



International subscription to select 21 professionals to participate in one of the 3 multidisciplinary teams which will work in the theme:

Saint-Louis 2030, a new African metropolis.



Faced with new environmental challenges, what strategy will ensure dynamic, balanced and sustainable urban development?

What innovative **development strategy** should we propose for the **archipelago city** of Saint Louis in order to create the right conditions for balanced development that is deeply rooted in the **African values** of a historic city carrying a **cultural and landscape identity**, and respond to the three major challenges that the regional capital must react to? : The environmental challenge due to the rising water levels and **climate change**, the challenge related to the **demographic explosion** expected by 2030, and the challenge of developing a dynamic **urban economy** that is multi-polar and diversified, and beneficial to everyone in the entire metropolitan area and its **hinterland**.



Preamble

The Mayor of St. Louis and its partners have asked the French association « Les Ateliers Internationaux de Maîtrise d'œuvre urbaine » to organize a session on development of St. Louis in its large configuration (downtown, suburbs, extensions, rural areas bordering) as a regional hub balanced, focusing on its specific identity: landscape, culture, economy, agriculture and fisheries, heritage.

This workshop will follow this objectives:

- Bring out proposals for innovative planning and positioning of St. Louis wide off his "territory of the future" (town + hinterland),
- Bringing in an exchange of high level all development actors to St. Louis,
- Identify actions and study topics that could power cooperation programs,
- Adopt a synthetic approach based on various studies and consultations already carried out in St. Louis,
- Maintain an international event generator training.

The City of St. Louis supports local cost of the workshop and thanks these technical and financial partners of this workshop:

- AFD - French Development Agency,
- UNESCO
- Lille Métropole Urban Community, in cooperation with decentralized St. Louis,
- The French Ministry of Foreign Affairs in support of decentralized cooperation.

This document introduces the topic of the workshop. It was sent to partners and the entire international network of workshops in order to mobilize applications from professionals.

Rédaction : Luc Raimbault, Vincent Bourjaillat, pilotes de l'atelier,

Sur la base des échanges qui ont eu lieu lors de la mission de préparation en décembre 2009 avec :

Mme Aïda Mbaye DIENG, Adjointe au Maire de Saint Louis,
M. Mouhamadou Moustafa DIEYE, conseiller municipal, président de la commission de la pêche,
Mme Nafissatou DIAGNE BA, conseillère spéciale de M. le Maire,
M. Mathieu VASSEUR et Mme Géraldine BARBE, Agence Française de Développement de Dakar,
M. Ismaïla KONDE, Chambre de Commerce d'Industrie et d'Agriculture de Dakar,
M. Hamadi BOCOUM, Ministère de la culture et du patrimoine classé,
M. Boun Daouda SOUMARE, directeur de l'Agence de Développement Communal de Saint Louis,
M. Ali SINE, responsable de la planification urbaine et du patrimoine à l'ADC,
M. Laurent BIOT, Maison du Patrimoine architecte conseil,
M. Nicolas DUPUY, responsable de l'Association Le Partenariat,
M. Mamadou SY, Chef du Service Régional des pêches,
M. Mustafa DIA, Chef de la Direction Régionale de l'Urbanisme,
M. Bouna WAAR, Directeur de l'Agence Régional de Développement,
M. Amadou MBAYE, agriculteur, producteur de riz.

Relecture, mise en page : Nicolas Détrie,

Avec les conseils des membres du Comité Scientifique des Ateliers.

Photos : Luc Raimbault, Nicolas Détrie.

Ce document existe en version française et en version anglaise, en téléchargement libre sur www.ateliers.org

Date d'édition : 26 janvier 2010

Summary

page 2	Preamble
page 3	Summary
page 5	1- Introduction
page 6	2. Saint Louis 2010: The numerous assets of a regional capital with a prestigious past
page 6	2a. An exceptional cultural and landscape identity
page 9	2b. The assets of a regional capital on the border, at the mouth of a great river
page 11	3- Saint Louis 2030 : Three challenges to accept in order to prepare tomorrow's metropolis
page 11	3.a 3a. The environmental challenge of a city built in the middle of a river delta
page 15	3b. The Demographic challenge of at least a doubling population by the year 2030
page 17	3c. The Economic challenge of a multi-polar and diversified development
page 21	4- Which urban planning and development strategies?
page 22	Panorama of different elements to bring together and combine in order to build an effective and sustainable development strategy
page 24	Preliminary Schedule
page 25	Conditions for participation

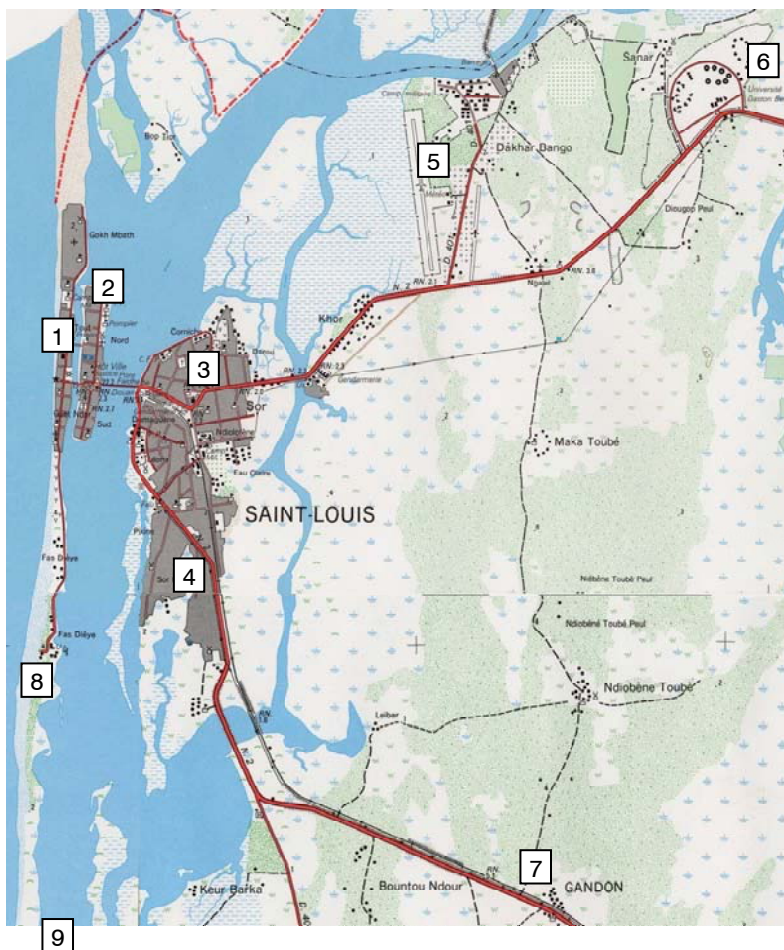


The street, place of joy

Elements of geographic situation



Située à l'embouchure du fleuve Sénégal, Saint-Louis se trouve tout au Nord du Sénégal.



Saint-Louis et sa périphérie

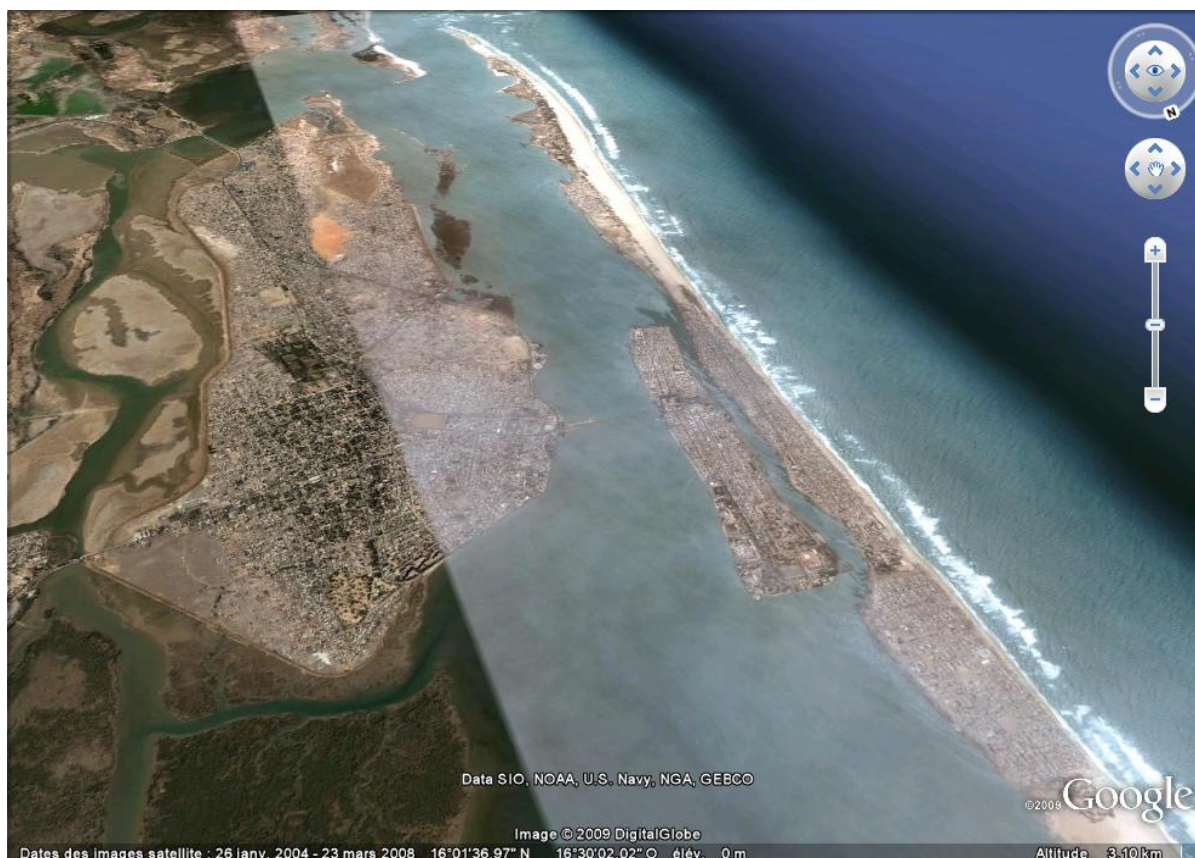
- 1- N'Guet Dar : le quartier des pêcheurs,
- 2- L'île Saint-Louis (tissu colonial),
- 3- le quartier Sor,
- 4- les quartiers Pikine, inondables,
- 5- l'aéroport,
- 6- l'université,
- 7- la commune rurale de Gandon,
- 8- la langue de Barbarie,
- 9- Vers l'embouchure sur la mer.

1- Introduction

Located at the mouth of the Senegal River, Saint Louis is one of the few sub-Saharan African cities to have been able to inscribe the many layers of history into its material and immaterial urban heritage, built up since the founding of the city 350 years ago. Today the city affirms its strong, singular identity based both on a rich and original culture, and on the strength and beauty of the remarkable natural site on which it has developed. A city of convergences and meetings, Saint Louis is the fruit of the union of the river and the ocean, of the desert and the savannah, and of the caravans of White Africa as well as the fishermen and farmers of Black Africa.

After its foundation by French navigators who gave the city its royal name in 1659, Saint Louis rapidly became a strategic place, opening the access to interior kingdoms through the possibility of going upriver for more than 1,000 kilometers, then positioned itself at the beginning of the bridge of European peoples who had come by sea to conquer the immense continent, and finally obtained the status of capital of French Western Africa. The first European establishments on the west coast were built in the city, which conserves numerous buildings that witness that epoch on the island of Saint Louis, which has been listed as a World Heritage Site by UNESCO.

A city forged for over three centuries by numerous historical developments, periods of mankind, and by the force and the infinite patience of the natural elements that shape the coast, inflict the course of the river and redesign the delta, Saint Louis must find within itself the necessary resources to stimulate a new dynamic, create the conditions of a balanced development resolutely turned towards the future, and to confront the new environmental, demographic, and economic challenges that the man of the 21st century imposes on the planet, menacing the very existence of the city.



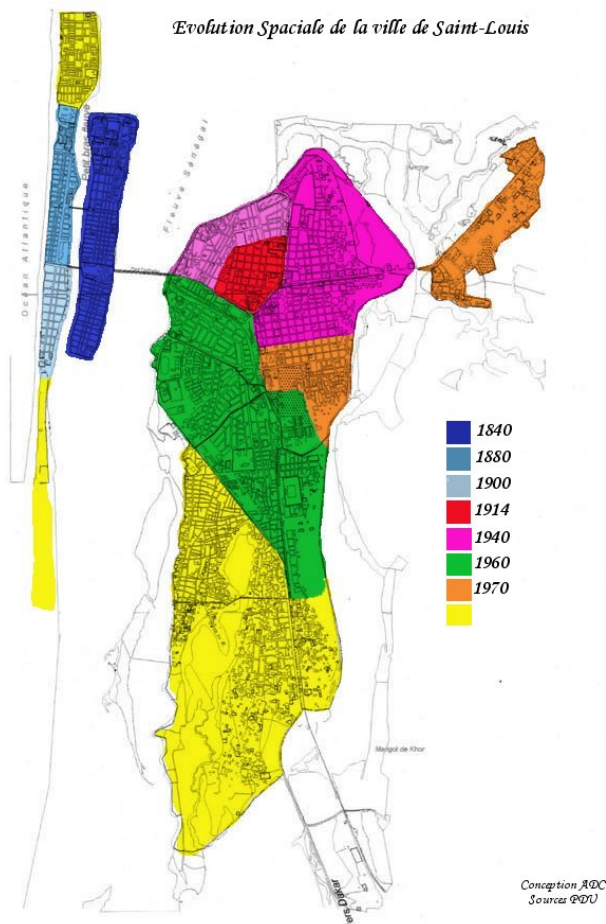
Vue satellitaire depuis le Nord.

2 - Saint-Louis: The numerous assets of a regional capital with a prestigious past

2.a) An exceptional cultural and landscape identity

Located in the northern fringes of Senegal at the border of Mauritania, Saint Louis is 270 kilometers from Dakar, and today is only accessible from the capital by road - a drive that takes approximately four hours. Overshadowed by Dakar since the beginning of the 20th century, the port city of Saint Louis nevertheless holds a major place in the history of the country and of the African continent:

After the implantation of the first trading post on a small island at the mouth of the Senegal River by Norman traders in 1638, Louis Caullier, assistant to the Compagnie Normande, transfers it to the island of N'Dar – the current Island of Saint Louis – and founds the first French city in Africa. Built at the heart of the river delta, it constitutes a strategic position enabling to protect against sea attacks as well as the threat from uncontrolled territories, and the city becomes the gateway to the riches of the continent. A permanent stake in the rivalry opposing France and England, the domination of the fortified town goes back and forth between the two great powers that control commercial establishments where gold, ivory, gum and slaves are exchanged until 1814.



contributed to the creation of the strong urban and cultural identity of the city, present up to today. A training center for executives of the French African colonies to begin with – notably through the school for sons of leaders and interpreters, founded in 1855 – nowadays, the city is the headquarters of a renowned university and it remains the cultural

After the abolition of slavery in 1848, followed by an initial period of lethargy, Governor Louis Faidherbe inspires a new dynamic for the French colony, whose capital is enlarged and embellished. The capital of Senegal, Saint Louis becomes the capital of French West Africa as well, before ceding to Dakar in 1902. In 1958, shortly before independence, the city also loses its status of capital of Senegal to Dakar. Thus begins a long period of loss of influence up until the end of the 20th century, marked temporarily by the status of the capital of Mauritania - to which Saint Louis is a border city - in a digression that occurred between the independence and 1962, when the Nouakchott event took place.

Finally, the history of Saint Louis is inextricably linked to that of civil aviation and the first commercial line connecting Africa and South America. It was from Saint Louis that Jean Mermoz took off in his Latécoère hydroplane to reach Natal in Brazil for the first time in 1930. The river site on the Langue de Barbarie spit, from where he took off, still conserves its former title of hydro base today.

Saint Louis is also one of the high places of the Senegalese culture and identity. The long colonial period had led to the emergence of a mixed and well-off society whose refined culture was renowned as far as Europe, and who largely



1930 - Jean Mermoz et son hydravion à Saint-Louis

melting pot from which the majority of the intellectual and political elite originate.



The great landscape offered by the river delta in which Saint Louis is inscribed constitutes the very identity of the city and offers it an extraordinary dimension and force. Water is omnipresent – the source of life of a very rich ecosystem. The river delta covers an immense territory where the fresh and silt-laden river waters, the fertile soils of the mouth of the river that are prone to flooding, and the briny ocean waters full of fish merge together.

The city was born at the heart of this magnificent natural environment, at first on the Island of N’Dar – rebaptised Saint Louis by the French merchants – to then expand on to the Langue de Barbarie spit – the last coastal strip – and, finally, upstream to the large Island of Sor, thus progressively constituting an archipelago city in symbiosis with the river delta, but which has always been exposed to the excesses of the river and the ocean. The structure of the city is thus composed of a string of three oblong islands, parallel to the coast and inserted in the river bed, served by an orthogonal path network whose principal axe down to the sea is formed by the Island of Sor market street, the Faidherbe bridge, the Malick Gaye bridge between the island of Saint Louis and the Langue de Barbarie, and, finally, the Guet N’Dar market, facing the ocean.



Vue sur le fleuve, en aval de la ville

Different urban fabrics

The three islands feature very different urban fabrics, characteristic of each one:

- Sor, the most recently urbanized, features all the characteristics of contemporary West African cities. Other than two tarred commercial streets, the island presents a road network of a spontaneous generation resulting from non-mastered urban expansion, low population density, an irregular implantation of an often precarious habitat on abandoned building lots that are sometimes prone to floods, and basic constructions made of raw breeze blocks and sheet metal.

- Saint Louis, on the other hand, presents the simple, criss-crossed layout of a town designed by the colonial administration, the streets lined with the former houses of traders of the 19th century, of standard size, whose beautiful façades in ochre shades line the streets, and whose upstairs are adorned with galleries forming a street balcony. Its urban fabric recalls that of European Mediterranean cities.

- The Langue de Barbarie is structured by a unique central axe several kilometers long from which a tight grid pattern of small streets developed; they contour regular little blocks where fishermen built housing that is often basic and very dense. The near homogeneity of a population of fishermen, and the overpopulation of a neighborhood where the public space is appropriated by the community, gives this neighborhood a very specific urban ambience.



Sor



Ile Saint Louis



Langue de Barbarie

Éléments paysagers



Éléments architecturaux



2.b) The assets of a regional capital on the border, at the mouth of a great river



La proximité de la Mauritanie donne lieu à des échanges commerciaux informels.



Le patrimoine architectural de l'île justifie son inscription à l'UNESCO.

- The first asset of Saint Louis is its border position: at the same time natural, as a seaport; geographic, between desert and savannah; as well as administrative, between Senegal and Mauritania. Ever since it was founded, the city has been irrigated by commercial and migratory flows, becoming the point of convergence of caravans coming from the desert, convoys navigating the river, maritime routes of the European traders and colonialists, paths running alongside of the coast of West Africa and, during the 20th century, from the railroad up to Dakar and the first commercial air links. Saint Louis has always had a status and an economy of a cosmopolitan, international city that is open to the world – essential qualities in the age of globalization.

- The listing of the Island of Saint Louis as a UNESCO World Heritage Site in 2000 increased the notoriety of the city, allowing it to access the rank of worldwide tourist sites. The presence of the Djoudj natural park, ranked among one of the most beautiful ornithological sites in the world, the richness of its secular and cosmopolitan culture as well as its fishing traditions, the quality of its swimming spots, the proximity of the desert and the new possibilities of cruises offered on a mythic river, complete the numerous attractions of a territory that possesses many assets to help it become a first class tourist destination – what is more, it benefits from a modern airport accessible to charters.

- Maritime fishing is the principal economic activity of the city and has always formed up a major element of its identity. Organized in family structures, the fishermen of Saint Louis possess over 3,000 pirogues from 10 to 25 meters long, each one carrying a crew of 10 to 20 seamen. Eight ice-making factories are present to meet the needs of the 500 pirogues that go out to sea every day. On the other hand, there is no on site capacity to freeze, and the only access road to the Langue de Barbarie necessitates a daily (and odorous) passage of some 70 trucks - as well as many fish-laden cars - through the center of town by way of the Faidherbe bridge. The unloading of fish concentrated on the side of the river remains rudimentary until today, and is carried out by a simple manual landing system on the banks. The small river port built recently at the hydro base is not an adequate solution: Its quay is used neither by the fishermen, nor the women; undoubtedly due its distance and poor adaptation to the small-scale landings of the local fishing industry.

Out of the 350,000 tons of fish unloaded per year in Senegal, 60,000 tons come from the capital of the north. In Saint Louis, the sardinelle is currently the most fished species; the other species have greatly diminished in numbers, especially the deep water species. There is currently an enormous effort to fish the sardinelle, which imposes a profound transformation of the industry that must organize itself to handle the fisheries and preserve the halieutic riches. Fish is the most economical and widespread protein in Senegal, and is exported as far as Mali and Burkina Faso.

The fishing villages are regrouped on the Langue de Barbarie, facing the sea. Overpopulated, they assemble nearly 50,000 people who form a supportive, homogenous, and autonomous community where the women hold an essential position, particularly through trade and small-scale fish conversion. The local fish conversion potential remains insufficiently exploited, and denies Saint Louis plus values from an important economic industry.



Activité quotidienne de la pêche et séchage artisanal du poisson.



- Saint Louis also benefits from the Gaston Berger University, founded in 1990 on a vast campus on the north side of the city, close to the airport. The second largest centre of higher learning after Dakar, this renowned university includes mathematics, computer science, economics, letters and humanities, law, and political science departments. Today, it is attended by 3,000 students from all over Senegal as well as from abroad. The goal is to reach a student body of 10,000 and complete the centre of higher learning with a university hospital.

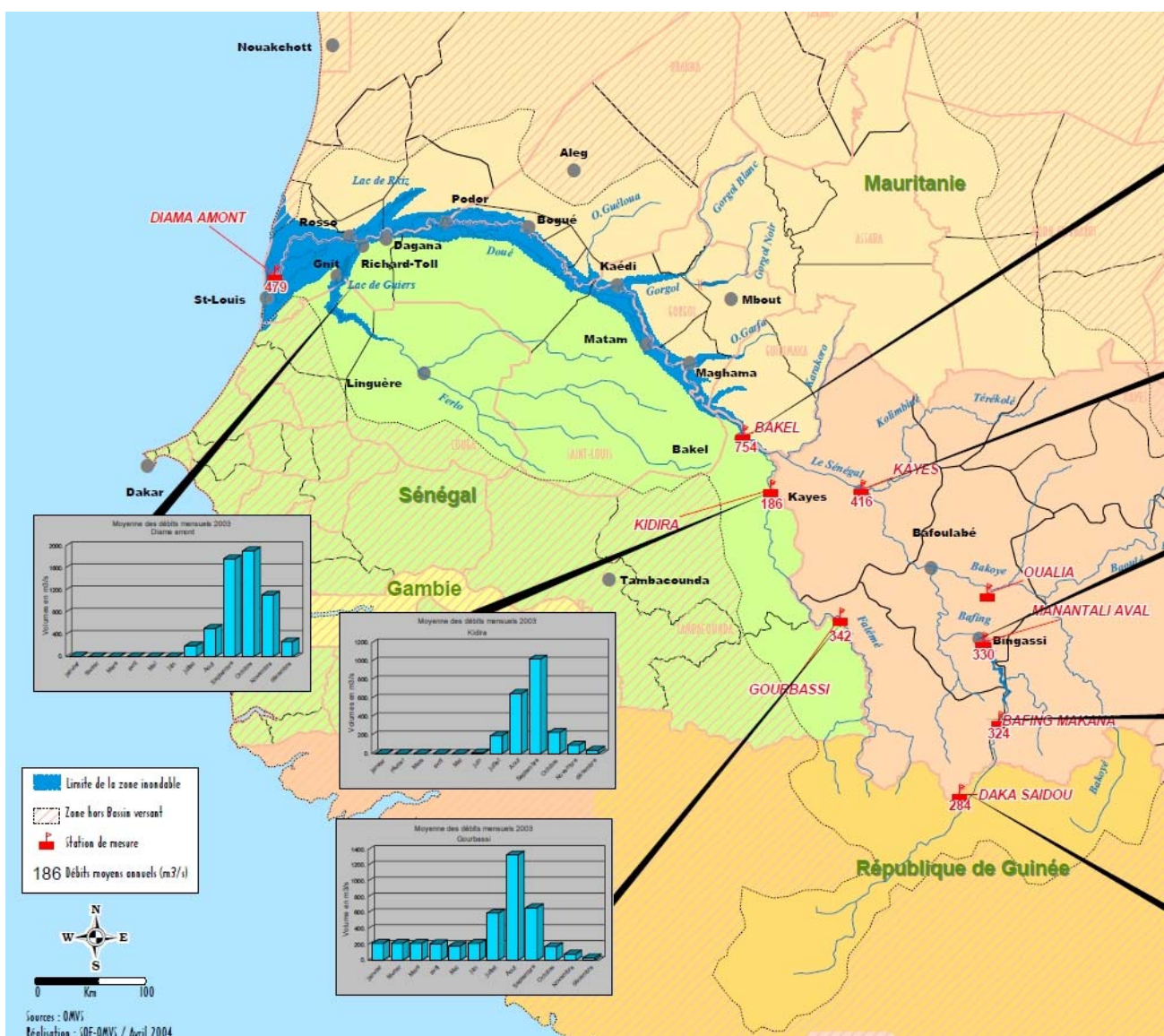
- The construction of two dams on the course of the Senegal River - the Manantali Dam in Mali and the Diama Dam north of Saint Louis – erected by the neighboring states grouped together in the OMVS (Senegal River Basin Development Authority) assures a substantial production of electricity - due to a hydrologic power plant located in Manantali - of 800 GWh per year, as well as a river flow regulation that allows for a minimal flow for cultivation and to improve the navigability of the river at the low water-level periods. The Diama Dam is essentially used to block the briny delta waters from going upstream from Diama - a phenomenon known as “salty tongue” - and to prevent the salt from sterilizing the fertile soils in the valley.

These important facilities which were finished in 1988 permit the irrigation of thousands of hectares and the development of intensive cultivations nearby Saint Louis: Sugar cane, tomato, onion, and rice. Nevertheless, the city benefits very little from these industrial productions, most of which are transported directly towards Dakar.

3 - Saint-Louis 2030: Three challenges to accept in order to prepare tomorrow's metropolis

3.a) The environmental challenge of a city built in the middle of a river delta

Saint Louis is both a river delta city and a maritime city. That's what gives the site and the city a great landscape and poetic value, but, for the future, this situation is also one of its greatest weaknesses, indeed a real danger.



Bassin versant du fleuve Sénégal et débit mensuel (Source : MOVS)

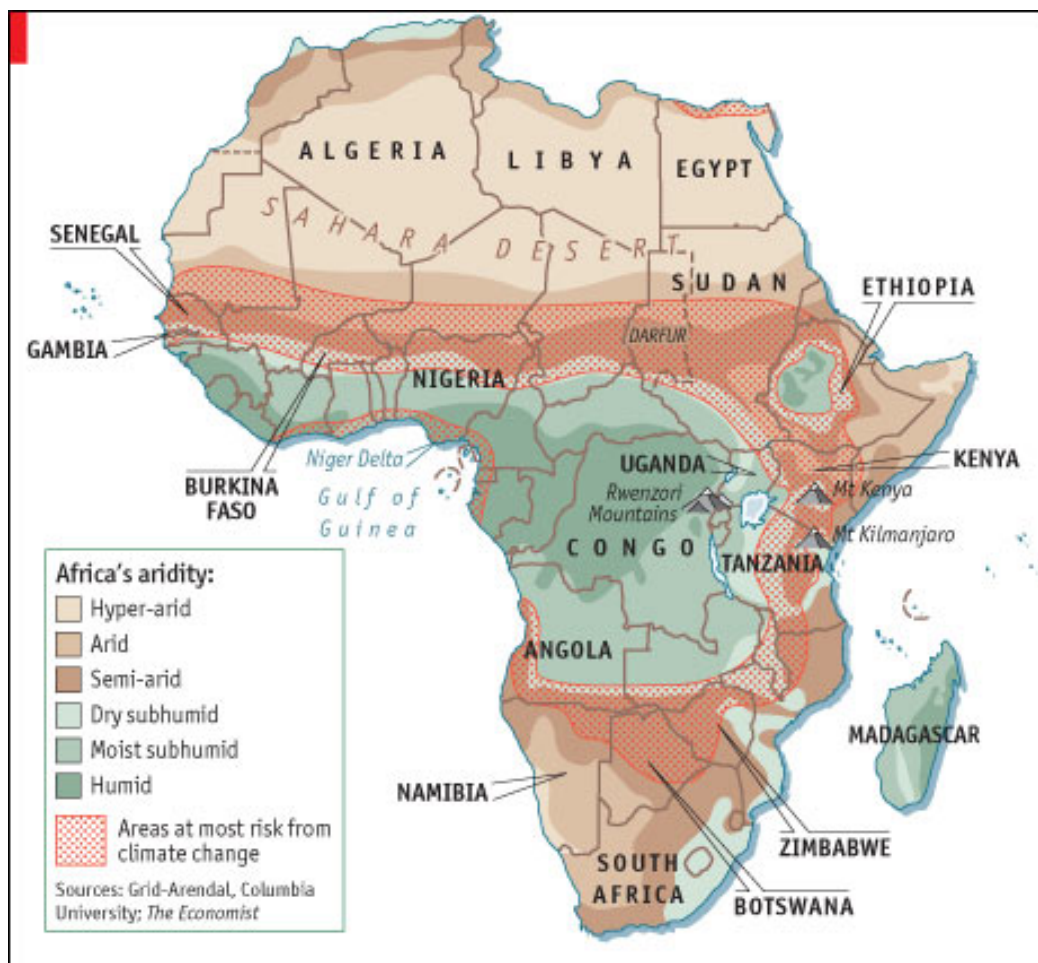
The mastery of the effects of global warming, whether it is risks of saltwater going upstream, coastal erosion, the multiplication of cataclysmic events (floods, in particular) must, effectively from now on be considered as

a determining parameter in any city planning development: The current balance that prevails between a city and its natural site, the fusion between water and land, as well as man and his environment, apparently will not go unaffected by the effects of global warming during the course of the 21st century. However, due to the existing uncertainty as to what concrete effects are going to happen, as well as their timing, the variety of preventive measures to carry out remains open to discussion.

Global climatic warming

In November 1997, a special report by the IPCC¹ titled “Effects of climate change in the regions: Evaluation and vulnerability” wrote, concerning Africa: “several coastal zones, many of which are subjected to the effects of demographic pressure and from contradictory land use, would suffer from rise in the sea level following climate change. The coast of central and western African countries (particularly Senegal, Gambia, Sierra Leone, Nigeria, Cameroon, Gabon, and Angola) are composed of low-lying lagoons sensitive to erosion that could suffer because of the rise in the sea level, all the more so as expanding large cities are often established there. The western shoreline, which is frequently shaken by storm waves, is currently threatened by erosion, floods, and very strong storms.” And further on: “There are adaptation measures, but their cost is very high in relation to the GDP of many African countries. They could include the construction of longitudinal defense walls, and the transfer of fragile human settlements and other socio-economic institutions.”

In June 2009, in preparation for the Copenhagen summit, the Maplecroft Company made a map of vulnerable areas when confronted with climactic disturbances, in which Africa appears to be the most vulnerable continent: Outside of the southern tip and Maghreb, the whole continent is ranked in the “extreme vulnerability” category.



¹ The Intergovernmental Panel on Climate Change

La Langue de Barbarie and the accumulated effects of coastal erosion and the rise in the sea level

La Langue de Barbarie is a thin coastal strip ranging from 100 to 200 meters wide and a few meters high, that starts in Mauritania and breaks off at the mouth of the Senegal River, about thirty kilometers downstream from Saint Louis. It protects the city and the delta from the ocean's onslaughts.

Today it is home to all the fishing activities and the fishermen's quarter - characterized by one of the greatest human concentrations in Africa - a group of tourist hotels and campgrounds, as well as a very rich natural ornithological park at the southern end: thus it plays a major role in the economic activity and the tourist attractiveness of the city. The future of this particular land formation is yet to be written, but the opening of the breach in 2003 visually brings a decisive clarification:

In fall 2003, the river floods were extremely severe and affected the whole city: As an emergency measure, it is decided to open a breach of 10 meters in the coastal strip - upriver from its natural mouth, less than 10 kilometers from Saint Louis - in order to allow the river waters to flow into the sea and free the city. Seven years later, the breach has become several kilometers wide and has almost replaced the former mouth. From now on, the coastal strip is no longer continuous up to the former mouth of the river.

More generally speaking, the real ebbing away of the beach by the sea is a matter of discussion: The opinions are divided about the reality of the retreat due to erosion, but the little tabular forms visible in several places on the beach seem to reinforce the argument of those who affirm that the land is receding due to the permanent movement of the sea.



Inondations en ville



L'érosion

The prevention of flood risks

Like all large rivers, the flow of the Senegal River is subject to great variations during the course of the year. They can be partly attenuated by dams, but, particularly in the vicinity of the delta, the variations create specific geographic formations called "wet zones", that serve as natural expansion areas when water levels rise, and can only be slightly developed and dyked up.

The floods of Saint Louis generally occur at the beginning of fall, in the months of September or October. The construction of dykes have, historically, accompanied urbanization: The island protections erected by the colonial power, then the dyke to protect Sor from the principal riverbed, then, more recently, the reinforcement work after the 1993 flood, which lead the Senegalese authorities to reinforce the height of the island quays and to construct a new dyke on the East side of Sor.

The importance of protection regarding high water levels is becoming more and more crucial with the acceleration of the urbanization needs related to demographic growth in recent years, but will be even more so in the coming decades. There is a strong temptation to pursue the archipelago city model, where the city is built like a string of islands protected by dykes: except that to further extend the city and increasingly dyke up the river, the reservoir zones are reduced in times of high water levels, and therefore increase the water levels in the main riverbed: For example the urban development project elaborated by the State for 2025 plans, notably, a massive urbanization to the east of Sor, on a vast wet zone, that would no longer be able to

play its role of zone of natural expansion : this project would induce a heightened risk of floods on each side of the major riverbed, where the fishermen's quarter, the historic island, and a part of Sor are established.

Where is the right balance for the future found? Conquer yet other new wet zones for urbanization at the risk of increasing the flood level and have to constantly raise the height of protective works? Preserve the natural reservoirs in the form of wet zones at the risk of distancing new urban development sectors, and creating vast poorly linked "dormitory zones" at the heart of the urban area...?

The Delta ecosystem

As a general rule, delta systems are fragile ecosystems, where human activity can be established, but it can never be in complete control.

The current system of river flow control is run by the OMVS (Organization for the Development of the Senegal River), which is composed of three member countries: Senegal, Mauritania, and Mali.

The river regulation is essentially controlled by two construction works: Upstream, on the main tributary of Bafling, the reservoir dam of Mantanali, and downstream, the Diama dam, which is an anti-salt dam located approximately 30 kilometers north of Saint Louis: It aims to protect the river waters from saltwater coming upstream, especially at times of slow rates of flow. The Diama dam has permitted the development of industrial farming irrigation, but it does not have the capacity to contain the great rises in river water levels, and was not conceived for that objective.

The delta zone is also a very rich ornithological environment: The Doudj Park which covers almost 16,000 hectares, and is located 60 kilometers north of Saint Louis, is the third largest ornithological reserve in the world! In the vicinity, south of the river, there is a project for another park - the park of the "Trois Marigots". The delta is composed of large stretches of mangroves and of vast natural zones still untouched by man that must be protected and preserved. Up until now, tourism has been respectful of this fragile environment and has thus, in a way, foreshadowed what it commonly known today as "ecotourism".



Le parc national du Djoudj



Elevage

Faced with the need to intensify the fight against floods, and to pursue agriculture and conversion industry development, and faced with the need to boost tourism and, finally, confronted with the pressure of urbanization that can only exert itself inland, can the current delta ecosystem be preserved? How should we regulate the different pressures that exert themselves on this fragile natural environment, how should we accompany the inevitable and necessary evolutions?

3.b) The Demographic challenge of at least a doubling population by the year 2030

The population of Saint Louis was estimated at 183,682 in 2005 (source: Urban Development Plan, 2008), which, at the beginning of the 21st century, makes it the fourth largest city in Senegal, after Dakar, whose conurbation of nearly six million presently makes up about half the country's population, and after Touba and Thiès, whose populations are, respectively, 600,000 and 310,000. If the population continues to grow at the current rate of an estimated 2.4%, the city's population should double by 2030. One should note that the Urban Development Plan has retained a hypothesis of growth rates markedly 4% higher until 2025, for which the extrapolation raises the population forecast to nearly 500,000 by 2030.

The configuration of the city in archipelago, the sanctuary-like status of the Island of Saint Louis since its listing as a UNESCO World Heritage Site, the extreme environmental threats that weigh heavily on the Langue de Barbarie – coastal erosion, the enlarging of the breach into which the river rushed, the over density of the fishing quarters, and the fragility of the coastal strip ecosystem – prohibits any possibility of densification of the existing urban fabric anywhere but the Island of Sor and its peripheral neighborhoods, and any urban extension oriented anywhere but east, towards the interior of the land, outside zones that are floodable, or that may become so in the future. It is urgent to compensate for the short supply of constructible property within the historic center that currently curbs city development, by programming new areas to welcome new populations in order to overcome the uncontrolled urban spreading presently occurring in the floodable areas, as the anarchic development of the Pikine neighborhood attests to.

This imminent demographic explosion presents three main issues:

- The search for property resources that can be urbanized and must not be located where it is detrimental to the river delta's great ecological balances, thereby exposing newly installed populations to the long term risk of floods - whose severity will only get worse with the rise in the water levels - and exposing the biological nutritive balance of the delta to an excessive pollution of human activities.
- The territorial organization and the functional and social mix of the future metropolis, in which the center of gravity will no longer be able to be located on the Island of Saint Louis, the historic heart of the city.
- The density choices for the new or restructured neighborhoods in order to optimize the territorial development and the investments making it possible to bring minimal services to the new populations prior to their installation: purification and drinking water, street planning, transportation, schooling, health...



Guet N'Dar quartier très peuplé des pêcheurs

It is necessary to point out the great variations in population density from one neighborhood to another, which is one of the characteristics of the urban fabric: on the Langue de Barbarie spit, the fishermen's neighborhood has a population of 45,950 (2001 census) on approximately 70 hectares of land – a very high density of over 650 inhabitants per hectare. In the Guet N'Dar neighborhood, which is the densest, there are up to eight families per 150 square meters and 15 people per room. In these conditions of extreme density,

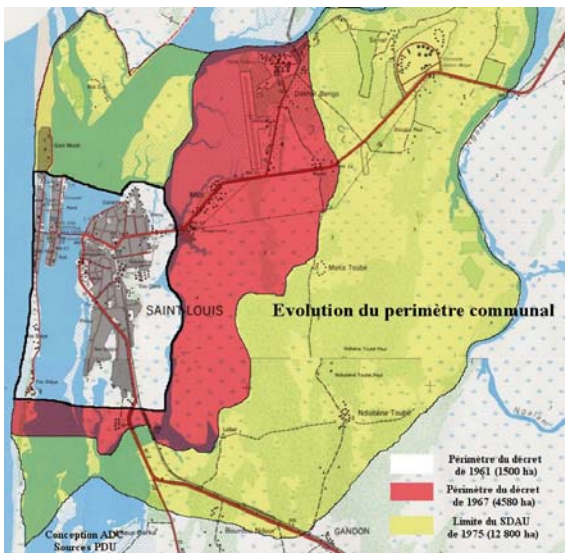
everyone uses the street as a space for everyday living and for household chores, a space shared by the community of fishermen.

The Island of Sor, on the other hand, contains 85,347 inhabitants, but has a significant potential for densification. The average density for the whole city was thus estimated at 232 inhabitants per hectare in 2001.



L'île de Sor présente un potentiel de densification important

In its planning for the future, the UDP foresees urban extension as the only solution to accommodate new populations. It retains the rough average density of 250 inhabitants per hectare, and parcel densities ranging from 30 parcels per hectare for social housing, to 16 parcels per hectare for upscale housing, which would call for an overall need of an estimated 980 hectares of property lots between now and 2025. This highly land-consuming approach is rooted in the urban vision and practices of the local elite: All those who have the financial means, including the fishermen, look to acquire a vast terrain alongside the road on the edge of the city on which to build a comfortable villa, thus contributing to urban spreading and to the excessive and ineffective consumption of property resources. This phenomenon is particularly sensitive in the neighborhoods of Khor, Cité Vauvert and Dakhar Bango.



The UDP itself plans to create a vast zone of luxury housing in the Diouk sector by developing a new island through digging a canal in order to drain this zone, which is liable to flooding. On the one hand, the excessive investments to carry out in light of the number of homes built raises a question, and on the other hand, the capacity of the city to invest in infrastructures must privilege the essential protective measures to carry out in the coming years to keep the floods away from the neighborhoods that are already urbanized.

3.c) The Economic challenge of a multi-polar and diversified development

Activité économique du Sénégal



With the independences, the economic dynamism left Saint Louis for many long years. The "Sleeping Beauty" began to wake up with the arrival of the 21st century. But the economic dynamics are still lacking in scope, and are too limited to certain areas of activity (fishing, tourism, agriculture...) and, above all, have a very low redistributive effect on the inhabitants of the city and its urban area: The tourism industry, for example, is almost exclusively run by European nationals (other than one very dynamic local player) or the large-scale agricultural cultivations of the delta which feed the rest of the country or are exported, with a very low locally added value, other than the production of raw materials.

The potentials that enable the few current levers of economic development to expand exist and are diversified enough - that is not the problem! The central and major question is to find the way to set the entire city and its inhabitants in motion - and fast - as the young people are reaching adult age groups in large numbers and do not find jobs.

The Potentials

Transportation and trade: Gateway to the African West for a long time, Saint Louis became a destination at the borders of Senegal, a place of arrival, but rarely a place of departure. Nevertheless, all the infrastructures and forms of communication are present to allow Saint Louis to become a crossroads of communications and exchanges, a regional hub: a railroad linking it to Dakar, in which the routes and stations still exist though have been deteriorated by time, an international airport whose infrastructures allow it to accommodate most types of planes, the river that allows access to Mauritania and Mali, a high quality road network that remains far from being overcrowded... Taken in hand and reorganized at the heart of the urban operations, these existing or renovated infrastructures constitute a decisive potential that could reactivate Saint Louis as a place of local, regional, national, and West African exchange and commerce.
(Photo: airport/road map)



l'aéroport



l'ancienne gare



les transports en commun

Tourism: Saint Louis is a known and renowned tourist destination, but has not succeeded in going beyond the status of a two to three day stop in a larger circuit. The current tourist trademark is obviously too centered on the historic heritage asset of the island, but can intend to enlarge itself as a trademark to the regional scale, and include the natural parks, the upstream area and the delta region. The questions of valorization in the “eco-tourism” register and the creation of a superior luxury offer: The issue has been identified; it is advisable to give it body and dynamism.

Fishing: Along with Guet N'dar, Saint Louis possesses the third largest fishing port in Senegal, a country for which the fishing industry made up a major economic sector before independence. Three elements converge to produce a very clear evolution in the fishing activity in Saint Louis in the next decade: A more and more perceptible scarcity of the halieutic resource, modification of port operations since the opening of the breach, and the overpopulation of the fishing neighborhood. One of the issues appears to be in succeeding in allowing the fishermen to play a larger and more redistributed economic motor role than they play today at the heart of the city, and to reinforce the local conversion industries...



La pêche moteur économique de Saint Louis

Agriculture and the food-processing industry: Large cultivations developed upstream from the Diama dam make Saint Louis the largest national center of sugar cane, tomato, onion, and sweet potato production. These cultivations have only generated a very limited local market that it seems possible to develop, and the knowledge gained during industrial transformation was not passed on to the entire field of small-scale producers. Moreover, peri-urban agriculture is developed very little, while the needs of the population are increasing. Important development, diversification, and industrialization potentials thus appear in this industry that would allow a reaction to the economic challenge of the urban area, as well as offering concrete solutions for the populations' daily dietary needs.
 (photo: conversion factory)



Culture intensive de tomates

<p>Agriculture: Portion of the Senegalese production represented by Saint Louis region: Industrial tomato: 100% Sweet potato: 100% Onion: 63% Tomato: 48%</p>
<p>Hotel business - number of beds: Dakar: 7089 Thies: 8446 Ziguinchor: 6540 Fatick: 3450 Saint Louis: 2002 Remainder of the country: 3702</p>
<p>Structure of the rotations at the Saint Louis airport: Private: 38% Commercial (passenger): 20% Military: 18% Flying-club: 16% Other: 7% Cargo: 0%</p>
<p>Source: ANSD (National Agency of Statistics and Demography): 2008</p>

University: The Gaston Berger University is the second largest university after Dakar, and the most renowned. Exiled to the far northeast periphery of Saint Louis in the middle of the fields since it was founded, the university participates very little in city operations, although there are some partnerships, particularly in the food-processing industry. The students that are educated there are hired all over Senegal, but rarely in Saint Louis. Thus, there is a general issue of insertion in the city and of support of local and regional economic development attached to the university, making the university a tool, certainly to serve the development of the entire country, but also the urban area of Saint Louis. (Photo of the university)



L'Université Gaston Berger

What are the instructions?

In the present case of the Saint Louis urban area, economic development, along with the existing potentials of different industries and fields of activity, can become a major contributor to the emergence of Saint Louis as a regional capital provided that it is apprehended and thought out within a comprehensive strategy that articulates several facets:

- A development carried by local players, by regaining an entrepreneurial spirit that seems to be presently lacking in all Saint Louisian social classes.
- A development with stronger redistributive effects at the local level: New, small industries organized at the local and regional levels, in which Saint Louis is generally only a place of raw material production.
- A development that is respectful of the natural environment, in particular the delta ecosystem, which will remain the strongest capital of attractiveness in the urban area, particularly its tourist attractiveness.
- A development strongly articulated to the needs of urban growth and extension, in order to build new urban area operations



Population saint-louisienne

4 - Which urban planning and development strategies?

Many territorial planning studies and documents on Saint Louis and its region exist, but the majority of them are sectional. A framework document that indicates the overall principal theme and the broad outline in order to prioritize and organize the different development priorities has become a necessity.

The elaboration of an urban development strategy can be a powerful unifier for the entire city and its suburbs articulating, through an urban organization and operations approach, the three major issues for which the local authorities must offer solutions: the environmental issue, the demographic issue, and the economic issue.

The main question that “Ateliers de maîtrise d’œuvre urbaine” participants are asked, regarding development and urbanism, is that of the different possible or desirable combinations, the hierarchical organization of the issues, and of the definition of the principal themes that will unify the different projects, will catalyze the available energy, and, finally, will reveal the insufficiently valorized potentials.

We start with an initial hypothesis that follows observations of the current situation and tendencies in action or in perspective, particularly those caused by the result of climactic warming. This initial hypothesis will have to be returned to, amended, deepened, or even rejected for another hypothesis by the professionals invited to the Ateliers session.

The Initial hypothesis: A continental regional capital!

In order to acquire the status of metropolis and regional capital extending into the hinterland, the city of Saint Louis must become more continental and transfer its centre of gravity inland, without losing its soul, and without jeopardizing its river-delta city environmental and landscape capital.

The city must also create itself a new collective identity, going beyond the current mosaic of distinct quarters that cultivate their differences, and build itself a new collective imagination composed of contemporary African values.

Through choices to carry out on the organization of transfer infrastructures, through the programming and the reinforcement of new and existing urban polarities, through the choice of sites accommodating new settlement neighborhoods and economic activity, through the enhancement of landscapes and public spaces..., urban development must act positively not only on the quality and the effectiveness of city operations, but also on its capacity to integrate and to bring the different populations that compose it together, and to create an awareness of a common and shared destiny.

Panorama of different elements to bring together and combine in order to build an effective and sustainable development strategy

Urbanism and development

- Where should the new city polarities be implanted? : The Island of Sor, the south entrance on the road to Dakar, the north entrance, the university and airport area...?
- Which urban functions and driving forces should be assigned to these polarities? Which projects should be developed around the university?
- Which development projects should be designed for the urban intensity poles created around the new structuring facilities: the new fishing port, the big market, the university hospital and the city of knowledge, the new bus stations?
- How can the rehabilitation of the historic heritage be given a new boost in betweenrisking creating a "museum city" for tourists, and allowing the buildings to continue to degrade?
- What's the railroad station's future? : Renovate it and create a new modern quarter around it, or move it inland and/or towards the periphery, assuming the railroad line is going to re-open?
- How can the obstruction and overpopulation of the fishermen's quarter be relieved? Open a new port on the inside bank of the river on the south of the city, as has already been foreseen, give a new boost to the hydro base site located on the Langue de Barbarie?
- What new urban morphologies should be proposed to Guet N'Dar to solve the problem of overpopulation in the fishermen's quarter, as well as for the new neighborhoods built towards the hinterland, outside zones prone to flooding, without the city losing its soul?
- What is the future of the craft center on Sor that is collapsing? : Renovate it onsite, or transfer it to the island?
- Which new public spaces and which new main places of animation and relaxation? : Walkways on the riverbanks, the creation of real public access to the sea in the fishermen's quarter...?
- Where should the big market that Saint Louis lacks be established?
- ...

Environment and risk management

- How can the natural reservoirs formed in the wet zones at times of flooding be preserved when the need for housing is increasing?
- How should the rise in sea water level and the Langue de Barbarie erosion be anticipated? By building new protective barriers or by anticipating a partial withdrawal inland?
- Which new type of urbanization minimizing the cost of protective measures against the rise in water levels should be constructed in the coming years?
- How can a sustainable regional river and delta tourism be developed without disturbing and menacing the natural ecosystem?
- How can the problems of waste collection, purification, and urban pollution be drastically improved?
- ...

Transports and Transfers

- Should the railroad line be re-opened? Should the former stations be renovated or new ones built?
- Should the bus station remain at the south entrance of the city or transferred farther south? Or should its equivalent be created for the north east section of the urban area?
- Should the idea of a second bridge to the island be maintained, or should investments first be made in new inland structures?
- Where should the new roads that bypass as well as serve the new neighborhoods be situated?
- ...

Economic development

- How can the business and exchange market functions of the regional capital be organized from bus stations as well as markets and capture new cash flows?
- What roles for the airport: passengers, freight, mass tourism, light aviation...?
- What functions should be associated with the university to favor the creation of a large pole of knowledge and culture?
- Where should the food-processing industries be developed?
- What added value will be in store for Saint Louis from the local conversion of the halieutic riches and of intensive agriculture produce?
- How and where should peri-urban agriculture be developed?
- ...

Housing

- What new type of housing should be thought up to conciliate density and African lifestyle? What new type of luxury housing should be conceived to respond to the demand of the local elite, without over-consuming property resources?
- How should the existing city - particularly, Sor - be made denser in order reduce the needs of inland urban expansion, and block the spontaneous urbanization in zones prone to floods - or required to become them - and the filling up of wet zones?
- How can a greater social mix be created within existing neighborhoods?
- Where should the new housing neighborhoods be built? : At the city entrances, inland? How can other functions be introduced, in order to avoid building dormitory neighborhoods? What new types of housing can be proposed that are thrifty on real estate, but compatible with the African family lifestyle?
- ...

Tourism

- Developing a clearer and more complete tourist offer: City, delta, river, Mauritanian Desert, natural parks, swimming areas...: What alternative is there to the historic island and the Langue de Barbarie for the establishment of tourist facilities and accommodations? Can and must Saint Louis become a tourist hub?
- Developing an environmentally responsible form of ecotourism: Should we create a new reception area within the delta?
- Should the luxury tourism niche be developed? : If so, where?
- Should new cultural events be created? Which ones?
- ...

Preliminary schedule of the workshop From Saturday 10 to Sunday, April 24, 2010

<i>Saturday, April 10</i>	Arrival of participants (1 / 2). Possible transfer from Dakar. Hostel Check in. Free evening.
<i>Sunday, April 11</i>	Arrival of participants (2 / 2). Hostel Check in. Walking tour of the island and Guet N'Dar. Meeting with the pilotage team: Presentation of the Workshop. Individual presentation of participants. Welcome dinner.
Monday, April 12	9 am: Opening ceremony with speeches from the Mayor. Presentation of the workshop and participants, introductory lecture. Visit of districts and meetings with local actors.
<i>Tuesday, April 13</i>	Conferences (development, environment, economy Local ..). Announcing the team's configuration and start work.
<i>Wednesday, April 14</i>	Workshop
<i>Thursday, April 15</i>	Workshop
Friday, April 16	9h-12h: Exchange Forum with Contact and invited partners. Workshop.
<i>Saturday, April 17</i>	Workshop. Les ateliers Evening.
<i>Sunday, April 18</i>	Free day. Proposed tour.
<i>Monday, April 19</i>	Workshop
<i>Tuesday, April 20</i>	Workshop
<i>Wednesday, April 21</i>	Workshop Arrival of Board members in Dakar. Overnighting.
<i>Thursday, April 22</i>	Workshops. Proceedings of messages (8pages Plan A1 + A4). Arrival of members of the jury. Visit and meeting with the drivers. Welcome dinner.
<i>Friday, April 23</i>	Oral presentations. Conference-debate with members of the jury.
Saturday, April 24	International Jury. Team Presentation, discussion, and private deliberation the jury. Evening with final results announced and awards.
<i>Sunday, April 25</i>	Retour of participants.

Conditions for participation

This workshop aims to involve professionals with different ages and nationalities, who works or has experience about urban planning or territory development. All disciplines are welcome: architects, geographers, landscape architects, engineers, economists, artists ...

The workshop will be held in St. Louis in Senegal from 10 to 24 April 2010. The workplace will be equipped with hardware and equipment design required. A collection of printed and digital documents will be available to the teams. A buffet lunch will be served daily for lunch. Production and exchange of the workshop will be bilingual French / English; interpreters will provide simultaneous translation for the exchange of public moments. There will be 3 teams of 7 members, in each will be at least one local and two Africans.

Participants are not paid, but the following expenses are covered: a flight in economy class, visas, accommodation in single rooms, meals. They are selected by the team piloting the workshop based on their career, their approach, their application and their relevance to the theme of the workshop.

In particular will be observed the following criteria :

- Ability and experience of teamwork,
- Ability to formalize ideas, by text, by drawing or by a computer,
- Experience in projects about cities with similarities to St. Louis,
- Method and approach of innovative working
- Foreign language skills.

How to apply

If you want to participate in this workshop, please send us an email indicating this desire. Your complete application must be received before February 18th, 2010. It should be sent by email to saintlouis@ateliers.org with three attachments :

- Application Form completed (attached or www.ateliers.org). Filename: NOM_prenom_Fiche
- 1 page CV. Filename: NOM_prenom_CV
- Note of one or two pages in which you explain the nature of your interest to participate and skills / experiences which introduces you. Filename: NOM_prenom_Note

The selection results will be announced in late February.

Pilotage

Luc Raimbault, Director assistant of the Urban Community of Cergy-Pontoise,
BOURJAILLAT Vincent, Head of Mission in the "Mission Capital Region"

Local correspondents:

Assistants:

Aurelie Landon, French architect
Claudia Vilela, Brazilian architect

LES QUARTIERS DE LA VILLE DE SAINT LOUIS

