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Sustainable green building strategies in France

Ecodistrict: a sustainable and desirable urban project? Or, how to avoid being led by technical solutions. *Michel Sabard**

The difficulties of city life are detailed in the Green Book published in 1990 by the European Community and further described in a sustainable cities statement published in 1996. Twelve years later, in France and Europe, the Ecodistrict concept brings together all the possible improvements which can create a more ideal way of city living. This vision arises from the recent culture of sustainability aiming to preserve both humanity and the planet.

Pierre Lefèvre¹ and I, both teaching at the architecture school of Paris la Villette, have tried to give a definition inspired by the examples that we have visited in Europe at the end of the 90s.

An Ecodistrict is:

- a part of a city, not distinct from its overall sustainability plan (mix of population, transportation, density...):
- qualified by a new type of long term, interdependent and locally-based development, aiming to create a socially mixed population with equal access to housing, social services, local economy etc;
- where inhabitants can live, work and travel together; where both public and private spaces are attractive; where risks to health are minimised;
- a response to the environmental issues affecting the planet (climate change and inefficient energy use, loss of biodiversity and destruction of nature) through energy saving, public transport, pollution and waste management...

The Ecodistricts: a major Grenelle² initiative

On October 22 2008, just after the publication of the Grenelle action plan, Jean-Louis Borloo³ announced the launch of the Sustainable City Plan, part of which is the call for eco-districts projects⁴. This programme aims to foster a new way of designing, of building, expanding and managing a city, of conceiving and developing a

¹ Architect and Professor at the School of Architecture of Paris la Villette, author of several publications on

² Negotiated National Action Plan for the Environment, published in 2007

³ French Ministry of the Environment at that time

⁴ For further details: <u>www.developpement-durable.gouv.fr/Le-plan-d-actions-Ville-durable.html</u>

new vision of a city shared by every citizen. The following four priorities have been highlighted to fulfil these goals:

(Excerpts from the Gouv. website)

"Call for Ecodistrict projects, at district scale, to persuade communities to achieve more sustainable urban programmes

On a wider scale, the Ecocity process should help great urban centres to organise large innovative architectural, social and energy-saving projects.

The TCSP⁵ should support the viability of the public transportation system, which includes access to the disadvantaged areas of the city.

Organise a nationwide conference and workshops on the theme "Restore and add value to nature inside the city" in order to plan ambitious programmes in this field.

The 2001 Ecodistrict prize selections

After the 2009 call for projects, the 2011 one was very successful. 394 communities proposed projects, out of which 24 innovative projects were selected. They demonstrate a new way of designing, building and managing a city.

The Ecodistrict results promoted all the projects in the communities, and awarded specific prizes to the projects in the following categories: "mid-size city", "rural environment", "urban refurbishment". It also categorises the projects according to their sustainable development targets: "Eco performance", "Nature in city", "From the quality of a project to the quality of life".

The Ecodistrict process

(Excerpts from the Gouv. website)

An Ecodistrict design aims to offer high quality standard housing to all citizens, while minimising their ecological impact.

An Ecodistrict must follow these sustainability principles:

- Promote responsible management of resources
- Integrate with the existing city and its surroundings
- Encourage economic development
- Offer all types of housing to everyone thus helping social integration.
- Organise public meetings from the start of the project in order to create a shared vision;

Once all this principles are integrated into the project, it is also essential that the Ecodistrict adapts to the individual specifics of the area, such as local landscape, urban, human or environmental resources. As well as being an outstanding example in itself, a Ecodistrict is also a lever towards achieving a sustainable city, within the constraints of the city as a whole.

An Ecodistrict must be an example and a precursor. It needs to be large enough to re-invent the city, a new way of organising structures and resources, and public consultation. It is not a product but a process.

Collaborative construction is essential and intrinsic to each project: Ecodistricts must be desirable, must appear to a great number of people, so as to avoid the 'window effect' of some avant garde architecture, prone to rejection.

⁵ Dedicated means of public transportation.

Finally, it aims to be an agreement between all players including prospective residents, neighbourhood, workers...

Since 2005-2006, a large number of statements of principles, recommendations and targets, user guides have been published. Developers are public organisations as well as a private one - Eiffage with its High Quality Life© target⁶

Looking at a Ecodistrict label in 2012?

In 2012 the French Ministry of the Environment began discussing the creation of an Ecodistrict label. A preparation committee was set up in 2011, working in a collegial and collaborative process.

The AFNOR⁷ P99H7⁸ commission is developing for a good practice guide for Ecodistricts developers : cities, social housing providers, private and public project owners, urban project managers.

The main objective of this commission was to continue the plan of action started in 2009, in particular to reach a consensus on the definition and concept of a Ecodistrict. It also aims to agree on an inventory of tools and good practices necessary for each step in the sustainable development process of urban planning. After the 1st National Conference on Sustainable Cities in 2009, the "ZAC⁹ of Bonne" near Grenoble won the first Ecodistrict prize. The selection committee had to examine more than 160 projects. Bonne was selected as "an exemplary sustainable district, globally excellent, addressing the key points and illustrating the spirit of the Grenelle Environment initiative" (httml?rubrique33)

But, after 3 years of occupancy, a report questioned the official statement of energy use of the Bonne Ecodistrict. An investigation by the newspaper "Le Monde" revealed a wide disparity between the expected and the real energy consumption.

In 438 out of the 900 social housing apartments, the investigation reveals an over-consumption of energy use for heating varying between 5% to 70% over target. Similar results were shown for domestic hot water and other energy uses (respectively over 17 and 10 kWh/m2/year).

To explain the discrepancies between originally estimated and actual use, designers and project managers pointed to the fact that "France is not low energy consumption minded, the people in charge have not yet integrated the various stages of design and building management, thus causing problems at each level of the project" (quoting Olivier Sidler, Enertech)

However, according to Olivier Sidler "these targets are realistic. In Germany Ecodistrict energy targets are even lower and always achieved".

The French Ministry of the Environment does not seem to be surprised by the results of this investigation. The advisors to the Minister (Nathalie Kociusko-Morizet at that time), consider that there was no need to reconsider the project, as Grenoble is a trial project and needs a running in period.

After 20 years, what is the reality today?

Official performance targets are often ambitious, therefore project owners have to take account of these contractual commitments as well as fully support the people in charge in terms of time and money, from the

⁶ Which includes health.

⁷ French organisation for standarsation.

⁸ Of which I am a member.

⁹ Area designated for future development

design period to fulfilment, to succeed in reaching these targets. This should also be in accordance with investors and resident's expectations.

For the last 20 years in France, legislation has taken into account the increasing democratisation of public policies process.

In 1992, the Earth Summit declaration states in § 10 that the best way to address environmental problems is to ensure the participation of all citizens. The Aarhus Convention, ratified by France, states clearly that citizens must be involved in the formation and application of public policies.

The various policies, reference guides and Ecodistrict standards recognise public participation as a guiding principle in governing cities. But this needs a long period of time, whereas urban projects lack time: conflict exists between project time and politics' time.

When considering a new city project, project owners should learn from the experience of other Ecodistrict projects and should reconsider their preconceptions. New technological standards should be integrated only if they are understood, and targets agreed upon. Ambitious goals for quality of life, energy efficiency and CO2 emission reduction will be only be effective if all users participate and accept changes in their way of life.

The desire to label and certify everything is a real risk. Despite the good intentions in the guiding documents, there is no guarantee that the most important target - quality of life - will be reached.

Each project is a new adventure. For the design, it is essential to learn from previous experiences, but these can never be used as a template. Many times it has bee shown that despite projects being certified as Ecoproject the actual quality of life fall far short of targets.

I know that, by questioning the certification process, I enter into the even more complex debate over the reasons for the existence of certification. So let us be ambitious and look for realistic targets, provide the means of achieving them, set up indicators and monitor continually, from early conception and design through to completion. These indicators will allow us to make any adjustments necessary in order to meet the targets.

Radical changes in our perception of the city and how we act, are required to address the issues of sustainability in cities. The scale of districts necessitates the involvement of many players. The issue of construction and regeneration of a neighbourhood impacts on the whole area, including in many different ways, such as population relocation, pollution and transport issues.

The sustainable city means not just a suite of passive houses or building sustainable neighbourhoods; it represents a radical change in urban understanding, linked to global and participative public policies. This approach rejects any standardisation. The sustainable city must indeed be constructed, it must consider the urban context, its geography and history, it must take into account economic and demographic dynamics, and finally it must be a project shared by all players.

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