



HAL
open science

Build up the sustainable city – Urban planning and management

Alban Bourcier

► **To cite this version:**

Alban Bourcier. Build up the sustainable city – Urban planning and management. Bilateral scientific seminar "Metropolisation and urban networks", May 2009, Moscou, Russia. halshs-00484263

HAL Id: halshs-00484263

<https://shs.hal.science/halshs-00484263v1>

Submitted on 25 May 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Built up the Sustainable City - Urban planning and management

Themes and Context

A city is created as the result of population movements which have been more or less well managed and tolerated.

To what degree is it possible to talk about poor quality or degraded urban environments?

To make a district sustainable is to give it a sort of “brand image”, to avoid any suggestion that the district is to be avoided.

The local environment has an important psychological effect on people which implies that this environment should be possessed of meaning.

Many factors affect decision making including budgets, the identity and nature of the decision-makers and the type of decision to be implemented (greening...).

Safety and security in those urban areas defined as being difficult depends on maintaining or encouraging the return of social variety. This variety should be visible in the community which should include members of all age groups and all socio-professional categories.

It is imperative that all the appropriate means should be made available to encourage variety in the community.

Taking Possession of Space

The objective is to encourage a sensation of belonging to a district so that each individual feels at ease in his/her everyday environment.

It is therefore important to break with the traditional “rabbit hutch” image of certain areas and to provide means whereby a district can be recognized in terms of identifying/defining features. Encouraging the sensation of “belonging” is an important aspect of the redevelopment of cities.

Putting works of art into urban areas is an excellent way of encouraging a feeling of belonging associated with clearly defined spaces. Building a pond or locating a sculptured fountain in a district can be enough to give it an identity.

Most urban decision-making can be put to good use in the establishment of identity. For example, decisions about the management of rain water can be taken with a view to building a safe, fenced pond...

Equipment and installations should, therefore, be multi-functional and the selection criteria should not be merely technical but should take into account the way in which the feature is to be integrated into the residents’ environment.

Appropriate Equipment and Installations

It is desirable to increase awareness of energy use in a given living space. Although energy consumption is increasing dramatically, there are ways of saving up to 66% of lighting consumption. For example, the use of neon signs and the lighting-up of shops windows at night are perhaps not absolutely necessary.

As far as heating is concerned, it is useful to calculate the ration between the volume of the building to be heated (a gymnasium for example) and the number of individuals who will use the facility (4 players on one indoor tennis court!)

While it is important to think about our practices, it is also important to encourage energy-saving architecture.

It is vital to make the right choice of construction materials. The cement which is usually used in fact requires an enormous amount of energy in its manufacturing process, the tropical woods of which the European market is so fond require a lot of transport energy which could be saved if we used available local material.

A wooden house built of local raw material is globally more economical.

We should also develop the concept of the “passive house” which produces enough energy not to need external sources of supply. This can be done by using triple glazing installed in metal frames and a double-flux mechanical ventilation system. This system involves a calorific exchange between emerging hot air and entering cold air. The double flux is necessary to renew the air inside the building in function of the efficiency of its insulation. A large extension to the roof covered with solar panels will shelter the residents from the sun and capture solar energy at the same time. Energy consumption can be reduced from 165 to 12.4 kilowatts per square meter per year in a house of this kind.

To the concept of the “passive house”, we should add that of the “active house” which produces more energy than it consumes. In Germany local energy providers are obliged by law to buy this energy surplus for redistribution.

As far as urban transport is concerned, we should promote “soft” systems as a matter of urgency. It is a fact that 50% of car journeys are made for distances under 3 km, 25% for distances under 1km and 15% for distances of less than 500m. It is obvious that if alternative means of transport are made available in this 3km radius we would save 50% of the fuel consumed in towns, create less pollution and improve the quality of life.

A light vehicle caught in a traffic jam uses 70 liters over 100kms. Using a bus in the same circumstances saves the equivalent of the fuel consumption of 50 private cars.

Developing alternative transport requires planners to be aware of the need for intermodal exchanges, especially on routes to work. It has been shown that journeys are faster by regular public transport facilities using dedicated routes than by private car. Tramways can provide an interesting option for routes connecting the inner city and suburbs. The public transport offer can be completed by reactivating disused railway lines to connect the suburbs to further destinations. These options show what can be done within the context of a sustainable communications policy.

It is also necessary to consider the question of supplying the city as not everything is sourced locally. To bring in products ordered on the other side of the world on a regular basis is simply not sustainable

From now on, we should encourage local sourcing and we should manage the economic future in such a way as to encourage the use of local resources as the basis of a city's activity.

Conviviality, Solidarity and Making Social Connections

The number of spaces in which people can meet and share should be increased although care should be taken to limit the possible sources of nuisance and tension between neighbours, for example noise. Being part of a community implies that people should be

educated to respect the reasonable demands of their social environment (it is reasonable to expect a dog to be trained, it is not reasonable to expect a country cockerel not to crow!).

It would also be useful to think about the location and organization of play, leisure and meeting areas, These spaces should be organized in such a way as to make it possible for people of various age groups to enjoy them and the materials used should be simple (natural, drinking water fountain decorated by the residents..).

Allotments should be preserved and their use encouraged. They provide important leisure facilities and are also essential as a means of food production for poorer families.

Decoration, especially with the use of works of art, is an important factor in making cities habitable. Improving the environment tends to reduce the numbers of acts of vandalism, simply because people feel more at ease in their space.

In some districts the old communal bread ovens have been brought back into use, thus enabling residents to renew contacts.

The creation of small leisure "city farms" in some places has been a way to encourage social exchanges.

The quality of life can be improved in a number of very simple ways.

Biodiversity in Cities

A well-planned city can be a refuge for fauna and flora.

It is possible to encourage biodiversity with some very modest installations: dry stone walls for observing lichens, lizards and insects; heaps of dead wood for xylophagous creatures; a city garden with well-presented information offering a life-size collection of local species; encouraging urban wildlife (hedgehogs) in gardens.....

Finally, practical changes can encourage biodiversity - not mowing lawns too short, differentiated mowing etc.

Managing Waste

Waste treatment policy must be based on an analysis of the position of incinerators, the way in which waste is collected and the management of construction and demolition waste.

Waste is responsible for the physical decline of a large number of suburban spaces.

In France every inhabitant creates over 1kg of waste per day, that is almost 400kg per year.

A few simple measures allow us to reduce this quantity of waste considerably. The final objective is to reduce the production of waste and, by extension, the quantity that must be managed.

- Encourage centers for the selection/separation of waste
- Regulate the depollution of smoke
- Encourage people to compost

- Encourage people to select and separate different kinds of waste to save raw materials and energy (it is cheaper to recycle than to produce).

Managing Water in Cities

Water consumption is 20 to 30 times higher than it was 30 years ago.

This means that we need more capacity to deal with dirty water and so more sewage farms - which nobody wants!

The objective is to encourage people to consume less water by taking simple precautions against waste.

Relations With Rural Areas Beyond the City Limits

The city should be a market for local agriculture. It is important not to think in terms of a distinction between “the city” and “the country”, and to avoid the No-Man’s Land effect of fields abandoned to developers at the edges of the cities.

It is important to implement policies which encourage the establishment of a balance between the city and the close countryside.

It would be useful to encourage local production (farm-reared veal, organic beef...).

Encouraging local farmers’ markets seems an excellent way to bring together town and country.

However, agriculture has an effect on the quality of water. The more agricultural practices pollute, the more city water is polluted and the higher the purification costs. The objective would be to restore a regime of common sense and good practice in order to avoid conflict (thus, for example, do not plant sweetcorn which requires a great deal of water in areas experiencing water shortages or having low reserves..).

Natural Spaces on the Edge of Cities

A forest should remain an essentially natural space and the public should be educated to use it as something other than a park.

This suggests that forests near towns should be maintained. If the forest is neglected or abandoned the obvious lack of attention will incite people to misuse it.

We must start to reclaim natural spaces. The traditional agricultural practice of introducing herds of sheep and goats into neglected areas limits the proliferation of undergrowth, lowers the risk of fire and also the risk of flooding.

Conclusion - Achieving the Sustainable City

- Fight against the city-dweller’s lack of individual dynamism
- Avoid exclusively short-term visions
- Be aware of the importance of the citizen in decisions concerning his/her environment.