



INITIATIVES POUR L'AVENIR
DES GRANDS FLEUVES
INITIATIVES FOR THE FUTURE
OF GREAT RIVERS



KOUROU (Guyane)
— VILLE SPATIALE —



MARONI AND OYAPOCK,
border rivers

MARONI AND OYAPOCK, BORDER RIVERS



It was on 5 August 1498, during his third voyage that Christopher Columbus sailed along the coast of Guiana. One of his captains, Vicente Yanez Pinson, landed a little later, in summer 1500. A storm had thrown his ship onto a sandbank.

Thirty thousand Amerindians were presumed to be living at that time in this vast territory north of the Amazon.

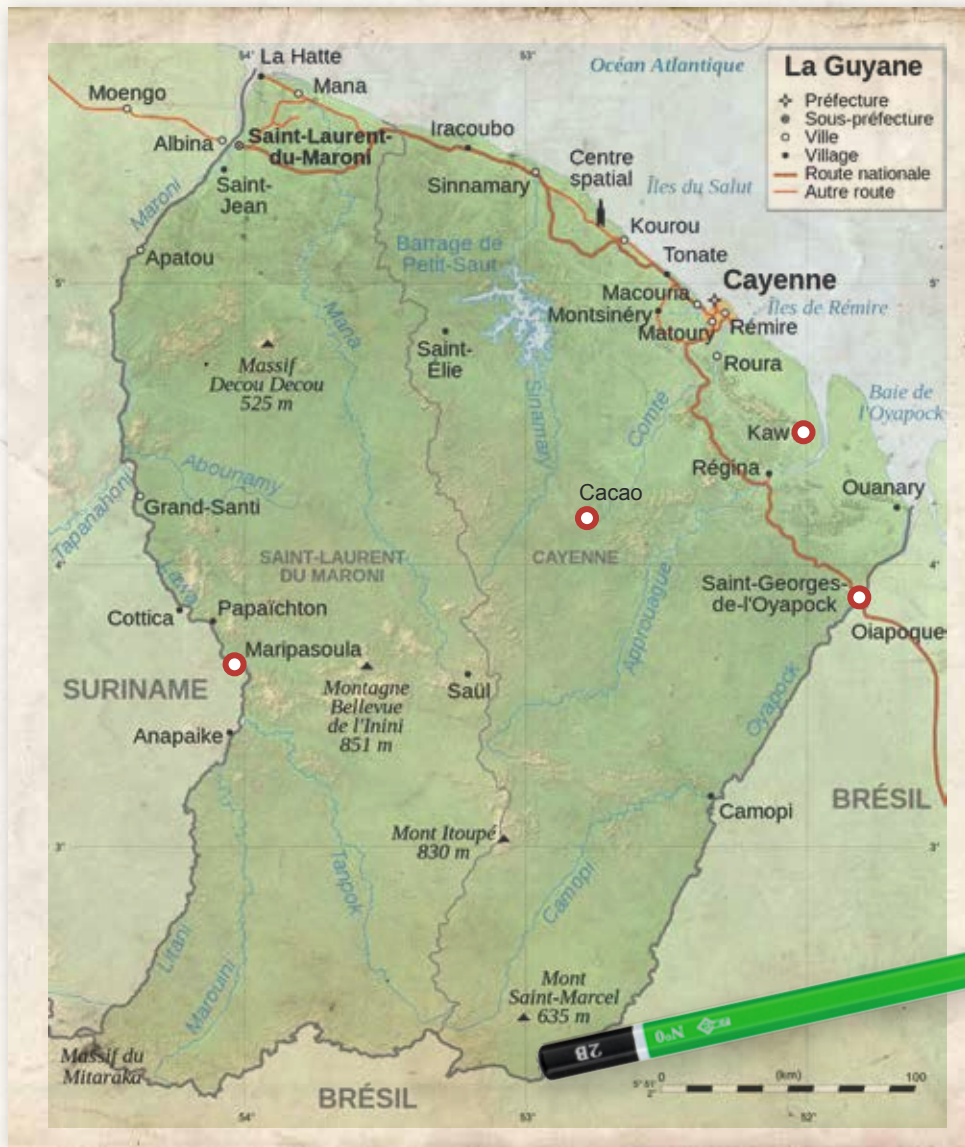
A few decades later there were only a few thousand, decimated by the violence of the conquistadors and the diseases they imported. To be fair, the Europeans died in swaths, too, victims of the climate and the animalcules that prospered there, as varied as harmful.

Then followed four centuries of unfruitful attempts to set up a colony. The disaster of Kourou was to remain in the annals.

Fifteen thousand French settlers arrived in 1764, mainly from Alsace and Lorraine, lured by the promise of immense fortunes won quickly. But all that awaited them was dysentery, yellow fever and syphilis. Twelve thousand of them died within a few years. The survivors took refuge on an island they called "Isle du Salut" (Isle of Salvation).

During this period the very Christian powers battled constantly to win control of this colony, which finally fell to France. The borders were decided by two arbitrations, one by the Czar of Russia which chose the Maroni River as the western boundary, the other was concocted, surprisingly, by a Swiss commission. It chose the Oyapock as the eastern boundary.

Brazil lay on the other side.



ROUTE PLAN

The Oyapock River

The Maroni River

Maripasoula

Cacao

The Kaw marshes

French Guiana was to experience great adventures, not all them sweet.

Slavery, which allowed the plantations to develop.

The convict camps, decided by Napoleon III. The convicts and their forced labour ensured the transition to develop the territory. The terrible report by Albert London led the administration to finally decide, reluctantly, to close them (but not before 1946).

Successive gold rushes to the many rivers where the metal is present. From 1910 to 1930, it is thought that 15,000 prospectors tried their luck in the deep forest.

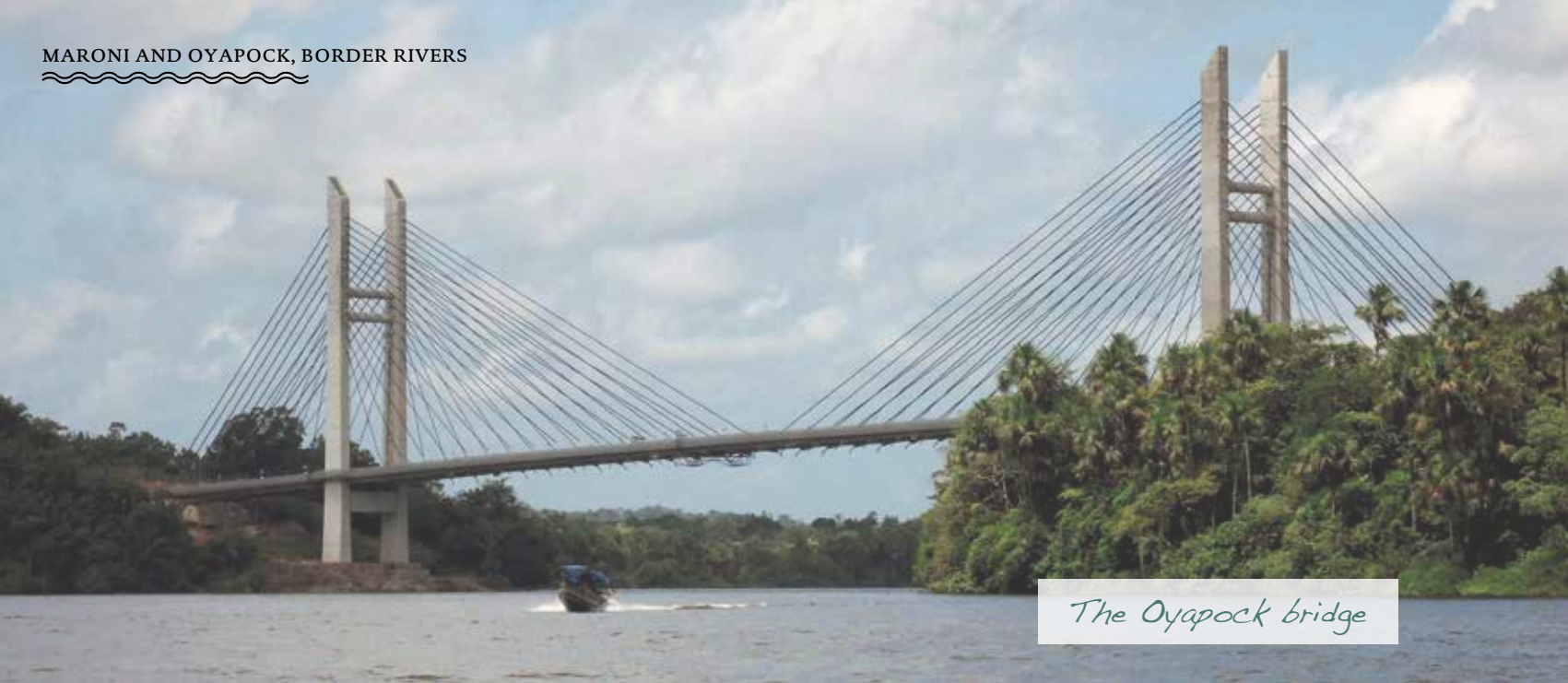
Finally, there was the conquest of space.

When Algeria became independent in 1962, it was necessary to replace Colomb-Béchar. France had to find a new rocket launching base as close as possible to the equator.

General de Gaulle chose Kourou, the very site of the disaster of two centuries before. To date, more than 500 hundred rockets, some named Véronique and Ariane, have been launched in the framework of what is now a European programme.

A hot (average 26°C) and wet (rainfall : 2,900 mm a year) country, covered with forests (98%), the beautiful and luxuriant Guiana has no lack of water. Besides the two rivers forming its frontiers it is crossed by countless others.





The Oyapock bridge

ONCE UPON A TIME THERE WAS A BRIDGE

The Oyopock is modest compared to the other giants we've seen: it is 400 kilometres long and its average flowrate does not exceed 850 m^3 a second. But during the rainy season, from February to June, this figure increases to 3,500. On the contrary, around October, the bed of the Oyopock is almost dry, with a flow rate of only 71 m^3 a second!

A border river, all kinds of traffic pass on

the Oyopock : gold, immigrants, gasoline. For those keen on nautical thrills, we recommend the "Maripa jump", a series of quite dangerous rapids. But the leading actor is the bridge.

A magnificent bridge with cables and two 83 metre high towers supporting a span of 378 metres ; two lanes, each 3.5 metres wide ; a headroom of 15 metres.

It's a marvel of a bridge, I tell you!

It was completed years ago but never inaugurated, so no traffic crosses it except for a few dogs.

Let's go back in time, to 1997.

Jacques Chirac was the President of France and Fernando Henrique Cardoso watched over the destiny of Brazil. The two Heads of State decided to bring the two countries closer together. What better symbol than to build a bridge over the shared border?

No sooner said than done. The site was chosen, between Saint Georges (France) and Oiapoque (Brazil).

Calls for tenders were launched, contracts signed, plans drawn, and concrete mixers started.

And here we are with the bridge foreseen.

It was then that the leaders of both countries began to think. Do we really want a bridge? Developing the regional economy by stimulating trade, who could not fail to back such a laudable goal? However, wouldn't the bridge facilitate the TRAFFIC that the functionaries of both sides, especially the French one, have so much trouble in controlling? And so, year after year, the inauguration has been postponed.

During this time the jungle has regrown and the roads leading to the bridge forgotten. What remains of the works has vanished under the vegetation. It is said that the bridge is rusting. Maybe through impatience! Nicolas Sarkozy preferred not to broach the question when making an official visit to Brazil. François Hollande displayed the same prudence last spring.

When holding the last joint cross-border commission, Brazil and France solemnly and irrevocably chose a date for cutting the ribbon this year, in August 2016. But according to the latest news, the celebrations have been pushed back due to outstanding diplomatic, technical and security problems.

It should be added that right now, Dilma Rousseff has more pressing problems.

During this time, dozens of dugout canoes pass back and forth between the two banks.

Why deprive these brave ferrymen of their trade?

A FRONTIER BETWEEN TWO WORLDS

The Maroní flows at the western extremity of French Guiana.

It is rather more imposing than its small colleague to the east.

Length: 610 kilometres. Watershed: 65,000 km².

Average flow rate: 1,700 m³/s. Highest flow rate in May: 3,500 m³. Low flow in October: 380 m³.

This communication route is crucial despite the large number of "jumps" (rapids). There are nearly 200 of them and some are dangerous. But in such a forest it is difficult and terribly expensive to build and maintain a viable road network.

Seen from the sky, the Amazonian forest looks like a giant display of broccoli, dotted with orange coloured stains: the sites of clandestine gold panners. According to the Prefect, they are only five or six thousand, following the energetic campaigns carried out against them. According to other sources, their number exceeds 15,000. Once thing is sure, they degrade the

forest and poison the water by pouring mercury into it. Posters with photographs adorn all the town halls of Guiana, warning pregnant women against eating certain foods and fish, as the flesh of the latter contains mercury, a danger to the child they carry.

After a flight lasting an hour, we arrive in Maripassoula, 12,000 inhabitants, and the main town of this inner region of Guiana, located on the bank of the river and the border with Surinam. A powerful impression of somnolence strikes one at the airport, the word used locally. Perhaps the town suffers from sleeping sickness, despite my friends at the Pasteur Institute swearing to me that they have never come across the least tsetse fly.

The explanation for this general siesta was given to me by the owner of the town's only restaurant. "You came three days late. You would have seen plenty of activity".

Looking at my surprise, he explained.

"On the first Thursday of every month, you'll see a crowd in front of the post-office. People go to collect their minimum social security cheque.



The good fish ...



... and the bad fish ...

Thanks to this windfall, the shops are full. Then the sleep comes until the next handout". Is that why the French side of the river is empty whereas the other side is lined with shops, hotels and canteens?

The man advised me to go and see.

"There's nothing easier. Ten minutes in a dugout canoe. What's more, they're free".

"But who finances all this? France, the regional council?"

"You're off the mark. A gift from the Chinese".

They own a good share of the shops in Suriname ! Those people know how to attract trade".

So I went to Suriname. Far from me the desire to generalise. I knew nothing about this country. All I can say is that the bustling activity that reigns here on the other side of the Maroni, opposite the French apathy, is driven only by trade. They sell everything here. Anything that could satisfy the needs of a clientele mainly composed of gold panners. Naturally, women are sold, of all ages and types. Food is sold,



Crossing Maroni to Suriname

starting with an impressive range of alcohols. All the equipment necessary for life in the forest and prospecting for gold is sold. Life is merely a market, its avidity and ferocity, but also its dynamism. The two extremes meet, separated only by this good old Maroni.

On one side France, a State which remains a vein of providence despite its increasing poverty. And an administration that seeks to uphold the law, as testified by the military base just downstream.

On the other side of the river reigns the law

of the strongest and lowest bidder. Shameless and without redemption. Woe betide the needy ! Let them get on with it on their own.

Is there any choice in this part of the world, between soporific dependence and the wild west that turns men beastly?

For all that, in this general torpor, Maripassoula is the home of a surprising activity, that of the entomologists of the Pasteur Institute of Guiana. Their legitimacy springs from the field. This is asserted enthusiastically by the director of the Institute when he offers to take me with him. His eyes gleam with the idea of adventure that awaits us. I'm not sure I share his enthusiasm. Although my head, which has always been too big, has little chance of shrinking with Zika virus, I have direct knowledge of Guilaín Barré syndrome. It struck my mother. Seeing her paralysis advance day by day was hardly a pleasant experience. But let's calm down, I'm protected for the time being. These pioneers in the combat against vector borne diseases are here because the Pasteur Institute in Cayenne



Passionate scientists in the service of the Pasteur Institute



P3 Laboratory



Breeding Aedes

is the National Reference Centre for Malaria. That is to say that it must gather all the data known on the presence of this disease in Guiana. Thus it supplies data to the World Health Organisation. It is also an EPRUS, the French acronym for Emergency Health Response Establishment, a network set up in 2007. Dengue, Chikungunya and Zika, not to forget flu viruses; always recurring, always threatening.



Collection in breeding grounds

Relentlessly, these women and men scour the terrain to track the parasites and diseases, and to draw the attention of the population to the risks they run.

During their hunt for breeding grounds, our entomologists took the direction of an annex of the school. In the midst of the Zika epidemic, media hysteria and an increasing number of prevention campaigns, one can only imagine that premises run by the State Education department would be well-maintained. However, the experts were as delighted by their findings as disappointed.

They were shocked by their initial examination. Despite informing and over-informing the population, it draws no practical conclusion and makes no change in its behaviour. It isn't enough to know the threats, we don't believe they exist or else think that they only happen to others.

These aren't breeding grounds, they're genuine hatcheries, a bowl in a chicken coop, a watering can in the vegetable garden, all nurseries where eggs can calmly become larvae, and where the larvae can just as calmly become nymphs before



"Blond Ponytail" and a portable insect vacuum device

new adult mosquitoes emerge in only a week. This harvest was judged satisfactory, since the entomologists were attacking adults. *Aedes* like human habitations. So that's where they have to be found.

Here's a very pretty black girl wearing a blond ponytail sitting on her veranda. Our scientists offer to pass the mosquito suction device inside the house.

"You've come at the right time, I hate doing the housework," she replies.

The tiger mosquito likes to live in the immediate vicinity of man. The hunt is over and the girl



The culprits are at the bottom of the pot

turns to us convinced that there no mosquitoes in her house. The entomologist gives a thin smile and unscrews the pot of his vacuum device, covered by a grid. Fifteen little insects move inside it. At first sight they are *Culex*, two of which have abdomens swollen with blood. However, it seems that a tiger mosquito is lying at the bottom, just what they were looking for.

Between health and water the frontiers are porous, just like the Guyanese rivers and the countries that border them: borders that separate and bring together.

Finally, Cacao comes into view.

It is the name of a very charming small town founded forty years ago by a community of Mhong, a people of Laos. Le Degrad is the name of the restaurant that overlooks a meander of the Comté River. Is it really a good idea to choose a Pho, a hot soup, when the ambient temperature is 35°C ? The answer is yes. Certain odours, like that of citronella, embody strange reserves of coolness. Why does the flow of the River Comté bring back memories of the Mekong ? Because of the hills, with their unique Asian delicacy, through which it winds? Because of the monkeys jumping from tree to tree? Because of the small freshwater turtles that dive, over there, as soon as danger threatens ?

The young waiter doesn't know from which part of Laos his parents come, but he remembers the date of their arrival, before he was born : 3 September 1977. He also remembers the time: just after midnight. A coach came to fetch them from Cayenne airport. They got off it in the pitch dark, in the dead of night. Why was it necessary to take such pains to hide them ? Who would want to harm them? Twenty lucky



From Laos to Cacao

persons amidst the horror; they had escaped Southeast Asia and its nightmares, notably that of the neighbouring country, Cambodia. The next day they resumed their peasants' work, brought to a halt by years of political violence. It is now undoubtedly the most productive farming region of French Guiana.

The Amerindians, blacks, creoles and whites are fed by the Laotians. The result of globalisation and the odyssey of peoples driven by the ill winds of history, scattered here and there like seeds once the winds subside.

Don't be fooled. Not everyone in Cacao is Laotian. Once upon a time there was Marion, a young accountant employed by a company in Toulouse. One day, she got bored of numbers, and the screens exhausted her. Perhaps, too, more private events had given her the urge for a change of scene. She left for French Guiana and became, of all things, a canoeist. Helped by Alex, an Amerindian living in the village of Fava, she set up her own eco-tour agency. So she unveils the wealth of the river to the rare tourists that come. For example, the fine alliance between the bees and a very beautiful bird called the crested oropendola. If you wish to adopt one, they come in three colours: completely green, with a yellow tail and with a red tail, details easy to recognise from your canoe (with a little practice). The bees drive away the flies that would feed on the oropendolas' eggs. In return, the birds eat the bees' predators.

Besides these exotic secrets, the former accountant and now canoeist explains the daily realities of those living on the river banks. Imagine going to school in Fava, the village of Alex, the assistant canoeist.



*On the Comté River,
with an Amerindian canoeist*

We wake at 4 a.m. and take the canoe at 5. A bus comes at 6:30 a.m. to take us to the bridge of Roura. Then follows an hour's journey by road; likewise for the return. You don't return to the village to the homework possibly given to you before 7 p.m. In the interior of French Guiana more than elsewhere, learning is an adventure requiring courage and stubbornness. Like so many other villages and small towns of the interior, Fava suffers from a shameful illness for a French department. Five to six hours of electricity a day at most, provided by tired and dirty electro-generators. However, the country doesn't lack resources, especially water. Later, when we met the representatives of the CTG (Territorial Council of Guiana), they told us of their projects and disillusion. They had found a Canadian supplier of marine turbines, but they hadn't been subjected to scrutiny for European certification. Everything had to be started again. Also solutions had to be found for the claims of the population living deep in the forest who had no access to public services. The derogation of connection to the general grid would solve

a lot of problems. But an alternative producer had to be found, if possible a specialist in renewable energies. The eyes of our interlocutors lit up when we spoke of CNR's trades, its knowhow and its capacity to assist the territories.

"When are you coming to see us to develop your solutions?" Thus the door opened for possible cooperation.



The Kaw marsh

ANOTHER LESSON FROM THE BORDERS

At least two hours from Cayenne lies the Kaw Marsh, France's third largest nature reserve, covering 94,700 hectares. In fact it is a "floating" savannah. Dugouts are the only means of transport, and despite the expanses of greenery, it is impossible to know where the frontier between solid and liquid begins, between stable and unstable, and between plant

and animal. For all that, countless birds fly overhead. They seem to want to inform us of something but no member of our crew knows the language of the cocoï heron, nor that of the red ibis, no more than that of the cock of the rocks, or the harpy eagles, whether ferocious or crested. Only the zebras appear comfortable with this uncertainty. They change from one mode of locomotion to another without apparent effort. They walk during the dry season and swim when the waters rise. One can see their horns

between the blades of high grass. Apparently, cows are not endowed with this capacity. I'm told they cannot control their sphincter, thus such amphibian treks are forbidden to them, otherwise they would be filled with water and sink.

I wouldn't take a little dip if I were you. First, you might come across a gymnotus, a kind of eel that emits an unpleasant electric discharge, and then you could be bitten by one of the myriad snakes. But there are almost no mosquitoes. Their absence is a gift from the water, which is very black due to the decomposition of all this vegetation. The result is that the water is very acid, something the larvae cannot tolerate. In the 18th century, families came from Europe to settle on the edges of the marsh, on the slopes of the surrounding hills. They tried to grow rice, and it's true that this rounded nature, so soft to



The Cocoi heron

the eye, is reminiscent of parts of Asia. But the families left, leaving nothing in their wake but bamboo. Long afterwards, our guide, Jean-Louis, took their place. Nothing presaged his settling in such a marsh. He preferred the

sea when young. And music. Herbert von Karajan, the famous orchestra conductor, taught him both: he chose him as a sailor for his beautiful yacht at Saint Tropez. The Côte d'Azur and the Sénéquier terrace now seem so far away! Chance and the ruptures of life brought Jean-Louis to Guiana. Perhaps this universe where nothing is fixed, where the humidity is so intense that one doesn't know when the rain has stopped, where the light changes every second, sometimes vivid yellow, then green and suddenly grey, where shapes follow and link with each other; perhaps he feels that all this motion is like music? Jean-Louis has opened

a lodge, obviously a floating one, with ten bedrooms or rather ten wooden cabins. Some of the nature reserve officials regularly threaten to close his establishment. They belong to those who cannot tolerate the presence of human beings, even when respectful and amazed. When the night comes, tens of tiny red lights shine everywhere. They are the eyes of the caimans. There are four species: red, grey, black and spectacled. Can you hear the cacophony of the howler monkeys afar?

Guiana.

A living Noah's ark.

The borders too, a Noah's Ark.

Between human and nature.

Between health and disease.

Between humans, insects and their parasites.

Between the immemorial and rockets.

Between Europe, via France, and South America.

Between French nationals and immigrants.

Between the Wild West and law.

Between solidarity (that some call dependence) and everyone for himself,

wild freedom in the country of convict camps. Guiana.

Earth and forest born from water.

From all the possible waters

One water which only serves at present to communicate.

It could give far more, starting with energy.

Guiana is a huge fallow land.

It has all the assets, primarily aquatic, to build genuine development.

