



les ateliers

maîtrise d'œuvre urbaine



West-African workshops of urban planning of Porto-Novo



3rd session : from July, 20th to August, 11th, 2012

Ecosystem and urban Development

Preserving, Protecting, planning and valuing depressional areas of the city of Porto-Novo.

*International workshop for students and young professionals from Africa
and other continents.*

Presentation of the workshop



*Four international and cross-disciplinary teams make proposals
to the territory's actors.*

Foreword

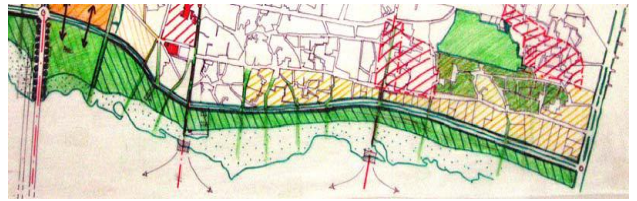
The History of Porto-Novo's workshop

Ever since 1982, Les Ateliers' original method has grown and allows international students and young professionals to work within multi-skilled teams on an urban planning topic proposed by the local authorities.

In November 2005, a professional international workshop was organised within the frame of the decentralised cooperation with Cergy-Pontoise. The workshop's aim was to think about the city's urban project, its territory's development and promotion strategies.



Sketch produced during the 2009 workshop focusing on the West bank of Porto Novo's lagoon..



Sketch produced during the 2005's workshop.

In June 2009, Porto-Novo's new mayor Mr Oeni asked Les Ateliers to come back and put up an « express » workshop that came up with a guide plan for the banks' planning.

Since 2010 Porto Novo has developed its own cycle of International urban planning workshops for students and young professionals, with the support of Les Ateliers: This year, the goal is to confirm the West-African Urban Planning Workshops' sustainability. This third session will focus on the importance of the ecosystem for Porto-Novo's urban development.

Organisation of Porto-Novo's West African Urban Planning Workshop

3 weeks led by a joint team made of Les Ateliers and representatives of the City of Porto Novo.

4 mixed teams of 6 international participants, with 3 African members at least in each team.

Selection of the 24 participants based on applications. Young professionals or postgraduate students.

An international jury made of Porto Novo's mayor, representatives of the local authorities and urban planning experts.



Sketch produced during the 2009 workshop focusing on the West bank of Porto Novo's lagoon..



↑ Mid-Workshop forum
← A tour of the site as an introduction to the workshop

Porto-Novo's partners

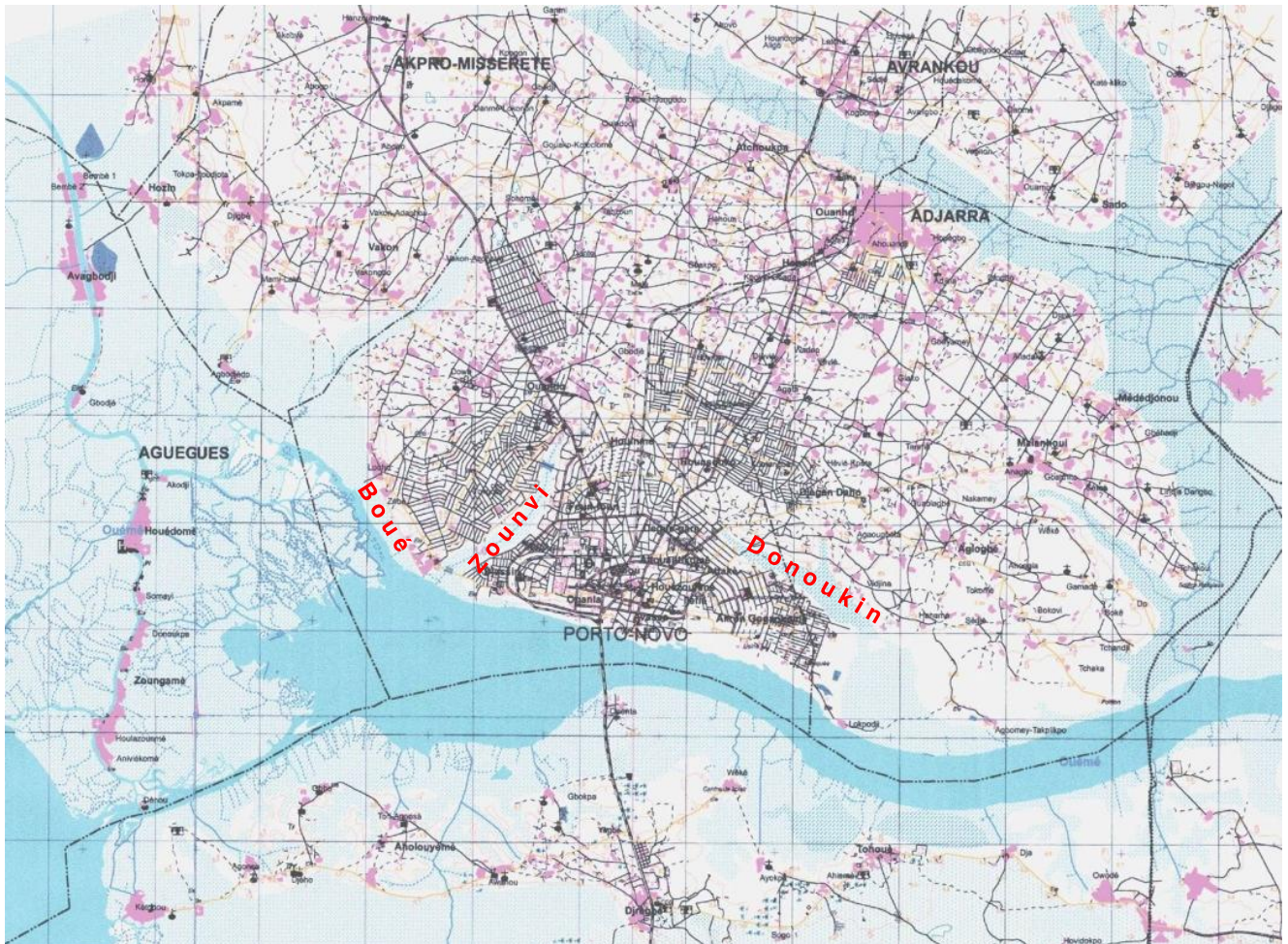
The agglomeration of Cergy-Pontoise and Porto-Novo have been partners since 1995 within the frame of a decentralised cooperation convention focusing on strengthening the African city's skills regarding urban development. The urban planning workshops led by Porto-Novo are a way to achieve this objective.

Here are the development agencies involved in the West-African workshops:

AGETUR : Urban Works' Execution Agency
SERHAU : Regional Studies for Housing and urban Planning

The African universities take part in the scientific committee and suggest students and young professionals to the workshop:

UI : University of Ibadan, Nigeria
EAMAU : African School of Architecture and Urban Design of Lomé, Togo
ESIAU : Superior School of Engineering, Architecture and urban Design of Bamako, Mali.
INAU : National Planning and Urbanism Institute of rabat, Morocco
UAC : Abomey-Calavi, Benin's major university.



The Topic

Porto-Novo is characterised by an extension of its housing area which occupy all the urban territory. It is a 290 000 inhabitants urban fabric (2010 census) with a 2,6% growing rate, and a density of 5300 inhabitants/km². The urban landscape is intricate with several depressions that are invading the urban territory. These depressions are natural areas made of unconstructible wetlands which have resisted to the pressure from the intensive urbanisation: Zounvi, Donoukin and Boué.

They were once considered as lagoon branches on the continent and used to irrigate the city with water on a wide area. But the sitting-up, the accumulation of solid waste and the urban pressure have considerably reduced them.

Indeed, while it spreaded to the North and the East, Porto-Novo has reached the suburban areas like Louho and engulfed Zounvi, and is now threatening Boué which is located further away.

The demographic boom is linked to the soaring and agressive urbanisation and has reduced these natural wetlands to a draining activities (rainwater).

How to preserve, protect, plan and promote the different depressions (Zounvi, Donoukin and Boué) of Porto-Novo and create integrated ecological areas on the one hand, and on the other hand, create farming, tourism and leisure areas?

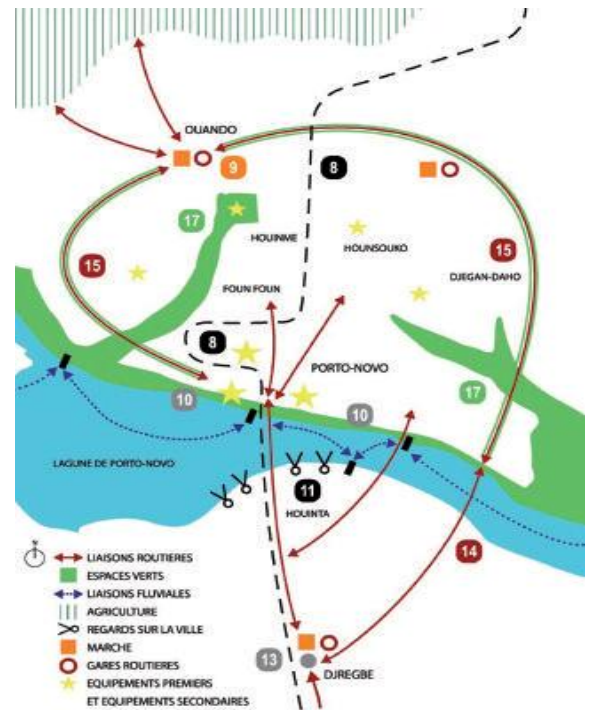


sources: Fond RFU-Porto-Novo, 2005
Données DST-Porto-Novo, 2009

Réalisation: Grégoire NOUDAIKPON

The workshop's objectives

- Renovating the functions (accumulation and retention of the water, refilling of the groundwater, water treatment, biodiversity reservation, absorption of the floods) and preserving the ecosystems (maintain the animal and vegetal population) of these depressions;
- Promoting these depressions with tourism areas (development of ecotourism), urban farming and fishing areas, leisure areas.
- Preserve these areas from the harms caused by urban pressure and waste.
- Proposing a green corridor in the city linking the existing areas (green areas and depressions)



Sketch produced during the workshop in 2005.

The issues

Environmental issues

The Zounvi, Donoukin, Boué depressions and the lagoon as well are an ensemble of wetlands listed as **RAMSAR Sites (International Ramsar Conference, Iran, 1971)**. Wetlands which are on that list gain a new national and international status and become important not only for the country which they are located on but for the whole world. The selection of the wetlands for the list is made upon their ecological and botanical international importance.

Nowadays, due to the lack of necessary equipments these areas' outskirts have become junkyards where the waste collecting carts come to dump their load. These junkyards are harmful to the environment and could damage the natural ecosystem and soil the groundwater. The water Hyacinths invasion in those sensitive areas is the proof of the water's hypertrophication.



↑ Invasion of the water hyacinths
 ← NGO in charge of the waste collection dumping their load in the Zounvi area.

Ecological and landscape issues

Zounvi and Donoukin surround Porto-Novo and are two major entities which play an important part, with the lagoon banks, in the landscape's identity. Beyond their obvious hydraulic utility (they drain the rain water), these areas constitute a fragile biotope and take part in the lagoon's very sensitive ecosystem..

Yet, the preservation of these wetlands is endangered by the actual soil occupation.

The lagoon's bank, the depressions and the vegetalisation of the streets form a three actions structure: climate, landscape and orientation. The green corridor project must allow the city's improvement and render it nicer for the population as well as for the tourists. By tightening the links between the city and its depressions, the green corridor should improve the population's conscience regarding the importance of the wetland's landscape and ecological heritage.



A house under construction in the depression



The branch of the G collector crosses the Donoukin and drain the city's rain and waste water.

Social and economic issues

Generally, the depressions are not or poorly exploited in Porto-Novo. There are some farming exploitations: fish farming, tree nurseries, market gardening... The planning project for the depressions need to maintain these existing activities and develop other activities in order to create economic and social benefits.



Fish farming in Boué.



Market gardening in Donoukin

The site

There are main wetlands in Porto-Novo: the Zounvi depressions in the West, Boué in the North-West and Donoukin in the East. Each of them ends its course in the Porto-Novo lagoon (35km): with the Ouémé valley and the Lake Nokoué (150 km), the whole area is Bénin's widest wetland (91,000 ha).

Porto-Novo's urban structure is particular: the two green depressions of Zounvi and Donoukin are surrounding the city center and further away, around about 7km from the center, is located the depression of Boué. Porto-Novo is now 52,2 km² wide and the wetlands are only 430 ha wide, only 8,3% of the current urban area. The Zounvi depression is a valley with relatively important slopes on its sides. Boué is a small, narrow valley with rather strong slopes, between 8% and 12%, on its sides.

50 000 m² of the area is covered by green and public areas. This figure only counts the areas which have been planned by the authorities. Indeed, the city's fabric contains many planned squares with green areas. But this number is rather insufficient compared to the average number in Bénin, which is 2.5 m² of green area per person, which would be 75 ha for a city the size of Porto-Novo (according to the office in charge of planning and cleaning up).

Thus, green areas do not seem to be a main feature of Porto-Novo's development. Nor they seem to be important features of the new housing schemes that were built before the decentralisation.



	Vegetal cover	Diversity of the fauna	Importance of fauna pops.	Anthropogenic actions
Ecosystem #1: Topping the valley and on the banks of lowland	Herbaceous formation dominated by cyclosorus (invasive ferns)	Rodents, reptiles, insects and some mammals	Sizeable presence of rodents	Culture of thallia Illegal dumps Filling the valley floor House Construction
Ecosystem #2: in the bottom of the valley	Degradated swamp forest of raffia palm, palmyra, and aquatic plants	Fishes, reptiles, insects, mammals, birds	Low presence of animals	Culture of raffia palm
Ecosystem #3: Downstream - valley floor	Swamp forest of raffia palm - fairly intact	Fishes, reptiles, insects, mammals, birds	Strong presence of animals (monkeys wildlife, birds, monitor lizards and otters)	Very little culture



Ecosystems of Porto-Novo's depressions.

Current state of the depressions



Donoukin : Ruins of a house

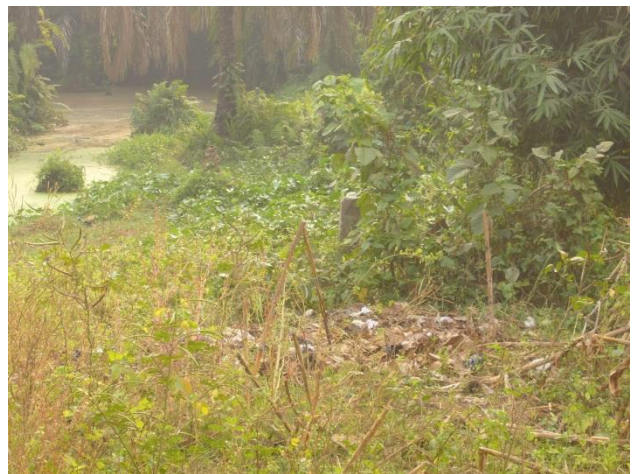


Zounvi: A private lot in the depression

Because of housing estate projects, many owners have been relocated along the banks and in areas which are not suitable according to the 7th February 1992 government decision n° 2 MEHU/DC/DUA. This decision states that a 100m area from the highest water limit is property of the state and is unconstructible.



Donoukin: Makeshift bridge to cross the stream.



Zounvi : IGN landmark

Aware of the problems generated by these buildings and following the floods that occurred in September 2007, a decree was voted by the city (n° 2007/068 about the constructions in Zounvi and Donoukin and a decree forbidding to settle there) forbidding any construction in the depressions. The limits are materialised by the IGN landmarks.

On site, we can see that the landmarks are demarcating the water stream and, generally, the constructions are located just behind the landmarks and don't respect the 100m ban. Thus, the mayor's decree is not respected in this unconstructible area.

The Botanical and Nature garden

The garden is a witness of the former kingdom of Porto Novo. It fulfils many needs for the population: regulating the air quality, resting area, provider of medicinal and culinary herbs as well as seeds that were introduced many years ago. It is a tremendous educational tool for the knowledge of the local ecosystem, for the awareness and the education to a better management of the environment.

The JPN has an important wealth potential and its point of interests are almost unlimited for the city.



The Botanical and Nature Garden.

The location of the JPN in the administrative district of the city and the fact that its near some very important services (Governors Palace, Parliament, Secretary for Agriculture, Ouémé Hospital) prevents it from being threatened.

The Songhaï Centre

The Songhaï Centre is located in the Zounvi natural depression. It is a centre for training, production, research, development based on integrated farming. It is an experimental agri-organic centre which method is based on the exploitation of the cultivated areas' own resources. The Songhaï experimentations started on one hectare of forsakened land, given by the government. Since then, the land has become the centre's headquarters and its first « farm-school ». It is 15 hectares wide and is one of the most productive farm of the region.

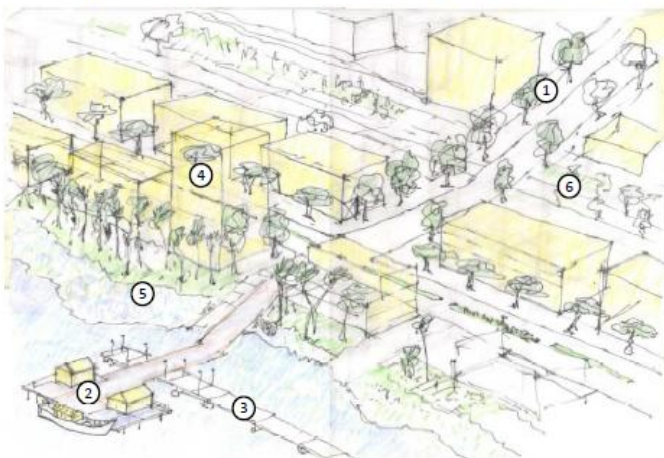


Tour of the Songhaï Centre by the workshop's participants in 2010.



A road in Boué, after the RNIE 2 (towards the Ouando Market)

Principe d'équilibre entre trame verte et bâti



- 1- Allées arborées remarquables, perpendiculaires à la lagune
- 2- Embarcadères pour les transports fluviaux
- 3- Pontons flottants - Promenade sur la lagune
- 4- Bâti discontinu aligné avec quelques bâtiments hauts « repères »
- 5- Berge non constructible de culture biologique
- 6- Boulevard lagunaire planté d'arbres parasols



Entrée en ville-capitale

Sketch produced during
the 2010 workshop

Workshop's projected schedule

Friday 20 th July	Greeting the international participants. The participants settle in. Welcoming dinner with the leading committee.
Saturday 21 st July	Morning: Presentation of the Porto-Novo workshop and its organisation. Presentation from the participants (1/3) Afternoon: Tour of the city
Sunday 22 nd July	Morning: Free. Afternoon : 1 st tour of the site (with the artists)
Monday 23 rd July	Morning: Presentation from the participants (2/3). Afternoon: 2 nd guided tour of the site
Tuesday 24 th July	09h : Opening Ceremony and speeches from the authorities- Lectures(Porto-Novo). Evening: Creation of the teams and launching of the session.
Wednesday 25 th July	Workshop
Thursday 26 th July	Workshop
Friday 27 th July	Workshop
Saturday 28th July	9h-12h : 1st forum. Workshop
Sunday 29 th July	Day off. Tour.
Monday 30 st August	Workshop
Tuesday 31 st August	Workshop
Wednesday 1 st August	Workshop
Thursday 2nd August	Workshop. 14h-17h : 2nd forum
Friday 3 rd August	Workshop
Saturday 4 th August	Day off
Sunday 5 th August	Workshop
Monday 6 th August	Workshop <i>Greeting the members of the jury. Welcoming dinner.</i>
Tuesday 7 th August	Workshop. The teams hand-in the 8 A4 pages at 8pm. <i>Jury : Introduction to the topic and to the site in the morning. Lectures from the members of the jury to Porto-Novo's local authorities.</i>
Wednesday 8 th August	The teams hand-in the A0 boards at 12pm. Presentation rehearsals. <i>Jury : Tours, preparation for the jury in the afternoon.</i>
Thursday 9th August	9h : International Jury. Teams presentations, debates, then deliberation. Closing ceremony, results and awards.
Friday 10 th August	Collective trip to Ouidah, departures of the participants and the jury members.
Saturday 11 th August	Departure of the participants and the jury members.

The workshop's organisation

The workshop will take place in Porto-Novo from the Saturday 20th of July to the Friday 11th of August. 24 participants will be working within 4 teams of 6, under the supervision of a mixed team made of local professionals and representatives of Les Ateliers (2 or 3 assistants and 1 or 2 experts)

Participants will stay in houses which have been refurbished by the city, in an institute or in a hotel. The workplace will be equipped with computers and all the necessary drawing material. Digital and paper documents will be available. Lunch will be provided everyday. Participants have to take care of their dinner.

The jury will be a privileged meeting place between authorities, local and international experts and the participants. The jury will rank the four teams.

How to Participate

This workshop is open to young professionals and students from every background related to urban planning: architects, geographers, landscape artists, engineers, economists, sociologists, artists.... Applicants should have studied for 3 years minimum. Age: Between 22 and 30.

Application:

- 1 page CV. Name of the file: SURNAME_firstname_CV
- A research work about a similar topic about a different site (preferably in your home country) Analysis note+ graphic elements preferably produced by the candidate. Format : 6 A4 pages or 3 A3 pages. Name of the file: SURNAME_firstname_RW
- Filled Application: Name of the file: SURNAME_firstname_ID

The complete application needs to be sent by email (up to 10Mo of attached file) to: portonovo2010@ateliers.org
Deadline for applying : **May 15th , 2012.**
Results will be announced end of May

Finance

Participation Fees: 25 000 francs CFA for the African participants and 100 euros for the non-African participants.
Participants are responsible for their transport, personal insurance and visa.
Bursaries can be granted on a personal basis depending on the partnerships: Foundations, French Ministry...

Contact

For further information, please check our website: www.ateliers.org and the dedicated page on Porto-Novo's website: www.villedoportonovo.com or write to us at: portonovo@ateliers.org.

Porto-Novo : **Joëlle AKODJENOU, in charge of Porto-Novo's workshop .**
Les Ateliers : **Antoine Plane, deputy director.**



Benin in West-Africa



Porto-Novo



View of the lagoon



In the street



A day in the workshop