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Context document
May 1st 2016

Saint-Laurent du Maroni, the urban transition of a french city in the Amazon

International workshop of urban planning
Saint-Laurent du Maroni from 6th to 20th may 2016

Ville de
Saint-Laurent du Maroni
Sèves de Guyane

EPAG
Guyane
territoire d'avenirs

afd
AGENCE FRANÇAISE
DÉVELOPPEMENT

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Saint-Laurent du Maroni. The urban transition of a french city in the Amazon.

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ACKNOWLEDGEMENT

Acronyms

ADIE : Association pour le Droit à l'Initiative économique
ADIL : Agence Departementale pour l'Information sur le Logement
ADEME : Agence De l'Environnement et de la Maîtrise de l'Energie
AEC : Association des Etats de la Caraïbe
AFD : Agence Française de Développement
ANRU : Agence Nationale pour la Rénovation Urbaine
AP : Administration Pénitentiaire
APOG : Association Patronale de l'Ouest Guyanais
ARS : Agence Régionale de Santé
AUDEG : Agence d'Urbanisme et de Développement de la Guyane
BTP : Bâtiments et Travaux Publics
CACL : Communauté d'Agglomération du Centre Littoral
CAF : Commission d'Attribution Foncière
CAF : Caisse d'Allocations Familiales
CARICOM : Caribbean Community, ou Communauté Caribéenne
CAUE : Conseil d'Architecture, d'Urbanisme et de l'Environnement
CCDS : Communauté de Commune Des Savanes
CCEG Communauté de Communes de l'Est Guyanais
CCIG : Chambre de Commerce et d'Industrie de la Guyane
CCOG : Communauté de Communes de l'Ouest Guyanais
CCPAB : Conseil Consultatif des Populations Amérindiennes et Bushi
CGEDD Commissariat Général de l'Environnement et du Développement Durable
CHOG : Centre Hospitalier de l'Ouest Guyanais
CIAP : Centre d'Interpretation de l'Architecture et du Patrimoine
CSG : Centre Spatial de Guyane
CTG : Collectivité Territoriale de Guyane
DAAF : Direction de l'Alimentation, de l'Agriculture et de la Forêt
DAC : Direction des Affaires Culturelles
DEAL : Direction de l'Environnement, de l'Aménagement et du Logement
DIECCTE : Direction régionale des Entreprises, de la Concurrence, de la Consommation, du Travail et de l'Emploi
DJSCS : Direction de la Jeunesse, des Sports et de la Cohésion Sociale
EPAG : Établissement Public d'Aménagement en Guyane
EPCI Établissement Public de Coopération Intercommunale
FOAG : Fédération des Organisations Autochtones de Guyane
LLS : Logement Locatif Social
LLTS : Logement Locatif Très Social
MERCOSUR :Marché Commun du Sud
OIN Opération d'Interet National
ONAG : Organisation des Nations Autochtones de Guyane
ONF: Office National des Forêts
PAC: Politique Agricole Commune
PADD : Plan d'Aménagement et de Développement Durable
PK : Point Kilométrique
PLU : Plan Local d'Urbanisme
PPDS : Populations Provisoirement Déplacées du Suriname
PPRI : Plan de Prévention des Risques d'Inondations.
RSMA : Régiment du Service Militaire Adapté
SAR : Schéma d'Aménagement Régional
SAU : Surface Agricole Utile
SENOG : Société d'Economie mixte du Nord Ouest Guyanais
SIMKO : Société Immobilière de Kourou
SEMSAMAR : Société Economie Mixte de Saint-Martin
TCA : Traité de Coopération Amazonienne
ZAC : Zone d'Aménagement Concertée
ZDUC : Zone de Droits et d'Usages Coutumiers
ZNIEFF : Zone Naturelle d'intérêt Ecologique, Faunistique et Floristique.

ABOUT THIS DOCUMENT

This context document was drafted between March and April 2016, with documentation provided through local actors, scientific research, interviews, field visits, and three months of immersion in Saint-Laurent du Maroni. This context document is a snapshot of the territory the participants of this urban planning workshop will be focusing on and serves to be a source for understanding Saint-Laurent du Maroni on different scales and across multiple dimensions. This document does not claim to be exhaustive.

Introduction

Part I. French Guiana in the Guianas

Part II. Saint-Laurent du Maroni today

Part III. Saint-Laurent du Maroni tomorrow

Conclusion

Annexe

Maroni river, view from the french guiana bank. Credits : Ateliers de Cergy

INTRODUCTION

ORIGIN OF THE REQUEST

Saint-Laurent du Maroni, located on the western edge of French Guiana and the last French town before the border with Suriname, is beginning its urban transition. The strong urban growth that has been recorded these last few decades poses the question of how territorial solidarities can be implemented within the Saint-Laurent commune. In fact, demographic projections place Saint-Laurent as the most populated commune in French Guiana. In 2012, French Guiana's population was estimated to be 252,227, of which 59,129 were in Cayenne and 45,871 in Saint-Laurent. According to certain population scenarios, by 2030, Saint-Laurent is estimated to have a population of 153,075 compared to 73,403 for Cayenne.1

However, these demographic projections expose the commune to numerous challenges that are economic, social, environmental, and urban. They also appear in French Guiana at the regional level. And though these challenges seem similar to those of other emerging countries, it is important to remember that the country's political and administrative framework falls under that of the French Republic, whose laws and regulations set limits on French Guiana's territorial development.

Facing challenges and constraints, the city of Saint-Laurent du Maroni decided to respond by requesting the assistance of Les Ateliers Internationaux de Maitrise d'Œuvre Urbaine de Cergy Pontoise, so as to better identify and debate these new challenges and anticipate possible means of action over the long term: by 2060.

France métropolitaine

7 000 km

Océan Atlantique

Guyane Française

83 534 km²
soit 16% du territoire metropolitain
255 600 habitants
3 habitants/km²
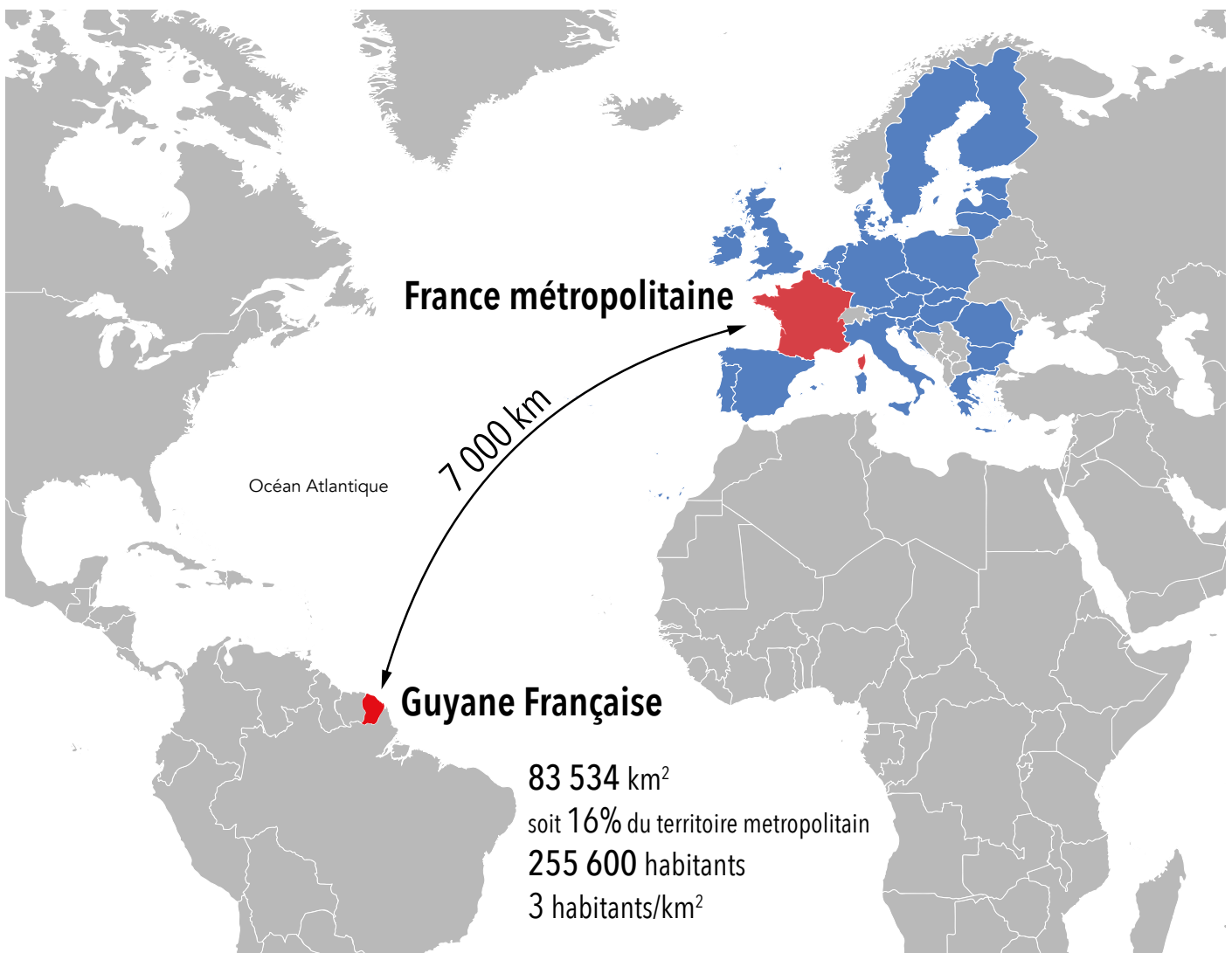
French Guiana Location. Credits : Ateliers de Cergy

WHY 2060 ?

The decision to orientate the workshop towards a process of coproduction results from the need to collaborate with local stakeholders. Foresight is the best method for moderating their relationships to the territory thus enabling the emergence of creative and innovative propositions, which the current political situation does not always permit. It is the underlying reason for implementing a collective strategy for local development through various tools and projects. It is also a way out of the "catch-up" rationale that has placed all of the local actors and services under strain, instead choosing to expand towards new scenarios by anticipating other forms of urban development.

EXPANSION OF THE STUDY AREA TO ALBINA

In order to expand towards another form of urban development for the commune of Saint-Laurent, it is also necessary to extend the study and action area beyond communal and political limits. The situation of the cross-border cooperation with Suriname is also important to consider. Even if the Maroni river is the political border between France and Suriname, it is no less a representation of the residential area shared by French Guiana and Suriname. The history of this river can be traced through the links between Saint-Laurent and Albina, twin cities, who are best suited to be defined and strengthened through an inclusive and collaborative approach. The partnership with the French Development Agency (AFD) aims to consolidate these cross-border objectives.
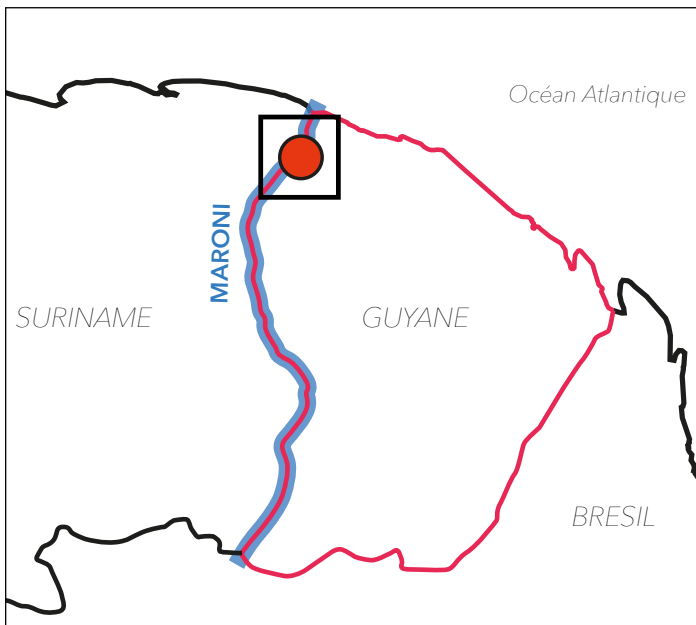
Saint-Laurent and Albina location.
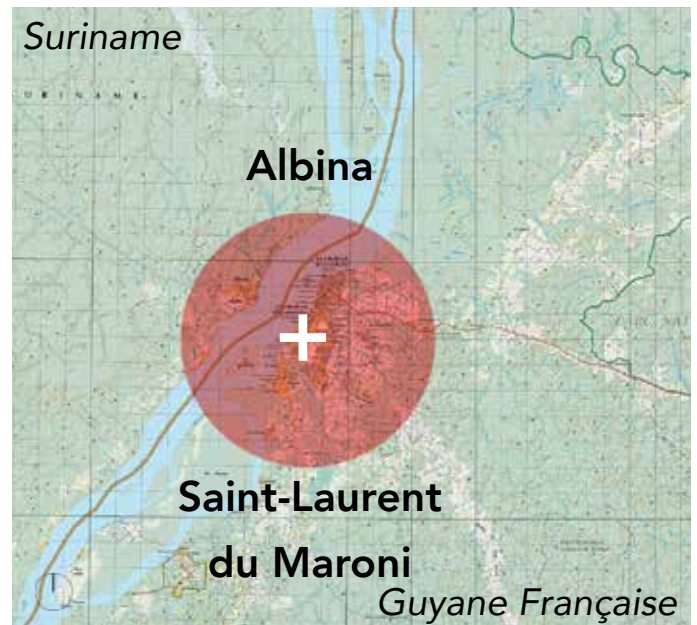
Area's project. Base map : IGN.

WORKSHOP CHALLENGES

The main challenges that emerge from this reflection deal with the Maroni river, the built environment, and infrastructure. These challenges are analyzed by their economic and environmental features and in terms of the overall ecosystem in order to move towards transversal and consistent responses.

> The river

Six hundred and twelve kilometers in length, the Maroni has always been the commercial and cultural artery of exchange for the Guiana Shield. Even if history attempted to break up the river between two countries, economic and cultural continuities remain. Concerning Saint-Laurent, its contemporary urban history has developed with its back towards the river. At this point, it is best to consider its return towards facing the riverbanks by focusing on three axes of development. A north-south axis going from Mana to Apatou. An east-west axis which includes Saint-Laurent and Albina, and therefore their urban zones. And finally the notion of connectivity, applied to public facilities and spaces.

> The built environment

The study of vernacular and contemporary urban forms captures the diversity in which different populations construct and inhabit their environments. These urban forms interrogate the relationships that the populations maintain with nature and the river. A wide variety of produced urban forms can be observed, ranging from self-built to metropolitan high-rise developments. And yet the difficulties faced by the population in finding housing raises questions about a housing market whose supply and demand seem to be in conflict. Finally, the built environment, in all of its immense diversity, examines the relevance of certain types of urban models to be adopted: can urban agriculture find its place in a rural town? How can models founded on social economy support the collective intelligence at work?

> Infrastructure

Even if infrastructure serves to structure the territory over the long term, it is nonetheless important to think about its insertion into Saint-Laurent's urban fabric and its cross-border role. Accessible transportation systems, communication networks, and waste management services create challenges in terms of territorial cohesion and urban management. Lastly, major public works projects such as bridges, the airfield, and the port should now be considered centers of development and no longer as territorial fissures.

AREAS, APPROACHES

> The study area

This area covers the residential and commercial zones of Saint-Laurent du Maroni: from Awala-Yalimapo to Apatou, passing through Mana and Jahouvey, but also extending to the Suriname side from Galbi to Bigiston. The challenges of agriculture, resources, waste, economic activity, and culture are placed on the scale of this vast territory to allow for the development of complementary and synergetic responses.

> Project sectors

The multi-scale approach enables the development of tools based on project sectors.

The sector of the urban project and public spaces allows for short-term exploration:
- The different relationships maintained by the city with its river, in terms of tourism development and the bolstering of its historical importance.
- The eastern entrance to the city and the Margot carrefour serve as areas for generating the economic development of the city in relation with Cayenne and Mana.
- The southern access to the city raises questions about the potential circumvention and breach in terms of the existence of the river, at the Saint-Jean, Apatou, and Albina level.

The sector of the urban system and natural spaces. The large territories enable the examination, over a medium term, of methods of sustainable development and urban systems created around mini-networks, local systems, and nature within the city. It is thus necessary to expand on:
- urban agriculture and ecological continuities
- the flood prevention plan
- the hydrography of the Maroni's river basin and sewage and waste management techniques
- urban ecology and electric energy services

The sector of planning a connected and digitally-linked city. The premise of planning for 2060 will allow for the examining of the role and impact of major infrastructure and urban facilities such as: the airport, port, river crossing, public facilities, economic activity sectors, and digital services in the city.

PART I
FRENCH GUIANA
IN THE GUIANAS

To better understand the challenges faced by the Saint-Laurent du Maroni territory, it is essential to have a full understanding of the regional context, that is to say on the scale of the Guiana Shield and French Guiana local government.

1. THE GUIANA SHIELD IN THE AMAZON

The area of study is located in the heart of the Guiana Shield, both geographically and historically.

GEOLOGY

The Guiana Shield, or Guiana Highlands, extends across five countries: Brazil's Amazonian section in the north, the western edge of Venezuela and the three Guianas: Guyana, Suriname, and French Guiana, covering a total surface area of 1.5 million km2. This geological formation, which dates back to the Precambrian Eon, contains numerous minerals: gold, iron, bauxite, diamond... The Guiana Shield is defined by the Orinoco river to the north and by the Amazon river to the south. This region adjoins the Amazonian river basin that covers 6 million km2 (more than 40% of Brazil) with 80,000 km of waterways, thus forming the world's largest watershed.

LANDSCAPE

The vast majority of the Guiana Shield is covered by primary forests similar to those in the Amazon, from which it is an extension. Many parts of the rainforest are threatened with deforestation even though the area is considered one of the world's largest zones of biodiversity. Guianese forests make up 2.6% of the world's carbon stock, or 6.15 megatons. This forest is covered by a vast waterway system composed of rivers, creeks, and mangroves which are as much examples of the physical landscape as they are historical areas of settlement. Mount Roraima in Guyana is the region's highest peak at 2,810 meters above sea level. Other high altitude points include the *tepuis* and plateaus with steep contours.
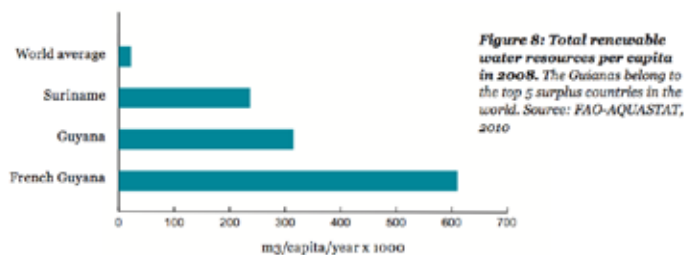
Water ressource / inhabitants. Source : WWF
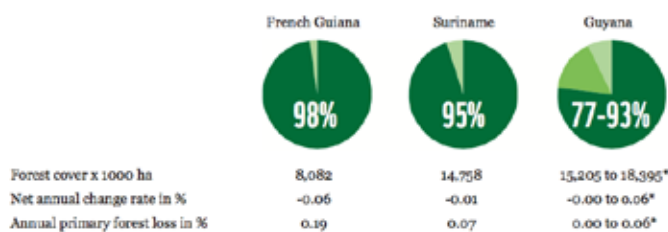
Forest cover. Source : WWF

Inselberg.

Maroni river.

Guiana Shield in South America. Source : WWF

Guiana Shield and its hydrographic network. Credits : Ateliers de Cergy

HISTORY OF THE GUIANA SHIELD

The present division of the Guiana Shield into six countries results from a heritage of western colonization. The three Guianas: Guyana (a former British colony), Suriname (a former Dutch colony) and French Guiana (a former French colony) are three countries in South America with an official language other than Portuguese or Spanish. French Guiana is the only non-sovereign territory on the South American continent.

12,000 BCE to 1500 CE: The pre-Columbian era
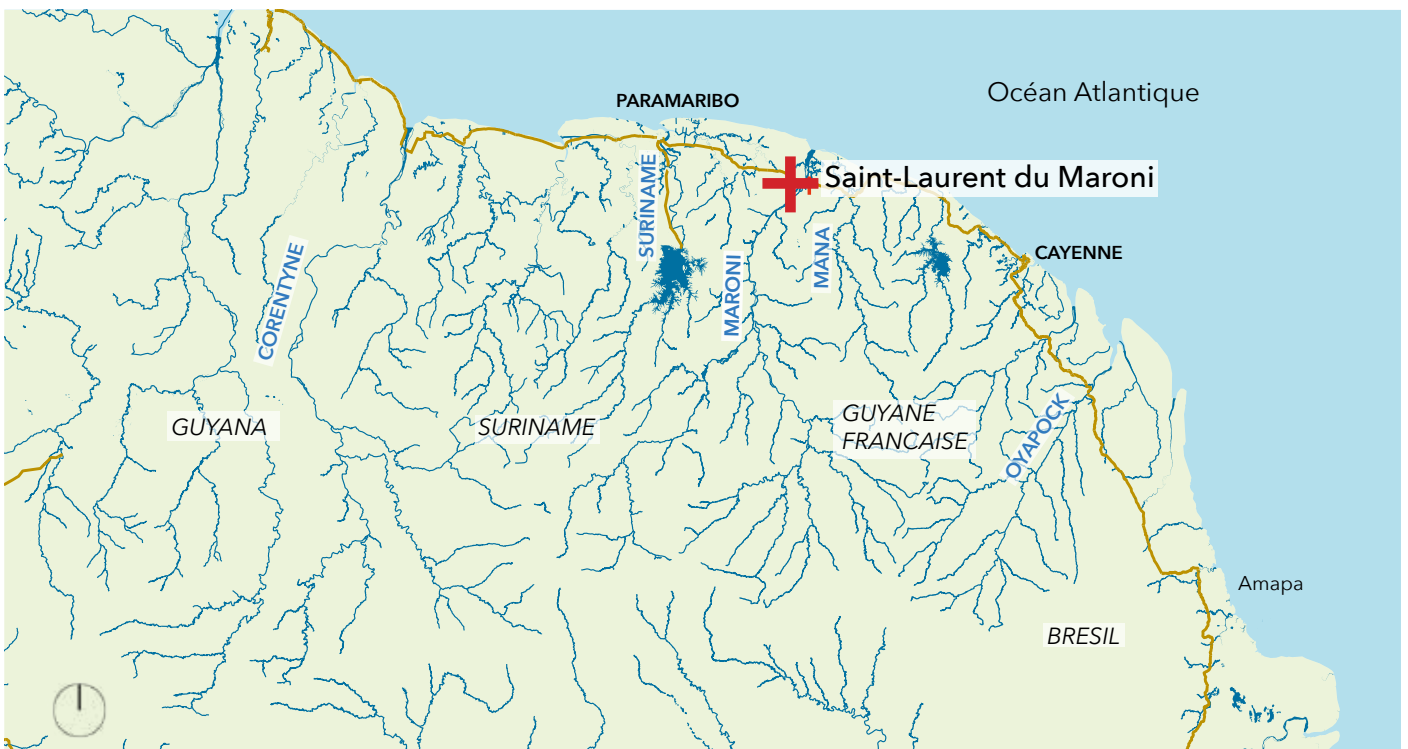The first people to settle along the Guiana Shield around 12,000 BCE were the Paleo-Indians arriving from Asia. By 6,000 BCE, the Meso-Indians were making pottery and cultivating certain plants (corn, arrowroot). The Neo-Indians settled the area beginning in 2,500 BCE and created constructions out of earth such as the «crowned mountains», mounds, raised fields, and small hills. Pierre and Françoise Grenand described a «likely ethnic and linguistic panorama of French Guiana» in 1500, during its discovery by the Europeans [1]:
- «Paleo-Indians,» groups of hunters and gatherers
- people who spoke the Arawak language
- people who spoke the Cariban language, originating from the Mount Roraima region
- people who spoke the Tupi-Guarani language, originating from the Amazon

17th-19th Centuries: The slave trade
It was in the 15th century when the first Europeans discovered the Guiana Shield. It was originally allocated to Spain through the Treaty of Tordesillas in 1494, which divided the world between the colonial expansions of Spain and Portugal. However, the Spanish were not looking to colonize the plateau in its entirety, thus leaving room for other colonial powers. This relative indifference is explained by the difficulty of settling in the area due its climate and relatively infertile soil. In the 16th century, new settlements were made by the British, Dutch, and French. These colonies established their boundaries using the river system. Until the Treaty of Utrecht in 1713, these borders would change impulsively as a result of wars or settlement failures by the various colonies. Despite this treaty, disputes continue to persist from the 18th century to today concerning the interior borders and river sources, in spite of and in contradiction with the settlements of indigenous people.

With the arrival of settlers and the gold rush of the 19th century, indigenous populations were decimated by the introduction of new diseases, as well as through wars of conquest and attempts at forced labor. At the beginning of the last century, the indigenous population counted only 1,500 people as compared to 30,000 before the arrival of Europeans in French Guiana. The colonial development of the coastline forced indigenous populations to migrate inland, always along the rivers.

The 17th century also marked the start of the slave trade as part of the Triangular Trade. Empty boats loaded with trading currency, were filled with slaves coming from wars of conquest. These African populations were sent to the different colonies in the Americas, where they worked mainly in cotton, sugar cane, mining, and timber. The fruit of their labor was then sent to Europe to supplement new economic markets and to finance the monarchies at war. In total, around 11 million Africans were shipped off as slaves, of which 5 million were sent to Brazil, 36,000 to French Guiana, and more than 300,000 to Suriname. In France, it wasn't until 2001, with the introduction of the Taubira law, that slavery and the slave trade were recognized as crimes against humanity, and the inclusion of this history became a requirement in the national educational curriculum. May 10th is a national day of memory for the slave trade, slavery, and their abolition. The day commemorating the abolition of slavery in French Guiana is June 10th.

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1. Grenand Françoise, Grenand Pierre. Les amérindiens de Guyane française aujourd'hui : éléments de compréhension.

Native Amerindian's arrival, European colonisation and Black slave trade.
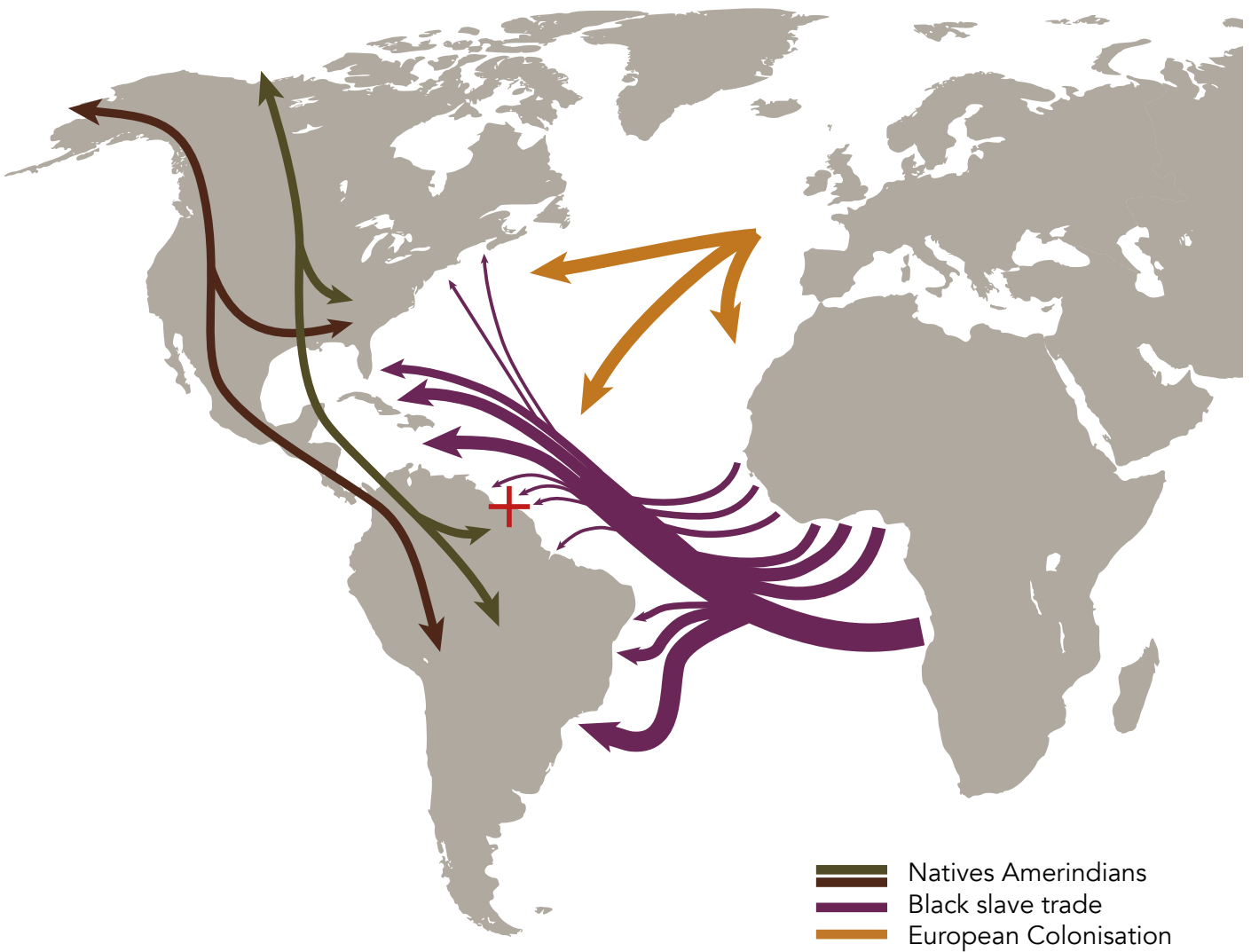
Natives Amerindians
Black slave trade
European Colonisation
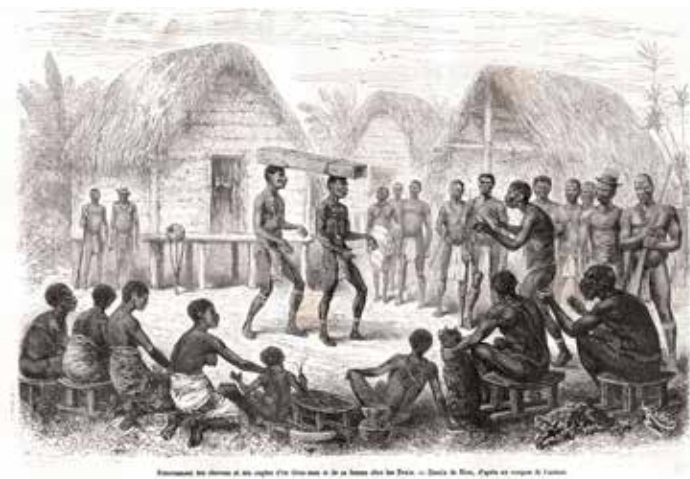
Engraving of Edourard Brieu. Burial of hairs and nails of a Gran Man and his wife among Bonis tribe. Credits : BNF, Gallica

Saint Laurent's pier postcard.

The three Guianas have different histories tied to their colonial empires and political situations, but they all basically functioned according to the same systems:
- a system of slavery, until its abolition in the mid-19th century
- a domination over indigenous populations
- settlements along the coastline and river openings for commerce and military defense

19th-20th Centuries: Colonial period of international migrations
The abolition of slavery took hold at different times: in 1807 for the British Empire, whereas in Guyana it was 1838, 1848 in French Guiana, and 1863 in Suriname.

The result of the abolition of slavery was a significant decrease in the work force who now had to be paid. Therefore, the colonial empires established new strategies. Penal colonies were established in French Guiana, from 1850 to 1938, where over 80,000 convicts were sent to serve out their sentences. Suriname established an Indian and Javanese immigration between the late 19th and mid-20th century, during which over 60,000 migrants arrived. In Guyana, around 14,000 Chinese arrived around the same time, effectively abandoning plantations for commerce. In the same period, from 1835 to 1918, over 300,000 Indian workers arrived in the British colony.

Decolonization and the birth of a *département*
Independence took effect in Brazil in 1822, in 1966 in Guyana, and in 1975 in Suriname. The status of French Guiana was to go from being a colony to that of a French département, thereby becoming an official French territory in 1946. Beginning in the 1970s, French Guiana saw the emergence of separatist and autonomist movements.

In Suriname, the first established government was toppled by a military coup in 1980, with Sergeant-Major Dési Bouterse taking power. December 8, 1982 marked a turning point in the country's history with the execution of 15 members of the opposition party by those in power, thus leading to the regime's isolation on the international scene. Between 1986 and 1992 was the Surinamese Interior War, in which the government of Colonel Dési Bouterse was pitted against that of the Jungle Commando led by Ronnie Brunswijk. Fighting was engaged in the east of Suriname, a region mainly populated by Bushi Nenges, leading to the arrival of over 10,000 refugees on the French banks of the Maroni. On July 21, 1989 a peace agreement was signed in Kourou between the new Surinamese government and the Jungle Commando. However, in 1990, Bouterse retook control through a new coup on December 24th. It wasn't until 1992 and a new government for the conflict to effectively be put to an end.

SURINAME (DUTCH GUIANA) WEST INDIES.
GEOGR. POS. 2°-6° NORTH, 54°-58° WEST
TEMPERATURE 73°-87°, RAINFALL BETWEEN 60 AND 92 INCHES.

Javanese migrants to Surinam.

Jungle Commando. Credits : Patrick Chauvel

REGIONAL DYNAMICS OF COOPERATION

During the post-colonial period, a dynamic of cooperation has gradually developed between the two sovereign countries of the Guiana Shield and the two regional entities: continental South America and the Caribbean islands. French Guiana is limited by its status as a French territory and thus cannot be a full member of these regional bodies.

Created in 1973, the Caribbean Community (CARICOM) was established by the Treaty of Chaguaramas. Its headquarters is in Georgetown and it counts fourteen states as members, including Guyana and Suriname. Its current objective is to strengthen ties between the countries with the project of a Single Market and Economy and a shared passport.

In 1978 the Amazon Cooperation Treaty (ACT) was signed by the countries of the Amazon region: Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela. Guyana and Suriname are signatories even though their waterways are not tributaries of the Amazon. This treaty aims to promote cooperation for a sustainable development of the Amazon. Today, French Guiana participles in some of the activities of this treaty.

In 1994, the convention establishing the Association of Caribbean States (ACS) was signed, with the «goal to promote consultation, cooperation, and coordinated action between all of the Caribbean countries.» There are 25 members, including Guyana and Suriname. French Guiana is one of the associated members to the extent that it is a non-independent territory.

Two thousand and eight was the start of the «Amazon» Operational Program by the European Union's European Regional Development Fund (ERDF) under the objective of a «European territorial cooperation.» This program, now for the period of 2014-2020, brings together French Guiana, Suriname, Guyana and three of Brazil's Amazonian states (Amapá, Pará and Amazonas) on cross-border projects, working with institutional partners and civil society.

Regional infrastructure projects
These treaties of cooperation are accompanied by roadway infrastructure projects serving to integrate the Guiana Shield into the South American continent and, more in particular, with Brazil. The latter considers the Guiana Shield as part of its sphere of influence and is developing intercontinental projects there to enable its accessibility. These projects include the development of roadways in the Amazon between Brazil and the countries of Guyana, Venezuela, and Suriname; the Northern Arc project, connecting Brazil with Venezuela, via the three Guianas; and the construction of the bridge over the Oyapock river between French Guiana and Brazil.

« These infrastructure projects are envisioned through a geopolitical perspective as explained by Hervé Théry and Nely Aparacida de Mello. Through the construction of stretches of roadway connecting Roraima and Amapá to the coastal roads of the three Guianas, [the Northern Arc] forms a continuous ring that unites the two Brazilian states and the three neighboring countries (or département) in a unique ensemble where balances and power games have yet to be defined. With the Guianas now accessible, will it be easier for them to fall into Brazil's economic pockets? [...]But the immediate danger is that these roads are like the rest in the Amazon, primary pathways for miners, small farmers in search of land, migrants and traffickers, and plus, they frequently cross through Indian reservations.»[2]

2. Michel Michel, Hervé Théry, Neli Aparecida de Mello, Atlas du Brésil, Ed. Collections du Territoire, 2004.

Cooperation agrement and infrastructures' projects on Guiana Shield.
Credits : Ateliers de Cergy

ALENA

CARICOM

CARAIBES

UNION EUROPEENE

Arc Nord

MERCOSUR

| | MERCOSUR | ■ | CAN | ⟷ | The Northern Arc |
| | CARICOM | | ALENA | → | Roads |
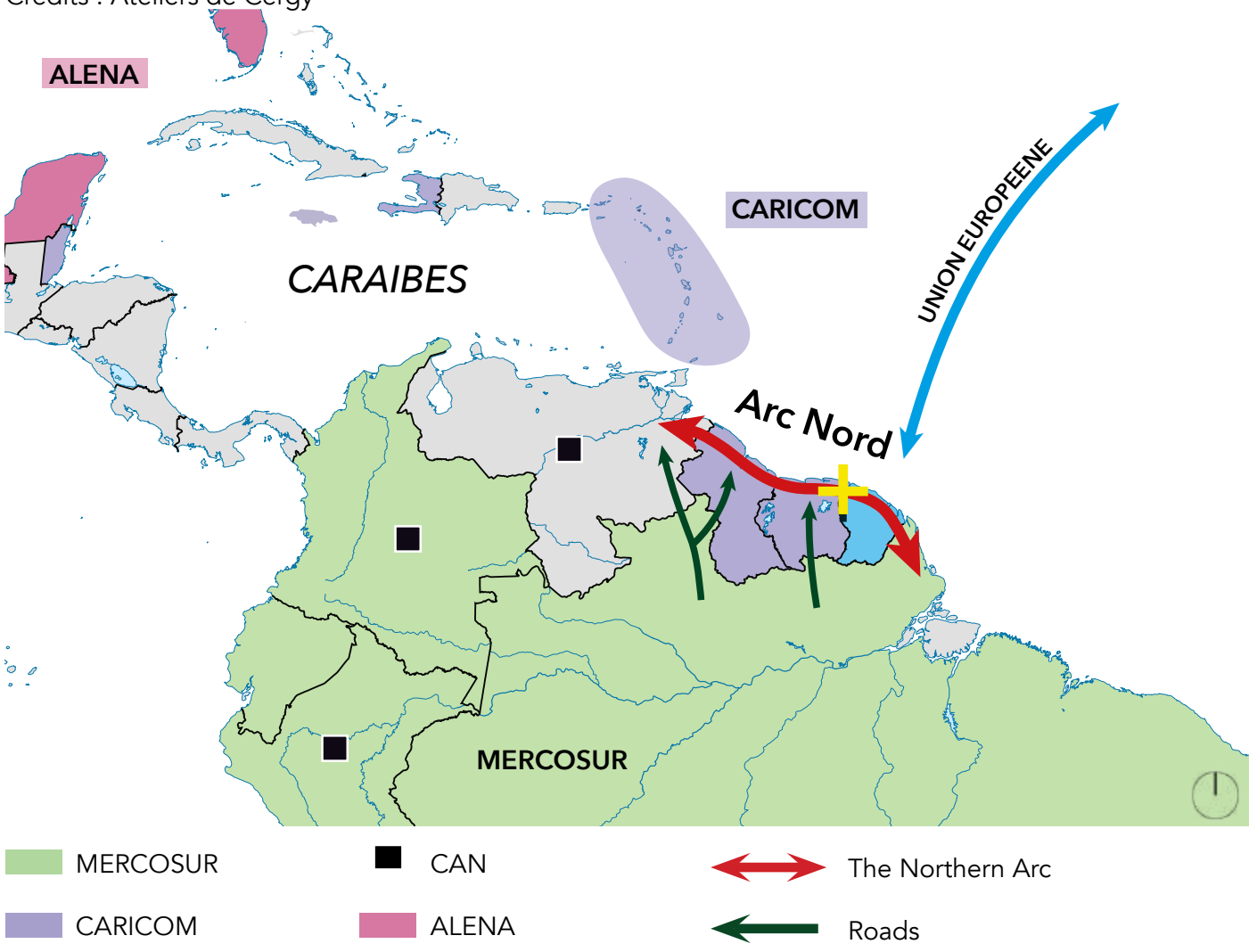
Paramaribo bridge crossing Surinam river.

Oyapock's bridge, between France and Brazil.

THE GUIANAS TODAY

Through their histories and environments, the Guianas are both culturally similar and yet opposite. They share a common and ancient history through the presence of indigenous populations. They differentiate themselves through their colonial pasts; they do not speak the same language; nor do they have the same urban structures or the same commercial ties. They share the same communal Maroon culture through the population's presence on both sides of the river. In addition, Suriname and French Guiana share similarities in European culture through the presence of Dutch and French mainlanders. Administratively, the colonial borders drawn along these rivers do not represent borders but residential areas for their inhabitants: the Maroni between Suriname and French Guiana, the Oyapock between Brazil and French Guiana, and the Courantyne between Guyana and Suriname.

With a population of less than 1.5 million, the three Guianas are still highly disconnected from the rest of the South American continent and despite their shared existence on the land, relations remain few. The potential for developing relationships for the Guiana Shield is important in terms of economy, culture, the environment and the free movement of people.

Five Guianas of the Guiana Shield. Source : Wikimedia
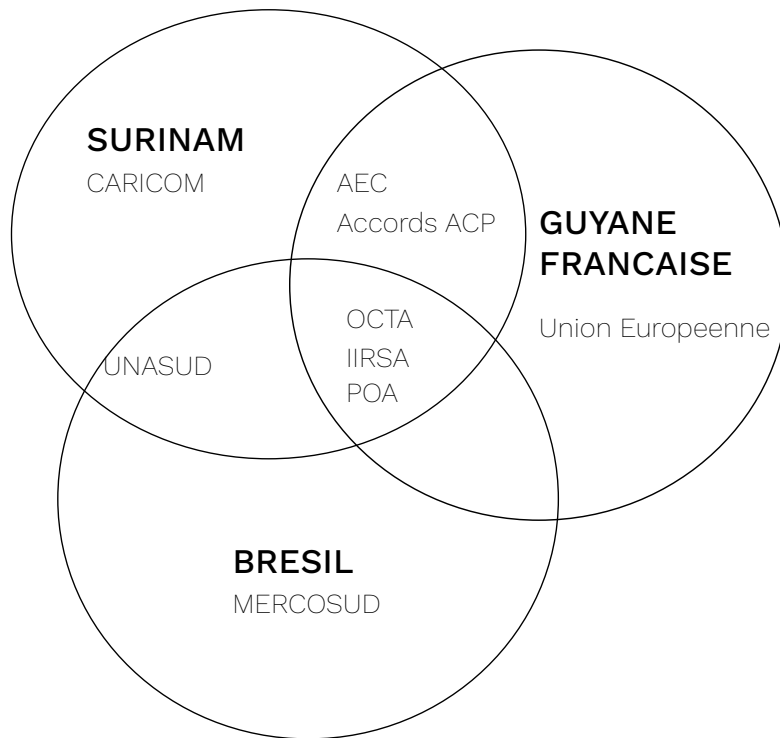
Transborder agrements between Brazil, Surinam and French Guiana.

	official language	capital	population (inhabitants)	area (km²)	density (hab/km²)	currency	GDP (US dolls)
FRENCH GUIANA	French	Cayenne	244 118	83 534	2,9	Euro	17 292
SURINAM	Dutch	Paramaribo	520 050	163 820	3,2	Dollar of Surinam	9 376
GUYANA	English	Georgetown	735 222	214 222	3,7	Dollar of Guyana	3 585
BRAZIL	Portugese	Brasilia	204 450 649	8 514 877	23	Real	11 347

2. Development, perceptions, and representations of French Guiana

GEOGRAPHY OF FRENCH GUIANA

One should know that the waterway geography of creeks, waterfalls, rivers, and streams influence the toponymy of French Guiana. Waterways, as infrastructure for communication and transportation, justify the establishment of human activities. Many of the names for the communes reference the waterways bordering them.

> Terrain & vegetation

Along the plateau, French Guiana extends 325 km from east to west, and 400 km from the north deep into the south. The average altitude is 150 m above sea level, and the highest peak reaches 500 m. Schematically, the terrain is organized in parallel bands:
- The lowlands, or coastal plains, 5 to 40 km wide. The vegetation here is varied and low lying, such as in mangrove swamps and savannas.
- The hills of the northern mountain chain. The asymmetrical slopes house a relatively high, dense forest and are crossed by flat-bottomed and marshy valleys.
- The main mountain range forms a chain a hundred kilometers deep, backed by the Trinité mountains, and rising to 400 m above sea level, between Mana and upper-Sinnamary.
- The Inini-Camopi form a mountain chain that can reach up to 800 m in altitude, between Maripasoula and Camopi.
- The southern peneplain, or the "Rock Savanna" as it is referred to in Creole, covers a fifth of the territory, with low-profiled convex mountains from which a unique land formation emerges–inselbergs. In the southwest, these rocky formations are grouped around Mount Mitaraka (670 m).

> Current coastline vegetation

Mangroves are part of the forest that is flooded with each rising tide. Coastal mangroves depend heavily on mud flats, thus moving from east to west with the equatorial currents. They play a role as the interface between the marine world and the biodiversity on land. Estuarine mangroves are rooted in the lower banks of waterways and are more diverse in species. The vegetation along the sandy beaches of the coastline consists of grasses.
The sub-coastal marshes are located behind the mangroves, mainly to the east of Cayenne.
The old coastal spits show the former position of the coast. They are composed of low-lying and bushy forests, diverse in species.

While the highlands may seem green from a uniform tropical forest, it is not just an appearance of forested unity. The stable climate and limited temperature and water constraints maintain the constant rhythm of their foliation and defoliation.
The maximum height of the trees, the canopy, can reach up to 50, even 60 meters high. Low-altitude (less than 500 m above sea level) forests are divided by type. There are the forest swamps located in the lowlands and creeks of stagnant water from the river system. And the riparian forests, which grow along the river banks and in the major creeks. Forests flooded by waterfalls are located on the rocky islets.

The mid-altitude forests are the most widespread and have the richest diversity in terms of animal and plant species. For high forests, the central Guianese mountain ranges are home to the tallest trees.

> Climate & Hydrography

Located in the intertropical convergence zone of the Azores and South Atlantic Highs, precipitation affects the river networks. Rainy and dry seasons are punctuated by intermediary periods: the short summer in March and the small rainy season.

In the coastal zone, the tides flow inland, digging river beds deeper into the earth. In the central mountain ranges, the waterfalls emerge as rapids from the outcrop of the rivers' bedrock. River circulation is made difficult during the dry season, but it is these waterfalls that constitute the real river landscape in way.
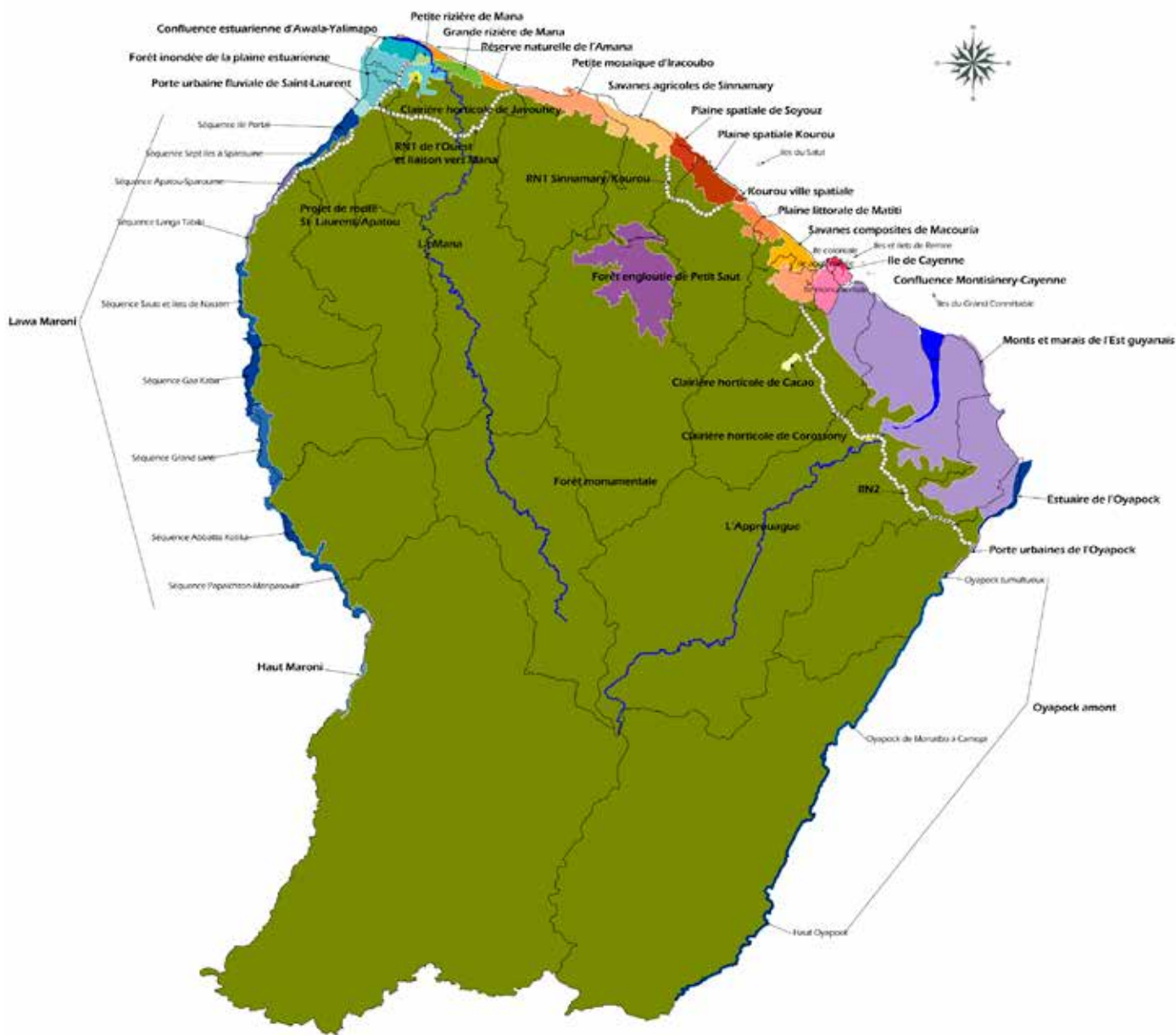
French Guiana landscapes. Credits : VU D'ICI & ARUAG, Atlas des Paysages de la Guyane

The river system is very dense and carries with it numerous ramifications. The density of this network explains the important role of precipitation, soil impermeability, and the thickness of the rock mantle. The network is orientated towards the north, the Atlantic Ocean, and is made from many creeks, widely spread and flowing into the many rivers, included the principal ones (from east to west):
- The Oyapock river, the natural border with Brazil, where there are many waterfalls and rapids.
- The Approuague drains an endless water basin at the center of the département, along with the Mana, Comté, Sinnamary, and Maroni rivers. It possesses the waterfall with the largest vertical drop of 19 meters.
- The Mana, the "River of 99 Rapids" gets its source from the Guianese central mountain range to the north of Saul and crosses the territory from south to north over 430 km.
- The Sinnamary, 262 km long, also takes its source near Saul. It is along its path that the Petit-Saut hydroelectric dam is built.
- The Maroni is French Guiana's most important river. It is 612 km long, with a flow rate of 1,700 m3/s. In Grand-Santi, it emerges from the meeting of the Surinamese river Tapahahony and the Guianese river Lawa. The surface area of its basin is 65,830 km2, of which half is in French Guiana.

In short, is this the primary landscape foundation?
«[...] the foundation on which the landscape is constructed is still heavily marked by natural balances that have expressed themselves across a large part of the territory for thousands of years. This environment is therefore akin to a blank page that has yet to be printed upon except in the margins by the hand of man. This virtual integrity of the environment is also remarkable because it is still very old and preserved. These primary colors, like pure colors before one starts to paint, are clearly expressed throughout the landscape.»[3]

Principal landscape elements:
- The geology illustrates unique forms such as the waterfalls, rocky coasts, inselbergs and directional reliefs.
- The terrain, despite its low amplitude, is none the less turbulent.
- The dense waterways accentuate the shapes of the terrain and open the forest area to water corridors that are more or less wide.
- The equatorial climate marks the landscape with its rainfall, cloud covering and sun exposure.
- The coastline is punctuated by rocky coasts which testify to the diversity of the Guianese coastal landscape.
- The landscape palette, the variety of plant architecture, ensures the proper environments for each ecosystem.

3. Direction Régionale de l'Environnement de la Guyane, Atlas des paysages de la Guyane, Vu D'ici & Aurag, 2007
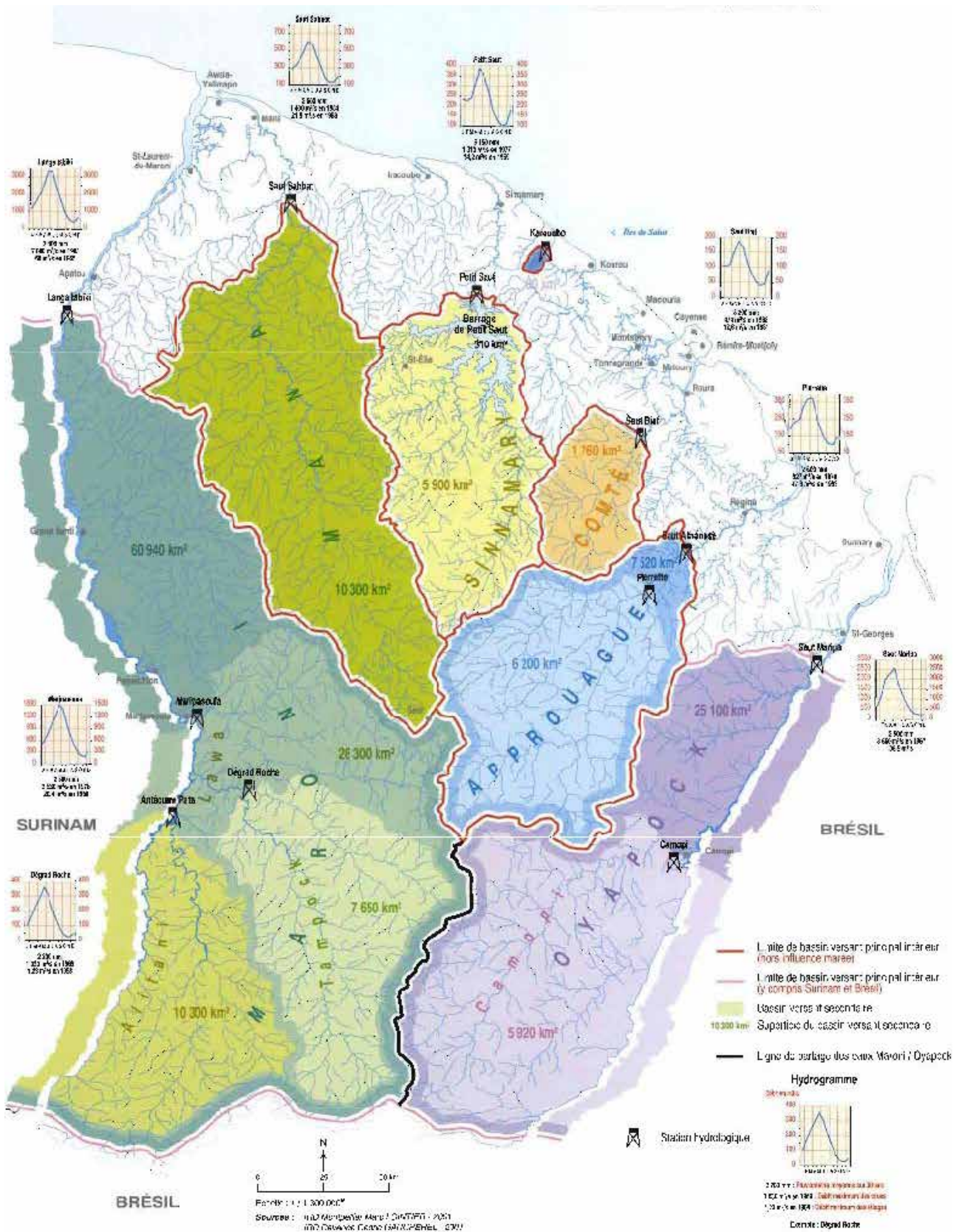
French Guiana hydrology map. Source : Atlas de la Guyane.

IDENTITIES AND MIGRATIONS

The various waves of migrations, whether deliberate or forced, form a multicultural breeding ground unique to French Guiana. The identities are numerous, they include: Amerindians (indigenous people), Creoles, Maroons, descendants of convicts, those from Metropolitan France, people of mixed race, those who were exiled... These identities converge, clash, juxtapose, and mix with one another. They reveal the complex relationships between the French Guiana territory and Metropolitan France.

Above all, the term "identity" poses two challenges. The first challenge is understanding identity as a cultural marker, strong and distinctive, even essential. The second challenge concerns the porosity of identity, its openness and zones of contact. The different cultural identities claimed by the people of French Guiana serve as an image of the territory's history. These identities are formed, expressed, distanced from themselves, and recomposed according to modalities tied to the development of the territory.

If French Guiana is today a *Collectivité Territoriale Unique*, one must examine the relationships maintained by the different communities, both amongst themselves and with the Guianese territory. It is thus important to understand the unique and complex history of French Guiana's population. This history rests mainly on a categorization, ethnically- and legally-founded, of the different populations. The indigenous people, whose presence predates the arrival of the first settlers and slaves, will have to reconstruct a new identity due administrative and lifestyle changes.

French Guiana went from being an equinoctial land populated by indigenous Amerindians to a colony of slaves. Rights were largely defined in terms of free men vs. slaves. The identities of indigenous people and Bushi Nenges developed within a climate of resistance and refusal. Then there was the abolition of slavery and the order that gave the territory the status of a penal colony under the backdrop of being a legal protectorate. Despite the fact that slavery had been abolished, the colonial system did not give citizenship nor equivalent rights to these populations. In addition, the introduction of the penal colony created new legal categories to better control the movements of people. Free men, whether they were former convicts, indigenous people, or immigrants, were put in opposition with the Creole population and administrators from Metropolitan France. At the end of the Second World War, to contain the desire for independence by former French colonies, French Guiana became a French overseas département. The entire population benefited from equal citizenship. While France still does not recognize indigenous rights, there is nonetheless a program of integration of French Republican traditions in French Guiana. This integration can be seen through the first land management policies via the transportation infrastructure and the creation of new towns.

Starting in 1982, policies of decentralization came to give greater power to French Guiana's Regional and General Councils. This was also the period when demands by autonomists and separatists were being heard across French Guiana. Indigenous populations continued to organize themselves on a continental scale. These autonomists movements claimed a sovereignty over their land in light of specific local conditions.

Finally on January 1, 2015, the two government councils, General and Regional, were merged to create a single unit under the title Collectivité Territoriale Unique. But it is now a French Guiana of multiple identities that needs to be consolidated. A French Guiana in which the population changes drastically and where people, once invisible, become key players in the territory.

These administrative changes reflect the relationships that the French central administration has maintained with the different Guianese populations. And amongst the population, different volumes of identity claims have been made depending on the political situations of the time. Local identities were first defined through slavery and forced labor, then through marginalization, followed
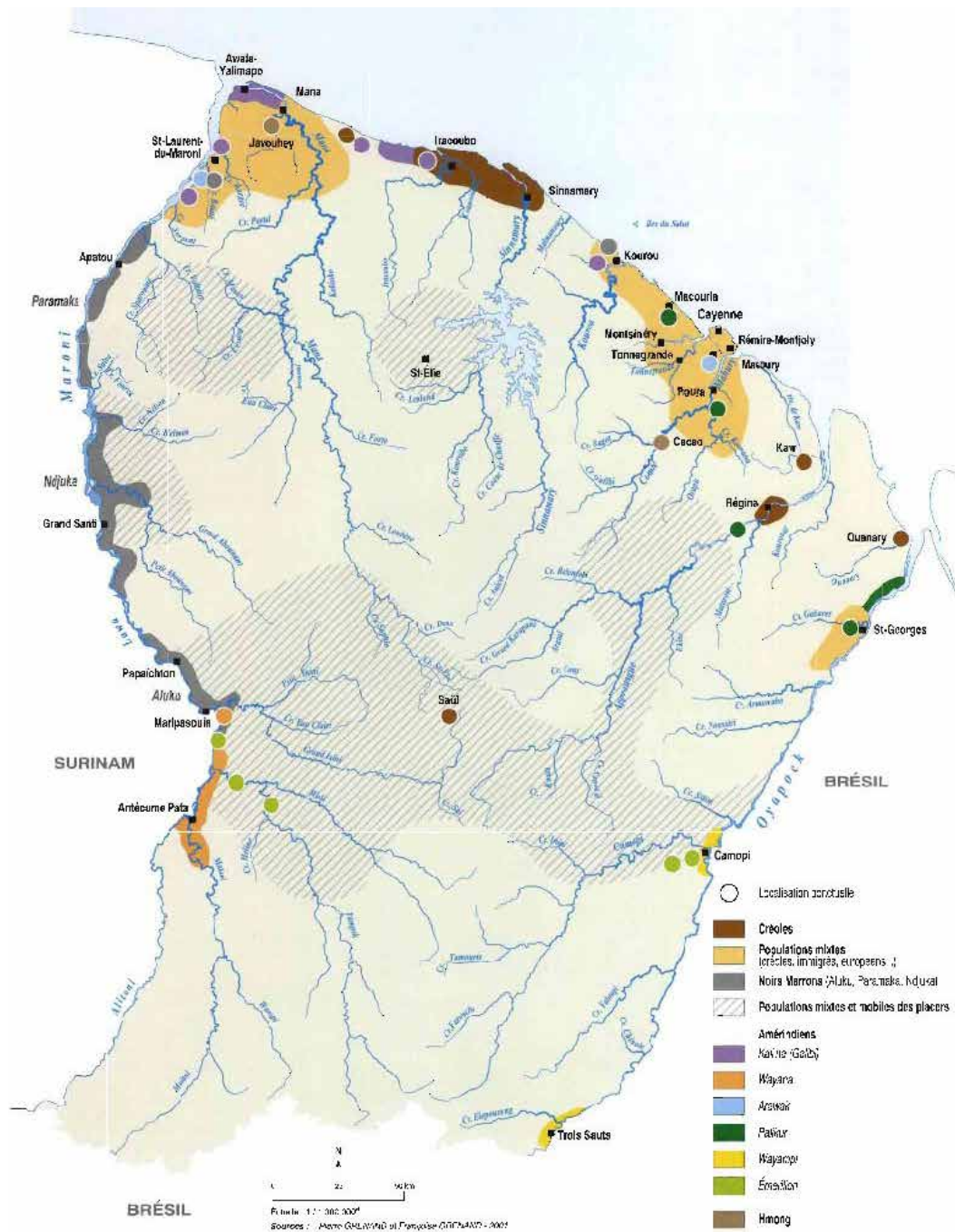
Ethnical human settlement. Source : Atlas de la Guyane.
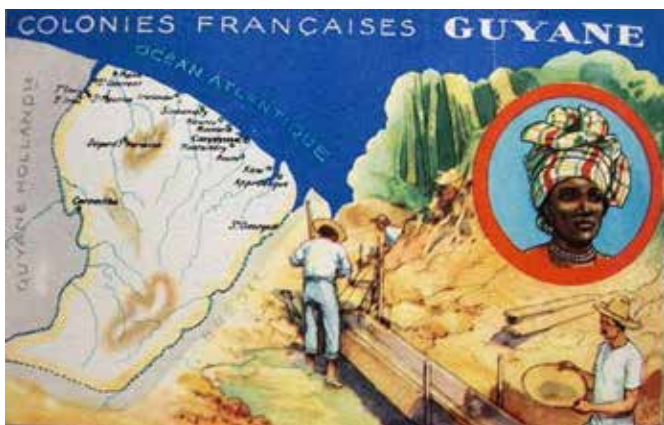
French Guiana postcard.

Tembe art.

by opposition to the protectorate, and finally in terms of the administrative and civic integration of the populations.

If these territorial integration movements and identity claims seem linear, it is important to understand how each population has developed.

> People from Metropolitan France
Settlers, administrators, and convicts do not make up a homogenous category. The first group primarily served as relay representatives in the establishment of the slave system that repressed French Guiana and the Caribbean until its abolition in 1848. The second, the administrators, ensured the implementation of the slave, colonial, and départemental systems according to laws dictated by Metropolitan France on French Guiana's territory. Incidentally, the high representation of administrators from Metropolitan France reflects a historical continuity in terms of the management of this territory. Finally, the convicts and the rest of the population of the «penal colony» gave rise to identities of rebellion and defiance against the central powers; identities then claimed by their descendants.

> Indigenous populations
Predating the arrival of the first Europeans, their settling on the Guiana Shield ages before was fragmented depending on how the land was shared and divided. The evolution of place names works in this sense. Located along rivers, the indigenous groups in French Guiana are separated into three linguistic groups:
- The Arawak group, consisting of the Lokonos and Palikurs, arrived three thousand years before, from the central Amazon. They skirt the Guiana Shield by way of the east and west. The Lokonos are present mainly on the coastline and along the Maroni river, in Balaté and Saut-Sabbat. While the Palikurs are largely present in the east of the country, on the lower-Oyapock river and inland.
- The Cariban group consists of Kalinas and Wayanas. They came downstream from the Amazon valley, settling in French Guiana over three thousand years ago and have stayed over the course of the last century. The Wayanas

or Roucouyennes, are mainly located along the Tampock and Maroni rivers. The Kalinas or Galibis are present along the Maroni and Mana rivers, but also remain in Suriname and Venezuela as well.
- The Tupi-Guarani group consists of Tekos (or Emerillons) and Wayampis. This final group of arrivals settled in the south and east, shortly before the conquest. The Tekos are settled along the mid-Oyapock river, the upper-Maroni river in Camopi, and along the Tampock river in Elahé, Kayodé, Taluwen and Twenké.
* Galibi, Emerillon, and Roucouyenne are the names given to these groups by Europeans.

> Maroon or Bushi Nenge populations
Shipped from Africa to Dutch and French colonies, the Surinamese Bushi Nenges and French Maroons still claim their African identity. In addition, the act of marronage, running away or escaping as a refusal to a life of servitude and forced labor, has marked their way of living within the communities where the forest is both a resource and refuge. Learning how to navigate, following contact with indigenous groups, led the Bushi Nenges to become excellent navigators on the Maroni river, where the are primarily located.
Beyond their apparent unity, the Bushi Nenges define themselves into several groups: Paramaccas, Saramaccas, Alukus/Bonis and Ndjukas, as well as the Kwintis and Matawais in Suriname.
They speak different languages depending on the date of their marronage. The Saramaccas speak Saramaccan ,which distinguishes itself from the other marronage languages due to its very unique lexicon (notably with words coming from Portuguese). For the Saramaccas and Matawais, their language is a Portuguese-based Creole. For the Aluku, Ndjuka, and Paramacca languages, the lexicon is an English-based Creole, receiving contributions from indigenous and European languages. The Paramaccas, Ndjukas, and Bonis each speak very similar languages which are regrouped under the Nenge-Tongo or Bushi-Tongo. Finally, the slaves who did not runaway are the original creators of Sranan Tongo, which is now one of the official languages of Suriname.

Traditional hairstyle in a contemporary way.
Credits : Nicola Lo Calzo

Making couac, from manioc.

Pirogue Bushinenge.

Kalin'a percussion : Sanpula.

Amerindian basketry.

Amerindian pottery.

Over the centuries, these groups have entered into both conflict and collaboration. During the war in Suriname, in the late 1980s, many Bushi Nenges fled the violence and settled in French Guiana. However their presence was also tied to the economic and cultural exchanges that crossed from one side of the Maroni river to the other.

> Creole populations
Behind this adjective, hides different historic and geographic realities that are quite telling when it comes to the dynamics of colonization and assimilation in French Guiana. In the beginning, Creole was used to refer to the local population born in French Guiana as opposed to the «Bossale» population which came from Africa. Later, Creole and creolization became associated to a movement of cultural assimilation by newcomers into a reference system based primarily on culture and education. These references, at first borrowed from a Western «modern» model, allowed Creoles to distinguish themselves from «primitives» such as the indigenous population and Bushi Nenges. However, beginning in the 1990s, the Creole culture reasserted its uniqueness in opposition to the culture of Metropolitan France. In the wave of identity claims expressed by the Bushi Nenge and indigenous communities, the Creoles were included as well.

Secondary and contemporary migrations
Beginning in the 1880s and the discovery of gold veins, numerous people coming from the Caribbean, Brazil, Europe, and Asia settled in French Guiana. As witnessed by the Chinese immigrants who still play an important role today in French Guiana's commerce. The volcanic explosion of Mount Pelée in 1902 led to the arrival of many inhabitants from Martinique. And in the last few decades, new waves of immigration have been coming from Suriname, Brazil, Guyana, Caribbean countries, and, in particular, from Haiti as well as Asia. For example, the Hmong people from Laos came to French Guiana in search of refuge in the late 1970s at the instigation of the French government.

Today, 34% of the 229,000 inhabitants of French Guiana have foreign nationalities (INSEE, 2009 and CICI Report, 2009). Of the 109 nationalities, three are predominant:
- The Surinamese nationality with 30,000 citizens, who mostly live in the Maroni basin and Saint-Laurent du Maroni.
- The Haitian nationality with 21,087 citizens, who mostly live in the urban areas of Cayenne and Kourou.
- The Brazilian nationality with 17,000 citizens, who mostly live in the urban area of Cayenne as well as in eastern French Guiana.

> Through these various elements can it be said that there is a Guianese mosaic?
« For these "ethnic groups" or "communities" are often understood as participating elements in the constitution of what is commonly called the "Guianese mosaic". Of course the term mosaic can be interpreted differently, depending on whether one focuses on its constitutive nature, the juxtaposition of added elements, or, contrarily, on the production of a whole figure. But the phenomenon is enrolled in a context of relentless migrations, notably those coming from neighboring countries (Suriname, Brazil, the Caribbean), but also from the Far East, with the arrival of the Chinese in the late 19th century and the immigration organized by the Hmong at the end of the 1970s. It is clear, therefore, that the whole figure, if it were ever to exist, remains, for the moment, extremely fluid. This phenomenon is accentuated by the fact that the current trend – which justly reflects these new names – heads towards a search for identity in its most essential form. And yet, the movement was largely initiated by Creoles at the moment when they ceased to define themselves in terms of their accession into French culture.»[4]

It is therefore very difficult to single out one principal Guianese identity without falling into the trap of cultural mosaics. Between juxtaposition and the whole figure, shouldn't the different expressions of the Guianese culture be discussed, as the regional history is a shared

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4. Marie-José Jolivet, « Du « sauvage » à l'« étranger » ou les difficultés de l'identification guyanaise », Nuevo Mundo Mundos Nuevos

International workshop of urban planning in French Guiana

Bagnard's tatoo. Credits : Léon Collin

Touloulou Creole's carnaval.

Pangi, traditional bushi loinclothe.

Tembe, Bushi's art.

Madras tissu of Creole Culture.

history, made from frictions and hybridizations, contacts and mixing. How does the fluidity of the word "Creole" reflect the difficulty in establishing a proper Guianese identity? Faced with calls for autonomy and independence from French Guiana, what are the messages being put forward by these different communities?

PERCEPTIONS AND REPRESENTATIONS OF FRENCH GUIANA

The expedition to Kourou (1763) and its failure served as the foundation for an inhospitable, even hostile, image of French Guiana. The first attempts to colonize, through the sending of settlers, failed. If the offers to colonize had been amazing, they would have attracted thousands of people eager to get rich in the new world, where fortunes could be made quickly. In reality, the long journey, the difficult living and cultivating conditions, the tropical weather and malarial diseases, were more than enough to support the hellish image of this territory.

The harsh living conditions were also a pretext for the sending of prisoners. The need to develop the new settlement was to be done through the provision of free prison labor. The opening of the «Transportation Camp» (prison) and the creation of a penal colony in Saint-Laurent was intended to relieve French prisons and penal establishments by shipping the convicts and relegated them to life there. The establishment of a place concentrated with the undesirables of Metropolitan French society, hostile descriptions of the Amazon, and later the discovery of abominable detention conditions for prison inmates, would leave French Guiana in the subconscious of Metropolitan France as the land of convicts.

In literature, French Guiana was also the land of adventure. Travel novels, notebooks, lost explorers, were all elements that reflected a prolific literary tradition that would touch the collective French subconscious. The penal colony also served as the setting for an incredible piece of literature where the Beauty (escape) is the ultimate goal. Eugène Dieudonné, René Belbenoît, Henri Charrière, all were escaped convicts who would become champions of escape and liberty through their published memoirs. Gaston Leroux, author of several fantasy and detective novels, including *Phantom of the Opera* and *The Mystery of the Yellow Room*, also created the character of *Chéri Bibi*, an unjustly condemned convict to whom many adventures arise. Likewise, the exploration of the inlands generated important stories of fallen heroes. The Frenchmen, Raymond Maufrais explored French Guiana between 1949-1950, trying to link back to Brazil using the traditional routes of the Emerillons. In the end, only his notebooks were recovered along the Tampok, a sub-tributary of the Maroni. Literature set a spotlight on French Guiana, crossing its nature and landscapes, and using its chaotic and hostile features to drive plots, like forces and obstacles.

As an overseas territory, French Guiana is actually associated with insularity, often confused as an island in the Caribbean. When looking at French Guiana in the background of a map of France, it is shown isolated, outside of the continent to which it is attached, mixing with the other insular overseas départements and territories. In addition, the scale used to represent French Guiana on maps of France is rarely respected, making French Guiana a territory with the same surface area as Martinique, which is 80 times smaller. Ironically, French Guiana is also surrounded by rivers that mark its borders. It is equally isolated politically within the South American sphere by its administrative dependence on France, from which a certain type of insularity is also created. Nevertheless, it is the Amazon forest that brings it back to is location on the subcontinent when imagining the virgin forest and gateway to the skies (the Kourou Space Centre).

In terms of appeal, French Guiana is perceived by its neighbors as a rich «country», which economic indicators confirm. Conversely, it is considered a region with little appeal for those from Metropolitan France and Europe. During the drafting of development policies within Metropolitan France, economic and social indicators emphasized the «lagging behind» of French Guiana. Development aid is therefore considered to serve only as an «IV drip.» This vision and these indicators feed into the rhetoric of «catch-up», instead of examining the modalities of an economic, territorial, and

internal development specific to French Guiana.

Culturally, French Guiana is perceived as a multicultural mosaic, a French region where different continental and international communities mix together. As mentioned above, the different expressions of culture should be considered through their diversity, points of contact, conflicts, and their relationships with the culture of Metropolitan France. If the Caribbean and the ensemble of DOM-TOMs are generally used to describe the culture of overseas territories, references should be made to clarify each territory's proper history, including their similarities and differences.

somes facts and figures

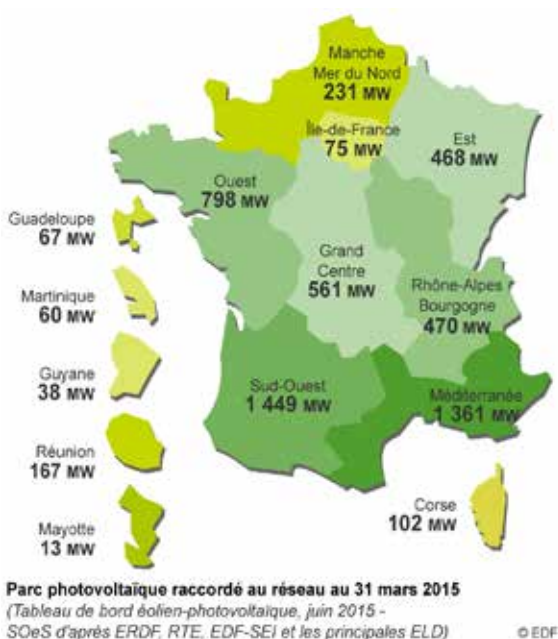**7 000 km** away from France

94% Amazon forest

612 km the length of the Maroni river

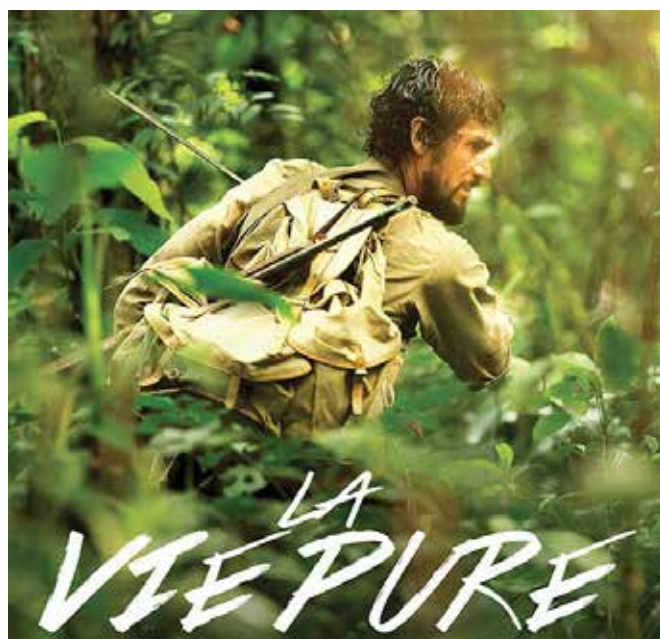more of **200 rockets** thrown from Kourou

more than **30** spoken languages

440 000 vegetal and animal species

area : **83 544 km²**, as the area of Portugal

French Guiana like an island. Source : EDF

La Vie Pure movie. Source : Allociné

3. What type of economic model is possible for French Guiana?

«French Guiana could become this double window where technological efforts to explore the universe and ecological efforts to save the planet are shown together to the rest of the world.»[5] Hubert Reeves

FRENCH GUIANA'S CURRENT ECONOMIC SITUATION

To understand the economic situation of French Guiana is to take into account its size, as large as Portugal and with a population of 250,000 inhabitants. That is to say that it would be the 170th country in terms of population, if French Guiana were in fact a sovereign country.

At the same time, French Guiana is the territory with the highest GDP per capita for the continent of South America and one of the regions in the European Union ranked among the weakest. It is an important paradox mentioned in many speeches and has numerous repercussions in terms of migrations and economic development.

Until the early 1990s, French Guiana possessed a strong economic growth tied in part to the development of the aerospace industry which began in the 1960s. Since then, the strong growth still registered by this sector has not managed to support the exponential growth of the population. This situation has resulted in a significant rate of unemployment (21.3%, in 2013), a large proportion of social aid within the average budgets of the Guianese and a preponderance of public sector employment, whose added value alone represents 35% of French Guiana's GDP. Funds from the European Union support the economic development of several sectors, reaching 485M € between 2007 and 2013.

French Guiana, through its status as a French

territory, is governed by European standards, thereby slowing commercial trade with its neighboring countries and putting the region into a situation of dependence vis-à-vis Metropolitan France. One of the consequences is that French Guiana imports six times as many goods as it exports; the large majority coming directly from Metropolitan France. This exclusive relationship has slowed the development of local economic sectors such as the agricultural food industry. Growth in French Guiana is largely orientated towards the consumption of household goods, like in Metropolitan France, and thus generates a «vicious cycle» through a reliance on mainly imported products.

The fiscal system of French Guiana is unique. French dock dues (*octroi de mer*) are applied and the Value-Added Tax (VAT) has a fixed rate of 0% for the territory, raising challenges in terms of public finance.
Under point 1 of Article 294 of the tax code, the VAT is not applicable to French Guiana in the interim and this département shall be considered a territory of export. Accordingly, the VAT shall not be levied within French Guiana nor on imports into the département. [Equally,] «dock dues" are a French tax, applicable to the majority of imported products, and in force in overseas regions. It is collected by customs officials.[6]

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5. Lettre à Mme Roselyne Bachelot-Narquin, Ministre en charge de l'écologie Paris, le 3 décembre 2003.

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6. http://bofip.impots.gouv.fr, consulté en mars 2016.

THE REGIONAL ECONOMIC SITUATION

The Guiana Shield is experiencing a strong economic and demographic growth and is in a process of continental integration with its neighboring countries, Venezuela and Brazil, but also the Caribbean region. These bordering countries, with contrasting economic situations, could be drivers of opportunity for the development of French Guiana.

> Suriname's economy, based on natural resources

GDP growth in Suriname is two times lower than that of French Guiana, but its share of exports within its GDP is eight times higher. Suriname's economy is based on the export of its natural resources (bauxite and gold, mainly) and in a lesser extent on oil extraction. These three resources represent around 80% of exports and generate 25% of the country's revenue. This dependence on exports has made the Surinamese economy volatile, at the mercy of commodity prices. In terms of agriculture, Suriname is a producer and exporter of rice and bananas. Tourism is more developed than in French Guiana, with a large selection of hotels and activities, mainly targeting the Dutch and Guyanese.

> Brazil and the state of Amapá

Brazil is the world's seventh largest economy, a member of MERCOSUR (Southern Common Market), and a participant in the G20 and BRICS diplomatic conferences. The bordering Brazilian federated state is that of Amapá, whose capital is Macapá. It is one of Brazil's least populated and least prosperous territories. The economy is based on manganese mining, brazil nut harvesting, and wood.

> Challenges of economic cooperation

CARICOM and its Single Market project facilitates the exchange of goods between Caribbean countries, including Suriname and Guyana. As of today, French Guiana is still not a member, yet it did submit a membership request in 2015. The process is complex due to the status of French Guiana as part of France.

POTENTIAL RESOURCES

French Guiana, 94% of it covered by rainforests, holds numerous assets for its future economic development through the exploitation of its natural resources, the training of its youth, and its strategic position. Today, French Guiana's economy is based on several industries: aerospace, agriculture and fishing, construction, mining and timber, and administration services.

> Is the organizing of a gold mining industry sustainable or tenable?

The gold mining, or gold panning, industry is a principal base of French Guiana's economic revenue, yet represents only 0.1% of the world's production. The gold industry in French Guiana therefore must overcome several challenges as explained by Jessica Oder.
« Firstly, while gold prices continue to rise and break records, the number of legitimate mining jobs is diminishing and this, since the early 2000s, is the Guianese gold paradox. Secondly, a number of illegal and clandestine gold miners, mainly Brazilians, mine the gold in French Guiana, with all the collateral damage that this implies; affecting the environment and indigenous population (victims of mercury poisoning, an element prohibited by law but used to amalgamate gold) but also the legal gold industry, which suffers from unfair competition in so far as these garimpeiros are free of all administrative constraints and can set up in protected natural areas and thus mine a significantly larger quantity of gold. »[7]
European standards, poorly adapted to the reality faced in French Guiana hamper local entrepreneurs with the costs of meeting these requirements and help to intensify illegal gold mining practices. The prefecture has established a Départemental Chart of Mining Orientations to try and adapt to this situation.

> Construction and land management

The demographic situation is driving the demand for the construction of lodging and the necessity for substantial and specific urban development, hence the prominence of this sector in French Guiana's economy. The construction industry is dominated by historic

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7. Jessica Oder, « Vers la structuration d'une filière aurifère durable? Etude du cas de la Guyane française »

groups originating from Metropolitan France, who use construction techniques, such as reinforced concrete, poorly adapted to the local context. The operation and creation of a local timber industry could be developed, but only if a strong demand exists in this sector.

Land ownership is also a major challenge for local economic stakeholders. Today, mainly owned by the government, land could be made available to local actors for the development of activities, assuring its more contextual and sustainable management.

> Biodiversity
Primary forests cover 94% of the territory, with over 440,000 plant and animal species, making French Guiana the perfect research terrain for scientists. This biodiversity could be the driver for establishing an industry aimed at promoting this research, for example with cosmetic products or the medical and pharmaceutical sectors.

> Tourism potential
Contrary to other overseas départements, French Guiana attracts very few tourists. The waterways which flow from the Amazon are filled with brown sediment, giving the coastal waters a muddy color. The turquoise waters of the Caribbean rival in their appeal. The tourism industry represents less than 2% of the region's added value and 9.6% of businesses (INSEE, 2014). Business tourism represents the majority of traffic, due to the aerospace industry and government workers from different services and ministries. Affinity tourism (visiting friends and family living there) represents the second reason for travel to French Guiana. As a destination, French Guiana is subject to a significant seasonality, regardless from where travelers have come, the busiest months correspond to those of the summer holidays, July and August.

The principal tourist attractions are:
- the Kourou Space Centre
- the Amazon forest
- the Transportation Camp in Saint-Laurent du Maroni
- this historic centers of Cayenne and Saint-Laurent du Maroni
- the Îles-du-Salut (Salvation Islands)

There is a lack of offerings for accommodating tourists, despite their diversity (hotels, cottages, huts). Other obstacles include air service (which is limited to Metropolitan France and the French West Indies), the difficult access to interior cities, and erroneous representations of French Guiana.

Today, French Guiana is seen as a land of nature and culture on the South American continent, where one of the challenges is to develop ecotourism. This type of tourism can have positive effects on local economies while also preserving nature and promoting local cultures.

> The lack of training as a handicap
An immense potential exists in the training of young people in French Guiana. Today, too few qualify in the face of the region's economic needs. This lack of training is supplanted by the strong presence of people originating from Metropolitan France working in the hotelier, education and engineering sectors. In 2015, the University of French Guiana was inaugurated in Cayenne, in a move to create and diversify training and education offerings in the Guianese territory.
There is a deficit in the number of people mastering French, making professional integration difficult. In addition, there is a lack of language instruction for English, Dutch, and Portuguese, hindering the development of cross-border economic opportunities. But the linguistic diversity of the people of French Guiana, with thirty spoken languages, allows for exchanges along the Maroni river, for example, where Bushi-/Nenge-Tongo is spoken.

CHALLENGES OF SUSTAINABLE AND ENDOGENOUS DEVELOPMENT

The challenge of economic development in French Guiana is that of the relationship maintained with Metropolitan France: withdrawing from a commercial and economic hegemony towards a system of empowering internal economic development. One of the possibilities is tied to the region's legislative connection to the European Union. Seen as a handicap, French Guiana could become a gateway to the South American continent for the European economy and benefit from its unique position between developed and developing countries. Development potentials, the diversity of resources, and the region's youth are major assets of French Guiana, but that are, today, under valued. There is a need to develop local industries in line with the unique features of this territory, capable of following the progression of the population and the evolution of its lands.

somes facts and figures

45% unemployment rate in French Guiana for the people under 25 years old. INSEE, 2013.

21,3% unemployment rate, stable for 10 years. INSEE, 2013.

117 M€ export versus **821 M€** in Surinam, 2007.

45% part of public administration in employment.

485,8 M€ funds of the European Union between 2007-2013. Source DIACT, Prefecture.
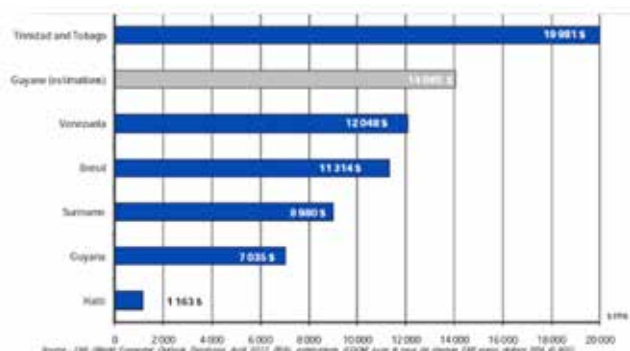
GDP/inhabitants, Caribbean and Latin America area, 2010.
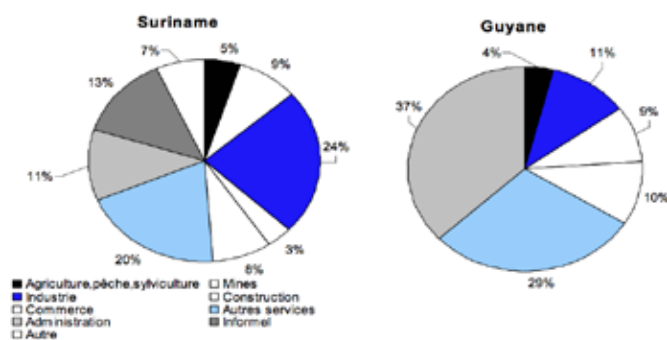
Sources : Suriname ,emplois (ABS, FMI)
Guyane, emplois salariés (INSEE, ASSEDIC)

Employment by sectors in French Guiana and Surinam

4. A city in search of its place within the regional balance

> ## > Strengthening its position as the capital of the Maroni

Trade and commerce established Saint-Laurent as the city of the Maroni open to trade. Its status as the capital of the Maroni would hence be confirmed by the presence of French officials, exploitable prison labor, indigenous populations, Bushi Nenges, Creoles, Europeans, and Asians in search of gold and fortune. Each of these new groups of people gave a cosmopolitan air to the city. The junction of migratory and economic movements contributed in making the city attractive, despite its difficult access.

The discovery of gold along the upper-Maroni attracted a population both large and international. Saint-Laurent thus became the main stop on the way to the Eldorado of the inlands. This new free populations came to add to the indigenous and Bushi Nenge populations alre ady present within the river basin. It is this question, in regards to the movement of free men around a penal territory, which is therefore raised, especially in terms of the creation and stimulation of a local economy founded on commercial trade, gold mining, and timber.

During the creation of the Inini Territory in 1930, Saint-Laurent was also the intermediary city between the coastline governed by Cayenne and the interior lands governed by Saint-Eli. Then following French Guiana's recognition as a département, Saint-Laurent became the regional sub-prefecture. This permanent administrative presence in its urban history is therefore what has really made it the capital of the Maroni.

Today, there is a major development challenge regarding the towns upstream of the Maroni, which are forecasted to have an extremely high demographic growth by 2030. For example, the projected populations are expected to be more than 6,900 in Maripasoula and more than 1,500 in Papaïchton (source: EPAG, Feasibility Study). This urban growth will lead to increased trade with the city of Saint-Laurent.

The capital of the Maroni must meet and anticipate the needs of the area, for example, in supplying raw materials, mobility and intermodal transportation, educational institutions, and administrative and hospital services. Places for storage, exchange, services, culture and transportation will strengthen Saint-Laurent's position as the hub and capital of Maroni.

> ## > Capital of the West, French Guiana's biggest city in the future

On the scale of French Guiana as a region, the location of Saint-Laurent along the coastal road makes it a port and roadway entrance to the interior. The presence of administrative services, structural facilities, along with those for education, sports, and medicine all come together to make Saint-Laurent the capital of western French Guiana. Saint-Laurent is considered one of French Guiana's most dynamic cities in terms of arts and culture through its numerous festivals, the presence of performing arts, its architectural heritage, the multiple communities and its proximity to Suriname. The city must build on its facilities and cultural riches to meet the challenges of its growing demographic.

> ## > Saint-Laurent du Maroni, between Metropolitan France and French Guiana

On the scale of the Guiana Shield, the border city of Saint-Laurent is located between Cayenne and Paramaribo along the Northern Arc, which is being built to connect Brazil with Venezuela by passing through the three Guianas. Saint-Laurent will thus be one of the largest cities along this route, with a number of advantages such as its hospital center. The development of cross-border exchanges with Suriname is essential for the growth of Saint-Laurent. The city is currently orientated towards Cayenne, while Paramaribo is more appealing due to the fact that it has better road access, but moreover due to its dynamism as the capital of Suriname. Cross-border cooperation would help to reinforce ties beyond those of the Maroni,

as Saint-Laurent could also become the access point to the Guiana Shield for French Guiana, and therefore for Metropolitan France.

The strategic position of Saint-Laurent du Maroni

There is a tension between the different scales:
- The Maroni river basin level, of which it is the capital
- The French Guiana level, with the presence of administrative offices and numerous attractive public services on the scale of western French Guiana.
- The Guiana Shield level, with its assertion as being part of the Caribbean-Atlantic arc, as the interface between the interior South American territories and Europe.

Saint-Laurent du Maroni holds a strategic position within several different territorial scales, yet it does not have an industrial project plan nor sufficient infrastructure to better negotiate these territorial exchanges. Its assertion as a platform of exchange and contact, whether economic, cultural or human, requires the development and networking of infrastructure capable of generating a "reterritorialized" economy.

How can an infrastructure capable of absorbing and redistributing this territorial flow be created? How can expanding this infrastructure into a greater network generate and support a territorial economy?
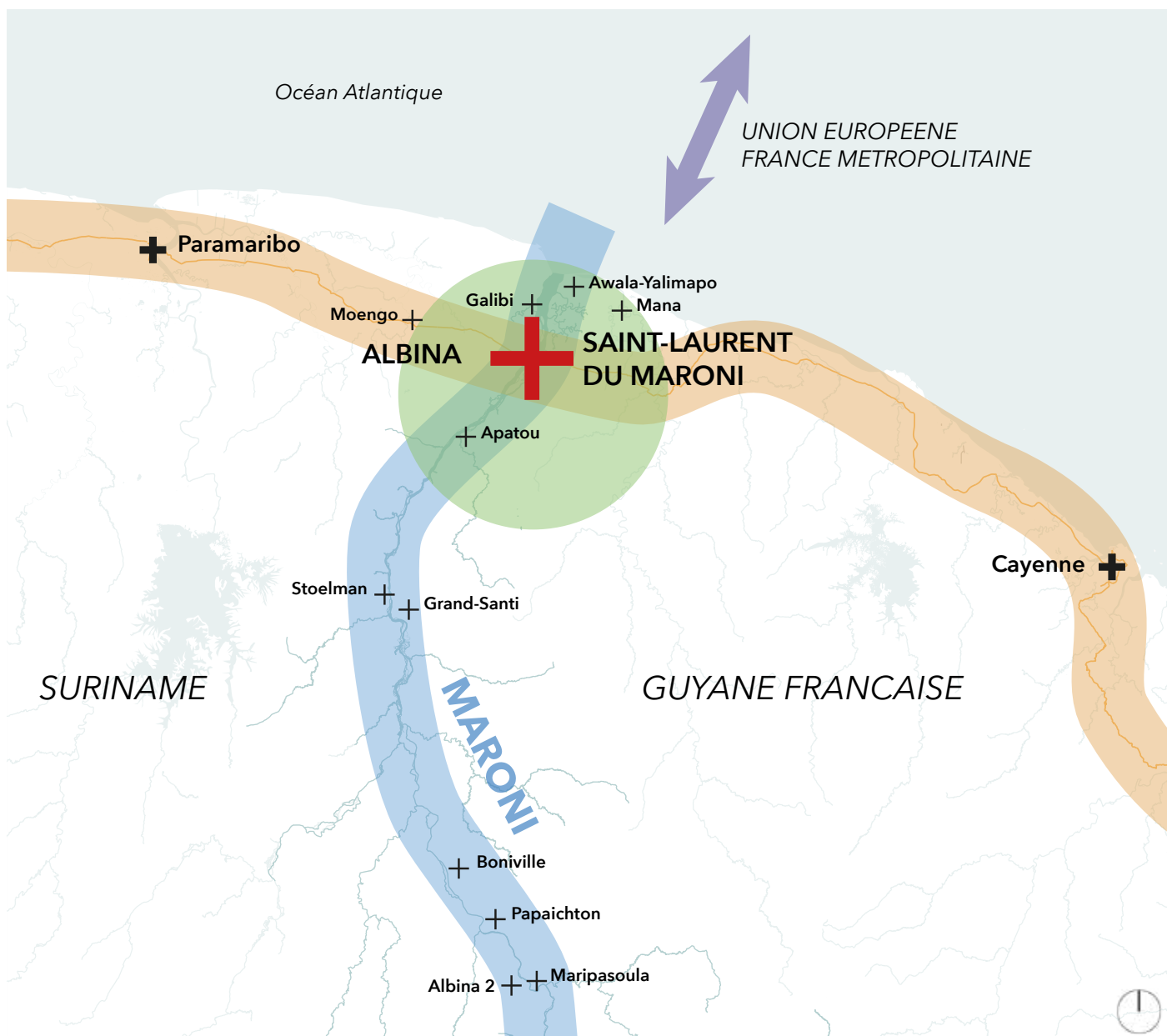
Saint-Laurent du Maroni and Albina, a strategic location. Credits : Ateliers de Cergy

PART II
SAINT-LAURENT DU MARONI TODAY

1. Biodiversity, forests, cultural landscapes

«The Maroni. The mouth of this river, several kilometers wide, is always restless… On the starboard side, Dutch Guiana, sometimes hospitable; to the port side, French Guiana, land of penal servitude. The banks are both sinister and magnificent. Here, nature is still absolute. […] a wide border of silt, thorny brush, large and small bamboo, palm trees of every size, and especially mangroves.»[1]

THE MARONI AND ITS RIVER BASIN

The water system is marked by the omnipresence of the Maroni river. This overwhelming presence exists due to an incredibly dense network of creeks borrowing from the river basins of the Maroni and Mana. The hydrographic system's volume is explained through the significant rainfall and the terrain's lack of grade variation. Its flat topography continues through numerous wetlands, including into the city.

The path of the Maroni, 520 km long, is interrupted by numerous rapids and waterfalls. Its wide riverbed is interlaced with many islands, some of which are inhabited by indigenous and Bushi Nenge populations. Towards the end of the river, after the Hermina rapids, the Maroni submits to the influence of the tides. Its estuary widens at Saint-Laurent. And even without direct contact with the coastline, the city's northern tip nonetheless presents certain coastal characteristics. Salt water flows back into the Maroni's rivers and creeks, causing the brackish water of the savannas that border the river, and thus creating a vegetation marked by mangroves and *moco-mocos,* when the flow of freshwater is sufficient.

> River landscapes
Saint-Laurent du Maroni presents itself, with Albina, as an urban gateway on this river that marks the end of the coastal marshlands and the start of the inland forest landscape.
- The Île Portal. This section of is characterized by a heavy human impact on the river, especially around the Saint-Jean creek. The creek retains the important silhouette of the river. The linear landscape along the road opens a gap into the forest. Cultivated clearings, or those for grazing, alternate with larger farms. The wooded band of the secondary forest, between the road and the creek, is home to Terre-Rouge and Espérance indigenous villages. The village of Saint-Jean brings together a habitat typical of the Maroons and directly linked to the river. The former Relegation Camp now houses the Régime du Service Militaire Adapté (French military division). Lastly, the Île Portal is now occupied by a Kalina village and is being cultivated in its southern end.
- The Sparouine islands. A succession of small wooded islands, some inhabited, that can be seen within the axis of the river. The banks are marked by a scattering of homes that form little villages. At the opening of the Sparouine creek, a village that has developed along the length of the river can be found. The sandy riverbanks promote the proliferation of *dégrads* (rudimentary river ports).

> Challenges
The presence of the river and the many creeks that irrigate Saint-Laurent du Maroni endow the city with an almost lake-like landscape, where water plays a significant role in the way of life. However, this river landscape raises numerous challenges for the Saint-Laurent commune. Firstly, there is a loss of identity in the new forms of architecture. These new standardized constructions are not adapted to the lifestyles of residents, thus creating new ways of living and in return transforming social relations. Saint-Laurent's river landscape is also being changed by roadway projects. While homes were built along the Maroni's riverbanks despite the area's risk of flooding, a reversal towards roads can now be seen, correlating in the widespread use of cars (albeit the low rate of motorization by households) and thus accentuating the transformation of the landscape and raising questions about its future. The architectural landscape of the river appears threatened by the risks of flooding, but the pressure tied to urban development and economic activities equally weaken, if not more so, this natural space – structurally and

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1. Eugène DIEUDONNE, La vie des forçats (1930), Editions Libertalia, 2014

Communal map of Saint-Laurent du Maroni. Source : IGN.

economically. It can thus be understood that strong connections exist that bind the cultural identities of the river to the different styles of housing. Between promoting local river cultures and standardizing new constructions, what strategies can be envisioned? The Maroni assumes its cultural, landscape, and social dimensions, including its future that is tied to that of the people of the river.

FOREST AREAS

98%[2] of Saint-Laurent's territory is covered by natural areas: forests, semi-natural areas, and wetlands. Its vegetation is arranged in tiers between the coastal vegetation of recently formed plains (mangroves, sub-coastal marshes, and forest swamps) and the vegetation of ancient coastal plains (forest swamps, areas full of palm trees, creeks lined with Moriche palms, sandy savanna zones). A creek is a small river, coming from a larger one.

The low-altitude forest areas also exhibit great diversity. The primary forests are marshy, on white sand or hard earth. The anthropogenic forests, or secondary forests, cover land previously cleared and abandoned. Saint-Laurent also as three suburban forests: the Malgaches, Saint-Jean, and Saint-Maurice. A portion of their lands has been transformed for cultivation, intended essentially for recreational purposes. Forest trails are becoming increasingly present within the landscape, due to the opening of the territory. The urban development near roadways is also opening the landscape, yet not contributing to its structuring but resulting in a retreat of the forest threshold. This withdrawal of the forest's boundary is accentuated by the growth of rural and agricultural sprawl.

The management of these massive forests requires a coordinated set of actions to sustain these areas and supply the timber industry. As such, a forest management project in the area called Forêt Sparouine is planned. The search for other areas and rivers in underway in Saint-Laurent, in order to promote them as areas for ecotourism.

Several sectors of Saint-Laurent have been catalogued for their flora and fauna. The establishment of statuses as Natural Ecological Interest Zones of Flora and Fauna (ZNIEFFs) can indicate to policymakers the presence and value of the natural heritages of these sectors. They are informative, non-binding, but would have indirect legal effects if a judge was to value the lawfulness of administrative acts in regards to these spaces. Included among these ZNIEFFs are the waterfalls of the Voltaire creek. Beginning at the Paul Isnard road, the Voltaire creek is a tributary of the Sparouine creek. The Voltaire creek is in the Maroni river basin. Covering 17,740 hectares, the Voltaire waterfalls are the largest listed site in French Guiana. Forests covers virtually the entire site, accessed with difficulty after three hours of hiking and walking.

> Landscape challenges tied to the expansion of trails and roads

Forest trails develop a dual use in terms of habitation and agricultural farming. The creation of new trails by the National Office of Forests (ONF) presents risks of mutating forest areas. It is therefore necessary to distinguish different types of forest trails by their different impacts over time. The secondary trails, in use for less than ten years, reforest themselves quickly. In order to reforest routes that are too wide, the ONF closes the sites for fifty years.

Roads thus impose their own vocabulary, more technical than landscaped. The presence of trumpet trees, along the margins, banalize the landscape but structure it. The local environment is now considered in advance when planning roadway projects, through the demarcation of biological corridors. Nevertheless, these corridors may face an informal urban development which is already present. The project surrounding the RN1, which leads to Apatou, and its expansion towards Maripasoula is considered in light of these elements. The forest landscape found there has been profoundly changed through an urban development tied more closely to that of the roadway than the river. The new entrances to the city add to the stigma of monotony and banality. The opening of forest areas must not be done at the detriment of landscape development.

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2. Expertise littorale de l'ONF réalisée en 2009

Monts et Montagnes constituant des repères sur le parcours du fleuve

Villages amérindiens ou marrons accompagnés souvent d'un chapelet d'abattis

Ripisylve dense marquant un couloir vert et cloisonnant l'espace entre la forêt et le fleuve

Iles et bras changeant l'échelle de perception du fleuve

Ville d'estuaire marquant une zone forte d'échange entre la forêt, le littoral et l'océan

Ile boisée ponctuant l'espace fluvial

Mangrove, forêt inondée et marais d'estuaire marquant l'embouchure du fleuve, régime maritime

Le paysage animé des sauts, mélangeant l'eau, le minéral et le végétal

Village associé aux sauts

Typical section of the Maroni river. Credits : VU D'ICI & ARUAG, Atlas des Paysages de la Guyane

Map of the forestry river, farming lands and natural open spaces
Diagnostic réalisé par le bureau d'étude Quadra en 2014.
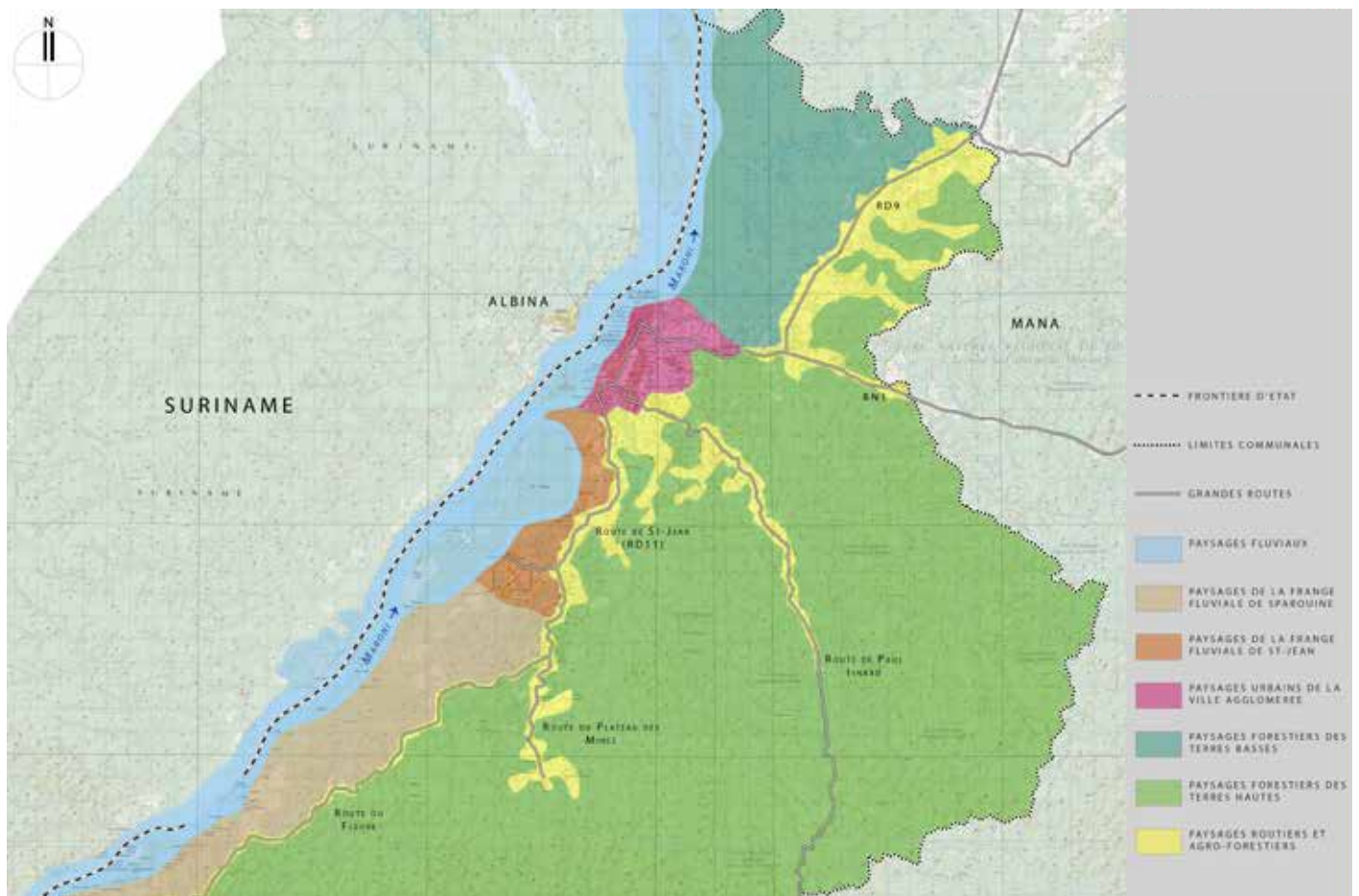
2. History of the development of the capital of western French Guiana

The rivers are where indigenous populations first settled in French Guiana. Human settlements are localized along these rivers, which serve as axes of communication across the territory. The cities of Albina and Saint-Laurent du Maroni were created at the mouth of this Amazonian river, nearly 40 km from the ocean, creating a strategic residential zone between the land and ocean, allowing for control of the interior lands while remaining accessible by the ocean.

> The river of indigenous and Bushi Nenges populations

The first inhabitants of the Maroni were historically indigenous populations. The first settlement on the «French» bank of the river carried the name of its chief Kamalaguli. Today, only the Lokonos and Kalinas remain, ensuring the shared management of their lands in respect to customary laws. Their integration into the territory comes through an evolution of social structures and the diversification of their activities: farming through forest clearing and wage labor.

In the 17th and 18th centuries, the banks of the Maroni saw an influx of new populations: European settlers and their African slaves. The descendants of rebel slaves, Bushi Nenges and Maroons, fleeing the plantations of Suriname divided into four main groups: the Boni/Alukus, Ndjukas, Paramaccas and Saramaccas. They settled in neighborhoods of the main town or in surrounding villages. Contact with indigenous populations and the exchange of skills allowed the Bushi Nenges to become "great navigators of the river, making them undeniable specialists in the art of building pirogues (dugout canoes) as much as in piloting them."[3]

This shared history explains how the estuary, banks, and tributaries were settled in the 19th century by different indigenous and Maroon communities. The first site in western French Guiana to be occupied by Europeans was Mana; where in 1830, the parish Saint-Joseph-de-Cluny was built. Before the establishment of the penal colony, western French Guiana was not yet part of the colonial reality, which mainly was the case on Île-de-Cayenne and in its surrounding areas. Therefore, well before the establishment of the Transportation Camp, the Maroni was already an important center of life, full of permanent exchanges. This place of life and exchange would only become a border in retrospect.

The Maroni embodies a territory of resistance to colonial forces. «[...] Never completely French due to the movement of populations outside of the colony, but never totally Surinamese since it was constructed in opposition to the society of slavery; the river is a marginal space between two colonial systems.»

> 1852–1953: The penal and gold-bearing territory

Albina was an indigenous village abandoned by the chief Kwaku when August Kappler colonized it in 1846 and renamed it after his wife. Kappler was a German soldier who had served in the colonial army of Suriname. He established a timber estate, a forest colony. By 1856, in this new Albina, there were close to 70 settlers operating economic activities tied to trade. In 1852, the site of Saint-Laurent du Maroni was designated as a Transportation Center. The origin behind the creation of this detention center is tied to the lack of servile labor in French Guiana after the abolition of slavery in 1848. Napoleon III explained the reason for its establishment in French Guiana. «[There are] six thousand convicts, locked in our prisons in Brest, Rochefort, and Toulon, increasingly burdening our budget and incessantly menacing society. It seems to me possible to make the punishment of hard labor more efficient, moral, less expensive, and at the same time more humane, by using it to progress French colonization.» Article 2 of the Act of May 30, 1854 describes the duties of prisoners, where «the convicted will be employed to work the most arduous tasks of colonization and all other jobs deemed public works.» Several prisons were thus created in French Guiana - in Kourou, on the islands, in Cayenne and in the commune of Saint-Laurent du Maroni.

The penal colony of Saint-Laurent du Maroni was founded in 1857. The mayor of the town

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3. Rapport de présentation du PLU

Riou's engraving, crossing a river drop.
Source : BNF, Gallica
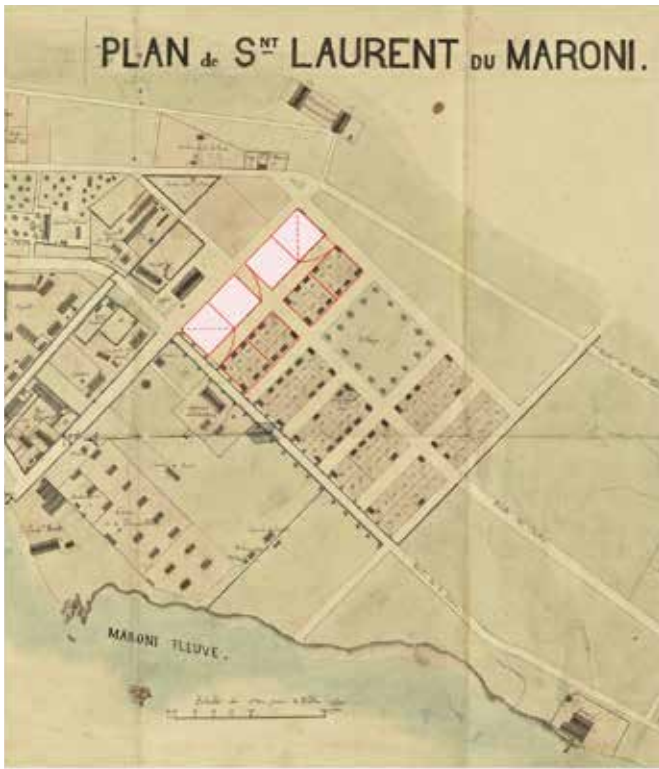
Urban street grid of the 1878's map.
Source : M. Verrot

Postal card of the railway building.

Datation map of the plot pattern and network. Source : AVAP
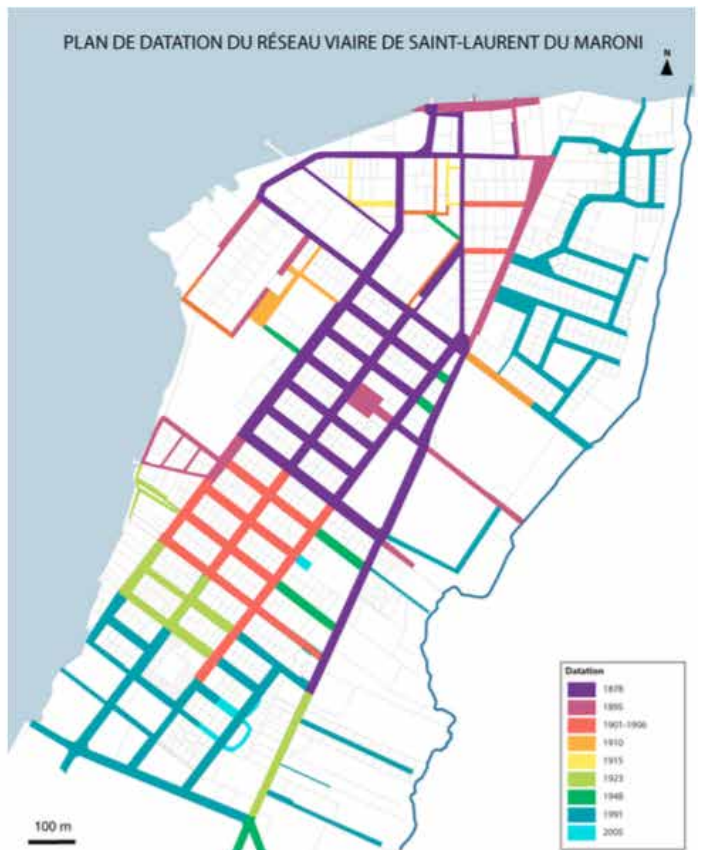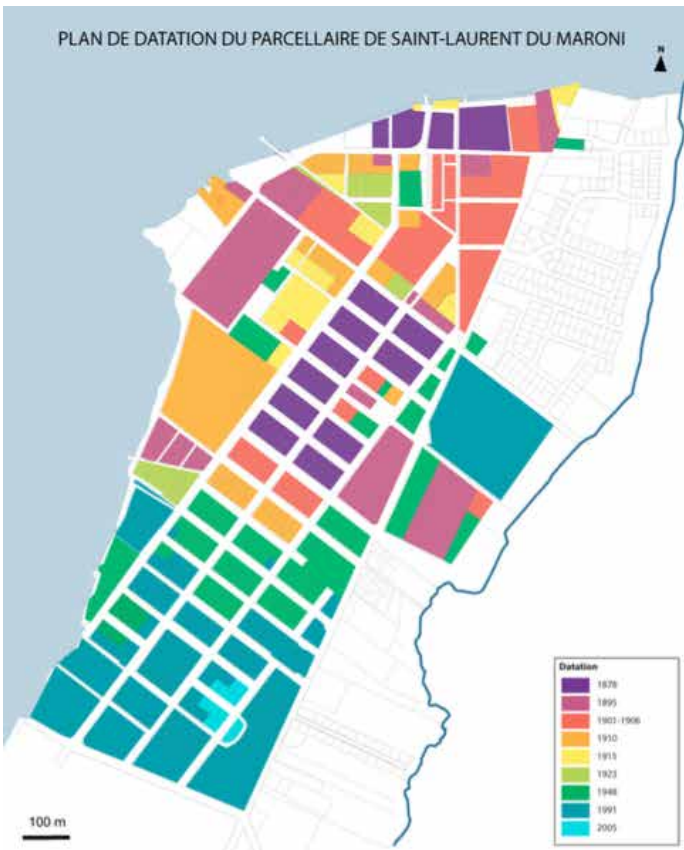
was the director of the Transportation Camp. Even if the latter was the main site of detention along the river, the Relegation Camp in Saint-Jean also existed, along with agricultural and timber prison camps in Godebert and Charvein. Some detainees were sentenced to constructing the road between Saint-Laurent and Cayenne.

The prisons were separated into three categories: transportation, relegation, and deportations. Transportation was for those convicted through common law, more than 50,000 were «transported» between 1852 and 1938. Relegation was for delinquents or repeat offenders. Deportation was for political prisoners, including French anarchists such as Eugène Dieudonné and some separatists from other colonies.

In French Guiana, the Transportation Camp in Saint-Laurent du Maroni was the site which had the greatest number of detainees. It was the penal capital, creating a real city by the late 19th century with a church, hospital, two schools, two barracks, a slaughterhouse, stores, sawmill, brickyard... The city consisted of an Administration Pénitentiaire (Department of Corrections) neighborhood, the Transportation Camp, the village, and agricultural plots.

«Before us Saint Laurent du Maroni, the city of crime, lay still under the morning sun, and its colonial aspect looked pleasant. But many among us turned their heads furtively to look at the other bank, the Dutch shore, and their hearts beat fast for they thought that there, in the Dutch jungles, lay liberty... close at hand.» René Belbenoît, Dry Guillotine, 1938 (Translation by Preston Rambo). [3]

In Saint-Jean, the Relegation Camp was created in 1885 to accommodate those condemned to perpetual confinement in the colonial territories. The site is 15 km south of Saint-Laurent's center, along the Maroni river and Saint-Jean creek. A railway was introduced around 1885 to ensure the link between Saint-Laurent and the camp in Saint-Jean, and at a later stage, between Saint-Laurent and the different camps near Mana.

The freed
In 1924, concessions granted to those released by the decrees of 1895 and 1901 became the plots for private property ownership, businesses, and industries.
Each concession recipient had a little over two years to enhance and demonstrate the value of his land. These concessions were first given provisionally, then definitively. The newly freed could thus become property owners of their own land and home after five years of demonstrating their value and at least one year after their release. But facing the weak agricultural potential of the land and restrictions by the Administration Pénitentiaire, the concession system was not the success it was expected to be: 1,520 settlers were therefore dispossessed of their lands for not having demonstrated the value of their concession within the time demanded or for not having exercised a declared trade. (Mallé, 2009)

> **The gold rush**
In 1880, gold veins were discovered in the upper-Maroni, sparking a gold rush. This discovery led to an influx of people, especially those from the Caribbean, attracted by the prosperity of trade. Through this dynamic of urban growth, the Maroni territory became open to the civilian population in 1882. It was during this time that Saint-Laurent became a junction of exchange, where diverse populations lived and met. In the same period, Albina was also becoming a trading center through the mining of gold along the Lawa river, which began in 1876. In 1893, Marowijine became an official district. Thus «the period of gold mining progressively generated an opening of customary lands to coastal cities and large towns - estuarine commercial relays » explained geographer Frédéric Piantoni.[4]

Until 1950, Saint-Laurent was not connected to Cayenne except by the sea and found itself virtually isolated in regards to the rest of French Guiana and Metropolitan France. In the 1930s, the progressive closure of the penal colony and the decline in gold mining activity led to a renewal of the indigenous and Maroon populations coming from the upper-Maroni. Saint-Laurent gradually became a commune

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3. René Belbenoît, 1899-1959, est un bagnard français qui a réussi à s'échapper de l'Île du Diable et a diffusé ses mémoires dans *Dry guillotine* paru en 1938.

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4. Frédéric Piantoni, « Les recompositions territoriales dans le Maroni : relation mobilité-environnement »

International workshop of urban planning in French Guiana

with a civilian and multicultural population, whose growth continues today.

> 1949–1986: The rise of Saint-Laurent
In 1949, Saint-Laurent became an official commune where close to 3,000 inhabitants lived. The Transportation Camp, emptied of its detainees, was sold. The poorest inhabitants came to settle on its site until the 1980s. Saint-Laurent's population doubled between 1950 and 1980 as a result of the rural exodus from the Maroni river basin.

«During this first period, a transfer from villages to newly created administrative centers (Maripasoula, Papaïchton) developed. Then, rapidly saturated in terms of employment opportunities, coastal towns became the main reception areas of migratory trajectories starting in the mid-1970s. Through its opening onto the river, its population, and its role as a gateway to the coastal economy, Saint-Laurent presented the sociological conditions which made it the docking station and redistribution point (towards Mana, Kourou, and Cayenne) for those coming from the valley.» Frédéric Piantoni.

During this period, indigenous populations settled along the Maroni by creating three villages in the south–Balaté, Terre-Rouge, and Pierre–and one in the north, Paddock, in accordance with community and family ties. Maroon populations also settled along the river to the west of the camp's outer wall. The Toto and Roche Bleue villages that were previously there were razed due to their unsanitary conditions. Consequently, the river banks saw the creation of a «Maroon village» with the emergence of a pan-Maroon culture in these neighborhoods. The development of the city also took place along transportation axes such as the RN1 and Saint-Jean road.

To respond to the new needs for lodging, new sectors were developed by continuing the grid pattern in the south of the center: the Hibiscus housing projects (1960s), the Acacias residences (1970s). In 1981, a prefectoral order, regarding the unsanitary conditions of certain sectors of Saint-Laurent, was voted upon in order to relocate families residing along the riverbanks and in the Camp. It was the first urban operation targeting the resorption of slums (RHI) in Saint-Laurent. These inhabitants would be relocated to the new urban developments to the east of the Cultures housing projects and to the south of the Charbonnière district.

In addition, it was a period when numerous infrastructures were constructed in French Guiana. In 1951, the Saint-Laurent-Cayenne route was inaugurated, but its paving would not be finished until 1983. The Port de l'Ouest, to the south of the city center, was constructed in the 1960s as a stage for entering into the city.

Albina, Saint-Laurent's twin, was more populated and thus possessed superior public facilities. Children from Saint-Laurent were educated in schools in Albina. Residents of Saint-Laurent crossed the river to benefit from commercial trading, but also Albina's night life and regional hospital. Suriname's economy was thus more dynamic due to the intensity and reciprocity of exchange. In the 1970s, Albina was a touristic holiday spot with fine sandy beaches unique to Suriname.

During this period, in 1975, the French government proposed to Hmong refugees from Laos to come and live in French Guiana. The Hmongs settled in two villages, Cacao, to the east of French Guiana and Javouhey to the north of Saint-Laurent. They were integrated into the Plan Vert (Green Plan), a program to develop agriculture. Thus, more than 400 Hmongs came to live and cultivate the land in Javouhey, selling their products mainly at the Saint-Laurent market.

> 1986-1992: The Surinamese Interior War
The history of the towns was changed drastically with the start of the Interior War in Suriname, which made Albina one of its principle areas of fighting. In July 1986, the Jungle Commando began their rebellion with the attack of an army barrack 100 km to east of Albina.

This interior war was tied to the marginalization of Maroons from eastern Suriname and to the country's economic and socio-political crisis. Albina disappeared under the incendiaries of bombs and bombings. The majority of residents left the city.

The war led to the displacement of close to 25,000 people in Suriname. Between 13,000 and 15,000 refugees went to Paramaribo and between 1,500 and 2,000 became refugees in the Netherlands. Between 9,000 and 13,000 Surinamese crossed the river in search of refuge in the border areas along the French river bank. They were received into five camps: Camp A, Camp B, PK9, Charvein, and Acarouany. They were predominately Ndjuka and Paramacca, but there was also around a thousand indigenous people, Kalinas and Arawaks. The latter were welcomed into the indigenous villages along the French river bank. The refugees had the status of PPDSs, Provisionally Displaced Populations of Suriname. This was a stand-alone status, as it did not fall under the auspices of the UN nor the High Commissioner for Refugees. The management of these populations was handled between the municipality, the prefecture, and the central French government.

During the six years of conflict, the rebels assembled in Saint-Laurent and used all of the French side of the Maroni as a fallback base. The Chinese Village was therefore used as a landing dock by the Jungle Commando. This occupation created a climate of defiance by residents in relation to the Surinamese.

A peace treaty put an end to the war in 1992. The city of Albina, which was essentially destroyed, has yet to fully dress its wounds, even today. Three villages have not been rebuilt: Negerkreek, Moiwana and Maria-Kondre. After the war, the reconstruction of the city was done gradually through the impetus of economic exchanges tied to the urban growth of Saint-Laurent and with the renewed gold production along the upper-Maroni river.

In 1992, a program for refugees living in Saint-Laurent to return to Suriname was established. The government offered 4,000 francs (around 610 €) per adult and 2,000 francs (around 305 €) per child for the refugees to return to Suriname and rebuild their lives. But upon returning to their villages, they found a land where their homes had once been now invaded by nature.

The massacre of Moiwana
During the Interior War, between 39 and 130 villagers in Moiwana were killed by a unit of the national army on November 29, 1986. The majority of the survivors from this massacre live in French Guiana and have obtained official refugee status. Today two sites of commemoration have been built on the locations of this massacre, since the verdict in 2005 by the Inter-American Court of Human Rights. Refugees from Moiwana were sent to the Charvein Camp in Javouhey.

> 1992 to today
The effects of the conflict on the residential level of the Maroni, geographer Frédéric Piantoni explains that:
[T]he effects of the conflict will cause a recomposition of the socio-spatial dynamics through a reversal of the demographic polarizations in the border area. The relational spaces, shared before the conflict, will be restructured on the basis of a community cohesion. The Maroni will find itself serving a function as a resource-space in terms of identity, but also economic with the resurgence of gold mining.[5]

On the scale of Saint-Laurent, the arrival and installment of Bushi Nenge communities tripled the population in just ten years. The small isolated town of Saint-Laurent thus became a big city with its twin city, Albina - survivor of war - on the other side of the river. This civil war and influx of migrants attracted the attention of Cayenne and Metropolitan France to western French Guiana and Saint-Laurent. Hence the emergence of a rebalancing of investments for western French Guiana, though not enough as to help the city meet the challenges of receiving refugees turned residents. This situation is only partly resolved and many of these refugees turned residents live primarily in informal neighborhoods along the margins of the city. The challenge is the integration of these new neighborhoods through the development of urban services and facilities and in the construction of housing.

5. Frédéric Piantoni, « Les recompositions territoriales dans le Maroni : relation mobilité-environnement »
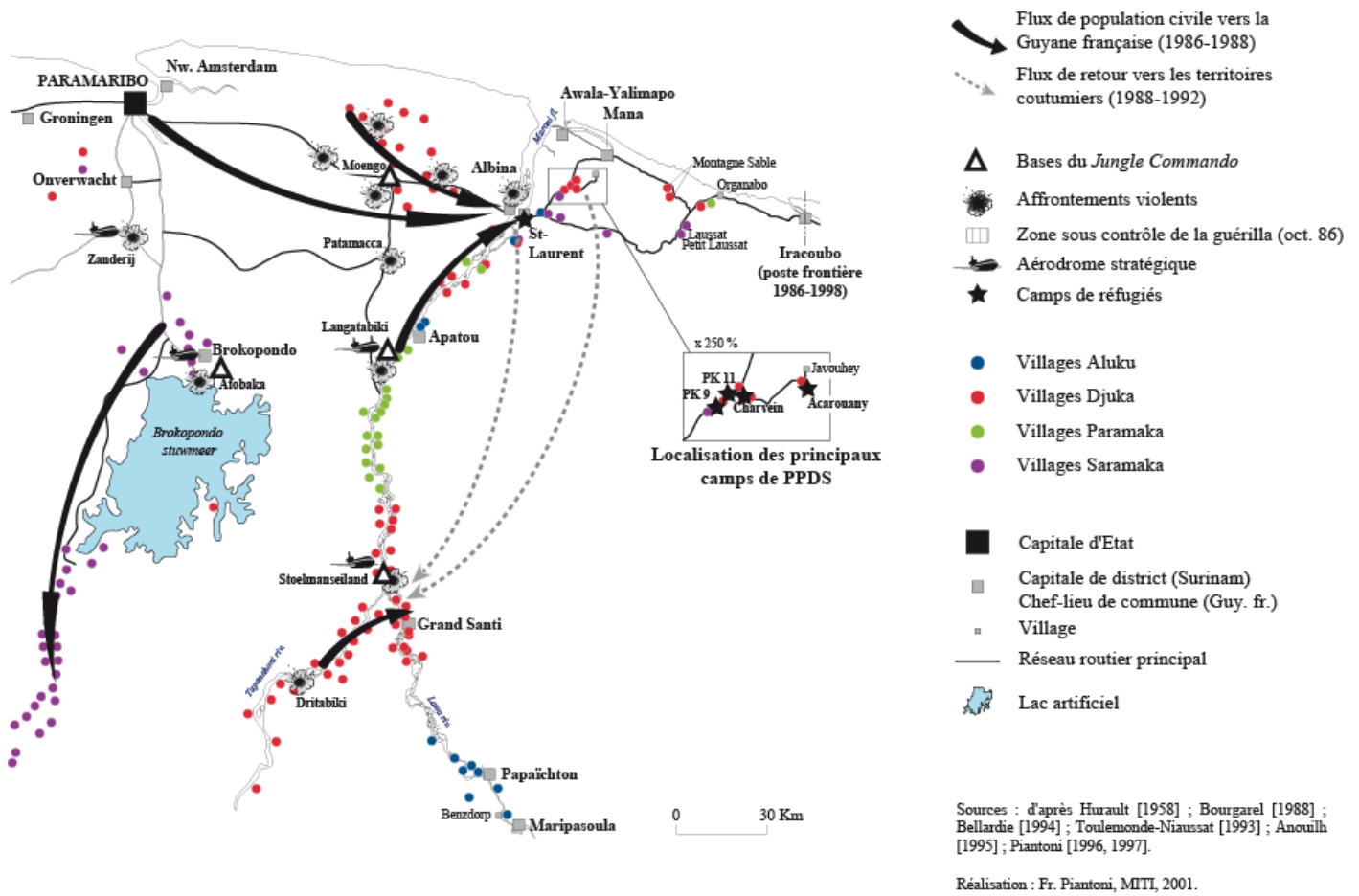
Migrants flux and battle fields during Surinam's civil war. Source : Frédéric Piantoni
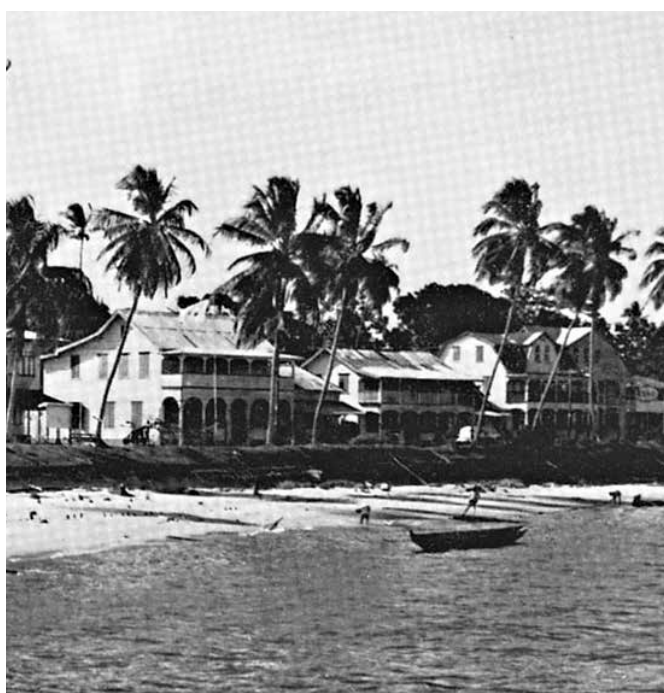
Albina before the civil war, in 1962.

Realm of memory of Moiwana's massacre.
Source : Africultures

An unprecedented urban development
The city hall, along with the prefecture, CGT, developers and local partners have introduced numerous programs to respond to the need for housing and to eradicate or transform the insalubrious living areas. The housing programs are developed depending on land opportunities, along the roadway network, resulting in groups of social housing primarily to the south of Saint-Laurent and on the road to Saint-Jean, as well as in the southeast across from the airfield.
- In the south: the Orchidées, Cassialatas, and Frangipaniers residences
- To the north of the city center: the Cultures and Mescle neighborhoods
- In the southeast: the Sables Blancs housing projects in 1994, the expansion of the Charbonnière district with the Flamboyants and Moucaya sub-divisions, the Ecoles housing project in 1996

The volume of housing produced has not been sufficient in responding to the high demand. The Saint-Maurice ZAC was created with the objective of constructing more than 3,400 housing units over time, making it France's largest ZAC. It would link the Ecoles neighborhood to the Sables Blancs.

Infrastructure to support the urban development
The tripling of the population led to considerable needs in urban services, infrastructure and facilities:
- Construction of the first roundabout at the entrance of the city and the first traffic light to allow for driver's license testing in Saint-Laurent.
- Relocation of the landfill along the Paul Isnard road
- Construction of the first «Super U» supermarket in the Saint-Jean commercial zone
- Expansion of the Port de l'Ouest
- Construction of numerous elementary, primary, middle and high schools
- Construction of a new hospital currently being built in the Sables Blancs neighborhood

Despite these projects, the high population growth as created significant pressure on the usages and capacities of these infrastructures. How can the size of these projects be calibrated in light of these exponential needs?

Cultural proactivity
Saint-Laurent has developed a policy of cultural proactivity since the late 1990s with the introduction of the Centre d'Interprétation de l'Architecture et du Patrimoine (CIAP) inside the Transportation Camp that was inaugurated at the end of 2014, numerous music and performing arts festivals (Trans'Amazoniennes, Les Tréteaux du Maroni…), and the support for various organizations. The city of Saint-Laurent has also promoted its heritage by becoming the City of Art and History in 2006 and establishing the Architecture and Heritage Development Park (AVAP) for the historic center. Saint-Laurent has thus become the cultural capital of French Guiana.

SUMMARY

The birth of the city along the river came about with the prison during the mid-19th century, in the area of the Maroni where indigenous and Maroon populations were already living. French Guiana was therefore a French colony with the Maroni river as its border. The city became a center of trade in the late 19th century with activities generated by the prison and gold rush. With the closing of the camp and the decline in gold mining, the population of the penal colony left and the city received a new population coming from around the river. Saint-Laurent thus began its rise, with its twin city, the more attractive Albina.
The historic turning point for the city was the Interior War in Suriname that lasted from 1986 to 1992. Tens of thousands of Surinamese crossed the river and found refuge in Saint-Laurent, staying six years in camps under the special status of PPDS, Provisionally Displaced Populations of Suriname.
The area of the Maroni and Saint-Laurent is the story of endless migrations, between the indigenous populations, Bushi Nenges, prison inmates, settlers, Creoles, Chinese, people from Metropolitan France, Hmongs, Haitians, Brazilians... It is a welcoming territory where numerous communities live together, with a third of its population being immigrants, according to the 2010 census. Today, the Bushi Nenges represent the majority of Saint-Laurent's population.[6]

6. André Calmont « Dynamiques migratoires en Guyane : des politiques migratoires de développement au développement des migrations spontanées » 2007
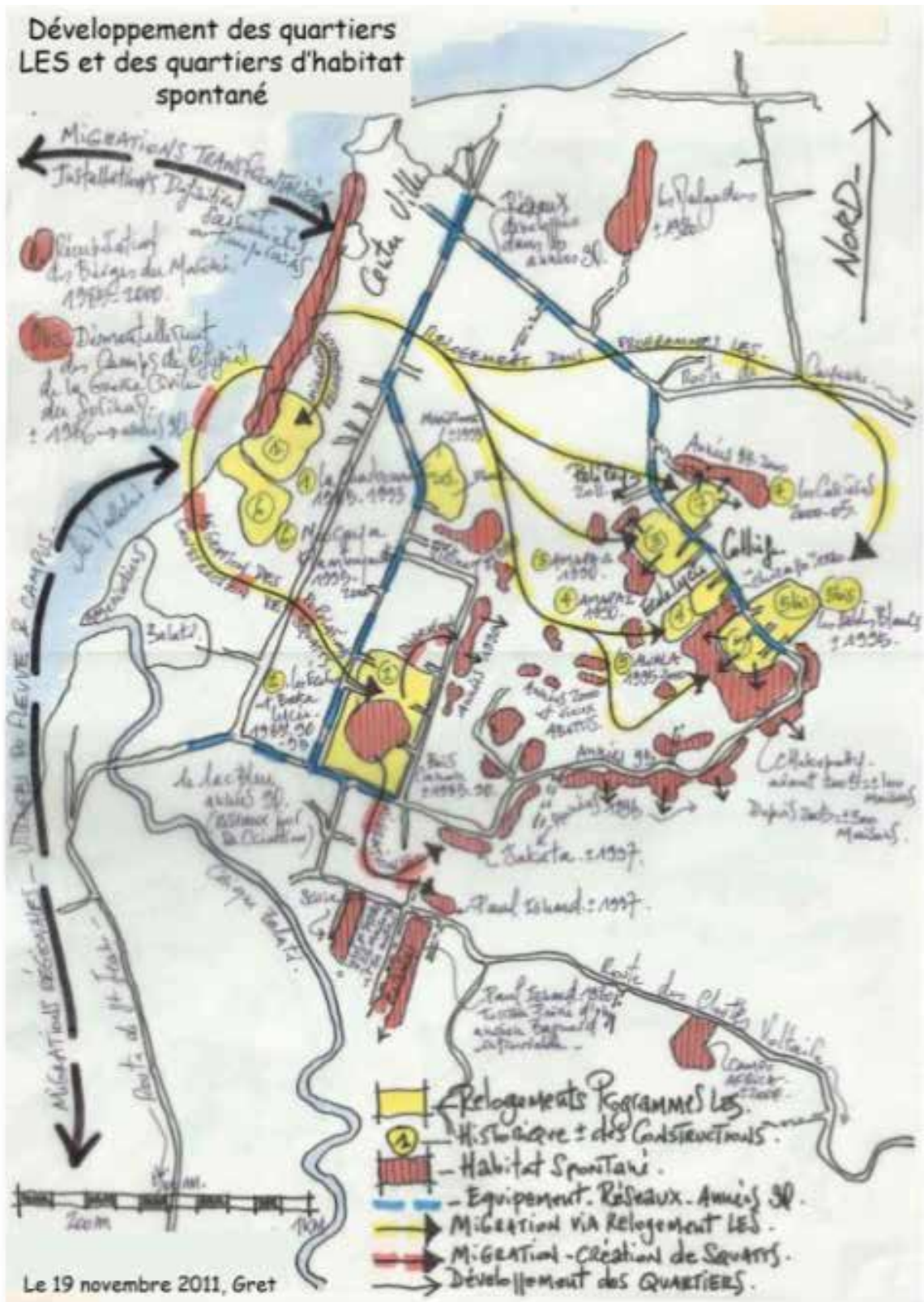
Growth of the LES districts and informal housing settlement.
Credits : GRET, 2011

3. STRUCTURES OF THE CITY

INTRODUCTION

Today, the city of Saint-Laurent, with an estimated population of 40,597 (INSEE, 2012), is the second largest city in French Guiana after Cayenne. Capital of the Maroni, capital of the penal colony, capital of the West, capital of the runaway slaves, French Guiana's cultural capital, City of Art and History, border town - Saint-Laurent has accumulated many adjectives representing its history and population in relation with the opening of the Maroni river. With a high population growth since the 1990s and the reception of nearly 10,000 refugees, the city is faced with a poorly controlled urban development, resulting in the construction of informal neighborhoods and the degradation of living conditions. The city is in a state of constant «catch-up» tied to a lack of means and an incompatibility between Metropolitan development tools and Saint-Laurent's reality. The population of Saint-Laurent multiplied by seven between 1967 and 2010, and multiplied by three in the last 20 years. By 2030, the baseline scenario, in terms of demographic forecasting, projects a population close to 135,000, making it French Guiana's largest city (GRET, 2014). The capital of western French Guiana thus faces the challenge of a rapid and massive urban development.

The population density of the Saint-Laurent du Maroni commune is very low, with barely 8.4 inhabitants/km2 in 2012. This number, however, does not reflect the reality lived on the land, since the commune's surface area is so large (close to 5,000 km2). As a comparison, French Guiana had a density of 3 inhabitants/km2 during the same period, but with 88% of its population concentrated along the length of the coastline, which means that the density lived by these populations was actually closer to 19 inhabitants/km2, which remains nevertheless far lower than the French national average.

The current urban structure of Saint-Laurent du Maroni is characterized by:
- a historic center which bears its patrimonial identity. Dense and structured, it houses the essential facilities, businesses, and services of the commune.
- secondary centers, characterized as single-function, for facilities, economic activities, and even housing (resulting from the first RHI programs in the 1990s, which created isolated neighborhoods, one after the other: Charbonnière, Sables blancs...).
- an unfurled urban development that stretches across the length of the transportation network (small dispersed groups of homes dotting the territory, mainly built alongside roadways), including several pockets of slums.
- indigenous villages that have developed according to their own system of organization. A huge part of the territory therefore remains completely deserted by the population due to presence of dense forests.

STRUCTURING AXES

The city is structured around its major roadways, the Maroni river and the Balaté, Saint-Laurent and Margot creeks. Saint-Laurent can be accessed by its three principal roadways:
- National Road 1 (RN1), leading to Cayenne and Mana at the Margot carrefour
- the Saint-Jean road, today leading to Apatou
- the Paul Isnard road

Within the urban area of Saint-Laurent, the local roads also structure the urban development of the city:
- the avenue Félix Eboué, former rue Mélinon (in the late 19th century) and rue de l'Eglise (in the early 20th century), this road crosses the village from north to south.
- the Fatima road
- the Vampires road or avenue Paul Castaing
- the avenue du Général De Gaulle. This boulevard connects the city from north to south, crossing six districts (the administrative district, the prison district, the colonial town and its extension, the Chinese Village, and Maroni Palace). Characterized by a wide comfortable road, the boulevard Général de Gaulle was once divided by an old canal, or gutter, separating the colonial town from the prison district.

THE STREET GRID[7]

The colonial town's *cardo* roads are characterized by their northeast and southwest orientations. Their size and profile along with the building facades are splendid, for example, boulevard du Général de Gaulle and rue Felix Eboué. The decumanus roads are characterized by their east-west orientation, their form (low sides, central median) and how the building facades are remarkably aligned with the street. Twenty meters wide, they all have central medians that were built in the late 19th century.

> **Central median: An element of the colonial town's streets**

The central medians of decumanus streets and on avenue Félix Eboué were not planted with vegetation during the era of the penal colony, but had a central gutter such as the one that can still be seen today on rue Marceau, across from the city maintenance department. The two rows on avenue Félix Eboué were planted with almond trees during the course of the 20th century, but those that were sick were cut down and never replaced. The central medians of the colonial town are now planted with Flamboyant trees and royal palms along the secondary roads and açaí palms on boulevard de Gaulle.

> **The gutter, a heritage element of the colonial town's streets**

Originally pedestrian, the colonial town with its wide dirt roads allowed for easy travel. The deep gutters constructed in the center of the decumanus roads and along the boulevard bordering the village ensured proper drainage of rainwater. The construction of these gutters was above all for sanitation purposes. Their maintenance was guaranteed and assured by the abundant labor provided by the penal institution.

THE COLONIAL TOWN

The birth of the city is tied to the prison. The colonial town is the foundation of Saint-Laurent du Maroni. Its current foreground includes elements that correspond directly to those shown on the land registry that dates back to 1878.

Below the administrative district, the village was designed as an extension of the church and covent. It consists of two axes: a northeast axis and southwest axis. Starting at these historical axes, the village forms a grid pattern of 12 blocks the length of the main road. Within this design, each small block is divided into 12 lots, numbered 1 through 120. Of the 120 lots, 82 were occupied by concessionaires. On these lots, the area reserved for construction was generally the same. Structures were erected in alignment with the street but with respect to a receded section along the two lateral limits. They were built on a constructible band representing slightly less than one third of the lot's depth. For the lots that formed the corners of each block, the structures were built in line with the angle of the two streets.

> **The colonial town's lot grid design**

The colonial town's grid pattern consists of twelve blocks, 100 meters long and 50 meters wide. The map from 1878 on to which today's current land inventory map perfectly overlaps, reflects the precision of the historic composition of northeast and southwest axes. The grid pattern follows the rules of proportion used since Antiquity.

«Designers of the colonial town's layout in the 19th century used the basic rules of geometry, which, since Antiquity have been established as the rules of proportion that govern architecture as well as the development of urban spaces. The square created by the width of the block is the compositional base for the design of the colonial town. It forms the 'module' from which all other proportions are governed. Each block is created through the combining of two 'modules' forming a rectangle with a 2 to 1 ratio.» [8]

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7. Diagnostic de l'AVAP

8. Carnet du Patrimoine de la ville de Saint-Laurent du Maroni n°3 , « Le centre ville de Saint-Laurent du Maroni, un plan en damier», août 2012

The width of the street is also set through a proportional ratio to the module. The designers achieved this by using the bias of the reference square, folding it back outside the block to the furthest point onto which a second block would be set. This concept respects one of the most used rules of proportion in the architectural compositions of Antiquity.

«Once the proportion of the blocks and the relation of the street to the blocks were established, it sufficed to develop the composition up to six blocks, then to create a symmetry in relation to the main road, currently represented as rue Félix Eboué, all while preserving the two central blocks for the location of a marketplace.»3

Each block was divided into 12 equal lots. These 16.66 meter by 25 meter lots formed the concessions for building a home and its annex, and the cultivation of a garden. These blocks have retained their original configuration with the exception of the blocks located on either side of the market, which were created from a section of a planted space that was present until 1895. These 12 blocks forming the colonial town follow the same construction strategy as used in the lots.

The main building is always found in line with the street. It sits on a constructible band corresponding to a third of the lot's length, and systematically maintains one or two air corridors along the lateral limits of the lot. The annexes were constructed at the back of the lot to house toilets and the kitchen. These buildings at the back of the lot or on the lateral boundaries also sat on a footprint no larger than one third of the plot's size.

This form of localizing construction on streets and at the back of lots guaranteed the presence of an open space at the block's center, correlating in a courtyard or garden. The size of the courtyard represented a minimum of one third of the lot's total surface area. Rare are those that have preserved their original buildings. Nevertheless, the building localization strategy has been maintained and is still

9. Carnet du Patrimoine de la ville de Saint-Laurent du Maroni n°3 , « Le centre ville de Saint-Laurent du Maroni, un plan en damier», août 2012

clearly visible today. The courtyards located at the block's center, behind the main buildings of these urban concessions, served to house animal pens, as well as chicken coops, or even vegetable gardens.

THE COLONIAL NEIGHBORHOODS

> Administrative District
With its triangular urban layout orientated towards the river, this area represents the well-maintained character of a refined architecture that even includes perforated outer walls. This area combines both administrative buildings and well-maintained and comfortable public spaces, earning Saint-Laurent the nickname «Little Paris.»

> Penal District
Along the banks of the river, this neighborhood is characterized, at first glance, by its huge outer wall that masks a series of virtually identical buildings, which are aligned in a symmetrical manner on either side of the entrance's axis. It matches with the former Transportation Camp. The harmony of this strategy is reflected in the buildings of the hospital which followed this grid pattern in their own parallel version. Apart from its enclosed nature, this neighborhood, which disconnects the city from its banks, has today, found a patrimonial and touristic importance, despite the fact that for a long time these penal structures were seen as wounds yet to be healed on the Guianese territory where they were imposed.

> Colonial District
Constructed along two major perpendicular axes, one towards the church, the other centered on the market, this district forms an orthogonal design clearly oriented towards the area to be studied. Typical Creole architectural styles are found here: little *cases bois* (lit. wooden boxes), modest ground level homes on brick blocks with no more than two rooms and outhouses placed in the backyard; next wooden storied houses with verandahs at the rear, like the Creole-style homes in Cayenne; as well as storied stone houses; and lastly homes with brick ground floors and wooden upper levels. The streets are very wide and the public space has a more sober look to it than that of the administrative district.
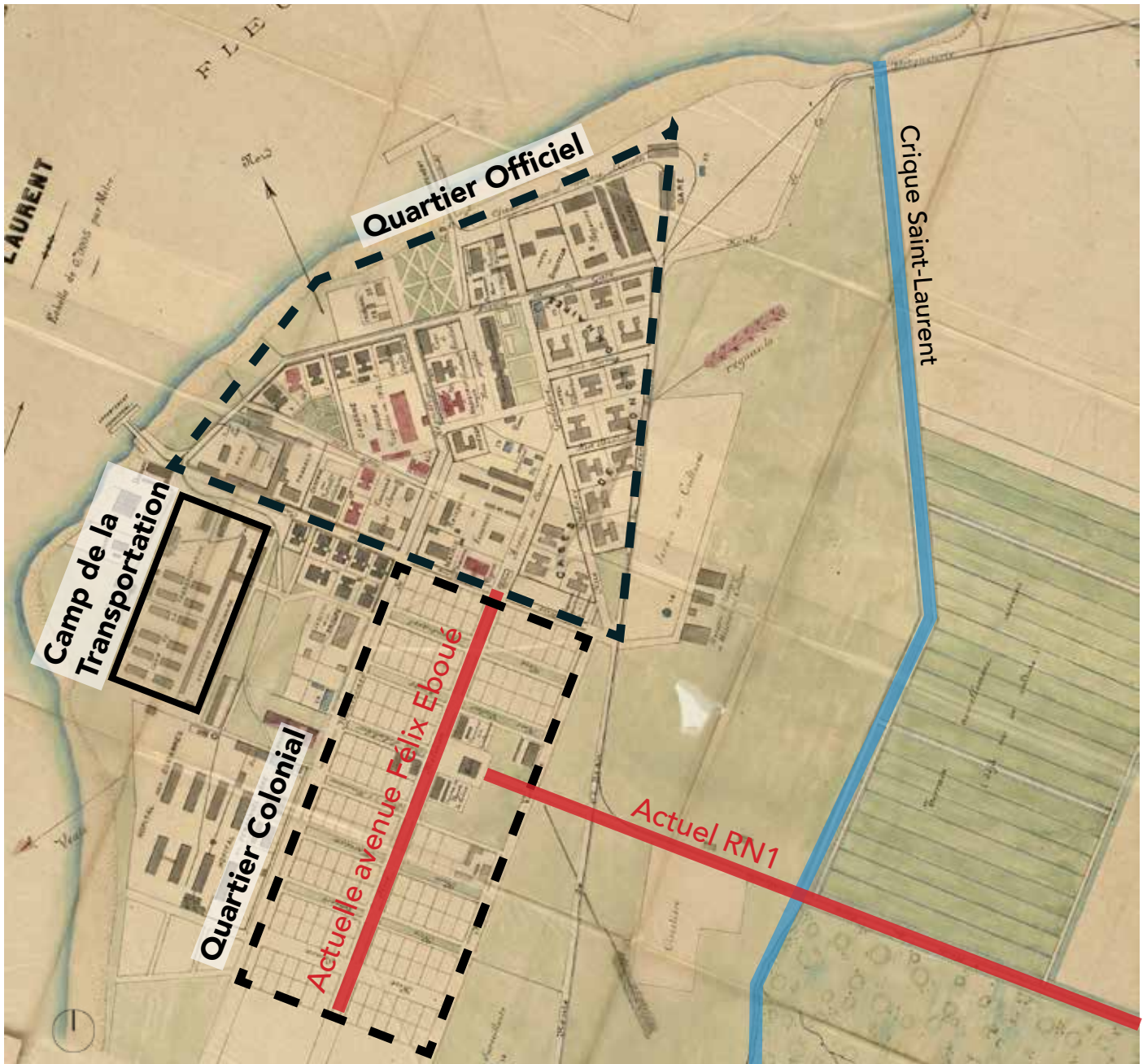
Saint-Laurent city map north directed, circa 1913.Source : AVAP
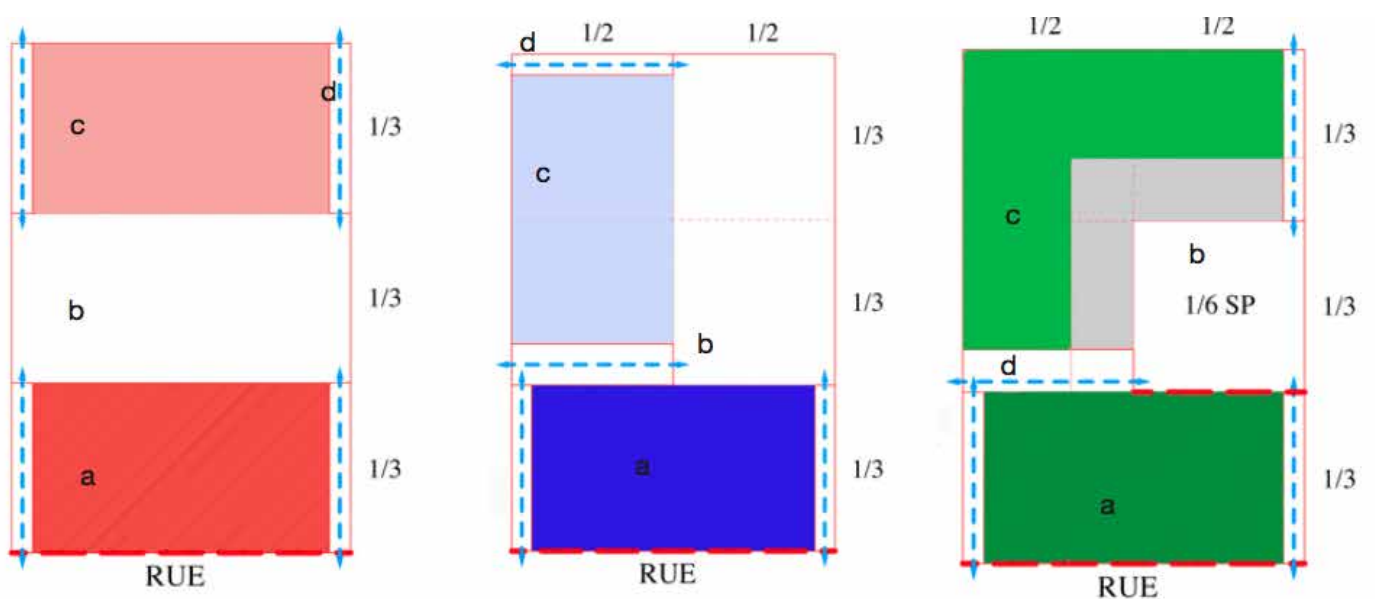
Bloc's structural organization on colonial town. Source : AVAP.

> Saint-Jean Village

The Saint-Jean village, which houses the former Relegation Camp now converted into French Guiana's Régiment du Service Militaire Adapté, has a characteristic architecture that preserves its role behind enclosed outer walls.

> Chinese Village

The Chinese Village neighborhood, called this because it was initially inhabited by former slaves coming from Indochina, quickly became a dynamic neighborhood tied to the gold trade and other activities related to the river, such as the fish market. Today, it is considered an insalubrious neighborhood with problems with drugs and prostitution. There is a ZAC project in this neighborhood that includes the demolition of a full block.

THE NEIGHBORHOODS

Outside of the colonial town and villages, three types of urban developments can be distinguished:
- Social housing programs, linked to RHI and LES programs and tied to the demand for accommodations in the form of housing projects or multi-storied buildings, up to four floors. The programs are carried out depending on land opportunities.
- Overflowing informal settlements, accessible by trails starting from the road network, but hardly seen from the road.
- Individual stand-alone homes
Hence, the various types of housing linked to developers, property owners, etc.

The Charbonnière

The neighborhood gets its name from the wood carbon that was produced there. It is a historic neighborhood for the Maroon community of Saint-Laurent. It is separated from the colonial town by the commercial zone and port. The distance to the city center, the individual houses, and the little streets create a unique atmosphere, that of a village on the river. It is also a very lively neighborhood during the day with a permanent procession of pirogues, but also at night with its bars and night clubs. Two facilities structure the neighborhood: the community center and the funeral hut.

The neighborhood that can be seen today is

the result of the relocation of the Awaa Ondo neighborhood that was located along the banks and the Roche Bleue neighborhood. The houses are self-built constructions, recalling traditional style homes through their triangle shape, but that use, for example, wood shingles as coverings, like Creole-style homes in the Caribbean and French Guiana. The Planning and Development Scheme has attempted to address some of these forms of village organization such as semi-privates spaces that could host semi-collective facilities, like cassava ovens. Each building would be constructed on an individual lot of 200 m2.

The commemorative memorial of the Marronages in the Americas was inaugurated in Charbonnière, following the first Marronage congress. It is a remembrance site at the center of this neighborhood which houses the main community of Saint-Laurent. Thus, the capital of the Maroni is a unique city in the Guiana Shield with its majority Maroon population.

> Flamboyant & Moucaya

These are two housing projects constructed under the program targeting the resorption of slums (RHI) in the neighborhoods of the Charbonnière. The Flamboyant housing project houses residents relocated from Bakaloto, a neighborhood of houses on stilts in the Charbonnière. The Moucaya I and Moucaya II housing projects contain residents relocated from the Awaa Ondo neighborhood.

> The Orchidées

All of the housing units are along the river, adjacent to the Port de l'Ouest. Maroni Palace.

> The Cultures

The railway line which served as the border between the urban area and the market gardens (from which the neighborhood gets its name) became a full-fledged track to the city center. The Cultures housing projects were constructed in three sections: the first section in 1980, the second in 1987, and the third was built in two parts in the 1990s. The Cultures was pushed back to the outskirts of the city, whose boundary is now marked directly by the forest. The Marinas neighborhood was constructed in the early 1990s, to the north of the railway line, along the banks of the Administrative District.
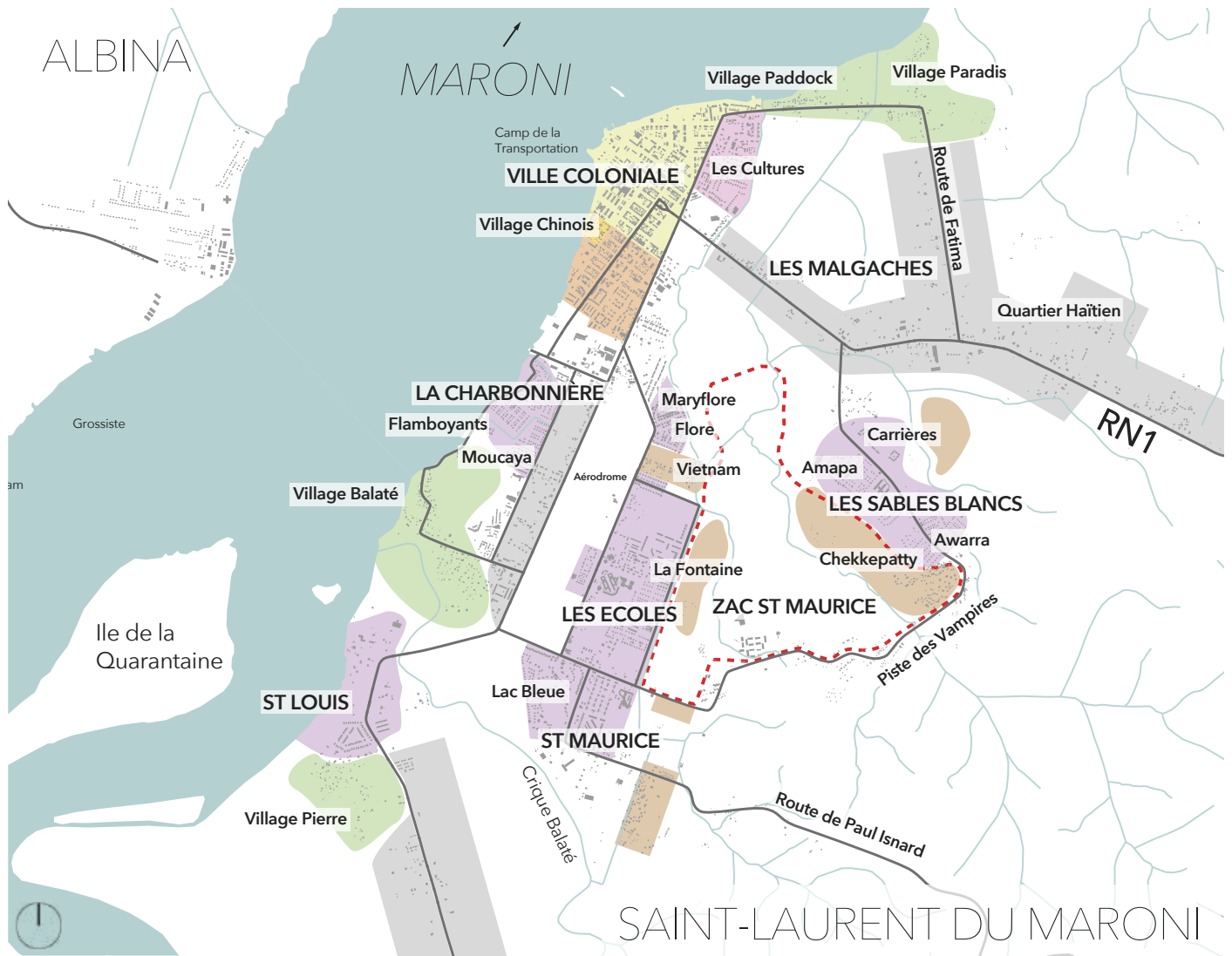
Les quartiers de Saint-Laurent du Maroni, carte non exhaustive. Credits : Ateliers de Cergy

	Historical center		Light urbanization along the roads		Informal area
	Center expansion		Social housing, housing estate		

View from Paul Castaing primary school, and the crane of the view of the new hospital.
Credits : Ateliers de Cergy

> The Malgaches
The Malgaches neighborhood is located in the eastern part of the city, between the RN1 and the Fatima road. It is currently an informal settlement, but there is a French Guiana Public Land Development Institution (EPAG) urban development project for social housing projects and self-built accommodations planned for the area.

> The Fatima road
The Fatima road connects the Paddock village in the north of the center to the RN1. Homes have gradually been built in an opportunistic manner along this route. Between the Fatima road and RN1 is a ZNIEFF, in the flood zone linked to the Vampires creek.

> Flore Maryflore
These are two housing projects along the Saint-Maurice road, bordering the airfield and adjoining the «secured» residence Laurentides.

> Vietnam
This informal neighborhood adjoining the airfield road, between the Ecoles subdivision and the Flore Maryflore housing projects, has existed for 20 years. It was created during the closing of the refugee camp located in the airfield zone, from which came the name Vietnam, a reference to the Interior War in Suriname. Today it is a dense neighborhood with a water fountain, bar, grocery store, and access to a creek.

> Ecoles I, II, III, IV and V
The Ecoles subdivision gets its name from the many educational institutions located in the neighborhood. The Ecoles I subdivision allowed for the relocating of residents of Roche Bleue and Maroni Palace in 1996. Then, the subdivisions and social housing projects Ecoles II, III, and IV were opened, forming today the "Ecoles".

> Jean de la Fontaine
On the other side of the canal, running along rue Jean de la Fontaine, is the informal neighborhood of Jean de La Fontaine (JLF), an overflow from the Ecoles subdivision. It is an expanding neighborhood, soon taking over the leveled areas of the Saint-Maurice ZAC.

Located on low ground, at the level of the creek, inhabitants have constructed small canals and pedestrian crossing.

> Lac Bleu
This is a residential neighborhood organized around an artificial lake and consisting of many house secured by walls.

> AMAPA I and II
Housing programs Amapa I and Amapa II

> The Sables Blancs
The Sables Blancs subdivision houses relocated inhabitants of the «Toto village».

> Chekepatty
An informal neighborhood that is a continuation of the Sables Blancs subdivision.

> The Carrières
Social housing along the Vampires road

> Djakata
Informal neighborhood along the Vampires road

> The Saint-Maurice ZAC
The Saint-Maurice ZAC has been in construction for the last ten years and, in time, should contain around 3,400 housing units. The future neighborhood will serve to connect the Ecoles and Sables Blancs subdivisions by the current Vampires path. However, this large scale urban development project does not provide a sufficient response to Saint-Laurent's population growth and has failed to formulate a comprehensive city project for the capital of the Maroni.

La Glaçière. Credits : Ateliers de Cergy

La Charbonnière. Credits : Ateliers de Cergy

Les Ecoles. Credits : Ateliers de Cergy

La Carrière. Credits : Ateliers de Cergy

House in the center expansion
Credits : Ateliers de Cergy

Informal settlement, Jean de la Fontaine.
Credits : Ateliers de Cergy

Village Chinois. Credits : Ateliers de Cergy

Colonial house. Credits : Ateliers de Cergy

THE VILLAGES

Four indigenous villages and one Bushi Nenge village rest on the banks of the river near the center of Saint-Laurent. The indigenous villages are Paddock (including Paradis and Jérusalem), Pierre, Espérance and Terre-Rouge. The Bushi Nenge village, today taken over by the city, is called Balaté. The villages are run by a traditional chief or *capitaine* (male or female), who is elected by the inhabitants.
For several decades, the traditional ways of life for indigenous and Maroon communities have been disrupted, creating tensions between the different generations. There is a desire to preserve certain traditions and to pass along knowledge and skills, but also the wish to take part in the contemporary world.

Today, two legal instruments exist concerning the occupation of land by indigenous communities: concessions and the ZDUC.

## > The Concession, for living and growing agriculture
Concessions are decided upon through the French Commission of Land Allocations (CAF). They last 10 years, are renewable, and free of charge. They provides land rights in terms of constructions for indigenous communities. For example, if the mayor wishes to construct a public facility on a concession plot, he must obtain authorization from the community's tribal chief. Similarly, it prevents individuals from constructing homes or cultivating agriculture on concession lands without the tribal chief's permission. The tribal chief, or capitaine, along with his village council, exercises the right to accept or reject proposals for new constructions within the village. This right is based on previously established social relations and the new arrival's intentions for future ones. Informal settlements are not found in the concession for the village of Terre-Rouge, as villagers prevent the development of uncontrolled housing.

The Balaté village did not renew its concession with the government. The land was thus handed over to an organization in charge of redistributing the land, which had therefore become private, between members of the community. The president of the organization may not transfer land unless the capitaine is also in agreement, hence current tensions.

Concessions for the villages of Espérance, Pierre, and Terre-Rouge do no extend past the main road of Saint-Jean. In fact, 300 meters along both sides of this road is land allocated to the city hall, where housing projects, individual home constructions and informal settlements can be found.

> Customary Land Use Zone (ZDUC)
This is a zone defined between the government and indigenous communities for traditional forest usage: clearing, gathering, hunting, fishing... The Terre-Rouge, Espérance, and Pierre villages share the same ZDUC, with a surface of 4,315 ha. Several issues arise in regards to the ZDUCs in Saint-Laurent, which are squatted, little used by the villages' younger generations and legally precarious. The ZDUCs, located outside of the urban space when they were created, have now been caught by Saint-Laurent's urban development and find themselves integrated into the urban sprawl. This raises questions about the survival of these spaces in the center of town, subject to an increasingly heightened pressure on their land.
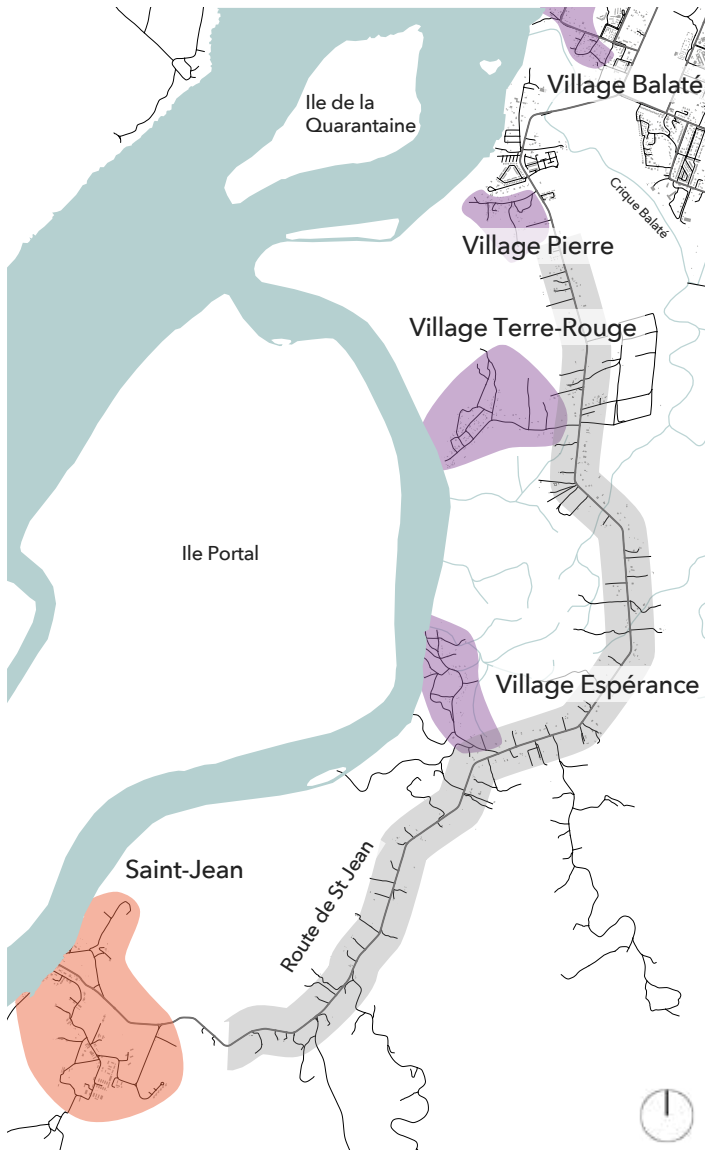
Village on the Saint-Laurent south center.
Credits : Ateliers de Cergy
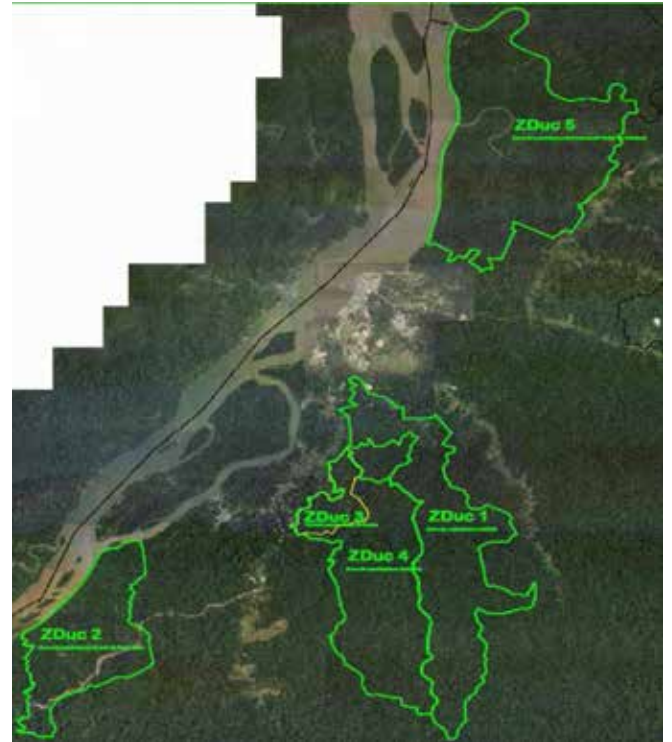
ZDUC area.
Crédits : Ateliers de Cergy

■ Amerindian village

■ Saint-Jean

■ Urbanization along the road.

Paddock viewed from microlight.

THE ALBINA SIDE

Suriname, independent since 1975, is administratively divided into districts, *ressorts* (sectors), and towns. Albina is the capital of the Distrikt Marowijne, in the east of the country. Albina town is the principal city in Ressort Albina, covering between 300 and 400 hectares, with a population density of 10 inhabitants/ha. The city does not have a legal boundary, since cities are not considered administrative entities, but the boundaries would be the Maroni river to the east and the neighborhoods resting on the hills two kilometers to the west. The northern and southern boundaries are those of the two drainage canals leading to the river. Outside of these limits are communal lands.

The center of Albina is composed of several streets with various businesses for clients coming mainly from Saint-Laurent. They are located behind the beaches where the pirogues arrive, perpendicular to the Charbonnière district. The center has a covered market and public facilities, where traces of the Interior War can no longer be seen.

To the north of Albina, there is a park along the river that is run by the indigenous community. A hotel has recently been built along the river nearby. The extension of the main road north of Albina connects four indigenous villages and one Maroon settlement: Marijkedorp (Arawak), Bilokondre (Ndjuka), Pierrekondre (Carib), Tapuku (Carib), and Erowarte (Carib). Between Pierrekondre and Tapuku, there is an area called Bambusi with only a few houses. Pierrekondre extends along the length of airfield in Albina.

To the south of Albina, a road leads to the Arawak Montecreek village four kilometers from the center of Albina. Before Montecreek is the village of Papatam at the 1 km mark. Past the road are numerous small villages running the length of the Maroni. The end of the sector is reached by a 45-minute pirogue ride, marked by an island with the Ndjuak village of Lemkibon on it. Before reaching this limit, there is the village of Bigiston and the Ndjuka villages of Bambusi, Akoloikondre and Onikoikondre. Bigiston is a village at the 3km post with indigenous and Ndjuka populations. It is to the south of Albina were supply shops for inhabitants and gold miners coming from the upper-Maroni are to be found. These activity and business zones are located along the river, allowing for the loading and unloading of goods directly into the pirogues.

To the west of Albina, a road between Albina and Moenga has been open to traffic since 1929. It was at that time that Moengo became an important site of bauxite production and a regional center. In 1964, the road between Moengo and Paramaribo opened, thus making it easier to reach the capital of Suriname from Saint-Laurent du Maroni. This road would lead to the arrival of tourists coming from Paramaribo to Albina in the 1970s.

The eight indigenous villages in the Marowijne district have special land rights governed by the CLIM (Commissie Landrechten Inheemsen beneden Marowijne or Committee for Land Rights of Indigenous People in Lower Marowijne).

Beachage area in Albina.
Credits : Ateliers de Cergy

Albina bank river. Credits : Ateliers de Cergy

Kapplerstraat, Albina. Credits : Ateliers de Cergy

Retail street, with the market on the left, Albina.
Credits : Ateliers de Cergy

Moengo, Paramaribo

River
Shop

«beachage» area

MARONI ➝

Albina viewed from microlight, 2016. Credits : Antoine Daublain.

THE TERRITORY OF THE MARONI

> The lower-Maroni

Awala-Yalimapo is the smallest commune in French Guiana. It was established as an official commune in December 1988 through its detachment from the commune of Mana. The commune is composed of three major residential zones: the large towns of Kunawayalé, Awala and Yalimapo, the village of Ayawandé along the Coswine creek, and the Charvein zone along the départemental road linking Mana to Saint-Laurent du Maroni. The population consists mainly of Kalina indigenous people. Access remains by the 22 km départemental road RD22. Awala-Yalimapo is located in the northwest, facing the Atlantic Ocean, at the confluence of two rivers: the Mana and the Maroni. The commune is known for its rich natural heritage, especially for the thousands of sea turtles that come to lay their eggs on the beach in Yalimapo.

Mana was founded by Mother Anne-Marie Javouhey in the early 19th century. The city of Mana is bordered to the west by the communes of Saint-Laurent du Maroni and Awala-Yalimapo, to the east by Iracoubo and Saint-Eli, and to the south by the commune of Saül. The commune is composed of two trading centers: the main town and the village of Javouhey. The village of Charvein is also an important residential zone. The population consists of various populations (Creole, Hmong, indigenous, Bushi Nenge, etc...). Access remains by the two départemental roads, the R8 and R9. Mana is part of the Regional Natural Park of French Guiana.

Apatou became an official commune in 1976. Prior to this, it was attached to the communes of Papaïchton and Grand-Santi. The commune is composed of three main towns: Patience, Maïman and Apatou. The population mainly consists of Bushi Nenges. Access remains by way of the river and, as of late, by a 35 km-road linking it to the commune of Saint-Laurent. Apatou is the gateway to the Maroni river, near the Hermina rapids.

> The upper-Maroni

The commune of Grand-Santi was created after splitting from Papaïchton. The commune mainly consists of Ndjuka indigenous people and is composed of various small villages: Gaa, Grand Citron, Ana Kondé, Apagui, and Monfina. The commune can only be reached by air or by the river. While Montagne Kotika (730 m) and the Montagnes Françaises remain highlights, the commune of Grand-Santi continues to be discrete and isolated. In order to gradually open up the area, the CCOG is currently leading a project aimed at ending its digital isolation.

Maripasoula became an official commune in 1969, during the dissolution of the Inini territory. It is one of France's largest communes in terms of its surface area. The commune is composed of the main town and various villages upstream and downriver. The population of Maripasoula consists of several groups. The Wayana indigenous people live mainly in the upper-Maroni, in the villages of Elahé, Kayodé, Twenke, Taluhen, Antecum Pata and Pidima. While the Bushi Nenge population lives in the main town and upstream (Nouveau Wacapou, Abdhala..). Access remains by way of the river (2 days) and by air through regular flights departing from Cayenne or Saint-Laurent du Maroni.

Papaïchton is administratively detached from Grand-Santi. Since December 1992, Papaïchton has become an official commune. It is composed of the villages of Assissi, Loca and Boniville. The population consists of Bushi Nengue communities, in particular the Boni. In the last several years new populations have come to settle on the communal land. Access remains by way of the river. The commune of Papaïchton is part of the Guiana Amazonian Park.

Map labels:

Galibi
Awala-Yalimapo
Albina
Saint-Laurent du Maroni
Apatou
Stoelman
Grand-Santi
Boniville
Papaichton
Albina 2
Maripasoula
Antecume Pata

Apatou. Credits : Guyalex

Grand Santi. Credits : Camille et Tayfun

Saint-Laurent du Maroni | Apatou | Stoelman | Grand Santi | Papaichton | Maripasoula | Taluen

Boniville | Loka | Nouveau Wakapou

Population totale Maroni : 69 125 habitants
nb habitants

St Laurent	Apatou	Grand Santi	Papaichton	Maripasoula
40 0000	7000	6000	6100	10 025
120 000	11 000	9500	7600	16 900
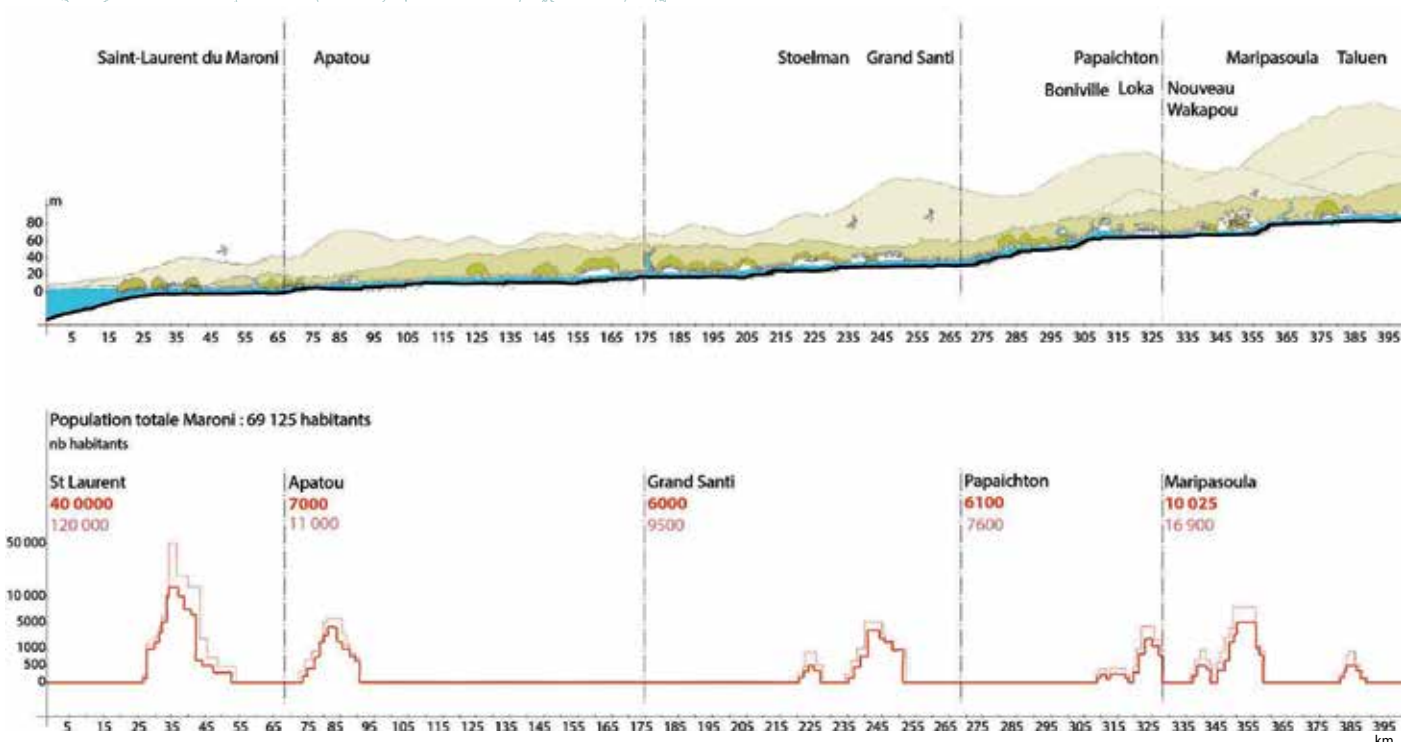
Longitudinal section of the Maroni.Credits : 2016, ENSA Marne-la-Vallée, DSA et DPEA

CONCLUSION

In summary, the great heterogeneity of Saint-Laurent's urban fabric presents itself as a succession of urban, cultural, and social histories. The proliferation of land occupations, as diverse as they are, illustrate two trends. The first trend rests in the huge appeal of the commune of Saint-Laurent, where the evolution of urban sprawl demonstrates a highly robust growth. The other trend is tied to the adaptability of the territory to the needs of its population. This adaptability has its limits in terms of the capacity for urban development. But it also demonstrates the collective intelligence at work in this territory.

4. Territorial stakeholders and actions areas

The Collectivité Territoriale of French Guiana includes four Public Institutions for Inter-communal Cooperation (EPCI): the Community of Communes in Eastern French Guiana (CCEG), the Urban Conglomeration of the Coastal Center (CACL), the Community of Communes of the Savannas (CCDS) and the Community of Communes of Western French Guiana (CCOG). In addition to these four EPCIs, French Guiana is divided into twenty-two administrative communes. One of the principal obstacles in the equitable development of French Guiana's territory is the poor plasticity or adaptability of French law in regards to local features. Local administrators should find a balance between a centralized French Republican model and the preservation of local particularities that make up the richness of the territory.

CITY HALL OF SAINT-LAURENT DU MARONI

In 2016, the population was estimated to be greater than 50,000 (based on figures from the 2012 INSEE). Censuses are difficult in light of unregulated populations, squatter settlements, and non-declared births. The «official» (census-based) population affects the financial support provided by the French government, the Collectivité and Europe, which have led to a deficit in terms of public facilities and infrastructure. The administrative boundaries of the commune of Saint-Laurent are:
- in the northwest, defined by the Maroni river, which marks the border with Suriname
- in the north, defined by the Vache creek
- in the south, defined by the Sparouine creek, a tributary of the Maroni, which establishes the inter-communal boundaries with Apatou and the commune of Grand-Santi (Dékou-Dékou mountain range)
- in the east, defined by the inter-communal boundary with Mana, formed by the Acarouany, a tributary of the Mana, close to 100 kilometers long

The bordering communes are Mana, Grand-Santi, and Apatou. Saint-Laurent extends across a vast territory of close to 483,000 hectares (4,830 km2). Léon Bertrand has been mayor since 1982 and is currently serving his last term. He was a member of the French National Assembly as a representative for French Guiana and a minister of tourism. Since the beginning, his term has been marked by an «urgent» management of the population following the massive reception of Surinamese refugees. There is a lack of expertise and engineering within city hall to be able to meet the demands of the urban development through a new strategy of anticipating new development situations. As well, the shortfall in tax revenue, tied to the unregulated nature of the economy and informal settlements, deprive the city of many resources, reducing its capacities as a financial backer. Finally, the figures provided by INSEE, concerning the general census of the population, are outdated and do not take into account the evolution of the urban fabric.

FRENCH GOVERNMENT

The prefect, representing the French government, plays, within this new plan of territorial reform, a central role in inter-ministerial coordination by overseeing the implementation of public polices. The prefecture is located in Cayenne, and the sub-prefecture in Saint-Laurent du Maroni. Six main agencies stem from the prefecture: The Agency for Environment, Development, and Housing (DEAL), the Sea Agency (DM), the Agency for Food, Agriculture, and Forestry (DAAF), the Agency for Youth, Sports, and Social Cohesion (DJSCS), the Agency for Businesses, Competition, Consumption, Work, and Employment (DIECCTE), and finally, the Agency for Cultural Affairs (DAC).

CTG

French Guiana as a new Collectivité Territoriale Unique has been in existence since January 1, 2016. It is the result of the merger between the Regional and General Councils, intended to make regional authorities more efficient and to limit exterior and jurisdictional conflicts. The CTG's jurisdiction includes: land development for the territory, the construction and

maintenance of roads and airfields, school and intercity transportation, de-isolation, economic development, management of European funds, regional cooperation, sustainable development, as well as overseeing social, childhood, health and prevention, research and innovation, education (middle schools and high schools, professional and technical training, and higher learning), culture, sport, and lastly heritage sectors.

CCOG

The Community of Communes of Western French Guiana is one of French Guiana's four inter-communal cooperation institutions. It covers eight communes and represents half of the western territory of French Guiana, in terms of inter-communal territories. The CCOG's headquarters is located in Mana, forty kilometers from Saint-Laurent.
The CCOG responds to requests by commune members regarding specific needs. It has an in-house engineer allowing it to be a contracting authority and to apply for financial grants from different programs run by the European Union, French government, and region.
This inter-communal cooperation includes the urban areas of Apatou, Awala-Yalimapo, Grand-Santi, Mana, Maripasoula, Papaïchton, Saint-Laurent du Maroni and Saül.
Its jurisdiction covers:
- Economic development. Example: the construction of an industrial manufacturing center.
- Installation of electricity in rural areas. Example: the enhanced development of the power plant in Saül.
- Waste management. Example: pre-collection, collection, storage, and treatment of waste.
- Port de l'Ouest consists of the commercial port, the international docking zone and the pirogue docking station. The management and development of the commercial port is entrusted to the Société d'Economie Mixte Local (private-public partnership firm) of the Port de l'Ouest.
- The implementation of the European program LEADER 2014-2020, aimed at supporting project leaders in rural zones.

THE SURINAMESE SIDE

Suriname has been organized into 10 districts since the 1980s. District commissioners are appointed by the government. The districts are divided into 63 ressorts, and some cities have municipality statuses. Albina is located in the district of Marowijne and in the ressort of Albina. The other ressorts of the district are: Moengo, Wanhatti, Galibi, Moengo Tapoe and Patamacca.

CROSS-BORDER COOPERATION

French Guiana is not a sovereign state, thus preventing it from establishing cross-border cooperation agreements. Nevertheless, the CCOG has introduced a cross-border project, supported by the MOT (Mission Opérationnelle Transfrontalière), to determine which items should drive the cooperation. The MOT operates in the cross-border area of the Maroni at the behest of the CCOG and city hall, as a consultant and support system in developing tools of governance and cross-border collaboration. The River Council is another tool of cross-border cooperation. It was created during the meeting of the first France-Suriname joint committee in 2009. The River Council is a discussion space between local actors from the two sides of the Maroni.

5. HABITAT

DIVERSITY OF HABITATION PATTERNS

Between official and squatter settlements, between Bushi Nenge and indigenous habitats, between the architectural heritage of the city center and that of the subdivisions, Saint-Laurent offers an wide variety of urban settings and just as many ways to inhabit them. «Habitation patterns» do not only reflect a residential dimension. This notion takes in to account the relationships between individuals and the territory. Habitation patterns examine the links between individuals, their homes, and their relationships to spaces that are expressed by their residential approach. Among the wide variety of habitation patterns, squatter homes represent one of the elements. Squatter homes are not only reserved for fragile populations, they also concern households with incomes, formal or informal, who are not able to access either the social rental market or the market aimed at homeownership. These different populations diversify the landscape and form spontaneous neighborhoods. From huts to villas, squatter settlements disrupt, in numerous ways, the traditional ideas of shantytowns.

> Squatter? Unofficial? Illegal?
The term squatter home is associated, often with confusion, as unofficial, illegal, and unsanitary.

In objective terms, a squatter home is defined as the constructing on or living in an available physical setting without right or permission. It is an unofficial way of producing housing, based on the notion of self-building. This unofficial nature puts into question the development of housing in the city, planned and governed by a legal system (property, construction permits, etc.). The existence of squatter neighborhoods and their organization reveal individual and collective initiatives and rely on a vernacular of know-how. This vernacular of know-how questions the expertise of development planning.

The word unofficial designates an act or spatial reality that is freed of official constraints.

Illicit and illegal mean that it is prohibited by law. Though illicit or illegal may reference a nature of being unofficial, all things unofficial are not illegal nor considered reprehensible by law. Finally, within these development strategies, surrounding the issue of squatter settlements, property standardization and public facilities and amenities will go hand in hand.

Today, government services need to respond to four major issues:
- The insufficiency in housing construction
- The discrepancy between supply and demand
- The significant amount of substandard housing
- The continually growing number of illegal or squatter settlements

POPULATION & HABITAT IN FRENCH GUIANA

Among the noticeable features of French Guiana's housing market, compared to that of Metropolitan France, is the smaller share of homeowners, a similar share of renters, and a three-times-greater share of occupants living free of charge, with 60% of social housing built after 1990.

The supply of social housing is allocated between three housing authorities: the SIGUY, SIMKO and SEMSAMAR. Collective housing represents two thirds of the housing market. While three- or four-room lodgings represent 65% of the housing units produced, families with multiple children have difficulties accessing the social housing market, in the sense that rents are too high and the style of living is poorly adapted to their needs. The demand for social housing is continually on the rise. The SIGUY of western French Guiana notes that 90% of applicants fall under the status of Very Low Income Housing.

The private housing market is accessible only to the upper class, especially in Cayenne and Kourou, where weak demand continues to push

St Maurice I and II residential area from Paul Castaing avenue. Credits : Ateliers de Cergy

Single house in the informal South Chekepatty. Credits : Ateliers de Cergy

Residential housing along Marne avenue. Credits : Ateliers de Cergy

prices higher.
The average budget of candidates for home ownership is situated between 150,000 € and 200,000 €. Although lower than the price of the property market, this still remains reserved for a small comfortable minority. It is also necessary to add the high costs of lots open to construction. Finally, the high demand for individual housing continues, even while the supply is centered on collective or grouped individual units.

The young are now directing their attention towards collective housing, even home ownership. Is this a change in mentality or does it illustrate the difficulty in purchasing a home at a reasonable price?
The homeownership market for individual properties is divided between:
- a classic market for stable, high incomes
- an unofficial market with limited financing capacities (100,000€ au maximum)

In Saint-Laurent, 80% of the rental market is predominately designated for public servants. New construction is in a constant state of catch-up. Needs for the period of 2005-2011 were assessed to be 3,000 housing units per year.[10]

> **Housing financed by the government**
Social housing authorities have a theoretical capacity of producing around 2,000 housing units per year, if there is not a shortage in developable land. Within this number, it can be observed that there is a low production of Very Low Income Housing despite the high number of eligible households.
The production of Low Income Housing is significant in volume and stable in its number. But a slight decrease occurs in favor of Social Rent Loan (PLS) housing. The production of PLS housing helps to balance operational accounts of housing authorities.

As for the question of progressive social housing, though in decline, it can better meet local demand. Finally, it can be noted that there is a low usage of the zero-interest loans for first time homebuyers, reflecting the lack of offerings for first time buyers and the difficulties in obtaining bank loans.

10. DEAL Guyane, Quelle production de logements pour la Guyane ? Objectifs qualitatifs et quantitatifs, 2011-2017, par Urbanis

> **Informal settlements as a response to the lack in housing**
Unofficial housing concerns as much occupying lands without permission as the illegal renting of social housing. Self-built homes are large and more consistent with the size of households. Sixty percent of self-built homes have 4 rooms, if not more. The response by the government is expressed through programs targeting the resorption of slums (RHI) and standardization, especially in large areas of unofficial housing. The Lechtimy report in 2011 stressed the existence of slums and methods for their resorption.

The objectives aimed at providing basic services to the ares through the installation of networks and by organizing roadways, allow families to remain in the same place and maintain their existing social fabric. The Local Plan of Urban Development aims to identify the most insalubrious sectors in order to launch relocation programs. However, the technical aspects of this report fail to fully take into account the economic and social aspects of these RHI programs.

In 2010, on the scale of French Guiana, 10,686 homes on 69 identified sites were targeted by an RHI program; 32,956 people were affected. The sites currently being targeted, which are mainly located in Matoury (73.5%), represent 4,650 homes. In light of the census and scheduled programs, the next RHIs will mainly take place in the CCCL (especially in Cayenne) and in the CCOG. The standardization and resorption of slums is a real necessity. These measures must support efforts to develop and support a supply that corresponds to the means and needs of the population, to better contain the unofficial housing market.

In Saint-Laurent du Maroni, in addition to RHI and standardization programs, city hall hopes to experiment with new systems of production in order to respond to the increasing demands. For example, the Saint-Maurice ZAC should deliver 2,500 housing units by 2017. Other new programs are also in progress and concern 600 housing units. Finally the construction of detached individual units will allow for the creation of 1,600 homes. Between 3,500 and
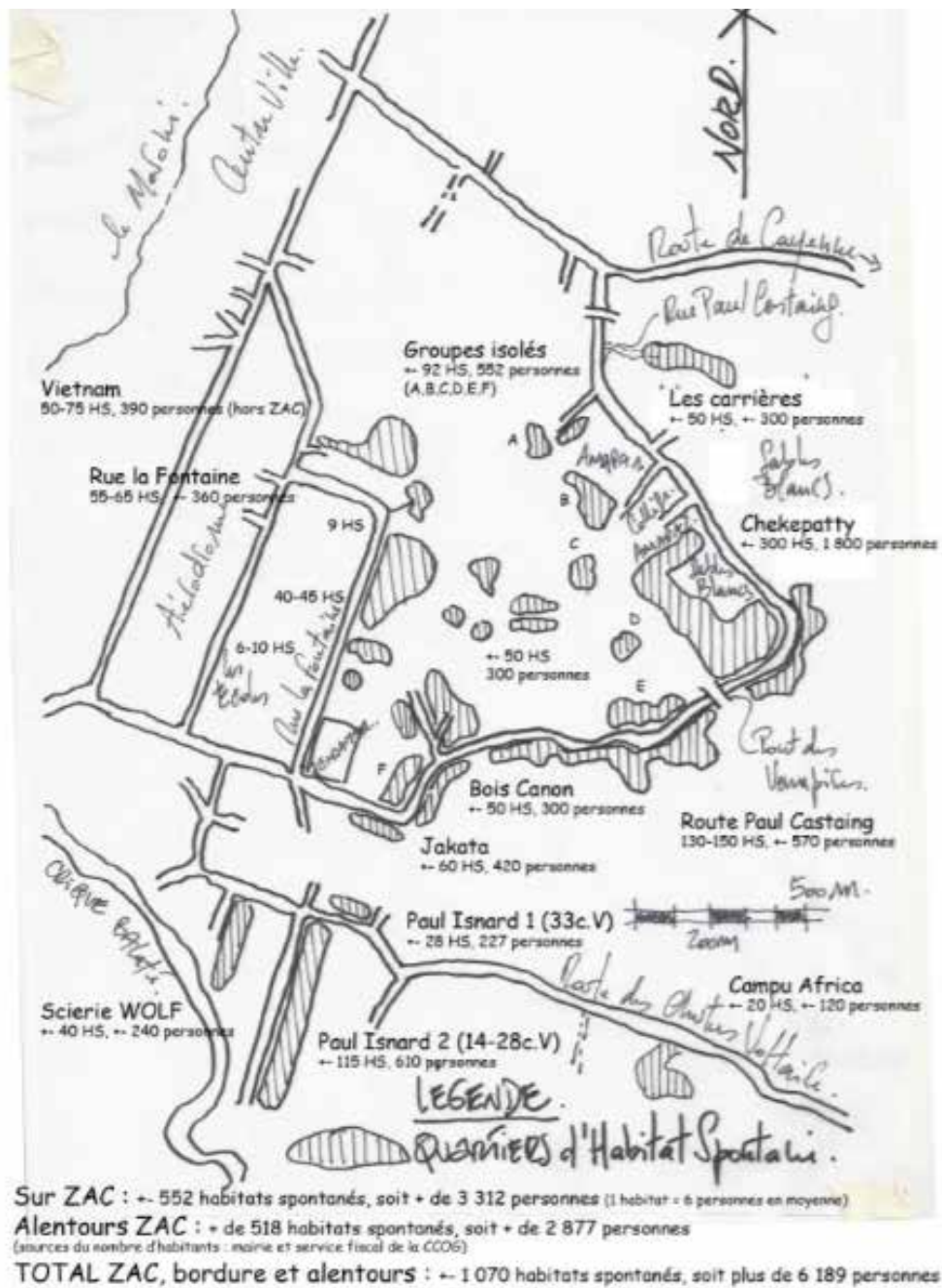
Spotting informal housing. Credits : GRET, 2011

construction : environ 5000€ en 1 mois

équipements & services urbains

Carrelage
Sol

Tôle metallique
Toit

Bois
*Ossature
et platelage*

Parpaing
Base et fondation

Sable
Ciment

Réservoir
d'eau pluviale
Eau potable

Raccordement
au reseau electrique

Boîte aux lettres
sur rue
Domiciliation

Bouteille de gaz
Cuisine

Parabole
Télévision
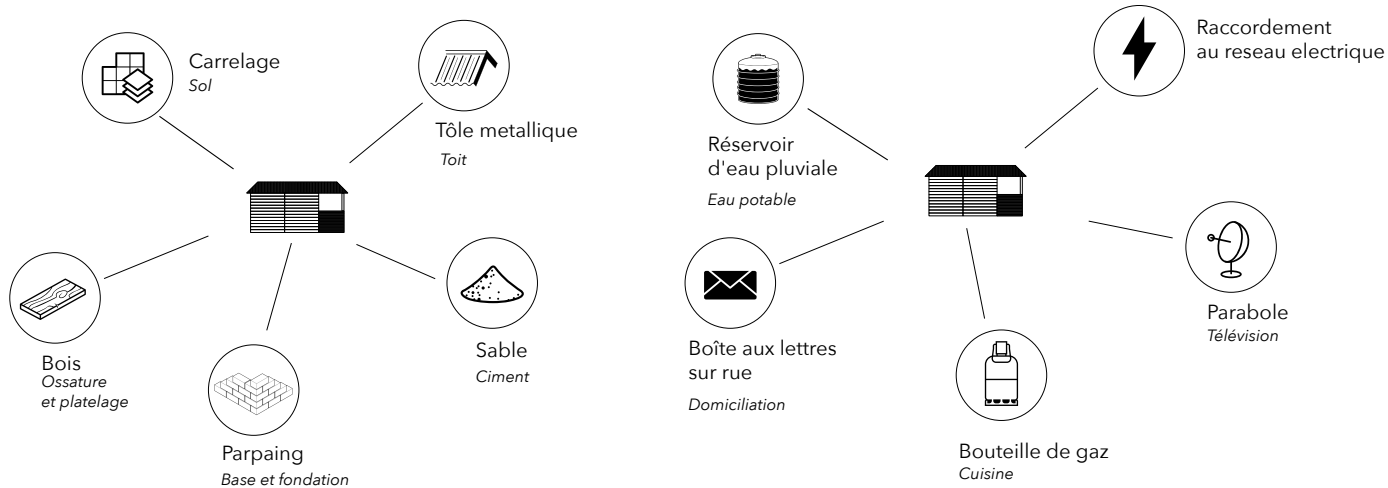
Materials and facilities of a self-build home. Credits : Ateliers de Cergy

4,500 housing units will be produced through identified projects. A qualitative analysis of the housing demand and needs also illuminates the current impasse.

> **Social situations of households and their needs**

According to INSEE, in 2008, 35.7% of heads of households were laborers and 25.1% were unemployed. These low incomes limit the ability for homeownership, but also eligibility for social housing.

The overall income level for French Guiana's tax households is one of the lowest in France (14,944 € per year), with 72.4% of tax households below the taxable limit.[8] Government transfers place a quota on the social trajectory of housing. According to a 2006 study on houseful incomes, more than 60% of households in French Guiana (first three quintiles) live relying on social benefits, which represent 40% to 90% of their income. Upon closer examination of CAF [household and child] benefits, it can be seen that there is a much higher share of aid for individuals in relation to housing assistance. Explanation: many multi-person households live in illegal housing. For two thirds of beneficiaries, these benefits represent more than half of their income.

But social housing only plays a partial role for households of modest income. The proportion of property owners is higher among households below the poverty threshold (42% compared to 36%). Conversely, the proportion of households lodged in the social housing market is higher for households above the poverty threshold. This redistribution is specific to French Guiana and not found in the rest of the Caribbean. The lack of rental housing for very low incomes (LLTS) and the bias (prefectural quota, beneficiaries of the 1% of housing...) towards reserving social housing (LLS) for populations who do not regularly have access (public servants, military personnel...) explains a part of this phenomenon. It is especially striking in the two border cities.

Therefore, only 36% of households above the poverty threshold are property owners in French Guiana, while in the Caribbean it is close to 60%. Inversely, 30% among them live in the social rental market (around 20% in the Caribbean).

Surveys of inhabitants done in informal settlements carry several conclusions. Firstly, traditional ways of living need to be taken into account in the projects for indigenous and Bushi Nenge populations. But it also important to recognize their rapid evolutions. Some of the inhabitants living in informal settlements have expertise in construction. The sites of informal settlements host economic activity. The tension within the housing market brings about cohabitations that are more endured rather than chosen in both informal settlements and the social housing market. A portion of inhabitants within the social housing market aspire to becoming property owners and sometimes possess certain means.

A synthesis of the housing market in French Guiana

The lack of legal housing production generates tensions within the market. The nature of the supply determines the classification of different housing markets:

- The illegal housing market is an alternative for those who cannot access legal offerings. Income origin, level, and regularity characterize this section. There is also the importance of the geographic situation and cultural practices. Also, some illegal settlements have a certain level of standing. The largest production of progressive social housing (LES) seems to be an alternative for the illegal housing market.

- The social rental market is aimed at households with a stable financial situation and fixed salary. Unfortunately the production of social housing is insufficient. The result is a poor rotation of existing housing. The occupants whose social criteria is above the authorized threshold prefer to remain in the social housing market.

- The private rental market. This market is aimed at those with a more comfortable economic situation, whose salaries are higher than the average. These households are actually eligible to qualify for zero-interest loans, albeit rarely used. A low rate of homeownership can be seen as supply is not sufficient, hence the presence of these households in the private rental market.

- Homeownership is no longer an objective for many households and a real estate challenge for the commune.

LIST OF HABITATION TYPES

Different typologies of habitations can be distinguished in Saint-Laurent.

City center:
- Concessions
- Town houses
- Houses with verandahs
- Modern buildings
- Ground level semi-detached homes
- Upper level semi-detached homes
- Administrative buildings with colonial architecture

City:
- Secured residences
- Secured homes

Squatter habitations, in:
- Dense suburban areas
- Suburban areas with sparse pockets of density
- Dense urban areas
- Isolated rural areas
- Urban backyards/courtyards

Social housing:
- Two- to four-story buildings
- Homes for homebuyers or completion by buyers
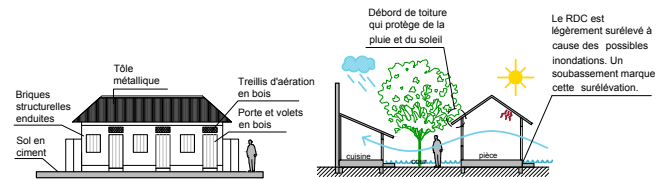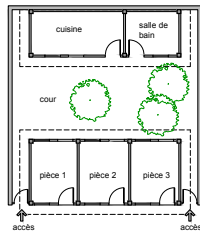
Concessionary home, Saint-Laurent. Credits : 2016, ENSA Marne-la-Vallée, DSA et DPEA
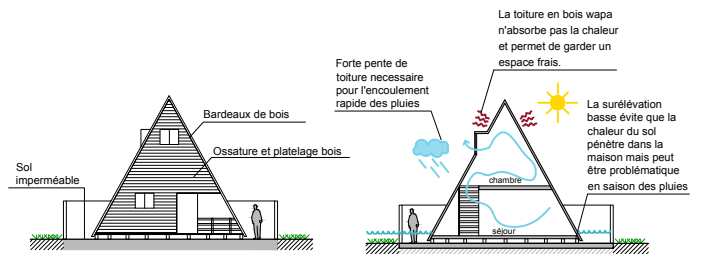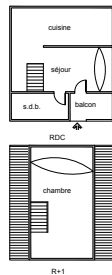
Charbonnière's housing, RHI operations, Saint-Laurent. Credits : 2016, ENSA Marne-la-Vallée, DSA et DPEA
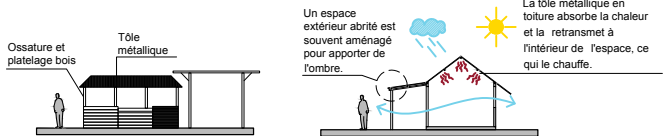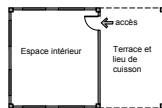
Informal housing along RN1. Credits : 2016, ENSA Marne-la-Vallée, DSA et DPEA
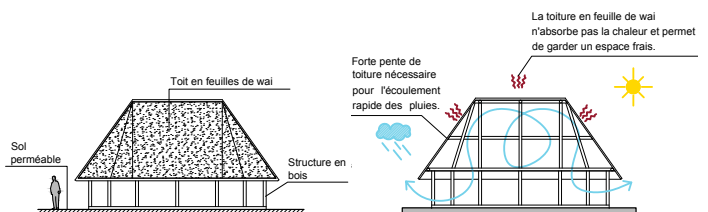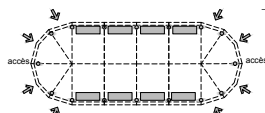
Carbet, traditional housing, Saint-Laurent. Credits : 2016, ENSA Marne-la-Vallée, DSA et DPEA

6. OPEN SPACES AND THE RELATION TO THE RIVER

«The city is by its very nature a site of optimizing interactions; but it is also a place of separation. An appealing city, which is developing, and a place where one feels good, is a structured territory where individuals meet and exchange. The question of urban intensity and meeting is essential.»[12] *Luc Gwiazdzinski.*

WHAT ARE THE SPACES AND AMENITIES OF TODAY?

In Saint-Laurent, the principal urban open spaces are located along the banks of the Maroni. These are areas of exchange and mobility, but also of diverse usages depending on their placement and temporality. The only official public spaces are located in the colonial town with the market area and the different poorly equipped gardens and squares. In the new neighborhoods, amenities are mainly associated with educational institutions, sports facilities, and neighborhood grocery stores depending on the different times of the day. In the neighborhoods of informal settlements, sites of centrality can also be found through, for example, the soccer/football field and the church in the Haitian neighborhood of the Malagaches district. In the case of indigenous villages, there are no enclosures between the different settlements; the spatial organization here is different. The areas are open, leaving space for multiple usages and the development of sociability between inhabitants. On the Albina side, the same usages can be found along the river's banks, tied to trade and business. Urban development is done on the forest. It is a daily battle to contain it, yet also makes it enjoyable and viable. Controlling it illustrates the permanent pressure on land use developments still to be conceived: benefiting from the natural setting while also streamlining its use. In addition, outdoor areas are subject to weather conditions such as the rainy season or heat waves during the dry season. In terms of usage, this translates into empty outdoor spaces between the hours of 1pm and 3pm, when the sun is at its zenith. On the contrary, when the sun sets around 6pm, the open spaces become lively.

> Central gathering areas

The Place de la Mutualité, with the market building at its center, can be considered the core of the city. Two times per week, Wednesday and Saturday, the market is held around the building. The interior is a large space for dining, but also a traversable public space. Its location between avenue Felix Eboué and in the axis of the RN1, position this square as the center of the roadway network. It is also the main site of encounters, where people from all of the area's populations come and rub shoulders through its numerous usages, such as the food trucks on site every night of the week. In addition, the parking lot is only rarely used for parking. It is an area made lively by drivers, used as much as drive-in offices as for small urban fairs.

The avenue Félix Eboué, a historic axis, is a thoroughfare where various businesses are located, from the church up to the boundary of the city center's extension – the port. As such, businesses have made the area an appealing meeting space and promenade for residents. The significant number of pedestrians, low vehicle circulation, and great elasticity in the use of the roadways makes this urban section enjoyable and favorable to the multimode nature of movements.

Along the river in the Charbonnière, Glacière and Chinese Village districts are central gathering areas for the neighborhoods where the relationship to the river is strong. The Charbonnière is the central gathering area in the evenings, with its numerous bars and night clubs.

> The banks of the Maroni river

The city of Saint-Laurent is intimately tied to the Maroni. The various areas along the river have led to different relationships with it depending on history. The banks of the Maroni are very popular for different uses depending on their placement and temporality. The shores, undervalued, allow for open use with adaptable

12. Document sujet Europan 12, «La ville adaptable, insérer les rythmes urbains», 2013.

pontes des tortues marines

Les Tréteaux du Maroni

Fête de la Musique

Festival de cinéma
America Molo Man

Semaine du goût
et des saveurs

Fête National

Les Journées de la
culture Bushinengué

Pirogues musicales

Fête Patronale de
Saint-Laurent

Commemoration
de l'abolition
de l'esclavage

Marché artisanal
de Noël

*VACANCES
SCOLAIRES*

CARNAVAL

SAISON DES PLUIES

janvier   février   mars   avril   mai   juin   juillet   août   septembre   octobre   novembre   décembre

Saint-Laurent du Maroni events. Credits : Ateliers de Cergy

Général de Gaulle Square. Credits : Ateliers de Cergy

Open space at the north of the airfield. Credits : Ateliers de Cergy

spaces for all. The river landscape leaves room for the sublime in the daily lives of inhabitants through the pirogue crossings and changing colors throughout the day. The river through its width and tides creates a giant landscape with the distant horizon of Suriname. The Maroni is also a culturally historic landscape, recalling the memory of the Maroons, for example.

The landscape and urban environments vary along the banks of Saint-Laurent. Starting from the north of the commune, one finds:
- the Paddock village
- the urban beach of the Marinas neighborhood
- the former train station, a vestige of the old railway, which is now no more than a metal structure
- the sub-prefecture building, formerly the home of the Penitentiary Director
- the Place de la République, with the remains of the Transportation Camp's landing dock
- the public swimming pool and sailing club
- the park in front of the tourism office, with a view of the Edith shipwreck
- the Roche Bleue, behind the walls of the Transportation Camp. It was occupied by the Maroon population and was the former village of Toto. Today, it is an open space – cultivated, calm, isolated – where music festivals are held.
- the path running along the walls of the CHOG
- the banks of the Chinese Village with a dégrad (rudimentary river port) and fish market
- the former location of Maroni Palace
- the dégrad of the Glacière district, one of the main docking stations for pirogues
- the Port de l'Ouest, the official port, which creates a break in the continuity of the riverbank
- the Charbonnière, with a «beaching» zone for the pirogues
- the village of Balaté
- the Saint-Louis neighborhood
- the indigenous villages of Pierre, Terre-Rouge and Espérance
- the village of Saint Jean

> Parks and Squares of the Colonial District
The founders of the city of Saint-Laurent designed the gardens and squares of the colonial district: _the Place de la République along the river was once a promenade with a French-style garden and pontoon. Today, it is an empty piece of land which, each year, hosts the

Fête Patronale, the city's communal event with a variety of festivities that bring out the entire population of Saint-Laurent. During the year, two food trucks set up at noon to serve lunch. The square is surrounded by administrative buildings representing architectural heritage.
- The Place de Prével appeared in the plans of 1896. This landscaped space accentuated the separation between the «village» (characterized by its dense facade, where the newly freed population and traders mixed) and the more open administrative district that housed the Administration Pénitentiaire. This distance between the two districts was therefore reflected spatially.
- The Robert Vignon square is a green space which rests upon a meter-high foundation. Today, the Transportation Camp has become an open space housing various cultural institutions. It is consequently a calm space, thanks to the surrounding walls, which could be considered as an urban park.

> Relationships to nature
On the weekends, some residents relax along the banks of the creeks or on their cleared lands, enjoying the forest as well. As such, there are numerous organizations for the protection of the environment or the promotion of unique experiences in the setting of a forest still considered virgin. This touristic and economic potential, enormous through its size and likely developments, nevertheless hides a daily reality that makes for one of the most complex features of the Saint-Laurent du Maroni commune. The relationship with nature - urbanity is negotiated day after day at every level of society, whether it be that of residents, new arrivals or those long established, or that of the authorities charged with preserving a balance between natural and built environments, for the well being of the commune and its inhabitants. Here, nature is considered on the one hand as a resource, but also a constraint with which it is necessary to compromise daily. The recreational relationship with nature is still developing in its usages. The natural environment is also the dump site for waste, whose treatment systems are currently being developed.

Facing the urban extension, can the invasive aspect of the relationship with nature still be avoided? Although it covers virtually all of the

International workshop of urban planning in French Guiana

territory of Saint-Laurent, it must also host a widespread and rapid urban development with sometimes harmful consequences such as water pollution.
Various items make up this relationship with nature, among which include:
- natural vs. cultivated spaces vs. urban spaces
- water and resource management
- biological corridors and nature within the city
- topography, geology, hydrography, climate
- local systems for urban agriculture
- pollution and pollutants

CHALLENGES OF OPEN SPACES

The main public open spaces are either located in the colonial district or along the Maroni. The potential for transforming or appropriating the spaces along the river is important in terms of connecting the different neighborhoods around the city and for increasing the quality of life for the residents of Saint-Laurent. In addition, there is a lack of quality spaces in the new neighborhoods and a real urban park does not exist, nor a real connection with the forest for developing a relationship with nature. Herein lies the reason for examining the conception of open spaces yet to be developed. What continuities between public spaces and the different neighborhoods can be envisioned? How can more links to the surrounding forest be developed? What kinds of programs and designs can be organized within the open spaces? How can urban development policies be used in the management of public spaces?
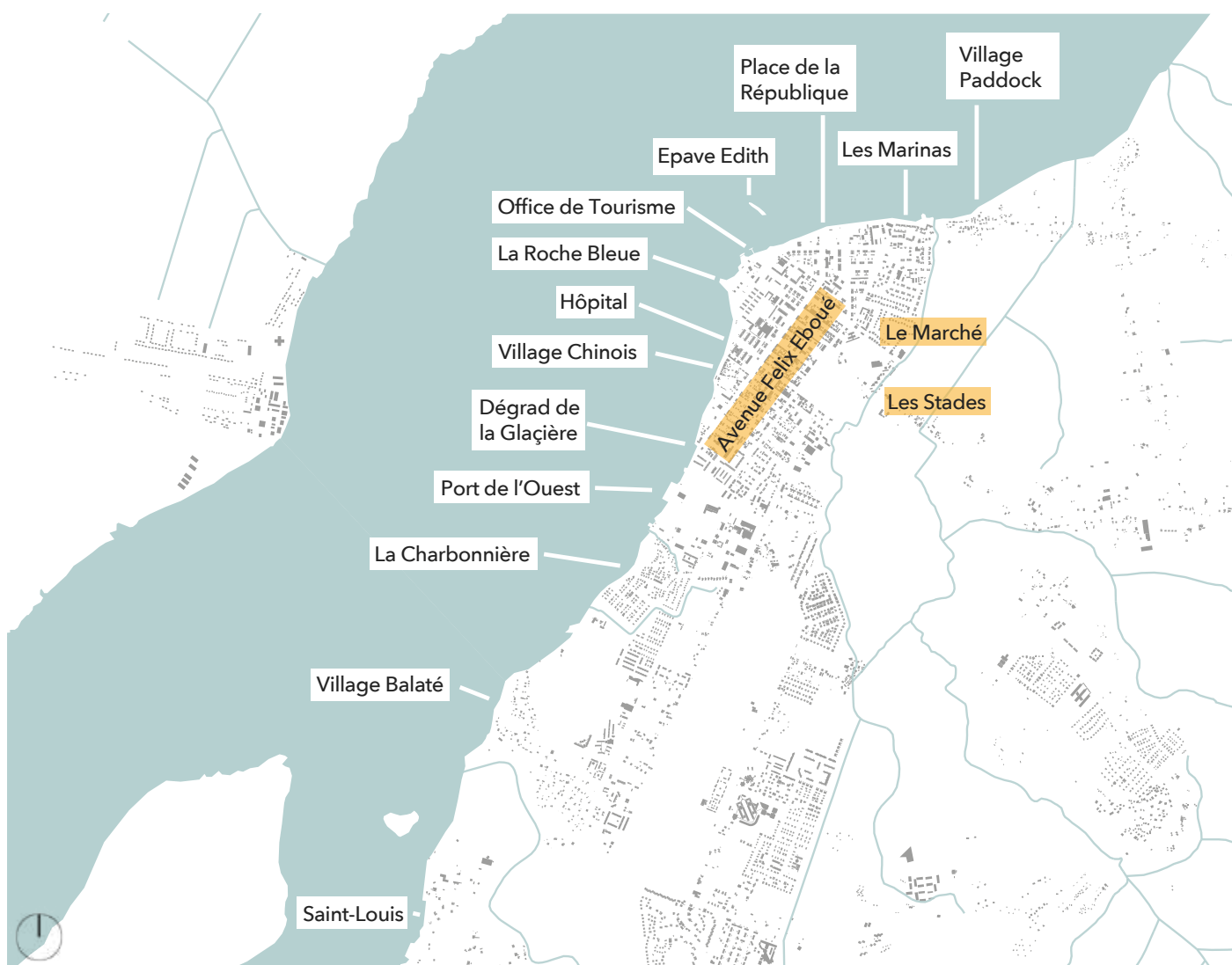
Open spaces, places and amenities on the Maroni river bank. Credits : Ateliers de Cergy

7. MOBILITY

The rise in movement across the Maroni territory increases in relation to the population, the expansion of the city, and changing lifestyles. In addition, the location of Saint-Laurent – a border city, a river city at the crossroads of territories – creates an intermodal space yet to be structured. Historically, it was the river that played the role of the transportation infrastructure, as much for humans as for goods at various scales: internationally, across the Guiana Shield, within the Maroni river basin, and between Saint-Laurent and Albina. The development of urban and intercity road networks revolutionized the way inhabitants travel, even if the use of pirogues and ferry boats remain the only means of crossing the Maroni.

> **Towards French Guiana**
Travel to the center of French Guiana is done mainly by car along the coast. To head inland, villages are only accessible by plane or by way of the river. Several lines of transportation exist between Saint-Laurent and Cayenne that are rarely used due to their limited frequency. The bus station in the center is currently underused. Carpooling/car sharing is developing more and more with the Guianese classified ad website Blada (www.blada.com), allowing people to cover huge regional distances.

> **Towards the lands**
Road projects are in construction to make some inland villages accessible. A road has recently been completed between Saint-Laurent and Apatou. It is significantly changing the links between these two cities and developing the city of Apatou. There are plans to extend the road all the way up to the Hermina rapids, then potentially up to the city of Maripasoula.

Intercity mobility in Saint-Laurent
The low rate of motorization in Saint-Laurent is explained by low household incomes and high car prices, resulting from importing costs. Today, there are nearly 10,000 insured cars in the commune (Assureurs, 2015), hence the need to anticipate the increase in motorization and

new uses for cars. This approach would serve to support their presence in the urban space and within modes of living.

A public transportation system existed in Saint-Laurent, but was closed in 2010. The only network that exists is the one for schools, which counts 25 lines across the commune. A proposition for a public transportation system was presented in the Global Plan of Transportation and Movement for French Guiana in April 2013. To compensate for this lack, numerous trips are made on bike and by foot despite the lack of bicycle infrastructure and adequate spaces for pedestrians. Bike riding has not been quantified, but its share as a mode of transportation does not seem negligible. One of the other solutions is the use of unlicensed taxis, with low prices and availability around the commune of Saint-Laurent, they could be formalized as a proposal of alternative transportation.[13]

> **The cross-border river**
The main purposes for river travel are either to cross from Saint-Laurent to Albina or to head upriver towards the upper-Maroni. There are currently close to 400,000 unofficial pirogue crossings annually between Saint-Laurent and Albina, compared to 30,000 official crossings by the ferry boat. The Gabrielle is rarely used due to the obligatory passage through customs and the need to have a visa, along with the high prices and limited frequency of crossings.

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13. CGEDD, Rapport définitif, 2013

SAINT-LAURENT

Charbonnière beachage area, where pirogues come from. Credits : Ateliers de Cergy
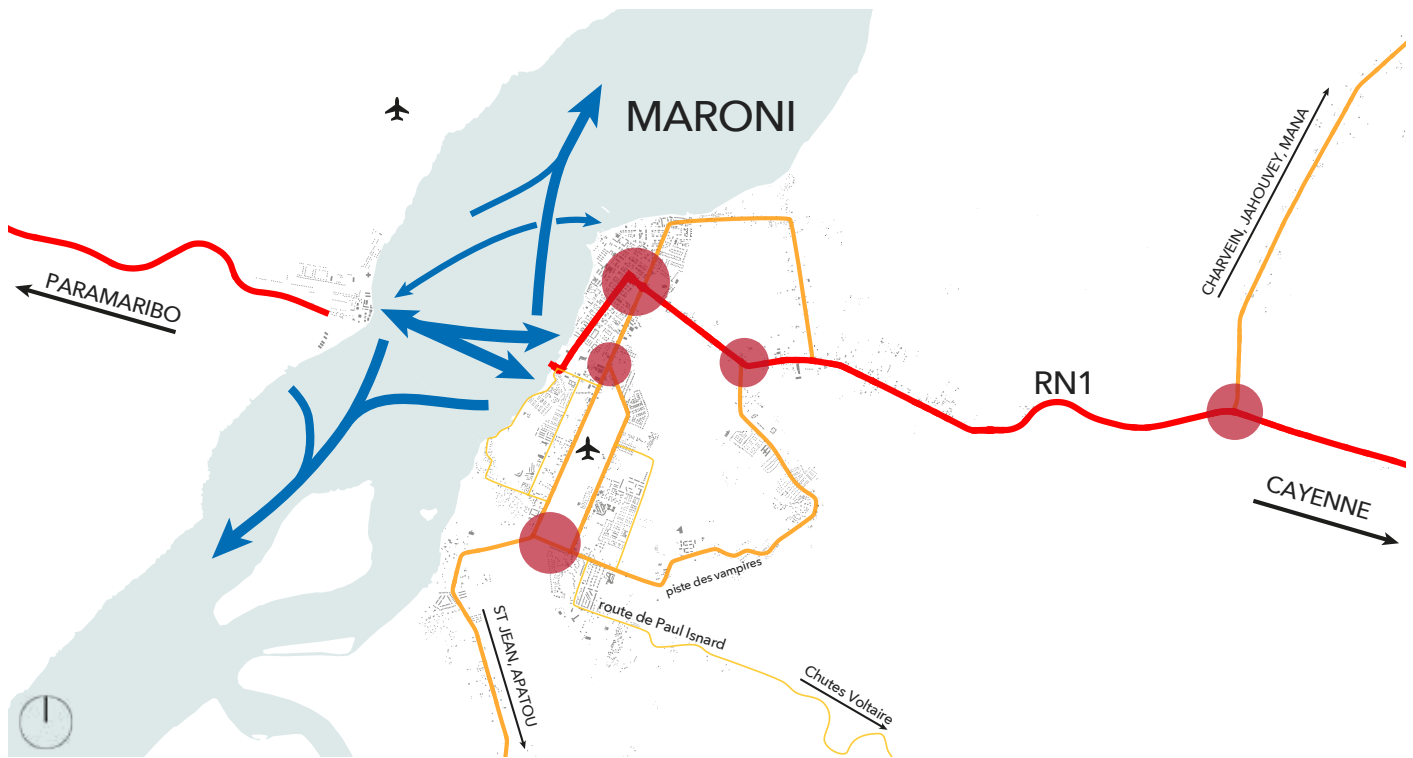
Main mobility axis and majors crossroads. Credits : Ateliers de Cergy

ALBINA

Albina beachage area, where buses are waiting for. Credits : Ateliers de Cergy

Studies have been carried out for the construction of a bridge between Saint-Laurent and Albina. There are several hypotheses on where to locate the bridge: Paddock, Île aux Lépreux, the Pointe Balaté, Île Portal, or even in the commune of Apatou. A city bypass would be developed with the construction of the bridge. This major infrastructure is only at the research phase, but in light of the number of crossings and the future intensification of exchanges between the two cities and two countries, the bridge appears to be necessary. In addition, the bridge project is part of the continuity of the road that crosses the Guiana Shield: the Northern Arc.

> Albina
Albina serves as the departure point to get to Paramaribo, in 1 hour 30 minutes by road, arriving from Saint-Laurent or the river. There are more than 300 taxis, 58 minibuses and an official car service making the trip between Paramaribo and Albino, by way of Moengo, both day and night. Albina is therefore one of the best connected cities in Suriname.

> In order of size
- 1,000 people cross the Maroni in an unofficial manner each day, according to estimations by local stakeholders.
- A pirogue costs between 5,000 and 10,000 euros, approximately.
- It takes approximately 2 days on a pirogue to travel up the Maroni to reach Maripasoula from Saint-Laurent, depending on the season.
- 2.5 km. The width of the Maroni between Saint-Laurent and Albina.
- 1 hour 45 minutes to reach Paramaribo (with the river crossing) compared to 3 hours to reach Cayenne from Saint-Laurent by car.
- Between 5 and 15 euros to reach Paramaribo from Albina in a shared taxi and between 20 and 40 euros to reach Cayenne from Saint-Laurent by taxi, shared bus, car, or through carpooling.
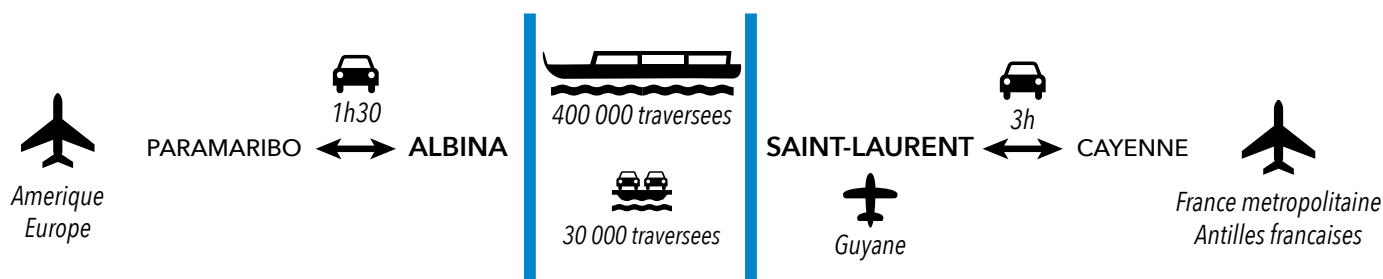
Mobility system at the regional scale. Credits : Ateliers de Cergy

School pirogue.

Bus station. Credits : Ateliers de Cergy

Ferry boart between Saint-Laurent and Albina : La Gabrielle. Credits : Ateliers de Cergy

8. Public facilities and amenities

The current situation in terms of facilities and amenities in Saint-Laurent does not correspond to the size of the commune. To keep up with the demographic pace, priorities were given to educational facilities. Unfortunately, the placing of sports, recreational, and cultural facilities as secondary priorities poses a problem for the new suburban neighborhoods. The different services and public facilities are primarily located in the city center, exposing populations who are already physically estranged to a situation of unequal access to services provided by the city owing to the absence of public transportation.

ADMINISTRATIVE AND PUBLIC SERVICES

The Centre Hospitalier de l'Ouest Guyanais (CHOG, the main hospital) is the most attractive facility, as much for those from Albina as those from the upper-Maroni. Located in the colonial district, CHOG buildings are in the the process of being renovated and restructured. In addition, a new hospital center is also in construction in the Sables Blancs neighborhood next the the edge of the Saint-Maurice ZAC in order to decenter this service and to modernize the hospital. Questions can be raised about how potential reconfigurations of the CHOG site can open it towards other activities and better promote its architectural heritage. Other facilities supplement the health and social offerings but need to be reinforced. For example, through private facilities such as medical offices and health centers. These health facilities are also prized by the Surinamese for their quality of care and medical follow-up.
The lack of public services also needs to be considered facing the over-frequentation of places like the post office and Caisse d'Allocations Familiales (CAF, Office of Family and Child Benefits).

EDUCATIONAL FACILITIES

During the last decade, many efforts have been made to construct educational facilities, necessary to keep up with the growing demographic. Nevertheless, the capacities of

the educational system are insufficient and do not enable schools to offer the best studying conditions. In addition, the difficulties in land use management emphasize the delay in construction projects for educational facilities. Currently, across the commune of Saint-Laurent there are: 8 nursery schools, 19 primary/elementary schools, 5 middle schools, and 3 high schools. In the works are an additional: 5 nursery schools, 5 primary schools, 3 middle schools, and 1 high school.

In September 2015, the rectorate of French Guiana made several observations regarding school enrollment for the region and for Saint-Laurent du Maroni. The Académie (French education authority) counted 41,327 students enrolled in the first level (nursery and primary schools) and 34,249 students enrolled in the second level (middle schools, high schools, and post-baccalaureate) of public schools.
The commune of Saint-Laurent counted 8,413 students enrolled in the first level, divided into 356 classes in 25 schools. In the second level, the commune counted 6,870 students divided into 5 middle schools (4,102 students) and 3 high schools (2,768 students).
Nevertheless, public school students faces major difficulties in terms of academic progress. These difficulties are sociological and economic in nature, with 73.2% of students in Saint-Laurent considered «disadvantaged»[14].
In addition, there has been a rise in student enrollments which the commune has not been able to absorb despite the construction of a new school each year. The difficulties also include the geographic remoteness of some children, in particular those living along the river, further up the Maroni. The dependence on school transportation (buses and pirogues) also limits access to educational services. Finally, these difficulties are often the cause behind many students dropping out. In French Guiana, it is estimated that 40% of the student population leave without degrees, about 9,000 people each year.
In Saint-Laurent, an education alternative exists which allows for the professional

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14. GRET, AFD, Rapport de synthèse sur les dynamiques démographiques et urbaines à Saint-Laurent, 2014

Transportation Camp. Credits : Ateliers de Cergy

City stadium. Credits : Ateliers de Cergy

Informal soccer playground. Credits : Ateliers de Cergy

certification of youth without diplomas: the Régiment du Service Militaire Adapté de Guyane (RSMA, adapted military service). Created in 1961, this military division, located in the former Relegation Camp in Saint Jean, served to train youth in order to develop the region through the construction of public works structures. Since the 1990s, following its opening to private businesses, the RSMA has orientated itself towards the professional training of youth, between 18 and 25 years of age, who have not completed the traditional educational curriculum. By offering 21 subjects and 10 trade skill programs, 700 youth have been trained each year. They leave with a professional training certification (equivalent to the French CAP professional aptitude certification) and 75% are integrated into the professional workforce. Through literacy classes, apprenticeships and professional internships, the RSMA provides these otherwise alienated youth with vocational training and the opportunity to better integrate into the economic fabric of Saint-Laurent. Finally, this division, under the supervision of the ministry responsible for oversees territories, benefits from a good reputation among young people in the commune. This alternative training program does not try to compete with traditional education; on the contrary, it offers skills for entering into vocational trades.

RECREATIONAL AND SPORTS FACILITIES

The level of supply is insufficient and poorly adapted to the younger populations. While the city center has been endowed with a pool, soccer/football field, a skatepark, and a gymnasium, the suburban neighborhoods lack these types of facilities. In some informal neighborhoods, spaces are summarily used, especially for playing soccer. Moreover, there are various sports events between Saint-Laurent and Albina on a regular basis.
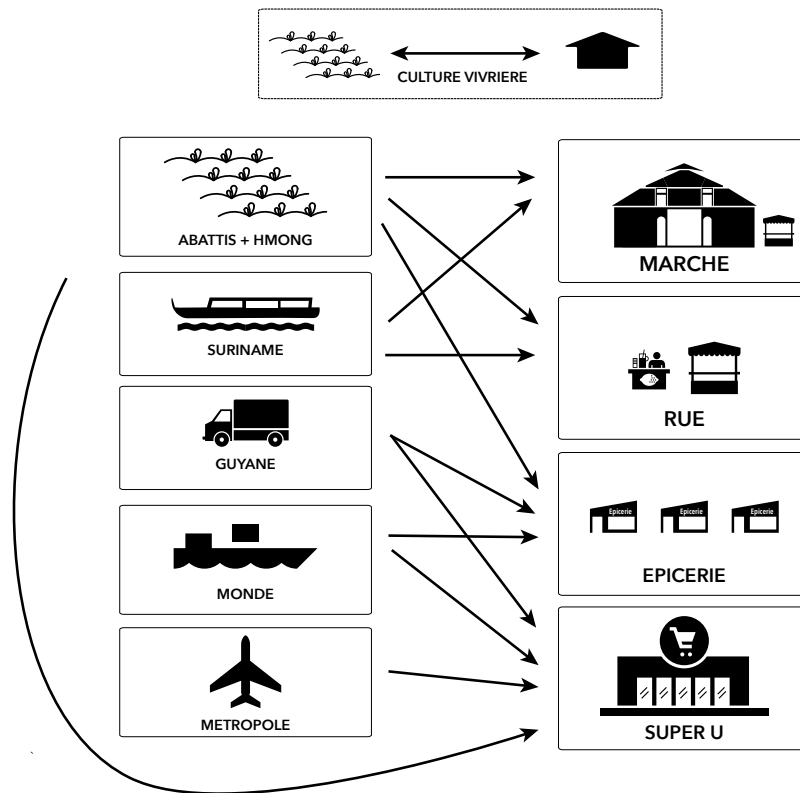
CULTURAL FACILITIES

In terms of cultural facilities, the site of the Transportation Camp offers numerous cultural activities supported by the partners on site, such as the CIAP, Kokolampoe theater, and

public library. The city is also equipped with a music school, a new tent for live entertainment, a temporary circus, neighborhood centers, the municipal cinema Le Toucan, etc. In order to enrich this offering of cultural facilities, the development of programs for the Saint-Maurice ZAC must also include a media center and cultural spaces. In addition, some events that can be considered cultural take place within communities in an unofficial manner.

COMMERCIAL FACILITIES

The commune of Saint-Laurent counted two commercial zones in 2011. One in the neighborhood near the Charbonnière district, in line with the port zone, and the other in the «Hameaux» neighborhood. French Guiana woefully lacks supervision and monitoring for commercial zones across the territory. The creation of a commercial zone by the CCOG, between avenue Castaing and the Paul Isnard road, with a significant surface area (17 ha), does not have an accessibility suitable for the flow of workers and goods that it could attract. It is urgent, in terms of attracting companies to the site, to take into account the risk of congestion caused by rat-running and accident-prone (cargo trucks) traffic to the surrounding transportation axes surrounding the zone (the RN1 entrance to the city, avenue Christophe Colomb, Lac Bleu access road).

As far as food distribution is concerned, Saint-Laurent is equipped with various grocery stores run mainly by the Asian community. Two commercial centers are in development to compensate for the growing needs of which the only current supermarket (Super U) is unable to meet. One of these commercial centers will be located in the south, along the Paul Isnard road, and the other along the RN1 upon entering the city. The latter will consist of a 6-screen cinema, a shopping arcade of 20 stores, and a 3,000 m2 supermarket. These commercial center projects will revolutionize the habits of the people of Saint-Laurent, in terms of their consumption and movements. These new commercial centralities will also change the urban development of the nearby neighborhoods.

15. INSEE, 2014

CULTURE VIVRIERE

ABATTIS + HMONG

SURINAME

GUYANE

MONDE

METROPOLE

MARCHE

RUE

EPICERIE

SUPER U

Food distribution scheme, no complete. Credits : Ateliers de Cergy

City market place on wednesdays and saturdays. Credits : Ateliers de Cergy

Hospital's empty building. Crédits : Ateliers de Cergy

9. URBAN SERVICES

Ensuring the viability and extension of daily urban systems is essential for the public's welfare. This includes the urban development and integration of neighborhoods of informal settlements into the city. Networks and services are in the process of being developed, such as the construction of a new landfill and water treatment facility. But the needs tied to the growing demographic are colossal, hence the urgency to think of new forms of waste treatment, the diversification of energy resources, and the sustainability of implemented models.

One of the responses to these challenges is perhaps a cooperation with neighboring Suriname, today blocked by European regulations. Another response could be the implementation of mini-networks for the production of energy on plots or the treatment of waste and water at the neighborhood level. How can these urban services be integrated into the new urban fabric? How can theses urban services be exploited to develop a local economy? How can industries and technical skills be developed?

WATER AND SANITATION

Today, in order to provide inhabitants of unofficial neighborhoods access to potable water, several water fountains have been put into place with a card payment system. Residents of these neighborhoods have equipped themselves with recuperation systems to collect rain water for use and have installed sceptic tanks for sanitation. At the city level, a water treatment plant is being constructed along the Paul Isnard road, which would allow for a water treatment capacity of 40,000 population equivalents (PE), compared to a current capacity of 15,000 PE. It will be a continuation of the «Lagune Nord» water treatment station, located between the Paddock and Fatima sectors.

WASTE TREATMENT

The lack of organization for the collection and treatment of waste has led to the creation of unofficial dumpsites. A landfill is being built in Saint-Laurent along the Paul Isnard road. Today, the treatment of this waste in Suriname is banned due to European regulations, which are stricter on treatment procedures. Eighty percent of the CCOG's budget is mobilized for waste treatment, of which some waste is exported to Metropolitan France.

ELECTRICITY AND ENERGY PRODUCTION

The current situation for the production of electric energy in French Guiana is one of impasse. The Petit Saut dam produces more than 50% of the electricity, but presents its limits in meeting future needs for electric energy. The territory of Saint-Laurent, at the end of the power grid, experiences power cuts from time to time. The cities upriver of the Maroni, unconnected to the power grid, are dependent on thermal power plants, which must be fed with hydrocarbon delivered by pirogues. This situation halts the development of energy-intensive economic activities across the Saint-Laurent territory and raises questions about the power supply for future facilities, such as educational institutions or the hospital.

> **Hydraulic energy**
The idea of a new dam has been put forward. It would not be able to respond to the immediate needs of the Saint-Laurent du Maroni territory, but it could be considered in regards to future electric consumption. In the short term, river turbines could be put into operation given the Maroni's average annual flow rate of approximately 2,000 m3/s and the strength of the tide's currents.

> **Biofuel**
A biofuel project is underway. It will be located south of Saint-Laurent and would use the plant material from agricultural wastelands and the cleared plant material tied to a potential mine.

> **Solar Energy**
Located five degrees north of the equator, Saint-Laurent has an extremely high rate of sun exposure: 1,800 kWH/m2/year, on average. The development of above-ground photovoltaic

International workshop of urban planning in French Guiana

panels is underway and a photovoltaic power station has recently been built in the upper-Maroni in the village of Taulen. Solar water heaters have been implemented in the social housing programs and encouraged by EDF.

TELECOMMUNICATION

The question of the connection to the Internet is essential in terms of hosting service activities and for the attractiveness of the city. The city of Saint-Laurent foresees the implementation of a FTTH (fiber-to-the-home) network to be deployed over the 2014-2020 period under the SDANT (Master Plan for Digital Planning). Today, the 3G and 4G coverage across the Saint-Laurent territory needs to be reinforced and there are currently no free Wi-Fi spots within the city.

Trash in a informal settlement.
Credits : Ateliers de Cergy

Satellite dish in Chekepatty
Credits : Ateliers de Cergy
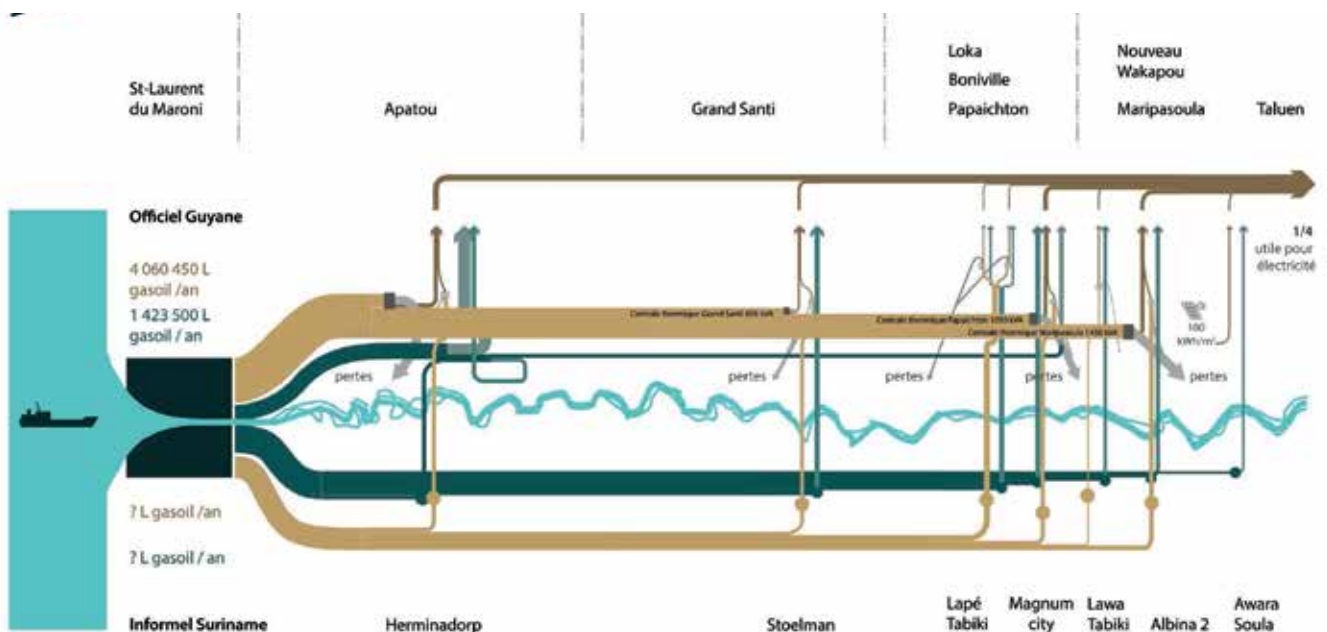
Gasoil distribution along Maroni river. Credits : 2016, ENSA Marne-la-Vallée, DSA et DPEA.

10. AGRICULTURE AND NATURAL RESOURCES

Clearing lands [through the slash and burn technique] is the traditional form of agriculture in French Guiana. It involves burning plants and crops to fertilize the ground with ash. This shifting agriculture alternates between a clearing cycle and and a period of cultivation and harvesting, as with cassava, for example. This type of agriculture can be seen practiced around Saint-Laurent. The clearing of lands also illustrates the importance of agricultural traditions in the modes of living of the different communities. Another feature of the territory was the arrival of the Hmongs to Javouhey in the 1970s, thirty kilometers north of Saint-Laurent. They were settled there by the French government under the Plan Vert to develop agriculture in French Guiana. Today, the Hmongs of Javouhey play an essential role in the local agriculture production and they brought new types of crops, such as the mangosteen and rambutan.

DESCRIPTION

Agriculture represents barely 1% of the territory in French Guiana. This low percentage is due to the poor mineral quality of the soil and weakness of agricultural productivity systems. Despite a certain dynamism, French Guiana's agriculture has not ben able to meet all of the country's food demands. French Guiana is nonetheless the only French territory where the utilized agricultural area (UAA, French acronym SAU) and the number of farms increases. Between 2000 and 2010, according to the Agriculture Census (2010), the SAU increased by 9% over the territory and the number of farms grew by 13%. Agriculture is also an employment generating sector with 20,500 active workers, of which 8,500 work in family farms, 12,100 are fully employed, and 11,900 are seasonal.

Geographically, the main agricultural areas are along the Oyapock and Maroni rivers. The farms are small in size and intended for subsistence agriculture. Surpluses can be sold at the market as informal supplementary income. Commercial productions are carried out by 300 professional farms. Despite the growing number of agricultural productions in the last few decades, the coverage rate of local demand by local production remains low overall.

While there is a lack of data on the coverage rate, imports of food products put a strain on local production. French Guiana's agriculture is still in the process of being developed, unable to respond to the demands of self-sufficiency in terms of food, and is still not competitive enough to position itself against a market of imports. The obstacles to a rise in production are:

- the lack of available land for agricultural activity. French Guiana's land is exclusively held by the government. There is a lack of means for a better provision of lands for candidates of agricultural activities. Even with the provision, the transformation and development of the land is still too expensive and physically exhausting. In addition, the intense pressure from urban development questions the predation of these agricultural areas, where informal urban development has established itself and impedes the agricultural transformation of these dedicated areas.

- the insufficiency of support systems for developing the farms, in number and in size. Small farm operations do not have access to the resources that would enable them to better develop their farms, whether administrative or technical.

- another consideration of the size of French Guiana's market. There is a necessity to specify the instruments used, so that they can better fulfill their missions in terms of performance and competition. The modalities of land use are not the same; the tools of economic development should be better adapted to local situations.

- the weak support of the banking sector for agricultural operations. Despite the fact that public tools for pre-financing exist, the banking sector still needs to be encouraged to grant loans and mitigate the lack of self-financing in French Guiana.

Hmong farmer. Credits : Une saison en Guyane.

Slashed and burned lands for farming. Credits : Une saison en Guyane.

Fishing on the Marwini river. Credits : Emmanuel Martin

- the lack in capacity of locally processing agricultural products. This is explained by the small size of the agricultural productive sector, the difficulty to formalize commercial relationships and the bias of the market, where the risk is taken by the one processing the product.

- the poor level of training in agricultural techniques as well as the necessity to establish research and development industries. In addition to professional courses in agricultural trades, the areas of experimentation and development, as well as the organization of industries for innovations and agricultural transfers of technology should be prioritized as a first step. These sectors could enrich the offerings in agricultural training, depending on the different audiences interested in these activities. This R&D component must therefore be concrete and operational to accompany the development of the country's agriculture, in its sustainable form and within a reasonable timeframe. This component is moreover considered through a regional cooperation, to the extent that neighboring countries of French Guiana are encountering the same issues tied to agricultural systems.

- the competition with low-cost products from Suriname. There is a need for a complementary relationship between the productions in French Guiana and Suriname, in order to create positive dynamics for the both of them, according to their respective advantages.

The intense population growth thus makes the food and agricultural challenge even more ambitious, especially as the market expands for producers. The Collectivité Territoriale of French Guiana is now equipped with strategic studies to address these challenges by 2030. This target date was chosen to develop innovative and activity-generating sectors so as to otherwise respond to the rising demands. There is also the question of food self-sufficiency, which should be taken into consideration through the support and development of independent and competitive local productions, capable of correctly paying for labor.

AGRICULTURAL POLICIES

Policy guidelines for establishing strategies are guided by the Rural Development Plan (PDR). It is a new rural development policy whose aim is «to accompany and complement direct payments and market support measures under PAC (Common Agriculture Policy, CAP) and contribute to the objectives of the latter.» Among the measures intended for rural zones:
- the transfer of technology and innovation within the agricultural sector
- the viability of agricultural operations
- the competitiveness of all types of agriculture in all regions and the promotion of innovative agricultural technologies
- the organization of food supply chains, as well as the processing and commercialization of agricultural products
- the well-being of animals
- risk management in the agricultural sector; the restoration, preservation, and reinforcement of ecosystems tied to agricultural activity
- the promotion of an efficient use of resources and the transition to an economy of low CO_2 emissions in the agricultural sector
- the promotion of social inclusion, the reduction in poverty, and the economic development of rural areas
The new PDR was validated for the 2014-2020 period, but with delays in its implementation. The budgets allocated to French Guiana comes mainly from FEADER (European Agricultural Fund for Rural Development, EAFRD). For the 2014-2020 period, this budget is set at 112M €, despite the fact that these appropriations concern agriculture in the strictest sense.

A WEST IN URBAN TRANSITON BUT STILL VERY RURAL

The Saint-Laurent market, Wednesdays and Saturdays, is the second largest market in French Guiana, after Cayenne. Western French Guiana is characterized by its rurality. Indeed, 58% of utilized agricultural areas and 78% of farm operations in French Guiana are within the CCOG territory. The city of Saint-Laurent registers a dozen new farm operations per year (registration under the MSA, French agricultural social coverage). Small- and medium-sized agricultural operations have an individual status, while large farm operations fall under the form of corporations. Saint-

Laurent is experiencing a diversity of farms and productions. Nevertheless, 9 out of 10 farms are considered small in size, representing approximately 54% of the commune's SAU. This high concentration of small farms demonstrates a traditional subsistence agricultural market in parallel with a modern and professional one. Medium-sized farms (7.5%) showcase a fifth of the communal territory. Finally, the large farm operations with more than twenty hectares are orientated towards livestock farming.

Regarding employment in the agricultural sector of Saint-Laurent du Maroni, according to the 2010 Agricultural Report, 2,099 individuals work regularly in the basic management of farms. Their work represents an equivalent to 699 full time jobs (UTA - Unité de travail annuel, French agricultural labor measurement). Family labor consists of 1,119 individuals for 634 UTAs. Farming operations also rely heavily on seasonal workers, 964 individuals for 60 UTAs. In short, less than 10% of farms have a full-time agricultural activity. Possible allusions to the windfall effect of agricultural lands has probably had a negative impact on the calculations of farm figures and their qualitative analysis. Indeed, many agricultural operations also represent an opportunity to build wealth through the obtaining and construction of land in parallel.

The average age of farm managers is 47 years: 45 years for women and 49 years for men. The proportion of those under 40 years old is small in comparison to the département: 16.3% in Saint-Laurent compared to 37% in French Guiana. Inversely, the proportion of those above 60 years old remains stable between the two: 16.7% in Saint-Laurent and 15% in French Guiana. It can also be noted that more than half of all farm managers are women, representing 38% of full-time employment.

Facing the demographic evolution, more and more lands are becoming residential developments with activities related to housing, recreation, or nearby suburban agriculture. The rural suburban zones are thus transforming into suburban areas with the following characteristics:
- land speculation
- a demand for recreational land

- a demand for dual-activity land
- a political will to develop suburban agriculture

These spaces dedicated to agriculture also include features unique to western French Guiana, including the continuation of traditional slash and burn subsistence farming of which surpluses are sold at the market. Low incomes, the food consumption of families and their growing needs, as well as undeclared labor, are factors that explain the importance of this type of agriculture. These lands also serve to confirm the identities and culture of the Bushi Nenges and indigenous populations. Nevertheless, this model presents its limits, especially in the costs of shipping and transferring productions to the market in Saint-Laurent. Many express the desire to continue living on their cleared lands, on the large lots surrounding the city. Many do not hold land titles and construction permits are becoming even more rare.

In the west, it is the cultural traditions and rising demographic that are placing quotas on agricultural practices. Adding to this, is a widespread urban development, which enters into competition with the development of agricultural sectors, thus generating usage conflicts. In addition to housing, the changing demographic is forcing the commune to strengthen its capacity for self-sufficient agricultural production. To do this, more means are needed to support the training and professional transitions of farmers, and also to permit the establishment of larger farms.

It is in the implementation of farming regulations where the difficulty for farmers to development farms that satisfy these standards can be seen. Situated on the South American continent and in close proximity to Suriname allows French Guiana to supply itself with fertilizers and weedkillers that are more accessible in terms of price and availability, but which do not comply with the European regulations in force. It can be noted, however, that there is a less systematic use of chemical fertilizers by the Bushi Nenges who practice a form of agriculture that is closer to organic. Another difficulty in the implementation of regulations is the management of agricultural waste, whether it be chemical or material. The bolstering of professional training

capacities and the financial and administrative support for agricultural farmers are as much priorities as the means for production.

The PLU (Plan local d'urbanisme, local urban development plan) has identified areas for agricultural development: along the Paul Isnard Road and RN1 and a third one surrounding Sparouine.
- The CD9 sector. This sector, covering 2,381 hectares, extends along former logging trails and follows from already existing settlements. The modification of agricultural lands resulting from dispersed housing does not compete with the agricultural uses of this area.
- The Paul Isnard road. After the forest reserves, the beginning of the road is characterized by its residential appearance. There is a trend of expanding occupied areas for ornamental gardens or primary and secondary residences. The agricultural activity establishes itself starting at the PK6 and covers 900 hectares.
- Along the RN1, to the east, between the Balaté creek, the Saint-Jean road to Apatou, and the road to the Plateau des Mines. This is one of the most active existing sectors in terms of agricultural operations. There is a rising demand for agricultural concessions. Thirty-seven lots are in the process of being allocated and 49 new requests have been made (as of 2011). This is also a sector where the average size of requested lots is 5.3 hectares as compared to 2.7 and 2.9 hectares for the two previously mentioned sectors.

EXPLOITATION OF NATURAL RESOURCES

> Forestry resources
The surface area of the permanent forest estate of the Saint-Laurent commune is 283,612 hectares, or 6% of the communal territory. The forestry system is defined as a set of good management rules translated into:
- an increased legal protection of the forest
- a management assured by a public institution, the National Office of Forests
- a planned and rational implementation of forest resources. Development programs organizing, with regards to time and space, forestry activities.

> Mineral resources
The main resources being mined across the commune are laterite, sand, and hard minerals. These materials are indispensable for the construction industry. How can the extraction capacities of existing mines be ensured to meet the growing needs in construction materials?

> Gold resources
There is currently a project by the Canadian mining company Columbus Gold. It has discovered a gold mining potential of 155 tons, which, at the current market value of gold, is an estimated 12 billion dollars in revenue. This deposit, called the «Montagne d'Or,» raises numerous question in terms of how extraction techniques, forestry development, and the supplying of power to the mining complex will affect the environment. The mine's power consumption will be 20 megawatts, that is to say, as much as consumption of the city of Cayenne. Columbus Gold believes that its project can create 3,000 direct and indirect jobs within the département. Jessica Oder explains, as well, that the challenges of:
 [A] viable policy rests on the definition and economic evaluation of all of the negative external effects (without which the internalization of these effects in terms of production costs could not be done) and the economic evaluation of environmental services provided by nature. What is the opportunity cost of the destruction of the primary forest (in particular, from a touristic point of view, or one of carbon sinks, etc.)? What force will the ripple effect of the industry play on French Guiana's economy? What are the prospects for creating local jobs, training programs? What are the tax implications and how can they be reinvested? And finally, what is the level most suited for the management of this industry?»[16]

16. Jessica Oder, « Vers la structuration d'une filière aurifère « durable » ? Etude du cas de la Guyane française », 2011
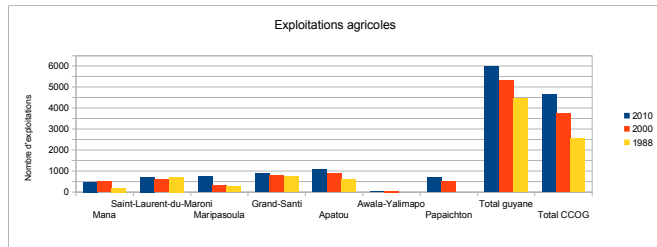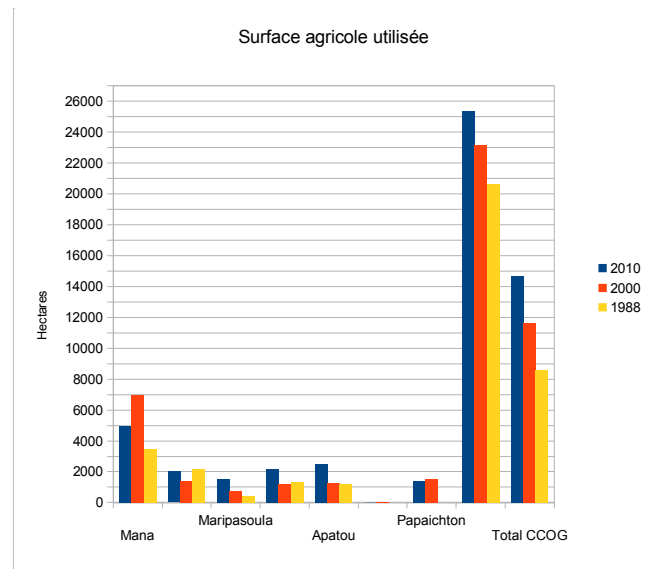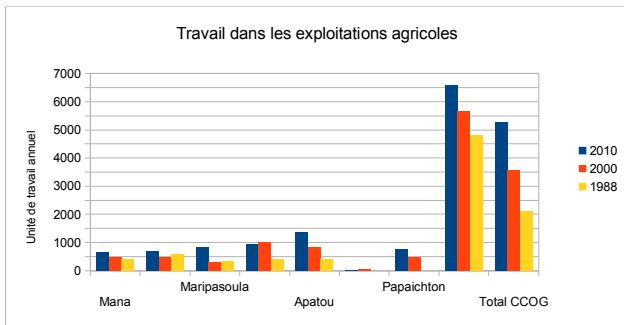
Source : Agriculture census.
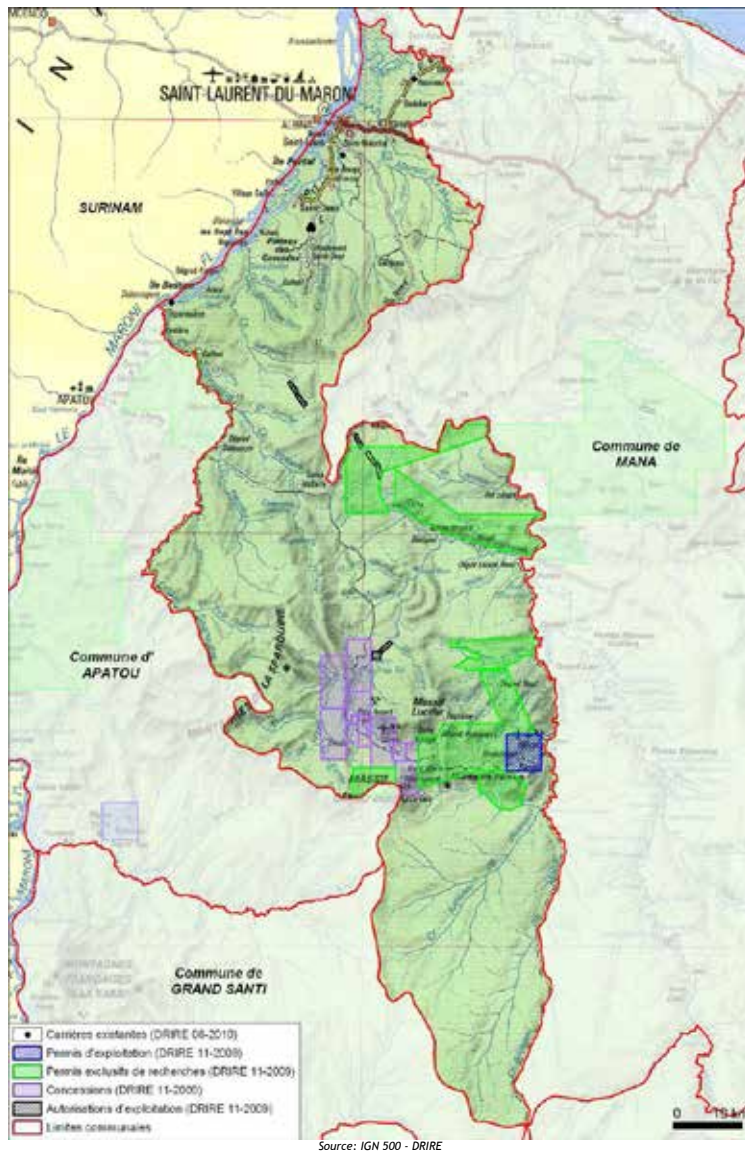
Quarries of the Saint-Laurent du Maroni area
Source : PLU

11. Economic activity prospects

Understanding the economic landscape in Saint-Laurent and along the Maroni is done at two levels: within the framework of trade with Metropolitan France and of regional trade at the Maroni river basin level.

HISTORY OF TRADE ALONG THE MARONI

Since the beginning, the city of Saint-Laurent du Maroni quickly became characterized by the variety of its economic exchanges. The presence of the Transportation Camp and its administration, along with the discovery of gold veins, promoted a close exchange between Saint-Laurent and Albina. These exchanges were led by indigenous, Bushi Nenge, European, and South American populations. The informality and formality of exchanges have always been intertwined, far from central authorities and spread across the river basin. The dense and expansive waterways encouraging the diffusion of exchanges and product variety.
The cities of Saint-Laurent and Albina were trading sites and resupplying points. The French river banks were deserted by indigenous and Bushi Nenge populations, for fear of the convicts. Some settled along the Surinamese banks or farther up the French banks of the Maroni. Nonetheless, the prison and penal and administrative demands allowed for the sale of products and the supplying of materials. The complementary relationship between these two cities turned the lower-Maroni into a commercial town. In the late 19th century, the current Chinese Village spontaneously developed in Saint-Laurent, tied to the gold trade, relations with Suriname, and with indigenous and Maroon populations. The Chinese Village, formally called the «Annam Village» due to the presence of former convicts from Indochina, has always been a market for fish and fish products. The «Annimates» practiced fishing and sales were often done with Creoles. It was in the early 20th century that Chinese traders settled into this neighborhood. Their integration, commercially and to the river, was accomplished through the usage of Sranan Tongo, the language disseminated throughout the Maroni. Gold panning and its market also

contributed to the commercial activity of this space. The Chinese Village is a site of economic exchange and cultural contact between the Maroni's various populations.
Once again, the shared geography of Suriname and French Guiana binds them in economic exchanges based on the complementary nature of products and skills and by the integration of a shared culture, that of the Maroni.

This complementary economic relationship between Saint-Laurent and Albina allowed these two cities to respond to the problems resulting from their estrangement and weak access to their respective capitals, Cayenne and Paramaribo. It wasn't until the 1950s when (precarious) roads were constructed, opening up Albina to Moengo, then Paramaribo, and Saint-Laurent du Maroni to Cayenne.

The war in Suriname would forever change the exchanges across the Maroni. The bombing of Albina, the destruction of its areas of trade, and the displacement of the Surinamese population to the river banks of French Guiana, left Saint-Laurent diminished but ahead in supplying more economic efforts and the integration of exchanges into its urban fabric.

TODAY

Economic exchanges can be analyzed by their formal/informal duality. In terms of the formal economy, it include all exchanges which enter into the official national registry. While this entry allows for a partial explanation of the difficulties of the economic fabric and the limits of instruments to measure it, it also obscures new notions of exchange. The informal economy, in the context of this document, does not take into account transactions tied to illegal trafficking, but rather local economic exchanges.

- The public sector is the primary employment- and trade-generating economic sector. Nevertheless, these jobs are primarily occupied by individuals coming from Metropolitan France and Creoles, which is not sustainable enough to stabilize itself within the economic fabric.
- With the presence of the market in Saint-

Degrad des Mineurs, postcard.
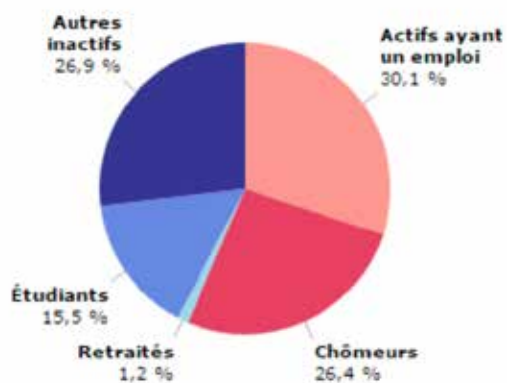
Population aged 15 from 64 according to their professional activities. Source : INSEE

View over the West Harbour.

Gasoil transportation throughout the Maroni river.

Laurent, French Guiana's second largest market, agriculture is a very important economic sector, marking the territory, but yet to be calibrated for an expansion towards self-sufficiency, or even exportation.
- The significant rate of unemployment among the working population, especially in regards to the young, the lack of qualifications, and weak economic prospects direct certain populations towards the wage labor economy–small, short-term, non-declared jobs–as well as towards social benefits (especially for individuals) as a source of income during the interim.

Although structural solutions are planned in regards to major economic balances at the French Guiana level, in Saint-Laurent, it is the strategies for supporting economic activities that need to be developed.

A SOCIAL AND COLLABORATIVE ECONOMY, AN ECONOMY TO SCALE?

Saint-Laurent du Maroni offers an atypical living environment with a high population growth, which needs to be considered as a new economic opportunity. It is necessary to understand this city through the prism of its in-place, or presential, economy. While the economic geography is divided into two approaches, in which one is centered on the establishment of companies in the territory (productive economy), the other is centered on the populations who live on this territory (residential economy). The residential economy is based on the idea that the population who resides on a territory generates an economic activity in sync with the needs for services. The increased mobility transforms the population, especially where those who are residents bring their economic approaches. This presence is variable and characterized by a simultaneity of consumption and production, without distinction in terms of time and space.
This presential economy can be applied to existing social relationships to create a local fabric of exchange. While informality strongly characterizes this presential economy, it is still important to think of ways to formalize these exchanges. Although the lack of training is a long-term obstacle, in this first phase, a social, collaborative, and local economy could bring an

element of response.

It is therefore through financial aid for the support and development of the economy to promote the creation and sustainability of businesses, which seems the most necessary. This financial aid concerns a public already weakened by the economic crisis, for whom social benefits are an important source of income. The capacity for self-financing is limited, even nonexistent. Nevertheless, Saint-Laurent is seeing the emergence of numerous promising small projects supported through ADIE (Association pour le droit à l'initiative économique, French micro-credit organization) or through the entrepreneurial component of government programs.

THE ECONOMY OF TRADE AND LOGISITICS

French Guiana's economy is above all an economy of importation – manufactured and processed products. The physical estrangement of Saint-Laurent du Maroni, with the river and road as the only axes for transporting goods, questions the maintaining of quality and security for products during this long chain of transportation.

The example of fuel is significant. Its daily transportation is achieved by two tanker trunks which travel along the RN1, then the fuel is stocked on two river carriers, in Charbonnière and Balaté, to supply the electric power stations along the upper-Maroni, the motors of pirogues and cars. Its delivery is done by pirogue, at 2 million liters per year, that is to say, 40 barrels which must be carried upstream by pirogue daily.

BUSINESS DRIVERS FOR ENDOGENOUS, INNOVATIVE, AND RADIATING PROCESSES

> Biodiversity research

The geography of Saint-Laurent offers access to numerous natural sites and landscapes sheltering diverse flora and fauna. Human and economic activities heavily impact these ecosystems. Saint-Laurent could become an interesting observatory for measuring the anthropogenic impact on these natural systems. Here, nature has an active value, as a living environment and intellectual reservoir on biodiversity. A better understanding of ecosystems and human activities could contribute to another interpretation of the territory, all while improving the living environment of inhabitants.

Biodiversity is also a reservoir of innovation in the sectors of pharmaceuticals, cosmetics, construction, manufactured products, etc. The «Nature Amazonie» brand develops plant-based cosmetics produced in French Guiana. Non-explored sectors also remain, such as mushrooms, of which knowledge of them is only limited.

> New technologies

The diffusion of cellphones and new technologies is developing in Saint-Laurent and across the Maroni, with a Surinamese telephone network covering the less densely populated areas along the river. There is a potential in terms of «smart-services» for the territory, which would allow for the development of new services such as transportation for example. One of the limitations is the significant cost and the lacking supply of technological equipment (telephones, computers), as well as the weak levels of service in terms of internet connections.

While the space center in Korou should be generating an economy founded on research technology, these positive externalities are not being felt across French Guiana's territory. Quite the opposite in fact. It is a hyper-specialized bubble that is formed around Kourou, which demonstrates little porosity with the rest of the territory, whether that be scientific or technological. Here, new technologies should not only produce objects for consumption, but also elicit new skills to generate new forms of economy.

The geographical estrangement of Saint-Laurent increases the costs of technological and mechanical products, due to their long shipping distances from Metropolitan France. This question could be avoided by business incubators tied to new technologies. The small size of these businesses, which are often represented by individual entrepreneurs and/or collaborative groups, reinforces the notion of exchanges and complementary relationships. The intellectual and professional proximity between entrepreneurs that is offered by business incubators is advantageous in the creation of innovative projects and in responding to precise needs. For example, the Manifact fablab[17], inaugurated in 2016 in the Transportation Camp, could allow for the emergence of new technological and mechanical applications that could be put to use in the territory.

In addition, the close proximity to the technology parks of universities in Kourou, Cayenne, and Paramaribo could spark investment strategies in the research and development of new technologies. The exchange of knowledge and techniques between communities is also a part of the Maroni's history. Survival and apprehension for this milieu was done through the exchange of knowledge, like the navigation taught to the Bushi Nenges by the indigenous population, which allowed the Bushi Nenges to integrate and specialize themselves in the economic market: river transportation.

> The construction industry

Building construction and public works (BTP) is an economic driver in French Guiana, due to the development projects and growing demands for housing. Construction materials are partially supplied by local industries, such as sand for concrete and laterite for roads. Despite the existence of forest resources, there remains only one sawmill across Saint-Laurent, because of Surinamese competition and the lack of a developed industry.

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17. Contraction de l'anglais fabrication laboratory, « laboratoire de fabrication », est un lieu ouvert au public où il est mis à sa disposition toutes sortes d'outils, notamment des machines-outils pilotées par ordinateur, pour la conception et la réalisation d'objets.

In parallel, the growing demographic has boosted activities of self-built housing for many new inhabitants. Self-building responds to the lack of produced housing, difficulties in achieving homeownership, and also to compensate for the failures of adaptability by modern housing. The materials for self-building are mainly bought in Suriname, owing to there low costs.

The construction industry could respond to different economic levels. Saint-Laurent du Maroni has the capacities in term of resources, the necessary demand, and the acceptable size for trying out alternative construction industries. It could be included in a much larger economy, at the French Guiana level. It could also be an alternative, founded on collaborative skills and supported by experts in construction, and made viable at the Saint-Laurent level. For example, during the construction of homes in the Charbonnière district:
[T]he significant demands for shingles made from Wapa, a cracked wood traditionally used for this purpose, could not be satisfied by the artisan system of production by hand. The order for 120,000 shingles for the first 16 houses thus enabled a local company to mount a division of production for sawed shingles, which competes today for the construction of luxury homes in the Caribbean, where Red Cedar shingles are imported all the way from Canada and the United States. The significant increase in local demand also relaunched the creation of artisan businesses in the production of shingles. 2

> Local suburban agriculture
In Saint-Laurent, mainly food-producing agriculture on small- or medium-sized lots is found. It is notably the transformation of harvests that could be a driving industry. The Chamber of Agriculture carries out projects of economic accompaniment tied to the processing of agricultural products for sale. It aims to promote activities related to the transforming of local products. Twelve active members from different cultural backgrounds exchange their knowledge and skills, to better transform and promote their products, but also to communicate with consumers and inform them

of the agricultural challenges they face. The local angle of proposed products could create a branding unique to Saint-Laurent and western French Guiana.

Economically, the modes of production could be better promoted. The agricultural products available in the market and sold by Bushi Nenges are grown without chemical fertilizers. These farming operations are defined as organic agriculture, but this does not ensure higher yield of returns for the households. There is an opportunity to support the higher yields of return through the promotion of the organic quality of the fertilizer. But the administrative estrangement of some populations does not make it possible to access existing apparatuses.

> Culture and tourism
The city of Saint-Laurent has undeniable advantages in the sectors of culture, heritage, and the environment. They are potential drivers for tourism development. The obstacle is the lack of hotel offerings, promotion for its tangible and intangible heritage, promotion for the river, etc. The potential to attract tourists for several days exists in the territory, between the Transportation Camp, the river, forest, the indigenous villages, gastronomy, festivals, etc. Therefore, how can the label as the City of Arts and History be better promoted? How can connections be built within the sphere of cultural organizations and civil society? What kind of devices can be used to support organizations?

> New services
The informal local economy is mainly founded on a service economy. It is a sector where institutional developments have shown their limits. The limited means of public institutions, the geographic estrangement of certain sites, the poor educational backgrounds of the population who have an important need to supplement their incomes, are just some of the factors fostering an economy of resourcefulness: the «job» in French. «Jobbers» (wage laborers) offer as many services as there are needs. They allow for the creation of an economic fabric were formal and informal activities interweave, especially in the neighborhoods of informal settlements, but also in the new neighborhoods where the economic fabric is still developing.

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18. DDE, Guyane Française, Politique de résorption des bidonvilles, 1986

International workshop of urban planning in French Guiana

These services are also present in formal public spaces, like in the market. The main bus station also proposes unlicensed taxis for travel around Saint-Laurent. There are also individual services, such as housekeeping, childcare, hairdressing, or catering.

Many skills are learned «on the job» and allow for the development of an economic activity without a diploma or previous experience... but with the limitations that that entails.

It is therefore necessary to think of economic transfer apparatuses that would allow for the integration of these field skills, exchanges, and informal services into a new and local economy.

Voltaire Creek.

Economical actrivities area, Paul Isnard road. Credits : Ateliers de Cergy

PART III
SAINT-LAURENT DU MARONI
# TOMORROW ? !

1. Developing the Saint-Laurent of tomorrow

One of the principal obstacles in the equitable development of French Guiana's territory is the poor plasticity or adaptability of French law in regards to local features. Local administrators should find a balance between a centralized French Republican model and the preservation of local particularities that make up the richness of the territory. Saint-Laurent is a commune that has been in an urban metamorphosis for the last twenty years in terms of the figures for its population. Yet for all of that, it does not have the means to support the current urban development, in regards to development strategies, urban organization, services, etc. Saint-Laurent still works like a village from the perspective of residents, with: a community-based way of operating, the continuation of certain rural habits, and an appreciated low density. Self-management, rural and informal economies, community-based organization often take the relay from social assistance and support by the government and make it possible for a social equilibrium in Saint-Laurent. Today, this urban transition is to be developed over the long term through a shared vision by local stakeholders in order to absorb the incredibly high demands for public facilities, as well as housing and employment.

REGULATORY TOOLS FOR URBAN PLANNING PROJECTS

The different tools for development address as much the areas of intervention, as they do engineering mobilization and deployment strategies. While these areas can sometimes come into conflict, the expansion of the residential zone of Saint-Laurent requires a better coordination between these project mobilizations in order to make the strategies consistent and complimentary. From the 1970s to 1990s, development programs were made based on land opportunism. Along the roadways, existent or in the process of being extended, are where sectors of social housing and programs based on urban policies of slum resorption (RHI) can be found. But these do not create a real strategy of urban development. Since the 2000s, the city hall of Saint-Laurent, given the increasing demands in housing, has begun construction on the Saint-Maurice ZAC, an urban planning tool for the creation of a new neighborhood. In addition, city hall has developed a Local Development Plan (PLU), a regulatory tool at the commune level. But the breadth of needs has proven too significant, hence the creation of the Plan-Programme, in partnership with the EPAG, which would allow for the departure from a rationale of «catch-up» and favor, instead, the anticipation of development, by 2035. Today, several projects are underway:
- the conception of a master plan aimed at 2060, with the intervention of Les Ateliers de Cergy, that has the objective of creating a communal shared vision of the territory over the long term.
- the Urban Renewal Project (PRU), to improve different sectors of the city
- a National Interest Operation (OIN), a tool directed by the government
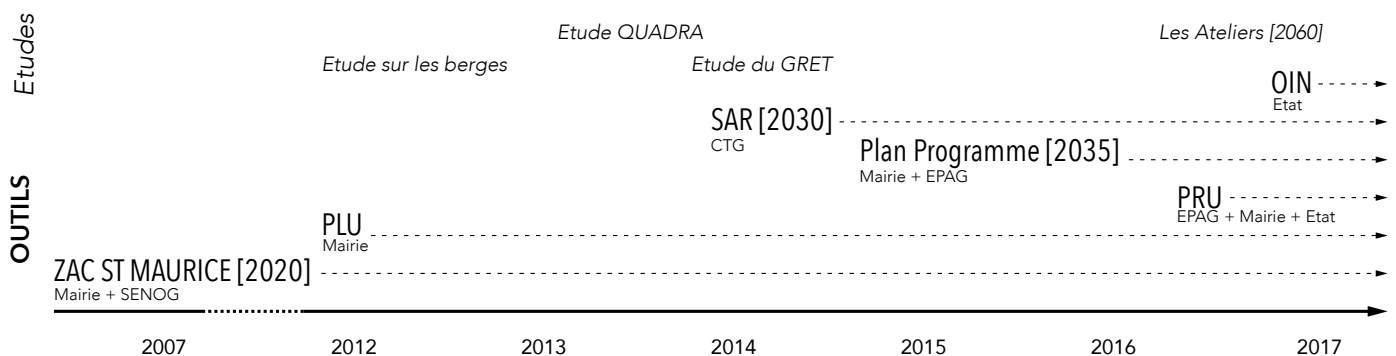
Regulatory tools on urban planning for Saint-Laurent du Maroni. Credits : Ateliers de Cergy

LA ZAC SAINT-MAURICE

The main program of planning and development at the neighborhood level is the Saint-Maurice Zone d'Aménagement Concertée (ZAC). This development zone is a public urban planning program, where a local government appoints a private-public partnership or a public urban development institution to manage the building and servicing, equipping, and allocating of an area. The lots are then ceded or conceded to public and private developers for the construction of housing.
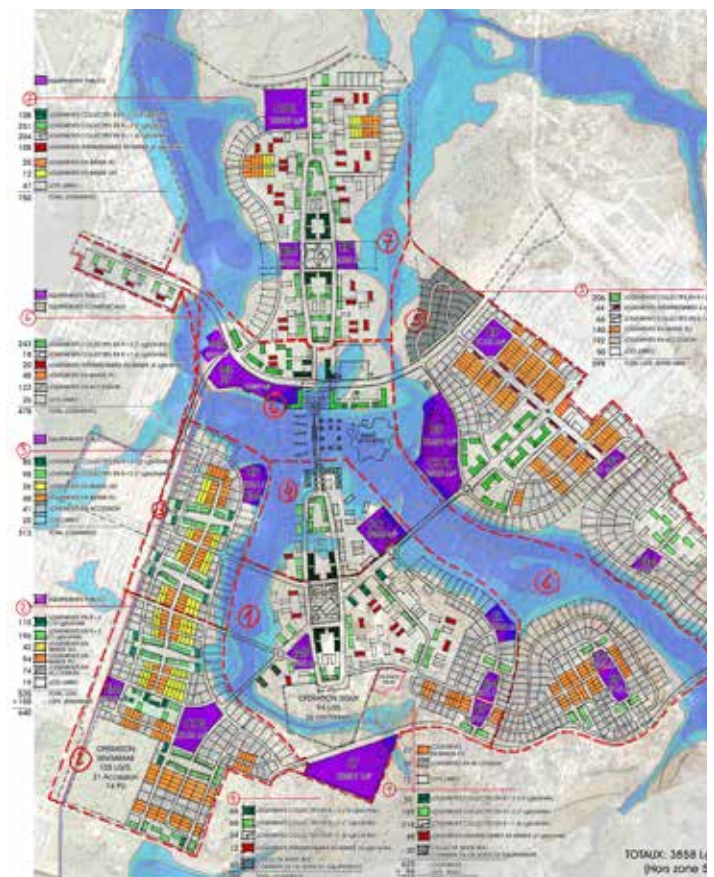Introduced in 2007 and validated in 2009, the Saint-Maurice ZAC is one of the largest public development programs in France. The city of Saint-Laurent has appointed the Northwestern French Guiana Private-Public Partnership Firm (SENOG) with the development and allocation of a 262 ha space. The construction of 3,858 housing units by 2020 is planned for the area. The housing programs are entrusted to the French Guiana Real Estate Corporation (SIGUY) and the Saint-Martin Private-Public Partnership Firm (SEMSAMAR).

The Saint-Maurice ZAC aims to connect the Ecoles and Sables Blancs neighborhoods. The latter is developing along the existing roadways, without a real urban strategy, hence the lack of facilities and poor access. As a consequence, many students go to school by the paths between the two neighborhoods. Therefore, the Saint-Maurice ZAC proposes to develop cross-sectional roads to allow for direct connections. In addition, the project hopes to take a reflexive approach, accompanied by an urban strategy.

Within these urban forms, the plan for this future neighborhood takes into account the constraints tied to the flooding of creeks, the creation of new demarcations, and the departure from the orthogonal structure of the Ecoles neighborhood. The project includes two central areas. One to the south with a market place and the other to the north with a church. This new neighborhood also aims to house various educational, learning, sports, and recreational facilities.

Nonetheless, numerous pockets of informal urban development are present across the ZAC and its periphery. The neighborhoods of Chekkepatty and Jean de la Fontaine are on the edge of the ZAC and adjoin the areas currently being leveled for construction. The overflowing informal urban development questions the legal status of the lands of these establishments and the expansion of the urban system and its services. These pockets of urban development disrupt the temporality of the land development, with lengthened delivery times and the disruption of work for project collaborators. In order to allow for the continuation of the ZAC's development, but also to understand the informal urban practices underway, GRET, in partnership with AFD, has conducted a population study. Through the description of ongoing situations, the need for facilities, and social orientations, this study has illuminated how urban development is approached by the different neighborhoods, such as the Jean de la Fontaine area. Different scenarios have emerged to nourish other types of strategies by those involved in regards to land development and planning.


Map of Saint-Maurice ZAC.
Source : Brassié Architectes et SENOG

LOCAL DEVELOPMENT PLAN

The Local Development Plan is the main urban development plan at the commune level. It indicates the directions to be given for land use. The PLU of Saint-Laurent, approved in 2013, includes sections on the initial state of the environment, an urban analysis based on population, facilities and infrastructure, and decisions relating to the establishment of a Land Use and Sustainable Development Project (PADD).

PADD is a «project» component of this regulatory plan. It includes four objectives: guaranteeing a controlled and consistent development of the territory, reinforcing the appeal of the commune and developing the economy, promoting quality of life and a preserved environment, and furthering mobility and movement.

Nonetheless, the new PLU still does not contain an Urban Transport Plan. This planning tool determines, within the framework of the Urban Transportation Boundary (PTU), the organization of moving people and goods, traffic flow and parking.

All modes of transportation are concerned, which translates into the establishment of actions favoring alternative modes of transportation rather than individual vehicles (VP): public transportation (TP), two-wheeled, walking... Each urban transport plan must also maintain an environmental evaluation component. It is a lever for actions aimed at economizing energy and limiting greenhouse gas emissions (French, «Facteur 4»), and could contribute to limiting the impacts of movement on green infrastructure.

Abstract of the Local Development Plan, 2012. Source : Mairie de Saint-Laurent du Maroni

AVAP

The Architecture and Heritage Development Parks (AVAPs) aim to give communes the skills to manage and promote their heritage. AVAPs also aim to accompany the evolution of heritage districts. They are a recommendatory tool, in service to a project of protection and sustainable development.

In Saint-Laurent, the old city is engaged in the recognition of its heritage but also in its uses as a project generator. A project for an AVAP is underway along the perimeter of the colonial city center. Yet for all that, its validation and implementation are still being negotiated. A consensus is difficult to find between heritage preservation and the required flexibility needed to facilitate entrepreneurship.
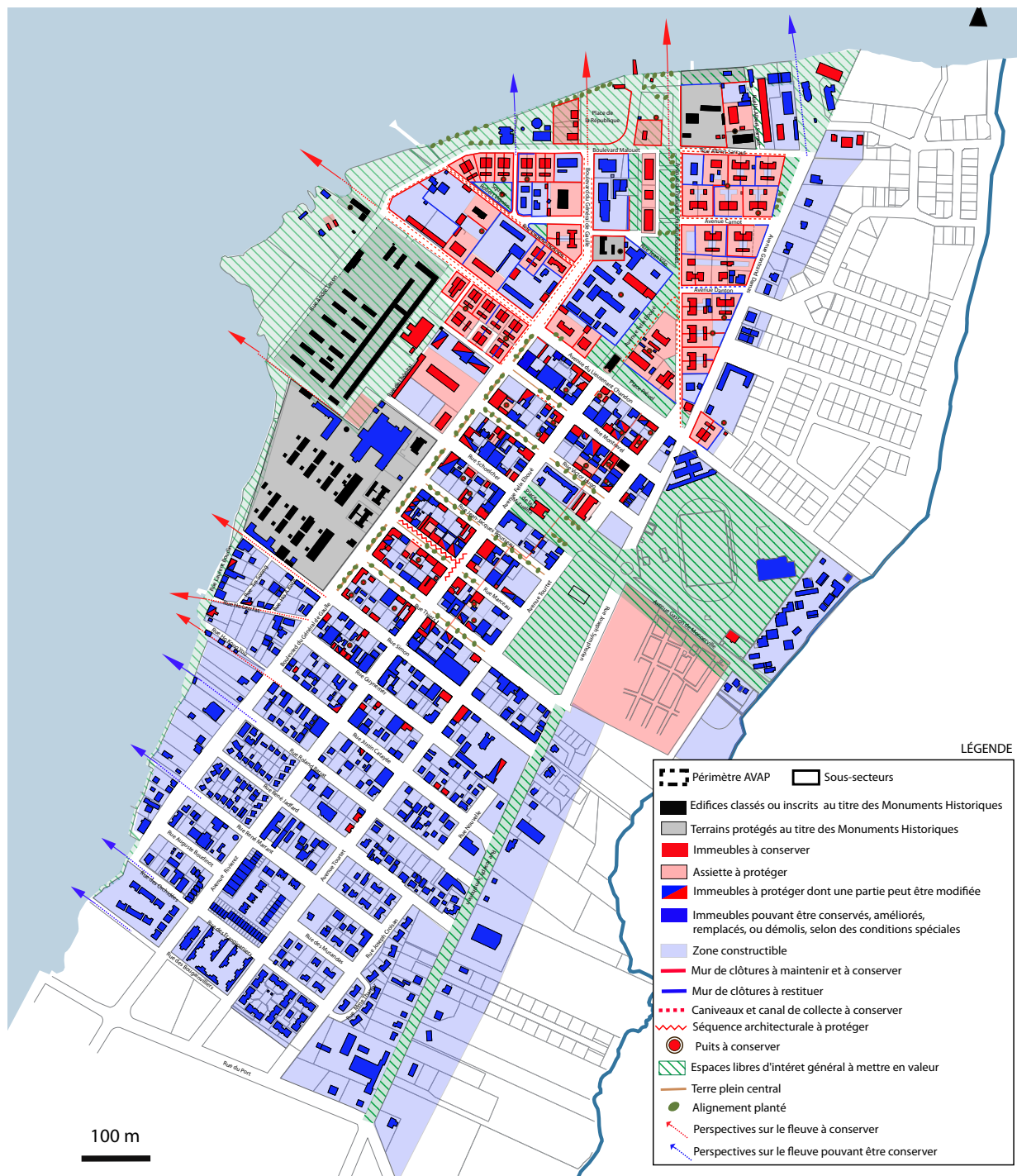
AVAP map of Saint-Laurent du Maroni, 2013. Source : DAC et Mairie de Saint-Laurent

PLAN PROGRAMME 2035

The Plan-Programme, piloted by the commune in partnership with the EPAG, aims to define and map the needs and challenges of the commune's development by 2035. Studies are underway to supplement the data already collected in order to better identify and define the constraints of land development, especially through topographic, orthophotographic, and hydraulic system mapping. The goal is to equip the commune with an operational tool for urban management.

The «Plan-Programme» tool serves to:
- create a precise diagnosis of the territory: its geographic and demographic components, its political orientations (the projected role of Saint-Laurent du Maroni at the various territorial levels) and its current projects (at the time of the study or those in the process of being developed, both private and public).
- structure and validate a development project aimed at 2035, on a scale of 1:40M.
- map, on a scale of 1:5M, the major components of the urban development (transport, public spaces, transferable lands for housing and activities, public infrastructure...), while taking into account the technical dimensions (development of networks in terms of hydrography, topography, geotechnics, and the actual occupation of the territory).
- put in to place conditions for the upgrading of this said plan, so as to take into account evolutions within the territorial components (data, political orientations, projects).

The city of Saint-Laurent du Maroni hoped to form a partnership with the EPAG to produce this tool. Therefore, this partnership took the form of a procurement process, concluded in 2012. The diagnosis report was completed by the research consultancy group Quadra in 2014.

Various constraints are juxtaposed and greatly reduce the areas that can truly be exploited, in terms of:
- Hydraulics (presence of waterways, the breach of floodplains...)
- Geotechnics (clay soil)
- Topography (steep downslope)
- Environment (presence of a unique biotope)
- Social (presence of non-landholding occupants)
- Various utility easements (sanitation and waste treatment)

During the development of this analysis, the following surface area demands were identified for the development of Saint-Laurent in 2035:
- Housing (including local facilities): approximately 3,000 gross hectares (approximately 30,000 housing units)
- Economy: 1,000 gross hectares
- Structural facilities: approximately 500 gross hectares
- Agriculture: several thousand hectares

Therefore, the commune needs to mobilize more than 5,000 ha to ensure a consistent urban development. Three scenarios were proposed to city hall. It was that of a compact-city that got the attention of the municipal staff.

PPRI

The Flood Risk Prevention Plan (PPRI) is a tool, issued by public authorities, intended to evaluate the zones that could be subject to flooding and to propose technical, legal, and human solutions to contend with them. Currently, a PPRI is in the process of being developed and validated, between government services (Department of Environment, Land Development, and Housing; in French DEAL) and the commune.

This is a strategic, cartographic, and regulatory tool. It defines the rules of construction in areas susceptible to flooding. The demarcation of zones is based on past flooding. And it is for this reason that these tools are often put into question, especially looking forward in regards to climate change.

Many neighborhoods have been constructed in the immediate proximity of the river. The consideration of this climatic risk in future urban developments is going to have implications on the localization and construction of homes as well as on their architecture. To what extent can the risk of flooding create a resilient urban project, where homes and public spaces can respond differently to it?
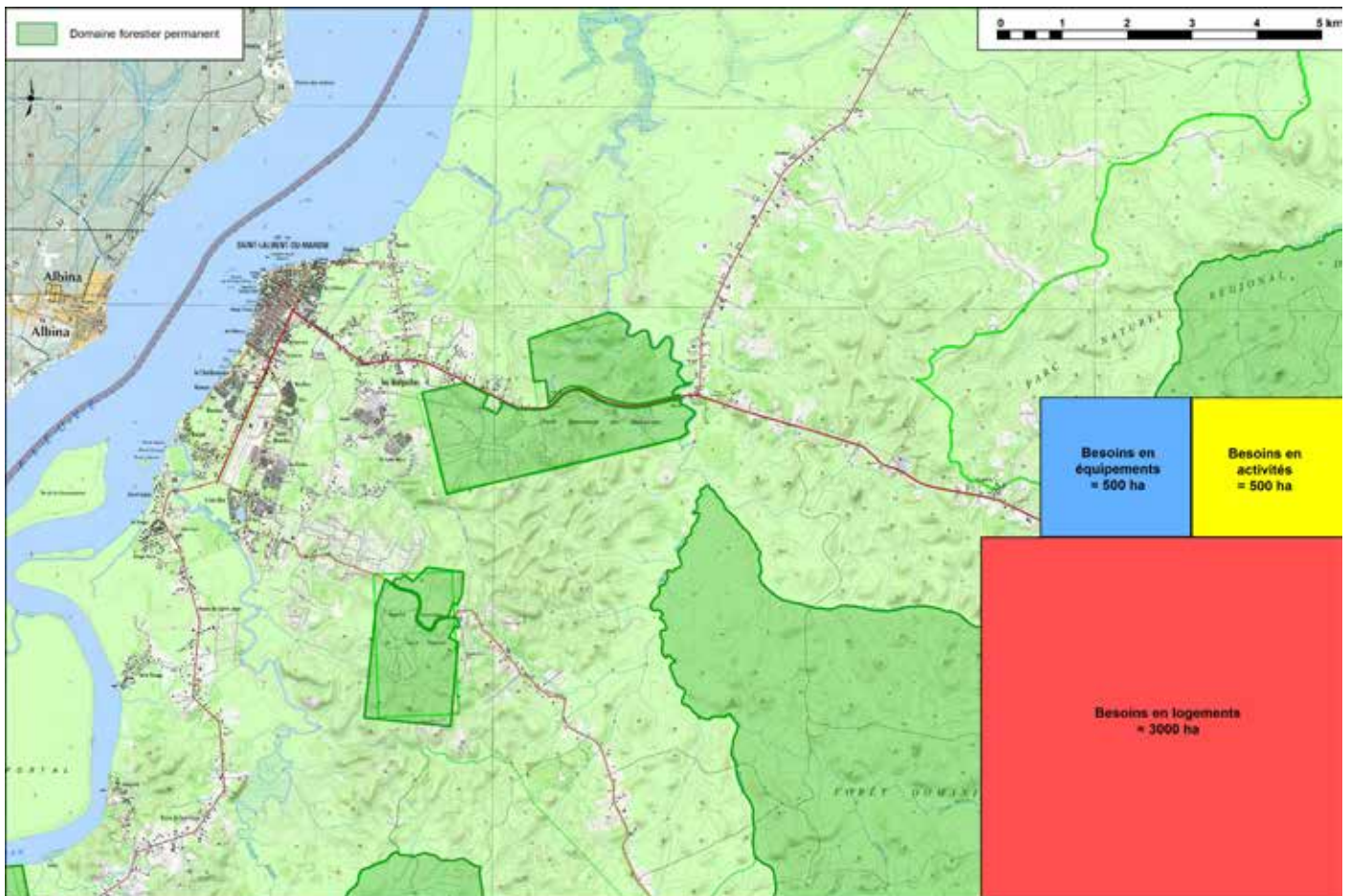
Estimation of the surfaces area for urbanize.
Source : EPAG et Mairie de Saint-Laurent
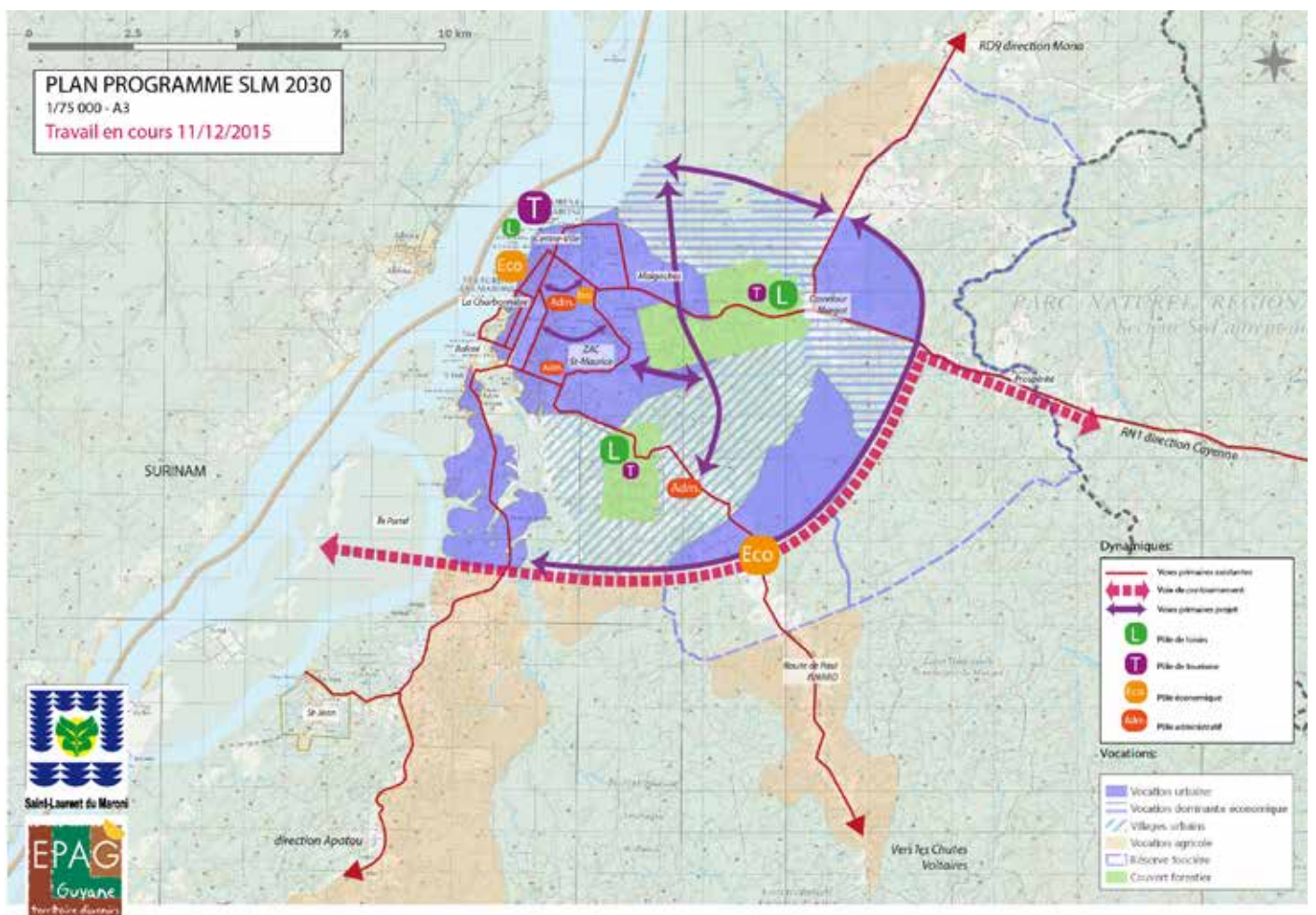
Plan Programme, work in progress. Source : EPAG et Mairie de Saint-Laurent

URBAN RENEWAL PROJECT (PRU)

An urban renewal project is going to allow for the «re-qualification» of various sectors of the city. The framework memo by the National Agency for Urban Renovation (ANRU) defines the sociological, economic, demographic, and urban context of the territory. It also provides an outline for governance, working budgets, objectives, and urban intentions. These guidelines were established on the idea of a connected city and intended to serve as a catalyst for other programs stemming from the city's development project. The creation of a protocol is being negotiated with the ANRU.

The identified sectors of the city are:
- from the cemetery to Raymond Tarcy high school. The development of this sector is necessary to connect the projects currently in construction for the future CHOG and the IV high school. Improving and repairing inter-neighborhood connections will be made through the restructuring of the main roadway.
- from Raymond Tarcy to the Margot carrefour. This sector is the subject of minor interventions on the public space to allow for the emergence of a recreational tourism center.
- The Margot carrefour. The moderate interventions on this sector aim to promote the conditions for economic development, through an attractive territorial showcase.

This project of urban renewal includes challenges concerning urban development, economic development, and living conditions.
- Urban development: Repair the city and existing neighborhoods. Promote the urban opening-up of priority neighborhoods and create conditions for mixed-usage there. Take into consideration the needs and usages of residents for urban developments.
- Economic development: Reinforce the economic appeal of the territory. Engender an atmosphere of innovation and excellency by relying on endogenous and locally unique dynamics.
- Living conditions: Promote access to public and local services. Promote the flow of residents and information. Adapt interventions in accordance with the diversity of situations.
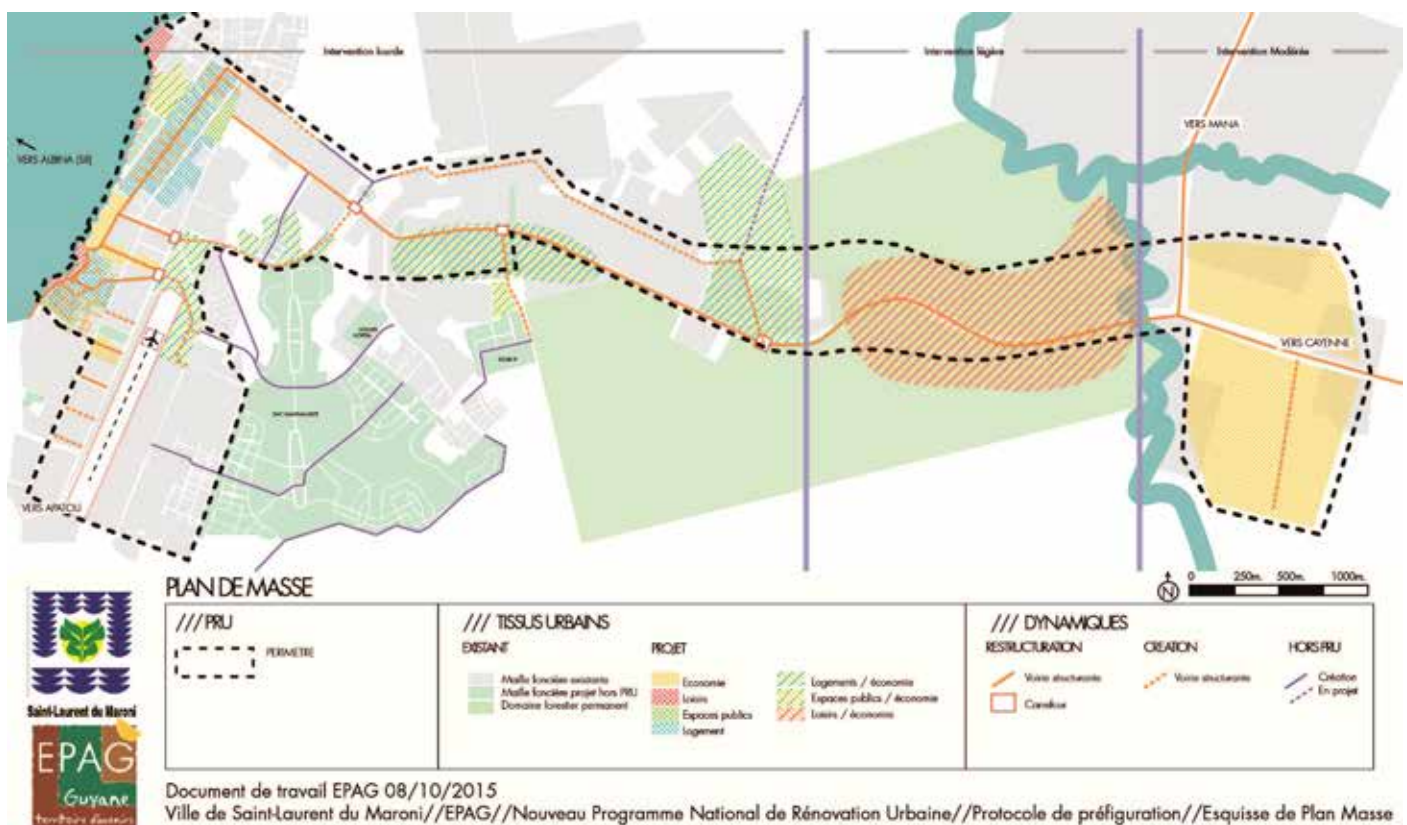

Map for the PRU, 2015, work in progress. Source : EPAG, Mairie de Saint-Laurent et NPNRU

REGIONAL PLANNING AND DEVELOPMENT SCHEME (SAR)

This is a governmental scheme aimed at organizing the coherence of the French Guiana territory. Based on dynamic and prospective studies, the SAR offers directions for the industrial project plans across the different regional areas, according to their various territorial issues. The Agency for Urban Planning and Development in French Guiana (AUDeG), by producing this scheme, plays as much an observational role over the territories as one of expert consultant in engineering and territorial strategy.

Produced for a target date of 2030, the SAR therefore calls for the bolstering of Saint-Laurent's role as the «nerve center of the west,» an attractive hub in line with Cayenne and open to a reinforced cooperation with Suriname.
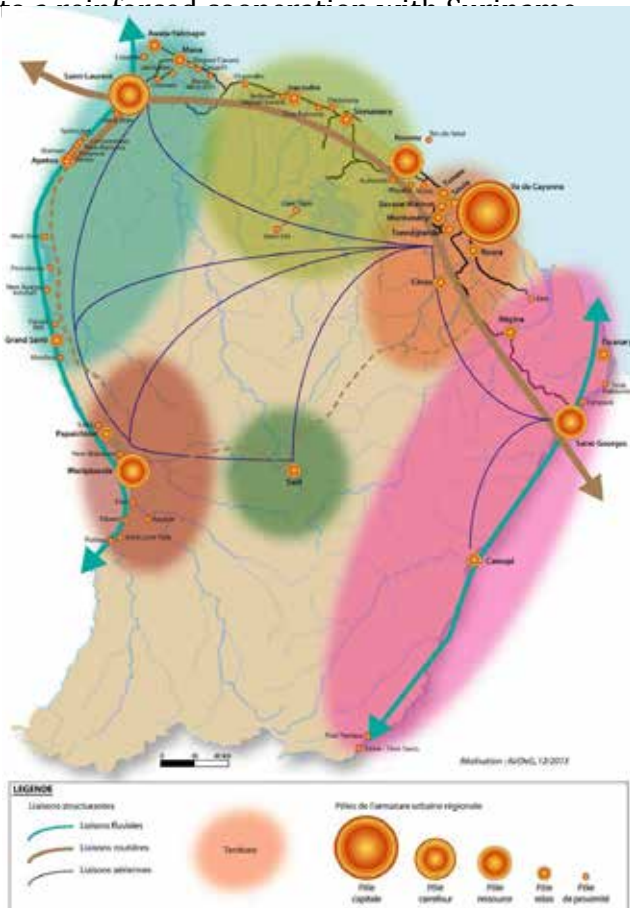
Regional Planning and Development scheme, 2014
Source : CTG, AUDeG

REGIONAL INTEREST OPERATION

A National Interest Operation (OIN) is, in France, an urban planning program in which a legal status is applied due to the government's majority interest. The government retains control of urban planning policies within these zones.

On April 1, 2016, the ministers in charge of urban planning and overseas territories announced the following measures, in order to act quickly and to immediately create the conditions needed for the successful launch of an OIN:

- Preliminary urban planning studies for projects will be financed by an increased budget, allocated by the French government to the French Guiana department of housing, of 2M € starting in 2016, and approximately 4M € for 2017.
- Secondly, the French government will carry out the transfer, free of charge, of the government-held lands included in the area concerned, approximately 1,700 hectares, to the EPAG who will manage the future OIN.

At the request of ministers, the prefect of Guyana will present the report recommendations to the elected officials involved in the proposed operational areas before the finalization of the decree creating the OIN and its publication scheduled for the summer of 2016.

IN CONCLUSION

While this list may seem exhaustive, it is only because it reflects the numerous regulatory, technical, and strategic tools in urban planning put into place by the different local stakeholders. The urban transition of Saint Laurent will be accompanied by a constant and creative dialogue between these development tools. The approaches and projects by these actors will allow for a projection beyond a call for response, urgency, or necessity.

2. AN EXERCISE IN PROSPECTIVE

«We need a lighthouse to guide us.»
M. Léon Bertrand, Mayor of Saint-Laurent du Maroni

Why prospective?
In 44 years we will be in 2060, 44 years ago we were in 1972. The future, looking at the past, is not predetermined in advance. It is open to many possibilities. By 2060, countless scenarios are conceivable: an independent French Guiana, the fall in birth rates, the end of oil, the construction of a railway line across the Guiana Shield, a switch in the economic paradigm, a Bushi Nenge university, etc.
There is an obligation to reappropriate the future, in order to escape from the daily state of urgency across the territory of Saint-Laurent. The target date of 2060 serves to construct visions for the long term, in order to open the fields to that which is possible and desirable. This work of foresight should come to enlighten the decisions of local actors and build shared directions for all, including neighboring Suriname.

vDream, fantasize, make dreams
The reflection for so distant a future makes it possible to imagine visions of the future by «dreaming.» It is essential to create these fantasized futures that will eventually be vectors of strategy. It is imperative for this fantasy to draw its essence from the present territory, local trends revealed by weak signals. The imaginary should be translated into advocacy work, carrying new interpretations to the territory. The many illustrations, maps, photographs, diagrams... provide new keys for individual understanding and also allow people to collectively share the same vision.

«The future does not plan, it prepares.»
Fernand Braudel

«Neither prophecy, nor prediction. Foresight does not aim to foretell the future —revealed to us as if it was something already decided — but to help us construct it. [Foresight] therefore invites us to consider it as something to do, to build, rather than as something which should already be decided and in which only unraveling the mystery would be appropriate.»[1] Hugues de Jouvenel
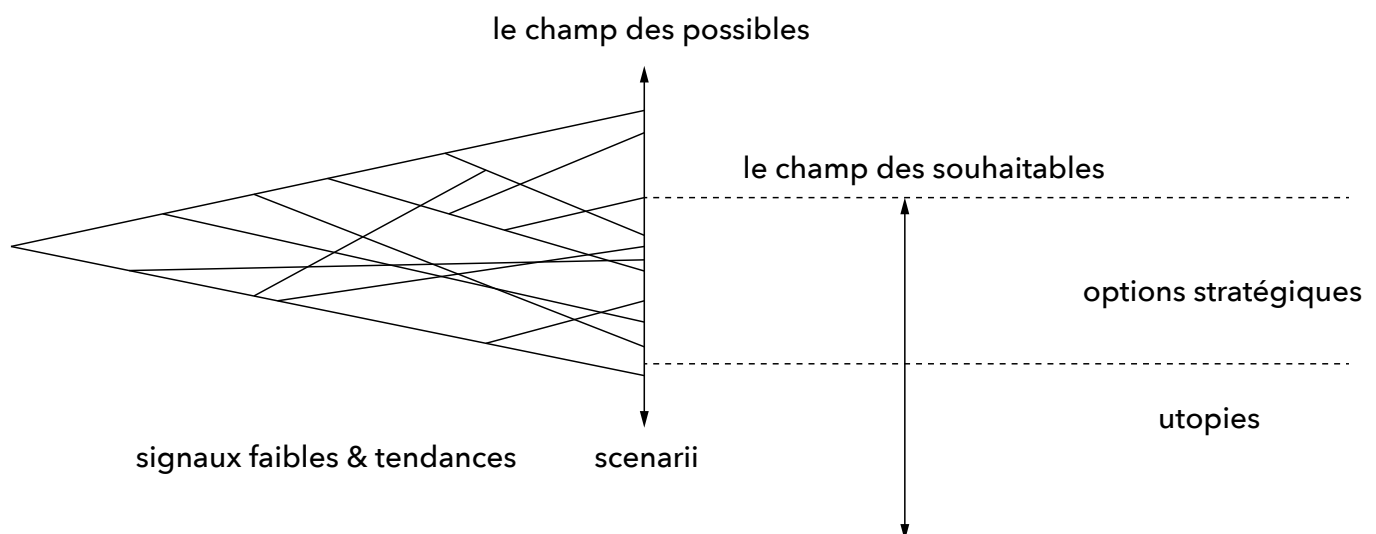
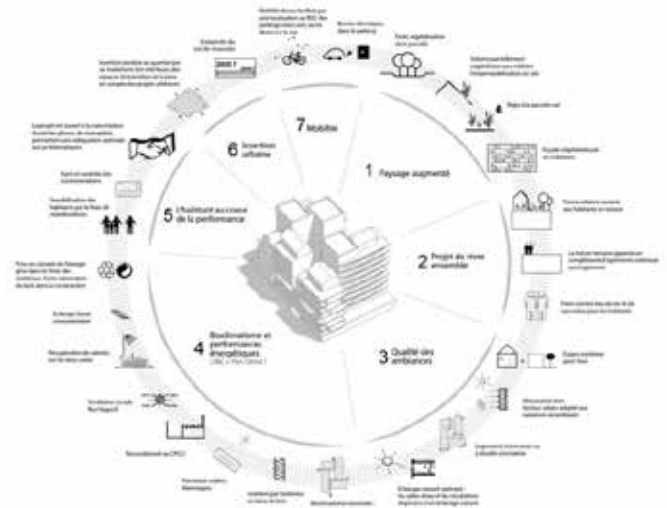Prospective approach, according to Hugues de Jouvenel.

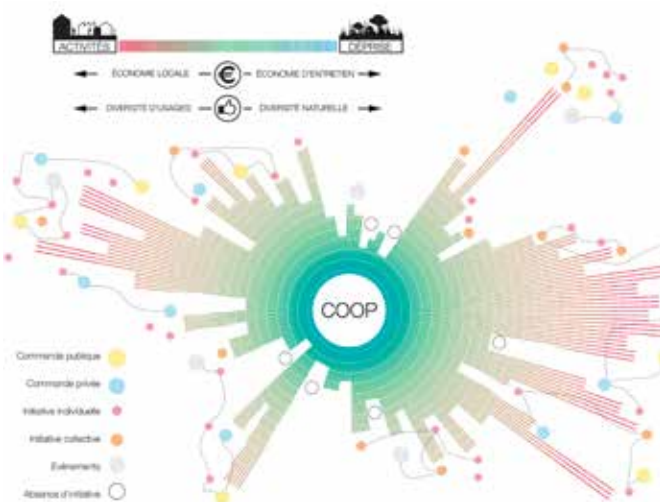1. JOUVENEL (de), Hugues, Invitation à la prospective in Futuribles, 2004

Paris imagined by Albert Robida, 1883.

CHANDIGARH, Master Plan, Le Corbusier, 1951
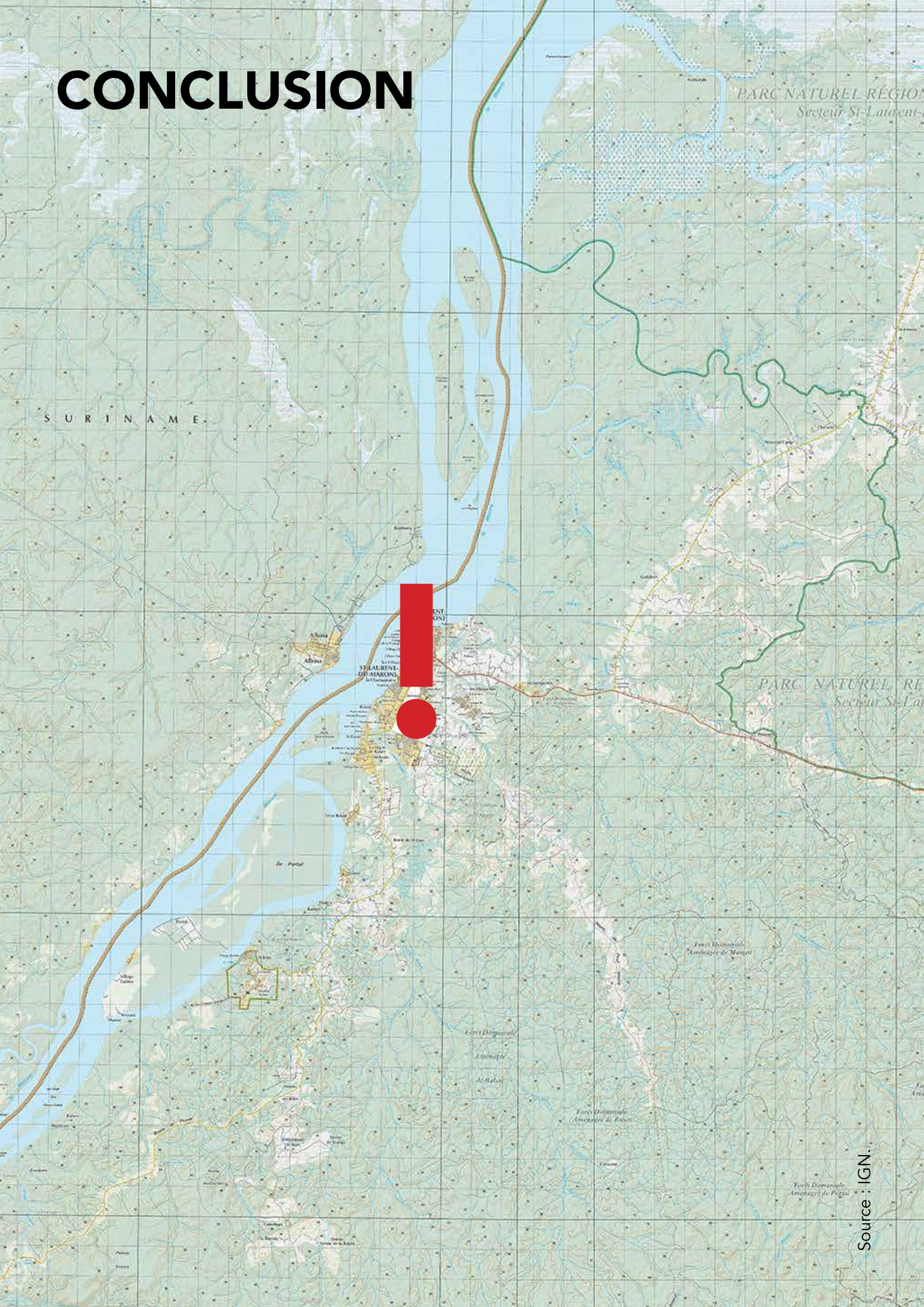

Systemic approach. Source : Franck Boutté

Europan 13, Déprise project, Marne-la-Vallée.
Source : Europan 13

Cordoba alternative mapping.
Source : Iconoclasistas

CONCLUSION

Saint-Laurent du Maroni is composing a new urban horizon, where resilience is king. A resilience to a complex past, a resilience to an omnipresent nature, a resilience to strict regulations, a resilience to situations of crisis.

The high population growth underway in Saint-Laurent du Maroni is the opportunity to initiate an urban transition that is alternative and endogenous. Facing the prevailing discourse of «catch-up,» according to national criterions, Saint-Laurent has oriented its efforts towards emergency situations: the integration of refugees from the Surinamese war, the resorption of slums, the construction of housing and educational institutions... So many are the situations that need responses in bursts, but which do not enroll in any vision, except that of the present moment. From now on, it is not in a state of urgency that territorial actions must be situated, but one of perspective, that of 2060.

Foresight allows for the tempering of political debates, to put short-term obstacles to the side in order to make new perspectives emerge. Between the emergence of weak signals and the transformation of social structures, foresight provides the ability to see other ways of designing, collaborating, developing, and animating the territory.

Saint-Laurent du Maroni must face up to numerous difficulties: a difficult control of land areas, limited municipal resources with rising expenses, a poorly trained population, the lack of economic drivers, a population whose needs are growing... All of these elements seem to be assimilated in a state of breakdown, a strike against a system that never really took hold. It is important to look at these elements differently, and understand which ones are blocked and which ones are mechanisms whose inner workings need to be changed, in order to create a direction shared by all local stakeholders.

This territorial vision that is to be created must be established with regard to features unique to Saint-Laurent: an extremely young population, a border and river town, a historic heritage, an immense forest coverage thats holds a reservoir of diverse resources, a city built and designed by its inhabitants, cultural knowledge that has been passed down for ages and local exchanges between communities... Many are the elements that could jumpstart an urban transition over the long term.

INTERVIEWED

Chronologic order :

> M. Antoine DAUBLAIN, Chargé d'opérations et de développement urbain, EPAG.
Entretien réalisé le 25 février 2016.
> Mme Marie-France NAÏSSO, Responsable de l'antenne Saint-Laurent du Maroni, EPAG.
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> M. Cyril CHEVALIER, Chargé d'opérations et de développement urbain, EPAG.
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> Mme Myriam SOUPRAYEN, Directrice de l'Urbanisme, Mairie de Saint-Laurent du Maroni.
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> M. Myrtho DUZANNE, Service de l'instruction des sols, Mairie de Saint-Laurent du Maroni.
Entretien réalisé le 9 mars 2016.
> M. David JURIE, Directeur des affaires culturelles, du patrimoine (CIAP) et de l'amination.
Entretien réalisé le 14 mars 2016.
> Mme Juliette GUIRADO, Directrice de l'AUDEG.
Entretien réalisé le 18 mars 2016.
> Mme Bénédicte FJEKE, Adjointe au Maire chargé des questions foncières et relations avec les autorités coutumières ainsi que Cheffe coutumière du village Terre Rouge.
Entretien réalisé le 22 mars 2016.
> Mme Anne-Laure DOBROS, professeur d'histoire-géographie et membre du conseil scientifique du CIAP
Entretien réalisé le 23 mars 2016
> M. Gilles VIGNES, Directeur de l'agence ouest de la SIGUY
Entretien réalisé le 3O mars 2016
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Entretien réalisé le 30 mars 2016.
> Mme Vanina LANFRANCHI et M. Didier URBAIN, Association Atelier Vidéo et Multimédia, AVM.
Entretien réalisé le 31 mars 2016.
> M. Léon BERTRAND, Maire de Saint-Laurent du Maroni.
Entretien réalisé le 5 avril 2016.
> Mme Lise GAMBET, Chef du service veille et planification territoriale, CTG.
Entretien réalisé le 6 avril 2016.
> M. Patrick ERRE, Responsable de l'agence ouest de la Chambre d'Agriculture de Guyane
Entrtien réalisé le 06 avril 2016
> M. Alain FOURMONT, Directeur commercial, SIMKO.
Entretien réalisé le 7 avril 2016.
> M. Xavier MEMIN, Professeur d'histoire géographie au Lycée Lumina Sophie.
Entretien réalisé le 11 avril 2016.
> L'équipe des médiateurs de la ville : Alain, Antoine, Carmen, Etienne, Irène et Roberte. Mairie de Saint-Laurent du Maroni.
Visite de quartiers réalisé le 12 et 13 avril 2016.
> M. Marc ESPOSITO, Chargé d'opérations et de rénovation urbaine, EPAG.
Entretien réalisé le 14 avril 2016.
> Les lycéens de la 1ère L du Lycée Lumina Sophie, dans le cadre d'une intervention de 2h en cours d'histoire géographie.
Intervention réalisée le 15 avril 2016.
> M. Gérard SAEZ, Directeur, SENOG.
Entretien réalisé le 28 avril 2016.

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