REPLAY*

From an Interspace to a Territory of Greater Paris: The Plaine de Pierrelaye-Bessancourt

CONTEXT DOCUMENT

les ateliers
maîtrise d'œuvre urbaine

International workshops
of planning and urban design
September 2013

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FROM AN INTERSPACE TO A TERRITORY OF GREATER PARIS: THE PLAINE DE PIERRELAYE-BESSANCOURT

INTERNATIONAL WORKSHOPS
OF PLANNING AND URBAN DESIGN
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Our Partners

We are grateful to our partners, for their help in enabling us make this workshop a reality:

PREAMBULE

There are so many unexplored possibilities, so much potential in a conurbation. Can that which already exists constitute the substance of the future city? That is the very question raised by the development of future possibilities for the Plaine de Pierrelaye-Bessancourt, which lies at the north-west of the Paris agglomeration – a second hand space *par excellence*[1].

Unlike structured urban spaces, unlike even areas made up of tower blocks and other large buildings, which are now undergoing urban renovation and again even unlike industrial fallow land, which contains visible structures, buildings or infrastructure, the plaine de Pierrelaye-Bessancourt for all the world looks like a vast open area, almost freely available, in a space which has, by way of contrast, seen a lot of construction in the last few years. But this is nothing but an image, a delusion. The plaine de Pierrelaye invites us to explore an urban archaeology and history of the underside of the conurbation. This is paradoxically an invitation to think far ahead. An invitation, because the existence of such an area in a growing agglomeration like that of Greater Paris leads to a desire to project onto the area new ideas, new projects, new functions, new approaches.

The scale of these issues is significant. This plain is at the intersection of an important wildlife corridor. The scale is also that of the large road infrastructures which extend towards Normandy and to the north, the territories and the specific infrastructures envisaged within the framework of Greater Paris, the confluence of the Seine and the Oise, the Seine-Nord Canal, the river port of Achères, seem as if they should open new opportunities, and lead to a total reshuffling of the area.

A paradoxical invitation, because the Plaine de Pierrelaye has, by way of total contrast, a patchwork of different functions and uses, regulated to a greater or lesser extent, some recreational, some not. Here, land is used for agriculture, which is greatly subsidised, and, sold one plot after another, for market gardening. Here, leases tend to be indeterminate or unstable. Yet we also find here horse-riding clubs, activities in the outdoors. But when we look at the ground and the soil, it's another issue entirely. There is a high level of pollution, brought about both by organic matter and metals – not absolutely everywhere, but wide-spread. This can be explained by how Paris made use of this area early on in its history, and by the disposal of sewage waste from Paris here in the second half of the 19th Century. So as to change the course of events, to build a new future, to give back to the Plaine de Pierrelaye-Bessancourt an impetus and a positive image again, there is a plan to plant a very large forest there. The announcements made by the French President in 2009 were a fitting response to the concerns of the local authorities and the project was launched.

However, several scientific studies, analyses of soil and phytosanitary studies, have shown just how complex the long-term management of the cycles of the transmission of polluting substances and the transformation of the chemical nature of the soil is, including in the case of the planting of a forest. The rapid progress which has been made in the evaluation of sources of renewable energy in the Ile de France region (SRCE 2012) also showed the limits of the use of a new forest for biomass energy. It would be possible to get rid of the polluted level of soil. But where would we then be able to dispose of the earth? And, above all, what uses of the area, what projects could possibly be important enough to justify the cost of this?

Will any solutions thus only be partial, minimal solutions? Or will all this ultimately result in an organised – rather than simply tolerated, as it is at the moment – deconstruction of the area or whittling away of its resources? Certainly not. Les Ateliers places itself within a movement which is driven by deliberately positive, constructive thinking… without at all ignoring the constraints which could limit creativity. We must widen the scope of our perceptions, our ideas.

Other solutions are being explored in the Boucle de Chanteloup, and around Achères, on sites which are not too far away and which have experienced the same history as the Plaine de Pierrelaye. Could they serve as a model? And looking elsewhere too, examples of the reuse of polluted fallow land abound. But here, we are often talking about this happening on a much smaller scale, and often the pollution is industrial, often the pollution is much less complex than on the Plaine de Pierrelaye. Examples abound too of new urban policies, or urban projects created from both new social practices and apparently insurmountable constraints, and this is the case in cities in developed countries, as much as it is in developing countries.

What is urgent, is the creation of a new history for the future, is the reopening of possibilities, is the widening of new horizons, without forgetting the constant pressure and needs of urbanisation – as is evident, for example, all along the B road 14 (RD14), which crosses the plain from east to west, with its continual string of commercial installations, or then again, as is apparent on the fringes of the different towns on the plain.

To achieve this goal, inflexible plans and easy, generic solutions should probably be excluded. We are at a crossroads of history, of the lives of a city, those of yesterday, those of today, those of people too, of each person, of those who use and those who live next to the Plaine de Pierrelaye. How can the idea of Greater Paris really contribute to effecting change?

Creating a forest is a long term project – a project which takes decades, which takes centuries. How can this process bring about a coherent mobilisation, which will last, of the politicians and key players in the community, at the same time as bringing about, in the very near future, the engagement of those who live in the plain, or alongside it – people who would find it highly advantageous to use the Plain de Pierrelaye in a different way, to find there services, activities, and social possibilities and uses which are impossible to find in the old historical woods of Saint-Germain or of Montmorency? Can the creation of a forest also give rise to new forms of urbanisation? At the limits of urbanisation and of history, bridging the gap between the short term and the long term, the Plaine de Pierrelaye-Bessancourt invites us to bring about new forms of consensus, to create new processes, new ideas for how the area can be transformed, in the long term, which fuse numerous different fields of expertise, encompassing social innovation, soil engineering, architecture, biotechnologies, small-scale and large-scale town planning, economics, both agriculture and also agronomy, and, above all, history.

Because that is really the heart of the matter. Stopping. Listening to the rhythms of the city. Not hurrying into any one thing, but rather finding out which strategies will allow us to give the Plaine de Pierrelaye-Bessancourt an inventive, subtle and local – as much as urban – future, and one which has been chosen by it.

Nicolas Buchoud and Patrice Berthé

1 Second Hand Spaces. Uber das Recyclen von Orten im städtischen Wandel. M. Ziehl, S. Oswald, Jovis, 2012
Junkspace, repenser l'espace urbain. R. Koolhaas

SUMMARY

1

GENERAL INTRODUCTION TO THE PLAINE DE PIERRELAYE-BESSANCOURT

GENERAL INTRODUCTION TO THE PLAINE DE PIERRELAYE-BESSANCOURT

Note: Many aspects of what follows, especially maps, images and data, come from the pre-operational study of the group, Urban Design/CERAPT/ONF, sponsored by the State and the General Council of Val d'Oise. The defined area of this study does not limit the work of the 2013 session of Les Ateliers in Cergy.

A. LOCATION

The plaine de Pierrelaye-Bessancourt, an area of about 2000 hectares, is situated 25km to the north-west of Paris, in the Ile de France region, in the Val d'Oise (95) department, between the urbanised parts of the Montmorency valley and the agglomeration of Cergy-Pontoise (1,2, 3, 4, 5).

It stretches across the towns of Bessancourt, Frépillon, Herblay, Méry-sur-Oise, Pierrelaye, Saint-Ouen l'Aumône and Taverny – a total number of 160,000 inhabitants.

It is delineated:
- In the north, by the Oise Valley, and, beyond that, by the Vexin Français Regional Nature Park
- In the east, by wooded hills and by the Montmorency valley
- In the south, by the Seine valley, by the Buttes du Parisis, and, beyond that, by the National Forest of Saint-Germain-en-Laye
- In the west, by the Cergy-Pontoise agglomeration.

It's a place of transition, where agriculture plays a major part, which lies between significant regional natural spaces. It is the landscape which forms the link between the Vexin Français Regional Nature Park, the National forest of Montmorency, the National Forest of Saint- Germain-en-Laye, as well as the Seine and Oise valleys.

B. THE SITE

A. TOPOGRAPHY

The 'plaine' [plain] de Pierrelaye-Bessancourt is situated on a plateau, on which also lie the hills of la Butte de Montarcy, la Butte Rouge, and La Butte à Mondion. There are several small valleys as we move towards the Oise Valley: the Vallée de Liesse, the Vallée de Vaux, or Vallée de Fond des Aunes, for example. The hills, called Les buttes de Montmorency and Les Buttes du Parisis, form a natural boundary to the plain, to the east and to the south.

The slopes of the Oise valley have a relatively gentle incline (area of concretion), which differs from that of the Seine valley (area of accretion). The plaine de Pierrelaye-Bessancourt is a plateau, from which the Buttes – part of the Paris Basin – rise up, and on which the Oise and the Seine rivers meet (7).

B. GEOLOGY AND PEDOLOGY

The site is mostly composed of loam soil on the surface. The edges of the site are, however, made up of clay: at Bessancourt and at Frépillon, as well as at Herblay, on the Seine plateau. The geological profile of the site is made up of the following elements:
· Eocene sand, principally 'Sands of Beauchamp' (wind-blown sand), with outcrops made of limestone (sandstone banks)
· Saint-Ouen limestone to the east and the south
· Marl and scree (limestone), lutétien limestone (a sandy form of limestone, often called 'calcaire grossier') on the surface of the ground, to the south.

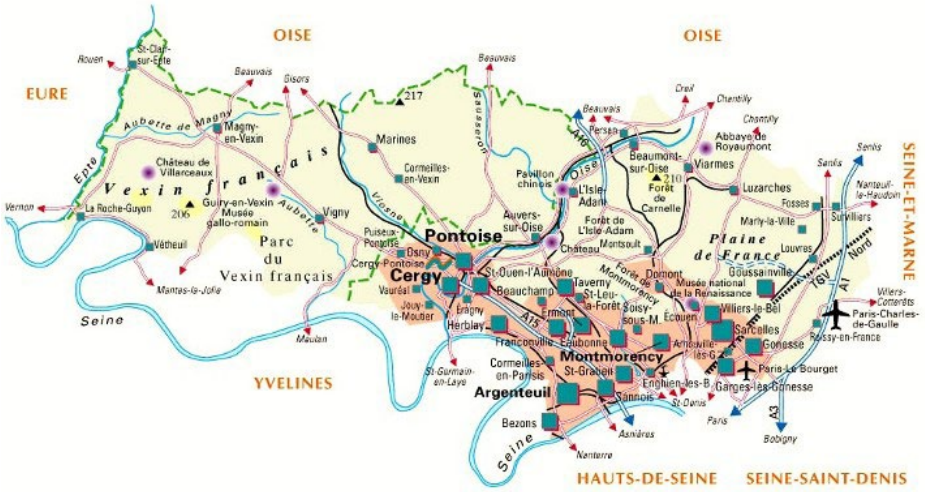
The upper layer, naturally poor, in geological terms, has been enriched in organic matter, by the run off of sewage waste and the development of market gardening. These soils are a natural resource which has little capacity to retain water. They do not really have any agronomic value.

C. BIODIVERSITY[2]

The fauna is made up of many species of mammals (stone martens, rabbits, squirrels) and a census of the presence of batrachians in the humid areas is currently being taken (frogs, toads…). The vegetation is varied: a total of 367 different species of plants have

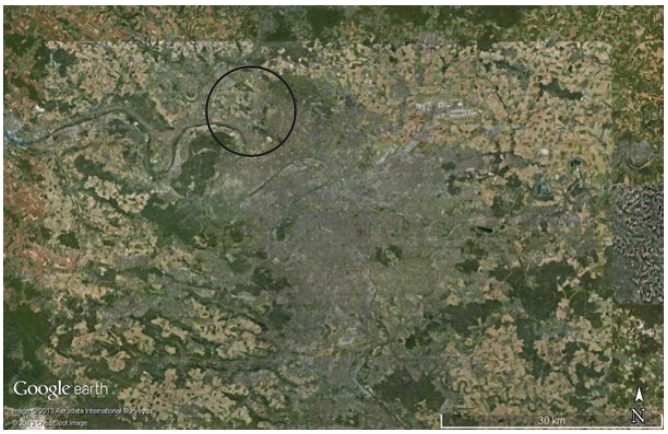
2 : Source Urban Design Study/CERAPT/ONF

1. Val d'Oise Department (Cg 95)



2. Val d'Oise Department (1france. fr)

3. Localisation de la plaine de Pierrelaye-Bessancourt (Géoportail)



4. Localisation de la plaine de Pierrelaye-Bessancourt (Google earth)

5. Location of the plaine de Pierrelaye-Bessancourt (Google earth)

been found on the plain – an important plant biodiversity. 298 wild species have been identified, of which two are very rare and 8 are rare. The variety of areas – cultivated land, the edge of forests, humid areas – which are rich in nutrients offers a stopping point for migrating birds. 123 have been discovered by the 1983/1983 campaign for bird-spotting. However, according to the Ornithological Centre of the Ile de France region, the number has somewhat diminished since then.

Generally, attempts at afforestation do not tend to succeed well, due in particular to the poor soils and to environmental degradation (rubbish tips, and slashed budgets). These forests are residual and enclosed, and make up about 400 hectares.

Nonetheless, they play a role in the landscape and the ecology and continue on the plain the green spaces which are found in the Vexin Français Regional Nature Park, the National Forest of Montmorency, and the National Forest of Saint-Germain, and the Seine and Oise valleys.
They have:
· A social value (landscape and history)
· A value in terms of biodiversity

Les Espaces Boisés Classés (EBC)

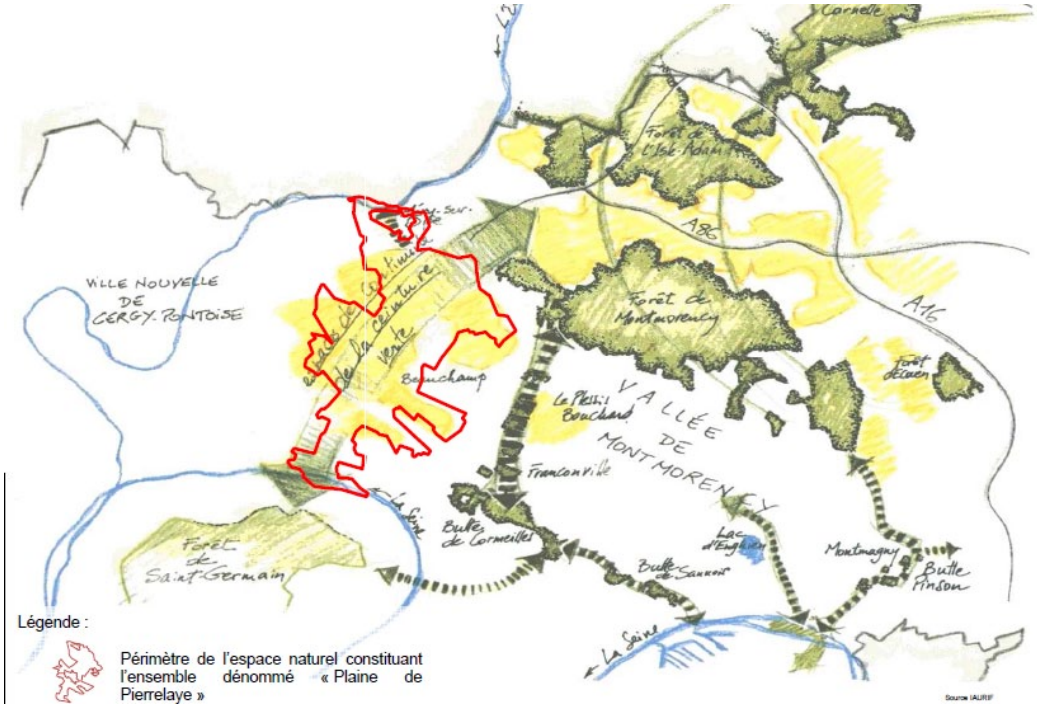
The Espaces Boisés Classés are a particular category of protected urban or peri-urban wooded areas, according to land-use planning (Plans Locaux d'Urbanisme – PLU). These spaces are very advantageous for areas in terms of landscape, ecology, and biology (9).

The rules which govern the protection of the Espaces Boisés Classés can be found in the L. and R. 130-1 and following articles in the Code of Urban Planning. All uses of soil which might endanger the afforestation are forbidden in the area. Also forbidden is any planning permission (even if the construction would not involving any felling or cutting of trees), permission for the land to be divided into plots, installations, camping grounds, fences, parking spaces for caravans, quarries, and, of course, clearing of the wooded area. The majority of forests created through afforestation fall within the category of espaces boisés classes, as according to the land-use planning of the local towns. A prefectural decree controls the felling and cutting of trees in woods of 0. 5 to 4 ha.

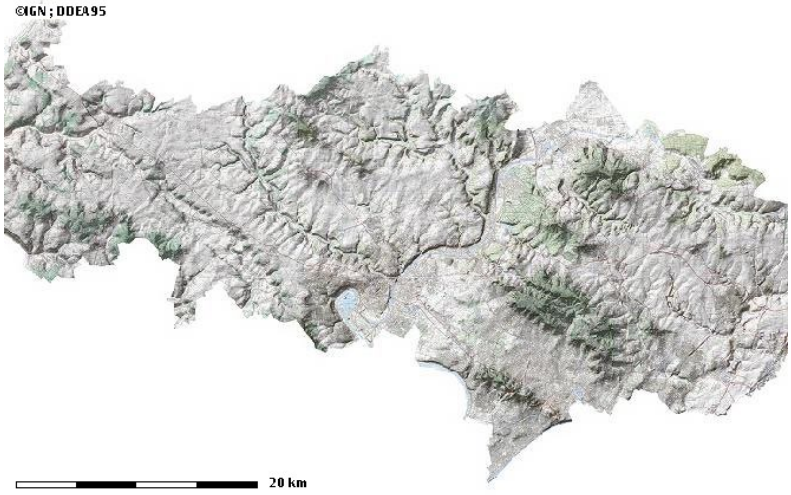
Sites of Community Importance (in Flora and Fauna)

Sites of Community Importance in Flora and Fauna (Les ZNIEFF - Zone naturelle d'intérêt écologique, faunistique et floristique) are created by the organisation, l'Inventaire national du patrimoine nature, when they catalogue the flora and fauna of a region. Once the national interest in these sites is recognised, and this finding is validated by a committee of scientific experts, these areas constitute the base for the creation of areas for the conservation of biodiversity, as well as for making sure that the environment is taken into account in development projects (motorways, green belt). Such a classification does not enforce specific regulatory measures which control the use of these areas, but it does mean a certain 'making-aware' in the case of projects which concern them.

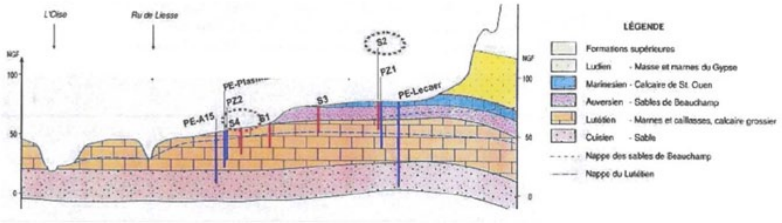
Part of the Plaine is classified as a type I ZNIEFF (10). This area is situated in the east, in the places known locally as «la Sablonnière» (36 hectares) and «les Bruyères» (35 hectares) at Bessancourt. This area has an ornithological and ecological importance.



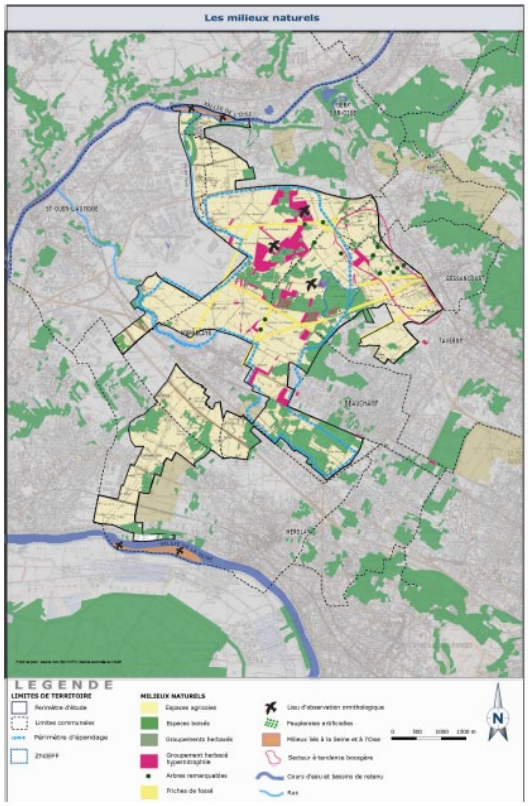
6. The plaine de Pierrelaye-Bessancourt, a place of transition (IAURIF, from the study CERAPT/ONF/Urban Design)



7. Topography of Val d'Oise (DDEA 95)



8. Profil géologique de la plaine de Pierrelaye-Bessancourt (Préfecture du Val d'Oise)



9. The natural areas of the plaine de Pierrelaye-Bessancourt (Urban Design Study/ONF/CERAPT)

D. A RICH WATER SYSTEM

The Val d'Oise department has a surface area of 1,250 km² and benefits from a wealth of water systems (450km of waterways). These waterways are particularly important because they include stretches of two navigable waters, the Oise and the Seine, as well as about twenty rivers which have smaller-scale and more restricted uses (they are locations for fishing, for walking) and rich ecosystems (11). The plaine de Pierrelaye-Bessancourt is situated between the Oise and Seine valleys and the Ru de Liesse (12) runs through it. In terms of the water table, there are two environments[3]:
· First, the Eocene water table contained in the lutétien limestone
· Second, the Eocene water table contained in the Saint Ouen aquifer and the Beauchamp sands.

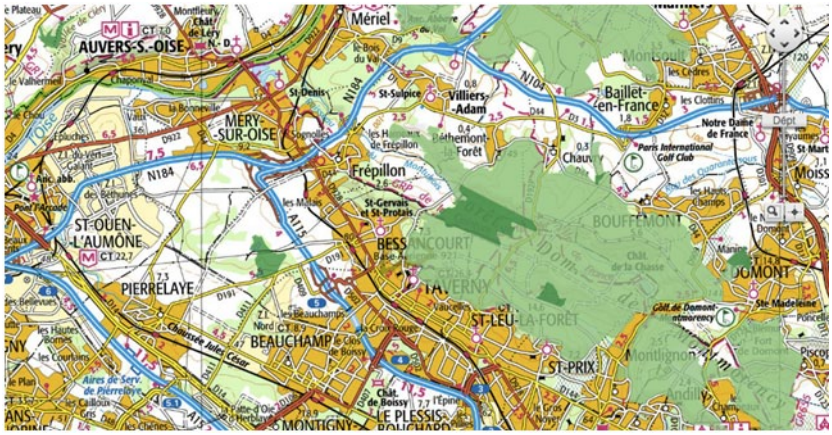
The depth of the Eocene water table varies from 5 to 46 metres. In the Bessancourt sandy areas and the basins where sedimentation occurs, the water table is just beneath the surface – something which renders it particularly vulnerable. The ground water drains towards the Oise, which is, along with the Seine, the base-line for underground run-offs in the area. They in part cross the areas of the Liesse and the Vaux.

According to the HPC-F report, a SIAAP study using documents and historical evidence, 10 of these channels are used in agriculture and 8 in industry.

Risks of Flooding

There are groups of buildings on some of the flood plains of the waterways, which exposes them to risks of flooding. The Seine and Oise valleys are subjected to the Plan for the Prevention of the Risk of Flooding. This is a regulatory document which has as its main goal the control of urbanisation in areas which are exposed to a natural risk. (13).

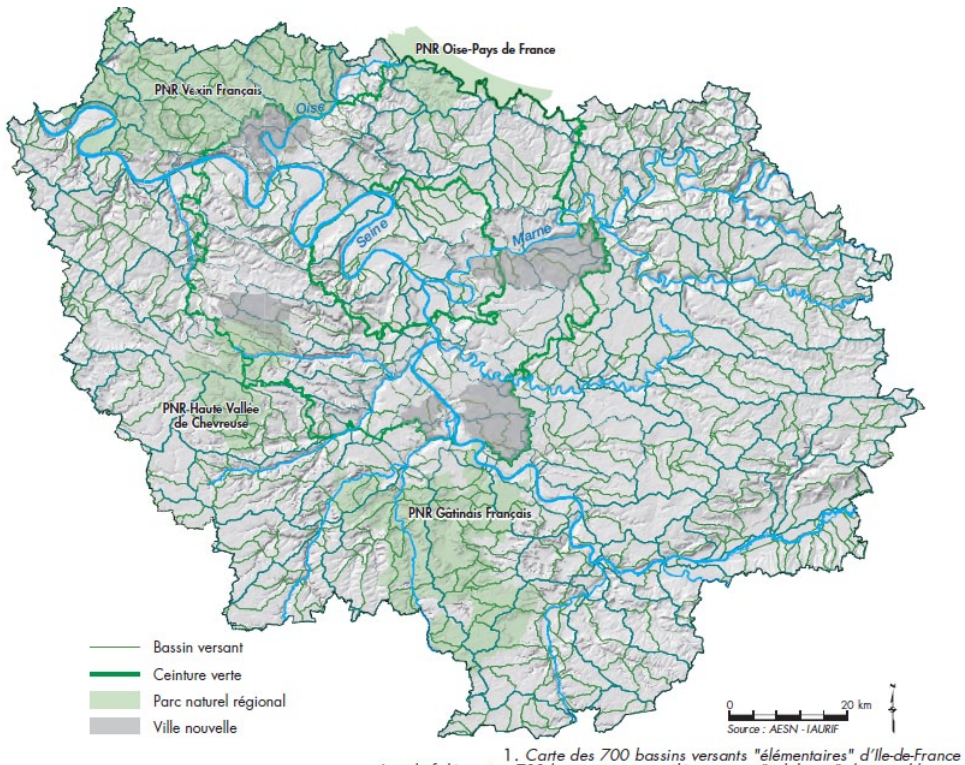
3 : Source: BRGM subsoil data and interpretation of the HPC-F report, a SIAAP study of documents and history (unpublished)
See Map no. 1 in the Appendix



10. The map of the ZNIEFF (From the website of the organisation, Inventaire National du Patrimoine Naturel)

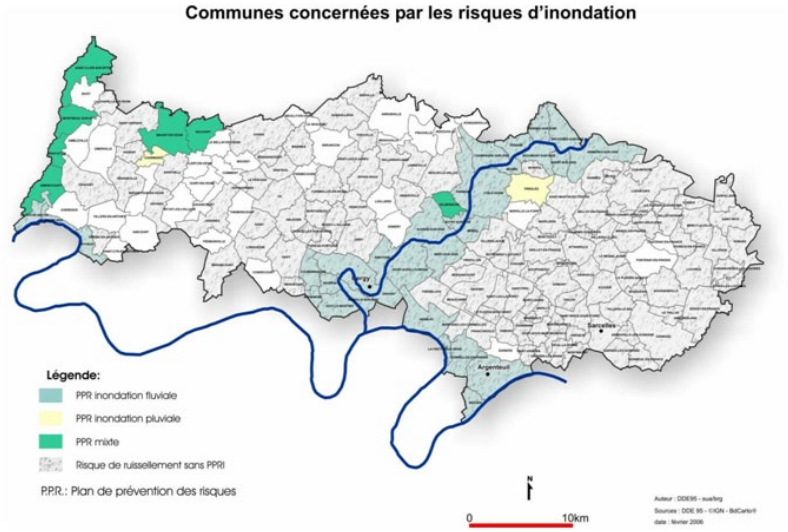
12. The waterways of the plaine de Pierrelaye-Bessancourt (Géoportail)

12. The ru de Liesse (IAURIF)



1. Carte des 700 bassins versants "élémentaires" d'Ile-de-France
Le relief détermine 700 bassins versants élémentaires "solidaires" du grand bassin

11. Watersheds in Ile de France region (IAURIF)



13. PPRI (DDE 95)

E. A TEMPERATE CLIMATE

The plaine de Pierrelaye-Bessancourt has a temperate climate. Averagely strong winds blow across the plain, coming from the west, where the plain is open. The average yearly rainfall is about 718mm and the average yearly temperately is 12. 8 °C

C. THE SWEEPING LANDSCAPES OF THE OISE AND SEINE VALLEYS[4]

The landscape of the Val d'Oise, which is both rural and urban, is very varied. Immortalised by the impressionist painters (14, 15) these landscapes are a product of a constant interaction between the natural environment and the recent and ancient activities of mankind.

The elements which characterise the landscapes of the Val d'Oise, such as the plateaus, the valleys and the hills, mean that the plaine de Pierrelaye-Bessancourt is part of a great, sweeping, varied landscape.

The Plateaus

These are the great open spaces which allow one to see for miles and to grasp the topography of the area. Spaces of transition, they form a link between the different reliefs. In the prehistoric era, the space was essentially made up of farms dispersed about the area. In the Middle Ages, the inhabitants of the region established communities, in villages. Sometimes, the location of these villages was determined by where major routes of communication were, sometimes it was built upon an older settlement; above all, these villages were built near rivers which produced the hydraulic power necessary for the windmills. In the Vexin Français, agricultural land still forms a large part of the plateau.

The Montmorency valley is a plateau which stretches between the Montmorency hills and the Cormeilles hills. It is situated between two watersheds: that of the lac d'Enghien and that of the ru de Liesse, which runs into the Oise. It is due to its role as a sort of corridor, located between higher reliefs, that it probably owes its name of 'valley'. It is a very urbanised part of the Val d'Oise.

The Valleys

The valleys play a key role in linking the area to other areas. Sometimes narrow, as they are in Auvers-sur-Oise, sometimes open, on a floodplain, as in Persan, lying peacefully between the Vexin and the Plaine de France plateaus, the valleys present a very rich variety of natural landscapes, urbanised to a greater or lesser extent, in which economic, touristic and cultural activities are developing. The hillsides of the Seine and Oise valleys form cliffs, some sheer, some less so. In the more inhabited parts of the landscape, we can see the originals behind the now renowned images of this part of the world brought to us by the impressionists.

The steep cliffs are situated in the outside curves of the places where the river meanders and cuts through the rock, as it does at Cergy, Auvers-sur-Oise and Eragny-sur Oise, in the Oise valley. In Argenteuil and La Frette, the presence of the Seine has led to construction around activities linked to the river traffic: in La Roche-Guyon, buildings have been constructed outside the areas liable to flooding, and on too great a slope. The pressure for real estate and the reduction in the profitability of farming has often led to urbanisation at the bottom of valleys and on their slopes, despite the risks of flooding and to the detriment of the flood plains.

The Hills

The hills divide the department, forming a north-west section and a south-east section. These natural reservoirs which sit above the rest of the area give rise to numerous sources, around which villages and farming areas have grouped. The hills entail technical constraints for anyone who wants to build on them. Certain slopes were covered in vineyards until the 18th Century. In the Middle Ages, these hills were chosen as the location for castles and forts (the Château de Marines or the Château de Montmorency being two examples of this). At the end of the 19th Century, this use of the summits decreased and they became covered in forests. Today, building on these hills is more common in the Plaine de France than in the Vexin, where the panoramic views offered by the area are seen as desirable.

4 Numerous extracts from the guide 'The landscapes of the Val d'Oise: issues and methods', CG95, 2002

14. Wheat-fields at Auvers-sur-Oise (Vincent Van Gogh (July 1890), Rijksmuseum Vincent Van Gogh, Amsterdam. Larousse. fr)

15. Paul VOGLER - “The banks of the Oise, 1880-1900
“ – oil canvas (Private collection, Von-Gogh. fr)

2

THE PIERRELAYE-BESSANCOURT PLAIN WITHIN ITS CONTEXT AS PART OF THE ÎLE DE FRANCE (PARIS) REGION

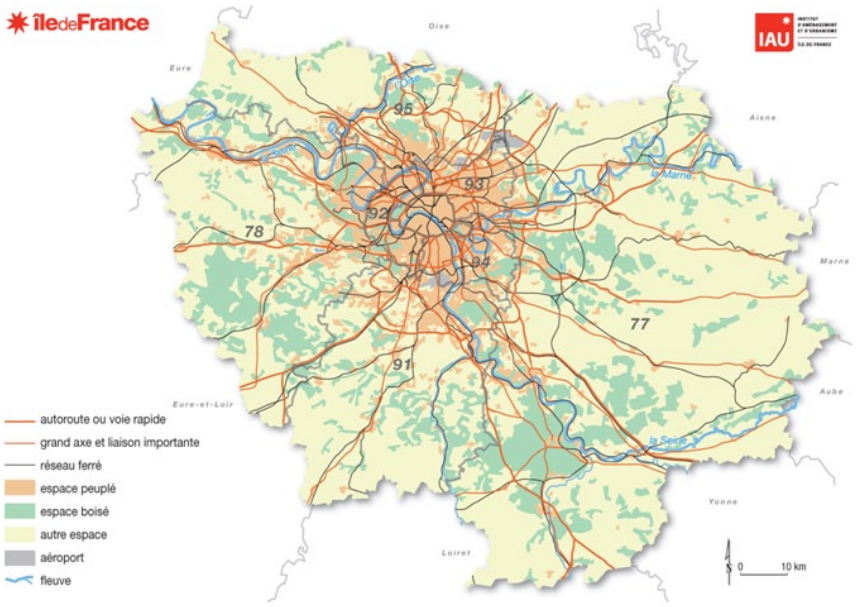
THE PIERRELAYE-BESSANCOURT PLAIN WITHIN ITS CONTEXT AS PART OF THE ÎLE DE FRANCE (PARIS) REGION

The future of the Plaine de Pierrelaye-Bessancourt, an interspace, because of its history, its location and its role in being the site for the project of the metropolitan forest of Greater Paris, cannot take shape without our taking into account several different scales and levels: nearby and distant areas, with which the Plaine de Pierrelaye-Bessancourt is linked, both in terms of location and of function.

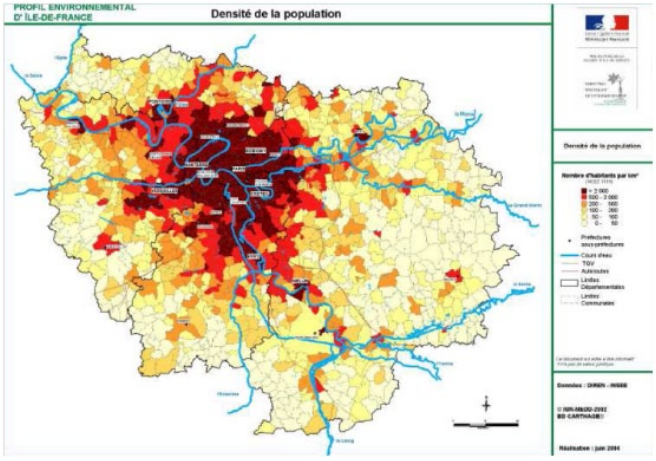
- the whole of the Île de France region
- Greater Paris, in the sense not only of a new transport system but also of strategic urban areas linked to each other by this transport network
- The confluence of the Seine and the Oise rivers, the western gateway to the conurbation, and the home to 350,000 inhabitants, due to be 500,000 in 2030: a significant urban area which adjoins the Plaine de Pierrelaye-Bessancourt.
- The 7 municipalities which are part of the 'Agreement' (about the use and development of the plain), which are on or very close to the Plaine de Pierrelaye-Bessancourt

The Île de France Region in a Few Statistics (16, 17, 18, 19)

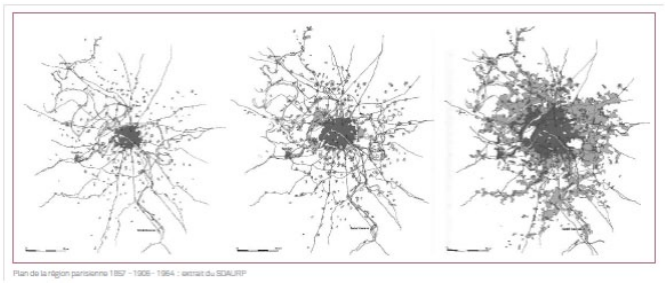
- 12,012 km2 of which 80% is natural space, agricultural land or forest
- 1 region
- 8 departments
- 1,281 municipalities
- 105 inter-municipality associations
- 11,667,000 inhabitants (as estimated in January 2011), i. e. 19% of the population of Metropolitan France and 2% of that of the European Union. 56% of the population of the Île de France region is under 40.



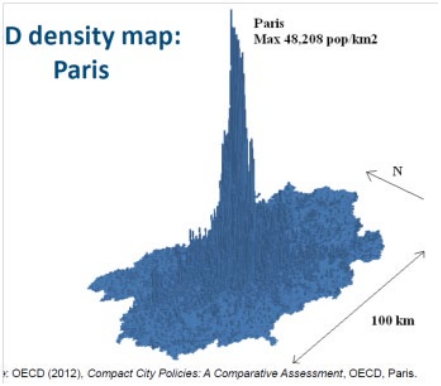
16. The main transport routes of the Ile de France region (IAU)



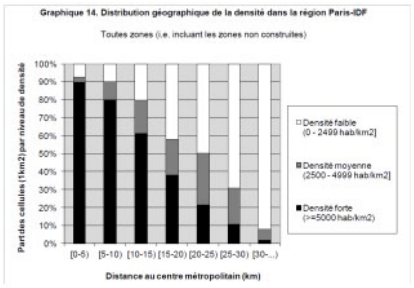
19. Population density in Ile de France region (DIREN IDF)



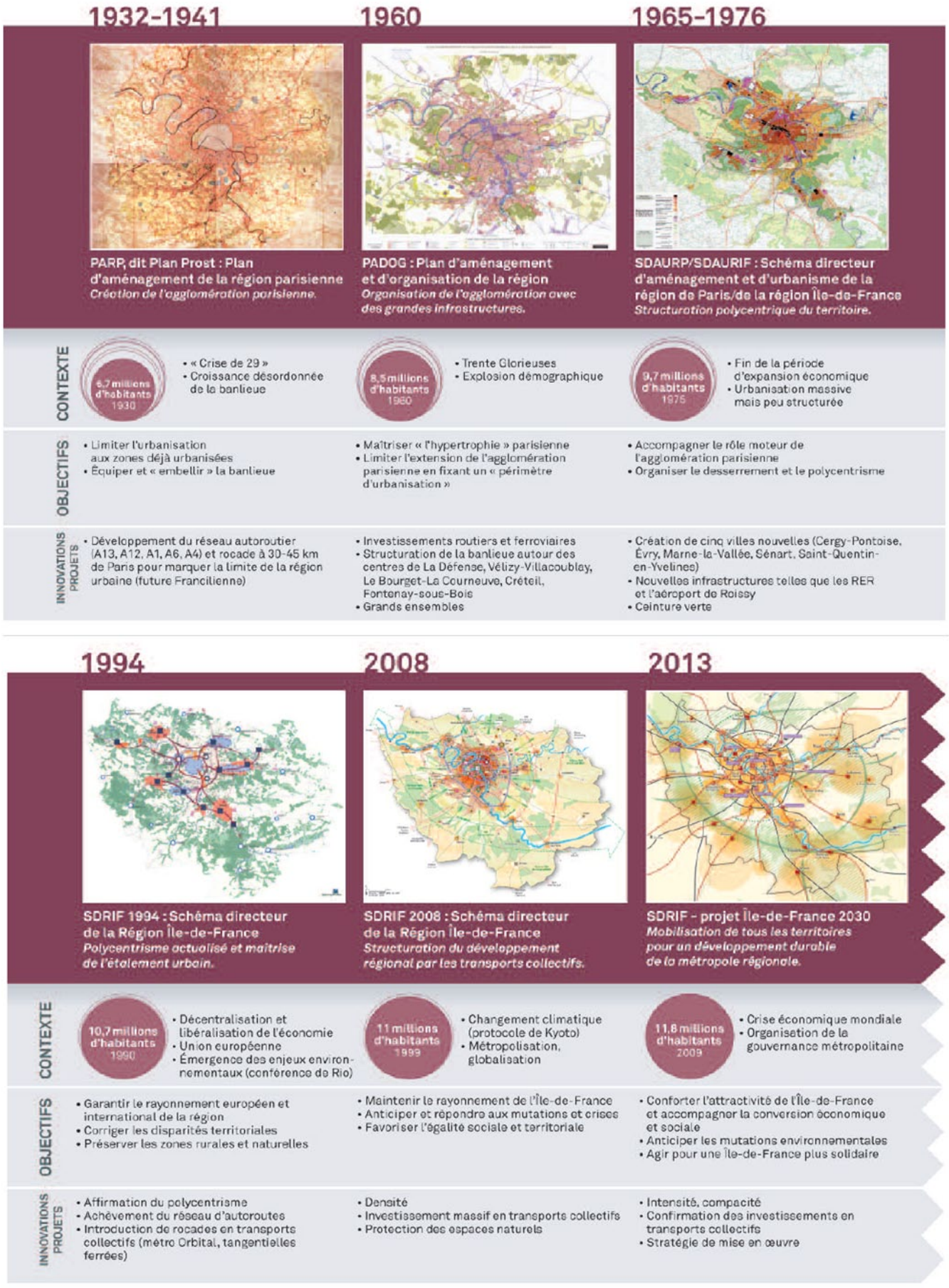
20. Plans for development for the Paris region



17. Graph of population density in the Paris-IDF (OCDE) region



18. Geographic Distribution of population density in the Paris-IDF region (OCDE)



21, 22: Table showing the various steps in development of the Paris region (IAURIF)

- Population in active employment in 2010 (Insee): 5,165,000
- Total employment (paid and unpaid) in 2009 (Insee, data is provisional): 5,955,000 of whom 82% are in the tertiary and primary employment sectors.
- Unemployment rate: 8. 8% (4th quarter, 2012)
- Population density: 988 inhabitants/km2 (2011)
- GDP 2009 (in millions, in current euros, Insee): 552,050, i. e. about 29 % of national wealth and nearly 4 % of the GDP of the European Union
- Air traffic of Paris airports in 2011 (millions of passengers, ADP): 88

The Region's Development[5]

Over the course of the 19th and 20th Centuries, the Paris agglomeration developed according to the real estate opportunities (take housing projects as an example) and according to the development of means of transport: railways, tramways, A roads and motorways. Progressively, the way state power is organising the Paris region is changing from simple zoning to a real policy of developing the area, created so as to respond to the challenges posed by the changing economic, social and cultural climate. 1932 marked the start of a succession of plans for the development of the Île-de-France (20, 21, 22) region. Each new plan attempts to respond to the demands of the new era; they contribute to the structuring of the area and equally to the construction of major pieces of infrastructure.

A. THE OVERALL PLAN FOR THE RÉGION ÎLE-DE-FRANCE REGION (SDRIF): A VISION OF THE ÎLE-DE-FRANCE REGION FOR 2030

According to the town planning code, the overall plan for the Île-de-France region (in French: le Schéma directeur de la région Île-de-France (SDRIF)) has the aim of controlling urban and population growth and the use of space whilst at the same time guaranteeing the international standing of this region. In other words, the SDRIF is a piece of urban planning which concerns the Île-de-France area, for the medium term, which sets out rules and governs the practice in the municipalities and departments. It specifies what must be done to correct spatial, social and economic disparities, coordinate the transport system and preserve rural and natural areas so as to ensure the conditions necessary for sustainable development in the region. The SDRIF determines the position of facilities, of transport lines and stations, of protected natural areas, etc…

A. L'AMBITION D'UN PROJET COLLECTIF POUR LES FRANCILIENS

The new SDRIF is the translation into practice of an ambition 'for a shared project in response to the expectations of the inhabitants of the Île de France region':
- More space and yet an increased proximity between areas
- Increased transport, through carefully chosen means
- An attractive and considerate region
- More balance and more plurality
- An environment which is well conserved and is welcoming
- Areas which are regenerated and yet familiar

(Source: Île de France 2030: the regional vision)

5 The following chapter, on the Overall Plan for the Île-de-France region (SDRIF) is a concise version of the document approved on 25th October 2012 by the local council for the region, an assembly of elected members representing the 8 departments which make up the Île-de-France. The subject of a public enquiry in spring 2013, this new SDRIF has been established in association with the State http://www. iledefrance. fr/competence/schema-directeur-region

23. The areas of metropolitan interest (TIMs) (SDRIF)

It aims to respond to three challenges[6]:
1. The reduction of inequality brought about by where people live, their social background and their environment, so as to create a more united Île-de-France
2. The promotion of an urban system and structure which responds to changes in climate and in energy sources and anticipates environmental change
3. The development of the jobs market, of the economic success and of the international influence of the region, at the same time as reaffirming the natural beauty of the Île-de-France region and working alongside the ecological and social aspects of the economy.

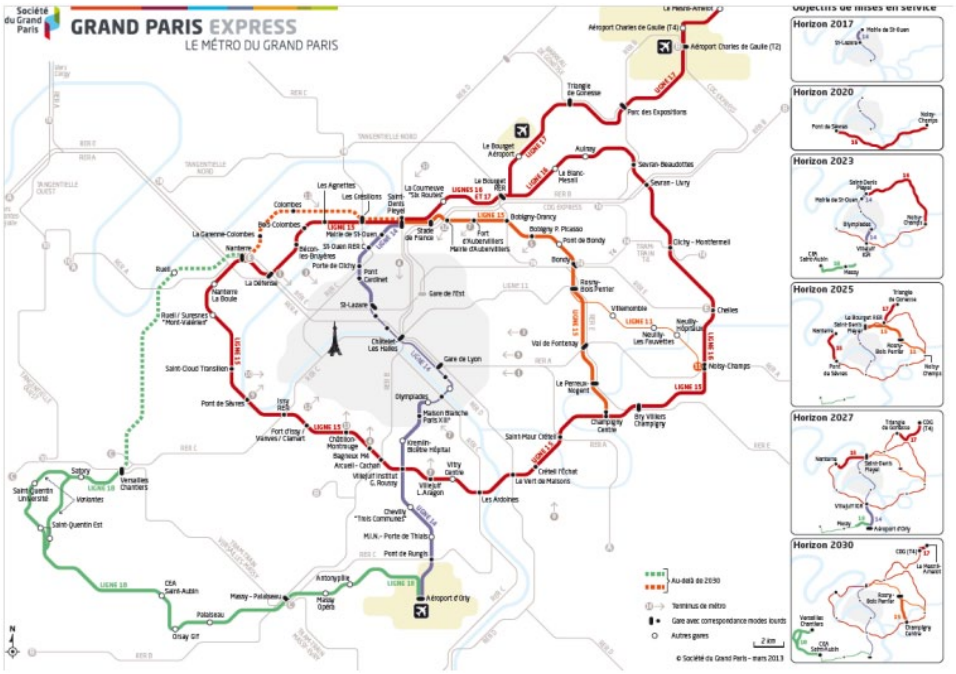
The vision is put into practice by the regional project, which is centred around three pillars:
1. To link and structure, so as to allow a region which is more connected and more sustainable
2. To focus and balance, so as to construct a more varied, lively and attractive region
3. To conserve and to value the natural environment, so as to create a vibrant, green region

Finally, this project for a new Ile de France by 2030 aims to respond to six major issues so as to put an end to the dichotomy between centre and periphery, to limit unhelpful competition between different areas and instead, to encourage them to work together and cooperate, so as to complement each other.
1. To structure the heart of the conurbation, turning it into the cornerstone of regional development
2. To strengthen the links between the very different areas of city centre and rural space
3. To reveal the importance of rural areas for the conurbation
4. To turn the river network into the element which ties all the region and its development together
5. To promote a new inter-regional coherence
6. To maintain 'areas of metropolitan interest' (in French, territoires d'intérêt métropolitain (TIM) – see below for definition).

B. THE AREA OF METROPOLITAN INTEREST (HEREAFTER, TIM) OF THE CONFLUENCE OF THE SEINE AND THE OISE[7]

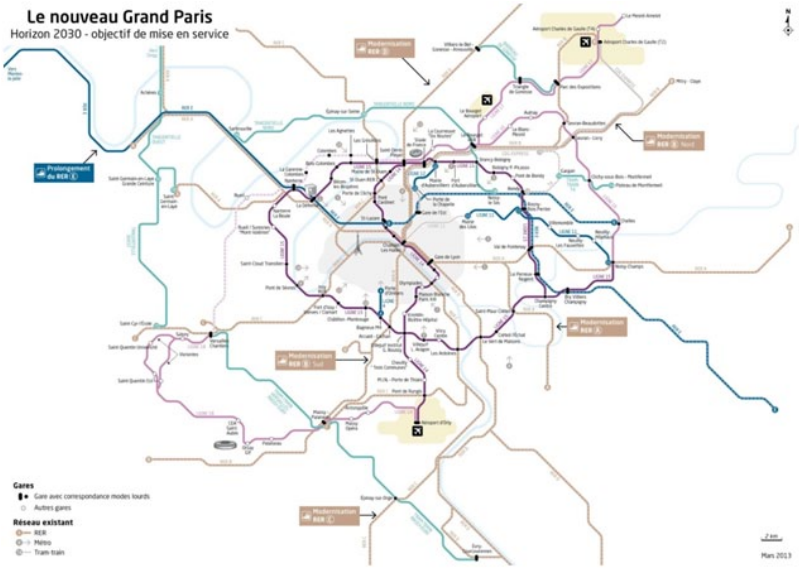
TIMs are unique areas, functioning as regional centres, which both contribute to the development of the Ile de France region in general and at the same time provide a local response to

6 : See Appendix
7 : See part 2 C 'The confluence of the Seine and the Oise'



A Process of Development from 2013 to 2030

25. Greater Paris Express (Greater Paris Association)



24. Greater Paris, as seen through transport networks (Greater Paris Association)

regional issues. There are 18 of them, and they are at the heart of the 2030 project's strategy for effective use of space. They have strong potential for development and a role in structuring the town, which will influence living areas. They have a major role to play, in finding solutions to the challenges present for the Île-de-France region and to a rebalancing of the conurbation. The plaine de Pierrelaye-Bessancourt is one of these unique territories, as defined in the SDRIF.

B. GREATER PARIS

The project of Greater Paris, undertaken in 2008, under the initiative of the French President, Nicolas Sarkozy, is a plan for the development of the Île-de-France region and is based on:

- A high-speed public transport network
- Development around the stations of this network, so as to create important centres of development
- One-off private and public projects which aim to structure the area

When it was first conceived, the idea of Greater Paris was considered a step which was in opposition to the review of the Overall Plan for the Île-de-France region (SDRIF), which fell under the auspices of the Regional Council. Nowadays, the two plans are often confused with each other in the New Greater Paris.

A high-speed public transport network: The Greater Paris Express (24, 25): Three interconnected projects using existing lines,

- a bypass or underground metro line (15), with the same capacity as the Paris metro, helping to ease congestion in a densely populated area and connecting in a spiral the following areas: Noisy-Champs, Champigny Centre, La Défense, Saint-Denis-Pleyel, Rosny-Bois-Perrier, Champigny Centre.

- automatic metro system, adapted to servicing areas which currently under development: line 16 from Noisy-Champs to Pleyel via Clichy-Montfermeil and Aulnay sous Bois, ligne 17 from Pleyel to Mesnil Amelot, going through Le Bourget (sharing a line

with line 16), Gonesse and Roissy, and line 18 from Orly to plateau de Saclay via Massy Palaiseau, extended to Versailles,

- extensions of existing metro lines when it's necessary and improves speed: line 14 to the north, from Saint Lazare to Saint Denis Pleyel, and, to the south, from Olympiades to Orly; line 11 towards the east of Mairie des Lilas and to Noisy-Champs via Rosny-Bois-Perrier.

A. THE MAIN CENTRES OF DEVELOPMENT

When it was first conceived, the Greater Paris Project has as its primary aims, increasing the rate of growth of the capital region, increasing the competitiveness of the agglomeration on a world-wide scale and strengthening Paris' role as a global city through the development of first 9 and then 10 strategic areas, which were conceived as concentrated urban areas or clusters, of which 8 were to be structured and organised around a new express metro network, operating with a competitively high speed (40km per hour) and with a high frequency of trains, ensuring the accessibility of these areas, and their connection to other parts of the network:

- Roissy - Villepinte - Tremblay: international connections, conferences and business fairs and exhibitions, logistics and industry development
- Paris - Le Bourget: the north gateway to the Capital Region, centred around aviation and business tourism
- La Plaine Saint-Denis: the area which is focussed on creation and digital arts
- Paris - La Défense: the financial city, the area of development for high-quality business services
- Est Parisien - Cité Descartes: the axis of the sustainable city, based upon sustainable development, of maintenance and of the eco-city
- Paris – Saclay: the axis of scientific and technological development, on a world-wide scale
- South of Paris: the valley of biotechnologies and of research in life sciences, the development of the Orl-Rungis axis
- East of Seine-Saint-Denis (Clichy / Montfermeil, Livry, Sevran, Aulnay): the recreation of an urban axis
- Seine Oise Confluence: The future river port (using the Seine and the Seine-Nord canal) and the port of the Capital region.

To these is added:

- Sénart: High added value logistics services

These last two areas are not to be serviced by the new express network.

The aim is that these areas will welcome 70% of the 1,500,000 new inhabitants and 95% of the 1,000,000 jobs which are supposed to be created in the Île de France by 2030, according to the developers of the project (26, 27).

These highly proactive objectives, subsequent to review, have taken on a somewhat smaller scale:

- There is a decrease of about 50% in the objectives concerning the jobs sector, due to their economically unrealistic nature, which breaks with the trends observed in the last 15 years and is in total opposition to the current economic climate
- Without questioning the notions of 'axes of development' and of concentrated urban areas (also dubbed, 'clusters'), the new SDRIF aims to create new jobs, as well as housing, in a more balanced way across the different parts of the conurbation.

The legislation introduced on 3th June 2010, and then modified by the legislation enacted on 18th January 2013, created a contractual framework for the State/ regional authorities concerning this strategy for development: the contracts of development for the area (in French, les contrats de développement territorial (CDT)) (28), which are the translation onto a regional level of the objectives of the Greater Paris Project. There are 23 of them, and they are the result of the way that the 10 large strategic areas have been divided up, for operational procedures, and yet at the same time need to be compatible with the SDRIF. In this new framework, the concept of 'clusters' is not systematically employed.

B. THE PLAINE DE PIERRELAYE-BESSANCOURT: A GREATER PARIS APPROVED PROJECT

At the start of 2012, following a call for projects, the Greater Paris honorary title was accorded to 22 projects, out of 87 applications. This distinction aims to give added value to projects which contribute in an exemplary fashion to the construction of Greater Paris, by responding to two complementary approaches.

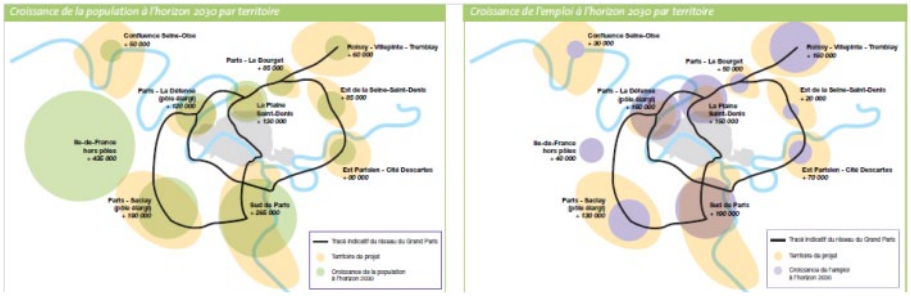
- The influence of the Capital region of France, its role as a major global town, made up of different areas which form a coherent unity.
- For those who live in the city, the feeling of belonging there, their comprehension of the city as a shared space, beyond the customary administrative limits.

This double objective governing the honorary title of Greater Paris mixes metropolitan cohesion with influence on a world scale so as to create a real metropolitan identity. ' (Source: Regional Prefecture.) This honorary title does not automatically award the projects any specific forms of public funding.

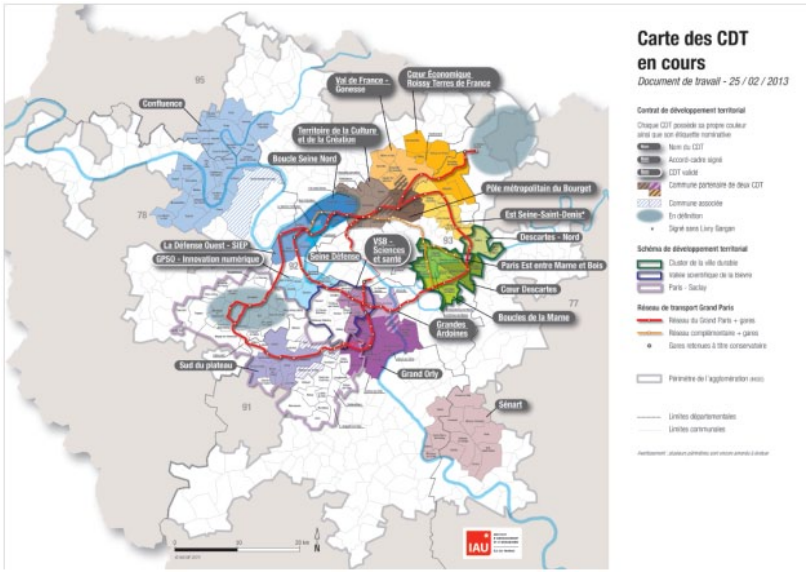
The public and private projects approved by Greater Paris are industrial, cultural, sport-based, social, energy-based, economic, or centred around city planning. The Pierrelaye-Bessancourt forest is one of these approved projects.

For its part, the International Workshop on Greater Paris (in French, l'Atelier International du Grand Paris (AIGP)) took into consideration 650 projects, participating in the Greater Paris project, and which covered the same sectors of activity or business as the projects approved by Greater Paris[8]. The scientific council of AIGP, responsible for sharing their opinions and expertise, or

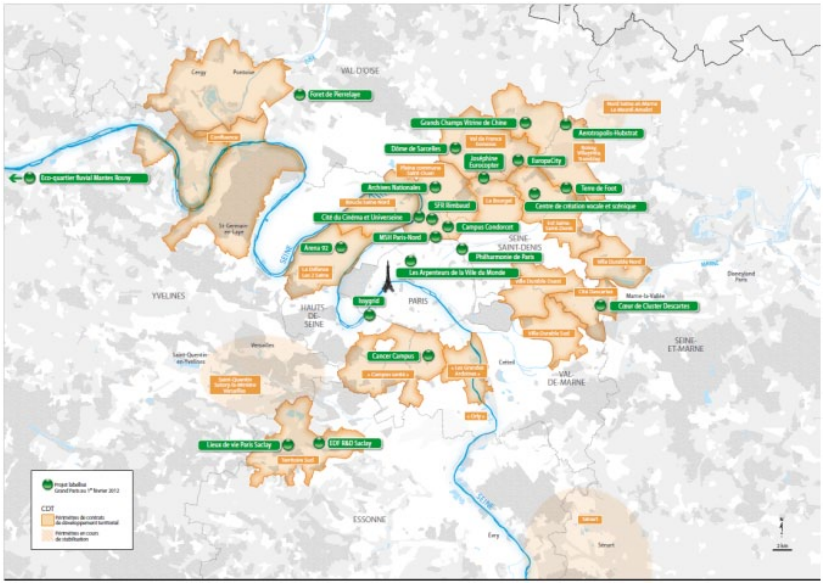
8 : http://www. ateliergrandparis. fr/territoires/index. php#



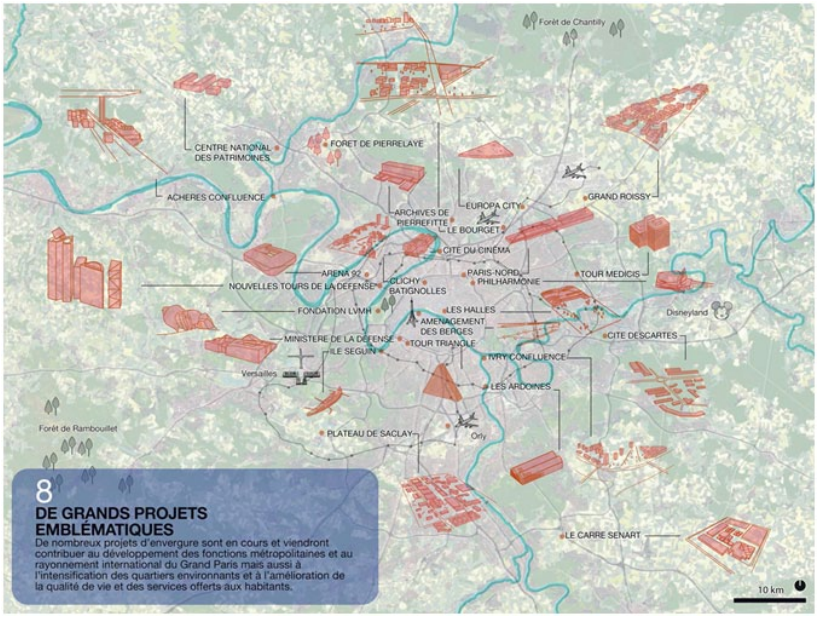
26, 27. Population growth envisaged for 2030 (Association for Greater Paris)



28. CDT Map (IAU)



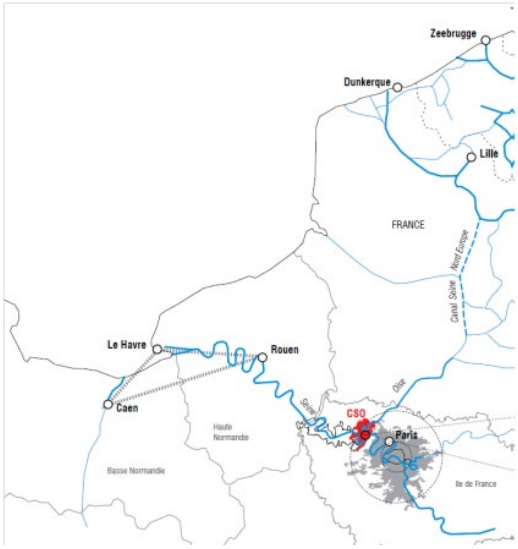
29. The projects approved by Greater Paris (Regional Prefecture)



30. The 8 main, emblematic projects of Greater Paris (AIGP)

31. The Seine-Oise Confluence, a TIM (SDRIF)

32. A strategic location as the port of the city, on the axis of the Seine, and linked to North Europe by the future Seine-Nord canal, but also as the west gateway to the Paris agglomeration
(Cergy Pontoise. fr)



33. Study into Greater Paris: Seine-Oise Confluence – contract of regional development 2011(AUC)

34. IGN map, showing the confluence (Géoportail)

producing studies, forecasting or research linked to the Greater Paris project, is made up of 15 interdisciplinary teams of town planners and architects.

C. THE CONFLUENCE BETWEEN THE SEINE AND THE OISE, A PIONEERING PROJECT FOR WEST PARIS

The Seine-Oise confluence, a project the scope of which stretches across different regions, is to be established between the heart of the urban area, and Seine-Aval, and an Area of Metropolitan Interest (in French, un Territoire d'Intérêt Métropolitain (TIM)) (31, 32)

'This area is the target of important infrastructure projects, which are necessary for satisfying the needs of the city (the Seine city port, the Seine-nord canal) and has vast open, natural spaces, starting with the Seine valley, which are the object of growing pressure. At the intersection between the Seine and the Oise, the Seine Oise Confluence is the new focus of the west of the conurbation, lying between the areas of La Défense –Boucle Nord – Val-de-Seine et Seine-Aval, at the border of the central agglomeration and the rural and agricultural spaces to the west of the city. From a regional point of view, the major thing at stake for this area is the organisation of an urban development which takes into account all the following issues: the development of logistics and urban services, of businesses and housing; and at the same time, the upkeep and conservation of open spaces, both those used for agriculture and also natural spaces, as well as of the role the Seine plays in the ecology of the area and, finally, an understanding of the value of the sweeping landscapes characteristic of the Seine-Aval and its hills' (SDRIF).

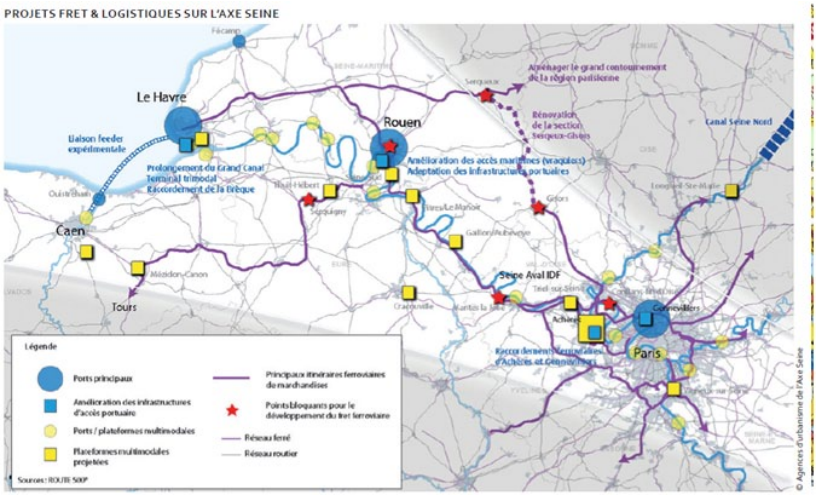
The area of the Seine-Oise Confluence has the benefits of being well serviced by public transport, of having many facilities, business areas and tertiary businesses. It is an attractive area and is a hub for the area west of Paris, which should be further developed. The development of the Seine and Oise valleys should lead to a balancing of the infrastructure of the city and of the city's different roles in business, in housing and in being an urban centre. The upkeep of open, natural spaces, the conservation of the area's ecology, and the promotion and appreciation of the landscape of the Seine and its hills are all key issues.

Reconciling the different functions of the Seine valley

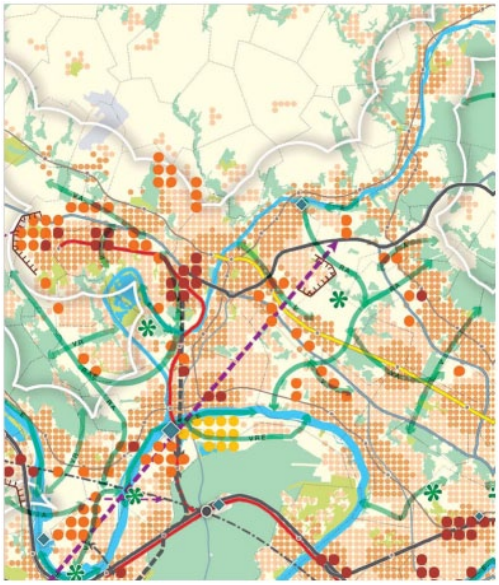
- Reinforcing a strategic position at the heart of the Seine's course (35)

The role of the Seine and the Oise as axes of development for business, transport, housing, tourism and holiday activities, and also as areas of outstanding biodiversity and beautiful countryside must be reinforced. With the Port 2000 project (with the Le Havre port) and the Port d'Achères-Seine-Métropole project, the Seine-Oise confluence has the opportunity of developing, of contributing to the opening up of this region to its maritime connections, so as to reinforce its place in international exchanges.

The importance of the ports of Gennevilliers, of Achères, and of Limay, and their own activities and development must be highlighted. The growth prospects for river freight are significant, as soon as the routes of the Seine and the Oise work together with other areas, thus building up an area of economic solidarity between Seine-Aval, Cergy-Pontoise, and the Oise valley. The desire for the – very important – development of the use of river and rail freight, instead of freight transported by roads, makes it necessary for a river port in the area of the Achères loop of the river to be constructed. That this port would complement the



35. Freight and logistics project of the Seine Axis (Planning for the Seine Axis Agency)



ports of Le Havre, Rouen, Gennevilliers and Bonneuil-sur-marne, Limay-sur-Seine and Bruyères-sur-Oise is guaranteed.

That it would also complement the Ouest de l'Île-de-France bypass, by rail freight, is also guaranteed. The Seine Oise Confluence has thus the aim to establish itself as one of the great crossroads of European river freight – something which could be reinforced further by the realisation of the Seine-Nord Europe Canal project.

- Improving the Infrastructure of the Area to Strengthen Urban Connections

The area is structured around three urban centres: Cergy-Pontoise, the boucle de Chanteloup and Achères-Poissy. A major centre on the course of the Seine, it aims for a demographic, residential and economic development, which would reinforce its competitive edge in the multipolar region of Ile de France. Urban development will benefit from an improved transport network, which will strengthen connections to other parts of the region and of France, all along the Seine, which will better structure the inhabited areas, and the links to Roissy-Charles-de-Gaulle, La Défense - Paris and Saint-Quentin-en-Yvelines. The improvement of the RER line A is a priority.

The extension of the RER line E (from Haussmann to Saint Lazare via Mantes) will allow increased use of the RER line A and better links with the Seine Valley. The Cergy-Pontoise agglomeration will benefit from a link in the Roissy-Charles-de-Gaulle direction. Internal links with the north/south of the region will be improved with the extension of the Tangentielle Ouest tramline. Poissy should find itself, in 2020, benefiting from a station on this line, which will improve its connections to Cergy-Pontoise, Saint-Germain-en-Laye and Versailles. The Confluence will become a key place for travellers, for connections to other parts of France, through the new Paris-Normandy (LNPN) line, which anticipates the possible construction of a station in Achères. The servicing of the area by road, with, notably, the opening up of the Boucle de Chanteloup, should improve. Considering the current debates regarding the plan for the extension of the Francilienne road (Motoway 104) between Cergy-Pontoise and Poissy-Orgeval, and the consequences of this on the surrounding road infrastructure and current urban development, the SDRIF envisages creating a link between Cergy-Pontoise and Poissy-Orgeval.

36. An extract from the SDRIF

- Appreciating the Value of Open Spaces, Faced with Pressure for Real Estate (36)

The conservation and the appreciation of agricultural and natural spaces will contribute to the attractive nature of this area and the quality of life of those who live there. Urban developments to the South-West of Cergy-Pontoise will take into account the value and importance of the Hautil hills. Saint-Ouen-l'Aumône and the plaine de Pierrelaye-Bessancourt, have need of particular attention, in terms of the plan for long-term management of this polluted site and the conditions determining its possible opening to the public. Within the open spaces of the Boucle de Chanteloup, several wildlife corridors are to be conserved: one of which forms the link between the Boucle and Hautil, another of which is an east-west link which runs to the heart of the Boucle, and others which link to different areas all along the Rives de Seine area (which lies on the banks of the Seine). The Rives de Seine park will play an important role in conserving a natural continuity all along the banks. The use of the centre of the Boucle for agriculture – but for non-food purposes, instead, concentrated on the growing of plants destined for green building – will allow the upkeep of open spaces. It will be a good idea to ensure the existence of a rural area which links the PNR and the Vexin Français and urban districts, particularly around Cergy-Pontoise, and a balanced development on the edges of towns.

Specific districts which are privileged for the implementation of key projects in the area

- The Achères-Seine-Métropole Port: The project of the Achères-Seine-Métropole port is envisaged as occupying nearly 420 hectares, of which 3,000 hectares are at the east of the A Road 184 (RN184). This project, a platform for logistics operations and for transportation, has an impact on a national level and will need to respond to the issue of the interconnection between different means of transportation (rail, river, road) so as to become one of the most important crossroads of Europe. The realisation of the Seine Nord Europe Canal would over time reinforce this role. The realisation of the whole of the project is dependent on an efficient servicing by river, road and rail. In this regard, the SDRIF places the 300 hectares to the east of the RN184 under conditional urbanisation, dependent on the role of the river port, on the improvement of the road network (the extension of the Francilienne – A104 – road between Cergy-Pontoise and Poissy-Orgeval), on the effective serving of the port by rail by the Serqueux-Gisors line and the marshalling yard in Achères (Achères Grand Cormier), and on the upkeep of the remarkable blue and green corridors in the Boucle d'Achères (ZNIEFF and ecological continuities).

- The Cergy-Pontoise Agglomeration: The objective is to reinforce the central nature of Cergy-Pontoise, a centre of development on a regional scale, because of its involvement in six 'pôles de compétitivité' (the term for an area which groups together various businesses and research organisations and higher education establishments which aim to work together to produce innovative projects for economic development), its university and its other higher education institutions. The realisation of numerous projects for urban planning and development on a regional scale is envisaged. The 'Grand Centre' project, and the Bossut area of the city aim to result in an ambitious increase in population density and a more diverse environment. The establishment of the National Centre for Conservation of Heritage, in Neuville, and of the National Centre of Ice Hockey, in Cergy-le-Haut contributes to its influence, and makes it more attractive as an area. The site of the former theme park at Cergy-Saint-Christophe will need to be comprehensively considered, in terms of organisation and design.

- The Boucle de Chanteloup: the main part of the municipalities of the Boucle is to be found in the community of Deux Rives de Seine. The objective is to make the area attractive again, by developing industrial sectors by creating a business park dedicated to green building and eco activities (and the eco centres of Triel-sur-Seine and of Carrières-sous-Poissy). The creation of the Triel-sur-Seine port will give added economic value to the Seine. There will be increased housing in areas where increasing population density would be advantageous, notably, in Carrières-sous-Poissy. As well as this, the question of transport is being considered; the improvement of public transport, and of a road network leading to Poissy and Achères, as well as encouraging people to walk and cycle are favoured responses to this issue. Furthermore, the opening up of the Boucle de Chanteloup should improve the servicing of the area by road.

37. The 7 municipalities of the Agreement (Géoportail)

- The plaine de Pierrelaye-Bessancourt: the plaine de Pierrelaye-Bessancourt covers more than 2,000 hectares, of which 1,350 are agricultural land. 860 hectares are impossible to cultivate, because of the pollution caused by the spread of sewage there. The plain is an important open space for the l'Île-de-France green belt, and lies between the national forests of Saint-Germain and Montmorency.

The urbanisation of the areas on the edge of its towns is envisaged, so as to take part in the regional effort to build more housing. The cultivated agricultural lands will be protected from the urbanisation. The planting of a forest space covering around half of the plain on the polluted part of the land is envisaged, subject to environmental studies which justify this action, on the basis of remediation.

D. THE PLAINE DE PIERRELAYE-BESSANCOURT AGREEMENT

The 7 municipalities bordering the plaine de Pierrelaye-Bessancourt are grouped together under an inter-municipal agreement, without fixed responsibilities nor permanent legal obligations, allowing both joint decisions on which course to pursue and the possible realisation of projects which are organised and financed by joint agreement.

The municipalities which are involved have written into their town planning documents possible projects for the development of their area, in the 2015-2020 time range. All of them agree overall that urbanisation of the plaine de Pierrelaye-Bessancourt and its hills should be limited. Concurrently, the construction of housing and the opening up of various areas to urbanisation of the edges of municipalities seems to be one of the priorities. It is intended that dynamic economic activity (in business and in the tertiary economic sector) should be concentrated around stations and around facilities.

- Bessancourt envisages opening up a space of about 30 hectares to urbanisation; the area is situated on the edge of the Plaine, between the B Road 191 (RD 191) and the end of the Taverny municipality (blocks of flats and detached houses, public facilities). The urbanisation of the area is limited by the RD 191 to the north and by the Motoway 115 to the west (which protects the Bois de Poêle). Generally, this urbanisation will be concentrated around the aim of adding to the hubs which have grown up around the station and the town hall. Moreover, a welcome centre, with 13 places for accommodation for travellers, is to be constructed in accordance with the department's plan, approved in 2004. The desire to preserve market gardening agriculture on the unpolluted areas is a key part of the PLU. Moreover, there is an important initiative concerning transport and mobility in the area. Thus, the project concerning the redevelopment of the B Road 928 (RD 982) is under consideration.

- Frépillon aims to create a Concentrated Zone of Development (Zone d'Aménagement Concertée (ZAC)) of about 45 ha on land which is either totally or partially possible to urbanise, as according to the SDRIF 1994, to the west of the railway line, in the Zone des Epineaux. The business park will make the area economically dynamic, through the arrival of businesses (between 50 and 80 SMEs-SMIs) and the creation of new jobs (1,200 to 1,800 new jobs are expected across time). The project is being run by the Association of the Municipalities of the Valley of the Oise and of the Impressionists (in French, la Communauté de Communes de la Vallée de l'Oise et des Impressionnistes). The project is currently in the phase where land is being acquired.

- Méry-sur-Oise is currently in the process of revising its Local Plan of Urban Development (in French, Plan Local d'Urbanisme (PLU)). The ZAC des Epineaux project will also affect the municipality, by using a total of 15 ha within this area.

- Pierrelaye is equally in the process of revising its PLU. A welcome centre, with the possibility of accommodation for travellers, is envisaged for some time in 2013, with sufficient capacity for 26 caravans.

- Herblay envisages the creation of a business park of 80 ha, in the Beauregards area, all along the Motorway 15 (A15). A welcome centre with accommodation for travellers is equally envisaged, with a capacity for 25 caravans.

- Taverny aims to extend by 18. 6 ha its Economic Development Zone on the Plaine des Ecouardes (8,000 new jobs are anticipated), to the north-east of the plains and of the Montmorency forest, with, over time, the building of housing and public facilities, as well as a new bus line.

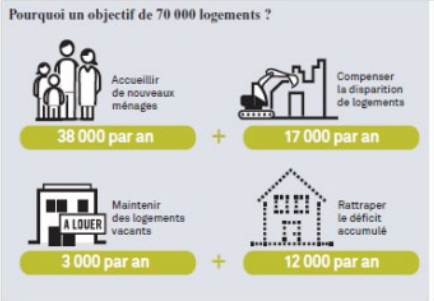
- Saint Ouen l'Aumône is currently studying the possibilities for the reclassification of the district of Porte Jaune, to allow an area of 27ha to be used for industrial activities which can cause pollution (previous study into the area conducted by the AFTRP). Furthermore, highlighting the importance of the riverbanks and developing the port area is another project, which is in line with the 'Eco-Port des 2 rives de Seine' project. Two welcome centres with accommodation for travellers are also envisaged.

Extract from the Study URBAN DESEIGN – ONF – CERAPT REGIONAL PROJECT report on the first stage 27/07/2011

In summary:
- 103,155 inhabitants in 2006,
- A good quality of life, a highly attractive and sustainable place to live
- A lack of local employment
- A decrease in the size of households
- A balanced housing market
- Demographic dynamism and vitality
- The presence of important un-built-upon real estates, on the edge of spaces which cannot be urbanised
- A privileged geographic location, close to centres of employment and to natural spaces
- A tendency of the population spreading out from the neighbouring agglomerations to these areas, leading to demographic growth in the districts on the periphery – as are the towns on the Plaine, in relation to the Paris agglomeration or to the New Towns
- A moderate demographic growth due to the birth rate and demographic migration from the centre of Paris outwards to the periphery

The trends:
- A higher population increase across 30 years, compared to the rest of the region and department
- A young population, attracted by the quality of life
- A limited social and professional mix
- The extension of residential urban areas, which take up a lot of space
- An affluent population, which enjoys hobbies and which needs natural, recreational spaces

Future Development:
- Management of supply/ demand for housing: increasing the supply to respond to the demand
- Development of the economic activity of the area
- Reversing the housing trends and developing local jobs, to the north of the Plaine
- The enforcement of means of protecting natural spaces so as to limit urban sprawl
- Improving the conditions of social integration



Objectifs annuels de construction de logements par département

Départements	Objectifs de construction horizon 2030
Paris	4 500
Hauts-de-Seine	11 600
Seine-Saint-Denis	11 641
Val-de-Marne	9 144
Seine-et-Marne	8 701
Yvelines	9 024
Essonne	9 329
Val-d'Oise	6 066
Île-de-France	70 000

38, 39. Aims for housing construction (SDRIF)

40. Housing construction (SDRIF)

E. REGIONAL ISSUES

A. THE CONSTRUCTION OF HOUSING

For about 20 years, the Île-de-France region has had to face a serious housing crisis (in terms of quantity, quality and financing): too few houses, which are too expensive, and not well located. The continual rise in housing prices (up 140% across ten years) and the absence of sufficient renting possibilities (including for social housing) in the centre of the region has forced households with modest means, as well as the middle classes, to move out of Paris…a move which is also due to national policies concerning house buying and the aspiration for private home ownership. This phenomenon leads to urban sprawl, but also harms the economic prowess of the Île-de-France region, because the housing booms means longer commutes, a decrease in spending power, and a lower quality of life.

There is a general consensus surrounding the aim to construct 70,000 new flats or houses each year. This would be double the rate of the last ten years (38. 39).

This means a total of 1,500,000 extra homes created by 2030, of which 30% will be social housing. For this category, this means, (as can be seen in (40)):
• The centre of the city will go from an average of 22% of housing being social to 31 %
• The other urban municipalities, those of the main agglomeration and of other urban centres will go from 21% of housing being social to 30%
• The rural communities ('small market towns, villages or hamlets') will go from 2% of housing being social to 10%

This very ambitious objective for the amount of housing to be built is closely tied to the objective of creating greater density in spaces which have already been urbanised, with an increase:
• From 70 to 79 homes/ha in the areas near stations, which are well serviced by transport networks;
• From 18 to 21 homes/ha in less densely populated parts of the conurbation

The development of the total amount of housing for 2030 should be balanced between areas which are already urbanised and areas which are to be urbanised for the first time:

• Nearly 75 % of the regional target for housing can be met in spaces which are already urbanised, through increased density and through changing the structure and layout of what already exists
• About 25 % of the regional target for housing can be met by the urbanisation of new areas, as set out in the SDRIF. This is the case for the edges of the plaine de Pierrelaye, which are marked by 'stickers' on the map which summarises the use of different areas, according to the SDRIF's project.
The improvement of housing which already exists is also a key objective.

To summarise:
- Build more
- Build by prioritising areas which have already been urbanised and which are serviced by a transport network
- Build more social housing, by prioritising areas which are currently not meeting the legal obligation of having 20% of housing as social
- A denser form of urbanisation in urban, peri-urban and rural areas
- A 'greener' form of urbanisation, with buildings which are more efficient in their use and saving of energy
- Renovate current housing with more efficient technology for using and saving energy: in 2050, 70% of the total amount of housing will be housing which already existed in 2005 (IDDRI, 2010)

- Within this context, the aim is for 6,000 to 8,000 homes to be built by 2030 within the area included in the Plain de Bessancourt Agreement

It is important to note that, since 1999, the Ile-de-France region has created an area where the use of real estate is controlled (in French, a périmètre régional d'intervention foncière (PRIF)), so as to be able to keep watch on how land is used and to have a pre-emption right over the Plaine.

The aim of this regional intervention is:
• to conserve agricultural spaces and to keep them available for people who want to use them, and notably those who wish to return to the area
• to allow the realisation, through the intermediary of the Organisation for Green Spaces (in French, l'Agence des Espaces Verts (AEV)), of open public spaces.

The acquisition of land happens through the work of the AFTRP or the SAFER on behalf of AEV. Nearly 160 hectares have already been acquired through the right of pre-emption. A strategy on a larger scale, concerning the use of the Plaine's real estate in the future, could lead to a widening of this area.

B. THE BLUE CORRIDOR, THE GREEN CORRIDOR

With the blue and green corridor (41, 42, 43, 44, 45, 46) it is hoped that a network of exchanges will be maintained and built up again – 'a corridor' which would allow animal and plant populations, including common species, to interact, to move around, to feed, to reproduce, to rest. This corridor favours their redistribution in a context of climate change.

The blue and green corridor aims to improve the quality of life, the quality and diversity of the countryside, and to take into account economic activities, notably agricultural ones. The blue and green corridor also aims stem the tide of the decrease in biodiversity, by participating in the conservation, the management and the restoration of areas which are necessary to ecological continuity across the region.

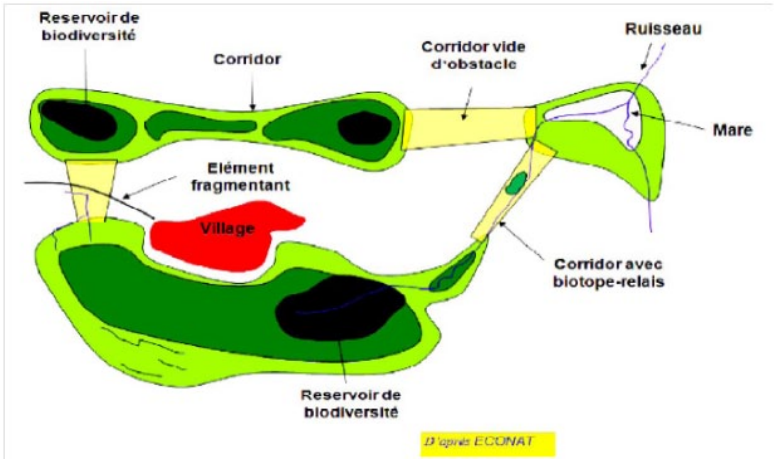
Havens of Biodiversity: areas teeming with life, rich in biodiversity, where species can live out all of their life cycle (reproduction, feeding, shelter)
Wildlife Corridor: tracts which allow the migration and dispersal of flora and fauna and which link the havens of biodiversity.
Ecological Continuities: The network of havens of biodiversity and of wildlife corridors

(Source: The Regional Plan for Ecological Continuity Project (projet de Schéma Régional de Cohérence Ecologique) December 2012)

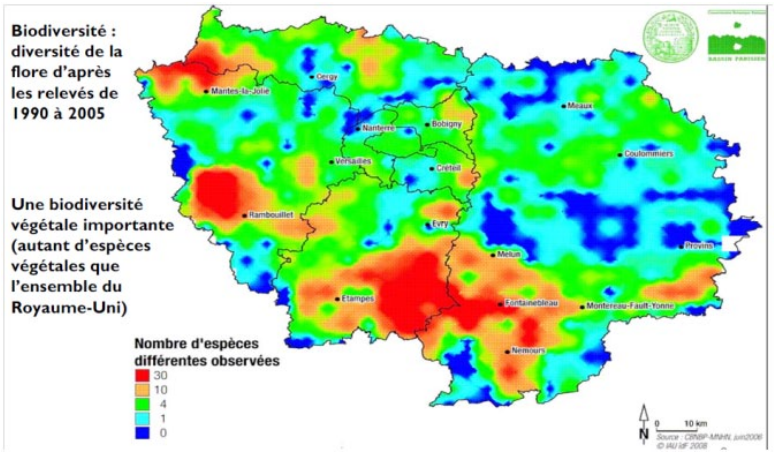
The Green and Blue Corridors: Main Actions

5 actions particular to agricultural areas:
1. Slow down the reduction in agricultural land and limit the fragmentation of farmed spaces
2. Limit the reduction in prairies and patchworks of agricultural land, which group together farming space, prairies, fallow land and wooded areas, which are absolutely essential for welcoming flora and fauna (in particular, beneficial organisms) and sustaining biodiversity.
3. Halt the disappearance of humid alluvial areas, and of the biodiversity associated with them, and maintain the ponds which encourage populations of amphibians
4. Avoid the loss of borders between land used for farming and woods, because these borders are important for numerous species, including shrews, snakes and birds
5. Combine agricultural productivity with the encouragement of biodiversity

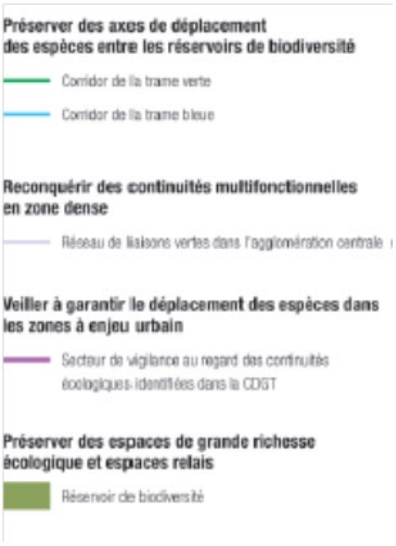
5 actions particular to wooded areas
1. Favour the conservation of biodiversity and of forest populations (a population which is multispecies and pluristratified, in an area where there are little enclaves of mature growth, and of interconnected spaces, like humid areas, moors and lawns)
2. Avoid the loss of borders between wooded and open areas (land for farming, prairies, lawns, moors, fallow land) and aquatic areas (waterways, water bodies, ponds)
3. Limit the fragmentation of forest spaces by transport infrastructure and the closing off or isolation of numerous forests
4. Maintain and restore the last few forest links which exist in urban and peri-urban centres, diminished because of the urbanisation of the area.



41. The Green and Blue Corridors (DRIAFF)



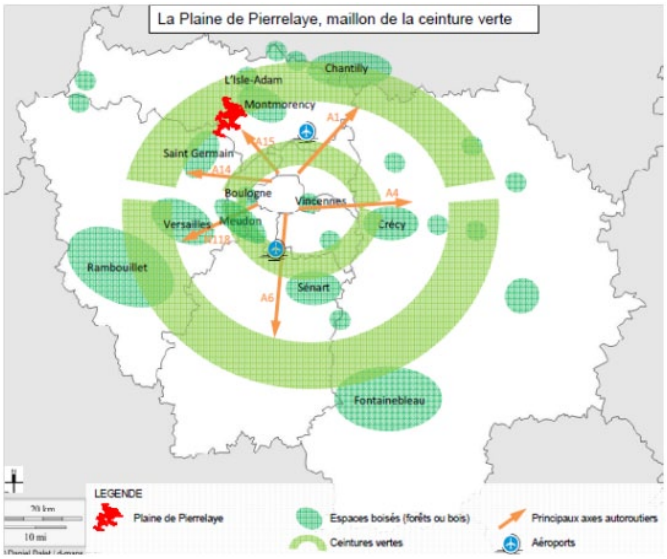
42. Biodiversity of the Ile-de-France (IAURIF)



43, 44. Extracts from the SDRIF

45, 46. Extract from the SRCE project, December 2012, Pierrelaye area

47. Pressures on the green belt spaces (IAURIF)



48. Urban Design Study/ONF/CERAPT 2011

5. Maintain the many functions of wooded spaces (welcoming the public, their economic role, their importance as pleasant, peaceful areas, their role as ecosystems)

4 actions particular to wet, humid areas
1. Rehabiliate alluvial areas and waterways (backwaters, swaps) so as to encourage a variety of habitats and to avoid the drying up of humid areas which are essential to the life cycle of certain species (several species of fish including pike, birds, butterflies, and other aquatic invertebrates)
2. Manage hydraulic infrastructure and processes, open up the river, and re-establish ecological continuity in the breeding of fish (especially for species which migrate a long way: salmon, shad, sea lamprey) and in the sediment in these areas (limiting fluvial works, keeping sluice gates open, facilitating fish runs)
3. Reduce the process in which natural shorelines and banks are decreasing, and instead promote the development of diverse habitats, capable of welcoming aquatic (fish, invertebrates) and terrestrial (birds, insects, bats) animals, which live off the river vegetation.
4. Stop the disappearance of humid areas. Certain species, like harriers, need these large, open spaces, often used for growing crops.

4 actions particular to transport infrastructure
1. Anticipate the ways in which it will be necessary to facilitate and yet respond to the new infrastructure which will be built in the area - which in turn responds to the challenge of the development of the Paris agglomeration. One particularly important aspect of this is the protection of vulnerable areas, particularly the havens of biodiversity, and the most important regional corridors.
2. Continue employing practices for the management of natural areas (berms etc) which take into account biodiversity, and make these methods more universal.
3. Renovate existing infrastracture, which more often than not has lacked management, allowing better access for fauna (very old or very frequently used infrastructure)
4. Alleviate the impact of railways and roads, motorways etc causing displacement for species who dwell in ponds and humid areas (amphibians and mammals)

4 actions particular to urban areas
1. Strengthen the ecological continuities of the green belt, in particular, across the whole length of valleys and at its moments of contact with peri-urban forests
2. Maintain and restore ecological continuities between rural spaces and urban centres
3. Limit the mineralisation of soil, which can harm soil fauna and reduce the number of habitats available for flora and fauna in the urban environment
4. Promote forms of management of green and natural spaces which are adapted to the area's biodiversity, and make them more universal.

C. THE GREEN BELT

The Structure of the Green and Blue corridors (47, 48)

The creation of the regional green belt has two main objectives:
- halt urban sprawl
- protect new towns outside of Paris

These main objectives have been particularly affected by the 'gnawing' effect of urbanisation within Paris and by the semi-urbanisation outside of Paris (in particular, all along communication routes and on the peripheries of the new towns).

Legislative measures and regulation aim to ensure a better protection of the regional green belt, in particular by ensuring that the 'edges', borders and boundaries of urban areas are taken into account more and that they are dealt with more carefully: protection by a more precise form of delimitation, upgrading of facilities…. and, importantly, the establishment of a relationship between the city and nature which does not only centre upon the interfaces and borders between the two areas, but also leads to a process of change at the heart of the urban fabric: nature playing an everyday role in the functioning of the city, not only as a recreational space (to reduce urban density), as a nutritive space, but also as an essential part of the city's metabolism (carbon reservoirs, water treatment and purification, struggles against urban heat islands,…) [9]

At the heart of the green belt, the plaine de Pierrelaye-Bessancourt is a strategic link between the forests of Saint Germain-en-Laye and Montmorency, the Vexin Français Regional Nature Park, the Seine and Oise valleys… central to ecological continuities and yet also criss-crossed by road and rail and urban areas.

D AGRICULTURE[10]

The Île-de-France is France's top agricultural region; agriculture makes up only 1. 6% of the regional GVA. The maintenance, and even the development of this sector is threatened by a very strong pressure on real estate, which leads to building upon agricultural land on a large scale (about 1,900 hectares per year) which particularly affects the most important agricultural land (49, 50, 51).

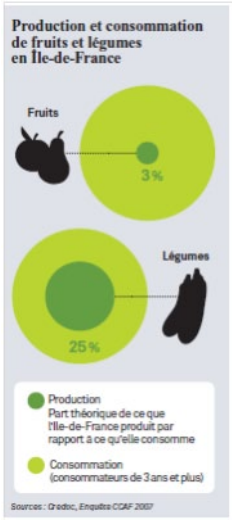
In relation to the current or potential forms of agriculture practised, the plaine de Pierrelaye Bessancourt seems theoretically ideal for[11]:
- The development of areas for market gardening, because of its proximity to the area where there is the greatest national consumption of these products (12,000,000 inhabitants)
- the growing of non-food products

But:
1. Urban sprawl does not facilitate the use of the land for agriculture:
- The fragmentation of the land by infrastructure and transport networks;
- The important very high voltage electricity grid and gas stored under medium pressure underground;
- The industrial and residential areas
- The building of light-weight constructions (temporary housing, which is in the process of becoming established)
- The dumping of waste in the natural environment
- Activities which cannot be monitored or controlled (motor-biking), environmental degradation, crop stealing

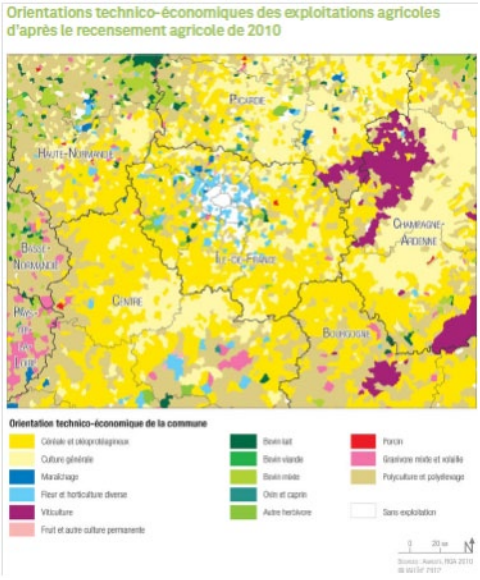
2. It is difficult for the areas which are being farmed to expand (there is a national trend where farmed areas are growing larger). This is a greater problem on the Plaine because market garderners have had to reconvert areas which have great agronomic value into land for growing non-food cereals

3. The position of the area, hemmed in by Paris on one side and Cergy Pontoise on the other, a situation made worse by:
– unchecked growth of the cities
– The presence of city blocks (Pierrelaye and the place named Les Courlains);
– The existence of about 200 ha of wooded areas (areas which cannot be used for agriculture – and which lead to other issues, such as damage to farming by animals and the possible rapid development of the landscape if these areas remain uncultivated for a long time)

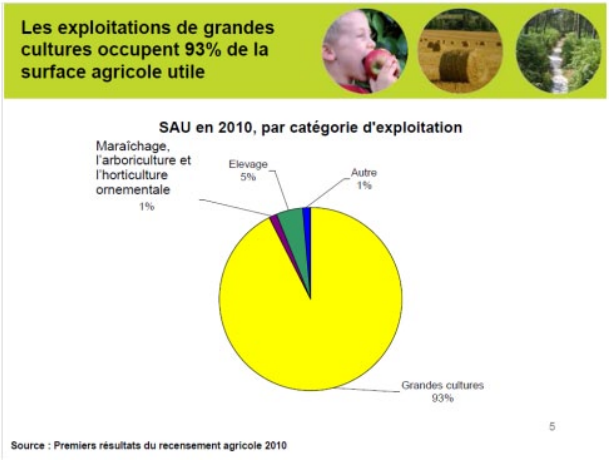
9 : See the Appendix 'Two examples of treatment; extracts from the International Conference on Greater Paris'
10 : Source: Plan Régional d'Agriculture Durable
11 : Extract: Study of the possibilites and the conditions of the growing of non-food crops on the plaine de Pierrelaye/Bessancourt/Achères – Blezat Consulting – Région Île-de-France 2004)



49. The different types of farming in the Ile-de-France



50. Growing and consumption of fruit and vegetables in the Ile-de-France region (CREDOC)



The main forms of agriculture in the Ile-de-France (agricultural census 2010)

4. The position of the area, hemmed in by the Seine on one side and the Oise on another;

5. Real estate speculation: the value of the land has nothing to do with its agricultural wealth; its market value is much more linked to its peri-urban location than to the agronomic quality of the soil;

6. Important additional costs for farming, which are amplified by logistical difficulties and an irrigation system which is currently not very economically efficient;

7. The agricultural production of the plaine de Pierrelaye-Bessancourt must be placed in promising, money-making sectors, taking into account the pollution of the soil on the plain.

8. Long-lasting outlets for these products must be researched

9. Public sector involvement

E. THE ILE-DE-FRANCE FOREST[12]

Some Statistics

Forest takes up 23% of the region's land mass. There are three types of forest
- National forests, managed by the National Office of Forests (l'Office National des Forêts (ONF))
- Forests which are owned by local authorities (by the region or by the departments)
- Private forests

The main national forests in the Ile-de-France are

- Yvelines: Rambouillet: 14,700 ha; Marly: 2,000 ha; Versailles: 1,100 ha; Saint Germain: 3,500 ha; l'Hautil: 400 ha;
- Essonne: Dourdan: 1,600 ha; Verrières: 570 ha;
- Val d'Oise: Montmorency: 2,000 ha; l'Ile-Adam: 1,500 ha;
Carnelle 1,000 ha;
- Paris: The bois de Boulogne and de Vincennes: 1,800 ha; Public estates in Paris; Meudon: 1,100 ha; Fausses-Reposes: 600 ha; Malmaison: 200 ha.
In total, 38,000 hectares.

The main regional forests are:

• Yvelines: Forêt de Rosny: 1,230 ha; Forêt de Verneuil: 160 ha; Meridon: 180 ha;
• Essonne: Forêt de Cheptainville: 80 ha; Forêt d'Etrechy: 100 ha; Forêt de Saint Vrain: 120 ha;
• Val d'Oise: Butte de Parisis: 240 ha; Bois de Galluis: 220 ha; Forêt de la Roche Guyon (78 and 95): 470 ha; Forêt de Taverny: 40 ha; Forêt de la Butte Pinson: 39 ha;
• Val de Marne: Forêt Notre Dame: 2,020 ha; Forêt de Grosbois: 150 ha; Forêt du Plessis Saint Antoine: 100 ha;
• Seine Saint-Denis: Bois de Bondy and Parc forestier de Sevran: 137 ha.
In total, 7,000 hectares

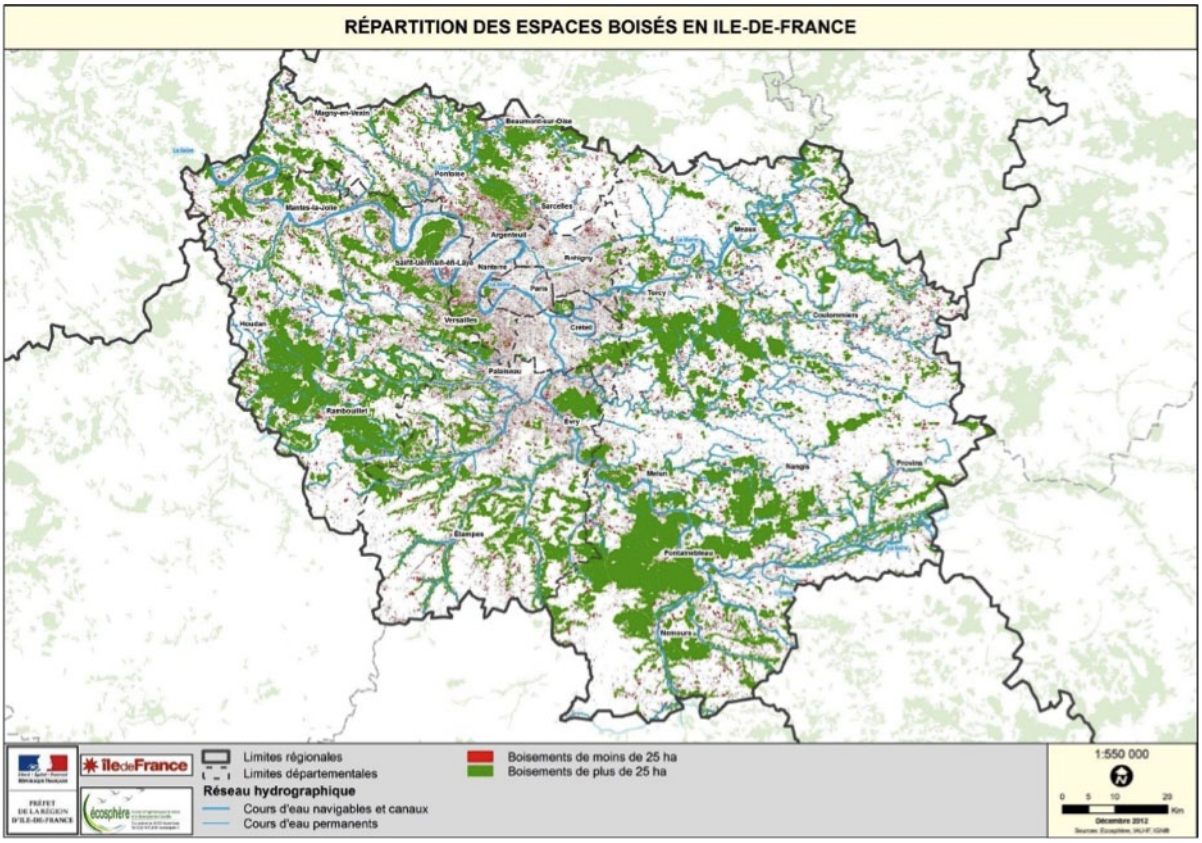
Private Forests in Ile-de-France

These cover almost 100,000 ha in the Ile-de-France region, and are a key part of the great diversity in the region's countryside. Private forests, by definition, are not open to the public (unless authorised by the owner or unless they are part of historical monuments which may be visited).

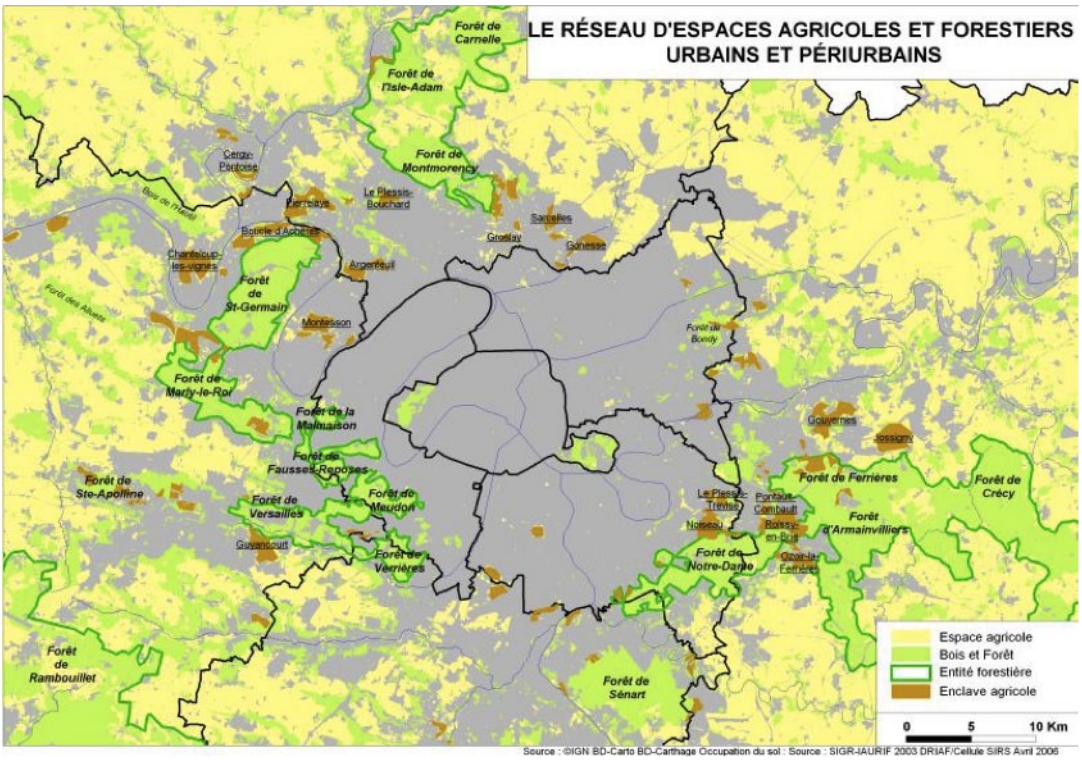
Split across different areas, often lying on the peripheries of public forests, as is the case with the Rambouillet forest (where there are 14,700 ha of public forest and 1,600 ha of private forest) but also spread out across valleys, on hills and on the plains of the Ile-de-France, the private forests are rarely totally fenced off, and thus, many inhabitants of the Ile-de-France go into them.

As seen on a regional level, the Ile-de-France forests have very similar characteristics to the average forest in France: they are leafy forests, which take up almost half of the total area of the region.

12 : Source ONF and Extracts from the document, The Ile-de-France forest, by the DRIAAF



59. The location of wooded areas in the Ile-de-France region (SRCE December 2012: Note: the map has been shrunk by a scale of 1: 550 000)



60. The network of agricultural spaces and forests in urban and peri-urban areas in the Ile-de-France (DRIAF)

61. Forêt de Montmorency (Montmorency. fr)

The heterogeneous nature of the location of wooded land in the region, split as it is across different areas, is, however, an important aspect of the forest, which must be taken into account. Here we have forest which is present in the region despite the city, but which is unequally divided up across the region. The spread of the forest is very much heterogeneous: there are several large forests (principally, Fontainebleau and Rambouillet) in an environment where there are also smaller forests dispersed across the rural parts of the outskirts of the Paris conurbation. The departments in the very heart of the urban area are those with the least amount of wooded space: the amount of wooded space thus triples between the centre of Paris and Yvelines. Futhermore, the status of the forest also develops gradually between the centre and the periphery: in the inner ring of Paris, the proportion of forest which is public (90%) is much more significant than in the departments outside Paris.

The Ile-de-France Forests: Rates of Frequentation[13]

Urbanisation, the increase of time for recreational activities, and the increase in mobility have contributed to making these urban forests a 'green lung' of the Paris agglomeration, frequented by millions of visitors. Generally, those who visit are from close by.

Numerous studies into rates of frequentation have been conducted in the Ile-de-France region since the 60s. The most complete study was conducted in 2000 by the CREDOC[14].

The Ile-de-France Forests: Perspectives[15]

The regional policy concerning forests is broken down into four principal objectives:
- The protection of large forest areas
- The development of economic uses of the woods (biomass, useful materials)
  - o Increase the economic productivity of the Ile-de-France forests, which currently generate 1. 6 million m3/ yea. This is a yield of only 43%.
  - o Increase the value of the forests (transforming them for different uses, e. g. sawmills, heating plants)
  - o Improving forest resources (investment aid)
- The conservation of the forests' biodiversity (flora, fauna, ecosystems)
- Maintaining the role the forests play in the landscape. The public forests welcome 54 million visitors each year. This must be reconciled with the two other objectives. Research should be done into how facilities in the forests can respond to the expectations of visitors.

There are delicate aspects to this, which must be mentioned

- The establishment of a multifunctional, sustainable development, at least in its practical manifestations, can cause incomprehension, dissatisfaction and even conflicts between those who use the forests and those who manage them. Felling trees so as to regenerate the forest, and then making use of the wood has an impact on the landscape and also on the paths within the forest, which can be unsettling for someone who visits or uses the

13 : Source: CREDOC Study 2000
14 : See the Appendix
15 : Source: DRIAAF

forest, either because the stable reference point which the forest represents is attacked, or because recreational activities are made more difficult. Generally, the large number of objectives for the management of the forest, and the prioritising of these, makes compromises necessary – compromises which are often difficult to get those who use the forest with only a very blinkered view of it to support.

• There are conflicts involved in the uses of the forest: walkers/ cyclists, walkers/ horse riders, horse-riders/ dog owners… Many instances of the behaviour of those who use the forest seem to suggest an increase in incivility, in lack of respect for others, and an increase of individualism. In this respect, the peri-urban forest is an interesting indicative of the state of problems in society. Those who manage the forest must face up to this by knowing that a poorly adapted development of the forest could worsen the situation and bring about conflict.

The forests in the Ile-de-France region have an important social role because of welcoming a high number of visitors. This high number of visitor raises the question of adapted forest management. Moreover, it is essential to maintain the biodiversity of forests: this last objective can be met through the conservation or creation of certain links between different forests, in the form of agricultural or forest corridors. (cf the Regional Plan of Ecological Coherence - Schéma régional de cohérence écologique).

The Fight Against Global Warming (Source: Extract from Group Descartes' contribution to the International Conference on Greater Paris – 2009)

'Forests contribute in very significant ways to reducing greenhouse gases on a world-wide scale. Despite the fact that deforestation has contributed 20% to the total emissions of green home gases, the carbon sink effect of forests is greater than this amount: the balance is thus in the right direction, and forests settle at around 0. 7 GtC/ year… work by Météo France, into various possible scenarios, with the aim of finding an optimum solution for effective climate change policies. Simulations, which envisaged a 30% increase in forest areas, suggested that this amount would allow a decrease between one and two degrees of the night-time temperature in the centre of Paris during its hottest temperatures! Furthermore, this 30% of extra forest areas is equal to an area of 1,400km² across the whole of the Ile-de-France region. '

The creation of a Greater Paris forest of a surface area of 1000 hectares on the Plaine de Pierrelaye-Bessancourt aims to play its part in the aim of increasing the capacity of forests to welcome visitors, since there is an increasing social demand for such spaces and existing forest spaces are saturated. The other aim – the production of biomass and of wood for construction – is also to be taken into account – as is that of the management of the risks of polluted soil.

THE PLAINE DE PIERRELAYE-BESSANCOURT: AN INTERSPACE

THE PLAINE DE PIERRELAYE-BESSANCOURT, AN IN-BETWEEN TERRITORY

The Plaine de Pierrelaye-Bessancourt is an in-between territory at three levels : the geographical one, the one of the uses and functions, and the one of time. The Plaine de Pierrelaye-Bessancourt has a distinctive geographical situation which makes it an in-between territory.

An in-between territory in the uses and functions, first organized around agriculture then in its periphery around economic and commercial activity zones.

Eventually, an in-between territory in time: It needs a new planning and development project, at the heart of a network of metropolitan projects. It is a territory awaiting a new design, a new aspiration, a new destiny

A. A TERRITORY SERVING THE NEEDS OF OTHER CENTRALITIES

The different uses that were made of this land across the centuries share a common characteristic : the Plaine de Pierrelaye-Bessancourt has been (and still is) a territory serving the needs of close or farther away territories such as Paris or the center of the metropolis. It remains outside the distribution of the functions of a higher level.. It is the land in which resources are taken, in which low-level, harmful or space- consuming activities are located in order to make the conurbation functions, and this during the different cycles of evolution and mutation of those functions.

This type of land declines, is abandoned or deserted when those functions are no longer needed or become obsolete. They disappear or relocate.

A. A LARGE SPREADING ZONE FOR DIRTY WATERS

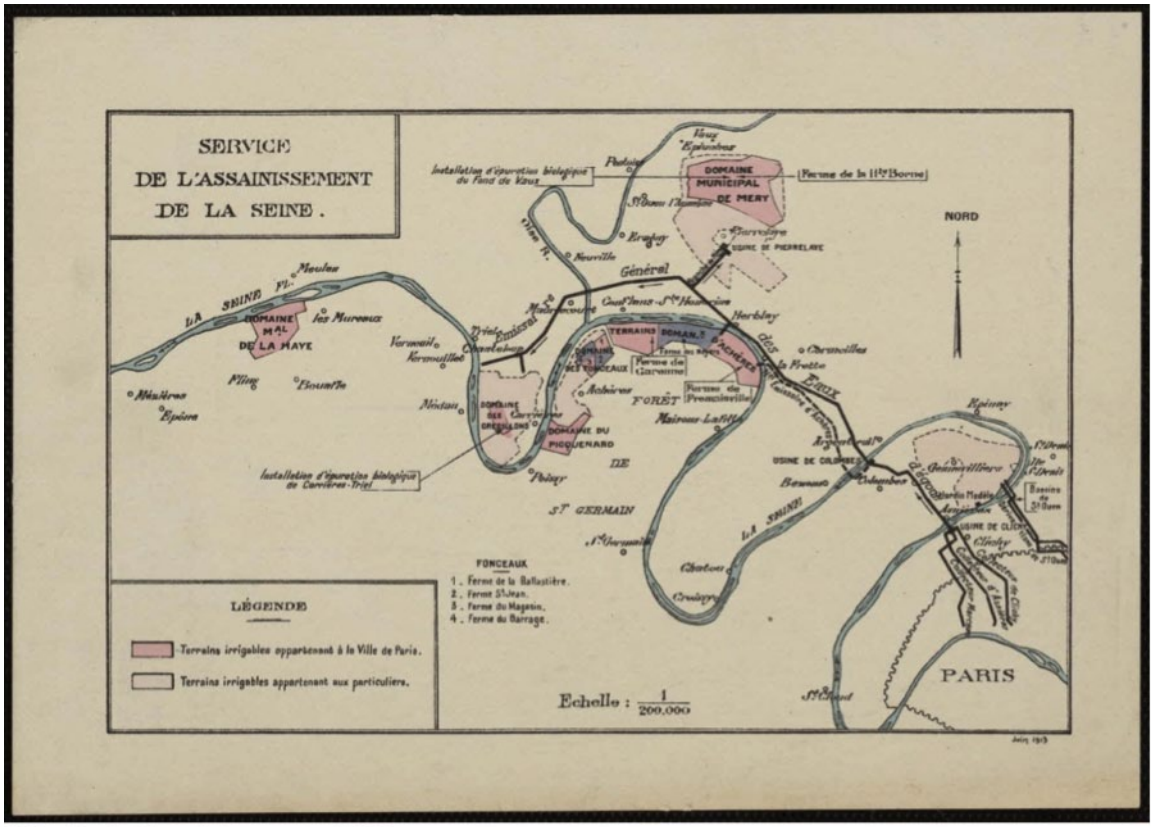
Things went on differently for the area where wastewater was spread. Since the quality of the water of the Seine River and its banks kept decreasing, the City of Paris was forced by the 1894 law to treat all of its dirty waters in 5 years. Without any technical alternative, the choice was make of spreading the waters on agricultural lands, linking water treatment and market production (« increasing the productivity of the cultivated lands by transforming the former sterile lands into fertile lands » and « giving the water of the Seine River a “crystal- clear” aspect », Risler, 1897).

The idea was to treat the waters before they reached back the groundwater tables and the water streams, and to enrich the filtering sandy soils that could potentially be the support of numerous agricultural activities. In 1899, 2400 hectares of the Pierrelaye/Méry-sur-Oise area were fulfilling these functions : they had also been chosen because of the poor quality of their soils but especially because the City of Paris had been acquiring pieces of land for 30 years in the area in order to carry out the project of building a big necropolis for Paris because these lands were easily connected to Paris thanks to the railroad.

The story of the Plaine de Pierrelaye Bessancourt is an early case of urban metabolism: «These agricultural spaces, created complementarily to the urban spaces they were surrounding, rely on cities for their survival, in the same way that cities depend on them for getting rid of their residues. They fulfill the double task of being dumping grounds as well as spaces feeding the city inhabitants » (Claudia Cirelli).

hanks to the engineer Belgrand, it was also a technical success and a major innovation: on 28 km, there were pools of primary decantation, stations to lift the water, ventilation columns and pipes crossing the Seine and the Oise rivers thanks to aqueducts or siphons. Then, there were more than 70 kilometers of underground network, of furrows for “mild” and half-purified waters. But also : « Those who lived at this time will never forget the pestilential smells nor the clouds of blue flies... » or the infiltrations in wells, quarries, the floods and the deep transformation of the soils due to pollution.

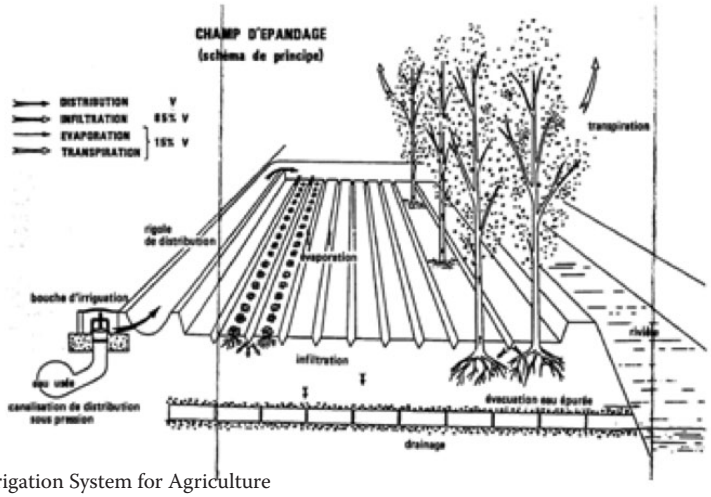
62. Sewage, mud, leaves and food waste were gathered in the town and used to fertilise the soil of the plain, Coll. part. Document CG95



63. Sanitation network (SIAAP)

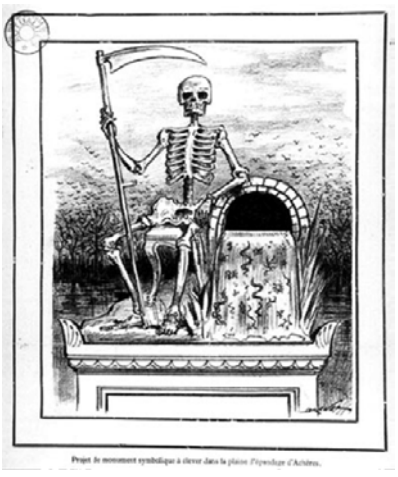
Mémoire de l'Assainissement - SIAAP

64. Sanitation, photograph from SIAPP



65. Irrigation System for Agriculture

Archives SIAAP



66 . "Engineers adopted the most primitive process possible: that of dumping the rubbish and filth of which they wanted to rid themselves in their neighbour's space, rather than their own. They decided to dump the sewage they didn't know what to do with in the neighbouring department. '
BHVP, extract CG95

67, 68. The Château de La Chasse and the upper pond, at La Chasse (Association for the Promotion of the History and Culture of the Vallée de Montmorency), woodcutter cabins in the Forêt de Montmorency (idem) (IAU)

B. USES OF THE FOREST AND THE WOODS

More than half of this land was covered with woods until the 18th century, against approximately 350 ha of woods today in a bad shape as a result of both a low forestry value and a lack of management. This forest used to be filled with oaks, honeysuckles, ferns and birches used for the manufacturing of brooms sold in Paris.

Beyond the use of the forest as a resource for wood – as a raw material or a resource for heating, the Plaine de Pierrelaye was used as a hunting ground, a place of leisure for the high-society, and was the Prince of Conti's hunting ground in the 18 th century. Let us mention a significant anecdote, quoted by Jean Aubert, in his book Memorable events from the Val d'Oise : « During the last years of the Old Regime, the proliferation of rabbits and hares caused great ravages to the cultivated lands. Thus the peasants from the villages that were located on the Prince of Conti's hunting grounds started to get organized in order to fight these animals...that they were not allowed to hunt ».

C. AGRICULTURAL AND MARKET GARDENING PRACTICES

Whereas it was not originally favorable to agriculture, the Plaine de Pierrelaye-Bessancourt has become an agricultural space « not like any other »:

From the feudal times to the 19th century, the cultivation of crops compatible with poor soils such as rye, barley or hemp was the most frequent. Market farming, wine growing and flour-milling have also developed.

In the 20th century: intensive market farming (vegetables, aromatic plants) in open-field replaces meadows. This activity requires innovation with the Haute Borne farm which covers over 500 ha. In this farm promoting a different and modern way of farming, new agricultural and breeding techniques will be developed

Its Slow Decline After the Second World War

The decline in market gardening within the region has been even more serious in the Plaine de Pierrelaye area because of
- A water supply which is charged and less substantial (water treatments plants have become more universal);
- Pressure for real estate;
- The workforce becoming increasingly expensive
- The increase in commercial agriculture

The Break

On note une rupture en 1999 lorsque la préfecture du Val d'Oise est contrainte de prendre un arrêté pour interdire temporairement la commercialisation et la consommation de légumes crus en provenance de la plaine. De 2000 à 2005, la monoculture des maïs réservés à l'alimentation animale, alliant gestion des sols pollués et rentabilité, s'est développée sur les zones soumises à l'épandage (environ 1300 ha) et sur une partie des 500 ha non irrigués. Certains maraîchers ont été relocalisés sur les franges de la plaine. Cette monoculture du maïs a produit un paysage monotone, nu après la récolte annuelle, mais n'a pas été sans conséquence sur la biodiversité des milieux (voir partie 4).

A partir de 2005, la culture non alimentaire subventionnée est privilégiée. A la suite de l'apparition de la Chrysomèle du maïs, des alternatives aux cultures du maïs ont dû être mises en place (cultures énergétiques de blé - pour l'éthanol, de tournesol - pour le diester et colza) aidées par l'État et le Conseil Régional d'Ile-de-France dans le cadre de contrats d'agriculture durables 2006-2010 et des contrats PRAIRIE.

The Next Stage Is, As Yet, Unknown

'The decline in market gardening does not mean the end of agriculture for the plain, but it means a profound change in it, and, thus, in the way in which people will see the plain. From a key area for prosperous market gardening, it will become simply a space amongst others which makes up the heart of a conurbation which is constantly expanding and which is always seeking a balance between its built and its open spaces. ' (R. Vidal, 2011).

D. THE MAIN ILE-DE-FRANCE FACILITIES

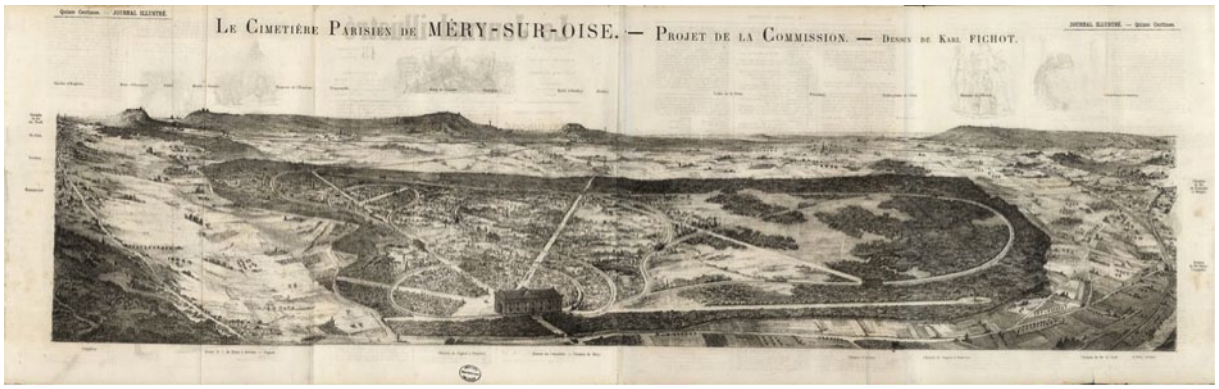
Even though the Baron Haussmann's project of a big Parisian cemetery (necropolis of Paris) connected to the capital city by the railroad was abandoned, the first plots of land were acquired by the city of Paris in 1857. This cemetery was first meant to be created in the Montmorency valley, but due to strong local oppositions, the site of the Plaine de Pierrelaye was eventually chosen because of its easy connection with Paris, before the idea was left aside. More recent times have seen the building on this territory of equipments no longer serving the needs of the metropolis but the ones of a closer center, the conurbation of Cergy-Pontoise, such as the incinerator for domestic waste of Auror'Environnement in the town of Saint-Ouen-l'Aumône or the thermic plant supplied with wood.

E. INFRASTRUCTURE: ROAD AND RAIL

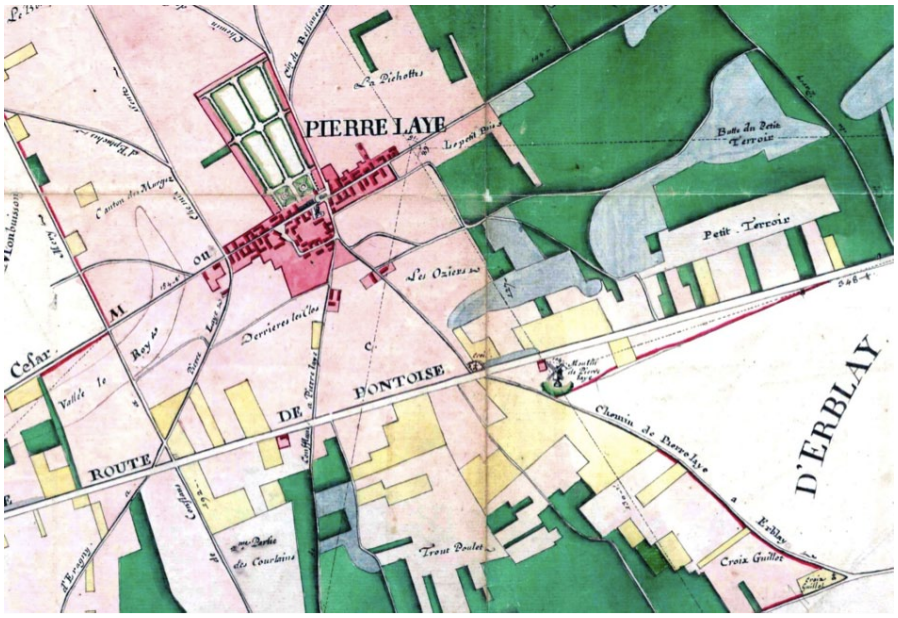
Such infrastructure, which marks and fragments the countryside, is also a possible medium of development. This started in the 1st Century, with the gallo-roman road, named the Julius Caesar route, which linked Lutetia to the sea, and which then was continued to the south by the 'voie royale'.

History speeded up in the middle of the 19th Century, with the arrival of the railway, which linked Paris and Belgium (it was finished in 1846, and the Pierrelaye station was opened in 1881)

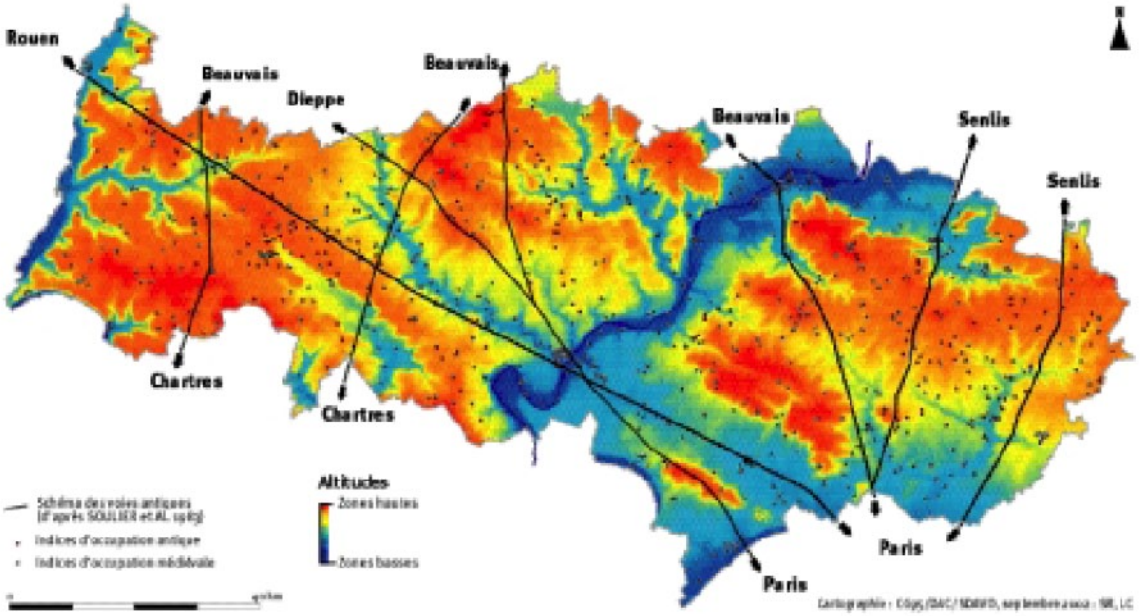
69: Pierrelaye pumping station (Cg95)



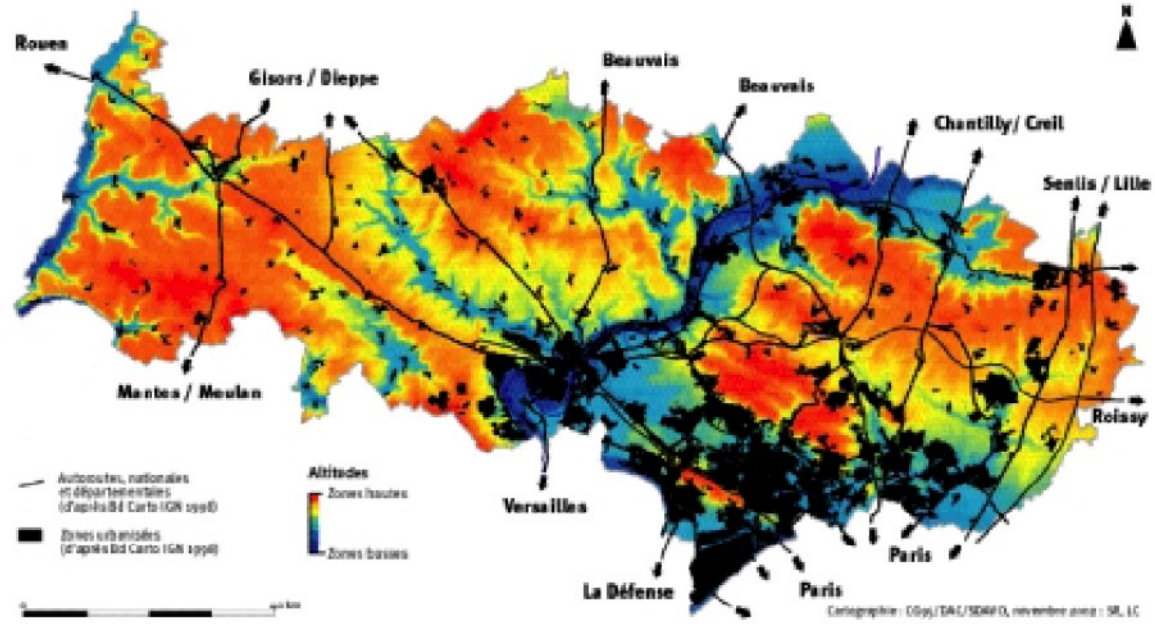
70. A plain reputed to be infertile, which was suitable for the great development projects initiated by Paris, Coll. Part. , extract Cg95



71. The Julius Caesar route to Pierrelaye (Cg95)

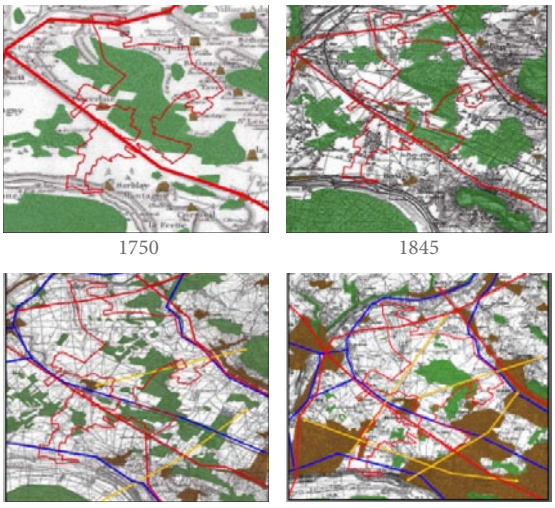


72. The main roads and infrastructure in Roman times and in the Middle Ages (Cg95)



73. Current infrastructure and urbanisation (Cg95)

74. Pierrelaye station (Cg95)



75. Urban Design Study /CERAPT/ONF

and in the 20th Century by construction of an A road, of an RER line and of motorways…. all of which make their mark upon the urban landscape of the Plaine.

Extract from Chapter III The plaine de Pierrelaye, The Management of the Environment and the Countryside Project (R. Vidal)

'The railway brought about a rapid relocating of the market gardening plots, which surrounded the city of Paris. This occurred even more easily since market gardeners could from this point on move their plots to next to the railway lines which ran along the valleys: the ground there was favourable to growing crops, and was under far less pressure for land, and the place they delivered their produce was no longer the central market but instead the station. And thus began a restructuring of French agricultural land, which first came in the form of a belt of market gardening, which stretched from the urban centres along the railway line (Poulot, Rouyrès, 2000).

Opened in 1850, the Paris-Dieppe line serviced the plaine de Pierrelaye and allowed the transport by train of Paris 'sludge', which, as was desirable, was transported further and further away from Paris, since the immediate suburbs were no longer big enough to absorb the ever growing quantity. So developed the start of market gardening, on the least impoverished soils of the region, and a system which pre-empted that which was to develop later: the train served to transport urban waste to areas which were able to make use of it; it served as well, in return, to transport the food produced in this way to the Halles in Paris. (Phlipponeau, 1956, p. 499). '

B. THE PLAINE TODAY: A PERI-URBAN AREA[16]

A progressive urbanization process typical of the territories that were urbanized at the edge of dense areas, that accelerated due to the

construction of big road and rail infrastructures. The territorial organization remains thus unstable and with a constant characteristics: the towns, whose development used to rely on agricultural activities, have gradually turned their back to the agricultural territory of the Plaine de Pierrelaye-Bessancourt. The area got parcelled out and abandoned. It became « the towns' hinterland », sheltering commercial, craft and industrial activities on its edges, aiming at large economic hubs outside the territory, especially Cergy- Pontoise : a change in the nature of a territory serving the needs of other cities

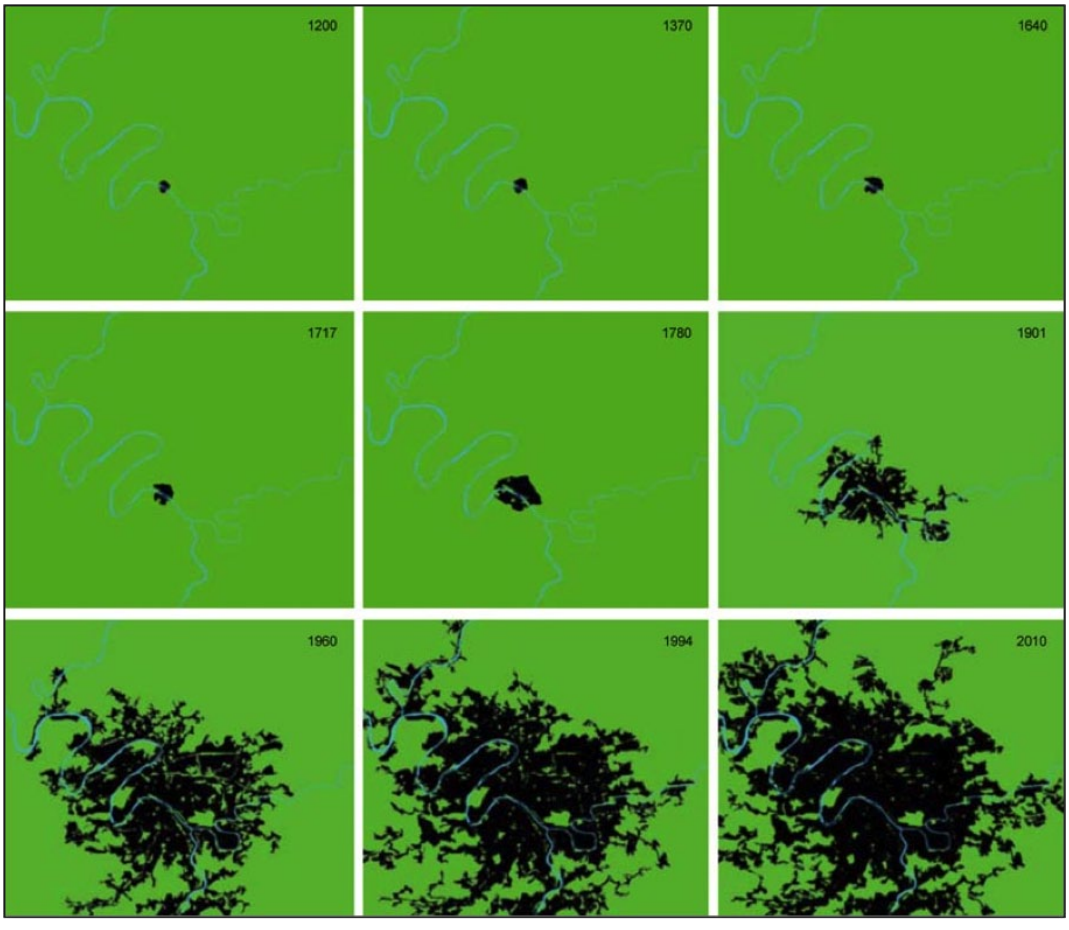
A. THE WAY THE LAND IS BUILD ON

The plaine de Pierrelaye-Bessancourt lies between two urbanised areas: the agglomeration of Paris and of Cergy-Pontoise. The core of the plain is mostly agricultural and/ or natural. The Pierrelaye municipality is the most significant urbanised area.

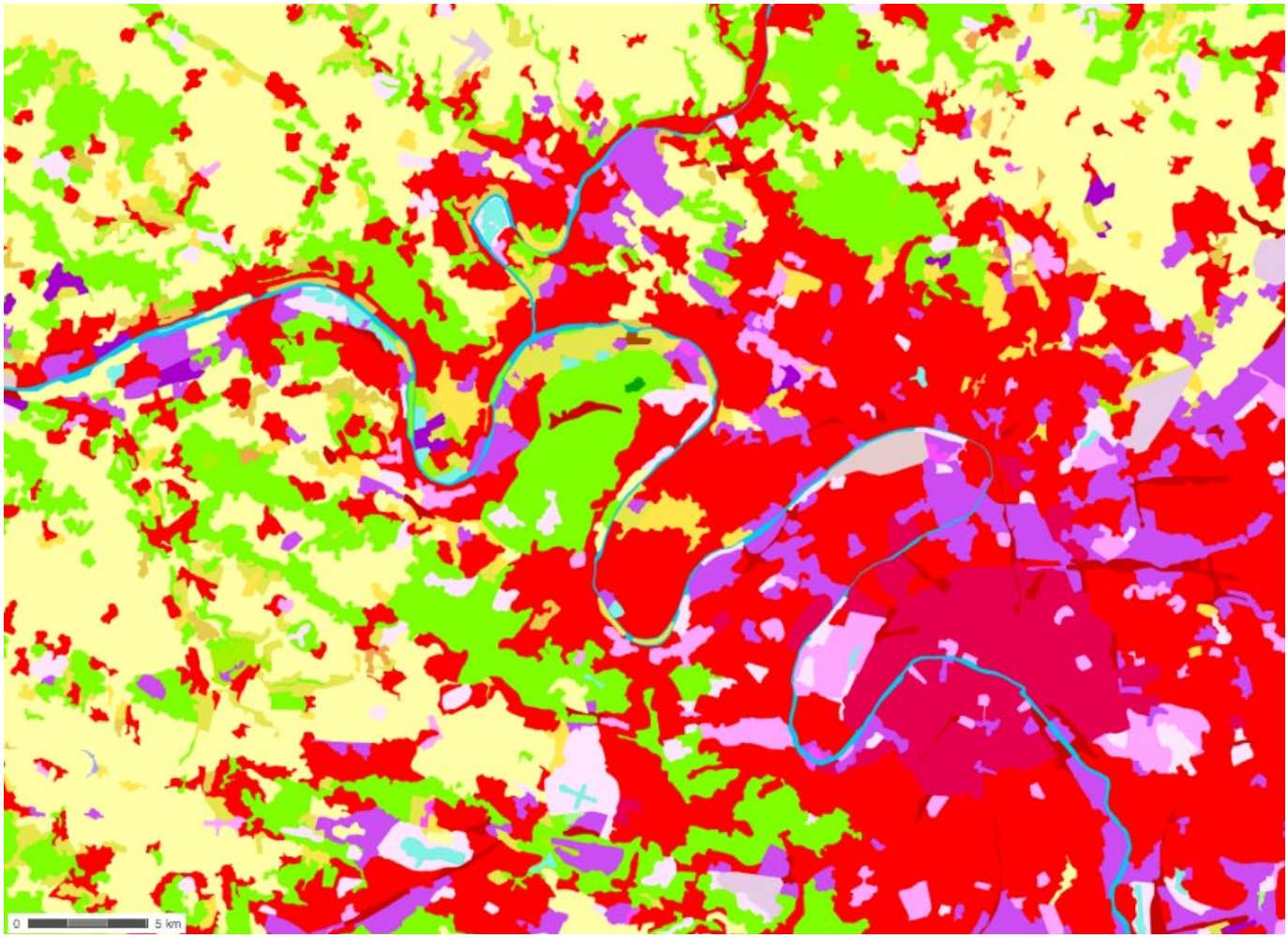
The edges of the plain are urbanised by the municipalities of Herblay, Frépillon, Taverny, Méry-sur-Oise, Bessancourt and Saint-Ouen l'Aumône.

Division of Land:
- 53% agricultural land and fallow land, and 5% gardens

16 : Numerous extracts from the Urban Design Study /CERAPT/ONF 2011



76. Development of Paris, from 1200 to present day, extracted from the studies conducted by CERAPT



77. Map showing use of land (Géoportail)

- 22 % land used by industry or business
- 16 % wooded areas
- 9 % urbanised areas

(Source: Urban Design Study/ONF/CERAPT)

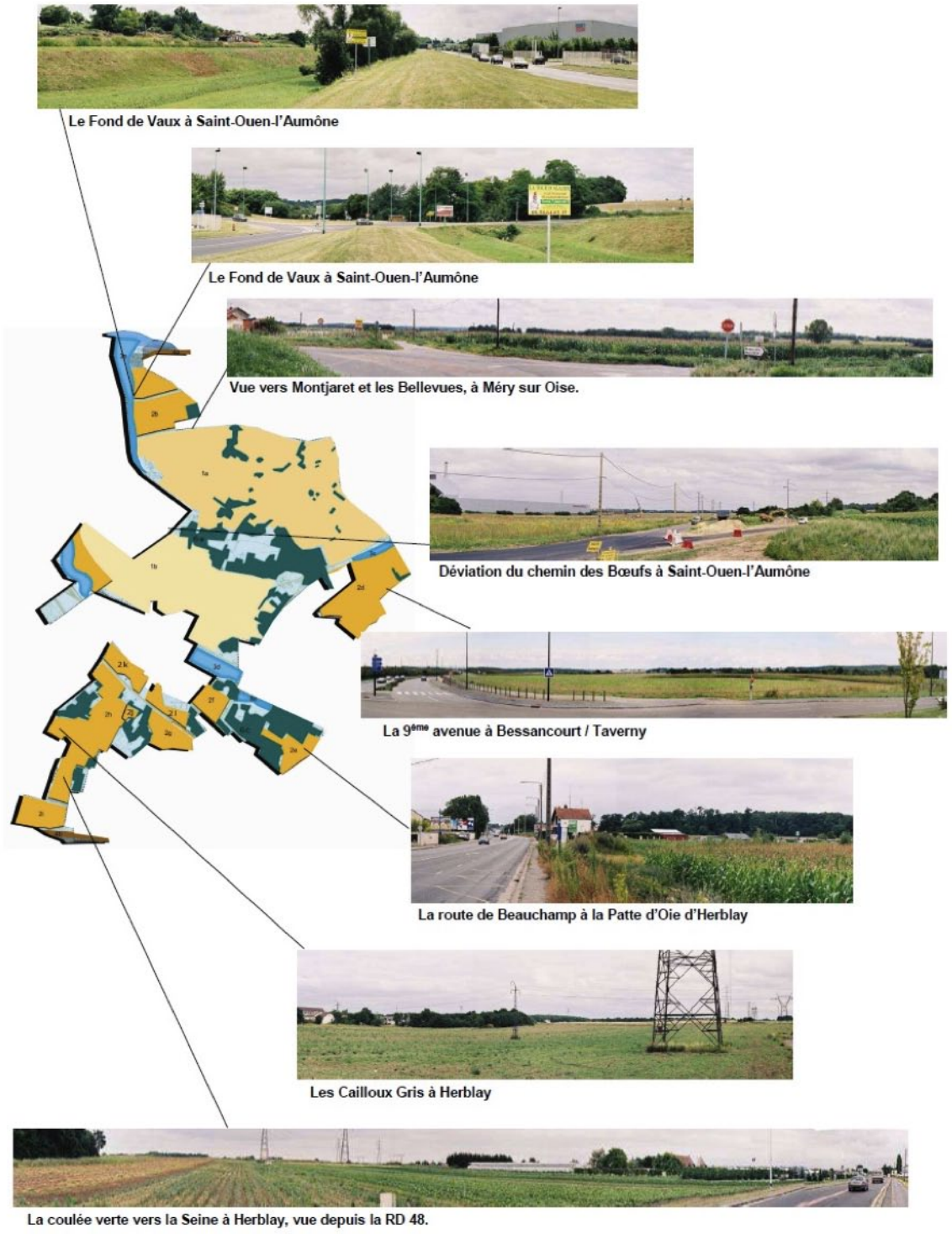
The Heterogeneous Urban Fringes – Clashes with the Plain?

The map which shows the use of land clearly shows the core of the plain dominated by agricultural and wooded land, surrounded by heterogeneous urban fringes which often contain business parks.

These urban fringes are organised around the town, and lack any connection with the plain, including in the way they operate. The consumption of natural space occurs through the reduction in agricultural space and by urban sprawl. There is a lack of management around these spaces of transition.

The analysis of urban fringes shows us a large range of types in:

- The nature of spaces on the plain: commercial agriculture, market gardening, woods
- The way in which the land is being used: for detached houses, for blocks of flats, public facilities, recreational activities
- The form of continuities between the environment and these constructions: none at all, a visual continuity, an 'urban' physical continuity (highways), a 'rural' physical continuity (footpath, track).



78. Urban Design Study/ONF/CERAPT)

Road Networks

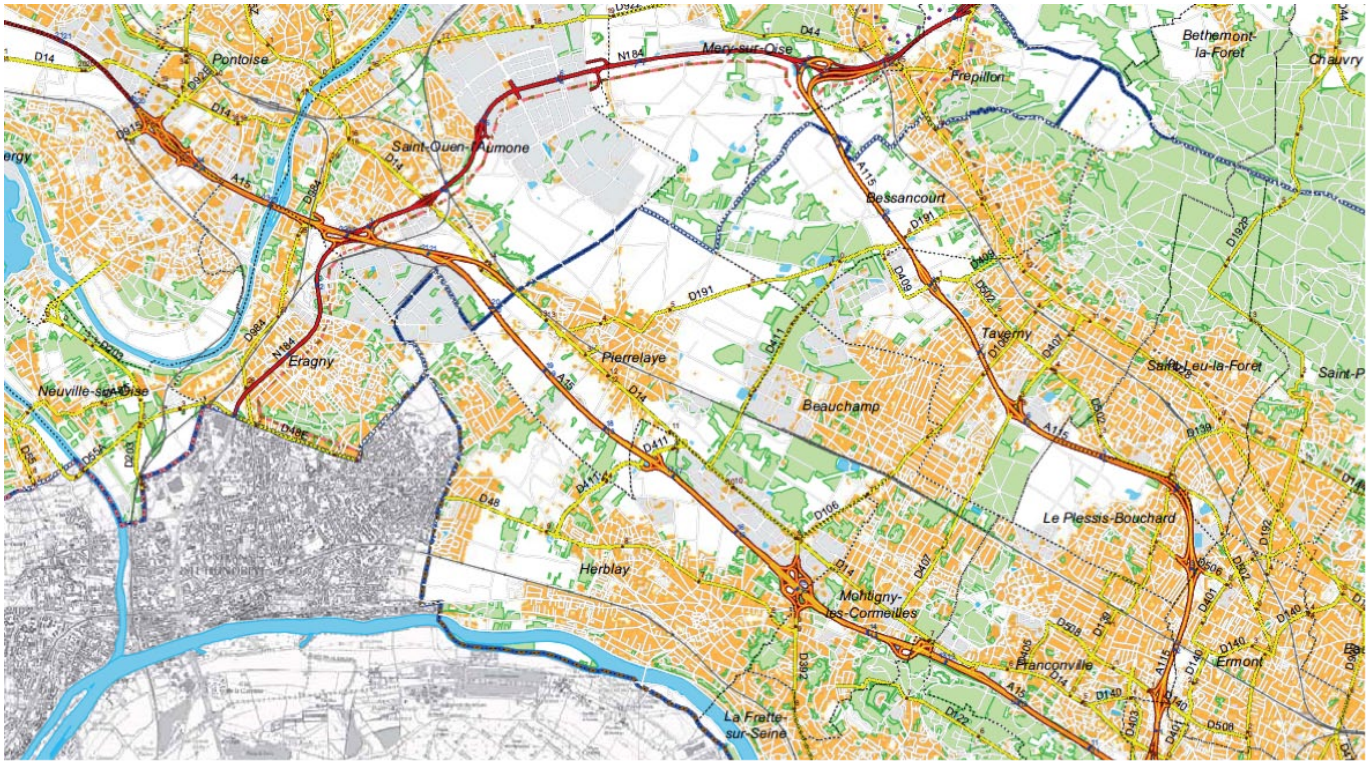
There are many roads which cross the plain which are central to the structure of the whole region. For the plain, they fragment urban and natural areas alike. The landscape of commercial areas which is to be found in the area between the B road 14 (RD14) and the Motorway 15 (A15), the construction of the Motorway 115 to the north, and the development of the Saint-Ouen l'Aumône business park all significantly break up the space.

The internal servicing of the area itself has not sufficient capacity given the size of the area and is therefore deficient. The road network is, in fact, completely insufficient. The building of the 11th Avenue Project has allowed Herblay to be alleviated from its previous burden of the traffic crossing between the M15 and Patte d'Oie. The building of the section of the M104 which would link the M13, the M15 and the M115 will cut across the plain. This development creates its own problems of access.

To Summarise:

- The downgrading of the RD14, from an A road to a B road
- Two motorways: The M15 and the M115 (with three interchanges). It should be noticed that the building of the M115 has problematised the agricultural role of the Plaine de Pierrelaye-Besancourt, by not re-establishing the irrigation canals which were cut off by this motorway
- The A road 184, developed in two stages, and having two lanes, could allow for a high quality, frequent bus service
- A project for extending the tram line (T8) onto the RD14
- The project of the river «link» between the Seine (the new port of Achères Seine Métropole) and the substantial Seine-Nord Europe canal. It is to be noted on this topic that, from the 18th Century onwards, several projects for canals which would cross the whole Montmorency valley to join the Seine and the Oise have been abandoned.
- A motorway project, and a project for finishing the M104, in a way that avoids the Saint-Germain-en-Laye forest. The plan is for the motorway to pass by the south-east of Cergy Pontoise and to service the 22km long area between Méry-sur-Oise and Orgeval, where we find Pierrelaye, Saint-Ouen-l'Aumône and Eragny-sur-Oise. This extension without road tolls would be financed by the state.

79. Coll. ARPE © Val d'Oise General Council. Photos J. -Y. Lacôte



80. Road Network 2011 (Cg95)

81. The project of the 'Green Area' by the Motorway 104 (CA2R2S)

Public Transport

Taverny, Bessancourt, Frépillon and Méry-sur-Oise are accessible by trains which service the suburbs of Paris, on the Paris- Gare du Nord / Valmondois line. Pierrelaye and Saint-Ouen-l'Aumône are on the Paris Gare du Nord Pontoise line, as well as on the C1 line of the RER. As for Herblay Station, it can be accessed from Saint-Lazare station in Paris.

Bus lines, both urban and inter-urban, form the links between residential areas, leisure areas, Cergy-Pontoise and Saint-Denis. They allow connections with trains, stopping as they do at train stations. A bus line equally forms the link between Cergy-Pontoise/ aéroport de Roissy/Charles de Gaulle. A bus line with its own special lane links the Gare de Liesse with Béthunes business park.

'Soft' Modes of Transport

The banks of the Seine and the Oise are easily accessible, bordered with tow paths. Many rural paths criss-cross the area. These smaller paths link up with the main tracks, which are situated towards the Oise and the national forests, so as to create routes which are easily identifiable and located on the Departmental Map of Walking and Hiking Routes. Such 'soft' ways of getting around allow coherence between the recreational areas of the Plaine and make it a space open to walking. If hiking paths and cycle routes break up the urban fringes of the Plaine, an important network of rural paths at the heart of the Plain can be used for daily journeys to work or to school.

River transport

The river network is important and, it is hoped, will be developed. Indeed, an increase of river traffic on the Seine and the Oise has been noticed, both caused by river tourism and also in connection to the future development of the Seine/ Nord Europe link. This development is to be compared with the development project for the port at Saint-Ouen l'Aumône.

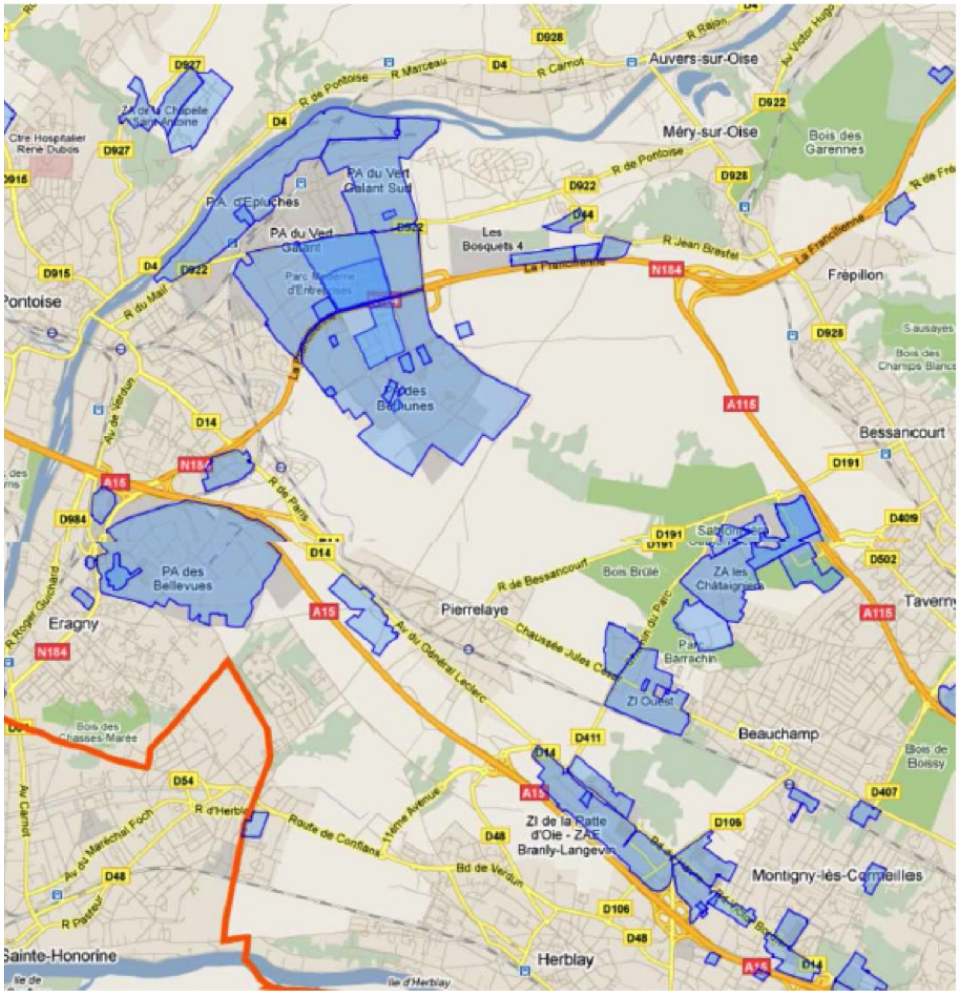
Large Business Parks

From the 1970s onwards, business parks have been eating into agricultural spaces. Today, the area has many businesses of a variety of sizes. The adjoining districts of Bethunes I and II, of Épluche, of Bellevues des Bosquets and of Vert Gallant bring together about 9,000 businesses and more than 15,000 jobs over a space of 680ha. It's the largest group of SME-SMI in France and in all of Europe.

An Economic Interest Group exists since 1977, encompassing the business parks in Saint-Ouen l'Aumône. The Economic Interest Group has the aim of bringing a group of services to small and medium-sized business which do not have the same ease of access to such things as large businesses do.

In Cergy-Préfecture or Cergy-Saint-Christophe, the businesses which border the B Road 14 to Bessancourt generate a large amount of economic activity. The municipalities of Bessancourt, Frépillon and Méry-sur-Oise have the smallest number of industries. Overall, in 2011, the majority of economic activity comes from business and transport sectors, as well as that of miscellaneous services, followed by construction and industry.

The north-west boundary of the plain is not very characteristic of an agricultural plain. There is a clearly delineated urban area, made up of buildings which, due to the nature of their business/ industry, are particularly imposing, including a centre for logistics management, and an Auror'environnement incineration factory. These buildings seem to shoot up right from the middle of the plain. The fact that the whole plain has a south-westerly incline means that the western edge of this region and the urbanisation of the Cergy-Pontoise municipality are even more visible.



82. Areas of Economic Activity (Carteco95. com)

83. Coll. ARPE © Val d'Oise General Council Photos J. -Y. Lacôte

84. Business Parks all along the B Road 14, les Ateliers

Local Business

In the urban fabric, there are many local businesses, small and medium-sized, run by professionals or by artisans. Over the last few years, offices in the tertiary sector have started to replace local business. Banks, estate agents etc are blossoming in town centres. Such competition is difficult for specialised local businesses, which are losing their clientele, who are attracted by bigger, less specialised businesses.

D. WATERWAYS, SANITATION, ENERGY, WASTE

Water and Sanitation

There are numerous holding tanks to the east of the Plaine. These ensure the management of rainwater. There are also retention basins, linked to infrastructure or to business parks. There are two principal water treatment plants for the plain, both outside the area of current study: one at Auvers-sur-Oise and another at Achères, on the other side of the Seine (Seine-Aval). Sewage from the Ru de Liesse watershed pour into the Fond de Mal Assis tailings pond, on the outskirts of Beauchamp and Pierrelaye, and are then redirected towards Achères (Seine-Aval).

A SEDIF (Syndicat des Eaux d'Ile-de- France) water treatment plant, located in the Méry-sur-Oise municipality provides the water supply for the municipalities, other than Frépillon et Saint-Ouen l'Aumône, which are provided with water by other networks and channels. In any case, the networks are linked.

The plaine de Pierrelaye-Bessancourt furthermore bears the signs of elements linked to the irrigation system, such as equalisation towers and water towers.

85. Water Purification Plant, Méry-sur-Oise (Cg95)

Energy

The plain is a place where different forms of energy supply routes intersect. The very existence of these structures serves as a break on urbanisation because of the public utility easements which exist as a result. The structures will also be advantageous for potential future urbanisation, since these areas already have these facilities.

Electricity

Many power lines also cross the Plaine from east to west (225Kv) and from north to south (63 Kv) and there are two principle substations, one at Saint-Ouen l'Aumône, the other at Herblay. Another high voltage power line follows the route of the plain, in its south-westerly part. There is also a 63 KV line which links the two parts of the urban area of Herblay, right up to the substation. It should be noted that, for safety purposes, urbanisation near high voltage lines is controlled[17].

86. Elements of the irrigation system (Coll. ARPE © Val d'Oise General Council Photos J. -Y. Lacôte, A. Maugin, P. Gaudin)

17 : Read about this at, http://www. ladocumentationfrancaise. fr/rapports-publics/114000008/index. shtml

Hydrocarbon

At Herblay, an oil pipeline crosses the plain, following the route Paris Cergy-Pontoise axis.

Gas

There are three high pressure pipelines, the main one of which crosses the plain from Frépillon to Herblay. A less significant pipeline comes off this pipeline, in the direction of Auvers-sur-Oise and Saint-Claire-sur-Epte, more to the north. A final pipeline crosses the plain from Eragny, to the west, via Pierrelaye, towards Montigny-lès-Cormeilles. This refers us to the 2009 state directive: the existence of this infrastructure for the transport of dangerous materials generates constraints and certain obligations, as set out by the ministerial degree of 04/08/2006. As regards city planning, the constraints concern the creation of buildings which are open to the public, and high tower blocks. There are restricted zones ranging from a distance of 5m to 405m from the axis of the pipes.

Waste

There are waste treatment units on the plain. To the north of the bois de Beauchamp, in 1986, a waste disposal site replaced the waste composting plant which was opened in 1970. This waste disposal site is for the use of the inhabitants of the municipality of the syndicate 'TRIACTION', which is an intermunicipal syndicate for the collection and treatment of household rubbish, which groups together the municipalities of Auvers-sur-Oise, Beauchamp, Bessancourt, Frépillon, Herblay, Méry-sur-Oise, Pierrelaye, Saint-Leu-la-Forêt, and Taverny. In Saint-Ouen l'Aumône, since the 25th August 1995, the main centre of rubbish treatment AUROR'ENVIRONNEMENT, deals with the urban waste of Cergy Pontoise. This centre is situated in the Béthunes II industrial park, on the outskirts of the municipalities of Saint-Ouen l'Aumône, Méry-sur-Oise and Pierrelaye. 250,000 tonnes of waste are treated there every year, of which 90% are upcycled.

E. HOUSING

Type

A predominance of detached houses

On note une majorité de logements individuels sur les communes de l'Entente. Mis à part Saint-Ouen l'Aumône (36,5 %) et Taverny (48,7 %), les 7 communes ont un taux de logement individuel supérieur à 50% avec un taux maximum de 88,7% à Frépillon. En moyenne, les proportions de logements collectifs des communes de la plaine sont inférieures à celle du département.

Second Homes

The proportion of second homes in Frépillon equals that of the department. Pierrelaye, Saint-Ouen l'Aumône and Taverny all have a very small number.

Age of Houses

The proportion of older housing[18] is important in the majority of the towns. It is nonetheless a relatively weak proportion, compared to the whole of the department and even more so compared to the Ile-de-France region. In all of the towns, housing built in the last twenty years represents a third or more of the total amount of housing, which is the sign of a recent dynamism and attractiveness. In Bessancourt, Frépillon and Pierrelaye,

18 : This is taken in the fiscal sense of the term; it refers to accommodation built more than 5 years ago or which is has had changes made to it or is being developed (INSEE)

87. Detached houses, plaine de Pierrelaye-Bessancourt, les Ateliers

88. Detached houses (Coll. Part, Extract Cg95)

89. Blocks of Flats (Les Ateliers)

older housing is an important proportion of the total housing (almost 30%). In Méry-sur-Oise, which has significantly expanded recently, 40% of housing is less than 20 years old.

Size

In France, the average number of occupants per home has decreased regularly since the end of the 60s. This decrease results from a dual movement. On the one hand, the number of single people has greatly increased, and, to a lesser extent, the number of couples living together without children; on the other, the number of houses which have at least five people living in them has gone down: families with more than three children are less common, as are homes where several families live together.

The towns on the plain have a significant share of large homes, made up of 4 rooms or more. These homes make up a total of 27% of housing in the Val d'Oise department. Small homes, of one or two rooms, are a relatively small percentage of the total.

Social Housing

The municipalities are making sure that the rate of social housing is maintained or improved, so that they are in line with article 55 of the SRU law, which imposes a minimum rate of 20% of housing being social. The issue of the need for social housing should be considered in relation to another question: housing or accommodation for itinerant people, who have decided to remain in one place rather than to travel. Both issues fall under the auspices of the Department's Plan of Action for the Housing of Disadvantaged People[19].

19 : See Appendix

COMMUNES	TOTAL LOGEMENTS	LOGEMENTS SOCIAUX	PART DE LOGEMENT SOCIAL
Beauchamp	3 524	540	15,32%
Bessancourt	2 523	625	24,77%
Frépillon	998	139 au 31 décembre 2010	12,92%
Herblay	9 500	1 440	15,16%
Méry-sur-Oise	3 173	567	17,87%
Pierrelaye	2 800	765	27,32%
Saint-Ouen l'Aumône	8 523	3 388	39,75%
Taverny	9 952	1 976	19,86%
TOTAL	40 993	9 440	23,02%

90. Amount of social housing (DDT 95 – Extract from Urban Design Study /ONF/ CERAPT)

Accommodation for Itinerant People

The Val d'Oise department is one of the departments in the Ile-de-France region which is the most concerned with finding accommodation for travellers. The N°90-449 law of the 31st May 1990, called the Besson Law, and reinforced by the N°2000-614 law of the 5th July 2000, envisaged the development of plans, in each department, which aimed at organising how travellers should be received and housed. The Val d'Oise plan for the welcome and housing of travellers was approved by the municipalities on the 5th November 2004. It is currently being revised.

According to ADVOG (Association Départementale des Voyageurs-Gadgés), there are 2,900 caravans[20] in the Val d'Oise for only 268 places, spread out across 10 areas. It is estimated that at least 700 of these, whether travelling or in a fixed location, are within the area of the Plaine.

It is important to differentiate between the different situations encompassed by the term 'travellers': those who remain in one place, those who travel intermittently, often because they are forced to do so, and those who choose to travel.

Depending on the situation, different areas or spaces can be considered: family areas, isolated spaces which can be rented out for people moving around different parts of the plain, and areas intended for brief stop-overs.

Travellers are often now setting up base on private plots of land, close to land used for agriculture and very often in areas which cannot be built upon. The economic, legal and practical (how to send children to school, how to obtain necessary food and supplies, urban pressure) difficulties, as well as population growth, is increasingly prompting families to look for more stability and remain in one place.

Insubstantial and unstable housing has been put up in certain areas, and if the traditional home of travellers remains the caravan (12,500 travelling caravans, 1,200 intermittently travelling caravans, and 1,200 which remain in one place, according to the ADVOG, 1004 travelling in 2003, according to the Prefecture), the travelling itself is no longer a distinctive sign. It is estimated that the area occupied by 'travellers' on the plaine de Pierrelaye-Bessancourt is overall equal to an area of about 80ha.

How best to welcome them and help them with social integration is a question which must be considered. An essential means of freedom and mobility, the caravan brings about a special relationship to space and is an important element of the identity of 'travellers'.

20 :12,500 travelling caravans, 1,200 intermittently travelling caravans, and 1,200 which remain in one location, according to the ADVOG, 1,004 travelling caravans in 2003, according to the Prefecture

C. AN AGRICULTURAL PLAIN

A. CULTIVATED AREAS

Culture types

see picture 91

Farm structure types[21]

There are three types of farm structures.
– Smaller farms: Often start out as fruit, vegetable and flower farms before using the land for field crop (13% of arable land (SAU)). This applies to most of the smaller farms whose averga size of 25ha has evolved little or none since the year 2000. Farm owners are rather old with an age span of 53 to 69 years.
– Diversified medium-sized farms (around 100ha) (6% of arable land (SAU)): Those structures supplement the revenue from classical crop (field crops, fruit, flower and vegetable) with other ressources, especially selling directly to the clients.
– Large farms (80% of arable land (SAU)): Seven farms grow large field crops on 200ha or more. Five of them control ¾ of the Plain surface, including the polluted land, and spread beyond

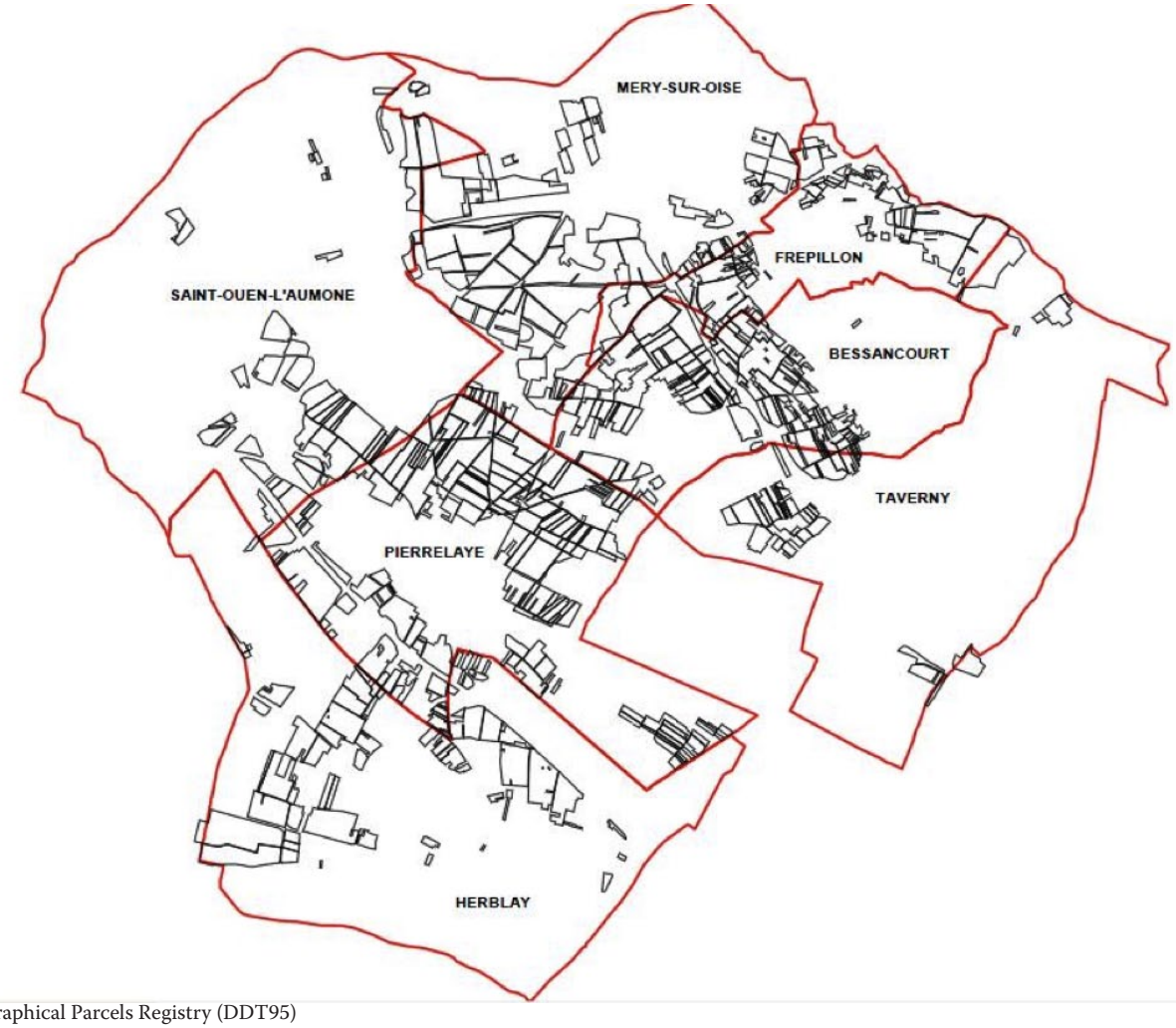
Only one farm, which produces vegetables sold mostly wholesale at Rungis, qualifies as «large» not for size but for revenue. Cereals are grown on polluted land, but vegetables have benefited from re-location in the surrounding areas, and amicable trade with the cereal farmers.

The other six Large Farms are structured in the two following, equally represented ways:
1. Those for whom most revenue comes from agriculture
2. Those holding various companies on the Plain, enabling them to choose which will lie fallow (a legal obligation) and which will be valorized for good soil.

21 Study Dessein Urbain / ONF / CERAPT 2011

92: The Pierrelaye-Bessancourt Plain (ARPE Coll. © Conseil Général du Val d'Oise / Picture credit J. -Y. Lacôte

91: Agricultural parcels, 2010 (Géoportail)



93. Graphical Parcels Registry (DDT95)

A complex parcel structure[22]

The Registre Graphique Parcellaire (Graphical Parcels Registry) shows plainly how numerous and diverse the agricultural plots are.

Land-ownership is split up to the extreme. Parcels show up as narrow slivers, a shape adapted to actual techniques of farming and irrigation.

The slivers are 200 to 400 meters in lenght for 20 to 40 meters in width and often run between two country paths, which shows how farming has adapted to fertilizer spreading procedures. Some sectors include large plots of 2 to 9 ha, which were the initial parcels owned by the Paris municipality, or were born from fusions. For the past twenty years, parcels have been re-organized by farmers themselves. Through trade and by linking plots in an informal manner, they create large zones for growing field crops over several hectares.

22 Source: Study Dessein Urbain / CERAPT / ONF, DDT 95, CG95

D. A SPACE FOR LIVING

A. SOCIO-DEMOGRAPHICAL APPROACH

General Characteristics

Municipalities in the Plain can be classified into three groups according to population size:
– Population under 3. 500: Frépillon
– Population 3. 500 to 10. 000: Bessancourt, Méry-sur-Oise, Pierrelaye
– Population over 20. 000:Herblay, Saint-Ouen-L'aumône, Taverny

L'Entente counted 101. 902 inhabitants in 2007, 34. 445 increase in the last 30 years. We can note a steady ongoing demographics evolution between 1975 and 2006, that follows the evolution of the County: 35% growth for municipalities and 28% growth in the County in the same period, way beyond the regional growth of 15%.

Those changes stem partly from the loose extension of neighboring agglomerations, especially Paris and its close suburbs, and partly from faster urban sprawl. The last census clearly underlined the loosening of urban density in Cergy-Pontoise.

Natural and migratory balance

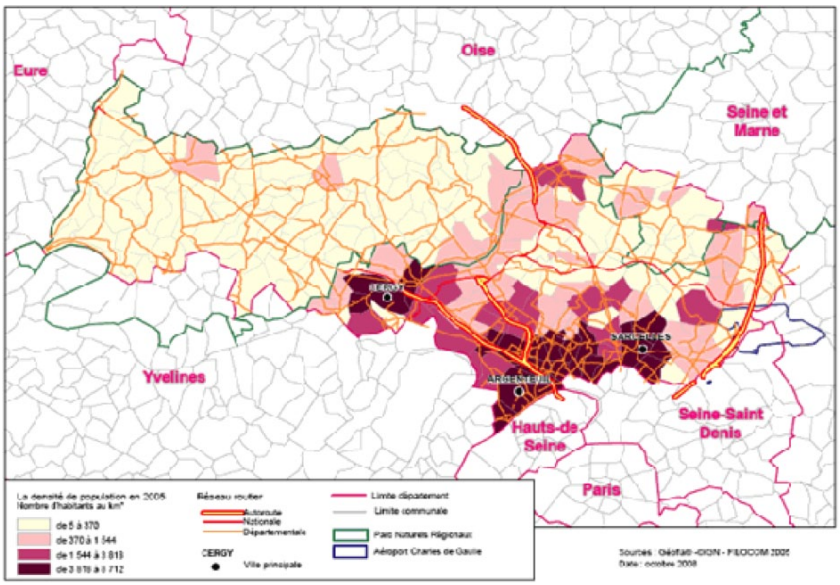
Natural balance was responsible for most of the population growth in municipalities from 1999 to 2007, except in the case of Frépillon. One of the reasons for the imbalance between natural and migratory growth is the disparity between offer and demand for housing.

Municipalities in the Entente have twice the growth rate of the county average, and depend more on migratory balance.

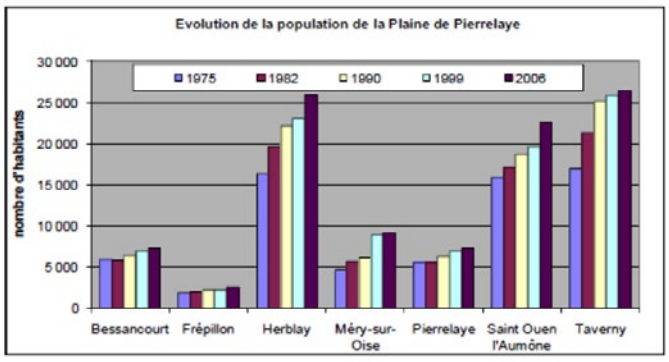
This analysis makes a case for spatial attraction to the territory, benefiting the municipalities in the Entente, and notably derived from the loosening of spatial use in Paris and Cergy-Pontoise.

A younger population

Analyzing the age pyramid in various municipalities both in 1999 and in 20007 reveals a rather uniform spread. The higher age group widened between 1990 and 1999, as all the «younger» age groups shrunk (under-29-year olds went from 46,52% to 42,41%) while the groups over 44 expanded. The percentage of 30-to-44 year olds shrunk, as opposed to the 45-to-59 year olds. Over 60, the age group expanded from 11,55% of total population in 1990 to 13,64% in 1999.



94. Population growth in the Val d'Oise (Ceevo 95)



95. Population growth, Pierrelaye-Bessancourt plain (from INSEE, ex. study by Dessein Urbain/CERAPT/ONF)

	Actifs (2007)	Actifs occupés (2007)	Nb Chômeurs (2007)	Taux de chômage (2007)	Evolution population active entre 2004 et 2007	Evolution du taux de chômage entre 2004 et 2007
Bessancourt	3837	3549	288	7,5%	10,0%	-1,27%
Frépillon	1319	1226	93	7,0%	14,0%	1,49%
Herblay	13014	11924	1090	8,3%	13,5%	-1,49%
Méry-sur-Oise	4815	4461	354	7,3%	7,0%	-2,37%
Pierrelaye	3992	3599	394	9,8%	14,5%	-0,12%
Saint-Ouen l'Aumône	12142	12142	1268	10,4%	19,0%	-3,91%
Taverny	13380	13380	1234	9,2%	3,4%	0,53%
TOTAL	52499 soient 75,5%	50281	4721	9,0%	11,6	-1,02
Département du Val d'Oise	74%	514919	65179	7,5%	2,2%	-12%
Région Ile de France	74,9%	5272521	636630	6,90%	5,2%	-16%

96. Activity rates and unemployment, Entente municipalities (INSEE source, ex. study Dessein Urbain/CARAPT/ONF

This ageing phenomenon is, however, in accordance with the county and regional evolutions. In 1999, the under-14 and 30-to-44 year old age group in the Plain was relatively as important, or more important, to the county average. The over-60 group is less represented in the Entente municipalities than in both county and region.

In 2007, the age pyramids were quite similar between our territory, the county, and the region. Today, the structure is evolving as the percentage of younger age groups grows. The over-75 group is shrinking. This could be justified by renewed attraction to the territory and the installation of new, younger households, and it explains the high demand in housing.

Activity rates and unemployment

The rate of participation in the workforce is 65% for 15-to-64 year olds in the Entente municipalities (compared to a national average of 71,5%). The active population is growing in all municipalities, slightly in Taverny (3,4%) but strongly in Saint-Ouen l'Aumône (19%).

Housing is the main attraction point of those municipalities. Indeed, there has been a drop between 1990 and 1999 of the percentage of workers employed in their town of residence.

Few workers are employed in their town of residence. This evolution is probably linked to the strong attraction of neighbording poles developping company-attractive policies.

97. Illicit waste (R . Vidal, 2011)

B. THE «FOURTH SPACE »

The «Fourth space» qualifies vacant or disused plots which polarize urban activities that the city does not manage. This includes plots of temporary or leisure housing (a phenomenon known as «shacking »), illicit parking of mobile homes, unauthorized circuits for «green» motorcycles and quads, car dumps, informal trash heaps of various kinds, but also depot grounds for construction and deconstruction materials, logistics, etc. . . (François Huart)

In 2005, 50. 000 tons of illicity waste were collected on the Pierrelaye-Bessancourt Plain.

In general, and according to information received in the crafting of this document, people living in the municipalities skirting the Plain have little «experience» of the Pierrelaye-Bessancourt territory, which they only know by crossing and which does not figure in their mental maps of the space they live in, which they describe as «poorly kept » .

4

ENVIRONMENT AND SANITATION ISSUES

ENVIRONMENT AND SANITATION ISSUES (INRA-ARS-SIAAP)

A. GROUND POLLUTION

A. WATER TREATMENT ISSUES[23]

Context

For as long as men dwelt in housing, we conceived various techniques to tame our environment. Urban sanitation, in its wider meaning (to clean and make healthy), is one of those techniques.

Solutions have been found on all continents, at all times:
– in Harappa (Indus) (2500 to 1500 B. C.), drains ran from the water-closets inside houses to an underground sewer system running below the streets
– Excavations in the city of Fostat, Egypt, have uncovered pit toilets inside houses. Farmers probably bought the muck for manure.
– In Byzance, houses included latrines and sewers in the capital must, by law, drain out into the sea.
– A sewer and drainage channel were also found in Palenque (Maya city)
– Around the Mediterranean, the first sewers were built in Rome to drain (or rather to keep) wastewater, etc.

In the countryside and in smaller towns, popular techniques are soakways dug in permeable land, and masonry wells elsewhere. In large cities, Paris in particular, most houses do not have pits, and everything «runs to the streets » . Open-air street drainage collects waste and rainwater. In the wake of the massive XIXth century cholera epidemics, hygienists define strong principles to build a modern sewer system, and push for its use.

The first «modern» drainage system , thereby, appears in Hamburg in 1843 when the whole city is rebuilt after fire. Flushing toilets, invented as soon as 1596 by englishman John Harington, start to spread. Pouring asphalt on the roads will only take in the Xxth century, though it was experimented as soon as the early 1800s by MacAdam.

In France, modern drainage system truly become the norm in 1894 when sewer laws are indicted in Paris. This is the first triumph of a hygeniest view of sanitation, and is rapidly followed by more as the system spreads through France in the early 1900s.

23 Reference to the Urban Hydrology Classes of J. -L. Bertrand-Krajewski, URGG, INSA Lyon

98. Water treatment plant outlet, pouring cleaned water into a stream (Atlas de l'Eau CG95)

Sanitation in the Val d'Oise today[24]

Sanitation in the Val d'Oise is plagued with geographical and technical contracts. Not all the county wastewaters are treated within the Val d'Oise. Most of them are carried through emissaries to the water treatment plants of Seine-Aval (largest worldwide after Chicago) and Meulan-les-Mureaux, in the Yvelines county. Some municipalities in the Val d'Oise mostly use individual treatment solutions (like Neuilly-en-Vexin). Others choose to send their wastewater to one or several of the 42 water treatment plants in the county.

Most of the Val d'Oise plants use as outlets the waterways running through the county. Their output must respect the waterway quality standards set in the prefectoral order from 06. 21. 2000.

B. HISTORICAL OVERVIEW OF POLLUTION AND RELATED ENQUIRIES

For over the century, liquid waste from the cities (wastewater, mud, household compost) has been spread on the farmlands in Bessancourt, Frépillon, Herblay, Méry-sur-Oise, Pieerlaye, Saint-Ouen l'Aumône, and in the neighbording towns of Achères, Triel-sur-Seine, Chanteloup-les-Vignes, Carrières-sous-Poissy and Andrésy in the Yveines county.

The effect was beneficial at first (influx of water and organic matter on naturally poor soil), and spreads drove the development of varied agricultural produce, especially vegetables and garden herbs. However, as industrial activity grew in the cities, the urban waste started bringing pollution to the arable soil, as mettalic-traced elements started to accumulate (ETM1: heavy metals), as well as hydrocarburates (HAP: polycyclic aromatic hydrocarbutates).

Between 1998 and 2008, several studies have looked into the spread of wastewaters on the Plain territory.

The scientific communauty has started to care about the consequences of such processes on the long-term, as contamination spreads to all the pieces of the ecosysem. EPANDAGRI was born; an integrated research project aiming to provide answers about soil quality and risks of continued agriculture. The project is based on an interdisciplinary approach (pedagody, agronomy, physics and chemistry, microbiology) that coves the chemical, physical, and biological impacts of spreads on soil evolution, and sets a framework for risk.

The main risks from a scientific standpoint are:
– Trace elements accumulating on the soil surface that, unline organic substances, can not bio-degrade, and are carried in full through vegetable cultures into the food chain. This is an issue of biodisponibility.
– Their sinking through the soil, possibly contaminating

24 Source: Water Altlas of the Val-d'Oise, CG95

the water tables
– Their effects on micro-organisms and the organisms' functions within the soil. This is an issue of toxicity.
– The evolution of their shape. This is an issue of speciation and ecodynamics within the soil.

C. RESULTS

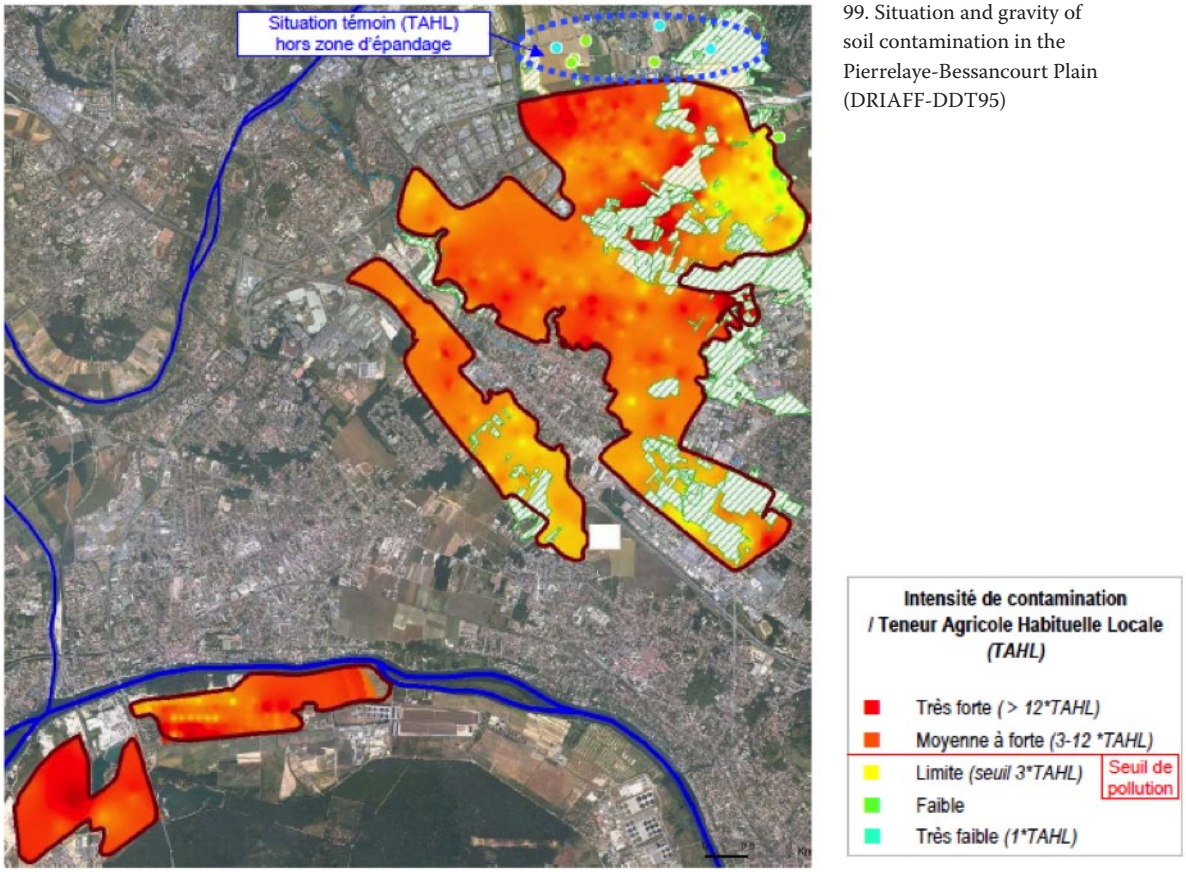
Position of polluted land in the waste spreading zone

In January 2004, the final report of EPANDAGRI study led by INRA confirmed important pollution by metal trace elements and hydrocarbutates. Paradoxically, due to the situation of the Plain, spreading waste waters has brought both:
– Pollution, eg through ETMs
– and Organic matter enabling trace elements to settle, as it absorbs them and concentrates them in the high soil surface (40cm)

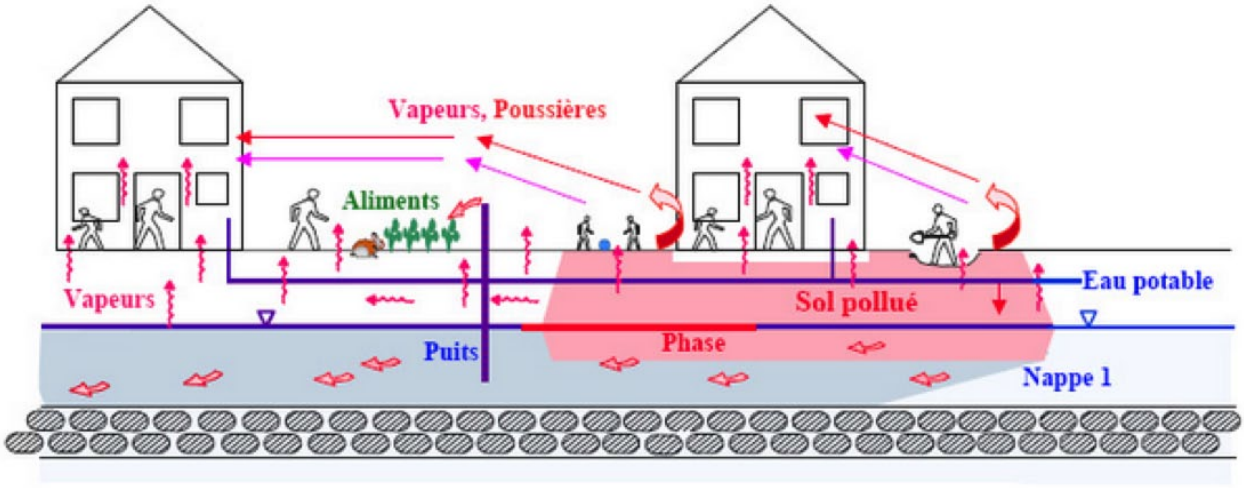
The soil surface has a complex structure, born from a century of spreading. Changing processes of irrigation and culturue practices has led to:
– Risks of biodisponibility relative to the quality of the actual crops
– Risks of toxicity relative to the soil fauna
– Environmental risks as pollutants sink into the ground table.

Main conclusions

Results of the study have shown real dangers associated with the soil pollution, stemming from an exceptional density of micro-pollutants and most notably trace metal elements that have accumulated in the ground. Today, the high organic content of the soil keeps the danger at bay, but the ground appears fragile and highly vulnerable to any new influx of metal.



99. Situation and gravity of soil contamination in the Pierrelaye-Bessancourt Plain (DRIAFF-DDT95)



100. Concept sketch of a site exposed to pollution (environment-travail. fr)

B. SANITATION AND ENVIRONMENTAL RISKS

A. THE NOTION OF RISK [25]

A site is said to be polluted when «its charge in pollution is incompatible with the actual or planned uses of same site or environment.» Risk can be defined as «the probable advent of an undesirable event, in given contextual conditions.» When it comes to polluted sites, risk is defined by the simultaneous presence of three conditions:
– Intrisicly or naturally dangerous nature of the substances involved (ex toxicity)
– Process and system of contaminating (ex through volatility, solubility of a substance) exposed ecosystems (water, air, soil)
– issues of sanitary and environmental protection for:
– humans: dwellers and neighbors
– the environment: air, soil, groundwater, water tables, ecosystems
– flora and fauna, material goods (depending on quality, planned use, quality standards, protected areas, situation, extension, and building weaknesses)
– actual and planned usage.

Risk is therefore framed in three notions:
– A vector
– A target
– An origin.

25 Source: ADEME and http://www. developpementdurable. gouv. fr, ground pollution and urban planning

B. RECOMMENDATIONS[26]

Stabilize trace metal elements

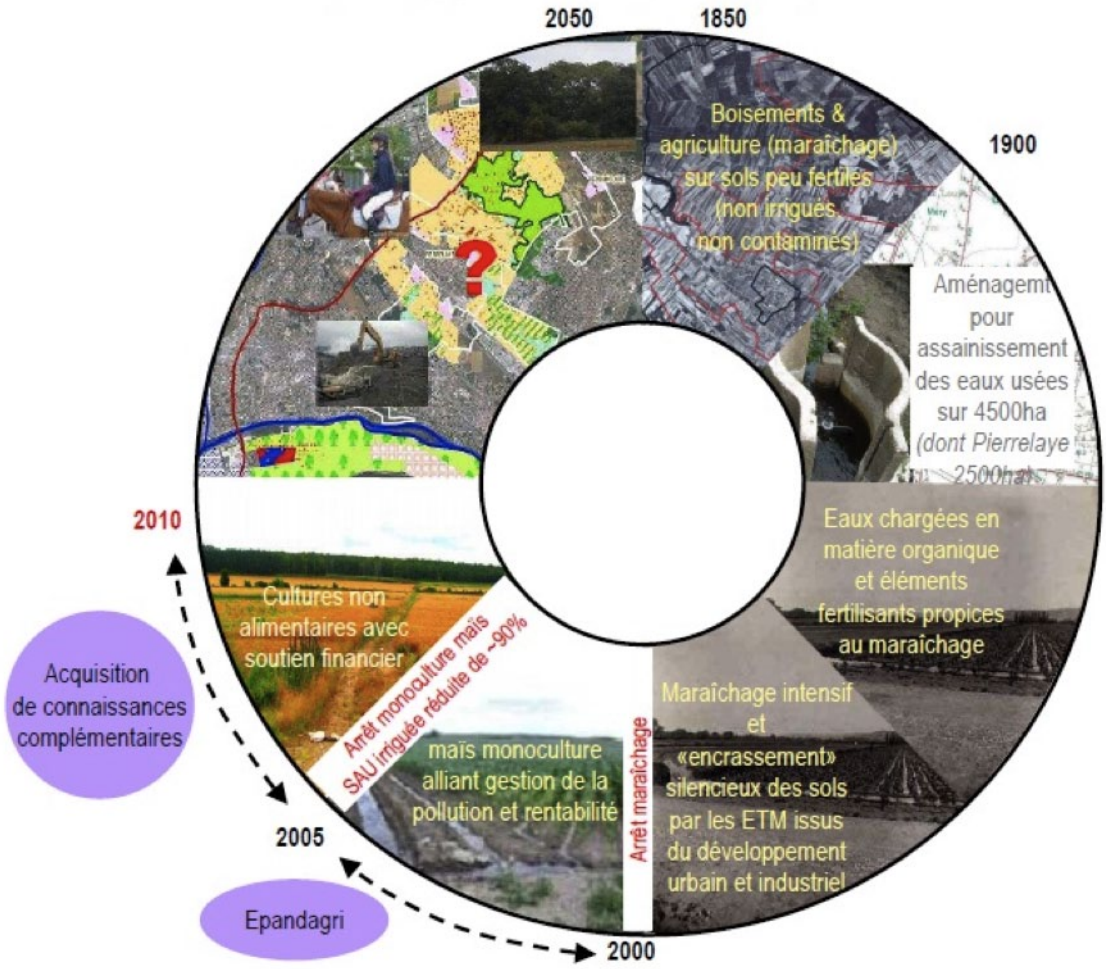
INRA suggests that protecting the sturcture of superficial ground surface would minimize the risks of metal contamination. This can be achieved by maintaining an agricultural activity based on non-consumable crops, and putting specific processes in place.

In the long term (~100 years), intensive irrigation has turned soil characteristics head over heels. Organic matter and metal trace elements have accumulated (0,5 to 1,5kg/m2, concentrated in the arable part of the soil). The water retainment properties have evolved:
– Massive influx of water have led to a peculiar form of pedogenesis , characterized by the dissolution of minerals
– The soil lost some of its capacity to catch metalic pollutants seeping through
– The aforementioned pedogenesis is not distributed in a homogeneous fashion
– Whatever the ground management processes ahead, it will be essential to take into consideration the geological and pedological heritage of the soil to understand environmental impacts and pollution issues.

Unefficient Phytoremedies

Physicochemical methods of ground treatment against pollution do not seem appropriate for our type of site.
– Naturally hyper-accumulative plant families have been tried and have proven to hold a high potential for extraction, that would be improved still by a limited use of fertilizers (P,N,S)
– Studies have shown that phytoremey processes were highly

26 Source: DRIAAF / INRA



101. DRIAAF-DDT 95, 2010

dependent on the disponibility of metalic elements.
– Will phyto-extraction lower the biodisponibility of metalic elements in the soil, on the long term? If so, this would enable a stable flora to take hold on contaminated sites, thereby improving the landscape.

Forbidding food outlets for the cultures

Since 1992, at the time the water protection law was drawn and indicted, the Val d'Oise DDAF has ben preoccupied by metalic pollution in the grounds. Following the December 1994 SIAAP intervention, aiming for precedence benefits (in accordance with the March 29th, 1993 decree enforcing the water law), the inter-service mission for water (MISE) launched analyses of the water, ground, waste-spread volumes and processes in the Val d'Oise.

In May 1997, the first pedological results of a global study covering Val d'Oise and Yvelines showed that metalic elements in the ground were denser than normal.

Food cultures (vegetable and fruit especially) were called into question. The Prefect of Val d'Oise county passed a first decree to forbid the sale of mint or thym that had been grown in the area.

Since then, more evidence of ground pollution has come up. Locals have turned to the High Comittee for Public Health (CSHPF) for advice. The French Agency for Food Sanitation and Security has given the following, twofold advice on April 13th 1999:

– take rapid measures to forbid the spread of waste that was not bacterially treated

– allow and promote growths that are less vulnerable to heavy metals, based on serious studies and recommendations.

In consequence of which, the CSHPF suggests in their recommendation from April 13st, 1999 that «the spread of untreated waste on agricultural land be stopped, in order to contain contamination. There will have to be an alternative to simply spreading this waste on other types of land. »

The Prefect published a new decree on March the 31st, 2000, «to forbid the growth of vegetable and kitchen herbs with or without sale» on all land receiving waste spreads in the Pierrelaye Plains. Corn has since become the only authorized crop in that sector of irrigation (held to constant supervision of the grain composition)

The spread of liquid waste has since been replaced by irrigation of clear-flocule waters treated by the water plant in Achères. Water volume and irrigation extent have been cut back from what they were under waste-water process.

5.

PLANNING ISSUES

PLANNING ISSUES

The context document for the Workshop aims to give a first overview of issues, challenges and constraints on all scales.

The following questions and enquiries are grouped according to a series of themes, for a preliminary program of work to be done by the sessions participants. Those enquiries should frame a global proposal to resolve multiple issues.

A. FITTING INTO THE GREATER LANDSCAPE ON ALL SCALES

How can the area evolve from its former position of use to others, to an active role as wide open protected space in the system of regional green belt, in accordance with the project of the SDRIF (green belt, biodiversity, large ecological corridors, greater landscapes) and with the Grand Paris standards for forest? How can it be valorized within a multifunctional area equivalent to a 300,000-strong agglomeration?

What part can it play in the metropolitan configuration? What links are there – from indifference to integration – between our area and the Seine-Oise Confluence? How should it evolve in an evolving geography (in the largest sense)? Are the «Grand Paris» standards for the metropolitan forest rather a bonus or a trap?

How will it fit in a «Grand Paris system» that no longer corresponds to the urban model of XIXth century Paris, nor to to the radioconcentric agglomeration of the Xxth century?

What project will bring together the seven municipalities in the Entente, working as one rather than several «little» fragments of territory? Is our area. . . suburban, is it a city in the fields, are there fields in the city, is it an outcrop of the larger agglomeration? Do we observe a spatial segregation of territorial functions, or a tendency towards hybrid and mix usage?

Up to what point is the future of the Plain decided at the local level (Entente)? Or will the main impulse for planning comme from the larger (metropolitan) scale? Bottom-up or Top-down? A future based on the context of the Plain or on material needs -or shall it combine both? What are the right scales at which to intervene?

B. WHAT SHOULD THE «METROPOLITAN FOREST» BE?

The forest is the MAIN political project meant to ground future planning in the Plain. It should be a vector of meaning, and an impulse for development. Beyond the technical and financial issues of creating a forest, Les Ateliers suggest you consider the forest as a fact, not a variable, and explore in depth what this generic term could cover. What new realities, shapes and processes can it generate?

More than just a forest:
Thought and imagination are plagued by the representation of the forest as a monofunctional domanial wood, used to hunt. The forest is more than a homogeneous amount of trees. It is a complex system of elements functioning as a whole. Areas open to the public are but a small part of it. It will be our task to define the future and varied uses of the forest, its program in a way: leisure, production (biomass, workshop wood), soil regeneration. How important should the leisure (sports, walking), production, and ecological aspects of the forest be?

What rôle will the metropolitan forest play within the regional system of green belts? For what landscapes, and along which ecological continuities? What could the identity of a modern forest be, and what multiple faces shall it wear? What can the forest bring to the Pierrelaye-Bessancourt Plain, that the old neighborhing woods of Saint Germain and Montmorency could not? The forest already acts as a barrier to climate change (it traps carbon and heat). Can it regenerate the soiled grounds, should it act as «compensation» (carbon emissions, biodiversity) for the shortcomings of other areas? Can the forest replace agriculture as the main identifier for the Plain? In what ways does the forest create social and human links in this in-between territory, in this «fourth space » ?

Think of the forest as a producer, in the economic sense (wood for furniture, building, heat, etc. . .)

What will the forest look like? It cannot be perceived as a homogeneous, monofunctional spread. The forest can answer multiple needs and accomodate multiple uses.

How shall it work with, or around, the planned (A104) and existing transport infrastructures (mall strips along RD 14, A15, A115, and the railways)? How will it be connected? What balance can we find between preserving crop and forest land on the one hand, and increasing regional attraction with more connections on the other hand? How can the harmonious evolution of natural areas and the metropolitan dynamism cohabit?

What planning program and management process can we imagine for the long term , keeping in mind that growth maturity depends on the type of essences in a forest, but takes on average fifty to sixty years?

C. WHAT FUTURE FOR AGRICULTURE ON THE PLAIN?

What will become of the agricultural production? Continued growth on the polluted soil is called into question due to following issues:
– Reglementation (are the agricultural produce and the actual pollution compatible?)
– Technical (Can the ground be irrigated and if so, how and for how much?)
– Economical (What produce for short circuit consumption on the local and regional scale?)
– Financial (How much of the cost is the collectivity ready to shoulder, in order to conform to the law?)
– Structural (Complex plot repartition)
– Spatial (landlocked)

Not all the land is polluted in the Plain of Pierrelaye-Bessancourt. Part of the plots are still compatible with the production for human consumption.

The future of agriculture on the Plain must be envisionned in a regional framework, keeping in mind the current planning trends (chapter on agriculture, see infra p. 77)

What role should «urban agriculture» play for garden crops, for heritage agriculture? How is agriculture an interface in the city/nature dualism between the urban edges and the forest? What role should non-food production play (for energy, biosourced materials, «green» chemistry. . .)? Beyond the issue of use, agriculture is a garantee of preserved open spaces, of vistas on the land. Our site possesses such landscaping vaue. In what ways would the projected forest preserve those rare occurrences of breathing space in the Ile-de-France region?

D. HOUSING PROVISION ON THE PERIURBAN FRINGE

Growth is dynamic on the fringes, which face important housing demands. The interface between urban space and agricultural land takes on different shapes and uses, according to local specifics. The changes in width and perception of said interface often reveal the attention it receives, and the way it is considered. However, the nonexistent integration of rural and urban fringes reveal at least ignorance, if not hostility in their respective demeanor. Urbanization tends to spread over the rural grounds, perceived first and foremost as open plots for housing, marked as blank space on the map.

There are multiple goals to adress through the housing issue:
– Integrate current urban development projects
– Give natural spaces a long-lasting border. This will boos their social, economic, environmental value and create identity.
– Break the continuity of built space currently growing on the Beauregard-Bellevue axis, within the regional green belt
– Acknowledge and manage the «marginal» uses in the «fourth-space» corners of the Plain
– How will urbanization happen on the edges of the Plain, knowing that 6. 000 to 8. 000 new houses or flat are in project – a project which can only be upheld by the whole Entente (though not all of the new housing has to spring up on the fringe)? What shall we promote for a new relation between city and country, a relation that involves integration, interfaces, hybrid spaces between open and built land (historical villages, cottages, collective housing, large malls, activity zones in need of restructuration, rehabilitation, mutation or extension)? How can we imagine the transition from forest to shared space to housing?
– What about shapes? Density? Typology? What about the functions – beyond housing – upheld by the new urban areas? How can the need for compactness and the the desire for space cohabit?
– Finally, how can we perceive the notion of «fringes» or «lived-in borders » ? Is there only one way to shape the limits of the built area?

A different way of living

There are issues related to nomad populations and informal housing. How can informal and/or mobile housing be integrated in the provision of built space? How would it interact with «traditionnal» housing patterns?

From a wider perspective, what is the future of activities associated with the «fourth-space» or temporary uses of the space? How can «informal» uses be taken into account? All theses uses point to real needs of metropolitan inhabitants, and call out to public authorities at all levels: they can no longer be ignored. Today, these issues need either to be tackled directly, partially integrated, or taken charge of at a higher scale than the Entente. What is to be done with those «depressurization» areas that do not fit in the metropolitan plan but nevertheless fulfill useful and non-negotiable functions? What will become of those functions once that space is planned, organized? Informal spatial uses are characteristics of in-between areas (nomad housing, petty trafficking, illicit waste, quads. . .), and can be found for example around the Paris ring road. How are these uses compatible with a decision to structure the urban space, or at least to organize it for better management, greater value, and higher social, economic, ecological returns? Projects could be stronger for acknowledging variety, heterogeneity, diversity.

E. HOW ARE PROJECTS FINANCED?

From an economic and political standpoint both, current conditions do not encourage large-scale projects, and their conforming to «Grand Paris» standards does not even guarantee finance.

Funds are unknown and uncertain. Therefore, we suggest that the teams include, in their proposals, ideas about one of a few systems of economic productions integrated in the development of the Plain, that would enable total or partial self-financing. In what domains, along which economic model? What revenue-generating ressources can benefit from the future forest?

F. NETWORKS AND INFRASTRUCTURES: CUTTING AND SEWING

The in-between territory of the Plain – unseen by its inhabitants, who perceive it as a set to be driven through – is crossed and irrigated by the metropolitan rail and highway networks. Their number and their variety knit the Plain into the metropolitan web.

Those structures stand out in the territory and help work it together. However, their value is balanced by the trauma and perturbation of a network that cuts the land in pieces. In short, they generate both constraints and opportunities for the ongoing growth of the Plain.

Possible angles on the issue:
– What will become of the existing and the planned infrastructures? How can urban living, landscape value and mobility work together along the A15 and A115 highways? Which new practices of mobility should be taken into account, as urban dwellers move differently to their work, their home, their leisure? How conservative should we be with energy?
– Is it really a solution to multiply the highway exits, for better service throughout the Plain? What cuts through the area today, can we transform it into a tool for proximity service in the years to come?
– What sort of territorial unity can we promise to this sliced-up plain? Will the whole area come together despite, or thank to the large infrastructures? Beyond cutting, can they sew?
– How can we integrate the large infrastructures in a global planning proposal, that does not forget the sylvic aspect? Can we rethink them as porous, or as protective? How shall we weave them through an unbroken green belt, and cross them with biodiversity corridors? What is the best way to handle the planned construction of A104 highway?

G. TEMPORAL ASPECTS OF THE PROPOSAL

The following issues stem from the question: what is living in an evolving territory? To the Pierrelaye-Bessancourt Plain, we can adapt this quote from Frictions Urbaines 2013[27]:

«A planning operation rarely takes place in a desert, but must fit in a landscape of habits and familiar uses. There might be a «before» and «after» the project […] but there certainly is a «during» the project which, lasting a few years, becomes it itself creator of habits. As construction progresses, memories are recalled or modified, whilst the routes, perceptions and uses of the old and new inhabitants [or users, in the Plain and its numerous types of fringes] settle into new shapes. How do the successive

27 Debates initiated by CODEV 94 and OPA-ORSA, program: http://www. gareautheatre. com/_pdf/pgFU13web. pdf

stages of urbanization [or planning] «mold» and solidify? How can we insure that the inhabitants [or users] remain in the neighborhood [or territory] through those changes, keep living within it, and little by little, make the transformation their own? In short, how does urban life take root in a evolving neighborhood? »

Is «process» the right word? We should take into account not only the time necessary for planning and constructiuon, but also the growth period of the metropolitan forest, ergo 60 years at least. All this, whilst conceiving the beneficial development of the Pierrelaye-Bessancourt Plain on the short term, ergo 10 or 20 years, and including issues related to climate change and the transition to clean energy.

Temporal issues are perhaps more essential for territorial planning than for urban planning, since growth periods for the vegetal part must be taken into account. How will the starting plots for our project be occupied? Who will take charge once the initial project leaders have bowed down? What part, alongside the planning and development of the forest, will be offered to plastic interventions, leisure and cultural activities, punctual events and shows?

H. PLANNING THROUGH THE ISSUE OF OWNERSHIP

There are around 4. 000 owners for 8. 000 plots on the Pierrelaye-Bessancourt plain today. The issue of ownershop is already on the table. It has been tackled in order to get the Plain in a PRIF: Regional land ownership intervention perimeter, through which the Regional Agency for Grown Spaces can supervise the exchange of land and get first dibs on a vacant plot. 120 hectares have been bought already through this process. Furthermore, the city of Paris already owns more than 350 hectares on the Pierrelaye-Bessancourt plain.

Brandishing a proposal will not be enough for public authorities to acquire all the plots at once. Their progressive ownership of the territory seems like a more realistic option. Keep this data in mind when thinking about temporal processes in your proposal.

FUTURE INTERROGATIONS

FUTURE INTERROGATIONS

The issue of ground pollution

A major question that industrialized societies will have to answer sooner or later is: what will become of the land we have polluted? There are midways to be found, neither denial (nothing the matter) nor catastrophism (abandon the land and close it off). However, existing projects are still few, and those tackling the matter, like Fresh Kills , do not have an answer for everything .

What can possibly become of the polluted grounds (treatment, management, confirment, sanitation issues, precautionary principle, settlement, dismissal of danger)? Participants must take into account how uncertain the answers, even the scientific answers, stand on the matter. The issue of pollution can not be overlooked.

However, comparing data from different techniques on a site only approaches reality: it presents and organizes the important elements to know that site, and puts them in perspective to to the unknown quantities. Therefore, this is only a tool for helping decision-makers. In the September Workshop, participants cannot, of course, overlook the issue of pollution . Nevertheless, the important thing is not to become experts on the matter, but to balance unknown quantities against risk, to consider the precautionary principle, and. . . . to keep in mind that financial constraints can be very important, depending on the planning scenario chosen.

Urban innovation and experimentation

The Pierrelaye-Bessancourt plain is up against the wall and needs to mutate, convert, transform. The area was rife with innovation in the late XIXth and early Xxth century. However, those innovations have led to the loss of the area's essential element: the soil. Can the Pierrelaye-Bessancourt plain emerge as a new soil for innovation in the XXIst century? Will it be through example, prototypes, laboratories, or as a display for all the new functions? Is it in its nature? Will this innovation be found in the new relations between city and country, in which natural spaces become subordinate to a new generation of cities, thereby integrating green belts, rainwater recuperation, water and air treatment, proximity services and material (re)valorization (construction, energy, waste), hydro- and thermal-reguation – all this, leading up to a new eco-system on the Plain, the last one having reached its end? From this point of view, the 8. 000 new houses or flats appear as an opportunity more than a threat. The Pierrelaye-Bessancourt plain, promoter and witness to innovation?

Considering the in-between

Data from the SDRIF is the sine qua non of planning proposals. All projects, whatever their scale, must obey these foremost injunctions. What freedom is there within the SDRIF constraints? Before the XIXst century, the plain was a poor and isolated in-between area. Spreading turned it into a subservient territory of the metropolis.

Is this status, as in-between space and subservient territory, necessarily a bad thing? Should it not be maintained, for optimal development of the region? Must the Plain – can it - play a greated part in the metropolitan game, than feeding the Greater Paris forest belt?

The radioconcentric system passed on from the XIXth century is still strong, but unilateral exchanges have been somewhat shaken by the creation of «New Cities» in the wake of the second world war. The Pierrelaye-Bessancourt plain went from a Paris subservient to a territory serving the new city of Cergy-Pontoise. In the XXIst century, territorial dynamics must be envisionned through a polycentric lens, as structured by all the Greater Paris territories.

In this transition from in-between to holding-together, from a subservient territory to a supporting function (industrial notion), how can the Pierrelaye-Bessancourt plain grow as a part of the Greater Paris? How can we end this process of ongoing degradation, which will not be halted but even quickened by simply qualifying our area as «open space for the green belt» in the regional planning scheme?

The next role for the Pierrelaye-Bessancourt plain will be acted out on a brand new regional stage, that will direct according to a new state of balance. Through that role, it will acquire a new identity.

ANNEX

LOCAL AND INTERNATIONAL EXAMPLES

The Réno-Valdieu forest is home to 1. 600 hectares of young trees, and some ancient growths (400 oak trees and 260 beech trees of almost 300 years). Well thought-out, the forest can be reached through welcome structures close to the transport routes. A marked path in the North takes you through trees over 40m high . Most were planted under Louis the XIVth.

http://autour-de-longnyauperche. over-blog. com/article-32408655. html

The Tronçais forest is a French domanial forest of over 10. 600 hectares, in the Allier county. It mostly hosts sessile oaks and has a reputation as the most beautiful oak forest in Europe. It is managed by the National Forest Board. The Tronçais oaks date back to Colbert, who defined the perimeter and planning of the forest in 1670? Colbert has a vision for a strong French Navy, and planted more than a million hectares of trees, the trunks and branches of which, specially selected, were to provide the naval industry with raw material of great value. He had therefor launched the redaction of a catalog called «les bois tors » , which purpose was to illustrate and present the specific pieces of wood destined for naval carpentry. (in Wikipedia)

http://fr. wikipedia. org/wiki/For%C3%AAt_de_Tron%C3%A7ais

Fresh Kills: a 890 hectare dump in Staten Island burrough, New York city, United States. It opened in 1947 and closed in 2001, but was temporarily reopened in September of that year to take in the waste of the fallen World Trade Center. Fresh Kills is nowadays closed, but remains the largest unbroken, undotted megastrcture built my man. At its largest, in 2001, Fresh Kills was so large it stuck up 25meters in height. Today, municipal authorities have decided it will host the largest park in New York, which will be built over the buried waste. This rehabilitation from dump to natural park is expected to take until 2016. (in Wikipedia)

http://www. nycgovparks. org/park-features/freshkills-park

http://www. synergiz. fr/fresh-kills-parc-ecologique-ou-site-pollue/

Greenwich Peninsula, Richard Rodgers, architect, Michel Desvigne / Christine Dalnoky, landscape architects:

The Greenwich Peninsula (Blackwall, Greenwich swamps, Bugsp swamps, North Greenwhich and East Greenwich) is an East London neighborhood in England, North-East of the actual Greenwich neighborhood. The Peninsula is hugged on three sides by the Thames.

In the XVIth century, the Peninsula was dried off and used as cattlegrounds. The site was industrialized in the XIXth century, and produced gaz amongst other things. The gaz factories, electric plant and other industries closed down at the end of the Xxth century, and the site was reconverted. This series of closures left important lots vacant, their ground often polluted.

In 1997; the national agency for urban renewal English Parterships bought back 1,21km² of vacant land on the peninsula, to build transport, housing and commercial projects, plus a park along the Thames. The Millenial Dome was built, as well as new roads on the eastern side of the peninsula, giving way to new developments, bicycle routes and open art projects.

The planning proposal for the Peninsula included the growth of a million-tree forest, which was realized in part.

http://isites. harvard. edu/fs/docs/icb. topic892112. files/Greenwich%20Peninsula/Greenwich%20Peninsula_%20Desvigne%20-%20Dalnoky. pdf

http://www. greenwichpeninsula. co. uk/

http://books. google. fr/books?id=tMt_-0zZL4YC&pg=PA148&lpg=PA148&dq=greenwich+desvigne&source=bl&ots=ir3RlddXFj&sig=Ht507WUaMdxjFcpGebHyHoJ5f5c&hl=fr&sa=X&ei=SQS_UbO2Fs29PaKagJgL&ved=0CFgQ6AEwBw#v=onepage&q=greenwich%20desvigne&f=false

Tel Aviv Hyria dumping grounds (Ariel Sharon park): Transforming the waste mountain near Tel Aviv into a park on the edge of the city. Peter Latz: «See from afar, Hiriya looks like a mystical mountain standing out on the flat aluvial plains of Avalon. Its fascinating silhouette must be kept intact, but its contents transformed, into a mediterranean park open to the public and centered around a water source as a symbol of nature. »

http://www. hiriya. co. il/len/apage/73293. php

http://www. latzundpartner. de/projects/detail/9

IBA, Emscher Park: The International Building and Architecture exposition at Emscher-Park drove a new life into the Ruhr, especially for the 17 cities and burroughs of the Emscher valley. The ten years between 1989 and 1999 have seen this desolate region reinventing itself through a series of varied natural projects. The 120 projects selected (out of 400 proposals) during IBA, as well as their implementation process, were collectively decided on the basis of strategic document «IBA Memorandum » .

http://www. iau-idf. fr/detail/etude/exposition-internationale-darchitecture-et-durbanisme-emscher-park. html

http://www. iau-idf. fr/fileadmin/Etudes/etude_653/memorandum_iba. pdf

http://www. dac. dk/en/dac-cities/sustainable-cities-2/all-cases/green-city/emscher-park-from-dereliction-to-scenic-landscapes/?bbredirect=true

Grünmetropol (green metropolis), Agence TER, landscape architects: on a 150km-long territory between Germany, Belgium and the Netherlands, there was need for a structure that would embody the political will to build a tri-national region. The project defines a homothetic geography of subterranean coal ressources, as the only social and symbolical value common to all three lands. The study perimeter was drawn within the exact borders of this invisible strata.

http://www. agenceter. com/frameset. php?lang=fr

http://www. studiostadtlandschaft. de/sites/projekte_urbandesign. htm

Europa City / Gonesse Triangle (Bjarke Ingels Group): the Gonesse Triangle is a controversial urban polarity including leisure, infrastructure, cultural structures and trade. The metropolitan forest was originally planned on that very site, but was put aside for reasons of closeness to the airport and superior quality of the soil.

The project is promoted by the Auchan group under supervision of the public planning authority for Plaine de France. It should come out of the ground around 2021-2022. Implanted in Gonesse municipality in the Val-d'Oise county, right by the A1 highway and close to the Paris Charles-de-Gaulle airport, Europa City is an integral part of the Greater Paris project. Over 80 hectares, the site should offer:
– A large, 500-store mall

– A funpark and a waterpark
– A snowpark
– A perennial circus and a show venue
– A dozen hotels
– A cultural exposition center,
– and a Congress center.

http://www. europacity. com/AuCoeurDuGrandParis/LeTriangleDeGonesse. sls

http://www. lemonde. fr/planete/article/2013/03/26/europa-city-ou-l-art-de-construire-des-pistes-de-ski-en-banlieue-parisienne_1851319_3244. html

cœur Vert (green heart) project by the Chanteloup river: The agglomeration 2 Rives de Seine is working to maintain a preserved green lung over 150 hectares in La Boucle, Chanteloup les Vignes. Non-food-related agrculture is currently being tried out. Their goal is to develop a new type of agriculture, based on agro-materials and energy-related crops.

http://www. agglo2rivesdeseine. fr/index. php/fre/Rayonnement-economique/Les-projets-de-developpement/Projet-Caeur-Vert

GENERAL LEXICON

Outfall: the place where a river, drain, or sewer empties into the sea, a river, or a lake.

Primary settling:The surface subsidence that manifests itself a few months after mineral extraction and that usually constitutes 60% to 90% of the total subsidence.

Sewage plant: Water collection and treatment process

Aqueduct: a bridge or viaduct carrying a waterway over a valley or other gap.

Siphon: An arrangement of closed pipes and valves to conduct water from one level to a lower level over an intervening ridge.

Entryways: Several small isolated buildings in the public space, or open spaces, of varied functions and status.

Through: Small canal meant for carrying water.

Bio-based materials: Bio-based materials include: recycled isolation like cellulose wadding or Métisse (isolation made of recycled cloth), materials from animal and vegetal biomass. The most famous are wood, hay, hemp, cork, sheepwool. . .

Sewerage / Sanitation: Acting towards health. Sanitation includes waste-water and rain-water treatment. It can be shared (Sanitation Network) and/or based on more local techniques (Autonomous Sanitation / Alternative Techniques). Sanitation is the technical aspect of urban hydrology. It has at least two meanings. The first corresponds to action in the physical sphere and concerns all the equipment involved: networks, autonomous actions, treatment plants to transform waste- and rain-water from agglomerations. The second is more inclusive: all strategies used by city dwellers and city officials to offer answers to the issue of water networks in the urban environment, except for the production and distribution of drinking water.

Spreading: Can apply to two discrete techniques: waste-water or mud spreading .
- Water spreading

Organic purification technique whereby wastewater is spread over soil to benefit from its treatment properties.
- Mud spreading

Agricultural usage of the mud from water treatment plants. Can take different shapes:
- Built-up liquids (<10% dry content)
- Pasty (15 - 20% dry content),
- Firm (30 - 50% dry content),
- Granular (65 - 90% dry content).

Mud spreading can be interesting for agriculture as the spreads contain quite large quantities of nitrogen, phosphorus and a little potassium.

Purification / Sewage Treatment: Purification is the step of a treatment process meant to turn waste-water from agglomerations into water compatible with the receiving ecosystem. It involves de-pollution, but not to the point of producing drinking water. Purification mostly concerns waste-water: for rain-waters, the term would rather be treatment of urban waste after rain. Purification can be upheld on a very local scale (individual or autonomous sanitation), semi-collective, or collective (most cases) at the outfall end of a sanitation network or through water treatment plants. Purification usually calls for organic processes that reproduce, at a much faster rate, the purification effects of nature (see biodegratation). The treated urban waste usually stems from house outfalls, with a few industries hooked onto the network.

Open area: Non-built, neither waterproofed areas. Characterized by their living, potential-rich soil (which cannot be found in urban built space, activity zones or within infrastructures where the ground is forever waterproofed). «Open areas» cover all agricultural, wooden or natural zones, usually considered in a discrete way although they plan similar parts in the preservation of the territory. One of their main similarities is to fulfill mutliple functions (economic, environment- and society-related), to work based on multiple entities (areas) and along multiple links (rural or forest networks, access to structural equipments llike silos and sawmills, ecological corridors. . .). This structure is the basis of the system and their guarantee of longevity. They are rarely acknowledged in planning documents and processes.

Forest: a large area covered chiefly with trees and undergrowth.

Heathland: Heatland (sometimes Dorne or Dornes in Northern France) is an area of open uncultivated land, typically on acid sandy soil, with characteristic vegetation of heather, gorse, and coarse grasses. Trees such as Pine Trees have been planted there by man or have spontaneously followed the extermination of large and small herbivores.

Woods: for leisure: urban or suburban public park planned for city dwellers' leisure, OR smal-sized forest.

Seeding forest: Growth of hard- and soft-woods born of natural reproduction or sows, with a typically bare trunk.

Fringes: the outer, marginal, or extreme part of an area, group, or sphere of activity.

Browsing line: limit of a forest or other vegetal formation.

LEXICON: INSTITUTIONNAL ACRONYMS

French institutions feed a forest of acronyms in which it is quite easy to get lost, even for natives of the abbreviation jungle. Beneath, you will find a list of those most used in this document. Others may be found. . .

Loi SRU: law n°2000-1208 from December 13th, 2000, on solidarity and urban renewal, commonly called loi SRU or loi Gayssot. This text deeply modified building and housing laws in France. It was published in the Official Journal on December 14th, 2000. The most famous article is n°55, which makes it mandatory for cities to hold at least 20% social housing.
The law was built on three pillars:
– mandatory solidarity
– sustainable development
– reinforced democracy and decentralization.
It includes, for example, notions about environmental protection and urban planning for the general good (with sustainable development in mind).

The impact of SRU was felt in five domains:
1. Building law
   – Direction sheets (SD) replaced by Territorial Coherence sheets (SCOT)
   – Land occupation plans (POS) replaced by Local planning sheets (PLU)
   – Zonal planning sheets (PAZ) eliminated to put down the notion that activity zones could develop according to different rules than stated in local urbanism documents
2. Social mixity, as it makes it mandatory for cities to hold at least 20% social housing if larger than 3. 500 inhabitants (1. 500 in the Ile-de-France region) and included in an agglomeration
3. Transportation, with a will to curb the car «invasion» in zones well serviced by public transport. Measures included the reduction of parking space for malls and movie complexes.
4. Social housing institutions (HLM, OPAC. . .) saw their functions extended and redefined
5. Civil law: the owner has to provide decent housing in the case of condominium and housing contracts.

SCOT (Territorial Coherence Sheet): SCOT is a tool for conception and implementation of inter-municipality planification, that frames territorial evolution and pushes towards sustainable planning and development. SCOT is meant as a reference framework for varied local policies, especially those dealing with housing, mobility, commercial development, ecology, and spatial organization. It provides coherence between projects as well as coherence between inter-municipality and sectorial documents (PLH, PDU), local planning sheets (PLU), and municipal tools.

SCOT must abide by the principles of sustainable development: balance between urban renewal, supervised urban growth, supervised rural growth, and preservation of nature and landscape; upholding functional diversity and social mixity in the urban cloth; environmental preservation.

PLU (Local Planning Sheet): Meant to offer a simpler definition of plot planning than the Ground Occupation Plan (PLO). PLU has replaced POS since SRU law was voted in Parliament on December 13st, 2000. It puts down rules relative to the aspect of new construction, to zones of mandatory preservation, to building reserves, etc. PLU must and should present in a simple way the global urbanistic vision guiding the municipal projects, relative to the evolution of the agglomeration. There is one per municipality.

SDRIF (Direction Sheet for Ile-de-France Region): a document for territorial and urban planning that defines a regional politic in Ile-de-France. It is meant to supervise and control urban and population growth, as well as keep spatial usage in check, and meanwhile guarantee international attraction to the region. SDRIF suggests ways to:
– compensate for spatial, social and economic disparity in the region
– harmonize transportation offers
– protect rural and natural areas.
Nota Bene: Ile-de-France is the ony region for which the SRU law of 2000 authorized a regional, not local, planning policy.

CDT (Territorial Development Contract): Contract between the State (as represented by the regional Prefect) and the municipalities, meant to keep territorial development in check around the new stations on the Greater Paris public transit network. The CDT is a new type of document which, on a given area, upholds the aims of urban planning, transportation, solidarity, economic and cultural development, and finally environmental protection.

AIGP: (International Workshop for the Greater Paris): Pluti-actor group where the State and the public authorities at all scale come together to organize debates, studies, initiatives and proposals on the urban issues at stake in the Greater Paris region. Meant to prolong, valorize and develop the ideas collected during the international consultation of 2008 on «Greater Paris and the Paris agglomeration » . The scientific council of AIGP includes teams of architects and urban planners that participated in the aforementionned consultation.

Conseil Général: Decision-making council in a county. Made up of Conseillers Généraux (concillors) elected for six years, it is renewed by half every three years. Abbreviated «CG » , as in «CG 95» for the Conseil Général of Val-d'Oise county, «CG 77» for the Seine-et-Marne county.

IAURP: Planning and Urbanism Institute for the Paris region / Ile-de-France region (also IAU, IAURIF).

DOCUMENTATION ADDENDA

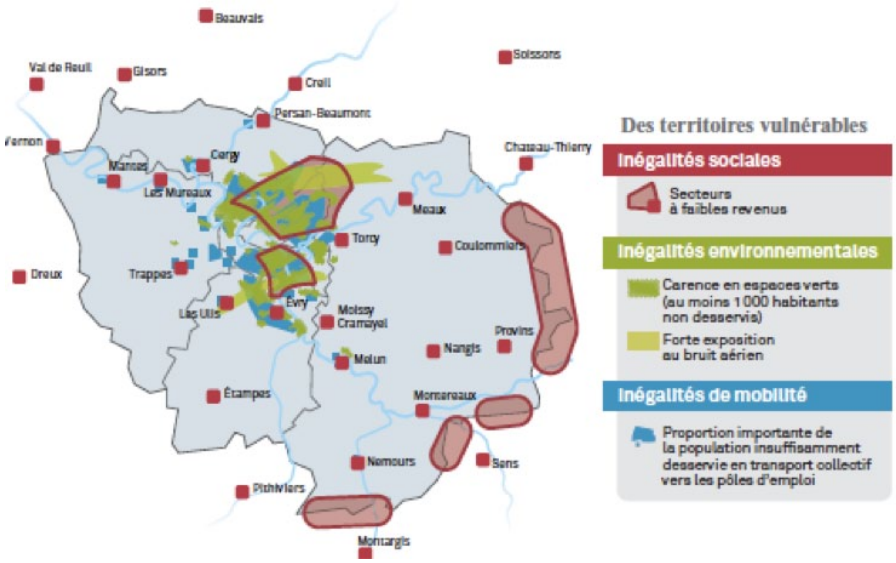
1) THE SDRIF

1. Lowering territorial, social and environmental disparities for greater solidarity in Ile-de-France region

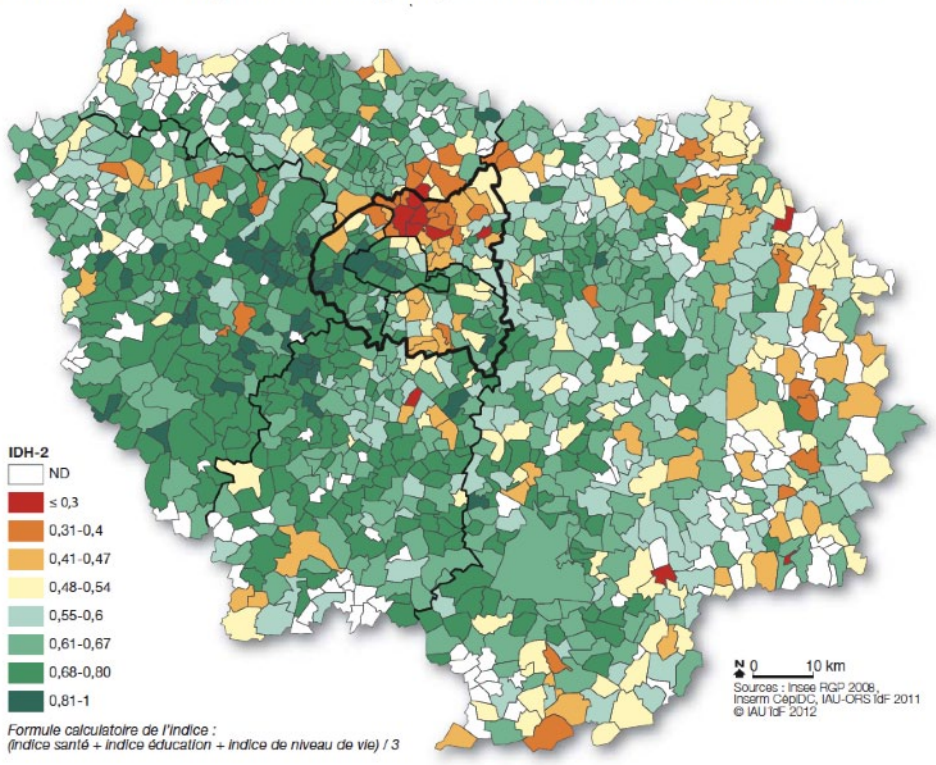
- Maintain dynamic population growth by curbing the migration deficit (compared to the French average), and keeping up the diverse and cosmopolitan (international attraction) identity of the region. Before 2030, the regional population should increase by 800. 000 to 1. 800. 000 inhabitans. This growth will mostly stem from over-65year old inhabitants of the Paris agglomeration.

- For years, the territorial and social chasms have grown wider, in the wake of greater poverty (from 7,2% in the Yvelines to 21,6% in Seine-Saint-Denis). This chasm is gaping between the growth in very high income in the West part of the region, while the poor tend to congregate in the West of Seine-Saint-Denis county, in the «New Cities» of the 60s and in medium-sized towns of rural territories. The rural areas are home to ever more vulnerable families. Finally, the eviction mechanisms for low-income families and middle-class families with kids have become more evident, pushing them towards the far periphery or out of the region. This massive trend both stems from, and solidifies, social and territorial disparities.

- The aforementionned phenomena raise the issue of equal access to housing and services. This issue can only be tackled by massive contruction, to double to current volume, especially for social housing, and foremost in those areas irrigated by public transit and services. Today, those are unevenly spread out over the



L'indicateur de développement humain (IDH-2) dans les communes d'Île-de-France en 2008



region, a situation that calls for correction. There needs to be huge improvement in the access to work and education.

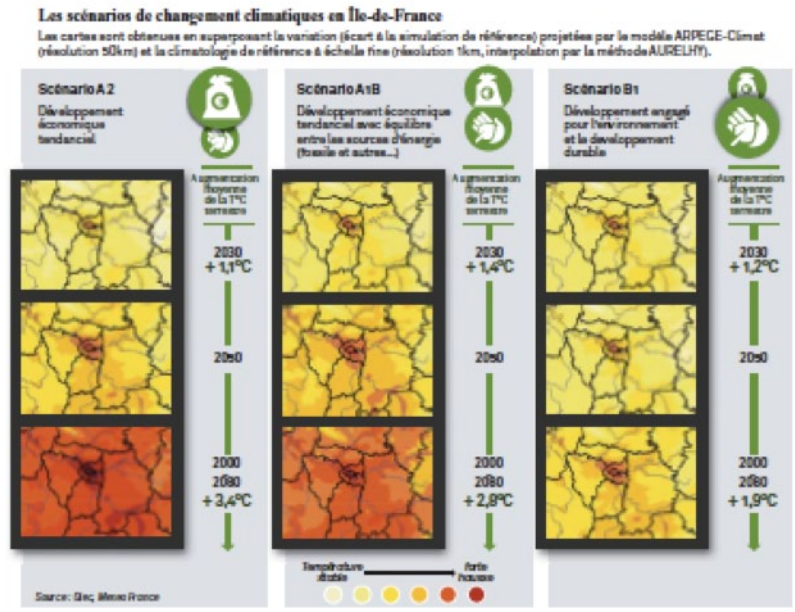
2. Promoting a spatial organization compatible with climate and energy changes, and anticipating ecological mutations

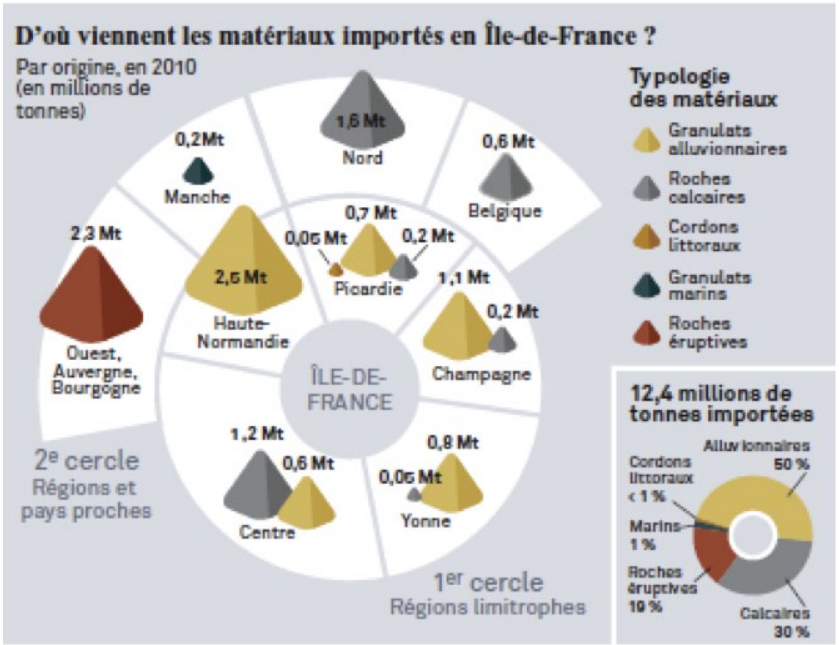
- Aim to divide greenhouse gaz emissions by 4 before 2050, and lead the energy transition are two main goals for the region. Compactness is a plus in the region but must be maintained, especially since Ile-de-France also has great weaknesses: high dependency on individual cars for mobility, current urban sprawl, lifestyles dependent on fossile fuels, and a 90% truck-based logistics system.

- Around 80% of the regional area is made up of natural, forest and agricultural land. These must be maintained and valorized. Maintained, for new evolution models in the region must break this habit of eating up agricultural land to the rhythm of 1. 900 hectares/year for the past twenty years. The fragile balance of the ecosystems poses a real threat to biodiversity, a threat made all the worse by the degradation of natural ressources in the region:
  - o chemical impregnation of the soil, water, air
  - o broken water cycle
  - o elimination of arable land
  - o air quality degradation
  - o higher demand in raw material for buildings and infrastructures.

- All these facts point to regional weaknesses that need to be tackled. The SDRIF makes the following recommendations:
  - o a more sober consumption of natural ressources. This concerns energy, raw materials, and food. Renewable energy sources are strongly encouraged.
  - o Acknowledging and preparing for climatic unknowns (heavy

Projection d'indicateurs climatiques : températures moyennes d'été aux horizons 2030, 2050 et 2080 selon trois scénarios du GIEC

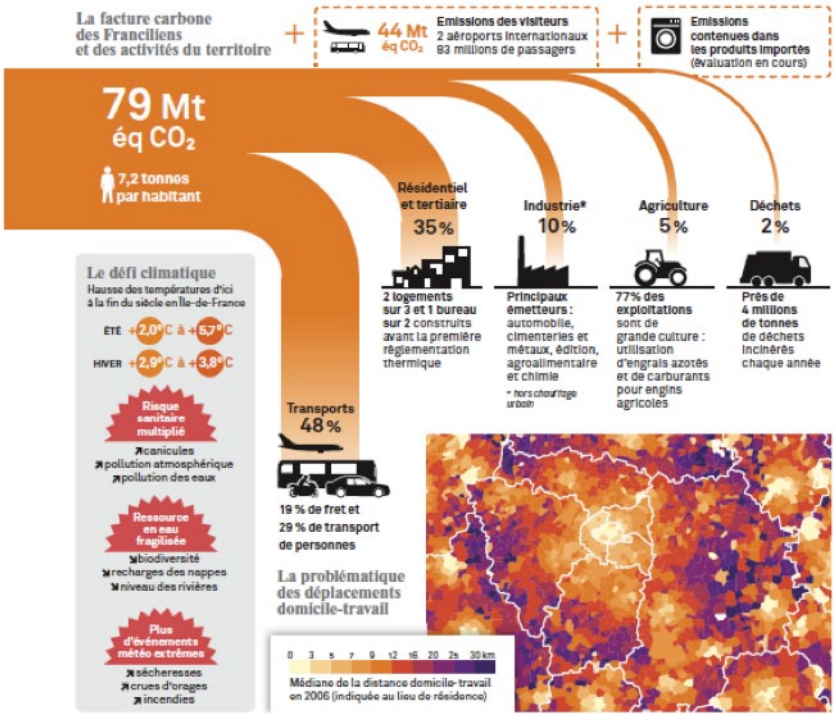


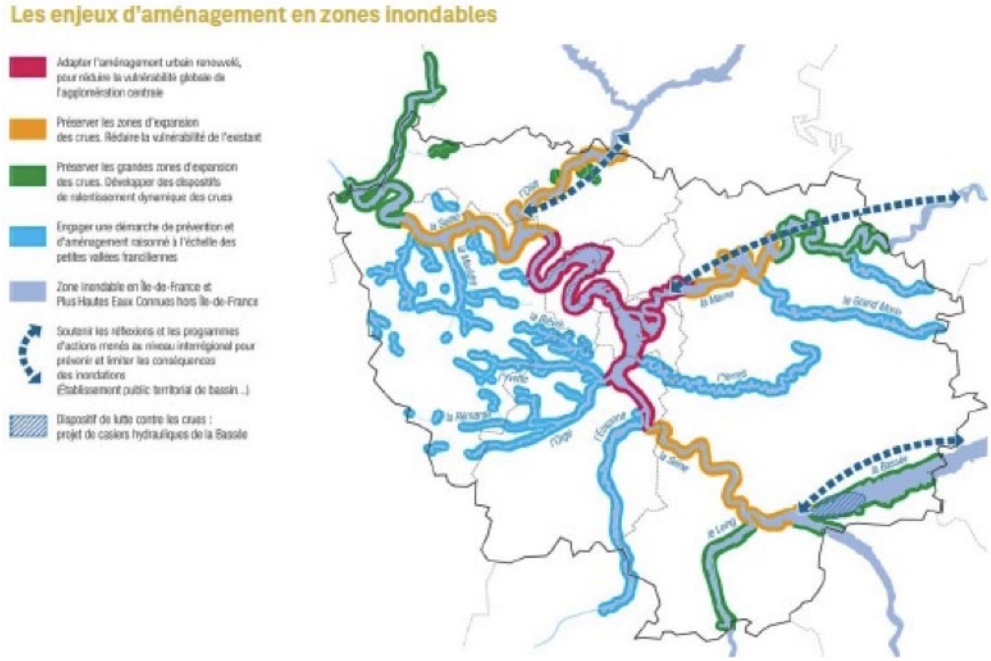


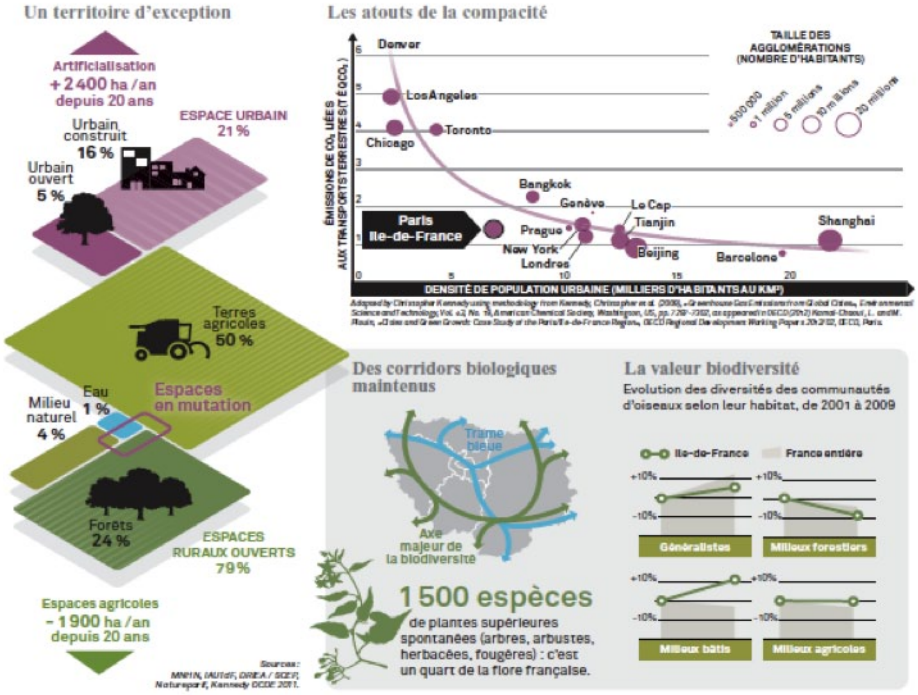
rains leading to floods and ground erosion, extreme heat leading to droughts). Rural and forest areas can play a role in that issue. They can also hold back the water-proofing of plots and encourage services and infrastructure to adapt.

o An intense, densified, green city that offers quality living conditions and generates external attraction for individuals and companies. The metropolitan region should become «more resilient. »

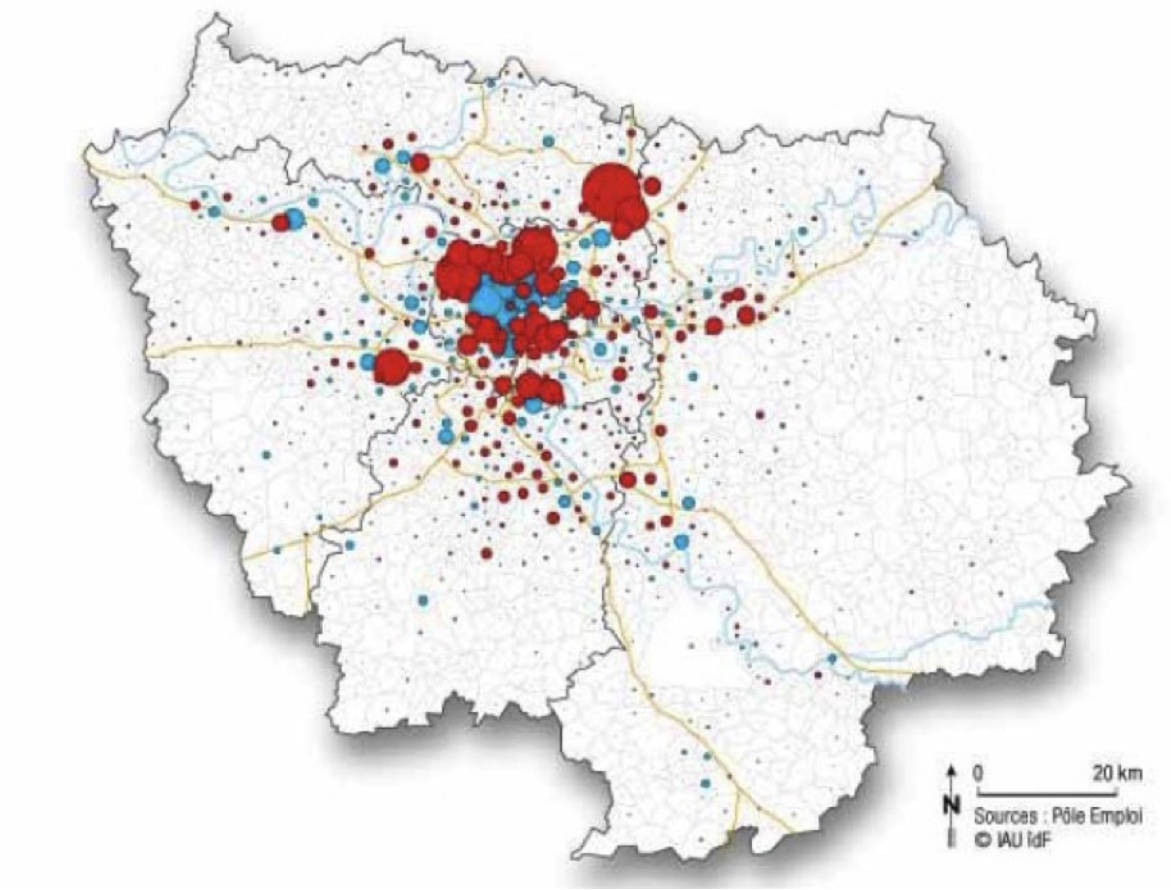
o Large-scale technical equipment for the essential workings of the metropolitan region.




Les enjeux d'aménagement en zones inondables
Adapter l'aménagement urbain renouvelé, pour réduire la vulnérabilité globale de l'agglomération centrale
Préserver les zones d'expansion des crues. Réduire la vulnérabilité de l'existant
Préserver les grandes zones d'expansion des crues. Développer des dispositifs de ralentissement dynamique des crues
Engager une démarche de prévention et d'aménagement raisonné à l'échelle des petites vallées franciliennes
Zone inondable en Île-de-France et Plus Hautes Eaux Connues hors Île-de-France
Soutenir les réflexions et les programmes d'actions menés au niveau interrégional pour prévenir et limiter les conséquences des inondations (Établissement public territorial de bassin...)
Dispositif de lutte contre les crues : projet de casiers hydrauliques de la Bassée


Un territoire d'exception
Artificialisation
+ 2 400 ha /an
depuis 20 ans
ESPACE URBAIN
21 %
Urbain construit
16 %
Urbain ouvert
5 %
Terres agricoles
50 %
Eau
1 %
Milieu naturel
4 %
Espaces en mutation
Forêts
24 %
ESPACES RURAUX OUVERTS
79 %
Espaces agricoles
- 1 900 ha /an
depuis 20 ans
Sources :
Les atouts de la compacité
TAILLE DES AGGLOMÉRATIONS (NOMBRE D'HABITANTS)
+500 000
1 million
5 millions
10 millions
20 millions
ÉMISSIONS DE CO2 LIÉES AUX TRANSPORTS (TEQ CO2)
DENSITÉ DE POPULATION URBAINE (MILLIERS D'HABITANTS AU KM²)
Denver
Los Angeles
Toronto
Chicago
Bangkok
Genève
Le Cap
Tianjin
Paris Île-de-France
Prague
New York
Londres
Beijing
Barcelone
Shanghai
Des corridors biologiques maintenus
Trame bleue
Axe majeur de la biodiversité
1 500 espèces
de plantes supérieures spontanées (arbres, arbustes, herbacées, fougères) : c'est un quart de la flore française.
La valeur biodiversité
Evolution des diversités des communautés d'oiseaux selon leur habitat, de 2001 à 2009
Île-de-France
France entière
+10%
-10%
Généralistes
Milieux forestiers
Milieux bâtis
Milieux agricoles

Emplois salariés du secteur privé : évolution entre 2000 et 2010



3. Encouraging employment, excellence in economy, and international attractiveness of the region, by working on regional potentials and by strenghtening mutations towards sustainable development and social economy.

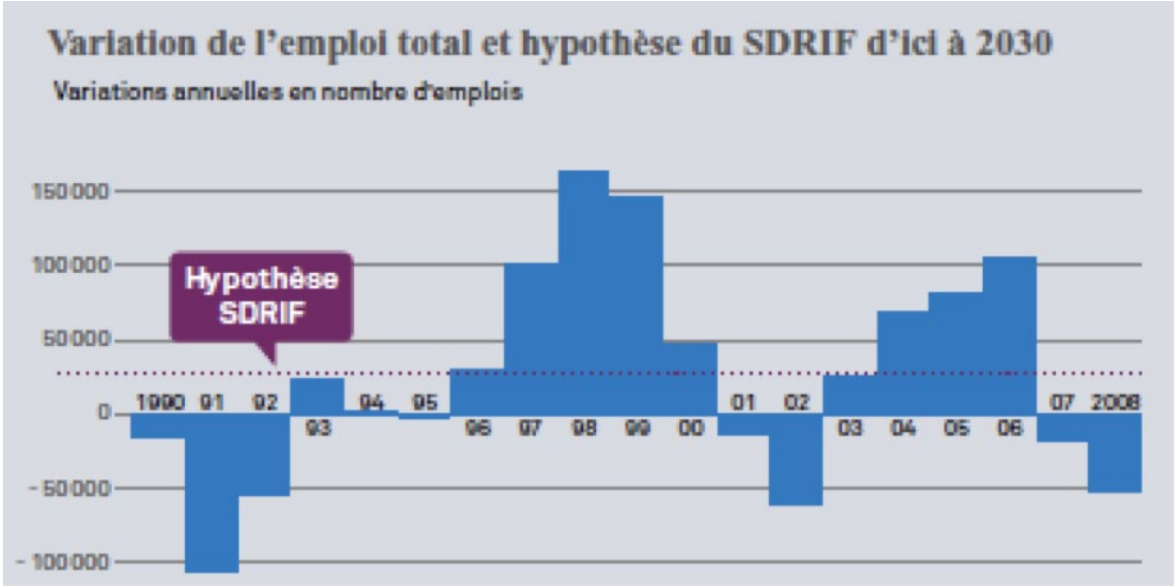
- Dynamism can maintain the international attractiveness of Ile-de-France region by:
  - o strenghtening its historical potential (market size, infrastructure and service quality, education, building offer) through intensive innovation and research effort;
  - o encouraging job create, despite the regional vulnerability to economic context. Goal: to create 28. 000 jobs per year, compared to the 25. 000/year average of these past 20 years.

- A more diverse economy and greater innovation could get the region over economic hurdles through:
  - o a more stable industrial chain, also within the densest urban parts, through sectors like the car and air-transport industry
  - o a stable spot as the first regional research center in Europe, as competitive polarities gain in power and knowledge/research networks connect the region with abroad.
  - o Support to the dynamic agricultural chains, not only for field crops (Ile de France currently exports cereal) but for a diverse range of agro-materials, wrappings, biomolecules. . . plus agro-industrial transformation industries and proximity sales. Feeding 11,5 million inhabitants is no small challenge.

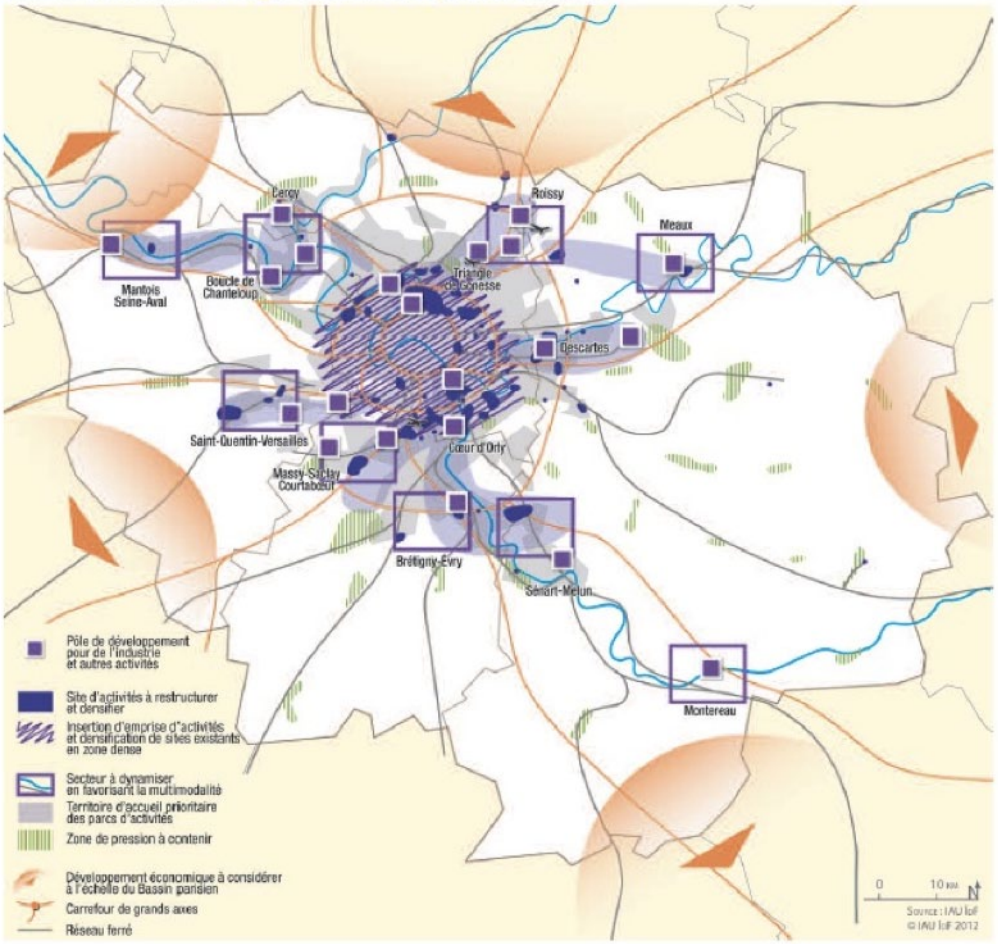
- Kick-start the transition towards a more sustainable economical model. This implies composing with both metropolitan growth and globalization to develop a diverse, spatially grounded economy.

- Economical dynamics in the territories should be balanced through:
  - o Better equilibrium between housing and employment, by fighting the historical disparities, by leaving no territory behind, by better answering «the growing demand for numerous and quality housing, for mobility offers and easier access to jobs in a spatial sense » . Access to education and training, in all its variety, is also a challenge.
  - o Maximizing the leading power of local employment centers, by comforting the rôle of the main economic centers, linking them in a network, but also by helping new local centers to emerge on the periphery. This should come hand in hand with the diversification of value-added activity and the mixity of urban functions.
  - o Conceiving the regional economy at the scale of Bassin Parisien, both for specialized production (many dynamic centers cross regional borders) and for large logistics route on the European corridors.

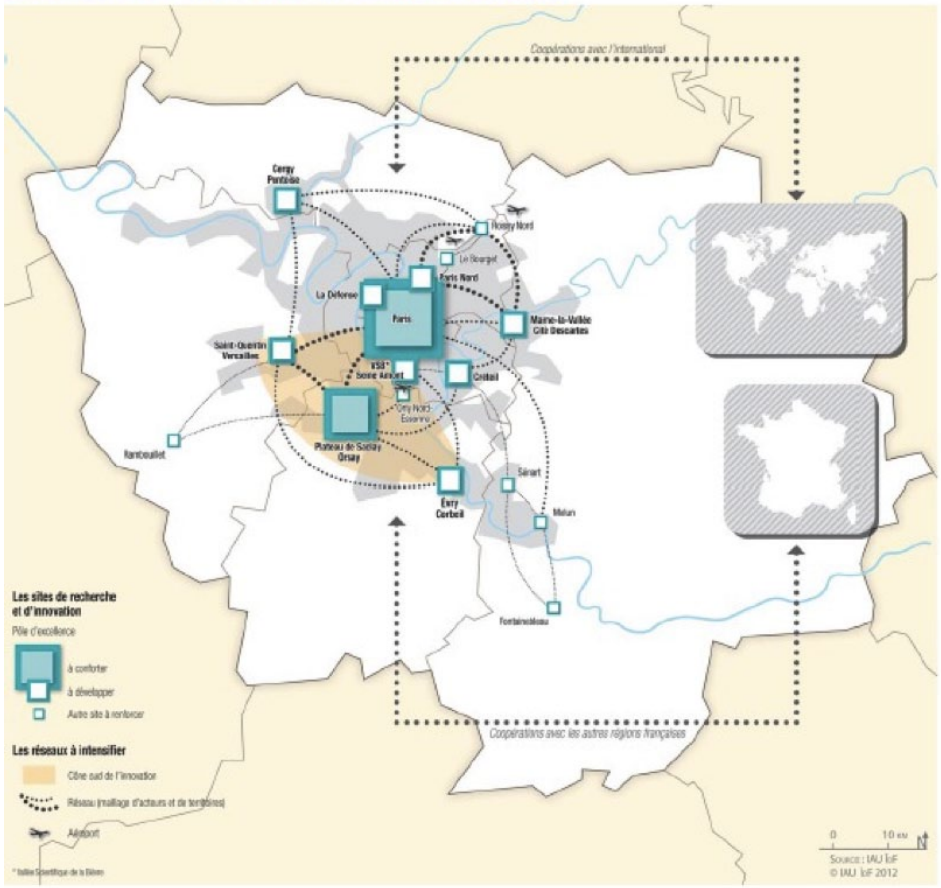
- Encouraging digital evolution by extending fiber optic to the whole region. This would guarantee innovation, growth and sustainable development through the multiplication of virtual uses and services, of knowledge and production networks.

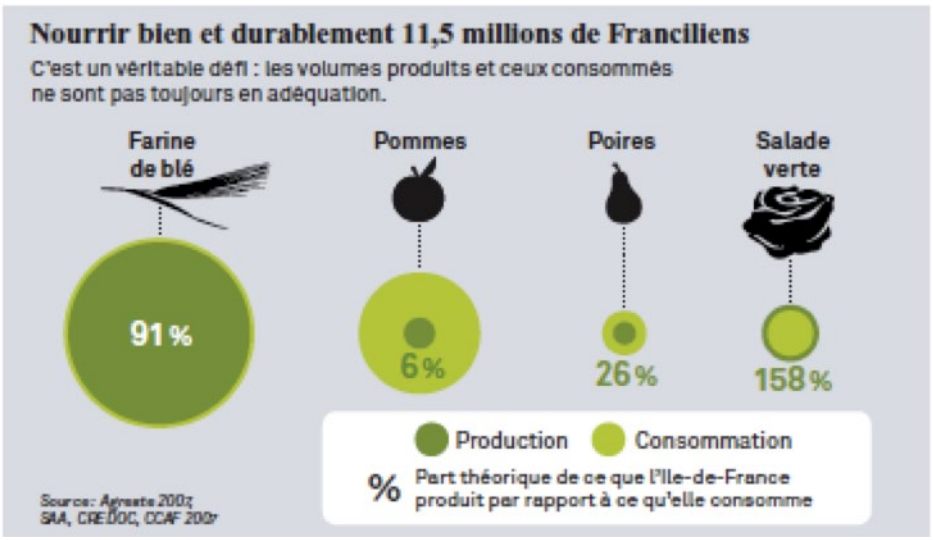


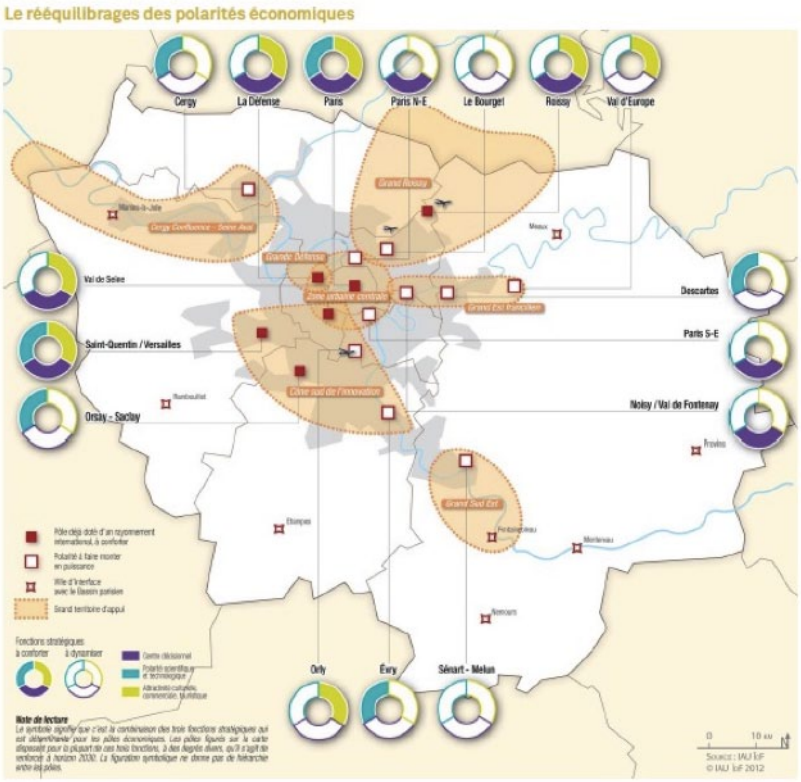
Renouveler, densifier et organiser l'offre d'espaces d'activités

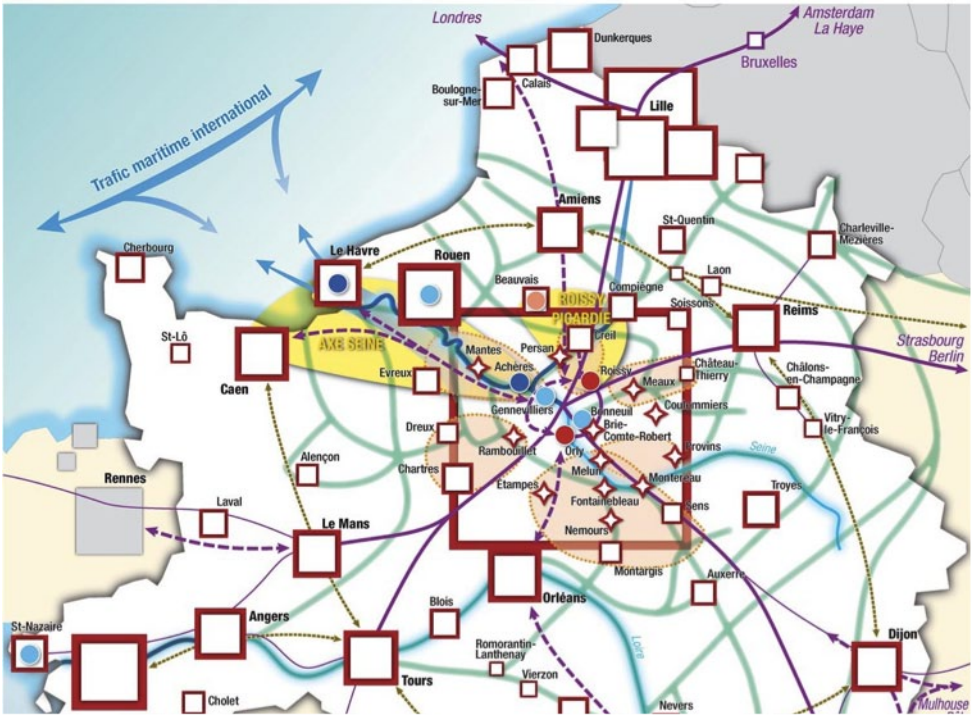


La recherche et l'innovation en Île-de-France à l'horizon 2030






Le rééquilibrages des polarités économiques
Cergy
La Défense
Paris
Paris N-E
Le Bourget
Roissy
Val d'Europe
Vallée de la Seine
Saint-Quentin / Versailles
Orsay - Saclay
Descartes
Paris S-E
Noisy / Val de Fontenay
Orly
Evry
Sénart - Melun


Londres
Amsterdam
La Haye
Bruxelles
Dunkerques
Calais
Boulogne-sur-Mer
Lille
Trafic maritime international
Amiens
St-Quentin
Charleville-Mézières
Cherbourg
Le Havre
Rouen
Beauvais
Compiègne
Laon
Soissons
Reims
ROISSY PICARDIE
Creil
St-Lô
AXE SEINE
Mantes
Persan
Achères
Evreux
Caen
Strasbourg
Berlin
Château-Thierry
Châlons-en-Champagne
Meaux
Coulommiers
Gennevilliers
Bonneuil
Brie-Comte-Robert
Vitry-le-François
Dreux
Rambouillet
Orly
Provins
Seine
Alençon
Chartres
Melun
Montereau
Rennes
Etampes
Troyes
Laval
Fontainebleau
Sens
Le Mans
Nemours
Montargis
Auxerre
Orléans
Blois
St-Nazaire
Angers
Romorantin-Lanthenay
Dijon
Loire
Tours
Vierzon
Cholet
Nevers
Mulhouse

This vision is embodied in the project for regional space, the three cornerstones of which are:

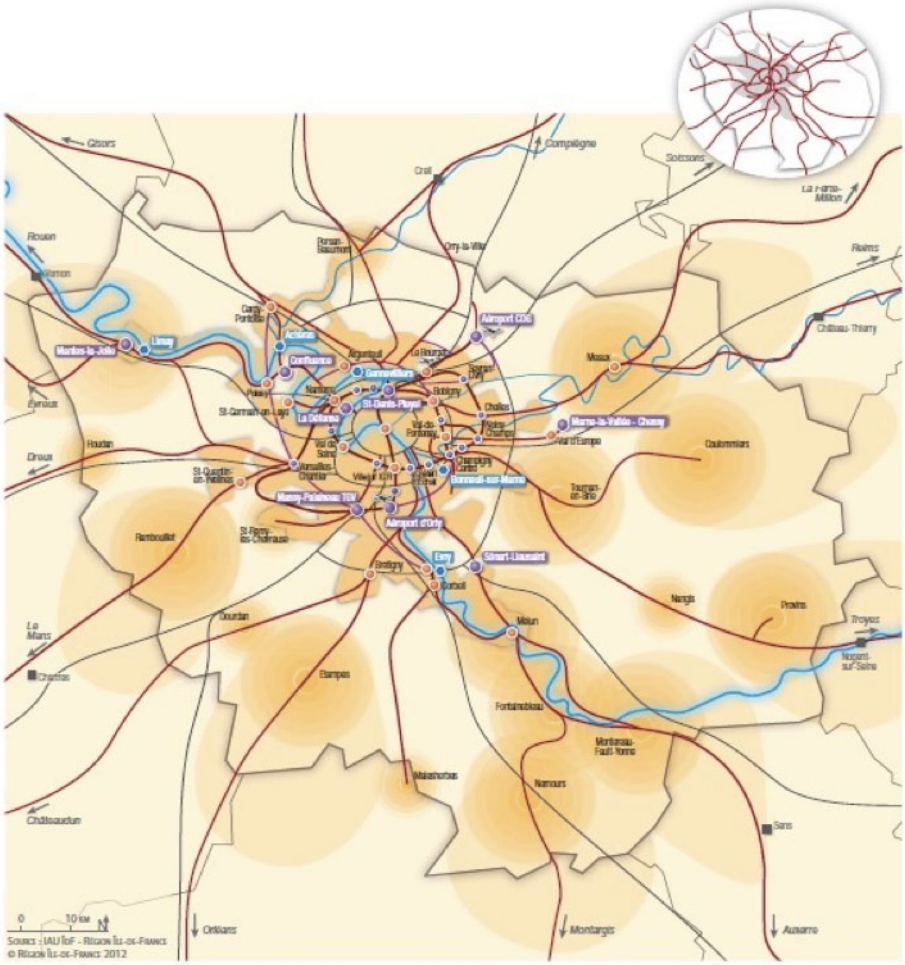
1. Link and structure to build a more connected, more sustainable region

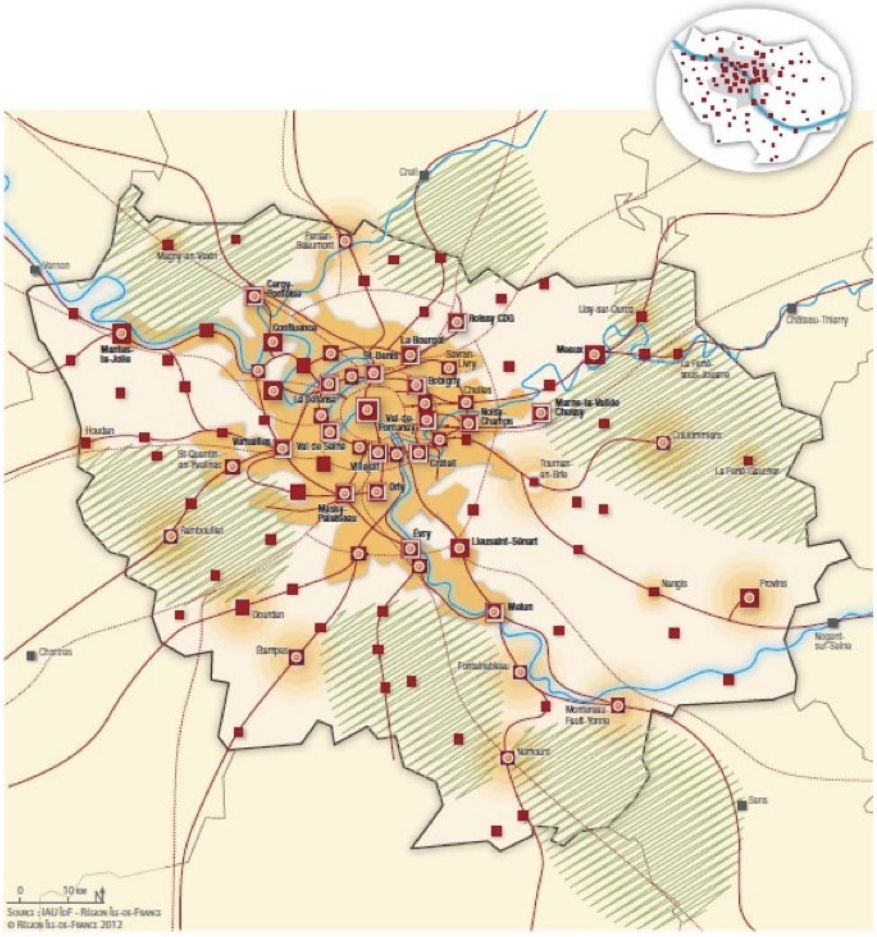
- More open to national and international inputs
- A better woven multi-level transit system
- Optimal local mobility
- Widespread digital access

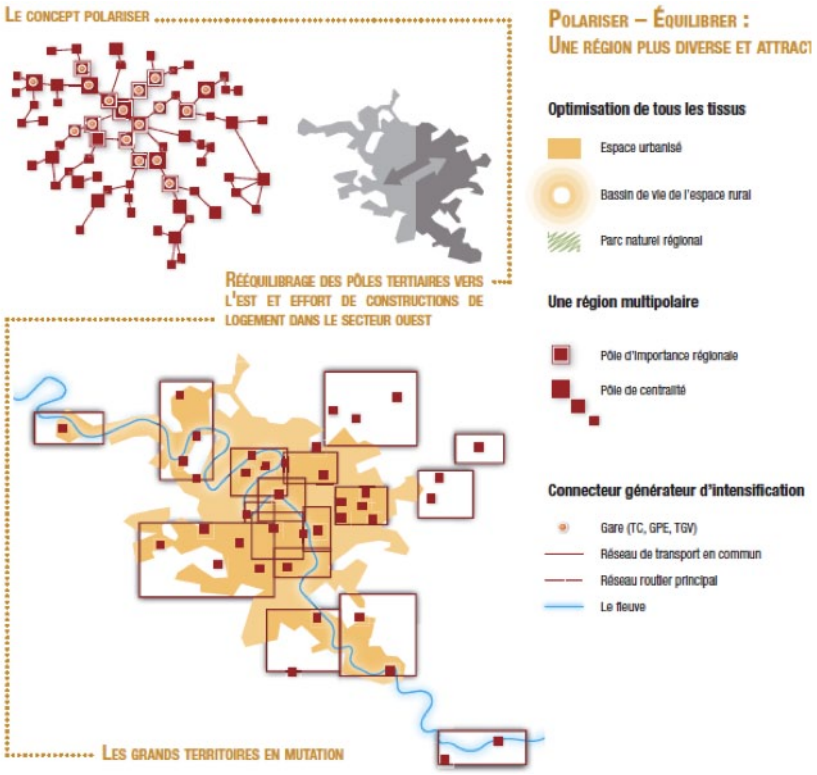
The Pierrelaye-Bessancourt Plain is only impacted by a single infrastructure proposal: the extension of A104 highway («The 3rd Ring »)

2. Polarize and balance to build a more diverse, vibrant and attractive region

- Better balance between several large living areas
- Stronger working poly-centrism, especially around regional train stations and the Greater Paris express transit network
- Encourage employment in the whole territory with an aim of economic diversification
- More compact urban weft for better and stronger mixity

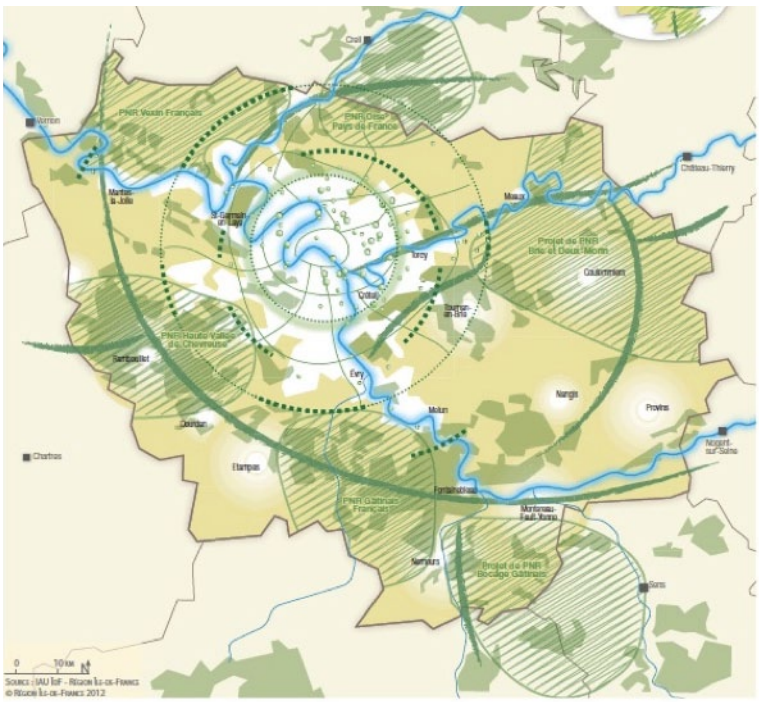



Optimisation de tous les tissus
Espace urbanisé
Bassin de vie nouvelle campagne
Parc Naturel Régional
Connecteur générateur d'intensification
Gare (TC, GPE, TGV)
Réseau de transport en commun
Réseau routier principal
Le fleuve

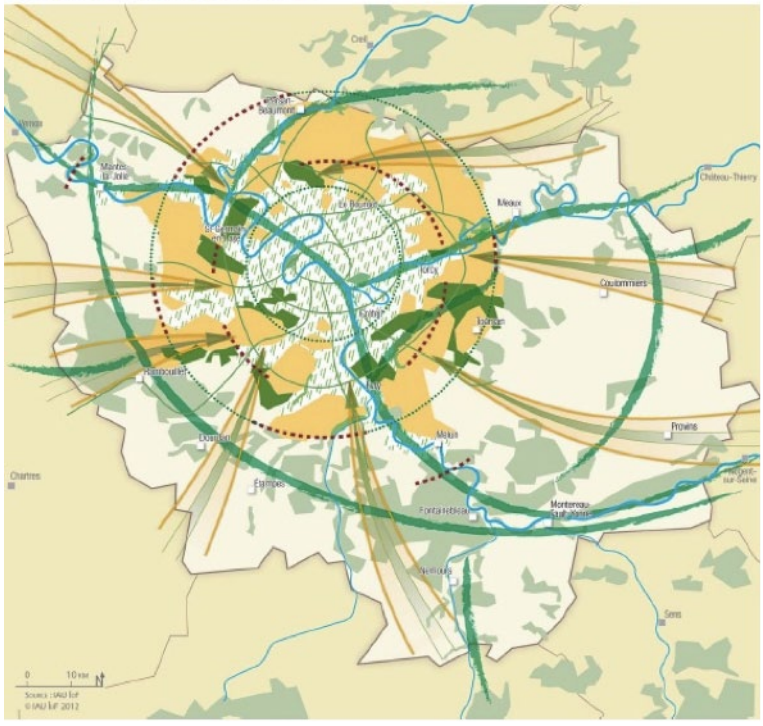

Le concept polariser
Rééquilibrage des pôles tertiaires vers l'est et effort de constructions de logement dans le secteur ouest
Les grands territoires en mutation
Polariser – Équilibrer :
Une région plus diverse et attract
Optimisation de tous les tissus
Espace urbanisé
Bassin de vie de l'espace rural
Parc naturel régional
Une région multipolaire
Pôle d'importance régionale
Pôle de centralité
Connecteur générateur d'intensification
Gare (TC, GPE, TGV)
Réseau de transport en commun
Réseau routier principal
Le fleuve

3. Protect and valorize to build a more vibrant, greener region

- New relations between city and country
- Valorize the open space in a regional system
- Work on ecological continuities and urban fringes in order to limit the cities' extension.



Le Système régional des espaces ouverts



The project to define space in 2030 Ile-de-France aims to tackle three main challenges, in order to put an end to the dichotomy between center and periphery, to limit territorial competition, and to encourage complementarity.

1. Give structure to the heart of the metropolis, seen as key player for developing the region

- Encourage cooperative movements between the capital and its neighboring territories
- Use public transit for better access
- Strike a new balance of living areas around dynamic centers
- Aim for compactness of the urban area, and intensity of the natural one through green and blue weaves

2. Maintain the strong polarities between the heart of he metropolis and the rural surroundings

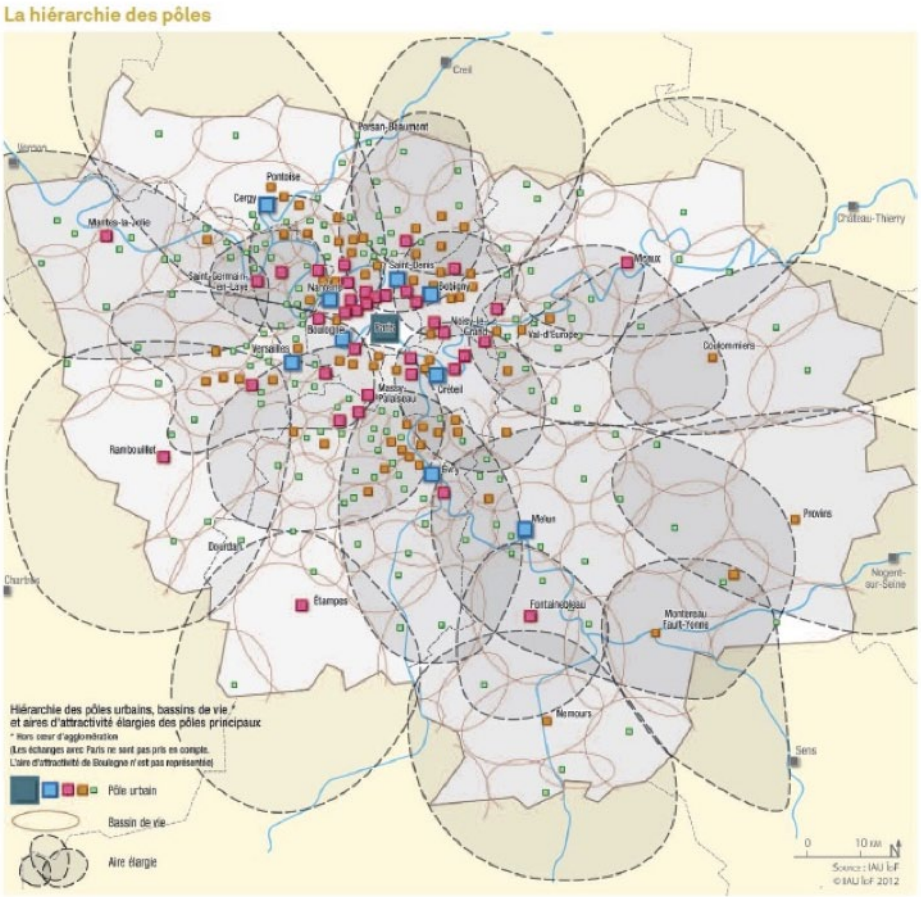
- Use public transport for better access to both poles
- Imagine new urban shapes on the city/country interface

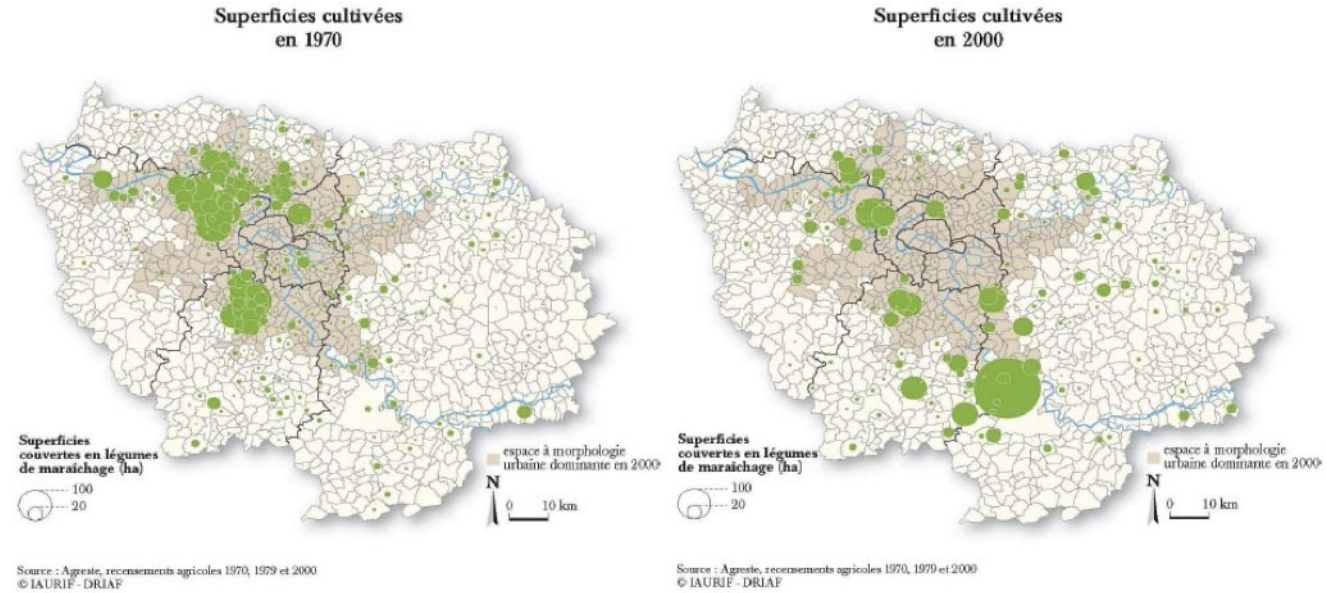
3. Unveil the metropolitan value of rural territories

- Strenghten the central cities as heart of living areas
- Urban growth should first and foremost follow the railway development
- Aim for urban density along the rail networks
- Keep hamlet, village and town growth in check; encourage growth of cities
- Give value to all functions of the rural space
- Anticipate the change in agricultural and agro-industrial chains of production

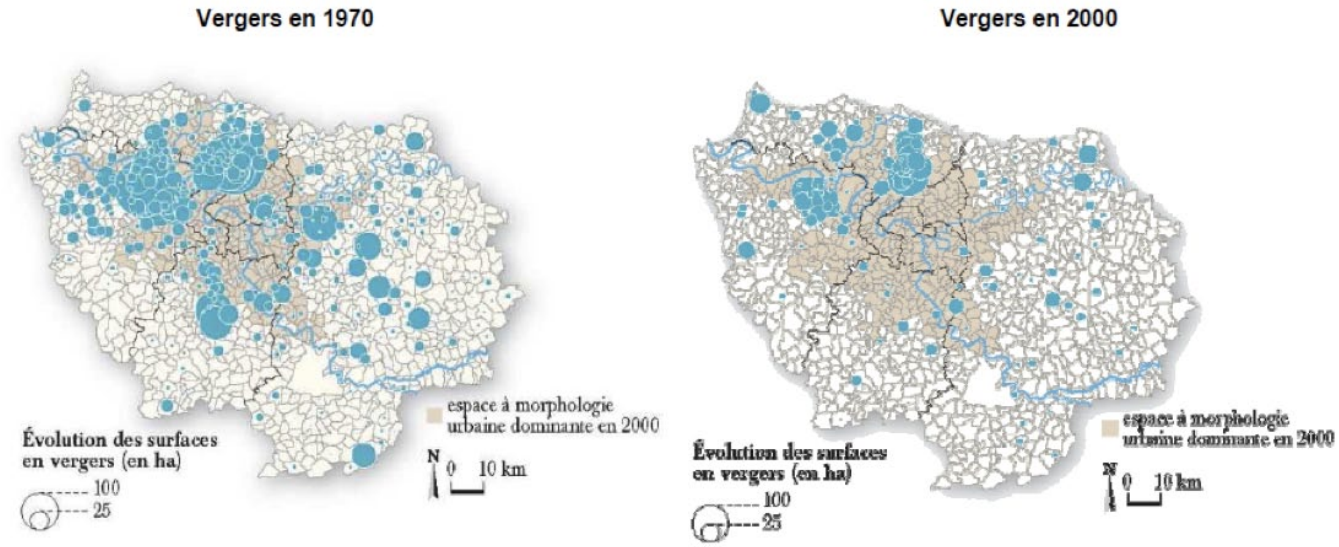
4. The river network should federate regional planning by:

- Valorizing the natural dynamism and trade protential of the river
- Open cities to the river, whilst protecting the latter's ecological and landscape functions

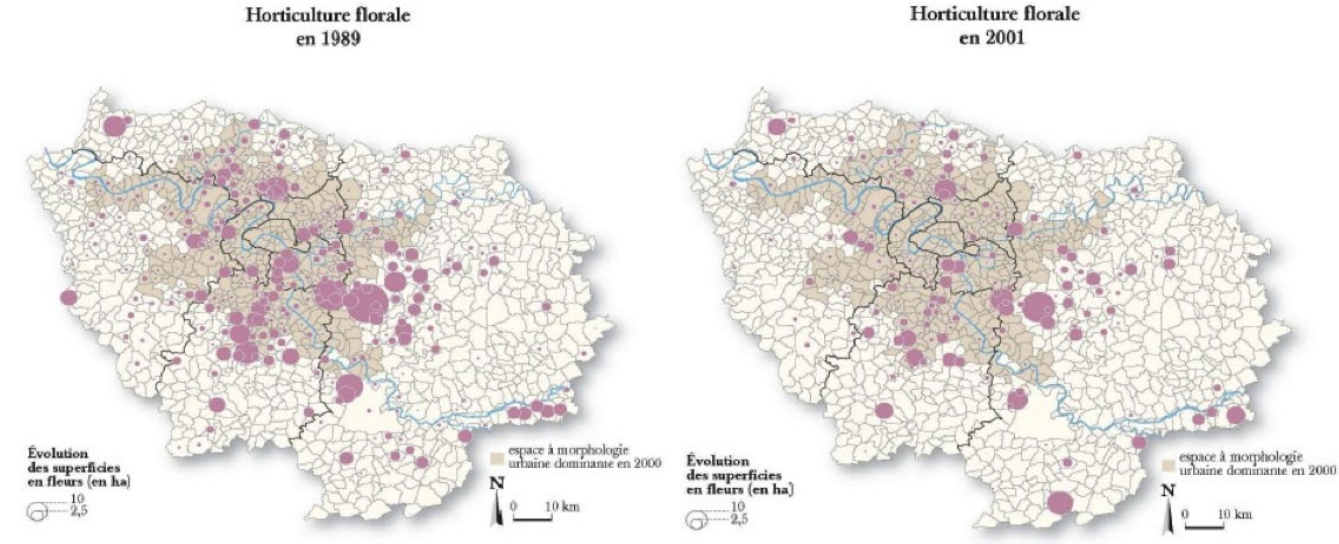




52, 53. Map of cultivated areas (market gardening)(IAU-DRIAF)



54. Map of cultivated areas (orchards) (IAU-DRIAF)



55. Map of cultivated areas (flower horticulture)(IAU-DRIAF)

1. Market gardening and orchards (52, 53, 54):

- Ile-de-France region annually produces 15% (137. 000 tons/year) of the regional demand in fruit and vegetables (905. 000 tons/year)
- Market gardening is only upheld by 84 farms in Ile-de-France (down 64% from 2000), over 1. 400 hectares (down 48% from 2000). Biggest produce are parsley, radishes, salads, white onions and watercress.
- Orchards: 61 farms (down 36% from 2000) over 900 hectares (down 9% from 2000). Regional orchards are mostly made up of (table) apple trees and pear trees. Farms output is varied (products include fruit juice) and innovative (wrapped cut-up apples)

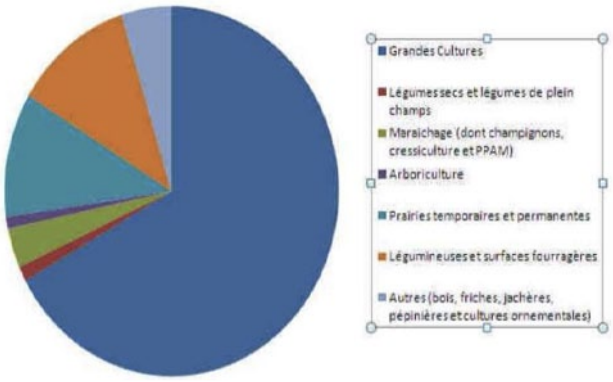
2. Horticulture and plant nurseries

254 companies (down 44% from 2000) over 3. 000 hectares (down 13% from 2000). Ile-de-France is the second region for potted plant production, and the 4th for plant nurseries. Experts predict the following evolutions for those four activities:
- Progressive disappearance of the market and flower gardening sector around Paris
- Bloom of new, higher-value markets such as direct sale to the consumers, restauration, transformation. . .
- Opportunities for better produce identification («taste guarantee» Ile-de-France, regional brand products. . . .)
- Growing logistics issues
- Mandatory restructuration of the production chain in order to guarantee stable outputs and growing production
- Possibly, interest in conforming to environmental standards (crop rotation. . .)

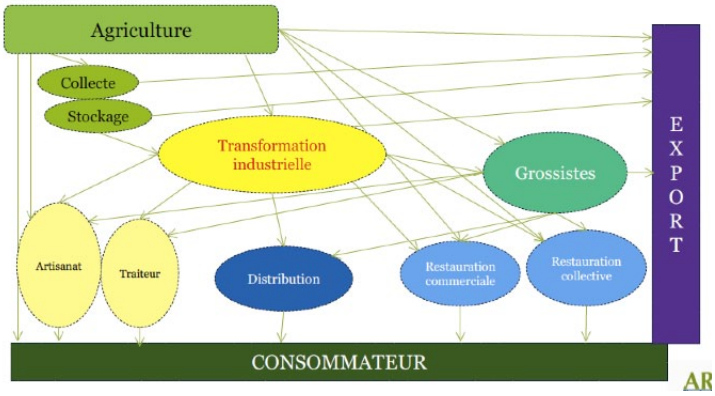
3. 3. Organic farming

Though it receives subsidies from the region and the State, represents only around 3% of regional farming (56).

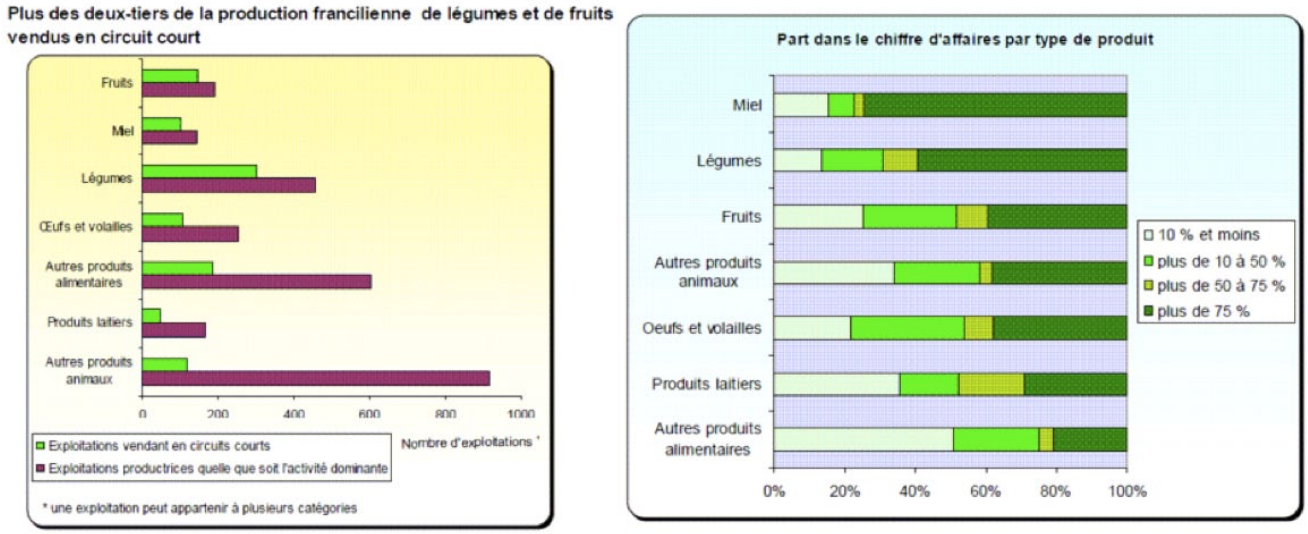
We have witnessed some dynamism since 2000, as the following numbers for surface of cultivated plots reveal:
– +55% for large field crops
– +98% for garden crops
– +82% for orchards



56. Weight of organic farming within regional Ile-de-France farming



57. Definition of a food chain(ARIA IDF)



58. Production chain and food produce typology as part of revenue (agriculture. gouv)

This growth corresponds to a modest – as of now – development of production chains for organic farming (57)

Direct sale to the consumer concerns less than 4% of products sold. Commercializing through short circuits works for 15% of regional farms, through:
– In-farm sales (49%)
– Markets (27%)
– Group sales point or «basket» sales handled by, amongst others, AMAP associations for the protection of small-scale farming.

More than half of Ile-de-France farms producing either honey, fruit or vegetable get more than 50% of their revenue through proximity circuits.

4-Growing non-food-related crops

- Hemp

Assets:
• Hemp is a good crop rotation leader
• It needs neither phytosanitary treatment nor irrigation, due to its deep roots (exception: on sowing)
• Downsides: highly controlled production which needs specific tools
Major hemp products are hempseed, fibers (often use as isolation in buildings), hempsap (used as an absorbtion material , mulch, or mixed in conrete or cover solutions).

- Miscanthus

Assets:
• No need of phytosanitary treatment (exception: on sowing)
• It sustains up to 20 years and produces biomass in high quantities (15 to 20 tons/year), while stabilizing ground pollution
• It can be reaped with non-specific tools in the autumn, when dry

The largest drawback is that miscanthus cultures might call for irrigation. Major miscanthus products are biomass for energy (in competition with wood biomass), litter (good absorbtion) and flower mulch. Researcg centers are currently studying new uses of miscanthus, like vegetal plastics or agro-materials for construction.

- Flax

Flax demandes very little water, fertilizers or phytosanitary extras. It is highly productive. The rod (fibers) is used for cloth fabrication (mostly for clothing). Flaxseed is either destined to human alimentation (rich in Omega 3) and animal fodder (especially for horses), as well as oil production (for paints). The remains and the flaxdust are agglomerated into particle boards or mixed as mulch (for cattle or flowers).

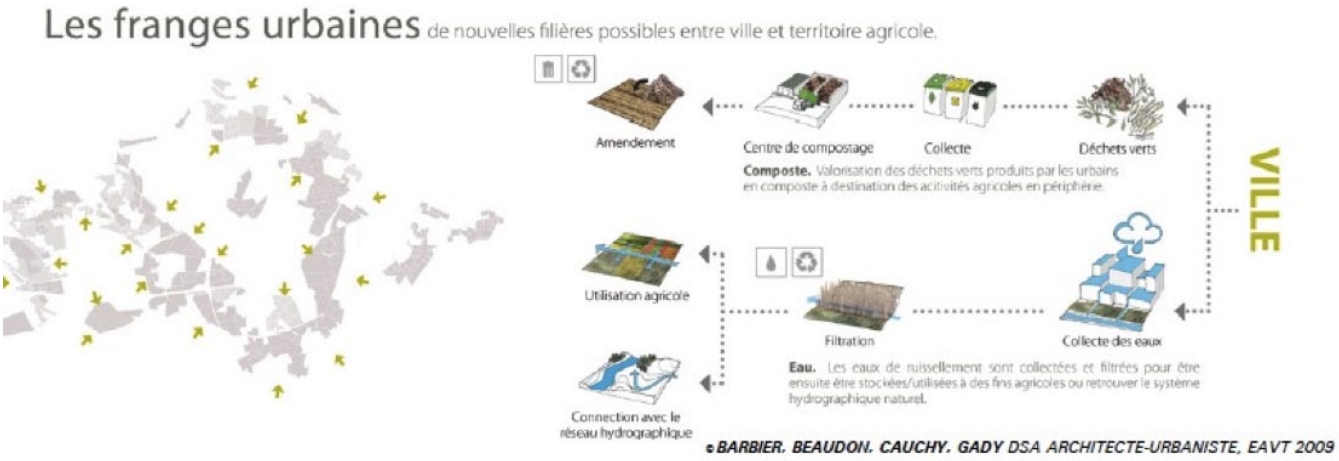
- Potential of agro-materials, energy crops and non-food-related produce

Construction is only a marginal outlet for regional agriculture today, though the market is growing. New technical uses of the crops are closely dependent on the competition and price of building materials. New possible outlets could include: car chassis, vegetal plastics, organic film. . . There are quite a number of building sites in Ile-de-France (green neighborhoods, low energy buildings. . .) that acknowledge the potential of agro-materials in building a strong production chain based on regional proximity networks.

In the whole region, support for the non-food-destined crops is evidenced by:
– Support for «in-field» tryouts of new non-fod crops (training, technical support, subsidies for specific tools. . .)
– Valorizing the «fourth-space » , vacant lots and polluted soil (esp. by trace metal elements) through non-food related crops (hemp, flax, miscanthus, crops for bioethanol, bio ester or green chemistry, biomass for heat production. . .)
– Subsidies for installing transformation units for non-food crops in the whole region (turning vegetal waste into combustible, fiber extraction for hemp, green chemistry, organic fuel. . .) and for structuring networks of biomass heat production.

4) TWO EXAMPLES OF URBAN FRINGE MANAGEMENT – FROM THE INTERNATIONAL CONSULTATION ON GREATER PARIS

- Groupe Descartes
- Ateliers Jean Nouvel- AREP- Jean-Marie Duthilleul – Michel Cantal-Dupart



Example: on the outskirts of the «New City» of Marne-la-Vallée

5) FOREST

- The current forest: diversified hardwoods

Forest in Ile-de-France is even denser in deciduous (hardwood) trees than the average French woods (90% of surface and volume)

Types of growth: coppice-forest mix or regular woods

Growths are generally made up of two or three main species:

- Coppice, formerly the main growth, was meant for wood production for heat and coal. Today, les than 10% of private forest surface is coppice.

- Coppice-Forest mix spawned from the old management technique of coppice-under-trees, which enabled both wood production for heat and high quality production for factories. This type of growth covers 46% of forest surface.

- Regular forest, where growths are mostly meant for factory production based on similar diameter trees (equial growths). A 1994 inventory estimates it covers 45% of surfaces.

- Irregular growth is a management process which concentrates homogeneous treatment on a sub-plot of a few hectares (the floor) or a few thousand ares (the bouquet). This is very little represented in the region (2%) but would benefit from wider growth, especially in the suburban forest.

Growth of the aging forest; aged forest of average quality

Total volume as stands is estimated to be around 43 million m3, or 2% of national volume. 54% of those m3 can be found in dedicated tree growths. It includes a notably high rate of good-sized trees, since trees of 50cm or more in diameter make up around 40% of total. However, there is a lack of first-rate wood for woodwork, with only 3% of volume compared to 51% for average quality and 46% for low quality (industry) wood. Global raw production is around 1,6 million m3 / year for the whole region, or 6,4m3/ hectare/year, slightly above national production average of 6,1m3/ hectare/year.

- Leisure in the Ile-de-France forests study by CREDOC 2000)

In the wake of city expansion, citizens with more free time and better access to mobility have turned to the forest as a «green lung» of the Paris agglomeration, visiting in millions every year. Visits are strongest from the neighborhing areas.

Numerous studies have been launched in Ile-de-France since the 1960s on the numbers of visitors to the forest . The largest and most complete was published by CREDOC in the year 2000.

- Eight out of ten inhabitants (of Ile-de-France region) enjoy being in the forest. Going to the woods remains at least as appreciated a type of leisure than it was thirty years ago for most people: 83% of inhabitants report «enjoying» or «loving» spending time in the forest. Enjoyment mostly stems from the sense of calm and

aesthetic value of the woods. Those disliking the forest mostly complain about cleanliness (33%) or crowds (27%).

- Almost half the inhabitants say they visit the forest rather often. In a year, 47% declare they «rather often» or «vert often» visit the forest. This is slightly less than the average French population. However, the number of visitors in the wooden parts of Ile-de-France has clearly been growing. Not only is there a steady enjoyment born of using the woods, but the frequency of usage has intensified. Only 1 out of 4 inhabitants has not been to the forest in a year. The worst obstacles to forest leisure are related to age, isolation and poverty – furthermore, cultural options are a frequent alternative for urban dwellers. Forest visitors that visit the woods for walking and pleasure use two different types of representation, that may complement each other: aesthetic value of the large forests the most famous of which are Rambouillet and Fontainebleau, and the comforting functionnality of «forest parks » .

- Two thirds of inhabitants report living close to a forest. Ile-de-France is a region well provided in forests: 67% of all inhabitants report living close to one (a few minutes from home). In the outer counties (Yvelines, Seine-et-Marne, Val-d'Oise, this is closer to 90%. The closer the forest, the more frequent their visits. However, proximity is not enough to create desire for sylvic leisure. Out of all the Parisians living close to the «Woods» (Boulogne, Vincennes) only 47% use them regularly; compared to 74% of Yvelines inhabitants living close to wooden areas. The practice of the forest is a leisure habit highly correlated with your surroundings. Clearly, the further away from the capital city, the higher the chance of using the forest. Suburban lifestyle makes it easy and rewarding to value natural areas, and desire is present thanks to reminders of nature in the landscape.

Unsurprisingly, cars are the most frequent way of accessing the forest (56% of visitors), even for those who do not own a vehicle. It is, however, not the only one. The proximity value means that more than a third of visitors arrived on foot or by bicycle (32% on foot, 7% by bicycle). This proportion is higher amongst women, pensioners, and house-owners. Indeed, those population categories usually head to the closest possible wooden area.

Two-thirds of visitors spend between 1. 30 and 4 hours in the foest. Average forest usage time is 2 hours (based on yearly total of visits).

Most visitors to the forest in a county come – three quarter of them – from the same county. Organizing counties according to this criteria reveals that:
– in Seine-Saint-Denis, 94% of forest visitors live in the county
– Val-d'Oise: 85% - Yvelines: 82% - Seine-et-Marne: 74% - Essonne: 66% - Hauts-de-Seine: 66% - Val-de-Marne: 41%
– Paris: 22%.

Total number of visits to Ile-de-France forests is close to 90 million visits per year, and steadily growing .

en %., en colonne

	Estimation du volume de visites selon données de l'enquête de recrutement	Estimation du volume de visites selon données du panel
Fontainebleau	17 700 000	17 000 000
Rambouillet	10 700 000	17 300 000
Vincennes	9 000 000	8 200 000
Meudon	4 800 000	4 000 000
Montmorency	6 000 000	3 700 000
Sénart	1 400 000	3 300 000
St Germain	1 800 000	3 200 000
Boulogne	5 200 000	2 300 000
Verrières	900 000	2 000 000
L'Isle Adam	3 000 000	1 700 000
Chantilly	4 300 000	1 700 000

The ideal forest: familiar, but still natural

To the question: «What would be your ideal forest? » , Ile-de-France citizens answer with a wide variety of desires about the landscape and the level of plannification. Half of the answers (49%) mention the surroundings. Three types of ideal forests emerge:

– The large hardwood forest, seen as a monument of nature (19%)

– The softwood forest, with mixed influences of the Landes and the Fontainebleau forests, characterized by sand and stone (12%)

– The exotic forest, both rainforest and prefered cover for wild flaura and fauna (18%)

The other half of answers (51%) mention the services found in a forest, seen as an area for the leisure and breathing time of city dwellers. Three types of speech emerge, characterized by different levels of care and plannification:

– The mostly natural forest, where «vegetation» plays a large part, characterized by an environment-friendly planning (15%)

– The kept forest, with services for walking or hiking, kept clean and clear of cars (15%)

– The planned forest, with pic-nic areas, children' games, sports facilities and bicycle paths (21%)

6) SURVEY AMONGST FARMERS ON THE PIERRELAYE-BESSANCOURT PLAN (EXTRACT FROM A STUDY BY DESSEIN URBAN / ONF / CERAPT)

7) EXTRACT FROM THE TECHNICAL CONFERENCE FOR REPORTING THE STUDIES AND RESEARCH PROJECTS ON THE ISSUE OF GROUND POLLUTION BY HEAVY METAL TRACES, DRIAFF-DDT 95 , 2010.

Bilan des acquis concernant la thématique agricole

	Elément(s) favorable(s)	Elément(s) défavorable(s)
Occupation du sol	▪ Occupation de l'espace. ▪ Maintien du sol en place. ▪ Sols fonctionnels du point de vue microbiologique *[Microbiologie]*. ▪ Conditions de faisabilité et intérêts potentiels de la production de biomasse avec recherche de stabilisation de la pollution dans l'horizon de surface du sol *[PHYTOPOP, RESACOR, Chambre d'agriculture]*.	▪ Potentiels de production limités en cultures non irriguées. ▪ Contamination du milieu limitant la gamme des cultures envisageables.
Environnement (gestion de la pollution)	▪ Possibilité d'action sur la pollution (chaulage, apport de matière organique,..) *[Epandagri, TSN]*.	
Sanitaire	▪ Possibilité de valorisation du blé, du colza et du maïs en alimentation animale *[Plan Surveillance]*. ▪ Spatialisation du risque de transfert $Cd_{grain} = f(Cd_{sol})$ *[Plan Surveillance]*. 	▪ Risque toujours possible d'évolution plus restrictive de la réglementation, sous l'éclairage de connaissances nouvelles. ▪ Attention aux poussières pour les agriculteurs *[Microbiologie]*.
Economique		▪ Limitation intrinsèque de la productivité du milieu sans recours à l'irrigation. ▪ Le maintien d'une activité agricole viable nécessite un accompagnement financier.
Bilan	• Intérêt du rôle de l'agriculture dans une gestion aussi maîtrisée que possible de la pollution. Les cultures non alimentaires strictes (culture de biomasse) pourraient présenter une alternative d'intérêt, sous réserve d'accompagnement financier.	

Bilan des acquis concernant la thématique boisement

	Elément(s)	
	favorable(s)	défavorable(s)
Occupation du sol	▪ Occupation de l'espace ▪ Maintien du sol en place.	▪ Sols à faibles potentiels (réserve en eau limitée) et contaminés par les ETM, nécessitant un choix d'essences adaptées.
Environnement (gestion de la pollution)		▪ Augmentation du risque de mobilité des ETM par dérive vers l'acidification et l'oxydation du milieu (mulch organique acidifiant, pas de chaulage possible hors chaulage avant implantation) *[Epandagri, TSN]*.
Sanitaire	▪ Le mulch forestier protège des poussières.	▪ Incertitudes sur la contamination par les ETM (cadmium, mercure, plomb) des champignons (ceuillette) et du gibier (chasse).
Economique		
Bilan	• Intérêt de la forêt, sous réserve d'essences adaptées au contexte. • Risque potentiel d'augmentation de la migration des ETM vers des couches plus profondes et potentiellement vers la nappe. Quel sera le rôle et la part de «recapture» du couvert forestier (mulch, racines, parties aériennes) vis à vis des ETM? • Réflexion souhaitable sur la mise en place d'un dispositif de surveillance sur la dynamique d'évolution de la contamination (migration en profondeur, transfert vers les arbres, les champignons, le gibier).	

Bilan des acquis concernant la thématique activité récréative

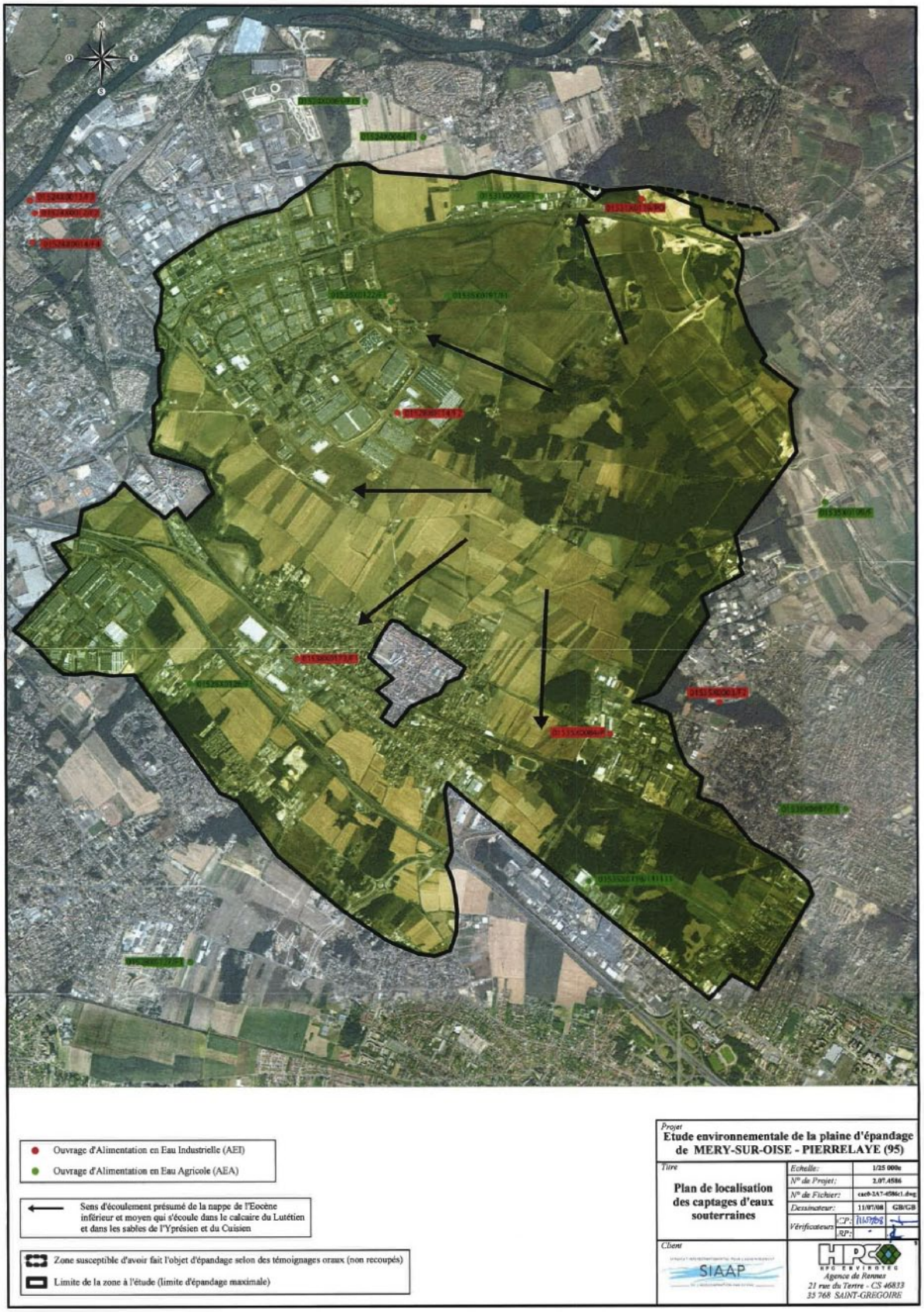
	Elément(s)	
	favorable(s)	défavorable(s)
Occupation du sol		
Environnement (gestion de la pollution)		
Sanitaire	▪ En l'état des acquis et des connaissances, pas de danger pour les personnes lié aux pathogènes humains et opportunistes *[Pathogènes humains]*.	▪ Risque sur les productions des jardins potagers (légumes tiges, légumes feuilles…). ▪ Risque lié à l'ingestion de particules de sol contaminées et à l'inhalation de poussières (particulièrement si sol nu).
Economique		
Bilan	• Aménager les espaces récréatifs et de loisirs de façon à limiter le transfert vers les productions des jardins potagers ainsi que l'exposition aux particules de sol, aux poussières *[Etude sanitaire]*.	

Bilan des acquis concernant la thématique artificialisation

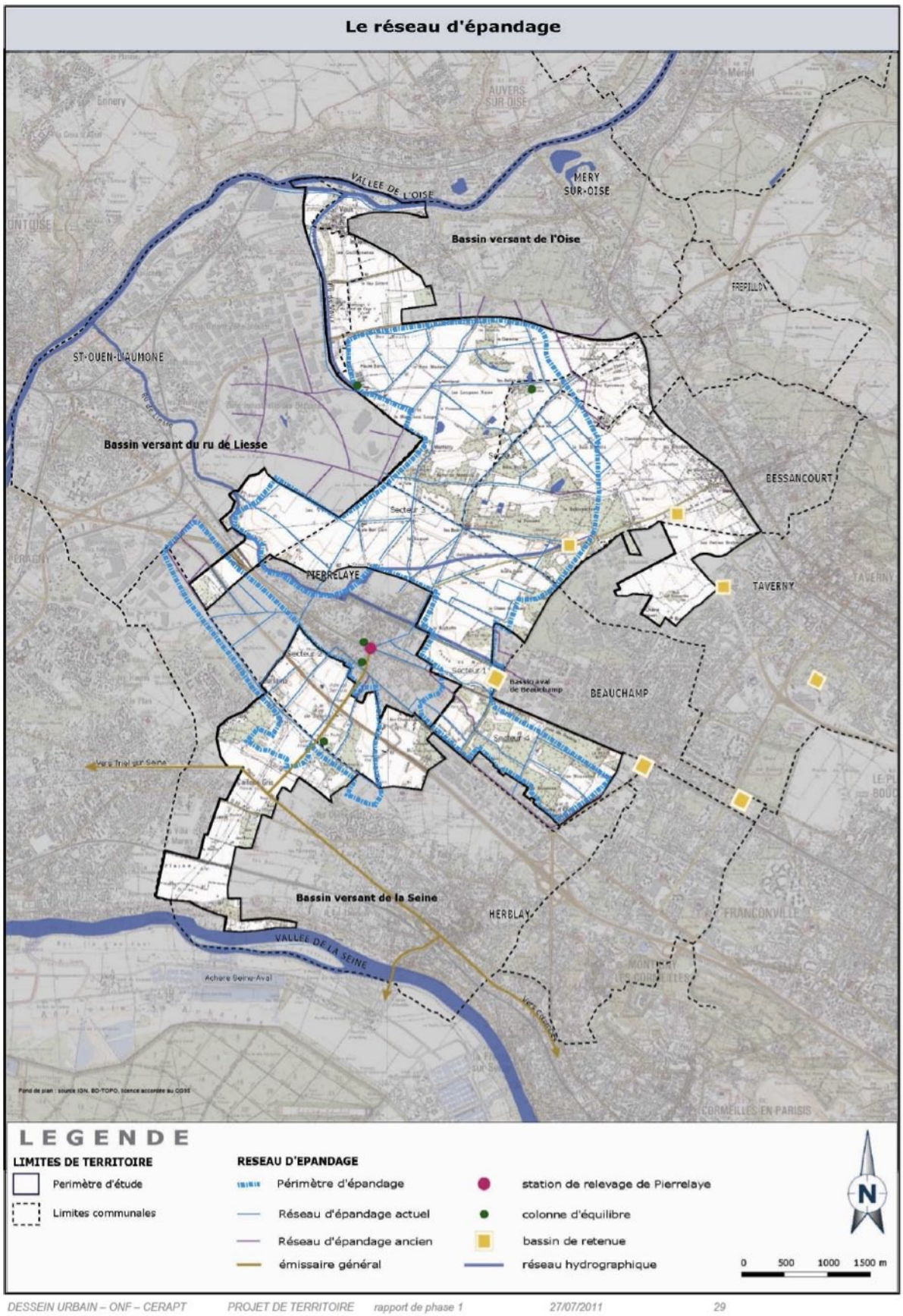
	Elément(s)	
	favorable(s)	défavorable(s)
Occupation du sol		▪ Le sol est excavé, il devient un déchet.
Environnement (gestion de la pollution)	▪ Suppression de la source par décaissement ou du transfert par confinement.	▪ Résultats de tests de lixiviation interdisent la destination en installation de stockage pour déchets inertes *[TSN]*. Le sol excavé doit être géré, tracé.
Sanitaire		▪ Si sol en place, obligation d'informer les nouveaux acquéreurs dans les transactions immobilières *(lois grenelle II, article 188 L.125-6. L.125-7)*
Economique		▪ Coût de la prise en charge des sols contaminés. Stockage en centre technique pour déchets non dangereux ~70-80 €/tonnes *(0.50 cm sur 1 m² de sol contaminé pèsent ~0.7 tonnes).*
Bilan	• La présence de contaminants implique une gestion appropriée des sols excavés et un coût spécifique *(confinement sur place, ou stockage en installation dédiée).*	

CARTOGRAPHY

SITUATION MAP OF UNDERGROUND WATER CAPTURE



THE SPREADING NETWORK (FROM DESSEIN URBAIN/CERAPT/ONF)



DESSEIN URBAIN – ONF – CERAPT PROJET DE TERRITOIRE rapport de phase 1 27/07/2011 29

BIBLIOGRAPHY AND SOURCES

STUDIES

- Étude prospective pour la définition d'orientations d'aménagement pour la plaine de Pierrelaye, commanditée par le conseil général du Val-d'Oise, rapport final, Daudet L. (dir.), 2011, Agence Dessein Urbain, non publié.

- Compte-rendu du séminaire de restitution scientifique des études et actions mises en œuvre pendant la période 2006-2010 sur les périmètres pollués de Pierrelaye-Bessancourt, DRIAAF, 2011, Préfecture du Val-d'Oise, 17 p.

- Etude des possibilités et des conditions de production de cultures non alimentaires sur la plaine de Pierrelaye/Bessancourt/ Achères – Blezat Consulting – Région Île-de-France- 2004)

- Identification et gestion des sites pollués, guide méthodologique, PNUE – ADEME, ADEME Editions, Paris 2005

Aménagement de la plaine de Pierrelaye - Faisabilité du boisement - rapport de synthèse. Décembre 2010. , Préfecture du Val d'Oise

ARTICLES

- Béatrice Cabedoce, « Eaux usées, usages de l'eau : épandage et maraîchage dans la plaine de Méry-Pierrelaye » , par, Cergy-Pontoise, Conseil général du Val d'Oise, atelier de restitution du patrimoine ethnologique, 2002, 16 pages illustrées.

- Vincent Mandinaud, « La pollution des sols des champs d'épandage d'eaux usées, contrainte et/ou ressource pour le développement durable en plaine de Bessancourt – Herblay – Pierreaye » , in Revue Développement Durable et Territoires, 2005, disponible en ligne : http ://developpementdurable. revues. org/1543

- « L'aménagement d'une aire pour les gens du voyage » , la Gazette, 16 septembre 2002 : http ://www. lagazettedescommunes. com/36157/lessentiel-gens-du-voyage-un-cadre-juridique-complexe-pour-des-publics-meconnus/

- François Huart (IAU Île-de-France), revue POUR

UNIVERSITY PRODUCTION

- « A Pierrelaye-Bessancourt (Val-d'Oise) où cent ans d'épandage des eaux usées ont privé les maraîchers de 1 000 ha d'exploitation, la Région aide au développement de nouvelles filières, non alimentaires » , Ma région mode d'emploi (janvier 2007), Eaux usées, usages de l'eau, Vendredi 25 mai 2007

PLANNING DOCUMENTS AND LAWS

- SDAGE (Schéma directeur d'aménagement et de gestion des eaux)

- PLU (Plan Local d'Urbanisme)

- SDRIF (Schéma de Développement de la Région Ile de France)

- Plan Départemental d'Action pour le Logement des Personnes Défavorisées (PDALPD) 2008-2010

AUDIO-VISUAL

- L'aménagement de la forêt de Pierrelaye sur les rails (nombreuses vidéos) :

http ://video. fr. msn. com/watch/video/le-projet-de-la-foret-de-pierrelaye-sur-lesrails/1y1ngsn52 ?q=cha t+voleur&rel=MSN&cpkey=fffffe3-eade-5e4a-851e-38775591188d%257cchat%2Bvoleur%257cMSN%257c%257c

- Un film de Béatrice Cabedoce et Olivier Milot / Conseil général du Val d'Oise (2002)

WEBSITES

AIGP : http ://ateliergrandparis. com/12clefs/

ADEME : http ://www2. ademe. fr/servlet/ getDoc ?id=11433&m=3&cid=96

Conseil général du Val d'Oise : http ://www. valdoise. fr/

SDRIF : http ://www. iledefrance. fr/missions-et-competences/ deplacements-amenagement/le-sdrif/le-schema-directeur-de-la-region-ile-de-france/

Inventaire National du Patrimoine Naturel : http ://inpn. mnhn. fr/

Direction Départemental des Territoires : http ://www. val-doise. gouv. fr/Services-de-l-Etat/Agriculture-environnement-amenagement-et-logement/Direction-Departementale-des-Territoires-DDT

SIAAP : http ://www. siaap. fr/

Centre de recherche pour l'étude et l'observation des conditions de vie (CREDOC) : http ://www. credoc. fr/

BOOKS AND MANUALS

« La vulnérabilité sociale d'une ressource abondante : épandage des eaux usées et protection de l'environnement au Mexique » , Claudia Cirelli, Géocarrefour, vol. 81/1 | 2006 La pénurie d'eau : donnée naturelle ou question sociale ?

« Assainir l'Agglomération Parisienne, Histoire d'une politique publique interdépartementale d'assainissement (XIXe-XXe siècles) » , Emmanuel Boulanger avec la collaboration d'Eléonore Pineau, Editions du SIAAP

« Guide de l'habitat adapté pour les gens du voyage » , ACADIE, AURES, MEEDM, 2009 : http ://www. dguhc-logement. fr/infolog/ droit_logt/gdv_guide_2009. pdf

« Second Hand Spaces. Uber das Recyclen von Orten im städtischen Wandel » , M. Ziehl, S. Oswald, Jovis 2012

« Forêt : essai sur l'imaginaire occidental » , Robert Harrison, ed Flammarion, coll. Champs, 1994

Junkspace, « Repenser radicalement l'espace urbain » , Payot, janvier 2011

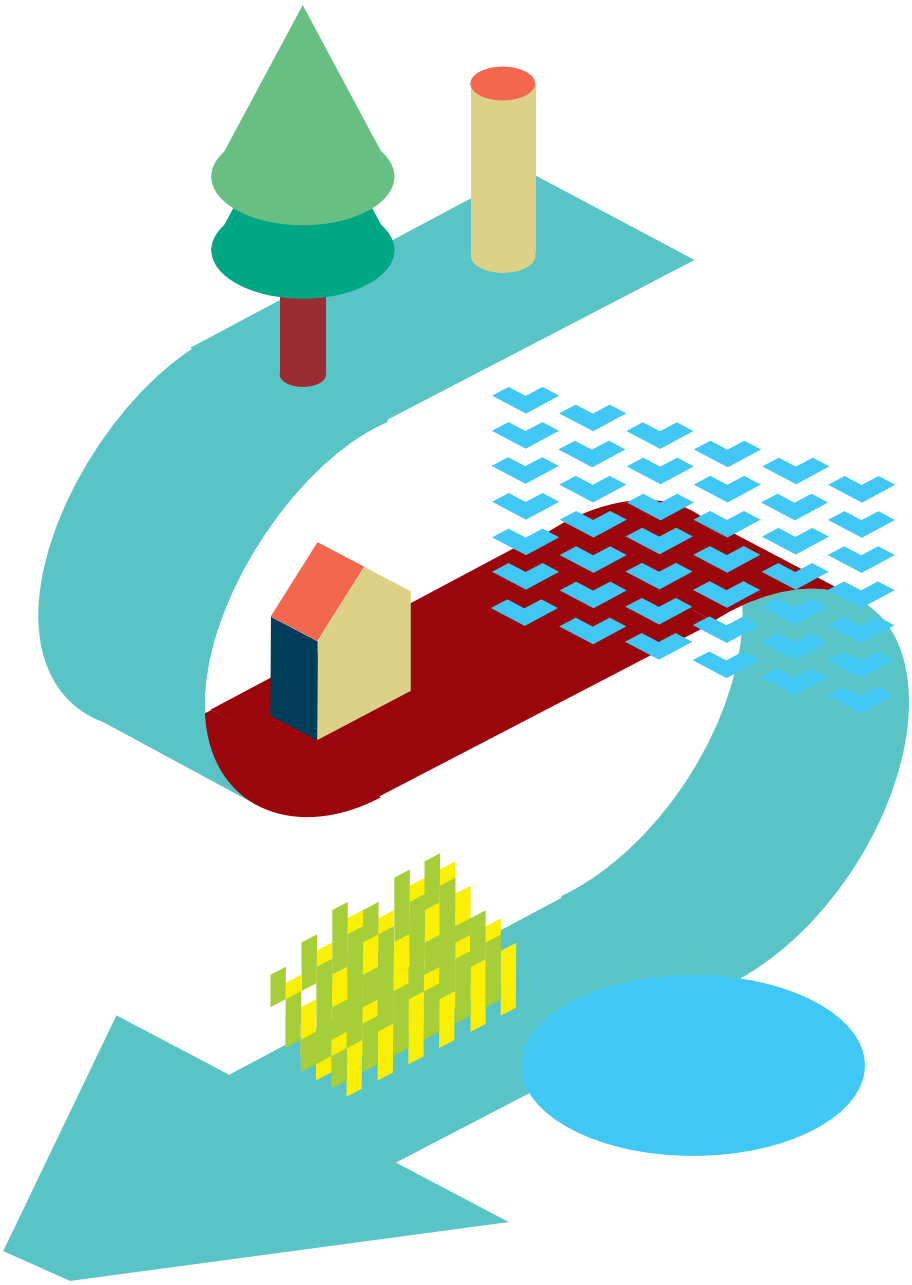
« Réaliser une analyse fonctionnelle des espaces ouverts » , IAU

« Paris en Ile de France, histoires communes » , sous la direction de Bertrand Lemoine, Editions du Pavillon de l'Arsenal, 2006

« 75 ans de planification urbaine » IAURIF, http ://www. iau-idf. fr/ lile-de-france/75-ans-de-planification. html

« Identification et gestion des sites pollués, guide méthodologique » , PNUE –ADEME, ADEME Editions, Paris 2005

IAU-CRCI-INSEE. 2009. « Chiffres-clés de la Région Île-de-France » , Paris: Institut d'aménagement et d'urbanisme.



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