.P. and Gernigon B., 1976). These atolls would have emerged during Pleistocene according to radiographic calculations (Brunel J.P. and Gernigon B., 1976).

2.2.2. Environment

Because of the insularity, the environment in Loyauté has remained naturally protected from introduced animals and vegetation. However with the increased exchanges between the Islands and the Mainland, this protection has to be maintained carefully. Loyauté Islands are commonly referred to as a “sanctuary” (Province des Iles - DEA, 2001).

The aquifers in Loyauté islands, or so-called “fresh-water lenses”, are the main fresh-water resources. They are very vulnerable to pollution given the high permeability of soils and ground (*Xaca* - calcareous rock) in Loyauté. Any chemicals used for agriculture would end up in the aquifer (Province des Iles - DEA, 2001).

2.2.3. Social facts

The population of Loyauté Islands reached 20 887, as at the last census of 1996 (ROOS W., 1997). The Kanak culture is strongly related to the islands, as 98.1% of the Loyauté population is Kanak (Faugère E., 1996a). Emblematic leader Jean Marie Tjibaou was from Ouvéa, and the Islands are often remembered as the cradle of the 1987-1988 events. Nowadays, these Islands represent the heart of the Kanak culture's upholding.

When France annexed the territory, the islands did not represent any economical interest for the colony and were therefore declared indigenous reserves, from which Kanak people could not leave without official permission (Faugere E., 1996b).

Kanak people of the islands have a particular civilian status, different from the common French right (Faugere E., 1996a). This status is based on customary rights and ratified by the French authorities. Under the traditional social organisation rules in place, each island is composed of a number of main districts, *Chefferie*, each of them headed by a High Chief, *Grand Chef de district*. Each district contains one or more villages, also called *tribu* [tribe]. Throughout the research report the word *tribe* will usually be understood as a *village*, because in Loyauté the *tribe* defines both as a community and the geographical area where this community lives. Chiefs of the tribes are called *petits chefs* (Faugere E., 1996a). This organisation was shaped by the first missionaries coming from Samoa and the United Kingdom before French colonisation. The aim was to facilitate evangelisation by gathering populations around places of cult, under the authority of customary chiefs. The core entity of customary relations is the clan. It is the next entity after family but remains the strongest one. It defines alliances among families and, most importantly, it is the key body for land ownership.

Customary exchanges are the heart of social relationships, especially on Loyauté islands. However, despite the proximity and the increasing exchanges amongst them, each island has its own culture and language, hence customary practices vary from one island to another.

2.2.4. Agriculture in Loyauté

The proportion of land used for agriculture in Loyauté is rather low compared to the mainland. It represents 14 per cent of the total agricultural land in Loyauté, compared to approximately 80 per cent on the mainland. However this low utilisation of land is not a matter of lacking surface, since 38% of the total surface is not used for production. In fact only 5.9 per cent of the total surface cannot be utilised. Instead the problem is related to land tenure issues and subsequent availability of land (Province des Iles - DEA, 2001). The rest of the total surface area is forest (41.7%), which brings agroforestry resources to the island. The exploitation of Sandalwood is a good income generating activity for people of Loyauté, and will remain as such if managed in a sustainable way. It is currently managed by the CUADA

cooperative (Province des Iles - DEA, 2001) and the Province constantly works on developing sustainable management's policies.

Land issues could become a constraint to agricultural development on the islands, because even though every Kanak works the land, they do not all own land as individuals. And for those who do own land, the piece of land they individually own is usually small; 70 per cent of Loyaltian registered farms have land of less than one hectare (Province des Iles - DEA, 2001). Land issues are traditionally ruled by the Custom¹. Discussions between customary Chiefs and the Province are held to ease access to land for Kanak people wishing to settle or develop commercial farming activities.

Water scarcity is another issue. Commercial farming development is dependent on irrigation availability. Farmers are not always situated close enough to the communal or provincial irrigation wells (Province des Iles - DEA, 2001). The Province still sponsors the installation of wells but only on lots situated at least one kilometre from the coast, as the water in the lens is still brackish close to the shore. These wells involve major costs for the administration in both their installation and maintenance.

Production in Loyauté is mainly dedicated to subsistence and customary exchanges and ceremonials. Over 50 per cent of Loyaltian producers live on subsistence farming as their principal activity (Province des Iles - DEA, 2001). Fruit production, market vegetables and tubers are the secondary activities. Avocado and lychees are the main products of the islands. Ouvéa Island has monopoly over copra production with 3000 hectares of coconut tree plantations (Province des Iles - DEA, 2001). Tuber production reaches more than 4 000 tonnes per year in Loyauté, which is 29 per cent of the Caledonian production. Two thirds of it goes to subsistence consumption and customary exchanges (Province des Iles - DEA, 2001).

Agricultural development on the islands has not intensified as it has on the mainland. The vulnerability of the aquifer is such that farmers have to keep up sustainable practices. Traditionally, Kanak agricultural practices, for subsistence purposes, have remained sustainable (Province des Iles - DEA, 2001). However, with the recent development of orchards some farmers have been tempted to use chemicals (Province des Iles - DEA, 2001).

¹: Custom in Maré is perceived as the traditionally respected social behaviour and as a set of rules that goes further than traditional customs. It will therefore be spelled with a capital C throughout the report.

Revival of traditional practices along with technical advisory on sustainable practices for orchards and commercial crops are needed. The Province is aware of these needs in training and has led part of the efforts towards this goal.

Rurality is strongly related to the identity of the indigenous people, whose presence is particularly significant on the Loyauté Islands (Faugère E., 1996a). “*Every islander is a born-cultivator*”, but farmers still lack training and education (Province des Iles - DEA, 2001). The organisation of the agricultural world is described as hard to build up when 75 % of registered farmers have a level of education inferior or equivalent to a secondary education level, and only a few of them have had a specific training in agriculture (Province des Iles - DEA, 2001). Less than one in two farmers is involved with a group of producers (GoP). This lack of organisation in the rural world of Loyauté is described as a factor in the lack of solidarity among farmers, and their lack of representation to deal with territorial institutions, research and commercialisation boards (Province des Iles - DEA, 2001).

2.3. Maré Island

The southern most of the Loyauté Islands, Maré (or *Nengone* in the indigenous language of Maré), is often referred to as a sanctuary. This is not only because of its well-preserved natural assets, but also because of the social and cultural relationships and practices, which have kept most of their pre-colonial authenticity. *A map of Maré is available in appendix 1.*

2.3.1 Traditions in Mare

Traditional Kanak culture is often said to be most preserved in Mare. It is a fact that traditional customs vary from place to place in New Calédonia, in terms of practices or type of products used for Custom. Therefore it is normal to observe differences among practices from an island such as Maré to the neighbour one, Lifou, or on different parts of the mainland. But custom in Maré is different from what it is in other place because of the place it takes in the society and the commitment *Nengone* people show towards it.

The exceptional customary ceremony for the wedding of a High Chief's son during the fieldwork, was a good opportunity to discuss this issue with some people from Maré and

Lifou. A group of women from Lifou told me how amazed they were by the customary practices taking place for the wedding. They said it was really different from Lifou, because it was much more related to the products of the land than in Lifou.

“In Lifou we do not use Yams as much in the customary ceremonies, we usually buy something at the supermarket to participate, such as rice, but here they use Yams a lot. That’s because the land is better here in Maré, they can grow bigger yams.”

During an informal talk, two young men from Maré expressed how proud they were of the Maréan Custom, as it is more preserved than on any other part of the territory.

“You see, here at the wedding, people they come from everywhere; Lifou, Ouvéa, “the Rock” and even from other places, and they like to see how we do the Custom. Because here in Maré, it is the Custom like it was before and they see it and it’s like an invigoration for them to watch our way to do the Custom.”

Custom plays a paramount part in the social interactions on the island. Its influences are most visible during major life events such as marriages and funerals, but also in smaller events such as visits, the exchange of goods or to gain respect from someone higher in the customary or religious hierarchy (Faugère E., 1996b). Custom also plays a major part in terms of land ownership.

When customary events occur, people gather (at the clan, tribe or district scale) to do the “customary work”. Every person working their own traditional field is called to participate in the event, by offering products from their field and donations of money². Failing to attend a customary ceremony is perceived as an offence and believed to bring bad luck to those who neglected to be there.

Maré island is divided into 8 customary districts, each of them comprising at least one but usually several of the 29 tribes on the island. The main district is the Guahma district as it encompasses 50% of the population. The project looked at by this study is located in the Tawainedr district, which covers 3 tribes; Wakone, Haenid and Tawainedr.

2: For an in-depth study on Custom and Money in Maré, refer to Faugère E., 1996b “Coutume et Argent a Maré,”

This division of the island is also apparent among people's relationship. Rivalries and even enmities amongst people from different districts, tribes and sometime clans are fairly common on the island. High Chiefs, whom are highly respected, are warrants of social cohesion, and temper these tensions by favouring social exchanges through customary ceremonials.

2.3.2. Agricultural development

Tourism (mainly eco-tourism), traditional fishing and agriculture embody the main potential of economic development for Maré Island.

2.3.2.1. Traditional agriculture in Maré

Working the land is the most important activity for Maréan people. As soon as they are able to take care of their own traditional field, male and female children of Maré can claim a piece of land. This entitles them to take part in customary ceremonials, as they can participate with the yams grown on their field. Everyone has a traditional field on the island, for even if one does not own land there is always a way to demand access from land owners for traditional purposes. A traditional field is usually less than a hectare and will be used for two to three years. Traditional fields are typically established in the forest or the bush using the slash and burn technique.

Yams in Mare are of high quality. It is believed that the quality of the soil, and most of all the slash and burn practice, produces such quality. Maréan people are proud of these traditional practices. However since slash and burn is not believed to be a sustainable practice by developers, people easily gets upset when one claims so.

“The Elders, when they hear someone says that it's not good to burn the land before growing, they get very upset and they're ready to drag their knives when they hear that! (...) It's good to burn, that's how we get good yams, you have to burn if you want good yams”

A man from Tawainedr

The products of the traditional field are used mainly for customary purposes (yams) and subsistence (cassava, kumara and vegetables). In some cases, products of the field are sold at the local market (vegetables) or sent to be sold by relatives in Noumea (tubers). The

traditional field can then be income generating. The average income generated by traditional field is difficult to estimate, since commercialisation of goods goes through domestic channels.

2.3.2.2. Commercial agriculture

Commercial agriculture on Maré is mainly based on arboriculture, with fruit production such as avocados, lychees and citrus fruits. Maré benefits from an excellent reputation for its avocado production. Research is continuously undertaken to improve quality and varieties grown. Maré's avocado production is exported to the main island and the Pacific region.

The first orchards were established in the 1980's, by Mareans who retired to their island after having worked on the main island. The development of orchards saw the first introduction of chemicals on the island. Even though the use of chemicals remains less than that required for intensive use, it still represents a real threat to the very fragile aquifer. Furthermore, on the island the recent death of an orchard early settler is suspected to be related to the use of pesticides, but no one wants to discuss the matter. Commercial agriculture appeared quite recently on the island and people were not used to the utilisation of chemicals. This explains why their utilisation is still not great. It should also warn against potential dangers of unprotected manipulations.

According to the Provincial Rural Development Subdivision, the main constraints on commercial agriculture development are water and land ownership issues. If access to land does not appear to be such an issue for traditional agriculture, it becomes one when it comes to orchards, because planting a tree is a traditional way to claim the land. It did happen that people who had tried to settle orchards would find their trees cut to the base because other members of the community thought that they had no right to this particular piece of land. Nowadays, the first step of any orchard project's design involves consultation with customary authorities. This leads to a *Procès de Palabre* [palaver act] between the project's holder, the land owners and the customary authorities. The Province facilitates the deliberations and representatives of the French State then ratify the palaver act. On Maré Island, gendarmes are responsible for ratification.

When it comes to commercial farming it seems that Maréan people tend to behave in a more individualistic way, compared to traditional agriculture where group work is part of the customary activities.

2.3.3. Presence of the Province in Maré

The Provincial administration was established in 1992. The administrative centre for Loyauté is located on Lifou. However, local branches ensure the administration's presence on the other islands such as Maré. Most of the heads of divisions and subdivisions are in Lifou, but given the importance of the agricultural sector in Maré, compared to the other islands, the Rural Development Service (S.D.R. *Service du Développement Rural*) is the only subdivision with its management office based in Maré.

The S.D.R. depends on the Economic Affairs' Division³ (D.A.E. *Direction des Affaires Economiques*) based in Lifou. Initially the D.A.E. was an indistinct division called Economic Development Division, with no subdivision. Provincial agents from this division would work simultaneously on fisheries and agriculture as well as small businesses and tourism; competences were not defined. The creation of structured subdivisions enabled a redirection of policies and a better management of agents' competences.

“Before the creation of subdivisions it was all blurry, we didn't know what we were doing and we could not see what we had achieved. Now, with the subdivisions it's much more clear, we know what we have to do and we see where we are going”

An agent of the SDR

In 2001, the SDR published a document – *Schema Directeur pour l'Agriculture en Province des îles Loyauté* [Framing Scheme for Agriculture in Loyauté islands] setting priorities and summing up current and future policies for agricultural development in Loyauté (Province des îles, 2001). This document shows the ongoing commitment of the SDR to set clear objectives to improve development management on the islands.

3: for a descriptive diagram of the DAE division, refer to appendix 3.

According to the Matignon accords, Provincial administrations have full authority regarding local development. The Province can set its own policies for rural and agricultural development. The SDR is responsible for the application of these policies. This is done through extension and support services (see section 3.1.4.), which involve training and other support services such as financial support.

The rural development subdivision manages funds that support agricultural development. These funds are allocated according to the Provincial Investment Code (*Code des Investissements*). Parts of these agricultural support funds come directly from the French State. They are known as *Dotation d'Installation à l'Agriculture* – DIA - [Farming Establishment Grant]. Conditions for eligibility to the grant are defined by the French State and adapted to the local policy context by the Province. In order to apply for the grant, farmers wishing to establish must follow a training course in agricultural management of at least 500 hours. In Maré, training is provided by the local training centre CFPPA (see section 3.1.4.), and paid for by the Province.

2.4. Summary

Extension and Support Services are fundamental issues for sustainable agricultural development on Loyauté Islands. Because of the environmental constraints, agricultural practices on Maré and the other Loyalty Islands have to remain sustainable.

The current development of organic farming is not really driven by a market demand but by deep environmental concerns. An additional challenge is to ensure marketability of the production. Farmers need to be able to rely on structures and institutions for commercialisation, but most importantly on themselves, by building up strong rural organisations.

Chapter Three: Literature Review

3.1 Extension and Support Services (ESS)

According to Swanson and Claar (1984), extension cannot be simply equated to technology transfer, but is a major part of the technology transfer process. However, aware of this nuance, in this study I will regard extension services and other support services as a whole system and will refer to both types of services as Extension and Support Services (ESS).

3.1.1 Definition of terms

It is widely recognised that the term “agricultural extension” can be difficult to define, because it is structured in different ways to achieve a broad range of objectives (Swanson and Claar, 1984). And in practice, there are no two agricultural extension systems alike (Contado T.E, 1985). The term agricultural extension is often construed differently according to people and places, but throughout these different interpretations, one can find a set of common features (Swanson and Claar, 1984).

In French, there is no such word as extension, the concept of extension in French would translate to “advisory services” or be encompassed in the entirety of support services. It is rather this understanding of extension and support services that is used by the local institutions of Loyauté. The French word for tool *-outils-* is commonly used by the Province to refer to ESS. This concept could easily be used in a *farmer-first* approach, as the set of “tools” available to farmers can be compared to the *basket of choice* promoted by the *farmer-first* approach (Chambers R., 1997). Farmers choose from these tools according to their needs. Generally speaking, extension can be understood as a process involving “*the conscious use of information to help people form sound opinions and make good decisions*” (van den Ban A.W. and Hawkins H.S., 1996). Support services would then be the additional physical or financial assistance granted to farmers as a way to achieve the objectives they have set for themselves following the extension services. Van den Ban and Hawkins (1996) find that extension is an effective instrument only when combined with, what we here call support services, that is to say, research, marketing, provision of inputs and credit. This way, van den

Ban and Hawkins (1996) believe that farmers can learn how to produce in the most profitable way and meanwhile rally themselves in cooperation or other organisations.

Watts (1984) has summarised the linkages supporting the farm family in an agricultural development context (*see figure2*). This comprehensive picture can be used to understand the relationships among farmers and extension and support services agencies. Farmers, or farm families ought to be the central point of the existing relationships, not the extension agencies nor the governmental agencies (Watts L.H., 1984). However, Watts' organisational setting for agricultural extension is still close to the approach particularly used in the 1970s of 'integrated rural development' as it regards provision of inputs as part of the extension setting. Carney recounts that projects in line with the integrated rural development approach, were usually over "*ambitious and complex*" (Carney D., 1999). Although this approach recognised the complexity of the rural life, it remained rather 'top-down' oriented (Carney D., 1999). Most of the integrated rural development projects "*underperformed*", partly because compensation to farmers for inputs were usually captured by rich farmers, since the poorer farmers only used few inputs (Carney D., 1999).

Figure 2. Linkages supporting farmers

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Source: Watts L.H. (1984) "The organisational setting for agricultural extension", In Agricultural Extension; a reference manual. Rome; FAO.

Hayward (1989) finds that extension is not merely a delivery service but rather an advisory partnership. Furthermore, participation should be the key for the relationships amongst extension, input suppliers, credit agencies and policy makers (Hayward J.A., 1989).

3.1.2. Evolution of extension approaches

During the last four decades extension approaches have continuously evolved. Different approaches have been used more or less successfully, each of them having its own advantages and disadvantages depending on the problem to be solved (Swanson B.E. and Claar J.B.,

1984). The main trend to be observed through out the evolution of extension approaches is the shift from “*top-down*”, which are often criticised as being too bureaucratic and blueprint approaches, to more people-centred and participatory approaches, known as “*bottom-up*”.

Rogers (1993) has described this evolution using a “three generations” extension model, the third generation being what he believes is the alternative to the preceeding ones. He describes the first generation extension as a very directive transfer of technology and information (*see figure 3.1*). It is research-dominated and entails a transfer of knowledge embedded in a *top-down* hierarchical model (Rogers A., 1993).

Figure 3.1. First generation extension

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*Source: Rogers A. (1993) “Third generation extension, towards an alternative model”, Rural Extension Bulletin – 3
December 1993 – Pp 14-16*

Rogers reports that this first generation extension, though still used in the field, is recognised to be rather ineffective with some reported adverse results (Rogers A., 1993). Learning from the lessons of this first generation model, extension approaches have shifted towards farmer-first oriented approaches (*see figure 3.2*). Instead of starting with research and then transmitting the results to farmers, extension workers using this type of approach, should start with the farmers, “*their existing knowledge and the gaps in that knowledge*” (Rogers A., 1993). It is described as a responsive approach aiming to meet farmers’ expressed needs. However problem solving lingers in the hands of the research-extension hierarchy (Rogers A., 1993).

Figure 3.2. Second generation extension

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*Source: Rogers A. (1993) “Third generation extension, towards an alternative model”, Rural Extension Bulletin – 3
December 1993 – Pp 14-16*

Third generation (*see figure 3.3*) is an endeavour to pass the problem solving on to farmers, based on the fact that farmers possess much knowledge and traditional ways to solve problems (Rogers A., 1993). It is an interactive approach encouraging independent learners. It seeks to strengthen customary patterns and networks of learning. Extension workers using such an approach should take a lower view of their own expertise (Rogers A., 1993). In the same line, de los Reyes (1985) suggests that extension workers should learn from the farmers. He further notes that improved farming practices and systems do not always come from the research station but indeed from some successful farmers who have improved their methods by trial and error, based on their own knowledge (de los Reyes B.N., 1985).

“The valuable knowledge gathered by farmers over generations, so called indigenous knowledge, is often neglected by researchers, although this information can be quite important for location-specific recommendations and for developing sustainable farming systems”

Van den Ban A.W. and Hawkins H.S., 1996

Figure 3.3. Third generation extension

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*Source: Rogers A. (1993) “Third generation extension, towards an alternative model”, Rural Extension Bulletin – 3
December 1993 – Pp 14-16*

The third generation extension can be criticised as costly, especially in terms of time as it requires a long-term engagement with rural communities involved.

3.1.3. ESS and groups of small farmers

Some extension approaches have been based on a dissemination principle, where some farmers of a given community, called “contact farmers”, were supposed to circulate information within their communities. However, the contact farmers were not always willing to invest time and energy in performing the role of an “unpaid extension agent for colleagues”

(Van den Ban A.W. and Hawkins H.S., 1996). In several countries these circumstances have impelled extension services to work with groups of farmers rather than with individual contact farmers (Van den Ban A.W. and Hawkins H.S., 1996).

During the 1985 South Pacific workshop on agricultural extension, participants were invited to dwell on the issue of small farmers and their environments. Organising small farmers for effective agricultural extension appeared to be a key issue. De los Reyes reports the assets of working with groups of small farmers:

“The small farmer group can be effectively used for disseminating technology. Normally diffusion of technology is thought of hierarchically from the early adopters to the late adopters. However, diffusion of technology can also be thought of laterally among the members of a group”

De los Reyes, 1985

Starting with a common activity, which is simple and which the farmers involved have previously experienced, the group will then engage in other economic and non-economic activities. This cyclic process enables the group to develop trust and self-reliance activities after activities (De los Reyes, 1985).

3.1.4. Extension and support services for Sustainable Agriculture

Governments will invest in extension when they believe it has value as a policy instrument, which will help to achieve government goals (Van den Ban A.W. and Hawkins H.S., 1996). Likewise the Province may invest in extension to promote sustainable agriculture. In several countries soil erosion, salination, depletion of aquifers and environmental pollution are serious threats to future agricultural production. Van den Ban and Hawkins (1996) remark that these actions taken to promote sustainable agriculture may not always be in the short-term interests of farmers or other people affected (Van den Ban A.W. and Hawkins H.S., 1996).

Traditionally extension has been linked with production objectives. More recently, food security, improved nutrition and sustainability have become part of the agenda of extension agencies (Garforth C. and Lawrence A., 1997). Garforth and Lawrence (1997) suggest that

extension approaches need to change in order to better address sustainability issues. This is summarised in Table 1. Garforth and Lawrence (1997) recommend the chosen approach to ESS for sustainable agriculture should embody a whole farming system orientation with individual clients and an interdisciplinary orientation. Collaborative problem solving should be used as the principal mode of influence on clients' behaviour. Furthermore development of independent client organisations should be supported with extension resources. Finally, they recommend that farmers should be enabled via learning processes to manage their resources with minimal extension support in the future and to name critical points at which support is needed (Garforth C. and Lawrence A., 1997).

Table 1. Changes that may be needed in an extension approach in order to address sustainability issues effectively.

Removed due to copyright

Source: Garforth C. and Lawrence A., (1997 "Supporting sustainable agriculture through extension in Asia", Natural Resource Perspectives – issue 21, June 1997.

Document retrieved on April 16th 2003 from <http://www.oneworld.org/odi/nrp.21.htm>

3.1.5. ESS in Loyauté

ESS in Loyauté are the responsibility of both locally autonomous institutions such as the Province, and French State dependent institutions such as the Ministry of Agriculture. The Province in Loyauté is managing the extension services and in charge of insuring networking among ESS agencies and farmers.

3.1.5.1. Objectives of the Provincial administration

The Directory Scheme for Agriculture in Loyauté (Province des Iles - DEA, 2001) defines the following priorities for agricultural productions in Loyauté:

- Environmental preservation.
- Quality of produce.
- Ensuring regularity in production.
- Ensuring commercialisation via building up of commercialisation structures.
- Organisation of channels of production.

This requires assistance from existing structures and training of farmers. Furthermore land related issues as well as access to irrigation wells have to be dealt with. Most important, groups of farmers and rural organisations need to be enhanced, and technical advisory services are required to respond to the farmers' needs (Province des Iles - DEA, 2001).

Farmers from Loyauté have two different ways to sell their produce. One is to go through local markets in Loyauté, the second is to sell outside the islands in the capital city Nouméa or export. Those who opt for the first way can approach local market boards and producers' groups. But if farmers want to aim for Noumea's markets or export they have to be well organised, forming specific farmers' groups and associations to defend their interests. The Province representatives hope that the building up of such self-help structures within the Loyaltian rural area will develop solidarity in terms of market accessibility, exchange of knowledge and even revolving funds organisations (Province des Iles - DEA, 2001).

So far the Province, in conjunction with the French State and other institutions, has developed the following "tools" in terms of ESS for farmers;

Financial support

- Help for investment
- Banking management
- Funds to assist with treasury matters*

Technical advisory – extension -

- Mechanisation advisory
- Advisory in environmental-friendly agricultural practices
- Problem analysis *with the help of a provincial agent*

- Arboriculture advisory *held by an Arboriculturists' Association*
- General training services *held by a French Ministry* dependent organisation*
Topics include; mechanisation, farm management, and irrigation
- Framing of the GDPL project with the land owner and the District customary Chief.
- Marketing channels to Nouméa thanks to complementary structures (*Arbofruits* and *Spie*)
- Marketing channels within Loyauté on local marketplaces

*Activities managed by or with funding from the French State
(Mercky S., 2003 -*personal communication*)

Example of projects involving ESS in Loyauté

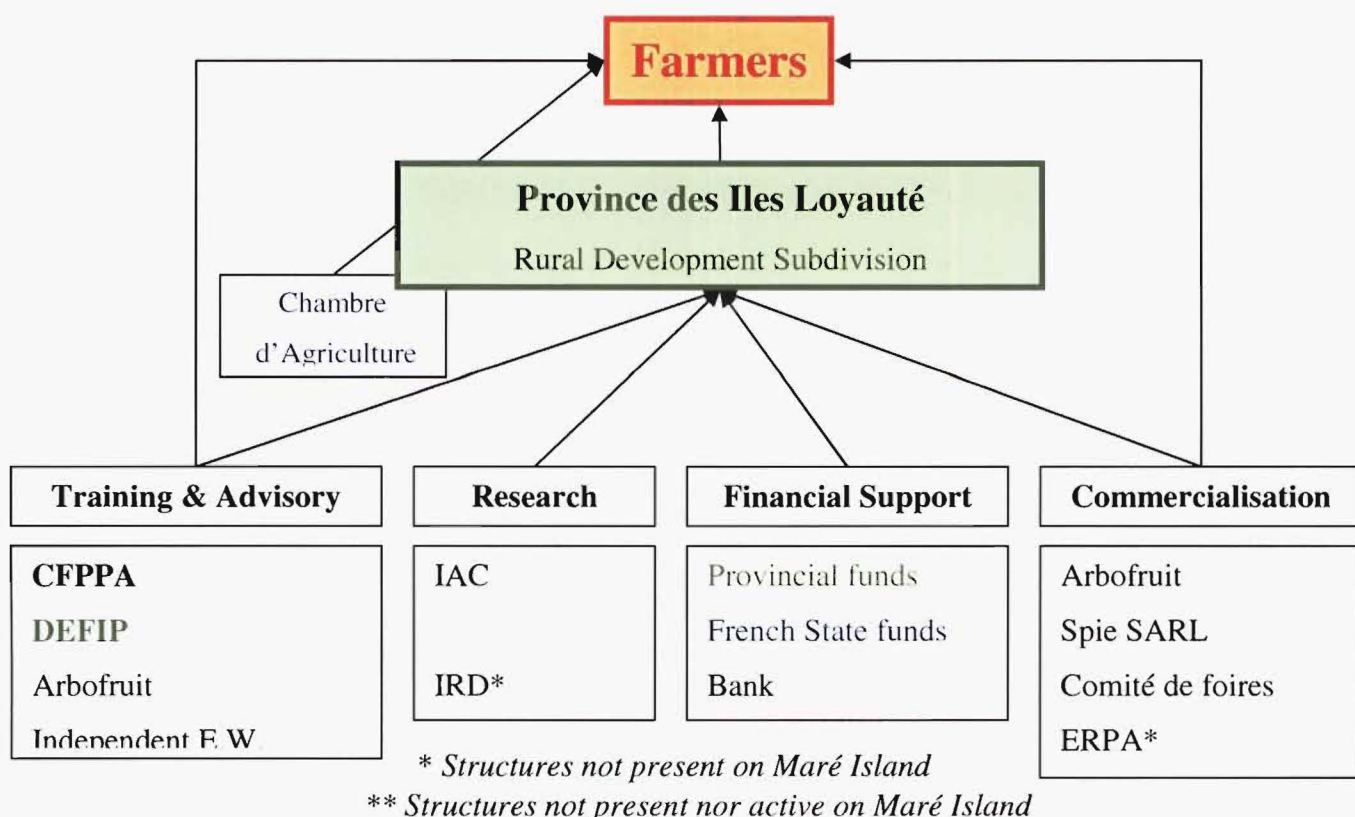
In 2002, the Province assisted a group of 6 local farmers to establish on a piece of land of 30 hectares. They have created, jointly with the land owners a “*Groupe ment de Droit Particulier Local*” - GDPL - (Local Land Ownership Right Group) in order to be able to use the land for agricultural purposes. They have named this project “*GDPL Paradise*”. The status of GDPL allows access to land for farmers wishing to establish despite the land availability obstacles in Loyauté. The customary Chief of the concerned district, Chief Etoroi Etoroi of Tawainedr, is involved with the “*GDPL Paradise project*”, thus avoiding conflicts of interests among local Customs, French law and farmers’ needs. This project was the main focus of the present research. The GDPL Paradise project is presented in detail in chapter 5 and a comprehensive analysis is available in chapter 6.

Some future projects regarding marketplaces, food-processing units and additional financial and technical tools should be implemented later on (Mercky S., 2003 - *personal communication*). Hence the ESS provided by the Province covers four main issues; training and technical advisory, financial support, assistance to commercialisation and applied research.

3.1.5.2. Structures involved

Figure 4 corresponds to the current organisation of ESS in Maré. This is presented according to the understanding developed through observation during the fieldwork. The Provincial rural development subdivision has developed its own diagram to present the interrelations of ESS in Loyauté – *refer to Appendix 4*.

Figure 4. ESS in Loyauté



Adapted from a Provincial Rural Development Subdivision (SDR) presentation board (2001)

Original version presented in appendix 4

“**Arbofruit**” is a fruit producers association. The association originated in Loyauté but now covers the whole territory. Among the services offered by the association to its members are commercialisation services and technical advisory services. The president of the association is from Maré and arbofruit has its own branch on Maré with two full time employees in charge of commercialisation and technical advisory services.

C.F.P.P.A. Centre de Formation Professionnelle et de Promotion Agricoles – Centre of Professional Training and Agricultural Promotion – is a French institution depending on the French Ministry of Agriculture. It delivers training and diplomas to farmers willing to receive training. The C.F.P.P.A. is present on the three Loyauté islands.

Chambre d’Agriculture, is a French institution depending on the French Ministry of Agriculture. It is present in every French administrative region. It acts as a local branch of the

Ministry of Agriculture. Since 2003, the Caledonian Chambre d'Agriculture has a local office based in Maré in charge of the whole Loyauté archipelago.

D.E.F.I.P. Direction de l'Enseignement, de la Formation et de l'Insertion Professionnelle – Education, Training and Professional Insertion Division – is a territorial institution specific to New Caledonia, responsible for professional training. It is considered as a division of the Province and is present in the Provincial Branch of Maré. In the case of rural development training in Loyauté, training objectives are set by the Rural Development Subdivision of the Province and financially supported by the D.E.F.I.P.

E.R.P.A. Etablissement de Régulation des Prix Agricoles – Agricultural Price Regulation Establishment – is a territorial public institution. It is therefore a local institution specific to New Caledonia. It deals directly with the Province and therefore does not require a presence on the Loyauté islands.

I.A.C. Institut Agronomique de nouvelle Calédonie – Caledonian Agronomical Institute – is a local Institute attached to the French research Institute CIRAD. The CIRAD is a scientific organisation specialising in agricultural research for the tropics and subtropics. The IAC branch for Loyauté is in Maré.

Independent Extension Worker (E.W.) The Province contracted an independent Extension Worker specialised in organic farming techniques. This person lives on the main island and comes regularly to Maré or the other Loyauté Islands as required by the contract. In Maré, this extension worker comes twice a month for a couple of days for on field training with the GDPL Paradise REFs. This person also provides commercial services by supplying REFs with organic inputs.

M.F.R. Maisons Familiales Rurales – Rural Family Houses – is a French NGO present in many countries and French overseas territories. It provides training in rural areas in the respect of local customs. M.F.R. are not present in Maré.

SPIE Ltd is a fruit and vegetable dealer, which originated in Loyauté but now has a presence throughout the whole territory. SPIE acts like a broker with fruit vegetable producers

of the territory and sells on the territory. SPIE also imports vegetables from overseas. SPIE has an agent on Maré in charge of collecting products and sending them to Nouméa.

CADRL Centre d'Appui au Développement Rural des Loyauté – Loyauté Rural Development Support Centre. It can be described as the Extension Centre for Loyauté. The CADRL is an independent association which gathers the CFPPA, IAC, Arbofruit and members of the tribe on which the building is established. The agricultural chamber's branch is not part of the association but is located in the same building. It is based on Maré Island in the tribe of Atha.

3.2. Project Cycle

The “project cycle”, first designed twenty years ago by the World Bank and modified by agencies since then, provides a set of steps to follow when undertaking a project. The World Bank divides the cycle into five main stages: Identification, Preparation, Appraisal, Implementation and Evaluation. The Asian Development Bank has identified 6 steps, adding Board Approval as one of the phases (*see figure 5*).

Figure 5 The Project Cycle

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Source; Asian Development Bank - web resources

Document retrieved on October 13th from; <http://www.adb.org/Projects/cycle.asp#cycle>

Identification is the very first step of the project's cycle, and if neglected this can easily lead to project's failure. The aim is to identify donor and recipient, the relationship that exists and how expectations on both sides fit together. It involves the identification of needs in the designated area of the project, the desires of the community considered, and the existing policies of the country where the project is supposed to take place. The risk here is that some inexistent needs may be identified by the donors, rather than the real needs of the recipients. The sustainable livelihoods' framework, described later (see section 3.3), can be used as a tool for identification.

Preparation is the phase during which the project's design actually occurs. Here, one targets the focal problem, and not the most commonly expressed effects of the problem. Missing the focal problem and targeting some of its effects would be ineffective. Identification of the focal problem allows an understanding of its causes and enables work on the roots of the problem. Preparation is about formulating the problem, and project design and planning.

Preparation is followed by an appraisal of the proposed project. This appraisal will ensure the feasibility of the project, especially when large investments are involved. In the past, appraisal has traditionally been focussed primarily on economic and financial issues but now tends to include social and environmental analysis.

Then, assuming the first three steps are completed satisfactorily, implementation of the project can occur. The main question raised at this stage of the project is what changes will occur as a result of the project. Evaluation is the final stage and is an attempt to answer this question. From the conclusions drawn by the evaluation, adjustments can be made to the context for the design and implementation of further projects.

Figure 5 includes loan negotiation and board approval as the fourth phase of a project cycle. The Asian Development Bank defined the presented cycle for loan purposes, but it is also particularly adapted to the case of local administration such as the Province. The Provincial board of representatives must approve each decision regarding the development project before implementation by the rural development subdivision. Hence, the Province could well use this Project cycle for project management.

The use of “projects” in development originated after the Second World War. At that time, major loans from dominant development agencies required some kind of return after loans had been granted. Projects are limited in time and space. They start at some point in a given area, and are supposed to achieve goals at a given time. Hence, the use of projects was a way for agencies to evaluate the use of the money they had lent over a given period of time. Shepherd (1998), sees the use of projects as an expression of a need for “control over development” as projects are usually “control oriented”. This need for control is one of the main critiques against the use of projects. This control orientation tends to make projects a way to tell people what they have to do rather than asking and assisting them in what they want or know they have to do. The use of projects and especially the project cycle are viewed as a rather mechanistic approach to development.

“The project cycle is an indicator of how linear the process of development is seen to be. It represents a Victorian and heroic notion of progress being achievable within a limited space and time, and with more or less limited interventions. But in fact, change is rarely linear”.

Shepherd, 1998

Project as a mechanistic and somehow reductionist linear approach will have to face the non-linearity of reality, which might jeopardise its achievement. These critiques are especially relevant for large agencies’ projects. However NGOs’ projects tend to follow the same path, since they are usually financially dependent on these agencies.

Despite the criticisms of projects and the project cycle, projects remain a useful model for development and present many advantages. Since projects are planned on a well-defined scale, time and energy spent on development are less likely to be wasted. The spectrum of actions has been limited and all the energy required can be invested in the designated focus.

The value of using projects really depends on how the project is defined and understood. If a project definition is limited to a time period and has a set of goals to achieve using a given budget, it is obviously not the kind of model that will truly help development. But if a project is designed in a flexible and people-centred way, it can be a real asset for development. A project defined by a community itself, using a participatory approach can be a good way for this community to improve livelihoods in a sustainable way. If the community itself sets the

outcomes of the project it might meet its needs more adequately. The project can be a source of motivation and empowerment within the community. A holistic approach to planning, which embraces cultural, spiritual and ethical considerations and is defined by the community itself is the most appropriate model. Projects focusing on limited areas can also be a way to enhance decentralisation, this plays an important part in the people-centred approach.

Hence, it can be said that the advantages and disadvantages of the project as a model for development certainly depend on the way a project is managed. If the project is indeed an expression of a need to “control” from the donors, the disadvantages will be numerous. But used in a people-centred way, the project becomes what it is supposed to be: the property of a community with a common goal that can tighten links within the community. Participatory approaches can help achieving such outcomes.

But reality is not as linear as projects tend to be. Unpredictability is a major constant in reality and projects cannot be designed to face the unpredictable. In addition, communities in reality are seldom as uncomplicated as the notion of community would suggest.

Hence, the Project Cycle remains a useful tool for project’s management. Its use has been criticised by the World Bank itself, and described to be best suitable for linear and “blueprint” projects (World Bank, web resources). But on small-scale projects it could still be used as an inspirational baseline for management purposes, as it can help ensure good coordination throughout a project’s span. Used with a people centred and participatory approach to monitoring the project, the project cycle is a simple tool to understand some crucial steps that need to be undertaken to best answer people’s needs

Recent evolutions in the philosophy of development are changing the notion of project to make it less linear and even more flexible. Tools and theories in development are perpetually evolving and since they tend to focus more and more on “people in development”, eventually “people in development” themselves will design those tools, and will probably come up with a more accurate definition of what a project should be.

3.3. Sustainable Livelihood framework

The sustainable livelihoods framework (SLF) has been developed to help analyse and understand the livelihoods of the poor. It is a framework that provides a guideline for the analysis of reality using qualitative and participatory analysis at local level. The SLF focuses on “people”. It attempts to stimulate reflection and debate about poor people livelihoods. It provides a way to understand poor people’s livelihood within the entire context.

Its main characteristics are that it is people-centred, operates in a holistic way, comprehends the dynamics existing around livelihoods, recognises everyone’s potential and therefore provides a way to build on strengths rather than focusing on weaknesses. It also recognises the importance of both macro and micro level relationships to policy making. Finally, the sustainable livelihoods framework places the notion of sustainability as a key to the livelihoods approach. Sustainability is commonly understood as environmental, economical, social and even institutional sustainability, but the SLF brings the dimension of livelihoods being sustained despite stresses and vulnerability.


Figure 6 Sustainable Livelihood Framework

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*Source: the Department For International Development Sustainable Livelihood Guidance Sheets
(DFID web resources, 1999)*

Document retrieved from http://www.livelihoods.org/info/info_guidancesheets.html

This framework presents the main factors that affect people's livelihoods and the typical relationships among them.

 **Vulnerability context:** shocks, seasonality, trends, weather conditions, political instability. In the broadest sense, all exterior and sudden events that can undermine people's livelihoods.

□ **Livelihood assets:** understood as Human, Natural, Social, Financial and Physical capitals that are more or less developed in any particular livelihoods system and the relationship between these assets upon which livelihoods are built. Combined in an original and adapted way these assets are meant to ensure sustainability.

- **Human capital** represents the skills, knowledge, ability to work and good health which people rely on to achieve sustainable livelihoods (DFID web resources, 1999).
- **Social capital** includes networks and connectedness, membership of more formalised groups with rules, norms and sanctions, the relationships of trust, reciprocity and exchanges that ensure informal safety nets for the poorest within a given community or society.
- **Natural capital** embodies the whole set of natural resource stocks from which resource flows and services are derived. This can include land, forests, wild resources, water, air quality, erosion protection, waste assimilation, storm protection, and biodiversity. Natural capital is closely linked to the vulnerability context (DFID, 1999).
- **Physical capital** comprises the basic infrastructure and producer goods needed to support livelihoods. The department for international development highlights affordable transport, secure shelter and buildings, adequate water supply and sanitation, clean and affordable energy and access to information through means of communication as essential components for sustainable livelihoods (DFID, 1999).
- **Financial capital** stands for the financial resources people can rely on in order to achieve their livelihood objectives. One can identify two main sources of financial capital: available stocks and regular inflows of money (DFID, 1999).
- **Traditional capital.** The sustainable livelihoods framework for the Pacific developed by Cahn incorporates the features of a Pacific sustainable livelihoods (Cahn M., 2002). The SLF


for the Pacific includes a sixth capital, named Traditional Capital. Cahn finds that culture and tradition impact on livelihoods, and that livelihoods also impact on culture;

“Often ‘culture’ is cited as an impediment to economic development. For example obligations to community, collective rather than individual motivation, antagonistic feelings towards individual economic gain, commitment to ceremonies and gift giving (...) have been cited as reasons why small businesses fail in the Pacific Islands. (...) Some of these so-called ‘impediments’ to economic growth are in fact fundamental to the traditional economic systems (Hooper and James, 1994). Rather than culture being regarded as an obstacle, it needs to be the basis of a more sustainable, equitable form of development (Discussion, 1997)”

Cahn M., 2002

The use of the SLF in the form developed by Cahn (2002) may be justified for the analysis of the livelihoods of people from Maré, since tradition and culture have a great influence on people livelihoods (Faugère E., 1996b).

The livelihood assets are presented in Figure 6 as a uniform pentagon. However, when using the SLF in real cases, it is likely one might find the livelihood assets’ pentagon is nothing near uniform. In order to achieve their livelihoods, people tend to use some assets more than others and some less, and substitute assets according to their accessibility. This might be due to the low accessibility of an asset, vulnerability context or the chosen strategies (DFID, 1999).

 **Transforming structures and processes:** these shape livelihoods and include governments, private sector but also laws, policies, culture and institutions.

□ **Strategies:** these define the broad ranges of livelihood that people undertake in order to achieve their goals. There is a great diversity of strategies undertaken and the framework leads to taking into account the whole set of them, in order to assist people by taking advantage of any feasible strategy.

□ **Livelihood outcomes:** these include such outcomes as increase of income, well being, resistance and security, and more sustainable use of the natural resource base (DFID, 1999).

The main critiques regarding the sustainable livelihood framework (SLF) point to the fact that it might be excessively micro-focused, time-consuming and complex (Farrington *et al.*, 1999). But it definitely helps understanding the nature of poverty and how “*interventions can be tailored to enhance livelihoods*” (Farrington *et al.*, 1999). For those who are familiar with recent paradigms, this framework may appear obvious rather than a real break through. But it actually puts together all these core factors that affect people’s livelihoods and that should not be left apart when working on improving livelihoods. It gives the whole picture of livelihood with a sustainable perspective.

Applying this rather mechanistic framework simply as it is drawn on the paper is probably not what it has been designed for. In this way the use of the SLF will definitely be time consuming. One should rather use this framework as a checklist for instance. When undertaking participatory methods to understand people’s livelihood and strategies to achieve these livelihoods, the framework can be used as a reminder of the complexity of livelihoods. It will help the facilitators in the participatory process and the researchers, by guiding them on what to look at and what to discuss with local people. In a given community for instance there might be more than two or three types of livelihoods, with many different strategies, importance of each capital etc... The framework then acts like a structure to understand the complexity of the context. As Farrington *et al.* (1999) define it, this framework is “*an analytical structure to grip with the complexity of livelihoods, understanding influences on poverty and identifying where interventions can best be made*”.

One of the critical issues in development projects or studies is dealing with access and control over resources. The SLF provides useful hints on how to identify who has access and control over resources; how access and control are determined, the type of factors that have an influence in the distribution of resources, how, what for and by whom resources are used. Repartition, access and control of resources are usually complex issues. Such complexity requires precise tools to be accurately understood. The SLF is sufficiently detailed to get a grasp on these issues. Lack of access and control over resources are part of the vulnerability context, which the framework offers to look at. Each of the capitals from which livelihood outcomes will be achieved is related to access and control. It is precisely access and control that will influence livelihood strategies. The complexity of access and control over resources

is fully embraced by the framework, hence allowing a better understanding of all these interactions.

As Farrington *et al.* (1999) suggest, this framework should be regarded only as an approach and not a panacea. It provides a comprehensive picture of the factors and concepts influencing people's livelihoods, and can therefore facilitate the search for poverty-focused solutions across the sectors (Farrington *et al.*, 1999), rather than exert influence by one single perspective more than the others (environmental, social or economic for instance). But it should definitely not be used in a mechanistic way assuming some sort of uniformity among livelihoods. This framework acknowledges complexity and diversity and provides a way to understand these characteristics at different levels in the context of poverty.

Because of its dynamic nature, the framework incites its user to consider the relationships between the previously described factors. In project identification, this framework can be very useful as it stimulates people to look at the whole picture of livelihoods when considering sustainability. Since sound identification can avoid project failure, if the use of such a framework can improve identification it will reduce the risk of project failure. Furthermore, this framework can also be used as a tool for evaluating projects, in order to assess sustainability of a given project and whether the project is achieving outcomes and supporting assets, improving processes and structures and reducing vulnerability.

Chapter Four: Research Design and Methods

4.1. Introduction

The present research is a qualitative study of the Extension and Support Services system in Maré Island. It is a case study based on the participatory evaluation of the GDPL Paradise project in which six REFs are involved. The project is well representative of the efforts made by the Province and partner agencies to support commercial farmers on the island. The evaluation of the project contributes to an improved understanding of the farmers' livelihoods, but also allows an assessment of the way project management is handled in the current ESS system and the way farmers feel about the overall ESS system.

In my approach to the study I have been influenced by interpretive social science, postmodern and feminist research. This led me to choose flexible and intuitive methods to carry out the case study, such as Participatory Rural Appraisal (PRA) methods.

4.2. Approach to the Research

4.2.1. Qualitative Research

This research is a qualitative study. Participants included Recently Established Farmers (REF) mainly the six members of the GDPL Paradise, and some Long-Established Farmers (LEF). Local representatives of the different institutions and extension agencies involved were also interviewed. The focus is on the 6 REFs of the GDPL Paradise project because they are representative of the efforts made by the Province to provide extension and support services.

A qualitative approach was selected since the research focuses on people's appreciation of the Extension and Support Services. Clearly, we are dealing with feelings that are qualitative variables rather than quantitative. Also, in order to carry out the research work, I stayed in Maré during most of the span of fieldwork. Living with people who are most involved is an additional way of gathering information via simple observation. Understanding the existing relationships among farmers, their community, and the different institutions was made easier by living in the community.

The main limitation of qualitative research, and particularly case studies, is the difficulty found when trying to generalise the ultimate theory. For this study, generalisation might be an issue if the results were to be used on other Pacific Islands. But the purpose of this study is to benefit its participants. The results will be used to meliorate the services offered to farmers of the Loyauté Islands. If the results were to be used in the context of other Pacific Islands, it would be to learn from other experiences only. Another limitation could be replicability. Qualitative studies are not as replicable as quantitative ones. This is a considerable limitation in terms of validation, since replication is often used for validation. However, qualitative surveys are usually considered highly valid, since respondents describe their own situation.

4.2.2. Interpretive Social Science, Postmodern and Feminist Social Research

The research is based on interpretive social science, with a strong influence from Postmodern and Feminist social research.

Neuman (2000) describes the interpretive approach as the foundation of social research techniques sensitive to context, using various methods to get inside the ways others see the world. These techniques are more concerned with achieving a clear understanding of feelings and world views than with assessing laws of human behaviour (Neuman W.L., 2000). They are used to understand and describe momentous social action, considering social reality as *“fluid definitions of a situation created by human interaction”* (Neuman W.L., 2000). This approach has been criticised by some mainstream social researchers, as they do not consider it to be scientific. But it is still acknowledged to be a useful approach for exploratory research (Neuman W.L., 2000). Considering the fact that only few social studies have been carried out in Maré (Faugère E. 1996b), and particularly regarding rural development issues, the present study can be regarded as exploratory.

The research was also influenced by feminist social research because it rejects sexism in assumptions, concepts and research questions. It endeavours to create emphatic connections between the researcher and those he or she studies. It is sensitive to how relations of gender and power permeate all sphere of social life. The researcher's personal feelings and experiences are incorporated into the research process. Research techniques are chosen in flexible way, crossing boundaries between academic fields. This type of approach to research recognises the emotional and mutual-dependence dimensions in human experience. Finally,

feminist social research is action-oriented and seeks to facilitate personal and societal change (Neuman W.L., 2000)

The following characteristics of postmodern social research presented by Neuman (2000) also apply to the chosen approach for the present research. Postmodern social researchers strongly rely on intuition, imagination and, like feminist researchers, they rely on emotion and personal experience. The postmodernist approach is based on an extreme subjectivity in which there is no distinction between the mental and the external world and an ardent relativism in which there are infinite interpretations, none superior to another (Neuman W.L., 2000). It embraces diversity, chaos, and complexity. It is based on the belief that causality cannot be studied because life is too complex and rapidly changing and the assertion that research can never truly represent what occurs in the social world (Neuman W.L., 2000).

However postmodern social research rejects studying the past or different places since only the “*here and now*” is relevant (Neuman W.L., 2000). This characteristic does not fully apply to the present study. It is acknowledged that Maré Island must be considered as a specific place, different from the neighbouring islands, but it appeared relevant during the evaluation process to be able to compare the agricultural context in Maré with Lifou, the neighbouring island. Also, since part of this study is based on a project’s evaluation, the history of the project seemed to play a relevant part in the understanding of the project’s effects and impacts. One of the aims of an evaluation can be to learn from both mistakes and successes. It is understood that findings are specific to the given project in its given context. To a certain extent, however, generalisations can be made which can be applied to other projects.

4.3. Research Design and Methods

The research has been designed in three ensuing levels. The case study of ESS in Maré is first based on the participatory evaluation of the GDPL Paradise project, which allows a better understanding of farmers’ livelihoods. Then, throughout the evaluation, project management and the role played by ESS agencies to that respect could be assessed. This finally led to a better understanding of the organisation, management and approaches used by the ESS system of Maré along with the opinion of farmers about the ESS system.

4.3.1. Participatory Mid-term Evaluation

The evaluation on which the case study is based can be considered as a mid-term evaluation since it took place after two and a half years of implementation. There are still 2 years before fruit trees start to reach production and project's holders have to repay the contracted loans. In order to gather accurate information for qualitative analysis, this evaluation was held in a participatory way. Because of the empowering nature of participatory evaluation, this type of approach well suits the expectations of the Province, which are to enhance self-capability and organisation of the rural world.

Whereas traditional evaluations are initiated from the top, carried out for the people, and the results used by higher-level academics and officials, participatory evaluation belongs to the people the project is designed for. It is self-help oriented, and an effective means of increasing self-reliance while increasing people's control over their own destiny.

Stephens, 1990

The results of this participatory evaluation, held for the most part with the GDPL small farmer group, will be used by the Province for further extension services planning. This type of approach is in line with the global approach taken in the South Pacific over the last fifteen years.

Planners and decision-makers in government are now stressing the need to decentralise planning so that the beneficiaries can participate in the process. This applies particularly to the extension service in order to meet the location specific needs of the farmers. The small farmer group can provide mechanisms through which the two-way planning process can be implemented'

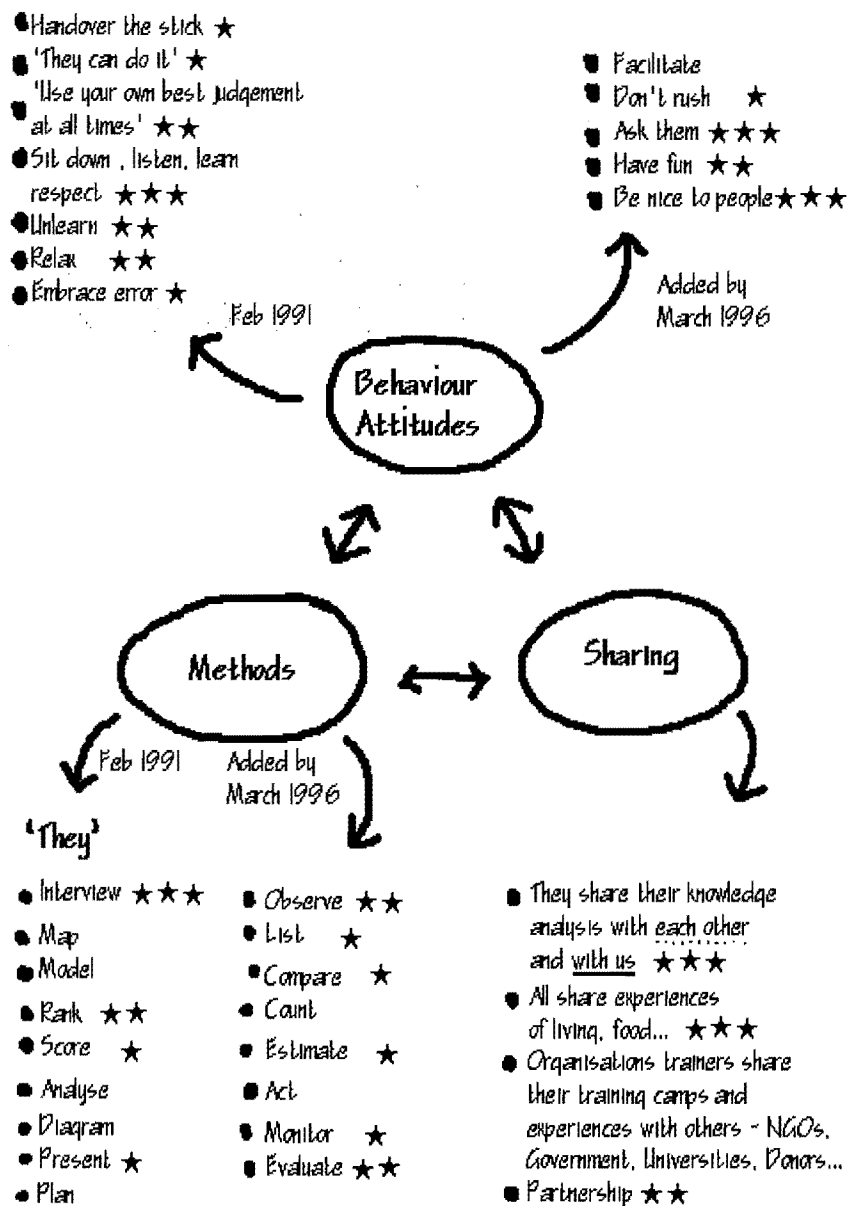
De los Reyes B.N., 1985

"Participation" for this study was defined and used as Chambers (1995) puts it, that is to say, as "*an empowering process which enables local people to do their own analysis, to take command, to gain in confidence, and to make their own decisions*". This means that as a facilitator, "I" participate in "their" Project, not "they" in "mine" (adapted from Chambers R., 1995).

4.3.2. Methods Used

The participatory evaluation of the project was based on the three pillars of participation formulated by Chambers (1997); Attitude, Methods and Sharing. (*See figure 7 – three pillars of participation*). For data collection on-site, participatory rural appraisal (PRA) techniques and semi-structured interviews (SSI) were mainly used. Figure 7 presents the set of methods proposed by Chambers (1997) and outlines those mostly used during the evaluation.

Figure 7. The three pillars of Participatory Rural Appraisal



★ Stars characterise the major points of the methodology used during the study
Adapted from Chambers R., 1997. *Whose Reality Counts?* London: IT publications

In my attempts to gather accurate information with the REFs and their families, I found that *sharing and behaviour and attitudes* were more important than *methods*.

Table 2 presents the different stakeholders who took part in the research and the methods used to facilitate participation⁴. The main method used throughout the evaluation was semi-structured interviews as it was best suited to people. This was also due to limitations encountered during the fieldwork, which had not been foreseen during the evaluation design (see section 4.4.).

Table 2. Methods used

Participants	Methods Used	Objective
Administration representatives and agents	SSI	Define sustainable development approaches Define existing ESS organisation
GDPL Paradise Recently Established Farmers	Individual SSI Group PRA workshops: <ul style="list-style-type: none">➤ Ranking charts➤ Transect walks Participant observation	Define their own objectives Define their objectives as a group Express their problems and expectations Define their perception of their Environment
Other Farmers LEF	SSI	Express their past and present experience Express their view on ESS and the GDPL Paradise Project
Customary representatives	SSI	Express their view on the GDPL Paradise project Understand how Indigenous Knowledge is or can be taken into account
ESS agents	SSI	Define their approaches to ESS Express their view on the GDPL Paradise project Express their approach to sustainability and Indigenous Knowledge

Semi Structured Interviews involve a series of open questions. Other questions can be brought about depending on the issues raised by the answers of the respondent. I used SSI principally with extension workers and representatives from institutions and agencies. During interviews with Kanak people, cultural interpretation of questions and answers may have differed from the respondent and the interviewer’s perspective. This was taken into consideration during workshops’ design and information analysis. However, being a French native speaker, I found that communication went well since Kanak people of Maré are also French native speakers.

Ranking charts are used in PRA exercises to rank and/or score issues, problems or assets according to the importance attached by participants. For this research, ranking and scoring matrices were used to identify problems faced by the REFs, their objectives and expectations from the project and the importance farmers attached to these issues.

Transect walks are a way to discuss with participants and make observation on their environment. For this research, I took part in transect walks with the REFs on their lots. They would show me the crops they grow and explain the techniques they use, the techniques they liked or disliked and the problem they faced on the lots.

Participant observation was carried out on several occasions. I spent several mornings and afternoons helping some of the REFs on their lots. As we were weeding the lots, seeding vegetables or pruning the farmers I was working with and I would have informal talks and I was able to observe and then better understand their livelihoods as they expressed it. Having lunch or a cup of tea with the farmer and his/her family was also a good way to improve my understanding of the life they live. In a similar way, participating in training sessions as a trainee was a good opportunity to make close observations and then better relate to what the farmers felt about the training.

Informal talks were used mainly while working on the lots with the REFs. Informal chats while working or resting were ideal to get a better understanding of the REFs' livelihoods. Also the discussion being less formal, farmers were more spontaneous.

Triangulation was used to confront issues brought about by some participants with the views of other participants. The statements of each participant could therefore be substantiated or refuted by the views of other participants. It was particularly useful to get a full picture of some issues relating to the extension system. Pitting the views of the farmers against those of the extension workers and vice-versa allowed a balanced understanding of the ESS system.

At the end of the fieldwork, results were presented to stakeholders during a semi-formal workshop. Problematic results were discussed and additional comments on the evaluation were received. This workshop happened to be very fruitful as different stakeholders were gathered to discuss the project. However out of the 10 people directly involved in the GDPL

only two women, one being a *promoter* (i.e. administratively identified project holder), were present at this meeting.

4.3.3. Working with the GDPL Paradise's families

As the beneficiaries of the GDPL Paradise project, GDPL Paradise's families are the primary stakeholders. This made it essential for me to spend most of the time with these families. Since the families do not actually live on the project's site and for reasons related to availability of accommodation, I could not live with the farmers. However I endeavoured to spend as much time as possible with the families on the project's site.

The first weeks were dedicated to getting to know each other. I would try to understand the project's history and each of the six promoters and family when possible. But most important, it was crucial for the people I would work with to gain an understanding of where I come from as a person and as a researcher. We established trustful relationships by working on the land together. In Maré Island, people are intrinsically linked to the land. Showing my ability and desire to learn how to work the land seemed to be the most obvious way to gain the farmers' trust. Each promoter works on his or her own lot, with or without the family's help. I worked on each lot, getting to know the individuals I was working with. While weeding, seeding or helping out with whatever the promoter had to do on the lot, we would have informal talks prolonged over the traditional *coup de thé* [tea time] or lunch. This situation was also ideal to carry out participant observation.

It took almost a month before we could decide to plan a participatory workshop with the 6 promoters and partners. A relationship based on mutual trust had to be founded, besides, as each of them had a different lifestyle, way of working and schedule, it was difficult to agree on a time when they could all gather on the field. Twice a week the women would go in the morning to the local markets to sell their products and spend the prior afternoon preparing the products. Winter in Maré is the season of weddings, therefore the promoters often had to spend time in their tribe for customary ceremonials. We had to postpone the workshop once for such reasons.

Out of the six REFs, only four of them (two males and two females) and two spouses (one male, one female) did come to the workshop, which took place on the project's site. It was

obvious that the group did not feel at ease being gathered to discuss their problems and expectations, or at taking part in a participatory workshop, writing down things, or playing with rocks to rank and score. Even though none of them are illiterate they did not want to use the pen and asked me to write it down. The situation was awkward but we managed to come up with some results. However, conscious of the difficulties we had had to get almost all of them together and of their discomfort regarding the proposed techniques, I asked them whether or not we should repeat the experience. Their answer was the first real consensus of the workshop!

“We’d rather keep it like we did before, when you come to us individually and we discuss our problems with you while working. This way we don’t lose time that we can spend on the field and it’s easier to talk”

One of the female promoters

This way of working was therefore used for the remaining month of study. When it was possible, I would go to the project’s location and spend the day with whoever was on the field, to help with the work and willing to have a chat at the same time.

Another way to meet the farmers as a group was to join training days, when they took place on the project’s site and at weekly monitoring sessions. Here again the 6 households would not always be represented but interactions could be observed and these occasions were often suitable for discussion.

4.4. Limitations

4.4.1. Use of participatory methods

Though literature describes participatory methods as an empowering process, in the case of this study, some unfamiliar methods (eg. ranking and scoring) first appeared “puzzling” for both participants and facilitator. Although it seems the participatory approach was eventually empowering, introducing it was not as smooth as expected. Two reasons can be advanced to explain the difficulties encountered with the method. Firstly, my lack of field experiences using participatory methods. My past experience involved groups of facilitators, while for this study I was alone to facilitate. I was probably not self-confident enough when I introduced the

method to the participant. Furthermore, in past experiences participants were mostly familiar with participatory methods and I had never faced a situation where I would have to encourage participation.

It is now clear that people from the GDPL Paradise are not familiar with participatory approaches. They did welcome methods such as transect walks, informal talks and semi-structured interviews. Workshops, however, using ranking and scoring methods, involving active participation by materially expressing their feelings and problems in a group felt awkward to them. When working as a group on the evaluation, I felt that the REFs had never been asked or offered the opportunity to think together about the project, and that they could not see the point of doing these participatory exercises. A lot of it had to do with the fact that participating farmers were not comfortable with personal disclosure in a group.

Whether it is due to my lack of experience or because some of the methods used seemed too “new” to the participating farmers; this participatory evaluation was limited to the use of some basic and individual oriented methods. Little could be observed or gathered about the 6 promoters and their family working all together as a group, except perhaps that they were not comfortable with this in the evaluation’s context. However, other participatory methods (SSI, transect walks and participants observations) proved useful and appropriate and were therefore used as the main research methods.

4.4.2. Presence on the Field

Presence on the project’s site, where the 6 REFs have planted their orchards, was another limitation to this study. As I was living in provincial accommodation located in the tribe of Atha, 7 km from the project’s site, I relied on provincial cars, which are rarely available, and the Provincial agents’ spare time to drive me around as bus services were not adapted to the working schedule. Furthermore, having other stakeholders to work with apart from the 6 REFs, I was not on the project’s site on a daily basis.

Farmers involved in the project do not live on the project’s location, apart from 2 households who camp on the site. They all live at least 3 kilometres from the project’s site and as they have no means of transport apart from their tractor or the bus services, they are not always present on site. In addition to this, the time at which the study took place coincided with the

time of the year when most customary ceremonial practices occur. It was also a very busy time with respect to traditional fields, as Yams had to be harvested and new fields slashed in the forest. Finally, some of the farmers involved in the project also have commercial orchards in their initial tribe to take care of and this restricted the time they spent at the project's site.

Because of these factors, when I was on the project's site, I did not always get the chance to meet all of the farmers. I would often meet the same ones, usually those camping on the site, or in some extreme cases none of them were present. This has limited the study in terms of on-site time efficiency. However, the long span chosen for the fieldwork (2 months), greatly reduced this limitation, and despite the frustration and disappointments encountered, a large amount of rich data could be gathered.

Chapter 5: The Project, Setting and Research Results

5.1. Introduction

The results are presented according to the way the research is designed. In section 5.2. the project is presented in detail. These were in fact the first findings from the fieldwork, as little information was available during the fieldwork preparation. The following section (section 5.3.) puts together the results from the participatory evaluation of the GDPL Paradise project. In the last section (section 5.4.), results regarding the ESS system in Maré are described.

5.2. The GDPL Paradise Project

The lack of written secondary data regarding the project's design and implementation limits the results presented and the evaluation process. At time of the study, there was no Project Design Document (PDD), Logical framework, systematisation or monitoring reports or equivalent document related to the GDPL Paradise Project available. The information presented in this chapter was collected through interviews, informal talks, group discussions, workshops and observations.

5.2.1. History

The project started when six farmers, from the Tawainedr district, each wishing to expand or settle orchards on their tribes (Wakone and Tawainedr) asked for support from the Province. They then followed the required 500 hours training for eligibility to the farming establishment grant (DIA). As they developed their application file for Provincial assistance, it appeared that expansion of orchards within their tribes' area was not possible. The tribes of Wakone and Tawainedr are located less than a kilometre from the shoreline (*see map in appendix 1*). Ground water in this area is still brackish, so agricultural wells cannot be established.

The six "promoters", which is the way the project holders are referred too, were encouraged by the Provincial administration to gather in order to formulate a joint application for land to a land owner clan in the district. A 30 hectare piece of land, formerly used for commercial farming and with an existing Provincial well, was made available to the group. A 'palaver

act', formal contract written after an oral agreement, was signed between the group and the land owners. Thus, the "GDPL Paradise" was created

Each promoter was allocated lots ranging from 4 to 6 hectares. The 'palaver act' states that promoters can use the lot for a 25 year duration for a donation of 5000 XPF (~ 90 dollars) per year and an additional payment of one kilo of fruit per tree, as soon as trees reach production. A mandator [*mandataire*] chosen by the promoters, represents the GDPL to institutions, banks, land owners and customary authorities. This person comes from the same district as the promoters, is affiliated to the land owner clan and has a respected rank in the customary hierarchy. The mandator does not receive financial remuneration for his position.

The first step of the on-field project implementation was the slashing of the lots, since the land had not been used for agricultural purposes for a long time and was covered with bush vegetation (mainly Brazilian pepper - Schinus terebenthifolius Raddi. - *faux poivrier*, an introduced tree species). The first two lots were slashed manually, the project holders acting as a group. However, they became increasingly tired of this work, as it took 15 days to slash one hectare. By this time, the Provincial administration had sponsored investment in an environmental-friendly bush-shredder for the three islands. The GDPL Paradise promoters were among the first ones to benefit from this tool. The shredder works faster and, compared to any other machinery, better suits the fragile soil conditions of the islands. Given the efficiency of the machinery farmers asked for each of their lots to be entirely slashed, when initially they were supposed to start with two hectares each⁵ of slashed land. As the machinery operates on the three islands; four of the six promoters could only have two hectares slashed. The machinery was needed in Lifou before it could complete the tasks on the GDPL.

Once the land was cleared, promoters started to plant avocado trees on the two initial hectares of their lots. They received training as they were establishing their lots and were therefore learning as they were planting the first trees of their project. Here too, they were acting as a group working on each other's lots. Yet, the difference of proficiency among promoters led to a certain degree of exasperation, as fellow promoters would not plant properly enough on lots assigned to others. This led to the first expression of individualism within the group and the promoters abandoned the idea of working as a group.

5: For a description of the project's lots repartition, refer to appendix 6

By this time each household started to work exclusively on its allotted piece of land. Promoters were still receiving training in horticultural management, organic practices and the use of agricultural machinery. The training was the responsibility of the training agency, CFPPA, which would arrange special training according to the needs identified during implementation.

5.2.2. “The 6 young promoters from up there”; a heterogenous group

The group of project holders can be identified as 6 people coming from the same district but different backgrounds. They are commonly referred to as “*the 6 young ones from up there*”.

Up there, because they all come from the same district; Tawainedr, located north of the district of La Roche where the Provincial branch and the ESS local agencies are. However they do not all live in the same tribe. Five of them live in the tribe of Wakone and one in the tribe of Tawainedr.

Young, because they received the Farmer Establishment Grant which was initially designed for young people wishing to establish. However, the 6 REFs of the GDPL Paradise are between 30 and 45 years of age. The word “young” is often used in Maré to refer to people who are not yet married. But in fact, out of the 6 REFs, only two are still single.

The 6 ones, refers to the 6 promoters identified by the administrative paperwork. But on the field, this project involves more than 6 persons. Four of the promoters are married and their spouses and in one case one child over 16 years of age, also work on the field. Two households stay on the field for the whole working week with their children. Including spouses, the 6 becomes 10 and the group gets bigger when children who stay with their parents on the field are included.

Finally, it is important to note that among the 6 administratively identified promoters there are two women and four men. Traditionally, agriculture is a male privilege in Maré because of yams. Yams are said to be male. Women can have their own field, but usually once married they will work on the household’s traditional field. For agricultural projects it is very rare to see a woman, especially married, in charge. It is therefore another distinguishing characteristic of the project to have two of the promoters being married women. However, out

of the two female promoters, only one is really in charge of the project and supported by her husband. In the other case, the woman was utilised as a token by her husband for administrative matters. This man had experienced a previous project's failure and bankruptcy, which prohibited him from any future loan or grant eligibility.

The group of people involved with the project is constituted of men and women who live in different places, come from different backgrounds in terms of access to higher education, commercial farming experience, rank in the customary hierarchy and affiliation to land owner clans. In fact, three of them are directly affiliated to the land owner clan, and two are not originally from Maré. From different age groups and marital status, one could expect them to have different expectations. However, they all took the risk of establishing organic orchards on the same piece of land, and working closely with the other promoters for the next 25 years.

5.2.3. Project's aim

The first obvious aim of the project was to allow tree-growers to expand or establish orchards, despite the issues of land availability and access to water. As the project was designed, the Province was strengthening its policies for rural development and was planning to develop sustainable practices on the territory. The idea was to develop organic farming and ensure commercialisation with added value via labelling. The creation of a label and the certification process were still to be studied by the time the 6 REFs were establishing their lots. The Province decided to encourage these farmers to be organic from the beginning of the orchards' establishment, in order for them to be able to benefit from the proposed certification, when the orchards reached production. It takes almost 4 years for avocado orchards to reach production and certification generally requires the absence of chemical use on the land for the past five years.

The Province does not want to turn to organic production to solely reach a potential organic niche market but rather to ensure the quality of the products. The added value would then come from the higher quality of products originating from organic practices rather than from the extra money some people are ready to pay for an organic label. This was to participate in the efforts made to improve quality of fruit production in Loyauté.

To support themselves and create income before trees reach production, the 6 REFs were encouraged to grow vegetable gardens between the lines of trees. In order to preserve the organic conditions required for the expected added-value of the avocado fruit production, these vegetable gardens are also grown using organic practices.

5.2.4. Extension and Support Services related to project's implementation

The GDPL project itself allowed REFs to benefit from special ESS, these mainly entail financial support, training and monitoring.

5.2.4.1. Financial Support

Financially, the 6 promoters were given access to a combination of grants and loans all managed by the Provincial rural development subdivision. The set of financial support is summarised in table 3.

Table 3. Financial support individually offered to the GDPL Paradise's promoters

	GRANT	
Name	Provincial Subsidies	DIA Dotation à l'Installation Agricole <i>Farming Establishment Grant</i>
Obtained from	Province	French State through Provincial management
Type	Subsidies for environmental and access to water purposes	Grant to support REFs in their investments. Transferred to REFs in two shares, prior to establishment and after implementation.
Conditions	Defined by the Provincial Code of Investments	Defined by the French State with restrictions added by the Province. Grantees must follow at least 500 hours of agricultural training.

	LOAN	
Name	Provincial Loan	Prêt BCI (Banque Calédonienne d'Investissement)
Obtained from	Province	BCI <i>Caledonian Bank of Investment</i>
Type	Interest free loan First reimbursement initially planned for 2003	Negotiated interest loan First reimbursement initially planned for 2003

It is the first time in Loyauté that farmers have been able to access such a combination of financial support. The most important feature is that promoters could have access to financial support without having to bring any personal financial investment. It had been decided that the Farming Establishment Grant (DIA) could be used to provide for the farmers' *own equity* to the project required by the bank. Consequently, out of the 6 REFs involved with the project, only one chose to financially participate in the investment. The others used the grant to top up their own equity in the project.

This system was designed to facilitate access to credit and investment for those with low incomes. So far most of agricultural investments in Maré have been made by people who had retired from their positions on the main island and came back to the island with enough money to invest in an agricultural project. The Province wished to give a chance to the younger people to stay on their island by facilitating access to investment.

5.2.4.2. Training

The six administratively identified promoters all received 500 hours training as required for eligibility to the farming establishment grant. This training was designed and handled by the training agency (CFPPA) of Maré. It is described by the same agency as a "tailored training" but it is difficult to get a precise outline of its content. As the project started and orchards were planted with vegetable gardens set between the lines, the promoters were still receiving in field training and technical advisory. This training was still managed by the CFFPA but handled jointly with Arbofruit, a local tree growers association, and an independent extension worker specialising in organic practices.

5.2.4.3. Monitoring

The Province monitors the whole project. A provincial agent from the Rural Development Subdivision is in charge of monitoring the project as one of their contractual obligations. This agent is the link between the promoters, the agencies involved in ESS and other Provincial subdivisions. Monitoring takes place via weekly meetings, where the Provincial agent and the 6 farmers get together and farmers set their individual schedule for the week. This is also the time to express problems that have arisen and discuss them as a group. These sessions are usually held on Monday mornings at the Provincial branch of Maré located in the tribe of Atha.

5.2.5. State of the project at time of evaluation

At the time of this participatory mid-term evaluation of the project, the six REFs each have at least 2 hectares of land slashed and planted with trees. The state of advancement of each promoter, however, varies. Each promoter has at least one hectare planted in avocados and one hectare in lychees. Two have additional hectares planted in either avocados or a mix of citrus fruits and custard apples. All of them have at least one hectare of vegetable market where they grow different sorts of tubers such as kumara, potatoes and taro (but not yams as these are grown in the traditional fields) and a wide range of other vegetables, such as tomatoes, peppers, sweet corn, cucurbitaceae, chives, lettuce, cabbage and leeks. Traditional plants are also sporadically grown on the lots. These would include “haricots 4 coins” a highly nutritious legume; “jam”, a bush close to the hibiscus the flowers from which are used to make jam; wael, a bush whose leaves are traditionally used in soups and stir-fries; and a range of medicinal plants.

On each individual lot farmers are about to install their irrigation system in anticipation of the upcoming dry season, or at least they have most of the irrigation material to do so. Two households are living on their lots during the week. One is in a woven shelter, while the other spends most of the week in its own warehouse, which is still under construction. The warehouses were initially meant for stocking machinery and providing shelter during the working week. One household has negotiated with the owners to live in a house adjacent to the project’s site. Electricity has still not been brought to the field and therefore warehouses cannot be fully completed, as electricity is required for the welding work. A 300-metre piece of track that would create a shortcut from Wakone to the field is still not in place. The three farmers who live in their tribe during the week have to traverse at least three kilometres to reach the field, the piece of track could reduce the way by two kilometres. Most of them are using their tractors as a mean of transport.

As previously described, training days are still organised principally to discuss the use of the machinery in which the promoters have invested and arboricultural practices. The independent extension worker has extended his contract span, without an extra fee, and comes to Maré twice a month to make sure that farmers properly understand organic practices.

Financially, the 6 promoters were supposed to start repaying their loans in 2003. But given the fact that the trees have not yet reached production and that the incomes generated by the market gardens appeared to be barely enough to support the families, a new deadline has been negotiated by the Province. Promoters now have until 2005 before they must start repaying both the Provincial and the BCI loan.

5.2.6. Summary

The GDPL Paradise project, described as a “spontaneous” project by the Provincial administration, is considered as a pilot in Loyauté and even the whole Caledonian territory. It is an exceptional project because of the efforts put into making available a wide range of financial and training services to project’s holders. It is also the first project in Loyauté where farmers use only organic inputs for commercial purpose, and this is a further reason for the project being considered as a pilot project. Two of the 6 promoters are women, this constitutes a further fundamental change to the local rural picture. Finally the project’s distinctiveness lies in the fact that land was made available for commercial purposes by a land owner clan to people who would not have had access to appropriate land.

5.3 Views from the GDPL Paradise Stakeholders

5.3.1. Results from participatory workshops held with REFs

The following results come from participatory workshops and semi-structured interviews. Information collected during the workshops was corroborated and completed via interviews or informal talks.

5.3.1.1. *Scoring their objectives and expectations*

During participatory workshops, we worked on objectives and expectations, with four members of the GDPL (two females and two males) and two of their spouses (one female and one male) willing to participate. Throughout a discussion, participants were invited to express what they wanted to achieve when they first took part in the project.

The questions asked were:








“What were your objectives when you decided to start the project?”

“What motivated you to take part in this project?”

The objectives they expressed were then listed on a piece of cardboard. Each participant had five stones - though 31 stones were used by a total of 6 participants - that they could place next to any of the listed objectives according to the importance they personally attached to it. For example, one could use three stones on the primary objective and the rest of the stones on two other objectives. None of the participants decided to put the whole set of stones on one single objective.

The ranking matrix for objectives and expectations is presented in Table 4. It is important to note that I had to give some probable objectives as examples in order to initiate the discussion. Out of the three examples given, only one is similar to those subsequently expressed by the participants. The specific examples used were; *“To have some money”*; *“To have access to land”*; *“To be able to work on this particular piece of land”*. Participants did not convey the issue of access to land as a motivation to take part in this project.

Table 4 Ranking and Scoring Matrix for Objectives and Expectations

Earn Money		7
Have a stable job		4
Create one's work situation (Create opportunities for youth)		5
Support the family		6
Stay on Maré Island		2
Exchange and promote products from Loyauté Islands		4
Start up one's business		3

Adapted from workshop's matrix made with farmers from the GDPL Paradise

Clearly, the motivations of farmers and spouses for taking part in the project were multiple but somehow interrelated. The ranking matrix reveals three main objectives; earning money, supporting the family and creating a work situation.

Earning money seems to be the main motivation for these farmers. The financial needs are continuously increasing in Maré. One has to keep in mind that the standards of living in New Caledonia are very much similar to the French one. The globalisation phenomenon brought by colonisation creates secondary needs within the population. These needs require sources of incomes to be satisfied. People have bills to pay and increasingly rely on shops for food commodities (Faugère E., 1996b). However, “money for money” does not seem to be the ultimate desired outcome. This objective is certainly related to the desire of being able to support the family. The four households represented during the workshop all have children to take care of. Food, health care and quality education are primary needs these families want to be able to provide their children with. If they want higher education for their children, parents from Maré have to send their children to the Main Island and hence bear higher related costs.

In order to achieve these objectives, households of the GDPL have chosen to create their own employment opportunity. There are only a few employment opportunities in Maré, so if one wants to stay on the island, creating one's own money-earning venture is essential. This idea was expressed during the PRA in three different ways, all scoring relatively highly; having a stable job, creating job opportunities and starting up a business. More than a way to achieve personal livelihood, these motivations can be related to social benefits these people wanted to create. It also denotes their desire to become active parts of the development of their island, by creating businesses that can participate to the local economy. There also seems to be a need for social recognition. Being an entrepreneur is a way to be recognised by the community outside the customary boundaries. Faugère comes to similar conclusions, stating that if one cannot access social recognition by customary means, other ways such as entrepreneurship or religion can be found (Faugère E., 1996).

Afterwards, participants were invited to express their expectations of the project before its implementation. Participants did not make any strong differentiation between their personal objectives and their expectations of the project. The issue was therefore only discussed and the results were not presented in a ranking matrix. When it comes to their initial expectations regarding the project, participants' thoughts can be summed up by what one of the participants said, reflecting the opinions of the group;

“When we decided to take part in the project we expected to have access to water and electricity and be able to work in good conditions here (...) and what we see is that it is still not the case”

A GDPL farmer's male spouse

The basic infrastructures (water and electricity) that farmers were expecting to be available for the project, would have allowed them to achieve their objectives. However these inputs were not on hand by the time of this research. This issue was discussed throughout the following activity (see *section 5.2.1.2.*).

To sum up the results of this PRA exercise, motivations expressed by the REF of the GDPL Paradise are strongly related to means of achieving livelihoods and social recognition. Within these motivations one could also see an implicit desire to play active parts in their own development and to benefit the whole community. However what they expected from the





project had not come about, and that is reflected in the problems that were identified during the next activity.

5.3.1.2. *Ranking and scoring problems they face*

During the following activity, we discussed the issues and problems farmers of the GDPL Paradise were facing. We had previously discussed these problems during informal talks but it was the first time we discussed it as a group. Like the previous activity, participants were invited to express these issues to list them in the scoring matrix. However the method used to rank the problems was different to the one used for objectives and expectations. Here, each participant was given two stones, a white one and a dark one. They used the white stones to identify the problem they least cared about and the dark one to identify the problem they were most concerned about (*see Table 5*). The activity was presented to the participants as follows;

If all the problems could be solved except for one, which one would it be? Use the white stone
If there was only one of these problems that could be solved today, which one would it be? Use the dark stone.

Table 5 Scoring Matrix of Problems Faced

Installation (political problem)			-5
→ Access track			0
→ Electricity			
Manpower			1.5
Provincial agents' lack of presence			-1
Water; low or no pressure at the well			4.5
Lack of saplings (Tree Nursery)			0

Adapted from workshop's matrix made with farmers from the GDPL Paradise

White stones were given a negative score and dark stones a positive one. This allowed identifying the lack of pressure at the well as the most undermining problem and the access track to the field as the least problematic issue. The 6 expressed problems could then be ranked as presented in table 6.

Table 6. Ranking matrix of problem faced

Problem they care most		Score
1	Water at the well	4.5
2	Lack of manpower	1.5
3	Electricity	0
3	Tree Nursery	0
5	Provincial agents' attendance	-1
6	Access Track	-5
Problem they care least		

It is interesting to note that the problems that were identified were all immediate. During the fieldwork, the REFs hardly ever mentioned issues or problems that could occur in the long-term.

Water at the well

The lack of water or pressure at the well was identified as the problem farmers feel most affected by, since it undermines the project’s implementation from their point of view. For the past three months prior to evaluation there had been none or too little pressure at the well. This has been a persistent problem since the beginning of the project’s implementation. Tree-farming and growing vegetable gardens without a reliable source of water is challenging. The project was actually initiated for that reason, but the lots where project’ holders originally wanted to establish did not have access to water. Hence, they gathered around a provincial well. However the farmers are not in charge of the well’s maintenance, it is a provincial well and therefore it is the Province’s responsibility to keep it in good working condition.

The well’s maintenance is the responsibility of the *DEA Direction de l’Equipement et de l’Aménagement* [Equipment and Spatial Planning Division], and the GDPL Project is looked after by the rural development subdivision which depends on the DAE – Economic Affairs

Division. Though both divisions are represented in the provincial branch of Maré, and located in the same building, communication issues and lack of responsiveness seem to be the origin of the problem. Provincial agents from the DEA do not seem to be conscious of the impacts of low maintenance of the well on farmers' livelihoods.

Some of the GDPL Paradise's REF were in the process of installing their irrigation system, but without pressure at the well's pump, irrigation trials cannot take place. Saplings are really suffering from the lack of water, farmers cannot even water them manually since at times water does not even come out from the pump. This is not a matter of water scarcity but really of maintenance.

"The water thing, it's the Province that's fooling around! Today there's still no pressure at the well, we don't mind installing the irrigation system but if there's no pressure what's the use? (...) And then they blame us because the saplings die, but if they don't do their part of the job..."

A male farmer from the GDPL

Manpower

Most of the REF have at least 2 hectares to take care of on the project's site, some of them also having other lots to take care of in their tribe. Most people in Maré have a traditional field, which is usually smaller than half a hectare. People often work as a group on this land relying on family and acquaintances because it has a customary purpose. But when it comes to commercial agriculture, this is not customary and free labour cannot be called upon. A two-hectare lot is a huge area for people who are used working on a traditional field. Four of the promoters are married and their spouse helps on the lot, but the single ones have to work alone on their lot. Vegetable gardens were set up to provide income until fruit trees come into production. Those who can rely on their spouse for work are already too busy with the saplings to take care of the vegetable garden. Single promoters have a smaller vegetable garden.

The need for additional manpower in the field is a farm management issue. Some farmers on the main island have more than 2 hectares of garden-market but still manage to get sufficient incomes with no extra manpower. However the context is different from the main island in

Maré. There is no tradition of commercial agriculture and farmers need more organisational skills to handle commercial lots than they do for a traditional field.

Whether they have their spouse or no one to help out, REFs of the GDPL still made little profits from their lots at the time of the research. They were hoping they could benefit from a labour program offered by the Province, called RIL “Revenu d’Insertion Loyauté” – [Professional Insertion Wage]. This scheme was designed to provide practical training to unemployed people and allow them to get a minimum wage in the meantime, by doing casual work. The Province provides the RIL positions after approval by the board of representatives. Grassroots people suspect RIL positions are appointed according to the applicant’s political stance. It is said that people who belong to the party presiding over the Province will be favoured⁶.

“They (Provincial representatives) give the RILs to those who have the same political identity, they help those who belong to their party; “Oh... you, you belong to my party? Alright, then I will help you”, that’s why we still haven’t got the RILs”

A male farmer from the GDPL

People from the GDPL had already benefited from RILs at the beginning of the project, but applied again in 2003, as the workload became more important on the field. At the time of evaluation, farmers felt their application was ignored by the Provincial board and started to feel exasperated.

“The Province, they tell us we have already received enough help. It’s true we’ve been helped a lot, but we can’t work on 6 hectares without manpower. We still need some help... but that’s also a political issue...”

A female farmer from the GDPL

Electricity

In the project’s “design”, electric lines were supposed to be brought to the project’s site so that electric devices could be used on the field. Families of the GDPL need electricity to undertake the welding work on their warehouses. Warehouses are meant to store machinery and offer decent shelter during the working week.

⁶: For an in-depth study on Political issues in Maré, refer to Faugère E., 1996b “Coutume et Argent a Maré”.

After two years of implementation, electric lines have still not been installed in the field. Electric infrastructures are the responsibility of the municipal corporation. Each year, according to the municipal budget, new lines are brought to new houses or settlement. The GDPL's demand for electric lines has so far been disregarded. Here again, it is suspected that the political game interferes with the project's implementation. The municipality and the Province have different areas of competency. However, in most cases, these responsibilities are complementary. Presently, two different political parties rule these administrations. Many thus suspect the Municipality of ignoring projects undertaken by the Province and somehow slowing down their process.

The immediate consequence for the GDPL farmers and their families is that they cannot build the warehouses. They have no proper place to store their machinery and most do not stay a whole working week on the field because they have no shelter there. As I mentioned earlier, three households still manage to stay on the field the whole working week. One household settled in a nearby proper house using the familial network. The two others have built shelters on their lot. One is using their half-built warehouse, the other one spends the week in a woven shelter (*See photographs in appendix 7*).

Tree Nursery

Two local nursery units contracted by the Province provide the GDPL with saplings (young trees). After the first avocado and lychee saplings were planted on the lots, there were considerable losses, due to weather conditions and inaccurate management. Replacement saplings were therefore ordered but the local husbandry units were not responsive enough and at time of evaluation REFs of the GDPL were still waiting for replacement saplings.

Other farmers from the group have already slashed lots, planning to plant more trees as soon as possible. Because of this lack of responsiveness from husbandry units, these farmers cannot establish new lots and waste time and input on cleaning unproductive lots. If these slashed lots are not kept clean, shrubs and invasive trees (Brazilian pepper) will take over. By the time saplings are available, the farmers concerned will have to hire stronger machinery to slash these lots all over again.

Provincial agents

The Provincial subdivision of rural development is coordinating the GDPL Paradise project. Provincial agents are in charge of monitoring the project by organising meetings with the farmers and visiting the field on a regular basis. The provincial agents are at the interface between the GDPL the Province and extension agencies. Farmers also rely on the agents' expertise on technical matters that may arise on the field.

During the workshops, participants expressed their frustration regarding the frequency of visits and the approach taken by provincial agents in charge. They feel the agents are not coming frequently enough and also suggested that the agents do not manage to understand the problems they experience or that may arise in the field. Farmers also have low confidence in the agents' technical knowledge and believe the agents do not have enough proficiency in organic practices.

Access Track

Using the current road system, the GDPL farmers have to traverse more than 3 kilometres from their respective tribes to reach their field, when a shortcut track, that would spare them at least 2 kilometres, could be slashed in the bush. Three kilometres by tractor or on foot takes between 20 to 45 minutes. Not only is it time-consuming but also, if they use the tractors this brings about additional costs in petrol and maintenance.

Tracks and roads, as with electricity, are the responsibility of the municipality. Farmers have to deal with the same dilemma and issues for this shortcut as for the electric lines. Moreover, during the evaluation, Maré Island was busy preparing for the wedding of the High Chief of Guahma district's son. Therefore all municipal road-digging apparatus was requisitioned to prepare the ceremony's venues in the Guahma district:

"We've been waiting for this track but you've seen, with the wedding down there, all the trucks are busy. That's because the town hall is on their district, sometimes it feels like it's the Guahma High Chief's town hall. That's why we're still waiting"

A male farmer from the GDPL

5.3.1.3. *By the end of the fieldwork*

These participatory workshops took place in the first half of the fieldwork, and were then followed by semi-structured interviews and informal talks. The project’s implementation continued during the period of the field research and by the end of the period, some of the problems had been, or were partially solved.

Table 7 presents the problems expressed as a group during the participatory workshop and their status by the end of the fieldwork. This table was up dated the very last day of the fieldwork.

Table 7. Problem’s status by the end of fieldwork

Problem farmers cared most about		Status
1	Water at the well	Solved
2	Lack of manpower	Partially addressed
3	Electricity	Not addressed
3	Husbandry	Partially addressed
5	Provincial agents’ attendance	Underway
6	Track	Solved

Problem farmers cared least about

The provincial services of the DEA had taken care of the well in the final week of the fieldwork, after three months of persistent problems with the pressure.

The lack of manpower had been addressed towards the end of the fieldwork too. The Province had discussed assigning RIL positions to the GDPL farmers prior to the fieldwork. By the end of fieldwork, the last week, spouses of promoters were appointed as RIL and single farmers received extra manpower through the same program.

Towards the end of the fieldwork, Arbofruit had taken care of the issue of availability of saplings. The husbandry units are members of the association. The agent of Arbofruit’s branch in Maré was already aware of the problem and had opened a discussion with the husbandry units. He said he was working on solutions regarding the sapling shortage.

Being among the main stakeholders of the projects, the provincial agents in charge of project's monitoring were particularly open to discussion. The fieldwork involved a lot of information exchange and the agents were eager to be updated with data collected during interviews. Using triangulation to confront results, I was brought to talk with the provincial agents about the issues conveyed by the farmers regarding their approach. After discussing the matter with the agents, I observed an introspective attitude and changes in their approach, thus confirming their aspiration to improve communication with the farmers.

Municipal services started to dig the shortcut track two weeks before the end of the fieldwork. Farmers had been expecting this track for a whole year. It was the first problem solved during fieldwork but also the one farmers felt least concerned about.

5.3.1.4. Other occurring problems

Throughout observations and informal talks, other problems farmers and families of the GDPL Paradise are facing were also identified.

Wind on the field.

The field in which farmers have established their lots is located on a high plateau particularly exposed to wind. Saplings and vegetable gardens suffer from the windy conditions. The wind both dries the land and physically damages plants. During an informal talk with some of the farmers and the independent extension worker, one of the farmers explained this plateau used to be clear, simply covered by high grass. There were no trees on the plateau.

“Before, here it was all clear. When you are in Wakone you can see people from La Roche walking around in their tribe from Wakone. Then it was covered with Brazilian pepper. That’s Father Dubois who introduced Brazilian pepper here because he wanted to close the pastures for the sheep. That was a clever man this Father Dubois. And then the Brazilian pepper they liked it here and they started to grow everywhere”

A man from Wakone

Indeed, before the 6 households established their orchards on the field, the plateau was covered with Brazilian Pepper. When the shredder came on the field, REFs asked to have the whole lot slashed. None of the existing trees were kept as a natural windshield around or

between each lot. When the wind factor was identified, farmers were encouraged to plant windshield trees (*Casuarinaceae* and legume trees) before planting the avocado saplings. Apparently, farmers from the GDPL did not respond to the advice. However, for those who did, the results are not really satisfying. Windshield trees, which were planted at the same time as the saplings are still too small to offer protection.

The farmers are now planting additional windshield trees, but in order to protect vegetable gardens currently in production, other solutions have to be found. Some of the farmers are implementing associated cultures based on indigenous knowledge from the traditional fields and advice given by the independent extension worker. For instance, one of the female farmers is using cassava as an associated culture with tomatoes. Cassava plants provide shelter to the tomato plants, protecting them from the wind and offering shade that keeps the soil moisture levels higher.

Communication issues

Households of the GDPL have to face communication problems that tend to undermine the project's implementation. These communication issues occur within the group but also between the GDPL and exterior individuals or institutions. The 6 households involved with the project do not behave as a group, their ways of working, personal background and level of commitment are too different. One could expect that having 6 farmers with their lots on the same field might be conducive to emulation. But given the fact that people from Maré tend to behave in a rather individualistic way when it comes to commercial farming, emulation did not occur as expected. In contrast, tensions arose among some of the farmers, with controversy taking place regarding the use of machinery, and even acts of vandalism on a farmer's lot were reported. It reached the point where one of the farmers now hides his techniques from the others. He developed successful systems of associated cultures but makes sure the others cannot find out about it.

"They want to play it individualistic now! Well for me that's not a problem, we'll play it individualistic. You see here, I've planted maize so that they cannot see what I do on my lot (...) I've had enough of them after what some of them have done (...) See how big my tomatoes are, well I'm not going to tell them how I do"

A male farmer of the GDPL

Communication is an issue within the group of REFs but also with external agencies or the Province. Farmers have difficulties expressing their problems and expectations to extension agencies. This is especially true with the provincial agents. Farmers feel frustrated about the agents' work but do not manage to discuss the issue with them. One of the farmers described the situation as a cultural problem.

“ Us, Melanesian, that is our problem; we cannot express our problem to someone in front of them. If we have a problem with someone we will talk about it when the person is not there and say how upset we are with this person. And then if the person comes we are happy to see him (or her) and we forget that we are mad at this person. We tell him (or her) to come with us for a cup of tea and we have a good time together and we don't tell the problem because we are happy to be together and also we want to be polite. But once he (or she) leaves, we haven't discussed the issue and we are still upset with the situation, and we keep it inside and after that it grows inside and then it can burst especially with those who drink alcohol like last time ”

A male farmer's spouse from the GDPL

This man was talking about the relationship between REFs and the Provincial agents, and the comment later in the discussion refers to the behaviour of one of the members of the group. Frustrated about the RIL attribution issue, a day he was inebriated, this member of the GDPL went to the Provincial branch and intimidated the head of the rural development subdivision.

Some of the men on the GDPL seem to be able to speak out only when intoxicated, but it does not solve the communication problems. Once, as the independent extension worker was visiting and giving advice to farmers on their lots, one of them still intoxicated from the previous evening, became quite offensive to the extension worker (EW):

“What do you know about how we plant potatoes here, this is my land and you are not gonna tell me how I have to work my own land. Your organic inputs they don't work on our land and it costs us money, in my field that's how I plant potatoes and I don't need you to tell me what I have to do all the time. Because at the end, I am the one who pays for the inputs!”

The extension worker was simply suggesting a different way to plant potatoes than the one used by the farmer. The young farmer was probably not upset with the EW in particular but expressed his frustration fed by the overall attitude of extension workers towards farmers of the GDPL. Indeed, before and after each visit by extension workers, members of the GDPL would tell me how upset they expected the EW to be.

“Today the EW is going to come and I will be told off again, I know, because I haven’t had time to mulch my saplings this week. Last time already he was really upset with us because we had not done what he told us to do...”

A female farmer of the GDPL

During a training session, two extension workers came to the field and initiated a visit to each lot. Lot after lot, the two extension workers became more and more exasperated by the low maintenance on the lots. On the first one, we were walking as a group, the farmers, the EWs and myself. As the EWs reached the last lot, I stayed on the previous lot with the farmers who had given up on the EWs who were so focused on criticising the state of each lot that they had not noticed farmers were no longer by their side.

“Each time they (EWs) come it’s to reprimand us, so now we know how it is and we let them say. It’s just a bad moment to undergo and then they leave it’s all right. We’re getting used to it.”

A male farmer of the GDPL

There is a negative feeling about the extension workers’ approach. Farmers of the GDPL do not always follow the advice given by extension workers, but there is no dialogue to discuss the reasons why farmers have not put in practice particular sets of advice. Farmers of the GDPL are now indifferent to extension workers’ criticism, they let them talk and hope it will not last too long.

However, farmers’ motivation is boosted when they receive compliments about their work. After a visit from the independent EW, where he had complimented one of the farmers for an associated culture she had set, this farmer was really pleased and kept on telling me how happy the EW was with her work.

“You’ve seen? Today he (the independent EW) was really happy with the association of cassava and tomatoes I have done. It’s nice, I’m really

pleased. But it's true my tomatoes they are nicer when they grow under the cassava. I didn't know he would be so happy. It's good it changes me from always doing bad"

A female farmer from the GDPL

The Mandator's role

This issue is quite problematical, as the mandator's part is somewhat obscure. In theory, the mandator represents the GDPL in the administrative and customary environment and manages matters that concern the GDPL as a group. Chosen by the members of the GDPL, their relationship should be based on mutual trust. However, some of the GDPL farmers feel the mandator does not fulfil the expectations of the position and is not present enough in the field to be aware of arising problems. On the other hand, the mandator is a volunteer position. The mandator no longer receives wages for the work he does. He did the beginning of the project, when he still benefited from the RIL status, but RIL positions are limited in time.

The mandator's role could be of great help as it is supposed to spare the farmers from most of the administrative work and to allow better communication with customary authorities. But one of the main challenges the mandator has to face is that the 6 promoters and spouses do not always act as a group and no longer make decisions together. Some of the farmers expect the mandator to take care of some issues they cannot deal with (for instance discussing the installation of electric lines with the Municipality) or to work with them to overcome communication problems within the group. But none of the farmers seem ready to discuss the mandator's status or a way to give remuneration for his work.

Since the issue is not really dealt with by the farmers, it remains *status quo* and the benefits they could gain from the mandator's help are not optimised. The mandator has a respected position in the customary hierarchy, which might explain why farmers do not want to discuss his lack of managerial skills. However, as the mandator's work is unpaid, farmers cannot expect much managerial skill or commitment from a volunteer who still has a family to take care of.

Feeling of Ownership

The most alarming issue in terms of project's management is probably the lack of a real feeling of ownership among the promoters. This could particularly be felt throughout the first interviews with the farmers when discussing the project's history. Interviewed participants of the GDPL were punctuating the conversation with words such as; *"It's the Province who said so"*, *"that was the Province's idea"* or referred to the project as the *"Province's project"*. Participants never talked about the project as *"our project"*. If they used *"My project"* in the discussion, it would always refer to their initial orchard in the tribe.

It seems farmers of the GDPL took part in a Provincial project as a means to achieve their personal objectives. Taking part in a project designed by the Province is a way to access credit and grants. Therefore, farmers from the GDPL act as project's participants rather than project's holders. In short, the project was designed **for** them but not **by** them.

5.3.2. General issues discussed with the farmers

5.3.2.1. Is Custom a burden on development?

In Loyauté, and more specifically in Maré, anyone involved with development work will come across the issue of the "Weight of Custom". Some of the farmers from the GDPL indeed complained about the amount of work they had to put up with and money they had to spend for customary purposes. July-September is an important period for customary ceremonies, it is the time of the Yam's harvest and weddings. The wedding of the son of the Guahma district's high chief intensified the discussions about the Weight of Custom by the time of the evaluation.

Some farmers feel Custom is too demanding and prevents them from working properly. Ceremonies for a wedding can take up to a week of preparation where the whole community is involved. People must attend and participate to customary ceremonies to demonstrate their respect for the Custom and sustain social acceptance. During the evaluation, many times some of the farmers would not be on their lot for an entire week because they had to attend customary ceremonies or work in their traditional field to harvest yams for ceremonies. Others often complained about the monetary cost of ceremonies, arguing that poor people have to sacrifice their incomes for customary purposes. They claim the costs of customary

ceremonies are ever increasing. However, Faugère (1996b) argues that the amount of money collected for a wedding is still comparable to what used to be collected 50 years ago.

People of higher rank in the customary hierarchy respond to this issue by saying it is always the same ones who criticise the Custom. They claim that when these people benefit from the Custom, or when they attend the ceremonies and eat for free, no one ever hears them complaining about it. Talking with a long-established farmer (LEF) with no particular rank in the customary hierarchy, I wanted to know how he managed to deal with the Custom and the work on his commercial orchard. I asked him about what some call the “Weight of Custom”. He responded quite strongly to the issue;

“Who told you about that? This is rubbish! Custom is not a burden; you give - you receive. Those who say it’s a burden, you hear them when they have to give, but when they receive they don’t complain (...) But of course if they go to customary ceremonies and stay the whole day doing nothing or drinking, no one is going to take care of their field. I have 11 hectares of trees here, but I still manage to work on my traditional field and produce my Yams for the customs. But that’s because when there is a customary ceremony, I make sure that everything is in order in the orchards and then I go to the ceremony and I don’t stay at the ceremony for ages.”

One of the farmers of the GDPL, whose lot is in a much more advanced state of production than the others, shared the same opinion about customary ceremonies.

“It’s all about being organised. Myself, when there is a ceremony I have to attend, I do as much work as I can on the field for that day and then I go to the ceremony but I don’t stay there for hours. I respect the Custom, but I don’t need to parade all day long. Some, they go just to be seen. Or some guys say they go to the ceremony but in fact you find them completely drunk at night because they did nothing but drinking and then the next day they can’t work on their field because they have a hangover...That’s not because of the Custom.”

5.3.2.2. Organic practices

There is some concern amongst farmers of the GDPL about organic practices, and especially organic inputs used on the field. Some of the farmers cannot see the benefits from the inputs. Inputs used on the GDPL include imported products such as; biofert® (a fertiliser), bioneem® and Bio2001 (pesticides), BiccoSulph™ (micronutrient), and ashes and mulch locally collected.

Experimentation with these inputs in Maré started to take place at the IAC station after farmers started to use them in the field. Some of the farmers therefore feel that part of the experimentation takes place on their lots at their own expense.

“They don’t know if it can work here in Maré. They haven’t tried and they tell us to try it here but in the end we are the one paying for the inputs and if it doesn’t work we have nothing to sell at the market.”

A male farmer of the GDPL

Despite the examples of success on the main island advanced by the independent EW, some farmers still doubt the products can be efficient on their land.

“Here in Maré it’s not the same as the Rock (the main island), maybe it works over there but here it’s different, the soil it’s not the same.”

A male farmer of the GDPL

However some of the REFs acknowledge the efficiency of these products. Results do vary among farmers. This probably comes from the fact that some of the REFs do not have full proficiency over the use of these organic inputs.

“They (a couple on the next lot) say that they put the biofert regularly, but they don’t. But now I will remind the wife when we have to put it because they don’t know.”

A female farmer of the GDPL

Farmers of the GDPL have to handle quite a wide range of products and do not always remember the frequency of application or the purpose of each of the products. In their traditional fields, they do not use any input, once the field is slashed and burned, ashes provide nutrients for the whole crop-cycle and there is no need for inputs. Mixed-cropping

and types of crops grown do reduce impact of pests and pesticides are not required. Provincial agents in charge of monitoring the project and technically assisting farmers did not receive special training in organic practices. They were merely invited to attend training sessions organised on the farmers' field. Their knowledge of organic practices is therefore limited and they cannot extend the independent EW's work.

"The provincial agents, they don't even know how we're supposed to use the products. Last time [he] came and asked us how to use the products. If they can't even help us using these products, how do they expect us to use them properly?"

A male farmer of the GDPL

Finally, organic products used on the field are not efficient against some of the pests present in Maré. Mulch seems to attract snails, against which there are no bio-pesticides available. They cause considerable damage and apart from time-consuming collection and destruction farmers cannot fight them. The recommended generic pesticide Bioneem[®] does not seem to be fully efficient against Chrysomelidae species highly present on the field. Even the independent EW acknowledges that these chewing insects are not significantly affected by neem's oil. They cause greater damage than snails in the vegetable-gardens and even on young avocado saplings.

Whether it is the lack of efficiency of some bio-pesticides or a lack of skill among farmers and extension services regarding the use of those products, the outcomes remain the same. These products have a cost that some of the farmers cannot cover since yields are too low. Eventually, all these farmers can see is the price they have to pay for such results, when their frame of reference is the traditional field, which does not require external inputs.

It has to be noted that at least two farmers of the GDPL have been using chemical inputs on their lots this year, although they have not formally reported it. If they keep on using chemicals on their lots they might jeopardise the whole organic approach not only on their lot but also on the neighbouring lots even though other farmers do not use chemicals. Because the lots are close to one another, the use of chemical on any lot would be against the rule of a potential organic certification.

5.3.2.3. Locally adapted seeds supply

Farmers of the GDPL source seeds from the local shops. These crops are mainly F1 hybrids designed for casual gardening. They are imported from Europe or Australia and are not always adapted to a tropical environment. Furthermore, the cost is relatively high in comparison to the expected yield. A 100 grams bag of melon seeds costs at least 500 XPF (~10 NZ\$).

In order to procure adapted seeds for their vegetable gardens, farmers have to order them from the independent EW based on the main island. They have to wait for at least 15 days to receive them. It is easier for them to buy hybrid seeds at the local shops, despite the prohibitive prices and low yield they have to expect.

5.3.2.4. Traditional agriculture

A majority of REFs on the GDPL believe more in traditional agriculture than organic farming. They all have full proficiency in the traditional techniques and customs related to the traditional field. They are committed to indigenous knowledge.

At the beginning of the fieldwork, one of the farmers showed me a trial he had set on his lot. On a piece of his lot, he had planted maize and lettuce both with traditional method (burning without ploughing the soil) and with the commercial farming practices (ploughed soil and application of organic fertilisers). Using traditional methods, maize and lettuce were growing much more vigorously than using commercial farming practices.

However, understanding of the limitations and environmental impacts caused by burning the land is limited. In fact, there has been no recorded attempt by extension agencies to study and explain to traditional growers the consequences of burning the land. Among non-indigenous developers there is a common trend to condemn slash and burn practices but no endeavour to assess or explain their impacts.

Also, there seems to be a strong dichotomy in Maréan people's mind between commercial farming and traditional practices. For instance, as we were visiting a traditional field with the independent EW (European) and two provincial agents (Kanakas), the independent EW noticed a kind of lettuce we had not encountered in commercial vegetable-gardens. The agents explained it was a local type of lettuce traditionally used like spinach or lettuce. The EW

asked them why farmers were not growing them on their field for commercial purpose and they replied smiling:

“But it just grows like that, you just sow them and don’t even need to water them, it just grows, why would farmers grow them for commercial purposes?”

Similarly, when the independent EW asked farmers of the GDPL why they do not grow more traditional crops on their vegetable market, they were amused. According to the EW who shows some interest for indigenous knowledge, some of the legumes of the traditional field are highly nutritious and deserve to be grown for commercial purpose. But even if they grow them in their traditional field farmers seem to disregard them for their commercial field.

Talking more specifically about indigenous knowledge, some of the farmers told me that a lot of knowledge has disappeared with older people. Among the many medicinal uses of local plants were known by their ancestors, only a few seem to be still well known by the present generations. It is quite paradoxical to observe such commitment from people to traditional agriculture and in the meantime hearing them talking about the continuous loss of indigenous knowledge.

Organic practices for commercial farming can be found to be both in line and contradiction with traditional agriculture on Maré. Organic practices are very different to the traditional approach, as they require a constant presence on a field that will be used for more than two years. Furthermore, there is no need to supply inputs (organic fertilisers or pesticides) to the field in the traditional approach, the slash and burn method provides the soil with enough nutrients to undergo two cycles of production (yams the first year and a mix of other tubers the second year). Traditional mixed cropping shields crops against diseases and pests. Mixed cropping is also used in organic farming, but not yet to the same extent as in the traditional field. Still, some farmers of the GDPL use similar approaches to mixed cropping on their commercial lot to the one used in the traditional field.

“On this line, I am going to mix golden kumara with the white one, like we do in our traditional fields, it’s to protect them from diseases”

A female farmer of the GDPL Paradise

The difference resides in the fact that on their lot, farmers grow their crops in lines whereas the traditional field has more of systematic mingled structure. However, the relation between traditional cultivators and their crops shares some specificity with the way some organic farmers relate to plants. Crops are considered as living organisms before being a source of food or income. This becomes particularly obvious when traditional cultivators talk about Yams.

“Once I tried to grow my Yams like they tell us to do with other crops. I ploughed the soil and I planted them in lines. But it was not the same, the yams they don’t feel well in soil that has been ploughed, they are not happy and so they didn’t grow well. What they like is to grow in a land that has been burnt and not ploughed, then they can grow big.”

A farmer from the GDPL

“Yams; it’s cultural; they can feel things; if you sell it at a very expensive price then they disappear. Mechanisation does not always work because Yams do not feel like they are in their environment”

A provincial agent

Whether they are cultivators or extension workers with a scientific background, Maréan people always refer to Yams as if they were persons, having their own set of behaviours, temper and feelings. This creates a close relationship between the cultivator and his/her crops, which suits an organic farming approach. The traditional knowledge, the “*knowledge of the old ones*”, is in line with organic practices. The “old people” of Maré used ashes as a repellent and used natural cycles, such as the moon’s, to grow their crops. Most of these practices are still alive in the traditional fields.

5.3.2.5. Threats over the land ownership scheme

Among the promoters of the GDPL Paradise, three are affiliated to the land owner clan. This means they would probably have had access to the designated piece of land without taking part in the GDPL. It also implies that, as members of the land owner clan they will benefit to a certain extent from the rent paid in fruit produce by the members of the GDPL. Some of the other members, not affiliated to the clan, now fear affiliated promoters will benefit from their

work while not working properly on their own one. They also fear that despite the formally set agreement, which gives them access to the land, they could get evicted from their lot.

“Last time, he (a promoter affiliated to the land owner clan) was drunk and he started to threaten us, saying that this land was the land of his clan and that he could get us evicted whenever he wants (...) So we’re working here but we don’t know what will happen next... It’s quite an uncertain and threatening atmosphere”

A member of the GDPL not affiliated to the land owner clan

During a semi-structured interview, a long established tree grower expressed his concerns regarding the issue of land ownership and the GDPL project. He considers that members of the land owner clan do not participate enough to the project and that the relationship between members of the GDPL and the land owner clan is not truly based on the Custom.

“This project should have been based on the Custom, the land owners they can receive (the rent) in nature but they have to come and pick it up on the field, to give a hand [donner la main]... Not by sitting on their chair at home, waiting for the fruits to fall at their feet”

A long established farmer

5.3.3 Project’s achievements

An evaluation of a project is an occasion to highlight problems and difficulties encountered. However, throughout interviews and informal talks farmers also expressed their satisfaction about the project.

“We criticise the Province when we talk with you because it’s a good occasion to get our voice heard, but it doesn’t mean we don’t appreciate what they do for us. They have really helped us you know, it’s great all they’ve done for us, all the loans and grants, and the training we received too. They don’t do that for everyone you know, and it is a real chance for us.”

A male farmer of the GDPL

REFs are conscious of the uniqueness of the project and the advantages they benefit from as project holders.

Further comments about the project's achievements concerned the place of women as project's holders in the GDPL. Some of the REFs expressed their gratitude of seeing women being head of an agricultural project, as it is a first time for the island.

5.3.4 Gender analysis

Labour is gender segregated in Maré. Even though both men and women work on the traditional fields, their tasks are gender specific. Men are in charge of labour requiring strength, such as slashing, and high status tasks such as harvesting Yams. Though women may be encountered slashing their field or harvesting yams, they are most generally in charge of tedious tasks such as hand weeding, harvesting vegetable crops and selling them at the local market. Women also tend to see the traditional field as a mean of subsistence, and they sell the products to the market and rely on cassava and sweet corn grown in the traditional field when the household is short of cash. Men, on the other hand consider it more as a means of social recognition through the Yams' harvest. This is of course a generalisation, the gender officer of the provincial branch of Maré mentioned that each couple has its own way to work and men and women's tasks will vary from one couple to another.

Regarding projects' implementation, the Gender officer of Maré had a rather explicit way to encapsulate the situation.

“For the Projects it's mostly men, because in our culture of us, it's the man who has to. Then one doesn't want to hear others telling him “Ah, but you it's your wife who holds...” especially for agriculture, because here it is men. But when he does the project his wife tells him “Ah, it's you who do the paperwork and the like” but afterward once it has been accepted by the Province she participates to the project and at that time it's often her who looks after the project's success”

A female provincial gender officer

A similar segregation occurs on the commercial lots of the GDPL. Women spend more time overall on the lots than men do. In most households of the GDPL, women are in charge of the

vegetable garden and sell their products twice a week at local markets (Tadine and La Roche). They go to the market as a group. Men focus on trees, which are much more valued and physical work such as installing the irrigation system or tasks requiring the use of machinery.

Once again, each couple on the GDPL has its own way to work. However, it is important to note that when the identified promoter is a male, his spouse is not always addressed by extension agencies. In one case, where the woman is the identified promoter, the husband often plays the part of the identified promoter. However with another couple where the wife is also the identified promoter, the husband strives to put his wife forward and respects her status of identified promoter.

The two single men do not have spouses to share tasks with. They still cultivate vegetable gardens between the lines of trees, but favour tuber crops rather than vegetable crops. They can sell their tubers on the main island or to the local school catering services, which spares them from going to the local market to secure their income while trees are not producing. The market place is almost exclusively female. Males seldom go to the market to sell their products. The gender officer of the Province argued that women from the market would not mock a young man selling his products at the market. Quite the opposite, they would think he is brave to work hard on his field and spend time at the market to sell his products. If the provincial gender officer reckons there should be nothing to be ashamed of for a man selling products at the market, a male extension worker, born in Maré but working in Lifou, thinks the opposite. He observed that men, from Maré and Lifou, do not want to be seen selling their products at the market because they consider it female work. This extension worker strives to encourage single male farmers he works with to go and sell their product at the market to sustain their livelihoods.

5.4. Extension and Support Services

5.4.1. Provincial Services

The Province is a young institution, barely 12 years old, but has still managed to undergo a self-inquiring process throughout this time. The latest reorganisation of divisions and subdivisions serves as an example.

Despite these recent adjustments, the institution still experiences internal communication issues. In Maré, defective communication between the SDR (Rural Development Subdivision) and DEA (Equipment and Spatial Planning Division) particularly affects the GDPL Paradise project. DEA agents do not feel as concerned about the GDPL project as SDR agents, who are responsible for project monitoring, do. Agents of the DEA are in charge of provincial wells' maintenance but are not in contact with farmers. Malfunction of the well on the GDPL Paradise's field had been persistent for the 6 months prior to the evaluation, including three months without water at all. Despite insistent pressure from SDR agents on their peers from the DEA, maintenance had not been carried out properly. Agents of the SDR admitted they did not know how to handle the situation with their colleagues at the DEA.

“But with them it's no use! It's always the same, I went there to talk with him (a DEA agent) but he just does not care. I don't know how to tell them any more, because meanwhile farmers they don't have water and they can't produce properly but them (DEA agents) they just don't care about that, they still get their salary at the end of the month. Each time I go over at the DEA he tells me they will do it but...you've seen; it's still not fixed... it's impossible”

A SDR agent

There seems to be a real need for proper communication systems within the Province. Talking with a Provincial agent of the SDR about the issues related to the Melanesian communication style (see section 5.2.1.4.), this agent explained that this communication format was also true within the Province.

Agents of the SDR involved with the GDPL Paradise are truly committed to the project. On several occasions they expressed their desire to see the project succeeding and project holders to benefit from it.

“This project is very good for them. Our goal for now is to see this project succeeding, we really want it to work because it is a chance for these farmers. We want it to work for them and for Maré”

A SDR agent

On the other hand, agents lack expertise in organic practices and approaches to the project's implementation. The only opportunities they have to train in organic farming are the on-field training sessions designed for farmers and dispensed by the independent extension worker.

This extension worker is not based in Maré and agents are expected to relay his work. They need more expertise in the field of organic farming to provide farmers with accurate information and to gain their trust.

According to the recent streamlining of ESS organised by the SDR, provincial agents are meant to become the link between farmers and institutions. This implies the build up of a trusting relationship between agents and farmers. However, the image of the average provincial agent carried by some agents may undermine such relationships. Many agents do act carelessly, using provincial vehicles for personal purposes, in some cases parading in tribes or ceremonies during working hours. Since agents hold a stable position in the provincial administration, other people from Maré with much less secure livelihoods cannot tolerate the negligent behaviour of some agents. But people do not always make a distinction among agents, and the overall judgement people have on provincial agents is not always positive.

“The agents you see them driving around the island with the provincial vehicles, you don’t know what they’re doing sometime... I don’t know what they’re doing, maybe drinking and parading around.”

A farmer of the GDPL

“Last week-end there was a wedding at the tribe and he (a provincial agent) came with the provincial car, he was playing the rally driver on the dust track, it’s not good for the car... He had had several drinks on top of that (...) but it’s true the one who works with us is not like that”

A farmer from the GDPL

The rather irresponsible behaviour of some agents destabilises the work of their colleagues, as they cannot work under trustworthy conditions, often they cannot use the equipment they need for working since it used by someone else for personal reasons or has been damaged. Ultimately grassroots people lose confidence in the agents either because of the image conveyed or because they are not able to do their work properly.

These internal issues affect the agents’ work and relationship with the farmers. The Province took a major part in the GDPL Paradise project and is accountable for responding to certain

needs of the farmers, especially the well's maintenance and sufficient support services. Agents directly involved with the project are committed to their work, but they often have to rely on some of their provincial counterparts, and cannot always do so.

Project design has now been assigned to the chamber of agriculture, which works directly with the farmers on their application file. This avoids confusion about political influence on the acceptance of applications for grants and loans. Furthermore it lessens the provincial agents' workload. Agents can now focus on project's monitoring and support during the project's implementation.

5.4.2. Training and Technical advisory

Training and technical advisory are the responsibility of the CFPPA, funded by the provincial division of professional training (DEFIP). The CFPPA manages the 500 hours of training required for the farmers' establishment-grant (DIA) and organises on field training sessions with the Arbofruit's technical adviser for arboricultural training and an independent extension worker for organic practices. On occasions, the CFPPA will also invite guest trainers from the main island. The CFPPA trainer on Maré is not Kanak, but has been on the island for years.

CFPPA

Farmers from the GDPL said they were satisfied with the 500 hours training they received. When asked to suggest potential improvements on the training, they did not believe improvements were necessary. Nonetheless, farmer's behaviour on their lots still demonstrates a certain lack of proficiency in some fields such as machinery maintenance, farm management and soil-plant biochemical relationship. These topics were supposedly covered by the 500 hours training, but may not have been properly assessed. The Province now wishes to instigate a formal assessment at the end of the 500 hours training. The idea is to set a final examination at the end of the training period to assess farmers understanding of the covered topics and in the end deliver a diploma. The CFPPA trainer of Maré is opposed to the idea, as he considers delivering a diploma for the sake of a diploma to be a mere administrative token.

Throughout the 500 hours training period, the CFPPA trainer helped the farmers now involved in the GDPL Paradise, in planning their investments, particularly with regards to machinery. Part of the machinery farmers have invested in was supposed to be used part in common and part individually. However, some of the farmers at the time of evaluation still did not know whether they were supposed to share some of the machinery or not. Tensions regarding the use of machinery have been reported throughout the evaluation. Some of the machinery, in which farmers have invested with the CFPPA trainer's advice, is unsuitable for the size of the lots and the return on investment farmers can expect from it is probably negative. Two of the farmers have invested in cars to provide transport of fruit, but one of them does not even hold a driver's licence and trees will not produce fruit for the next three years. One of the farmers invested in a pneumatic seed sower designed for intensive agriculture, the cost for this piece of equipment is 800 000 XPF when manual seed sowers could have been made available for 15 000 XPF.

Training sessions organised by the CFPPA in Maré lack structure. Sometimes REFs are not even aware that the training session will occur on their field. Often, the topic is decided on the morning of the training day. This could allow farmers to choose what they want to learn or practice on the given day, but often they are short of ideas and have had no time to prepare a section of their lot and the training day feels like a waste of time. Once, a training session was supposed to take place on the GDPL field. The aim of this session was to familiarise farmers with the pneumatic seed sower. It took a whole morning for the trainer to figure out how this piece of equipment, in which a farmer had invested a year ago, was working. Meanwhile, farmers had planned nothing for the day because of the training and have hence lost a morning of work. On top of that, once the trainer had sorted how to operate the machinery, they drilled a line with carrot seed. A month later the seeds still had not germinated. In Maré, training sessions are not as well advertised as they could be. On the neighbouring island, Lifou, the CFPPA trainer and the trainee farmers advertise upcoming training, weeks in advance via networking, posters or even the local media. They even make sure that transportation is arranged for every participant.

Even if the CFPPA trainer's attitude and management skills appear as rather ineffectual, farmers still show a lot of respect for him. They have a strong relationship based on trust and respect. Some still deplore the fact that he is often late for training, but overall they are satisfied with the training provided. As for the trainer himself, he is really committed to the

farmers. He tends to overexert his trainer's assignments up to fixing the machinery himself or ordering pieces of equipment for the farmers. He acknowledges that farmers rely on him too much. Farmers say they would rather deal directly with the trainer than the provincial agents. One may label the relationship sustained by the CFPPA trainer with the REFs as mollycoddling. This might not be completely unfounded and could explain why farmers show so much dependence on their trainer.

Arbofruit

Arbofruit is a local association created 20 years ago, therefore it has accumulated its own knowledge on arboriculture in the context of Loyauté. Technical advisory is one of the services offered by this structure to its members. In Maré, Arbofruit's technical adviser, Kanak from Lifou, also takes part in training organised by the CFPPA.

Farmers from the GDPL Paradise have benefited from this type of training, and are members of the association. They acknowledge and appreciate the technical adviser's expertise and knowledge. They regret the recent decrease in frequency of the adviser attendance at field visits.

"We haven't seen him (Arbofruit's technical adviser) much these days, but when he comes on the field it's good because instantly he can tell us what is wrong. If one sapling has a disease or lacks something he can tell right away, but us we don't see that. We don't have the eye like he does. Same for pruning, we have to do the pruning now but we're not sure how to do it. It would be good to have him over, because I've done some pruning lately and I would like to know if I did it wrong before I keep on. Though last time we had a training but I'm still not sure about the way I prune."

A female farmer of the GDPL

Over the two months duration of the evaluation, the CFPPA organised one arboricultural training session (half a day) focusing on shape-pruning young avocado trees. The CFPPA trainer cohosted the workshop and participants were therefore split in two groups. The workshop was practical and each participant was invited to prune a couple of trees.

Independent Extension Worker in Organic Practices

The independent extension worker (EW) was contracted by the Province to handle training in organic practices. The CFPPA makes the link between farmers and the EW. Like other workshops handled by the CFPPA, farmers are not always informed of the visit of the EW. In such cases, workshops are replaced by a brief monitoring session of the lots of present farmers. The independent EW comes to Maré every two weeks for a day or two, and since farmers are not always informed of the visit, he has trouble establishing a relationship with some of the GDPL promoters.

The independent EW also supplies the farmers with organic fertiliser and pesticides, along with locally adapted seeds. Farmers, who do not find these products efficient, do not have full confidence in the EW. Only two households do take his advice seriously. It has to be noted that this EW is particularly passionate about organic practices, hence he tends to get carried away in his explanations and uses a lot of jargon or scientific words. For instance, one of the organic products he recommended happens to be photodegradable. As he was telling farmers how to handle the product he used the word “photodegradable”. The following visit, farmers were complaining about this product’s efficiency. As they discussed the matter, a farmer explained they were applying the product in the morning. Although every member of the GDPL is perfectly fluent in French, the understanding of scientific jargon can be limited. Furthermore, from a cultural angle, the way to describe things in Nengone (the indigenous language) may be different to French.

Albeit his evident concerns regarding the value of Indigenous Knowledge, and that this EW has lived a long time in New Caledonia, he did not spend enough time in Maré with the REFs to be able to incorporate indigenous knowledge into the practices he recommends.

5.4.3. Research

The IAC research station was established on Maré in 2000, replacing the French CIRAD which did not manage to work in line with the Province’s objectives. The IAC in Loyauté has been part of the Rural Development Support Centre (CADRL) since its creation in 2001. Today, the research station of Loyauté is no longer a delocalised French research institute

(CIRAD), but rather a locally adapted research station (IAC). The IAC undertakes research in Loyauté, exclusively on topics defined by the Province.

The main research undertaken by the IAC since its installation in Loyauté focuses on avocado post-harvest quality. This research program was requested by the Province in response to marketing problems encountered. Part of the avocado's production reaching the main island is indeed too ripe or damaged. This is due to a lack of precision regarding the time at which farmers collect the fruit from the trees. The research is presently undertaken on-site by IAC with some support from HortResearch New Zealand. Some long established farmers have lent some of their lots for research purposes, but do not seem to see the point of such research. Experimentation is a long process, for which some farmers do not seem to be prepared.

“The guys from the research station they come on one of my lot and they do their little experiments and they tell me to do such and such on it... Yes, but meanwhile I have to get my production ready! (...) I can't remember how long this trial has been going on but I start to have enough of it, they keep on cutting my fruits...”

A long established orchard farmer

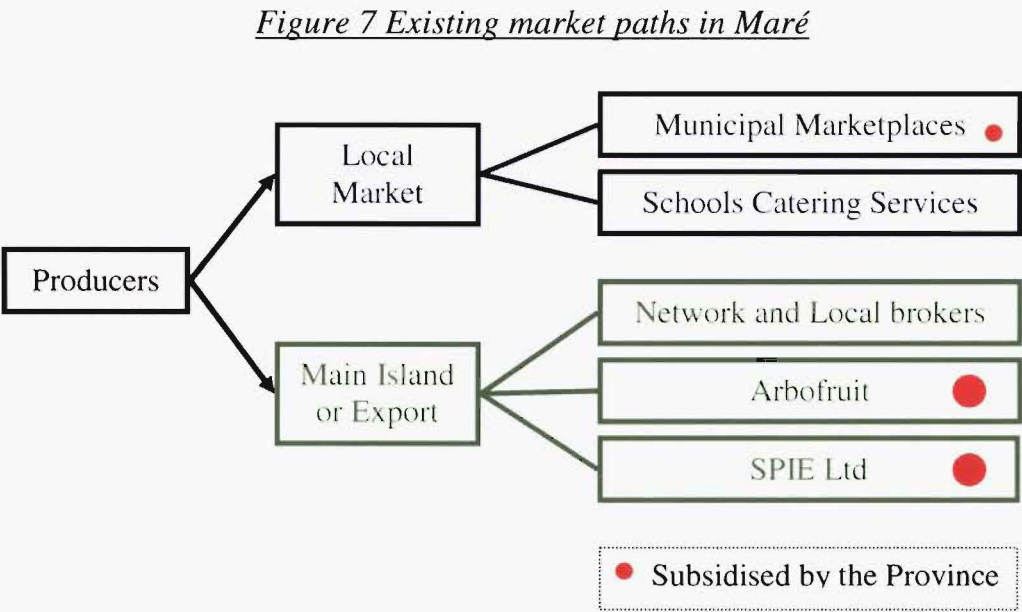
Research on organic practices started in 2002, when farmers from the GDPL were starting their project. So far, REFs of the GDPL have not benefited from locally undertaken research. There has been no research undertaken regarding Indigenous Knowledge, and no local knowledge inventories have been made so far. The IAC has worked with an ethnopharmacologist on pharmaceutical traditional plants, but not on traditional agricultural practices.

For the whole Loyauté territory, there is only one IAC researcher with an assistant and manual workers of the CADRL. They are based in Maré. There is a lot of research work to be undertaken on the islands, but the IAC branch of Loyauté is limited in personnel. During a semi-structured interview, the IAC researcher explained they would like to do more in terms of sharing information and knowledge with grassroots people, especially regarding organic practices. The research station of the CADRL in Atha could support such efforts. It has not been done yet, mainly because of time and labour constraints. Being part of the CADRL is a great asset for the research station because it is directly in touch with the fruit producers'

association (Arbofruit) and the training centre (CFPPA). Despite being created only recently, this structure already allows interdisciplinary exchanges. However, from the IAC branch’s perspective, it was mentioned that boundaries around the responsibilities of the CADRL member agencies are sometime ambiguously defined or overlapping. In order share knowledge and information about organic practices at the grassroots level, the IAC and CFPPA would have to work jointly and define their respective roles for that matter. They have not yet had time to arrange it.

5.4.4. Commercialisation

The existing commercialisation paths in Maré are presented in figure 7. Producers can sell their products on the local market (mainly vegetables and some fruits and tubers), on the Nouméan market or for export (lychees, citrus fruits and avocados exclusively). Products for export all transit by Nouméa.



Source; personal

Local market

Producers of Maré can sell their products locally in marketplaces. Tadine and La Roche have the biggest ones, but each tribe also has its own marketplace designed for small production.

Tadine is the main tribe of the Guahma district, where the majority of Provincial workers and schoolteachers live. These people, with stable incomes, are mainly French expatriates and do not have a traditional field for subsistence. Kanak teachers and provincial workers do have traditional fields but cannot spend enough time on it to grow subsistence crops. Tadine is therefore the biggest marketplace of Maré. Market day is on Thursdays in Tadine.

Located in front of the aerodrome, La Roche's marketplace was the first municipal marketplace to be built. However, the district of La Roche and the neighbouring ones are predominantly populated by cultivators. Producers could not sell their production and would play the leftovers in the "traditional" Bingo games that take place after each market day. For that reason most of them prefer the marketplace in Tadine, which has less structures but more customers with money to spend. Market day in La Roche is on Tuesdays.

Women from the GDPL do both markets and manage to sell the production from their vegetable gardens. They advertise their production as organic, even though there is no certification yet, and French expatriates seem to be quite responsive. However, some women asserted that the pricing system was not ideal. The marketplaces' committee, mainly comprising men, sets the prices and people who sell their product at the market, almost exclusively women, are expected to abide by the fixed prices. Sometimes, prices do not change for a whole year, despite the seasonal effects. Moreover, quality of products cannot be valued, since prices are set for each crop regardless of the quality of products sold by each woman. Faugère recorded similar observations in 1996 (Faugère 1996b), and it seems that things have not changed. The discussion I had with some women of the GDPL well illustrates situations the fixed price system can lead to.

"- We sell our products cheaper than the fixed prices, because the prices are too high sometimes, yes it's expensive, so we sell cheaper. It's the committee that decides on the prices but they don't ask us about it, they just decide.

- And what do the other women say about you selling cheaper?

- They don't know because we don't tell them.

- But then the customers, do you think they recognise that you sell cheaper?

-Hmmm... I don't know about that "

School catering services are another outlet on the local market for producers of Maré. Catering services have a high demand for tubers, vegetables and fruit. Production volumes have to be substantial and regular throughout the school year. Some farmers of the GDPL already work with catering services, they sell tubers (kumara), vegetables and fruit (watermelon from the vegetable garden, citrus from their orchards on the tribe). This is a very attractive market since large quantities can be sold without spending an entire day at the marketplace. This is an appealing incentive for single male farmers. One female farmer is quite responsive to the catering service outlet and is now trying to organise her production to suit the demand. However she cannot produce enough on her lot and now wishes to organise the production at the GDPL scale to secure this market.

In 2003, the municipality launched a project for a central catering service on the island. The demand will therefore be concentrated and the project will strive to give priority to local production.

Main Island and Export

To sell products on the mainland there are two main channels available to producers. There is a formal one, embodied by commercial structures such as SPIE Ltd and Arbofruit, and an informal one, which entails family networks and brokers.

Family network

There is an estimated population of 3000 Maréan people living on the mainland, mainly concentrated around Nouméa. Family links are preserved despite partition, and members of the family staying on Maré often rely on the expatriate members to sustain their livelihoods.

Those on the island cultivate a traditional field for commercial purposes and ship their products to the family in Nouméa. The family in Nouméa sells the products via individual networks or on marketplaces. Products involved in this type of transaction are mainly tubers such as Yams for Kanak customers of Nouméa or Taro highly sought after by the Wallisian community.

People involved in this type of trading system seem to be satisfied by the added value they can get. However given the cost of freight, volumes have to be quite significant to make any profit. This commercial channel is mainly informal and therefore rarely subject to tax.

Brokers

Brokers in Maré are people who independently organise commercial channels to Nouméa, usually using personal networks. Their role in the market between Maré and Nouméa is said to become increasingly important, although the amount of production running through this channel is difficult to evaluate.

SPIE Ltd

SPIE Ltd was started up in the 1980's by producers from the Loyauté willing to promote their products on the main island while sponsoring their political party. Nowadays, SPIE Ltd is apolitical and operates over the whole territory. SPIE Ltd is specialised in vegetable and tuber trade on the territory and imports from overseas. The company also trades fruit on the Caledonian market, though Arbofruit is still dominating this market. SPIE Ltd has a high potential as it is working closely with major retailers on Nouméa.

There is one trade person on Maré, in charge of collecting products and shipping them to Nouméa. However, SPIE Ltd does not seem to be well known by interviewed producers. Interviewed farmers of the GDPL did not even know about this outlet. The trade person on Maré does not seem to have clear marketing objectives and deals with the production as it comes. On the other hand, back in Nouméa, executives of the company blame the lack of consistency of the Maréan production, which from their point of view is not responsive enough to the demand from the mainland.

SPIE Ltd deals mainly with vegetables but executives seemed to be keen on having a share on the fruit market, held by Arbofruit. However, SPIE Ltd does not seem to be interested in traditional vegetables apart from Yams and kumara. Development of markets for traditional crops such as Wael and some legumes is not among the company's priorities. According to the company's executives the demand for indigenous products seems to be satisfied by informal channels and the offer is not constant enough. But their awareness of indigenous products' potential also appeared limited throughout the interviews.

SPIE Ltd appeared to be waiting for improvements in the organisation of the production on Loyauté, but cannot be seen as playing a major part in helping such development in Maré. SPIE Ltd is entitled to benefit from subsidies on trading exchanges between the Loyauté and the main island, but does not take advantage of it. Still at the local market level, SPIE was

invited by the municipality to take part in the central catering service. This could result in an increased presence of the company on the island and enhance its role in the market.

Arbofruit

This association of fruit producers originated from the Loyauté in the early 1980's as the first avocado orchards were established. The association now operates over the whole territory and connects producers from the three provinces. Arbofruit is providing technical advisory and commercial services. The association holds the export unit at the international airport of Tontouta, and is presently the only structure exporting fruits from the territory (lychees and avocados).

Arbofruit has long-term experience in the fruit business in Caledonia and in exporting, and has proven to be a very dynamic structure, striving to look for new openings and developing opportunities for its members. The personnel are competent and have acquired a real savoir-faire in the area.

However, because of its associative status, Arbofruit experienced troubles in 2003 with regard to commercialisation. Associations have a restricted right to commercial activities, which Arbofruit had surpassed in the last years. The total gross revenue of the association was indeed over the allowed limit. As a consequence, the Southern Province closed the subsidies allocated to the association for commercialisation. The Province des Loyauté took over in 2003, but a change of status was urgently required. Arbofruit could not become a cooperative, because its members were opposing it. Caledonian producers do not want to be tied to a single outlet and Arbofruit's members wished to preserve their freedom to be in business with several outlets. In August 2003 the decision was made to call upon a private investor for the commercial activity of the association, in order to preserve the present status for technical advisory and other services. With regard to commercialisation, it has to be acknowledged that members' satisfaction is not unanimous. Some farmers expressed their disappointment regarding prices at which Arbofruit buys their products.

“Yes we are members of Arbofruit but we don't like to sell our fruits [from the orchard on the tribe] to them because their prices are not good. So, we used to deal with an old farmer from the tribe who acts like a broker and now it's even better we've found a partnership with a grocery in Nouméa. The

price they give us is much better (...) Yes, even after we've paid the freight and other expenses we still get much more money than when we sell to Arbofruit."

A farmer from the GDPL Paradise

Some farmers even suspect that Arbofruit is making excessive margins on the fruit bought from them. Given the fact that Arbofruit is subsidised for its commercial activities one would indeed expect a fair price to be paid to producers. As long as Arbofruit was an association there was no reason to make excessive profits. Throughout the interviews with staff and the president of the association's board, I felt that the association was really committed to the producers' welfare. The only plausible reason then for such low prices paid to producers, would be inaccurate management practices and/or choices of marketing strategies. These likely reasons, however, could not be assessed or precisely identified during the research.

Commercialisation structures are present on the island and should be able to respond producers' needs. However, the fact that local producers strongly rely on personal networks or brokers shows the low utilisation of formal commercialisation structures. This is also due to the fact that local producers are not willing to limit themselves to a single marketing structure since having a number of business relationships is seen by some as a way to secure their livelihoods.

5.5. Summary

Throughout this chapter, the benefits and problems experienced by households involved in the GDPL Paradise project have been related in terms of the way these people felt at the time of evaluation, along with changing circumstances throughout the period of the project evaluation. This chapter also includes results from the evaluation of ESS in Maré. Technical advisory and training services, provincial services and commercialisation structures are described and the opinions that farmers have about these services are presented. Maré benefits from a wide range of Extension and Support Services agencies staffed by people with good will and competency (in most cases). However there is still a certain lack of coordination and consensus among agencies and structures. This is probably due to a need for time to adapt to the recent changes meant to improve the organisation and efficiency of ESS in Maré.

6.1. Introduction

The research aimed to assess the ESS in Maré based on the participatory mid-term evaluation of the GDPL Paradise project. The discussion is articulated in three main sections. The first section (section 6.2.) is an analysis of the livelihoods of the households directly involved in the GDPL Paradise project, using the Sustainable Livelihood Framework presented in the literature review (section 3.3.). The aim of the discussion in section 6.2, is to establish a better understanding of the livelihoods of the people involved in the project, how they are affected by the project and the sustainability of these livelihoods. This is appropriate, since the Provincial development policy includes sustainability.

In the second section (section 6.3.), the project management approach used for the GDPL paradise will be discussed based on the research results. Finally, in the third section, the ESS system in place in Maré and the global approach taken by the Province and local agencies will be discussed in the third section. Discussing the management of the project and ESS approaches will allow a better understanding of their impact on people's livelihood. Based on theoretical frameworks for extension services and project management, this second and third parts of the discussion shall bring to light possible improvements in these fields.

6.2. Sustainable Livelihoods Analysis – GDPL Paradise

The DFID Sustainable Livelihood Framework (SLF) has been developed to help understand and analyse the livelihoods of the poor and the effectiveness of efforts made to reduce poverty (DFID, *web resources*). Though households of the GDPL do not live in poverty, as commonly received (*ie.* low access to food, health care, education or shelter); a better understanding of their livelihoods will be an asset for the project's further implementation. This discussion is based on the livelihood approach because it offers a way of thinking about the objectives, scope and priorities of development (DFID, *web resources*). Furthermore, the SLF provides a holistic and integrated view of the process by which people achieve or fail to achieve livelihoods (Scoones, 1998; cited in Brock, 1999). This shall help determine the extent to which development initiated through the GDPL Paradise project is sustainable.

6.2.1. Vulnerability context

There are different critical trends people involved in the GDPL Paradise project may be affected by. Water scarcity, climatic conditions, pests and diseases on the field, land ownership issues and political trends are some of the main undermining conditions identified by people of the GDPL.

6.2.1.1. Water scarcity

Access to reliable water supply motivated the project's instigation. Farmers initially had plans for orchards on their tribes, but would have faced irrigation problem since ground water near the shore is brackish. One of the project's primary objectives was to group farmers facing the same problem around a provincial well, hence guaranteeing access to water for irrigation purposes. However since the project's implementation REFs of the GDPL have experienced problems with the well. Participants ranked this issue as the most undermining problem they are facing. They have experienced continuous water shortages over the three months preceding the end of the fieldwork. These problems were linked to a deficient maintenance from the provincial subdivision in charge. The unreliability of the water supply makes the farmers vulnerable in terms of the health of their crops.

The Province suggested the relocation of farmers around the well and is directly involved in the project. Though the division in charge of the project (DAE) is not the division responsible for the well (DEA), farmers do not perceive the Province as several entities and feel let down by the Province as a whole for not taking responsibilities with regard to the well's maintenance. Farmers of the GDPL are expected to install the irrigation system on their lots, but do not see the use of such an investment if water is not available throughout the year. Saplings and vegetable gardens suffer from the lack of water, this undermines future fruit production as some saplings are dying and current vegetable production, on which households of the GDPL rely as a primary source of income until trees reach production. By the time of the fieldwork, farmers were increasingly worried by the water issue as the dry season was coming closer. Fortunately, the problem was said to be solved by the end of the fieldwork. However farmers still face vulnerability in terms of maintenance of the well and the Province has to be consistent in that respect to minimise this vulnerability. In the project's design the well was supposed to be an asset, not a constraint or issue that causes vulnerability.

6.2.1.2. Climatic conditions

Farmers of the GDPL expressed complaints regarding damage caused on the field by the constant wind blowing on the plateau where their lots are located. Indigenous knowledge could have foreseen such a problem. Before colonisation the plateau was only covered by high grass, only plants able to cope with the wind, and even after the introduction of Brazilian pepper only few people would choose this location for their traditional fields. The lack of a proper design for the project led to the slashing of all existing trees on the lots, though they could have been used as natural windshield. Farmers were given advice to plant trees as windshield around their lot but only a few took the advice. The reason why they chose not to plant windshield trees could not be identified, but this reveals a lack of understanding of commercial farming practices. With regard to the wind problem, traditional strategies have been ignored in the project design and farmers have not successfully integrated commercial farming practices either. This has left farmers vulnerable as regards the survival and growth of their crops.

Furthermore Maré is a tropical island subject to cyclones over summer. As a LEF remarked during the fieldwork's closing meeting, REFs of the GDPL have not experienced such problems yet. If REFs of the GDPL are already struggling with orchards' installation, one may form sound reservations regarding their present ability to cope with natural disasters such as cyclones. Have these farmers received proper orchard management training, allowing them to face such catastrophes? Needless to say, subsidies would be made available subsequently, but there will still be additional workload, occasioned by damages, that farmers will have to manage. Orchard management practices should allow REFs to prepare their orchards prior to a cyclone, but they already experience difficulties managing their workload under reasonably quiet conditions. The low maintenance observed on the lots, off cyclonic season, justifies fears for damages possibly caused during the cyclonic season. Besides, some of the farmers have installed structures for their warehouse, but corrugated iron panels cannot be installed yet, because there is no electricity on the field. Corrugated iron panels are stocked on the lot and since the warehouses are not built yet, pieces of agricultural equipment are stored unprotected on the field. If a cyclone were to occur in 2004, not only would it damage plants on the field, but it would also damage machinery and structures in which REFs have recently invested.

Finally, climatic conditions have an effect on people's health. Strong winds lift up dust and soil particles. This affects people with asthma conditions. One of the promoters had to be hospitalised for three days during the fieldwork because of a severe asthma crisis. He told me he had been working hard on the field despite the wind the days preceding the crisis. Members of another household, who spend the working week in a woven shelter on the field, suffered from influenza. One by one, each member of the household became ill over a three weeks period. Though their condition did not require hospitalisation, progress on their lot was slowed.

6.2.1.3. Pests and diseases

Pest and diseases management is an important issue on the GDPL. Organic inputs used by Refs of the GDPL have not been specifically studied in the context of Maré. Local pests such as Chrysomelidae cause great damage on the vegetable gardens, undermining the production. Though trees have not reached production yet, LEFs who turned to organic practices also face problems with their fruit production. Research designed to anticipate locally adapted pest and disease management had not been undertaken early enough and farmers now have to come up with solutions while already in production. Though some of the organic inputs recommended to REFs (such as Neem oil) are supposed to be efficient against local pests, many farmers of the GDPL are not satisfied with the results. If these inputs were indeed proven effective, this could imply that training in organic practices has not been handled properly and that farmers do not apply these inputs appropriately.

Vegetable gardens are the main source of income while trees are not yet in production. If pests damage the vegetable production, this has direct consequences on the farmers' livelihoods and financial ability to repay their loan. Though deadlines for loans' repayment have been postponed until 2005, families of the GDPL are still worried about the amount of money they have to repay and wish they were able to save money now for the loans' repayment.

The independent EW suggested the use of protective nets against insects. This low investment technique still requires meticulous management and training. This new practice should be planned carefully to ensure effectiveness.

6.2.1.4. Land ownership issues

With access to water, land ownership was one of the main issues motivating the project's initiation. In Maré, land for commercial purposes is often difficult for farmers who are not affiliated to a land owner clan.

The GDPL Paradise project is the only one of its kind in New Caledonia because it is the first time that clan land was made available to farmers not affiliated to the clan. The Province and customary authorities worked hard on making this first attempt. The realisation of such efforts has to be seen as a success by itself. However, some REFs of the GDPL are in fact affiliated to the land owner clan. They could have had access to the project's site without the project's help. In fact some of the promoters claim themselves as land owners. This has already created tension within the group of REFs and non-affiliated promoters feel their access to the piece of land may be threatened. They have considerable investments in this project. Furthermore, they are filled with the desire to work on this land for the next 25 years (as specified by the palaver act) and even to see their children taking over. For some of these farmers, being a promoter is a unique way to achieve their livelihoods and threats on their access to the designated piece of land undermines the sustainability of their project.

Though agreements have been set "on the paper", non affiliated promoters still suffer from the pressure and threats sometimes inflicted by affiliated promoters. Efforts made by the province and customary authorities have to be sustained to reinsure these promoters and secure their access to land as stated by the palaver act.

6.2.1.5. Political trends

The political situation in New Caledonia is stable as compared with other islands of the Pacific or as it was in Caledonia in the 80's. However, participants repetitively pointed to political issues as destabilising the project's implementation in Loyauté. Mainly, they criticised the political game between the Municipality and the Province throughout the project's implementation and the internal political games within the Province at election times. Out of the three islands of Loyauté, Maré is clearly considered as the island where political issues have most influence.

Whether or not suspicions at the grassroots' level regarding political enmities between the Province and the Municipality are founded; these suspicions create a dubious atmosphere that does not favour people's confidence in politicised institutions supposedly working for the island's development. These administrations need to work on improved communication between themselves and with grassroots people.

Hopefully, the OGAF (Opération Groupée d'Aménagement Foncier – *Spatial Planning Joint Program*) initiated by the Province and the Municipality of Maré will facilitate improved coordination between these two administrations and renew confidence at the grassroots level. *A description of the OGAF development tool is available in appendix 8.*

6.2.2. Livelihood Resources

The DFID sustainable Livelihoods Frameworks helps identifying assets upon which people build their livelihoods in response to a given vulnerability context. These assets are categorised in 5 capitals; Human, Social, Natural, Financial and Physical. A sixth capital, Traditional capital, particularly important in Pacific Islands has been identified by Cahn (2002) and will also be discussed as it suits the context of Maré.

Compared with other farmers from Maré, especially LEFs by the time they are established, people involved in the GDPL Paradise project benefit from an increased access to most of these capitals thanks to provincial, institutional and customary assistance. Based on the results of the research, capitals on which people of the GDPL can rely as a result of the project are presented and discussed below. The analysis also considers whether these capitals have been provided or supported by the project.

6.2.2.1. Human Capital

Human capital represents the skills, knowledge, capacity to labour and good health that allow people pursuing different livelihood strategies and achieve their objectives (DFID, web resources).

Indigenous knowledge and local practices are well anchored in farmers' minds. However, they tend not to rely on it as much for commercial agriculture as they do for traditional

agriculture. The training in mechanised and organic agriculture they received satisfies them, however they still confess a certain lack of proficiency regarding the use of organic inputs. Exterior knowledge, especially with regard to organic practices, does not seem to have been fully assimilated. However information is available on Maré, there is a strong presence of extension and research agencies on the island, and the Province is making efforts to foster this situation. Still farmers of the GDPL are expecting the information to come to them rather than showing initiative.

In terms of labour force, each promoter is in a different situation. It goes from single farmers who can only rely on themselves for workforce, to couples sometimes relying on the oldest child or extended family for extra labour. The RIL scheme enables farmers to call upon extra labour force or at least to generate income from the work made on the lot by a member of the household. However improved management skills should also allow them dealing with the labour shortage they experience.

Some farmers and members of the GDPL households have health conditions. One promoter is declared handicapped, another promoter has an asthma condition and those living in a woven shelter are more sensible to viruses such as influenza. These conditions are affecting GDPL farmers and families in their everyday work. However, Maré has a good quality health-care system and access to treatment is rather straightforward. There are two main dispensaries, and the health-care system is well subsidised. Therefore, people do not have to pay for health care.

6.2.2.2. Social Capital

The first social entity, after households, at the GDPL level, would be the group of farmers itself. However farmers of the GDPL do not act as a group. The Mandator who should foster links within the group does not manage to do so. Truth is that this group is too heterogenous to achieve group dynamics. However, women within the group still manage to achieve dynamics to some extent. They go to the marketplace together, look after one another and exchange information.

Some extension workers have argued the group needs a leader to create dynamics. Someone who achieves superior results on his/her lot and able to act as a “leader and good example” for the group. However, after discussion of the matter with Kanak farmers, REFs and LEFs, and

other extension workers, the idea of a leader farmer within the group was not considered suitable. This would only generate resentment and feelings of inadequacy within the group, especially among farmers needing more time to catch up.

Farmers of the GDPL are all members of the fruit producers 'association –Arbofruit. They should be able to rely on the association for technical advice but also to exchange information with other farmers, particularly LEFs who are willing to share their experience. However, farmers of the GDPL do not seem to draw on this social asset as much as might be expected.

Customary authorities, which guard social cohesion on the island, played an important part in the project's implementation. The High Chief of Tawainedr, considered as an innovator, participated to the project's design and has been of great help in making available the piece of land REFs of the GDPL are now working on. Land issues are often seen as a constraint to agricultural development. The efforts made by customary authorities with regard to land attribution for the project were crucial to its implementation. The High Chief of Tawainedr expects a lot from the project for its community. Now that the project is underway, customary authorities' support has lead to additional pressure on the promoters to succeed. However, customary relationships are an informal safety net for the promoters, even though it is criticised by some as time and money consuming. For the promoters affiliated to the land owner clan, the clan is an even more important social entity in terms of livelihood, as they will benefit from the project having the status of clan members. Since they are members of the land owner clan they can indeed expect indirect benefits from the payments made to the clan by other promoters. What poses a threat on some promoters' livelihood (non-affiliated to the land owner clan) is perceived as an asset for others (affiliated to the land owner clan).

6.2.2.3. Natural Capital

In terms of natural resources available to the households of the GDPL, land and water should be secured. Farmers have experienced difficulties with water but are now able to rely on the Provincial well. These two resources are the most important for agricultural purposes. Though the ground water lens is fragile, agricultural practices in place on the GDPL will contribute to its preservation. However Maré is not yet free from the use of chemical inputs and in order to sustain the protection of the ground water lens, other farmers of the island will have to consider giving up or lowering their use.

Despite the strong winds, soil on the field will remain protected from erosion as long as organic practices are in place. The use of an environmental friendly shredder to slash the lot protected the soil's structure. Regular application of organic matter via mulching should preserve the soil's fertility. As compared to traditional slash and burn techniques, farmers of the GDPL can expect sustainable use of the land they have been allocated for the next 20 years. The land the six REFs have been provided with is definitely an asset and should be regarded as such even though it is also a potential source of vulnerability to some of the farmers.

In terms of biodiversity on the field, the use of traditional crops is an additional asset that should be promoted. With regard to fruit production, the significant history of avocado production on the island has led to the building up of local knowledge in the area. Furthermore LEFs from the island have imported and developed a range of varieties adapted to the local environment and diverse enough to allow an almost all-yearlong production. Farmers from the GDPL will be able to benefit from this accumulation of knowledge and from the wide range of locally adapted avocado varieties on their fields.

Most of the households of the GDPL still have a traditional field close to their lot or on their tribe on which they can rely for subsistence.

6.2.2.4. Physical Capital

Infrastructure is well developed on the island and farmers from the GDPL can rely on a reasonable range of infrastructures (roads, tracks, buildings and power sources) to achieve their livelihood.

Roads on Maré often suffer from damage from strong rainfalls but are always passable. However half of the households of the GDPL do not own a car and have to use their tractor as a mean of transport. Bus services are minimal on the district of Tawainedr and the bus timetable does not suit farmers' schedule. The last bus passes the project's site at 4.00 pm. Farmers without a mean of transport cannot stay late in the afternoon on their lot. For that reason, farmers without a car use their tractor as a mean of transport. The recent building of a shortcut between the field and the main road to the farmer's tribes reduces the time spent on the road by farmers.

Women go together to the market and use the car of one of the farmers whose wife also goes to the market. Problems arise when training sessions or meetings are organised on a farmers' field in another district. There are usually no arrangement made for transportation, and farmers do not attend training or meetings when they are located too far from the field or tribe.

Secure shelter and warehouses to store machinery are planned to be built on the field but are not ready yet. Electric lines have not been brought to the field and welding work cannot be carried out. Each household has secure shelter on the tribe, building proper housing on the field was never planned as it would be a breach to the contract with the land owner clan. However, farmers expect to be able to build shelters on their lot in order to stay on the field during the working week.

Provision in agricultural supply is managed by the provincial agents, the training agency (CFPPA) or the independent extension worker from the main island. There is no structure on Maré specialised in agricultural supply. Gardening seeds are available from the convenience stores of the island at high prices. A specialised structure close to the centre for rural development (CADRL) will soon be established. Arbofruit has been appointed to be in charge of this structure, which would be a considerable asset for farmers.

Market places are very important to most of the farmers' livelihoods. Women of the GDPL have arranged their schedule according to market days and manage to travel together to the marketplace. Marketplaces are well maintained, and more than being just places of trade, they offer good opportunities to foster social links among women. However women selling their products still have little control over the marketplace, this issue will be more specifically discussed in section 6.2.3.

6.2.2.5. Financial Capital

Promoters of the GDPL have benefited from a set of financial support never experienced before on the territory. Financial support they received for investment comprised a combination of loans and grants without them having to contribute their own equity. Only one promoter chose to bring his own equity to the investments. This financial support scheme was designed to allow farmers with low or no financial assets to take part in an agricultural

project. Although, most of the investments were covered by the establishment grant, farmers still contracted loans to pursue their project. They were supposed to repay part of the loans by the year 2003, but the incomes generated by the project so far were too low and the deadline had to be postponed. People from Maré easily admit they not familiar with money issues. Faugère (1996b) drew similar conclusions from her study in the district of Tawainedr. For instance, some of the farmers do not always seize the logic of investment. A female farmer of the GDPL recounted the dilemma she was facing when offering the other REFs the chance to invest jointly in a second hand power generator for the field. The power generator she had been offered to buy cost 150 000 XPF, and was powerful enough to provide energy to the 6 lots and allow welding work to be carried out. Other farmers said they would prefer to invest individually in new though less powerful generators costing 80 000 XPF each. However, 150 000 shared by 6 would have come to 25 000 XPF each.

Observation and discussion during the fieldwork suggested that access to financial capital made available to these farmers was excessively high in comparison to their needs and their ability to manage investments. Few of them actually comprehend the impacts of the investments they have realised. They started to assess it when they first faced the loan reimbursement's deadline and could not pay. What was designed to be a capital asset may in fact be an area that contributes to the vulnerability of the REFs and the project.

The six REFs are registered at a local accounting bureau - *Case de l'entreprise* -based in Lifou, but interviewed personnel of this bureau declared they did not know about the GDPL Paradise. This bureau should assist farmers in dealing with investment and repayment of loans, but at this stage is not providing this assistance

6.2.2.6. Traditional Capital

The people of Maré cherish traditions. The Custom plays an important part in their every day life and gives the rhythm to people's life throughout the year. Tradition and culture in Maré go beyond the social capital embodied by the informal safety nets and networks provided by the Custom. It is people's way of life. "*The Custom you can't see it, it's not an entity, the Custom we live It, that's who we are*" said a young man of Maré to explain the importance of Custom. The Custom is often presented as an impediment to the development of commercial agriculture, but LEFs I talked with refuted this idea. In fact, since the Custom is described as

what the people of Maré are, saying it is an impediment to their development supposes that people are the impediment to their own development. If so, it is not the people who have to adjust, but the type of development they are offered which has to be revised.

Tradition and culture have much to offer in terms of local agricultural knowledge. A traditional field in Maré is a very complex piece of work, where every action is meaningful to people; the crop they choose, the way they are set, the time at which crops are harvested, the influence of the natural surroundings...etc.

6.2.2.7. Asset support from the project

Generally speaking, people from Maré have quite a full range of assets they can rely on. The project was designed to increase the 6 REFs' access to some assets. Land and access to water were made available, though access to irrigation water has not been stable over the past year.

Among the five capitals described by the SLF, the one which accessibility has been most increased is definitely the financial capital. However, farmers of the GDPL were probably not ready to handle such access to financial services. There were no or only little conditions to access financial services, and for some of the farmers it appeared like money for free. Other assets were supposed to be made available to farmers through the project, mainly physical assets, but only a few were made available on time and the absence of some of the promised assets is challenging the project's equilibrium.

The traditional capital seems to have been underestimated. It has been integrated in the approach to land tenure, since the customary authorities were involved in the process of land attribution to the six REFs, but the dimension of local knowledge and cultural behaviours may have been underestimated or considered merely as impediments rather than assets. Local knowledge could have been integrated deeper in the development of organic practices. Also, individualistic behaviour of people of Maré when it comes to commerce should have been acknowledged in the project design.

6.2.3. Institutions and Organisations

At the GDPL Paradise project level, institutions and organisations directly influencing people's livelihoods that were identified during the research are; Provincial services, Municipality, training agency (CFPPA) and the fruit producers' association Arbofruit.

The Province, through the Rural Development Subdivision, coordinates and monitors the project. A Provincial agent makes the link between the GDPL, the Province and other institutions. This mediator role is also a responsibility of the mandator who does not always manage it efficiently. For project management purposes, the provincial agent is expected to be the primary link to the promoters. But often, farmers or agencies choose not to go through the provincial agent. This confuses the relationship between the REFs and institutions, as well as the project's monitoring process. It may be argued that provincial agents lack capability in project monitoring and common management tasks, but it has to be acknowledged there has been no previous example of such a project's implementation on the island. It is new both for the farmers of the GDPL and the provincial agents. As observed by a provincial agent, this project brought to light the assets and defects of the current rural development services in place in Maré. Interviewed provincial agents are willing to work on necessary improvements.

One of the most significant achievements of Provincial services throughout this project is the considerable advancement made in terms of access to land. Provincial services managed to open a discussion on traditional ownership rights and power relations. They worked closely with customary authorities and REFs to enable access to land for people who would not have had access to it for commercial purposes. From this angle, by supporting the GDPL Paradise project, the Province opened a door in the ever so closed debate of access to land in Maré. The Province also contributed to the project through financial support. The Province was the instigator of the financial innovations from which REFs of the GDPL Paradise have benefited. The Province manages its own funds and grants provided by the French State. But the Province will be able to support such projects as long as funds from the State remain constant. The current orientation chosen by the Economic Affairs Division is to maximise the use of these funds, as long as they are still available, by making substantial development investments. While the Province's efforts to ease REFs' access to financial support are quite honourable, one may wonder to what extent this system is sustainable. A snowball effect has to be expected from the financial support provided to the GDPL Paradise project. Maré is a

small island, with a tight community and news spreads fast. In the future, other REFs may feel entitled to claim the same level of financial assistance as REFs of the GDPL. There is a question mark over whether the financial support from the French State will remain at the present level.

The Municipality of Maré is responsible for among other things roads and power infrastructures on the island. The stakeholders described the Municipality's support throughout the project's implementation as below standard. Farmers of the GDPL expected to be able to rely on adequate infrastructure on their field (road and power) in order to achieve their livelihoods and feel they have been deceived. What is perceived at the grassroots' level as part of a disreputable political game between the Municipality and the Province, is presented by administrations as the combined consequence of insufficient funds to invest in further infrastructure and the lack of coordination between the Province and the Municipality.

The marketplaces' committee, which depends on the Municipality, manages commercial local market opportunities. Local marketplaces are important for many households on the island, providing regular income. However, women selling their products at the market are not consulted on the setting of prices for their produce. People of Maré easily assert they do not fully grasp the market value of money (*as opposed to the customary value of money - see Faugère E. 1996b*) but still strongly rely on money to sustain their livelihoods. Under such circumstances, the pricing system in place in marketplaces of Maré does not enhance capacity building in terms of pecuniary management.

The role of organisations and agencies with regard to ESS in Maré is further discussed in section 6.4.

6.2.4. Livelihoods strategies

Farmers involved in the GDPL Paradise project expect to achieve their livelihood based on incomes generated by the future fruit production. However, trees will not reach production until another two years at least. In the meantime, they had to develop alternative short to middle term strategies. During the fieldwork, two main livelihoods strategies undertaken by the REFs of the GDPL were identified; vegetable gardens and previously developed orchards. But some of the 6 farmers have also developed other minor strategies.

6.2.4.1. Vegetable gardens

The vegetable gardens are the only income generating activity resulting from the project's implementation so far. Avocado and lychee trees take at least three to four years to reach production, farmers of the GDPL were therefore encouraged to initiate vegetable gardens between the lines of trees to support themselves while trees are not yet producing. In order to preserve the potential organic certification of fruits, vegetable gardens are managed under organic practices. Some farmers do not see the benefits of organic inputs on their vegetable production and complain about the related cost of organic practices. When comparing with other households of Maré who use a traditional field to generate incomes, the management cost are much lower in the traditional field

As one would expect, if vegetable gardens have been designed to support the family their management cost should be much lower than the expected benefits. Most of the REFs have not assimilated organic practices they have been taught, hence they misuse the organic inputs they pay for and do not reach the expected production outcomes. Some farmers have already used chemical inputs in their vegetable gardens, because they want to be sure they will actually have something to sell at the market.

Still, vegetable gardens can be a reliable source of income for these farmers. This is especially true for couples. In most cases, it is the wife who is in charge of the vegetable garden and selling the produce, even if she is not the identified promoter. But women who were not identified promoters did not benefit from training. In most cases, men receive training in organic practices for vegetable gardens, but often disregard vegetable production, mainly because they only believe in traditional practices, and do not pass the information to their wives. Furthermore, women handle the money from the production they sell at the market but have not received training in small-scale marketing and budgeting. During the fieldwork, some female spouses mentioned that they would like to benefit from more training.

6.2.4.2. Previous orchards

Three of the GDPL households already had an orchard on their tribe before taking part in the project. They mainly grow citrus fruits there, but since these orchards are located on the tribe there is no irrigation system available, because of the coastal location of the tribe.. The production is limited but constitutes a reliable source of income for these households. Though

these farmers are members of the fruit producers' association Arbofruit, some of them chose not to make use of the association's trade services, since they manage to gain benefits through other commercialisation channels (eg. brokers or directly contracting with grocery stores in Nouméa).

6.2.4.3. Others

Those who do not manage to obtain satisfactory incomes from their vegetable gardens, or cannot rely on a previously developed orchard, have developed other strategies to achieve their livelihoods while trees are not producing. Single men can still rely on their family for food, shelter and support. However, one of them was only recently adopted by an uncle from Maré who needed a son to protect his land ownership rights. In his case, his biological parents are still on the main island and even though he has been adopted, he does not have the exact same relationship with his uncle's family that a biological son would have.

Traditional fields remain a consistent means of subsistence for most households of the GDPL. Some also rely on it to generate income. Yams and other tubers can be shipped over to the main island and sold via family networks for a substantial price. Selling large amount of crops, mainly Yams, on the main island is a good way to generate incomes. Anecdotedly, a farmer explained that he should consider growing Marijuana instead of vegetables, as it does not require much care and could be easily sold at a higher price than lettuces. Though, this quote could not be fully substantiated, it suggests that some of these REFs may seek out illicit strategies to achieve their livelihoods since the current way of generating incomes does not satisfy their needs.

Some of the farmers will favour the work on the traditional field to the vegetable garden as they master traditional practices and know the outcomes they can expect from it. Furthermore, even though traditional fields require a lot of manual work they do not require the use of inputs. The management costs, labour apart, are therefore inferior to the vegetable gardens' one. The choice of the traditional field as a livelihood strategy could explain the substandard management of some lots on the project's site. They have to take care of orchards that are not producing yet. To generate income, they can either grow vegetables through a production system they are not familiar with but located on the orchard, or rely on their traditional field

they are utterly knowledgeable about but which is time consuming and does not leave much time for thorough work on the orchard.

Though it was presented as a way to call upon extra labour force on their lot, some households, mainly couples, rely on the RIL scheme to bring extra incomes to the household. In the case of single men, people working on their lot under the RIL scheme are considered as extra labour force. But for couples, in most cases the identified promoter's spouse was chosen for the RIL position. This way, the household does not really gain additional labour force but its members no longer work for free and bring income to the household.

6.2.5 Livelihoods outcomes

The project's evaluation was a mid-term evaluation, therefore the expected outcomes of the project have not been achieved yet. This is mainly due to the fact that the project will start to generate substantial incomes only when trees will reach production. The project, to this extent, is still in the implementation phase. According to the DFID livelihood frameworks livelihoods outcomes, the achievements or outputs from the livelihood strategies, can be classified in 5 categories; more income, increased well being, reduced vulnerability, improved food security and more sustainable use of the natural resource base. During the fieldwork, members of the GDPL Paradise only expressed the generation of income and increased well being as a desired outcome from the project. Reduced vulnerability was also implied, especially with regard to a reliable water supply for irrigation.. From the Province's perspective, a more sustainable use of the natural resource base could be added.

Since the evaluation took place while project's implementation was still in process, it would be delicate to use it to assess final outcomes. However it can be used to assess the GDPL households' state of well being at the present time.

Without a doubt this project has already enabled a more sustainable use of the natural resource base, by enabling farmers to establish on land where water is available. The methods used to slash the lot were environmental friendly and farmers were encouraged to use organic practices. There is some concern about the fact that some farmers started to use chemicals on their lots. If these farmers are not convinced by the relevance of organic practices, the project will not achieve its environmental purpose.

With regard to increased well being and income, the results are very disparate among households. In one case, the household is already experiencing an increase in income, but for the rest of the farmers it could not really be assessed. Each household has to some extent experienced an increase in material and social well being. Being involved in a project allows social recognition beyond the customary dimension (Faugère E. 1996b). However, the project's success is already discussed in the community. Customary authorities put a lot of pressure on the promoters and since the project's implementation takes longer than expected, within the community REFs of the GDPL are often pictured as immature, careless or even lazy.

The increase in material well being can be justified by the acquisition of equipment REFs have been able to make through the project. Some of them have indeed invested in cars and/or tractors. On the other hand, the tediousness of the work they had to put up with so far does not contribute to overall well being. Two households spend the working week on the field with their children and are more inclined to fatigue and infections. Finally, all of these household have committed themselves to substantial loans, even though they also received a large amount of grants, and are in an indebted situation. The incomes generated by the different strategies in place were not sufficient to cover loan repayments, thus repayments have had to be postponed.

Once again, this discussion emanates from a mid-term evaluation and cannot expose the project's ultimate outcomes. The project has the potential for a further increase in well being and generation of income. The results achieved by the project so far may not seem as satisfactory as expected, but this should not lead to a pessimistic approach towards the project and the primary stakeholders. In fact, one should be warned against such pessimistic attitude, already shown by members of the community and some extension agencies. Pessimism and disbelief towards the REFs and what they have achieved so far will undermine the project's implementation as well as farmers' self-confidence and faith in the project.

6.3. Project Management

As previously described, the GDPL Paradise is a one of a kind project with no precedent in Maré or New Caledonia. It is the first time the Provincial branch and extension agencies of Maré are involved in such a project. Furthermore, the project is often described as spontaneously designed and implemented. Agencies involved in the project made an attempt to answer REFs' needs as they came, considering a group of 6 people rather than 6 different households.

Provincial services and extension agencies in Maré are not familiar with the project cycle, project design document or logical framework analysis. Usually, when a farmer or promoter has a project, he or she comes to the Province and fills in an application form for financial support. Provincial agents look at the overall feasibility of the project and the extent to which it suits provincial development policy before handing it over to the board of representatives. If the board approves the application, grants and loans are subsequently allocated and implementation starts or continues. In fact, many promoters come to the Province for assistance once the project is already on its way.

Most agricultural projects on the island are small-scale projects and the system in place is satisfactory. But for a project such as the GDPL Paradise, a slightly more methodical approach, for instance using the project cycle, could have benefited the project. For the GDPL Paradise project, although five of the six outlined phases of the project cycle (ADB, web resources); identification, preparation, loan negotiation, implementation and evaluation have taken place, these were not clearly defined and there has been no real appraisal prior to implementation.

Identification and preparation work was indeed undertaken with the various stakeholders including the Province, customary authorities, beneficiaries, and other agencies working in the sectors, but was relatively brief and informal. Flexibility can be an asset in project's management, but in the case of the GDPL Paradise it seems that "flexibility" resulted in a lack of coordination or mismanagement in attributing roles.

Throughout the fieldwork, finding the agency or institution in charge of the project's design has been demanding. It seems the Province initiated the project with the promoters and the

CFPPA training agency designed most of the project's activities. However, the training agency did not appear to have enough expertise in project design. Devising a project design document including a type of Logical Framework (*see appendix 9*) would have ensured a certain logic throughout the process of implementation by means of precise timing in training and consistency in the sequencing of activities and tasks to be undertaken. Had it been done before implementation, this would also have ensured a better coordination among institutions and limited the delays that have been encountered, like the installation of power lines and shortcut track for which the Municipality is responsible. Yet, the project's design and implementation phases are not documented and there is no base line for the different stakeholders to refer to.

The project's feasibility was not fully assessed either. Detailed project risks and sensitivity analyses were not carried out to assess viability of the proposed project. Loan terms and conditions for loan effectiveness were discussed to improve performances and address key policy issues, ie land ownership and access to investment. Still, a thorough analysis could have predicted farmers' expected cash flow while trees are not producing and subsequently set up achievable loan repayment conditions. Further field study, analyses and consultation were required but not undertaken. Research on the efficiency of organic inputs in the local environment was initiated after implementation was launched. Climatic and soil conditions on the project's site have not been gauged soon enough. For instance, the wind factor could have been anticipated thanks to a phase of appraisal.

Implementation took place after approval from the board of representatives. A project is meant to be implemented by the executing agency according to the agreed schedule and procedures. Farmers and agencies involved faced delays and coordination problems, mostly because there was no or only few agreed schedules or procedures. An extension worker confessed he sometimes considered things had been rushed and activities implemented with a poor sequence. Efforts in planning and the use of a common base agreed on and appraised by the partner agencies, a Logical Framework for instance, would have proven to be a useful tool for project's implementation.

The Province requested an evaluation of the project by the end of 2002. Staff from the provincial division and subdivision in charge of the project expressed their desire to assess the project's implementation, its relevance and efficiency. They also questioned their own

approach to the project and asked for an assessment of the extension and support services in Maré based on the GDPL Paradise project's experience, which led to the undertaking of this mid-term evaluation.

The provincial rural development subdivision has also organised an informal project monitoring system. A provincial agent is in charge of organising weekly meetings with REFs of the GDPL to help them planning the working week and discuss arising issues. Thanks to a regular presence on the project's site, the agent can monitor the state of advancement of each farmer and draw attention to technical matters when required. Improvements can still be made in the monitoring system, farmers of the GDPL have indeed expressed their desire for a more regular presence of the agent on the field. They also wish to see the approach taken moving from a group oriented monitoring system to an individually tailored assistance. Finally, women have asked for the monitoring meetings to take place on the project's site rather than at the rural development centre, which is located in the tribe of Atha. This would allow women to participate to these meetings and have access to information, it would also cut travelling time lost between the field and Atha.

The Province throughout the GDPL Paradise project's management did in fact unwittingly follow a project cycle. Nonetheless, some phases were underestimated or missed. Efforts are needed in terms of coordination among stakeholders, attribution of roles according to competences and general planning of activities. The project cycle as presented in the literature review can appear as a time-consuming process for such a close knit institution as the Province. But efforts made in planning can avoid delays during implementation. With this project, the Province and collaborating agencies have developed the premise of a locally adapted project cycle, which they can now work on and improve.

6.4. Extension and Support Services in Maré

Along with the mid-term evaluation of the GDPL Paradise project, this case study focused on the ESS system in place in Maré. The following is a discussion of the fieldwork results regarding ESS contrasted with theoretical grounds on the subject of extension.

6.4.1. Coordination and interdisciplinary approach

Given the current ESS system and agencies present on Maré, there is a real potential for an interdisciplinary approach in terms of extension. The creation in 2001 of a support centre for rural development (CADRL), in which the training agency, the local research station and the fruit producers' association are involved, illustrates the first steps taken towards an increased interdisciplinary approach to extension in Loyauté.

The key for efficiency in the interdisciplinary approach initiated in Maré will be coordination among agencies. Extension agencies in Maré have to sustain their efforts in working together in a common effort. This means communication systems have to be improved among agencies, between agencies and farmers and among farmers themselves. So far, each agency seems to be working independently from other agencies and often some go beyond their attributed role. Respective domains of expertise have to be acknowledged among extension agencies to avoid action being taken in parallel rather than in a joint effort. This is particularly true with regard to the attributed roles of the training agency and provincial services. The lack of communication and coordination undermines the work of both counterparts and confuses farmers in their understanding of the ESS system in place and where to seek for advice in a given situation.

Enhanced collaboration between the research station and the training agency would benefit farmers. Both agencies are part of the CADRL and share the same building. Trials carried out by the research station ought to be shared at the grassroots' level. Farmers in training or any farmer wishing to improve their knowledge should be able to benefit from the research undertaken. The CADRL needs to open its gate. In terms of training the training agency (CFPPA) should facilitate farmers' access to information regarding research. For instance, the IAC research station has launched a series of experimentations on organic inputs. Having farmers to come and see for themselves on the research station's field, the worth of organic inputs on a lot where try-outs are not carried out at their own expenses, would be a benefiting experience in terms of sharing knowledge and experiences at the grassroots' level. For this to happen, the CFPPA would have to advertise more thoroughly training sessions and create with the IAC opportunities for farmers to visit and participate to research. That would be within the CFPPA's responsibilities, which in terms of a training agency has a pedagogic responsibility.

Arbofruit as a long established local association of producers has accumulated knowledge in the field of fruit production on the islands. All its members on Maré, as well as the staff, are local people with full expertise in orchard management in the local environment. Most of all, these people understand local issues better than any external development worker. The network of members of the association constitutes a living library on Indigenous Knowledge and commercial orchard management on the island, from which recently established farmers or trainees could benefit more. In the case of the GDPL Paradise for instance, some LEFs of the association expressed their regret concerning the fact they had not been consulted for the project's design. Others were simply not informed of the project's implementation. However, persons in charge of the association do not seem convinced by the relevance of organic practices on the island. If the environmental impacts of chemical inputs seem obvious to deciding people at the Province's level, they do not appear critical of the majority of Arbofruit's members who are more concerned about being able to produce enough fruits to sustain their livelihoods on a yearly basis. At the moment, members of the association do not reject the concept of sustainable agriculture but verge more towards mixed practices such as *reasoned agriculture*, for which the use of chemicals is not totally prohibited. They base their argumentation on the fact that organic inputs currently available in Maré are not effective against pests and do not permit farmers to achieve satisfactory fruit production.

Efforts made by the Province and the research station in promoting organic practices will have to be relayed by the intermediary of Arbofruit to prove successful among LEFs. Arbofruit is already involved with research on organic practices, but the discussion on the prospects of sustainable agriculture in Loyauté must be further developed. Arbofruit's voice needs to be heard at the provincial level to define sustainable agriculture practices, since the association represents the majority of fruit producers in Loyauté.

The recent efforts made by the Province and partner extension agencies in Maré have allowed initiating an interdisciplinary approach to extension services. Efforts should now concentrate on improving coordination through enhanced communication among partner agencies. Also, inclusion of a sociological approach in the process, addressing issues such as the place of women in local development, and valuing Local Knowledge, would foster the interdisciplinary position taken by the Province and partner extension agencies.

6.4.2. Extension system in question

For the purpose of this research, the understanding of extension will be based on the definition used by Van den Ban and Hawkins (1996); *“Extension is the conscious use of information to help people form sound opinions and make good decisions”*. One should also question the substance of a *“good decision”*. Is it *“good”* from the extension worker’s standpoint or from the farmer’s one? A good decision would certainly be one that will allow achieving sustainable outcomes for the farmer’s livelihood.

A few extension workers acknowledge their attitude towards farmers can sometime be perceived as a lecturing stance rather than an empowering advisory process. Manifestly, farmers involved in the GDPL Paradise project are often told what to do, rather than given opportunities to form sound opinions and make good decisions. I repeatedly noticed extension workers complaining about the 6 REFs *“not doing what they have been told to do”* so as to explain the slow progress of project’s implementation. It might well be that farmers do not put in practice advice they receive because they have not been offered the information necessary to become conscious of the advice’s *“good”* worth.

During this fieldwork, I came across two side effects of the lecturing attitude towards REFs. The first one could be called the *“mollycoddling side effect”*. Farmers tend to get used to being told what to do, or having someone doing it a better way for them, and ultimately lose all sense of initiative or self-confidence. In short they come to face this type of question; if I have not been told to do so, how can I be sure it is the right thing to do? The second one, the *“congestion side effect”*, translates to resentment or indifference. Farmers do not take advice they receive because they can no longer put up with the lecturing attitudes.

Hence, extension workers may have to reconsider their pedagogic approach, perhaps by using more participation and making sure they reach the people they are working with. This implies building up a thorough understanding of people’s behaviour under specific circumstances. Unquestionably, extension workers of Maré know the people they are working with. Conversely, some extension workers may underestimate the influence of the context in which farmers evolve. In the case of the GDPL Paradise, extension workers are dealing with people who are striving to adapt to a commercial farming’s context, when most of them have hitherto been nurtured by the traditional agriculture’s context.

Based on observations made during the fieldwork, I was led to assume that a few extension workers on the island somewhat missed the point that REFs of the GDPL are not farmers in the sense we commonly receive the word, that is “*commercial farmers*”. Schoeffel argues that many agricultural development projects have failed in the Pacific because “*levels of production did not meet those projected by the economists levels which assumed an intensity of effort on the part of the farmers which did not take place*” (Schoeffel P., 1994). She deems the error made by many development planners is to assume that Pacific Island land owners, and thus traditional cultivators, are necessarily commercial farmers. At the GDPL Paradise’s scale, 3 promoters can be considered as land owners, and each of the 6 members is first a traditional cultivator. If commercial farming is to be developed on Maré, training and extension agencies have to make sure cultivators have the necessary tools to develop their own sensible mindset to commercial farming. According to Schoeffel, the characteristic of true commercial farmers, “*whether they are growing half a hectare of rice or raising sheep on 5000 hectares, is a certain type of individualism and motivation*” (Schoeffel P., 1994). The individualistic behaviour of REFs when it comes to commercial farming has been identified during the project’s implementation and evaluation but this behaviour had not been acknowledged, probably because it goes against the traditional behaviour used in customary activities. In fact, the 6 promoters have continuously been regarded as a single homogeneous group throughout the first stage of implementation. The lack of motivation exhibited by a few promoters of the GDPL Paradise is often criticised by extension workers and members of the community. Though, it does not concern every single REFs of the GDPL Paradise, generalisation is often made and it is common to hear about these REFs that “*they*” lack motivation. But these statements are made notwithstanding these 6 REFs have each followed a 500 hours training prior to project’s implementation, on which occasion their true *motivations* about commercial farming should have been assessable.

6.4.2.1. Extension approach to sustainable agriculture

Throughout the following discussion, the fieldwork results will be confronted to the argumentation of Garforth and Lawrence (1997) on the changes that may be needed in an extension approach in order to address sustainability effectively. More than contrasting the extension approach presently used in Loyauté, the point is to comprehend the extent to which Garforth and Lawrence’s theoretical framework is applicable to the context of Maré based on the GDPL Paradise’s case.

Garforth and Lawrence propose the focus of enterprise should move from a rather commodity oriented scope to a whole farm approach. It is indeed the option chosen in Maré. In the GDPL Paradise project, the organic approach does not focus on orchards solely but endeavours to address the whole farming system. This makes sense both from the environmental and commercial standpoint. There is no point to restraining the use of chemical inputs on the orchards, if meanwhile vegetable production between the lines of trees still involve chemicals. The impacts of chemicals on the environment may only be diminished and their effect on farmers' health will remain. From a commercial point of view, the persistence of chemicals' use for other commodities would jeopardise the potential certification of fruits.

A targeting of extension resources on clientele whose current land use practices pose most threat to sustainability may be called for in the approach recommended by Garforth and Lawrence (1997). That is indeed the option chosen by the Province. Fruit growing is the activity that introduced the use of chemical inputs on the island and which now most threatens the fresh water lens. For this reason, farmers wishing to establish new orchards were chosen for the introduction of organic practices on the island. Meanwhile other LEFs are also contacted by extension agencies in an effort to promote sustainable practices.

The extension approach in Maré is still strongly marked by the use of persuasion, advice and training when it comes to influencing farmers' behaviour with regard to the use of natural resources. There is no real engagement from the Province and extension agencies in participatory problem solving. This would however prove efficient. But participatory approaches demand time and experienced facilitator. These factors are limiting the actions taken by the Province and extension agencies in Maré.

Garforth and Lawrence (1997) explain that *"extension objectives can range from the effective transfer of technology to the building up of strong rural organisations which can exert influence over future research and policy agendas, and also take and enforce collective decisions over natural resource management. A shift towards the latter will promote more sustainable agricultural development"*. The building up of rural organisations has long challenged Provincial services. Through this project, hopes were mainly based on the success of the transfer of technology. Working with a group of farmers like the GDPL was a way to initiate a bit of organisation in the agricultural world of Maré. However, to really reach orchardists, extension services could rely on the collaboration of the main organisation on the

island; the fruit producers' association Arbofruit. The challenge is that the opinion towards organic practices is mitigated among Arbofruit's members. Under such circumstances, joint problem solving and enhanced participation in decision-making are seen by Garforth and Lawrence as ways of influencing future behaviour. Opening a discussion forum on organic practices in the community could be envisaged as a first step. This meets the theoretical frameworks, which points to the fact that many of the environmental problems which affect farmers, the fragility of the ground water lens in the case of Maré, can only be solved through collective decisions and actions (Garforth and Lawrence, 1997). However, farmers of the GDPL Paradise have expressed the desire to see the extension approach move from a group to an individual focus. It seems there could be two levels to the approach in Maré, a group/community one to raise environmental awareness and an individual one for technical assistance with regard to sustainable practices.

As previously discussed in this chapter, extension agencies in Maré can improve the efforts made to move their approach from top-down to bottom-up, by developing local participatory planning and fostering extension agencies' desire to learn from farmers' experiences, knowledge and technology (Garforth and Lawrence, 1997)

In order to develop sustainable agriculture on the island, extension services have hinged on transfer of technology, importing knowledge and inputs for organic practices. However most of this "new" knowledge and sets of practices are not always embraced by farmers, from the GDPL or LEFs of the island. With regards to the introduction of external knowledge in a local context, Malatiben Chaudhari, from a rural community of Gujarat, India, concludes from her experience as an innovative female farmer:

"It is important to learn from external knowledge but the critical task is to understand the application of any knowledge within [one's] specific context"

Chaudhari M., 2003

It would be constructive for extension workers to test local experiments and new knowledge (Chaudhari M., 2003), to understand how introduced knowledge can adapt to local knowledge and practices. Moreover, it is essential to understand how local knowledge can improve introduced knowledge. In the same line, one could say it is important for farmers of Maré to learn from external knowledge in the recently introduced topic of certified organic practices, but the critical task is to understand the application of this knowledge within the specific

context of Maré. That is indigenous knowledge, traditional practices, endemic crops and social interactions. Hence, linking this assertion with Garforth and Lawrence's definition of extension (Garforth and Lawrence, 1997), extension workers, conscious of the local context, should provide adequate information so that based on their own experience farmers can form sound opinion and make innovative decisions with regard to organic practices.

6.4.2.2. Women and Extension

Results from the fieldwork acknowledge the efforts made by the training agency and provincial services to promote women's place in the development of agricultural projects on the island. However, further efforts are needed in this respect, especially in terms of extension services and women's access to information. These further efforts should not be about promoting women for the sake of it, but rather about ensuring women have a fair access to information and that they do not inequitably bear the burden of projects men are engaged in. Some women of the GDPL are doing more work on the field than their husbands, although these women are not the identified promoters. These women put a lot of energy in the field, but have not had access to training. Reversely, men should not be enabled to utilise their wives as identified promoters to elude administrative concerns. In one case on the GDPL, a woman carries the administrative responsibility of the project only because her husband was not liable for grants and loans. Though she is the identified promoter, her husband leads the project and she will remain the one held responsible in case of project's failure.

Regarding environmental awareness, the close connection between women and their environment, or Nature, has long been acknowledged by cultural ecofeminist scholars (Moeckli J. and Braun B., 2001, pp115) but is also verified by Grassroots women of Maré.

“Women of here know better what keeping the environment clean means, because they keep their house clean everyday and they know the efforts required. They understand better what preserving the environment can mean. If they see the environment spoiled, they feel the same way as if their own house had been spoiled”

Provincial female gender office

This statement well illustrates the alternative characterisation of the women-nature connection suggested by Sturgeon;

“Because of pervasive gender divisions of labour, women are more likely to understand and more severely experience the impact of environmental degradation, therefore the woman-nature connection is best understood through a historical-materialist analysis of women’s work (...) Because of their reproductive characteristics, women are closer to nature than men and therefore they are more in tune with nature’s needs”

Sturgeon N. In Moeckli J. and Braun B., 2001, pp116

Yet, this should not be used in presuming women ought to be held in charge of environmental preservation on the island, men should also be involved. But, addressing environmental issues through the promotion of sustainable agricultural practices without addressing gender issues and acknowledging the place of women would not be complete.

6.4.2.3. From a first and second to a third generation extension system?

Results from the fieldwork reflect an attempt to shift the extension system from a first and second generation to a third generation system (Rogers, 1993). The ESS system in Maré still fits a first-generation system in the way that the transfer of technology and information on commercial and organic farming practices are often directive. This ESS system also have some characteristics of the second-generation types of extension, because even-though one of the expressed aims is to meet farmers’ needs, most of the problem solving process is left to the responsibility of the local extension-research hierarchy. The Province decides on research programs, based on the needs identified by extension workers, in Maré they are the provincial agents and the CFPPA trainer.

The shift towards a third generation extension system is not obvious yet, but is prefigured by the Province’s endeavour to place farmers at the centre of the system, and the desire to strengthen self-capability. Farmers now have an identified intermediary to the extension system in the person of the provincial agent. This is being developed to foster coordination and avoids redundant or conflicting actions from being taken by different extension workers. It might be interpreted as a means for the Province to increase its control over the extension system, but really it is a way to reduce confusion among farmers. Farmers can now use a privileged intermediary to reach the extension system and can still rely on their own networks of learning and customary patterns to solve problems. However, farmers of Maré are now hardened to having the extension system in charge of problem solving and are not genuinely

encouraged to rely on their own networks of learning and customary patterns to solve problems. Efforts are still required in capacity building. Extension workers and researchers need to help farmers recouping self-confidence by attaching greater importance to local knowledge. Farmers in Maré are not ready to take over problem solving, because they are not confident enough. Again, participation is an empowering process and can open the way towards increased confidence among farmers.

Although the third generation extension model curbs the authority of the extension workers' role, it does not reduce its significance. The extension workers' role is also meant to shift, from a framing responsibility to a reliable accompanying presence. Rogers (1997) states that extension workers should take a lower view on their own expertise, but he does not mean they do not need expertise. Extension workers' capability has to follow the shift. In Maré most of the extension workers are persons of utter good will, certainly ready for such a change. However, they need appropriate tools and qualifications to be able to act as unswerving facilitator.

In the attempt to find an extension model that best suits the local conditions, the Province should be careful about its own role. Often, the Province tries to control the whole system and wishes to provide all the services and support. This could be compared to the integrated rural development approach which failed to achieve satisfactory results because it was overambitious and too complex (Carney D., 1999).

6.5. Summary

In this discussion chapter, the livelihoods of the individuals involved in the GDPL Paradise have been described according to the DFID Sustainable Livelihoods Framework. The sustainability of their livelihoods, the way these livelihoods are influenced by the project and the local context have been assessed. Current approaches to project management and extension services in Maré have also been reviewed. The efforts and innovations made by the Province and partner agencies, especially with regard to land tenure and the place of women in agricultural development have been acknowledged. The analysis also highlighted possible improvements, in terms of coordination and communications, which will be further developed in chapter 7 (see section 7.3.).

Chapter Seven: Conclusion and Recommendations

7.1. Introduction

Conclusions drawn from the discussion are presented in this chapter. First, conclusions about the GDPL Paradise participatory mid-term evaluation are discussed according to the European Commission guide to evaluation procedures and structures (European commission, 2001). Second, conclusions about the Extension and Support Services system are presented. The conclusion then leads to a set of recommendations for further implementation of the GDPL Paradise project and future projects in Maré.

7.2. Project's Evaluation

7.2.1. Relevance

This project is the first project undertaken on Loyauté that directly tackles land tenure issues. From her long experience in the Pacific, Penelope Schoeffel construes that Pacific islanders have high economic expectations, far beyond what can be afforded within the lifestyle that is shaped by communal tenure (Schoeffel P., 1994, pp.42). She believes that governmental laws, which rigidly defend customary land tenure rules, *work against* mass participation in agriculture past the subsistence level (Schoeffel P., 1994, pp.42). The Province along with customary authorities have drawn similar conclusions and it was on this supposition that they based the project. This project created opportunities for people who would not have had access to suitable land for commercial purposes under the traditional land tenure system.

With regard to organic farming, it is understood that the Province did not provide support services on organic practices only to achieve added value through potential certification. The approach was mainly based on environmental concerns and initiated to guarantee high quality products. The expected added value will come from the improved quality of products more than from a certified label. But the Province and stakeholders now need to define clear marketing objectives and strategies to ensure sound commercialisation channels, especially for export. Organic practices can integrate with traditional agricultural practices of Maré, and

to that respect the approach also appears relevant. Nonetheless, organic practices developed so far on the island are mainly exogenous.

Focusing on a group of 6 people – households- rather than 6 separate individuals allowed easier access to land. It was easier to ask for a single piece of land than 6 separate pieces. Working with an entity such as the group of REFs was also a way to enhance organisation of the rural world. Generally, people of Maré consider group projects to be most suitable as they are in line with the community spirit of the island. However the co-operative nature of people of Maré does not seem to operate when it comes to commerce. Furthermore, the group of REFs of the GDPL Paradise is a heterogenous group and individualistic behaviours were not addressed by the extension approach. This undermines the expected group dynamic. Still, in terms of promotion of organic practices, this group is more visible to the rest of the farming population than scattered farmers would be. The GDPL entity can serve as a noticeable example for dissemination of organic practices.

7.2.2. Efficiency

The project's efficiency has been demoted by the lack of coordination among ESS agencies in charge. Lack of appropriate project management tools has caused wasted effort. Most of the investments made by the farmers, particularly with regard to machinery, appear to be excessive. Among extension workers involved with the project, some could have come up with less expensive and more suitable types of equipment. Expertise from LEFs who have already been through the process of farm establishment under especially challenging conditions, could have been used more efficiently by encouraging LEFs' participation in the project design. The fact that project's design and appraisal were rushed or underestimated undermined the sequencing of appropriate activities, leading to extra work (e.g. the independent extension worker prolonged his contract) or the occurrence of major constraints (e.g. lots unprotected from wind).

7.2.3. Effectiveness

Planned benefits of the project could not be assessed at time of evaluation, the project being still implemented. Farmers involved in the project have different backgrounds and hence respond differently to the project. Overall, they acknowledge the support they received but are

not comfortable with the way the project is being implemented. The feeling of ownership towards the project is still low among promoters. With regard to what has been achieved on the field, one cannot expect all 6 farmers to attain similar progress or results. Each farmer of the GDPL evolves at his or her own pace but remains convinced he or she can achieve outcomes he or she expects.

7.2.4. Impact

Impacts of the project could not yet be assessed since this case study is based on a mid-term evaluation. However trends can be perceived. With regard to the dissemination of organic practices the mitigated results of the GDPL Paradise producers lead to mitigated feelings within the population. LEFs do not see the relevance of organic practices yet, but the discussion has been opened and raised awareness regarding environmental preservation. Most of the farming population of Maré, and part from Lifou, is still expecting to assess the post-implementation outcomes of the project. The GDPL Paradise definitely contributes to raising awareness with regards to sustainable practices within the population. From an environmental perspective, it is too soon to substantially assess the impacts of the project. However it can be said that the project already avoided negative environmental impacts that would have occurred if the 6 REFs had established their orchards as they had initially planned it. Without the support of the project, it is certain these REFs would have used chemicals, which would have had negative impacts on the environment and their health.

Socially, the project as shown that governmental institution, such as the Province and customary authorities could work in a joint effort and achieve common goals. This will have a positive impact in people's mind, by developing the understanding that both powers that be can work closely to benefit the population. The project also showed that women could be in charge of an agricultural project, empowering women involved and raising awareness among the population. However, conflicts within the group of REFs cannot be ignored and they constitute a negative impact from a social perspective.

7.2.5. Sustainability

Because the Province worked closely with customary authorities on the GDPL Paradise's access to land, the allocation granted to the promoters can be considered sustainable. Customary authorities are looking after the project and the respect of the contract signed by

the promoters and the land owners under the supervision of the Province and customary authorities. However, within the group of REFs involved in the GDPL Paradise project, tacit pressures are exerted by members of the land owner clan on other farmers.

Financially, REFs of the GDPL Paradise have received a great amount of support. Although this has enabled some farmers to have access to financial investment, the amount of financial support might be considered excessive. Some of the people involved in the GDPL would never have had access to such financial assets, they were not fully prepared for it and do not have the skills to manage such investments. The support they received in terms of training was probably not sufficient to enable them to handle the investments they have made. Furthermore, promoters of the GDPL are not able to start repaying the loans yet, the benefits generated so far by vegetable gardens are not sufficient. Though returns once trees reach production are expected to enable the REFs to repay their loans, there is still a risk of seeing a feeling of “money for free” building up in their minds. Only one farmer has participated by providing his own equity to the investments. Finally, given the fact that the GDPL Paradise project is often presented as an example, one might expect other REFs to claim the same level of financial support. The question remains whether the Province will in the long run be able to sustain such standards of financial support for other REFs.

On the environmental level, the project can be expected to have favourable impacts on the environment if organic practices are adhered to. So far, the use of environmental friendly shredders and organic inputs participate to the protection of the local environment. Attention should be paid to regular inputs in organic matter to avoid soil depletion. Furthermore, two farmers of the GDPL have already used chemical inputs on their lot. If they persist with these applications, more than the expected certification, it is the environmental sustainability of the whole project that may be at stake.

Many extension workers involved with the GDPL Paradise project feel concerned and disappointed by the six REFs. They deplore the project is not running as successfully as expected despite all the efforts and the tremendous amount of material and financial support REFs of the GDPL have benefited from. The six REFs are often blamed for a certain lack of eagerness for the project. However, the promoters' participation in the project was mainly driven by financial incentive. They got involved with the project and organic practices partly because it was a way to obtain greater access to grants and loans. In brief, participation in the

GDPL Paradise project can be described as what Pretty calls *functional participation*⁷ rather than *interactive* (Pretty J.N., 1995). Farmers' self-mobilisation was limited to satisfying the need for access to land. The major part of the project was merely designed FOR the promoters rather than BY them. These promoters remained in a position of exclusive recipients and hence do not feel part of the project.

7.3 Extension and Support Services

This case study allowed identifying the efforts made to improve the extension and support services in Maré. The Province is working on making changes and improvements to provide farmers with a *basket of choice* (Chambers R. 1997) in terms of ESS. There is now in Maré a set of agencies and tools for support farmers can rely on. However the approach in place is not really encouraging farmers to make *choices*, and is still rather directive. The Province and partner agencies are also facing challenges related to their own limitations in capacity and expertise. Most ESS workers on the island are persons of outstanding good will, but many did not assume adequate training in the line of work they are now involved with.

The ESS system in Maré would like to shift from a second generation to a third extension model (Rogers A., 1993). However Rogers' theoretical scheme assumes farmers are willing and have enough self-confidence to seek information on their own and take over problem solving. It is therefore not applicable in Maré in its present state. The risk might be of leaving farmers unattended. Provincial services encounter difficulties when it comes to support the organisation of the rural world in Maré, which is partly due to a lack of initiative from farmers. Grassroots' participation in Maré is generally limited to consultation or motivated by material incentives. Interactive participation has been initiated through the OGAF preliminary phase but self-mobilisation is still not common on the island. Efforts to increase participation and capacity building will first be required to ensure expediency of a third generation extension system in Maré. Rogers' theoretical scheme also assumes the capacity of extension worker to accompany farmers in the process. Though most agents and extension workers in Maré are open to change and improvements, they need further grounding to gain expertise for this new approach and training, and trained extension workers are limited in Loyauté.

7: For a typology of participation, refer to appendix 10

The Province, with partner extension agencies, has initiated change in the ESS system. They are now developing the extension and support services system. This system might not entirely fit current theoretical frameworks, but it could be appropriate for the local environment as long as participation is ensured, and the system responds to farmers' needs.

7.4. Recommendations

Based on the discussion of the results gathered through observations, interviews and participatory workshops over a two months fieldwork, the following recommendations can be put forward;

7.4.1. For GDPL Paradise project's further implementation

7.4.1.1. Improving the current monitoring system and arranging a systematisation⁸ routine

- The current monitoring system under the responsibility of Provincial agents is justified but can be improved by slight changes in the approach. The weekly monitoring meeting should take place in the field to reduce farmers' travelling expenses (time and cost), facilitate spouses' participation and provide access to information.
- Contact with farmers involved in the project should move towards a tailored support household by household. The 6 promoters of the GDPL have different backgrounds and approaches to the project, which have to be embraced by the agents. "Efficient" promoters should not be favoured, nor should "less advanced ones" be left behind.
- Systematisation is a continuous course of participatory reflection on a project's processes and outcomes, completed by both project staff and participants (Selener D., 1996). By generating lessons, which are fed back to improve the project, it can strengthen learning and organisational capacity of development services and promote the implementation of more effective projects (Selener D., 1996). Instigating such a routine would benefit both the promoters and the development services involved in the project. It can be considered as a way to enhance promoters' participation and foster coordination and communication. Finally systematisation would allow gathering precious information and record lessons learnt from the GDPL Paradise project, on which the rural development subdivision will be able to rely for future projects.

⁸: See Appendix 11 for more information about systematisation

7.4.1.2. Review attitude towards farmers

- Given the good will of most extension workers one can understand their frustration regarding the slow pace at which some activities are being implemented. However reprimanding farmers only contributes to lowering their self-confidence and motivation. A positive attitude from extension workers is required, fostering progresses achieved by REFs rather than dwelling on failures.
- A LEF recommended extension approach should move from “framing farmers’ progress” [*encadrement*] to “following farmers’ progress” [*accompagnement*]. It is about giving choices to people rather than directing people.

7.4.1.3. Training Of Trainers in organic practices

- Comprehensive training should be offered to extension workers involved with the project, especially provincial agents who are the first intermediary. Farmers expect to be able to rely on provincial agents’ expertise for technical advice. However, provincial agents do not have enough proficiency in this area yet (especially with organic practices) and REFs do not trust them. When the independent extension worker’s contract comes to its end, there will be no “expert” available on the island. If the training they receive is held in a participatory way, Provincial agents who are all Kanaks will be able to improve currently taught organic practices by bringing in their own indigenous knowledge.

7.4.1.4. Research and organic practices

- Open the research station in coordination with the training agency, so that farmers can participate in the research undertaken on organic practices. Hence they will be able to and see for themselves the potential of such practices on a lot where farmers will not have the feeling that trials off the record are carried out at their own expenses. Or, farmers could be invited to have experiments formally introduced on their lots and to actively participate in the experiment.
- Develop a system on which REFs can rely to assimilate organic practices and frequency of treatments on their lots. A benchmark lot on the field and technical flashcards are some of the ideas suggested to that respect during the fieldwork.

7.4.2 ESS in Maré and other projects

7.4.2.1. Review communication

- Within the Province, impediments to communication have to be overcome. Provincial subdivisions should be able to communicate and work jointly. Discussions could be opened among agents of different divisions and subdivisions to favour exchange of ideas and coordinate objectives.
- Increased communication and exchange can further improve coordination among extension agencies. Agencies need to agree on common objectives and acknowledge the boundaries of their own domain of competences to ensure well-coordinated work.

7.4.2.2. ESS system

- Efforts made on structuring Maré's ESS system should be sustained. Increased participation at the grassroots level will enhance its efficiency.
- Training of trainers in participatory approaches and methods to value local knowledge will facilitate the shift from a second to a third generation extension level.

7.4.2.3. Increased participation

- It is acknowledged that self-mobilisation is not a current trend among the local farming population yet. Efforts should at least be oriented towards an increased interactive participation and revising current approaches, which are merely based on participation for material incentive or functional participation of grassroots.

7.4.2.4. Improvement in training

- More communication and collaboration with farmers in the organisation of training sessions would increase attendance and effectiveness. The approach and the work undertaken by the CFPPA trainer in Lifou could be used as an example for Maré. Not only does the approach taken by the CFPPA trainer in Lifou improve communication between extension workers and farmers, but also it facilitates communication and cooperation among farmers.
- The idea of a comprehensive appraisal after the 500 hours training should be pursued. It would allow farmers to assess their command of the knowledge they have gained, and trainers could review their methods for further improvements.

7.4.2.5. Project management tools

- Future projects would benefit from the use of management tools such as comprehensive Project Design Documents, and the development of Logical Framework analysis on which implementation, monitoring and evaluation can be clearly based. A locally adapted project cycle initiated with the GDPL Paradise's experience, once fostered, will also contribute to improved project management. More importance should be placed on the phase of appraisal prior to implementation.

7.4.2.6. Research and Indigenous Knowledge

- Participatory research would contribute to the valuing and protection of local knowledge. People of Maré deplore the fact that Local Knowledge has already vanished and these losses are irreversible. In order to develop locally adapted organic practices, researchers, farmers and extension workers need to be able to rely more on indigenous knowledge. Furthermore valuing local knowledge is a valuing the local identity, in which people of Maré put a lot of pride.

7.5. Lesson Learnt

Throughout this case study many things have been said, discussed and observed. Stakeholders, participants and facilitator have learnt a lot, the following highlights some of the most important lessons learnt in the process. These findings may prove useful to further development endeavours in Maré, the Loyauté and other places if kept in perspective.

- Working with a group of farmers can be in line with the local values of solidarity and helping one another [*donner la main*]. However, when it comes to commercial farming, people of Maré tend to behave more individually than under customary circumstances. This individualistic behaviour has to be acknowledged by the extension approach. The GDPL Paradise was considered as a single and homogenous group, when it is in fact a significantly heterogenous group constituted of people with different backgrounds and skills.
- A specific communication style has been identified and referred to as typically Melanesian by interviewed individuals. Given the high respect people show towards one another; conflict resolution cannot be straightforward. One will not dare to express directly one's resentment

against someone else's behaviour. The use of a disinterested party to open the problem's discussion proved satisfactory.

- Recently Established Farmers of the GDPL enjoyed the participatory approach taken during the evaluation. They particularly appreciated being able to express their concerns and problems with regard to the project's implementation, knowing that the Province and extension agencies were ready to receive their views on the project. The participatory approach proved to be an empowering process, which some of the promoters particularly valued. However, it has to be acknowledged that some farmers were not familiar with this approach and this curbed participation in the evaluation. The participatory process also seemed to stimulate actions aimed at responding to the problems expressed by the farmers, although this could not be proved.

- In the participatory process, expectations and problems were raised, which I could not follow up. As a researcher, I was unable to be detached from the problem that REFs and their families related to me. I would often bring the issues expressed by the farmers in discussions with extension workers and I believe it may have stimulated some actions.

- The increasing risk of losing Local Knowledge has been highlighted, many people asserted that local knowledge is continuously lost on the island. Less young people are interested in it and knowledge is no longer fully transmitted from generation to generation. Furthermore, it is noticeable that REFs have a hard time dealing with the transition stage from traditional to commercial farming. They both underestimate the potential of local knowledge in a commercial farming context and cherish this potential for subsistence purposes. There is a paradoxical situation where people from Maré are extremely proud of their Kanak identity but underestimate its potential for development. Most people are not willing to put this identity forward and make it an asset for development.

- Despite limited resources, especially in terms of human resources, the Province of Loyauté should be proud of the fact that they support ambitious and somewhat risky projects tackling complex issues such as land tenure.

- The amount of material and financial support does not ensure a project's success or smooth implementation. Interactive participation is a means to guarantee the building up of a true

feeling of ownership, which will indeed be determining for a given project's success or failure.

- Most extension workers, particularly interviewed provincial agents, were willing to improve their approach and knowledge. This positive attitude will facilitate change for the better, despite the limited resources for capacity building on which the Province are forced to rely.

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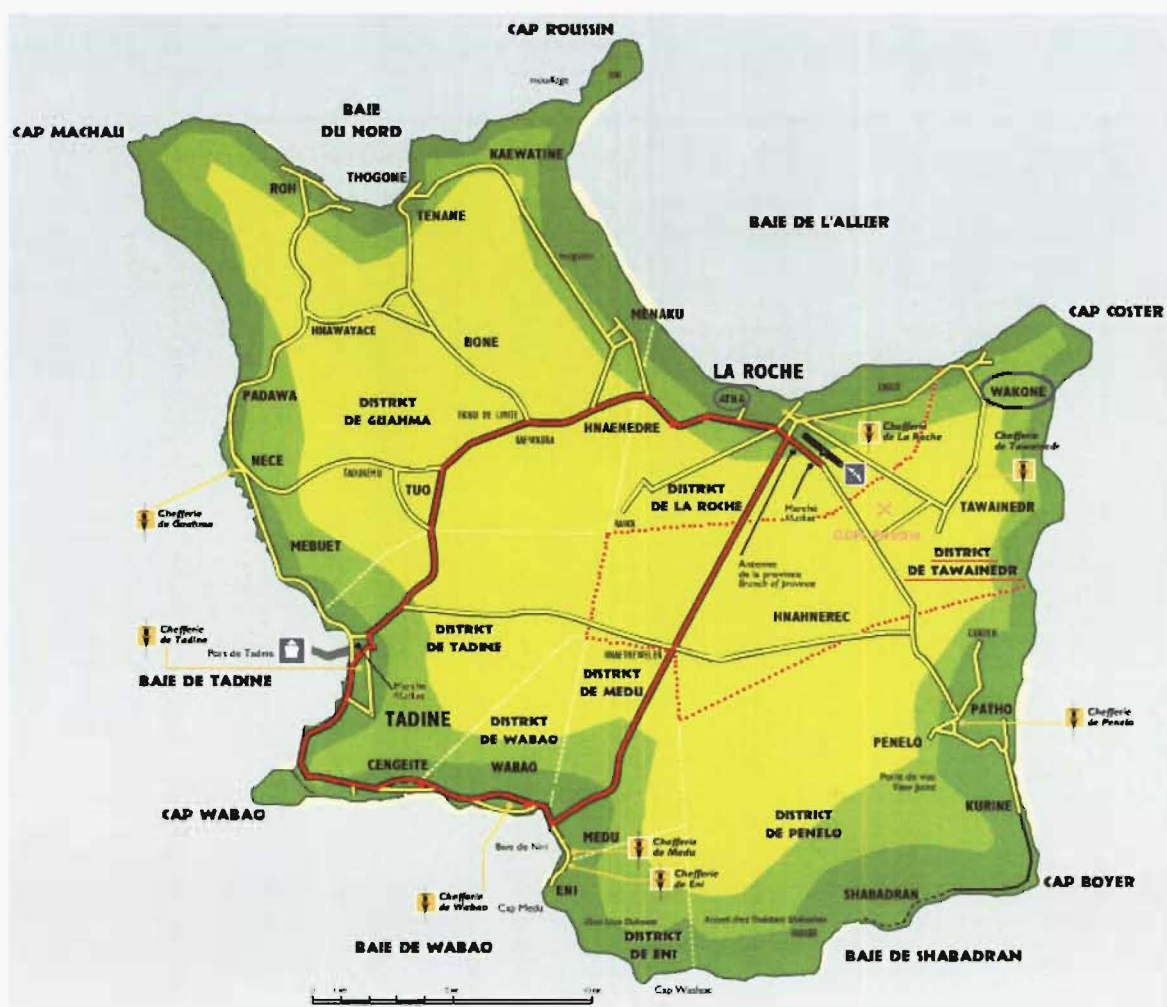
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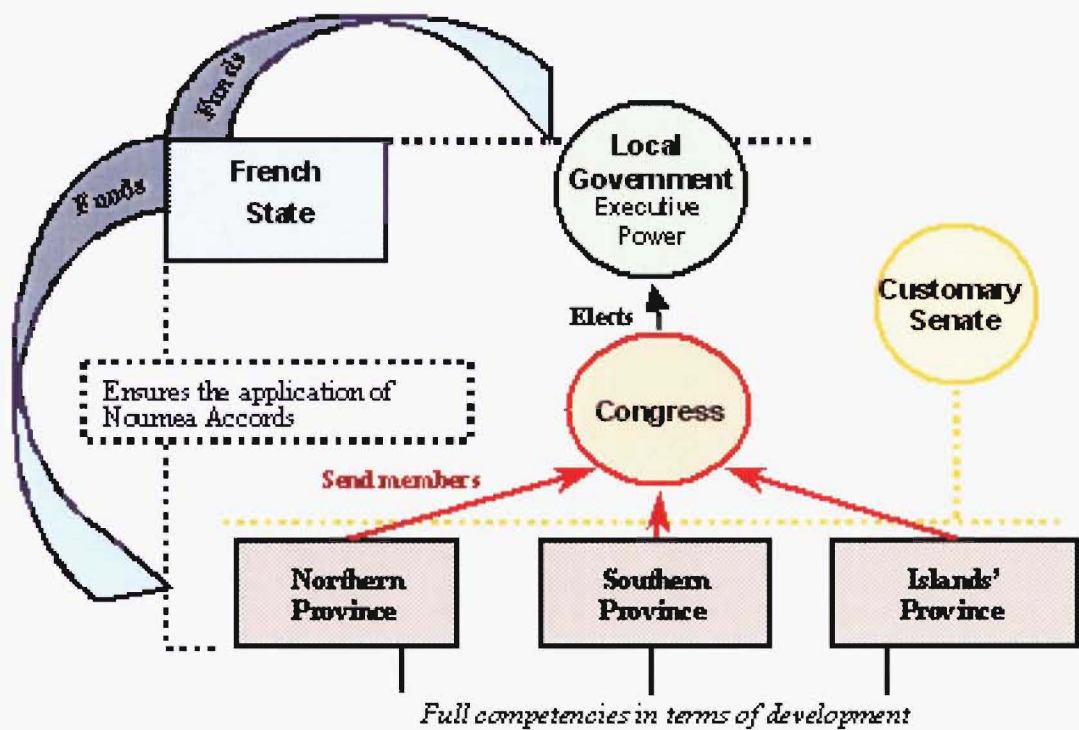
Appendix 1: Map of Maré Island



Adapted from Destination Iles Loyauté (*Web resources*)

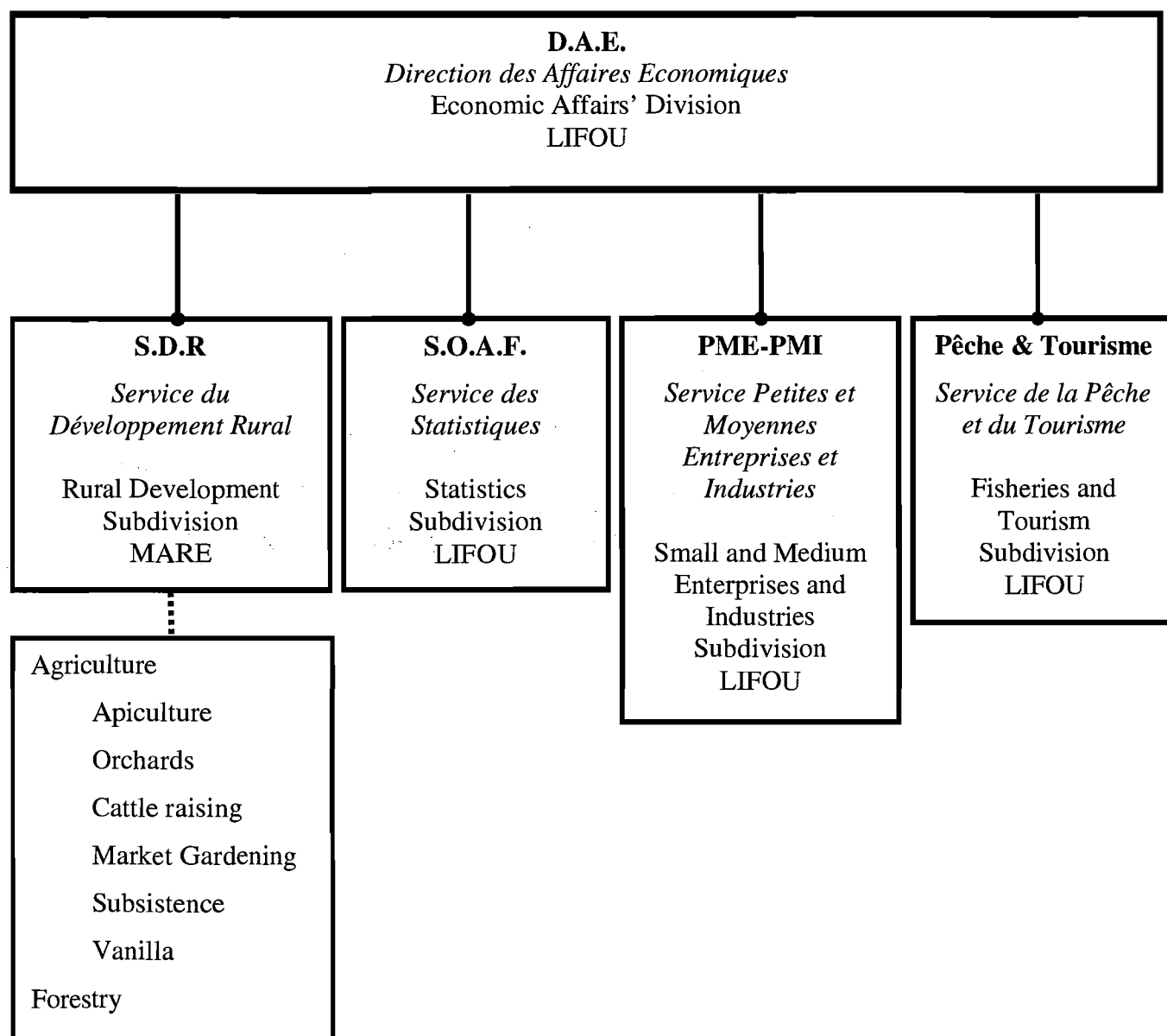
Document retrieved on December 1st 2003 from www.iles-loyaute.com/indexf.htm

Appendix 2: Governmental structure of New Caledonia



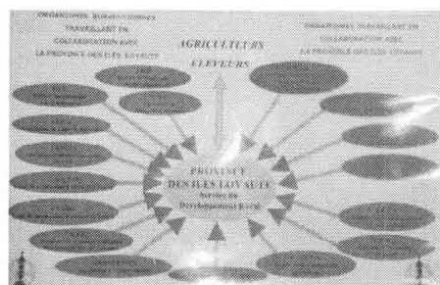
Source; personal

Appendix 3: Provincial Economic Affairs Division (DAE) in Loyauté



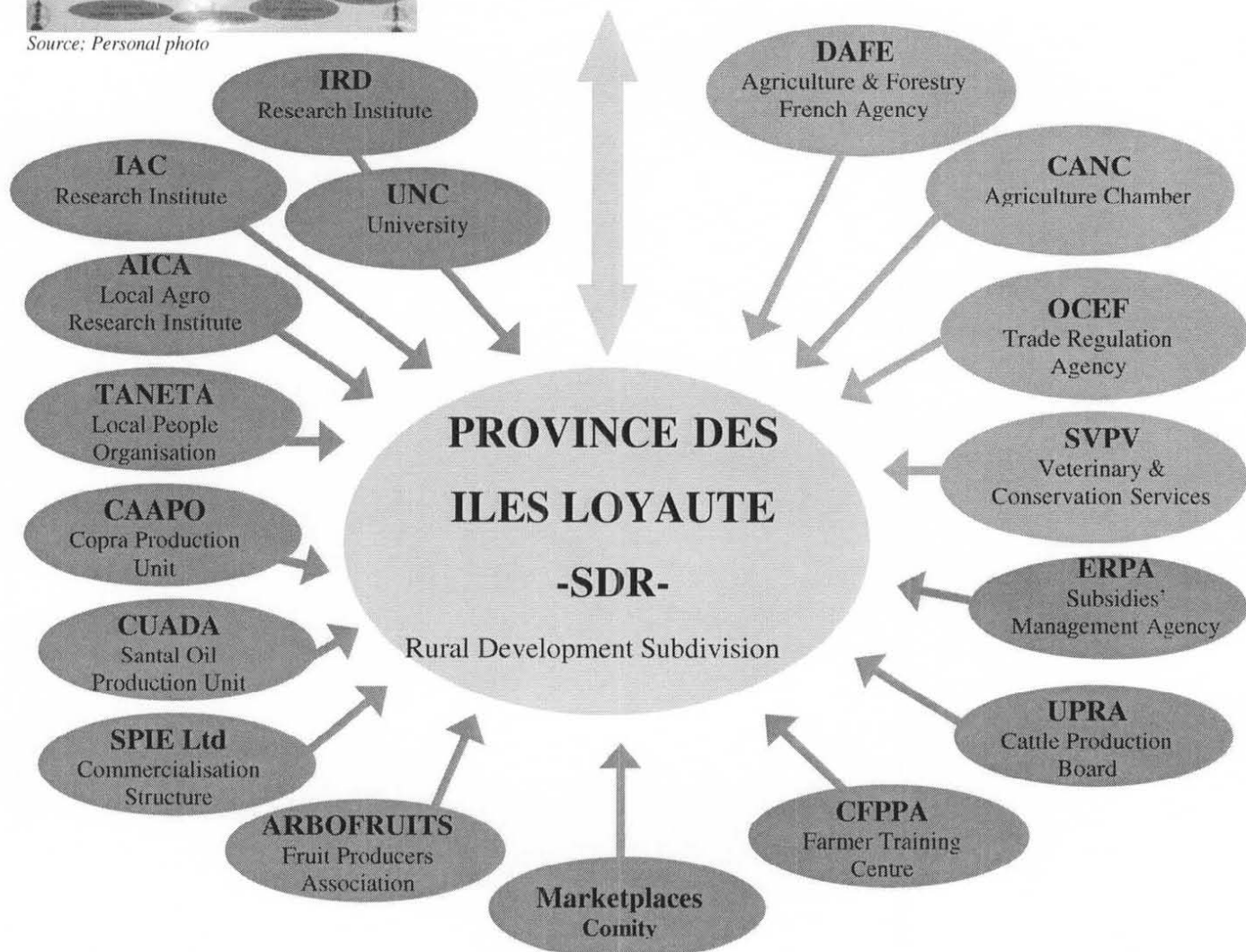
Source; personal – adapted from interviews of members of the DAE

Appendix 4: Extension and Support Services in Loyauté



Source: Personal photo

FARMERS



Support agencies subsidised by the Province

Other support agencies

Source: Translated from a Provincial presentation panel (see picture on top)

Appendix 5: Fieldwork's Schedule

Date	Location	Participants	Activity
June 20th	Maré		Arrival
June 23 rd - am	Tribe of Atha CADRL	5 promoters SDR agent	First meeting during the Monday monitoring session
June 23 rd -pm	Tribe of Atha CADRL	CFPPA Trainer	SSI
June 24 th - am	Taiwanedr district GDPL field	1 promoter SDR agent	First visit on the project's site
June 24 th - pm	Taiwanedr district <i>Chefferie</i> High Chief's house	High Chief Customary personalities	Customary Ceremony to ask Permission. Informal talk
June 25th	Taiwanedr district GDPL field	1 promoter and spouse	Informal talks while helping installing irrigation on the lot
June 27 th	Taiwanedr district GDPL field	1 promoter 1 promoter's spouse	Informal talks while helping on their lots
June 30th	Taiwanedr district GDPL field	1 promoter's spouse	Informal talks while helping with seeding.
July 1st	Taiwanedr district GDPL field	4 promoters Independent EW CFPPA trainer	SSI, informal talks and observations during training in organic practices
July 2nd	Taiwanedr district GDPL field	4 promoters Independent EW CFPPA trainer	SSI, informal talks and observations during training
July 3rd	Tribe of Tadine	6 promoters and mandator	Observations. Meeting with the mayor (cancelled)

Appendix 5: Fieldwork's Schedule – Part 2.

Date	Location	Participants	Activity
July 7 th	LEF's orchard	Arbofruit's technicians IAC staff LEF and family	Observation and informal talks while installing a new irrigation system
July 8 th	Tribe of Atha CADRL	IAC researcher	SSI
July 9 th	Tribe of Nece	Customary ceremony related to the forthcoming wedding of the Guahma High Chief's son	Observations and informal talks
July 10 th	Taiwanedr district GDPL field	4 promoters 2 spouses	Participatory workshop
July 15 th am	Tribe of Atha CADRL	CADRL temp worker	SSI - Informal talk
July 15 th pm	Tribe of Atha CADRL	CFPPA trainer	SSI
July 15 th pm	Tribe of Atha CADRL	Arbofruit technical advisor	Informal talk
July 16 th	Tribe of Atha CADRL	CFPPA trainer	SSI
July 17 th	Taiwanedr district GDPL field	1 promoter	Informal talks while helping with weeding.
July 19 th	Tribe of Atha CADRL	Agriculture Chamber's agent	SSI
July 21st	Tribe of Nece	Customary ceremony for the wedding of the Guahma High Chief's son	Observations and informal talks
July 22nd	Tribe of Patho	Small business holder	SSI

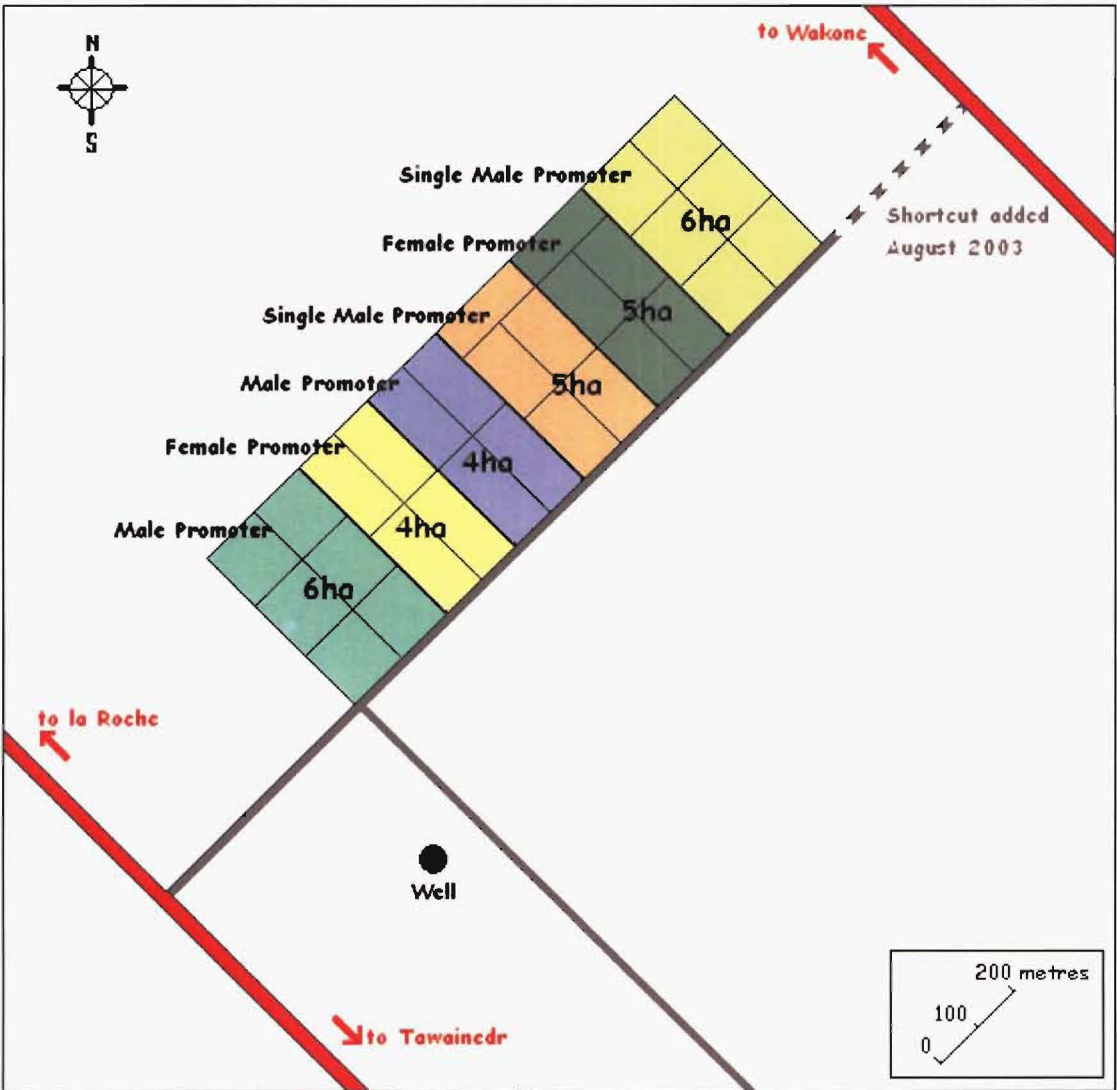
Appendix 5: Fieldwork's Schedule – Part 3.

Date	Location	Participants	Activity
July 24 th	Tribe of Atha Provincial branch	SDR agent	SSI and observation while visiting farmers
July 26 th	Tribe of Medu	LEF	SSI while pruning
July 28 th	Tribe of Atha CADRL	SDR agent CFPPA trainer Students from the main island	SSI and presentation from the SDR agent
July 29 th	Tribe of Atha Provincial branch	SPIE Ltd agent	SSI
July 30 th	Tribe of Atha Provincial branch	Provincial gender officer	SSI
July 31 st - am	Tribe of Atha Provincial branch	DEA agent	Informal talk
July 31 st - pm	Tribe of Wakwarori	LEF and family	SSI, observations and informal talk
July 31 st - pm	Taiwanedr district GDPL field	1 promoter	Informal talks while helping on the lot.
August 1 st	Tribe of Tadine Town hall	Information meeting about the OGAF Grassroots people Representatives from the Municipality, the Province and ESS agencies	Observations and informal talks
August 4 th - am	Lifou Tribe of Wé Province's offices	Head of the Division of Economic Affairs	SSI
August 4 th - pm	Lifou Tribe of Wé	Accounting advisory agency	SSI

Appendix 5: Fieldwork's Schedule – Part 4.

Date	Location	Participants	Activity
August 5 th	4 Tribes of Lifou	Lifou's CFPPA trainer REFs of Lifou	SSI, informal talks , observations and visits
August 6 th	Nouméa	SPIE Ltd. Staff member	SSI
August 7 th - am	Nouméa	ERPA Staff members	SSI
August 7 th - pm	Nouméa	Biannual market of Loyauté islands in Nouméa	Informal talks and observations
August 12 th - am	Maré Tribe of Atha CADRL	Arbofruit's technical advisor	SSI
August 12 th - pm	Tribe of Atha CADRL	Agriculture Chamber's agent	SSI and informal talk
August 13 th	Tribe of Atha Provincial branch	2 SDR agents	SSI and informal talk
August 14 th	Taiwanedr district GDPL field	1 promoter and spouse Independent EW	Informal talks while helping on their lots.
August 15 th	Taiwanedr district GDPL field	1 promoter and spouse Independent EW 1 SDR agent	Informal talks while helping on their lots.
August 22 nd	Tribe of Atha Provincial branch	EW and SDR agents and representatives 2 promoters	Final presentation Closing meeting
August 24 th - pm	Taiwanedr district GDPL field	Promoters and spouses on their lots	Farewell and feedback on closing meeting

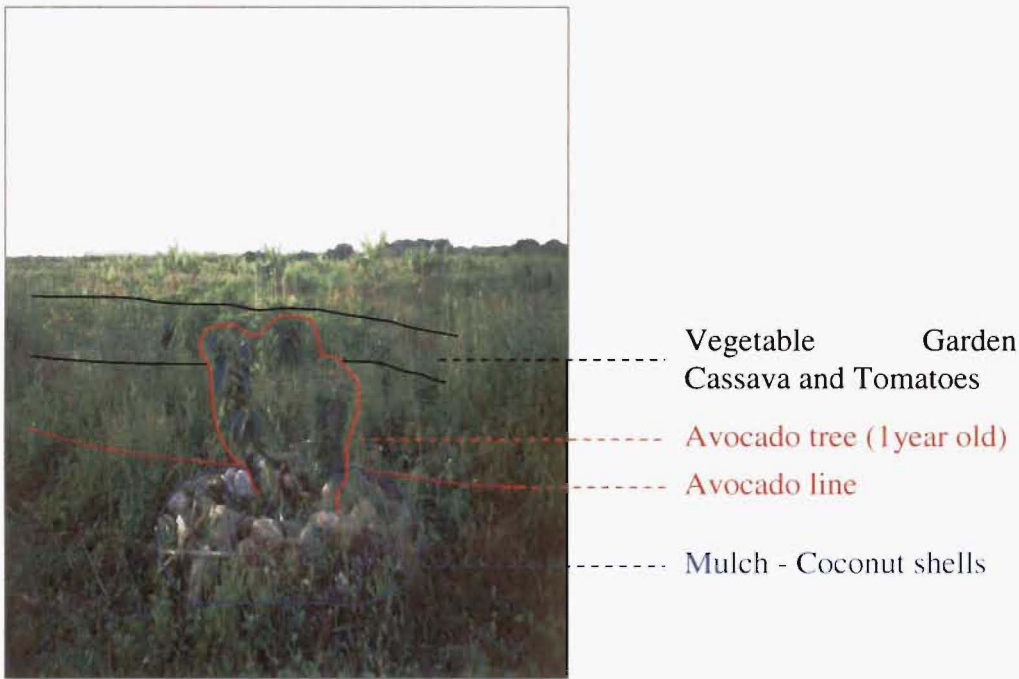
Appendix 6: The GDPL Paradise's field



Source: Personal

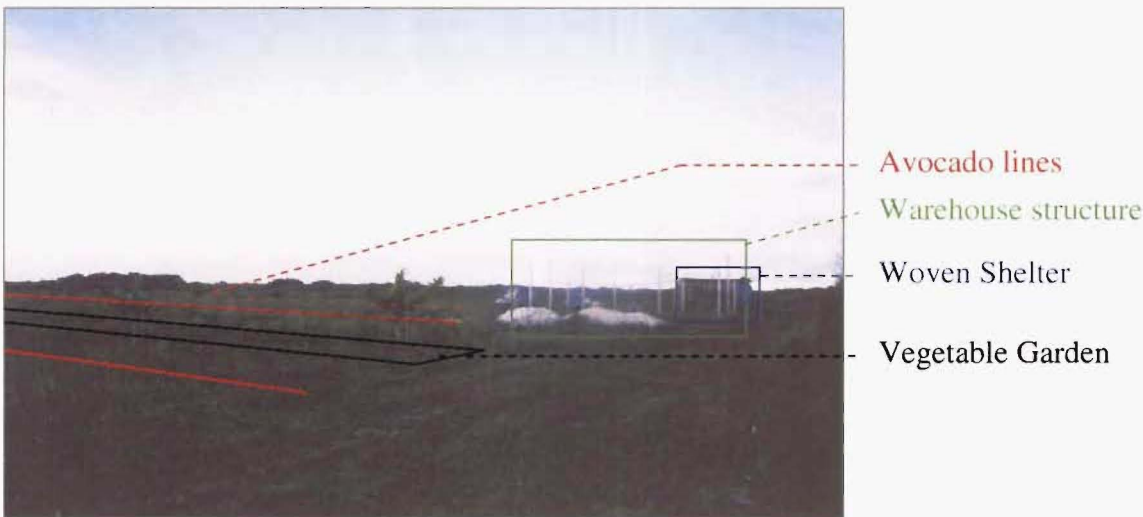
Appendix 7: Photographs

Picture 1 Avocado sapling on a lot



Source; Personal

Picture 2. Part of a lot on the GDPL field



Source; Personal

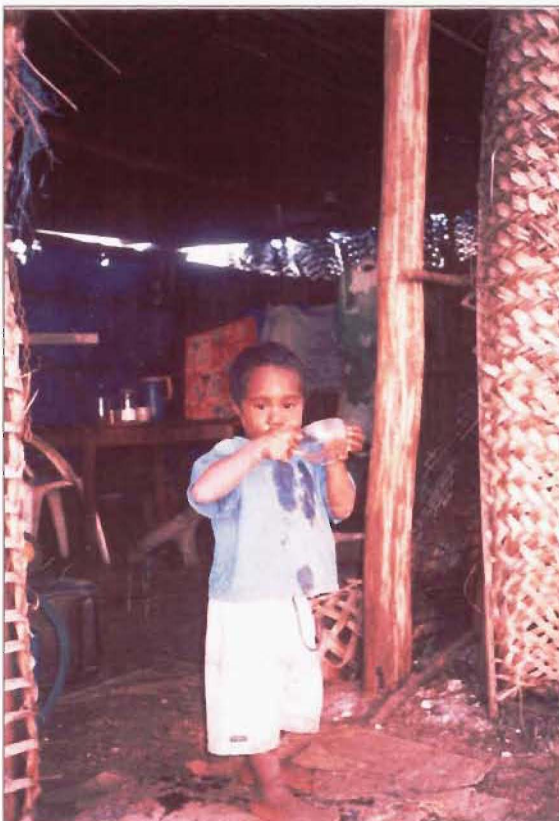
Appendix 7: Photographs – Part 2.

Picture 3. Female farmer on her way to her traditional field



Source; personal

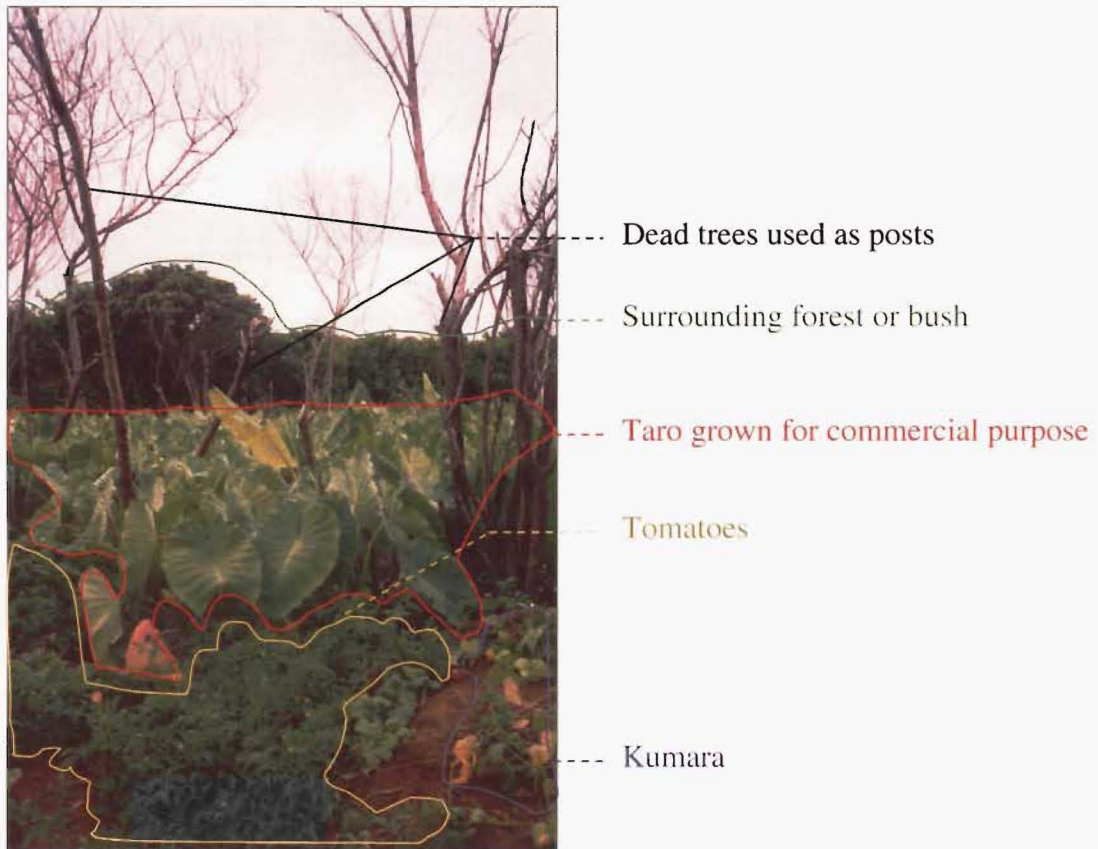
Picture 4. Child of the GDPL in household's woven shelter



Source; personal

Appendix 7: Photographs – Part 3.

Picture 5. Traditional field for commercial purposes



Source; personal

Appendix 8: OGAF, a locally adapted development tool

OGAF stands for Opération Groupée d'Aménagement Foncier, *Spatial Planning Joint Plan*, but really it is a development tool. It is **defined** as a program of collaborative actions taken by the French State, the Province, Municipalities and grassroots on a defined perimeter, over a distinct period of time (usually 3 years).

The **objective** is to facilitate local development by means of targeted activities, strong animation and subsidising spatial planning, production, commercialisation and/or training...

These programs are **Co-funded** by the French Ministry of Agriculture, the Province and Municipalities. The financial partnership may vary from one OGAF to another. Since 1993, New Caledonia has born 5 OGAF. One aiming at reinstalling a tribe on its land in Ouégoa (main island), 3 with an economic focus on the main island with the development of agricultural, fishery, craft and tourism activities. The fifth one took place in Ouvéa and aimed at strengthening the Copra industry.

In practice, OGAF entail a set of activities under rules defined by the stakeholders. The program brings together the efforts of the community in a set of ten activities managed by a chosen local structure and a facilitator.

For instance the activities could be;

- Supporting young farmers' establishment by subsidising inputs expenses.
- Developing the agricultural or fishery sector. The OGAF would therefore focus on making the funds available for investment in storage equipment, products' transportation, marketing operations...
- Capacity building; the OGAF could be used to set and fund training programs.

OGAF are always preceded by an identification phase, preferably held in a participatory way. In Maré, identification started in August 2003 and should last 6 months.

The chosen approach for OGAF is based on local animation, with a locally adapted program defined by the local population. The program's implementation takes place on field rather than in offices, and involves all stakeholders; grassroots, technical consultants, institutions and administration

Adapted from the pamphlet circulated during an information meeting, edited by the Haut-Commissariat de la République.

Appendix 9: The Logical Framework

The Logical Framework Approach is an analytical management tool, which can help planners and managers throughout project's design, implementation, monitoring and evaluation (AusAid, *web resources*). The Australian Aid Agency AusAid recognises a set of project's management situations for which the use of the LFA proves a useful tool as follow (AusAid, *web resources*);

- Analysing the **existing situation** during project preparation;
- Establishing a **logical hierarchy of means** by which project's objectives will be reached;
- Identifying the **potential risks** to achieving the objectives, and to sustainable outcomes;
- Establishing how outputs and outcomes might best be **monitored and evaluated**;
- Presenting a **summary** of the project in a standard format;
- Monitoring and reviewing** projects during implementation

The result of the logical framework analysis can be presented as a matrix of four rows and five columns which provides a summary of the project design (AusAid, *web resources*).

- | |
|---|
| <ul style="list-style-type: none">- The first column, Summary, records the hierarchy of goal, objectives, outputs and activities. In short Why, What and How.- The second column presents the indicators that will be used to assess the achievement of goal, objectives, outputs and activities.- The third column specifically indicates how these measurements can be done- The fourth column identifies the risk and constraints under which the project will be operating- The fifth column describes how these risks and constraints will be managed or taken into account in the design of the project. |
|---|

(UNEP, 2001 – *web resources*)

Appendix 9 The Logical framework – Part 2.

The following figures summarise the content of a logframe matrix;

The log frame matrix;

Summary	Indicators	Means of verification	Risks and constraints	Risk management
GOAL: The broader (national, local or programme level) goal to which the project contributes	Measures of achievement of the goal. These would be used during evaluation.	Sources of information (national statistics) Methods used.	Risks and constraints affecting the goal- objective linkage, <i>including risks and constraints outside control of the project</i>	The specific components and strategies that are within control of the project and those that are outside the control of the project.
OBJECTIVES: The primary purposes of the project - a sustainable base for lasting benefits for target groups should be the ultimate aim. The objective should specify a time for achievement	Conditions at the end of the project indicating that the objectives have been achieved. These would be used for evaluation, ie end of project status	Sources of information (project data, evaluation) Methods used	Risks and constraints affecting the objective-output linkages.	The project specific outputs and activities that will help to address the risks/constraints identified
OUTPUTS: The direct measurable results of the project. The combination of outputs will help achieve the objectives.	The magnitude and quality of the outputs. These would be used for review and evaluation.	Sources of information (project data, review) Methods used	Risks and constraints affecting the output- activity linkage	The project specific activities that will address the risks and constraints identified.
ACTIVITIES: The actions carried out to implement the project (This could include inputs, timing and responsibility)	Implementation targets - type and quantity. These will be used for monitoring	Sources of information (project data,) Monitoring methods used	Risks and constraints affecting the successful completion of the project activities	These should either be addressed by other activities or by the way in which activities are carried out.

Source: UNEP, 2001 - web resources.

Example of a LogFram matrix;

Community forestry project - Vietnam				
	Project description	Key indicators	Means of Verification	Assumptions/Risks
	Goal To increase wood supply and farmer incomes, and to help arrest the process of soil degradation in the project area on a sustainable basis.	Volume of wood harvested. Family income from tree products. Soil structure and fertility.	Annual sample survey of farmers conducted by DFOs. Soil sample survey in years one and four by FRI.	
1	Component Purpose 1 To establish improved community based forest management practices among members of the Ben Da Farmers Association (BFA).	No. of 'active' BFA members. % of farmers 're-adopting' recommended practices in subsequent years and their understanding of key husbandry and/or management practices.	Association membership and meeting attendance records kept by BFA. Annual sample survey of farmers conducted by DFOs.	Market liberalisation policies are maintained. Market prices for commercial tree products exceed production costs.
1.1	Outputs Land distribution will have been completed for garden forest and woodlots for 1 600 families.	Area distributed and no. of beneficiaries.	Land register kept by district people's committee.	At least 40 farmers are willing and able to become VEWs.
1.2	40 village extension workers will have been identified, trained and resourced.	No. of VEWs trained, average no. of days training conducted and VEW kits distributed.	VEW training register kept by DFOs and Forestry Adviser, reported quarterly. Kit procurement records.	District people's committee provides payment in rice for VEWs working with the project, and these farmers continue to work with the project after training.
1.3	Farmer field days will have been conducted, supported by appropriate extension and awareness materials.	No. of farmer field days conducted, topics, location and attendance.	Field day records kept by VEWs and reported quarterly.	Extension.
1.4	BFA executives and staff will have been trained in management, accounting and administrative skills.	No. of people trained by topic and self assessed quality of the training provided.	Training reports prepared by contracted trainers and training evaluation reports completed by trainees. Ex-post assessment 6 months after training	
2	Component Purpose 2 To expand, diversify and improve the tree planting and forest management in the project area.	Ha. planted by species, survival rates, etc.	Annual sample survey of farmers conducted by DFOs and Forestry Adviser.	farmers find the trees - technology to their

Source: AusAid web resources

Appendix 10: A Typology of Participation

Typology	Characteristics of each type
1. <i>Passive Participation</i>	People participate by being told what is going to happen or has already happened. It is a unilateral announcement by an administration or project management without listening to people's responses. The information being shared belongs only to external professionals.
2. <i>Participation in Information Giving</i>	People participate by answering questions posed by extractive researchers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.
3. <i>Participation by Consultation</i>	People participate by being consulted, and external people listen to views. These external professionals define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views.
4. <i>Participation for Material Incentives</i>	People participate by providing resources, for example labour, in return for food, cash, or other material incentives. Much on-farm research falls in this category, as farmers provide the field but are not involved in the experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.
5. <i>Functional Participation</i>	People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organisation. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
6. <i>Interactive Participation</i>	People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures and practices.
7. <i>Self-Mobilisation</i>	People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Such self-initiated mobilisation and collective action may or may not challenge existing inequitable distributions of wealth and power.

Source: Pretty (1995), adapted from Adnan et al (1992)

Appendix 11: Systematisation

Definition of systematisation

“Systematisation is a methodology, which facilitates the ongoing description, analysis and documentation of the processes and results of a development project in a participatory way. New Knowledge is generated through a systematic learning process, which then fed back and used to make decisions about actions to be implemented to improve project performance. The lessons learned are shared with others” (Selener D., 1996).

What is systematisation?

Systematisation should be envisaged as a comprehensive and continuous process, a participatory exercise. It is a planning, problem-solving, monitoring and evaluation tool. Systematisation is not a one-time evaluation focusing on impacts and handled by external individuals. It does not aim at simply describing events through a mere documentation either.

Why systematisation?

Systematisation avoids “losing” the experience, the lessons learned that can help improving project performance. It goes further than an evaluation carried out after completion since it is an ongoing process throughout implementation.

It allows preserving the experience, monitoring and analysing processes, activities and results throughout the life of the project.

Who is involved in Systematisation?

Project beneficiaries, community leaders, development workers, facilitators, technical staff, social workers, educators, researchers and evaluators, government officials and donors.

Five main activities

The five main activities of systematisation are; Description of the project; Analysis of the activities; Decision making and action to improve project performance; Documentation and Sharing lessons learned.

Six main objectives

Preserve information; Improve project performance and results; Promote empowerment, self-reliance and sustainable development; Contribute to mutual understanding and cooperation; Enhance organisational capacity and Strengthen civil society.

Adapted from Selener D. (1996) – pp.5-15)