

## Post Carbon research: BETA Programme

Friday 9 September 2011, by [quattrolibri](#)

Quattrolibri has been selected by [ADEME](#) (French National Agency for the Environment) and by the [French Ministry of sustainable development](#) to join the national research programme on "[rethinking cities in a post carbon society](#)".



Our research purpose was to design a transition strategy to reduce carbon emissions by a factor 4 by 2050.

Our focus was on the small to mid-sized satellite cities, which increasingly suffer from their proximity to a bigger neighbour. Our research indicates that action taken on these satellite cities is a strong lever to reduce the congestion of their metropolis, and play an important role on the reduction of carbon emissions of cities in general.

Our diagnosis of these satellite cities highlighted the vicious circle at play:

- loss of local employment
- longer commute
- increased dependency on individual cars
- relocation of shopping and purchases where cars can be parked
- increased shopping on the outskirts of the cities
- greater reliance on long-haul supply chains
- reduced land available for farming around towns
- less shopping in city centres
- less job opportunities in the city centres.

We then designed a transition path, focusing on a coordinated action plan on four priority fields:

**Buildings**, which are in the top two sources of carbon emissions, and rising; the priority is to revamp the existing stock of buildings, which in turn requires a new breed of insulation and eco-materials.

**Employment**, where the challenge is to shift away from carbon intensive jobs towards low carbon ones; it drives new needs for telecentres (to offer work facilities next door) or new production / transformation businesses to build a new low-carbon infrastructure.

**Transportation**, in the same category as buildings, where the priority is to shift individual modes of transport towards low carbon options (which also requires shorter distances and a reduced need for long distance transportation)

**Agri-food**, which has a significant indirect carbon footprint due to the high waste ratio linked to long-haul supply chains (around 30% of the food we produce is wasted, which means that 30% of the related water, fuel, fertilisers, cooling equipment, trucks... is wasted).

The synergies and interdependence between these four fields are shaped into the "BETA programme".

We tried out our research in the field, leveraging the post carbon strategy we had designed for the area of Fontainebleau. We managed four student projects, one in each field of action.

Our conclusions are applicable for:

corporations: resilience tests, strategic guidance for a low-carbon path

public officials: transition strategies, policy coordination

local authorities: design of low-carbon action plans

The full research material is available on [www.betaprogramme.org](http://www.betaprogramme.org).



See online : [BETA Programme \[http://www.betaprogramme.org\]](http://www.betaprogramme.org)