

# Greater Lyon

## *Integrated Climate Protection Policy*



communauté urbaine  
**GRAND LYON**

*Bad Ischl, september 5th, 2006*

## 57 communes which act together

- First country of Europe for the number of its *communes* (= municipalities) (36000), France created the urban communities (law of December 31, 1966) to **cure the shift between the administrative structures and the geographical reality of the agglomerations.**
- The objective was to manage the public services in order to think the urban development in term of agglomeration either commune by commune.
- The urban community of Lyon gathers 57 communes and extends on nearly **50 000 hectares**. The population of Greater Lyon amounts to **1 200 000 inhabitants**.

# Competences

The urban community of Lyon (Greater Lyon) exerts many competences:

- **services** : roadway system, distribution of drinking water and improving of the sanitation, collection and treatment of the household refuse, displacements and parking.
- **town planning** : elaboration of town planning documents (PLU, directing diagram), habitat, social housing, public spaces, large agglomeration's equipments.
- **economy**
- **environment** : air quality (including GES emissions), noise, natural landscapes, agriculture

## Greater Lyon vulnerability

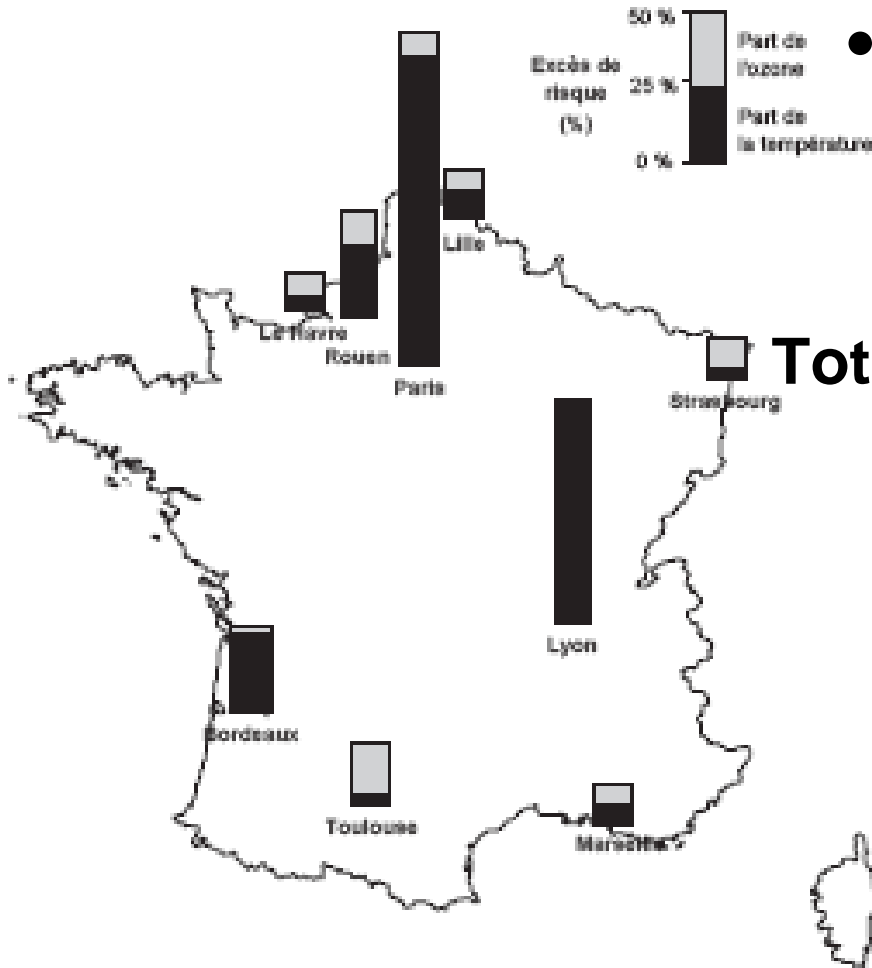
- Water supply risk
  - Major stake = diversification of water sources (not supply)
- Flood risk
  - Increase of 25% of winter rain by 2100
  - Increase of urbanisation of the Greater Lyon soil
    - important flood risk by streaming
- Heatwaves and ozone risks
  - Major risk for the Greater Lyon : increase of 2 to 6°C by 2100  
(2<sup>nd</sup> hot city in France during summer 2003)

## The summer of 2003 : a national tragedy

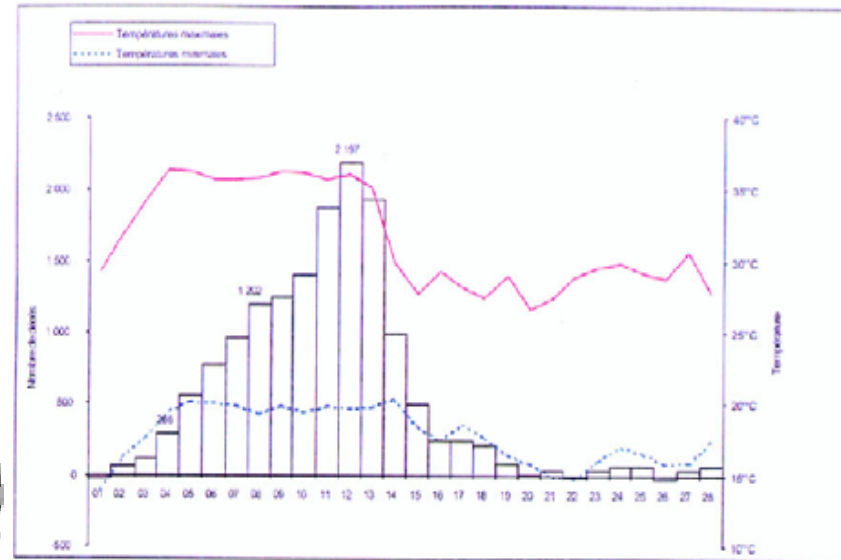
- The hottest one for 47 years
- +7 °C compared to average monthly values
- +60% of mortality,
- 14.900 dead people

# August 2003 : increase of mortality risk, ozone and temperature factors

- **Over mortality in France : +60% for August 2003**



**Total : 14.947 additional deaths**



Source : INSERM

# Response of the French government : national heatwave plan

1. heat health watch warning system (**sacs**)  
updated in 2005 and 2006

3 levels of information / mobilization :

- Level 1, seasonal surveillance : period from June 1<sup>st</sup> till August 31<sup>st</sup>
- Level 2, awareness raising and action: T higher than the 3 days T threshold
- Level 3, maximal mobilization : large area

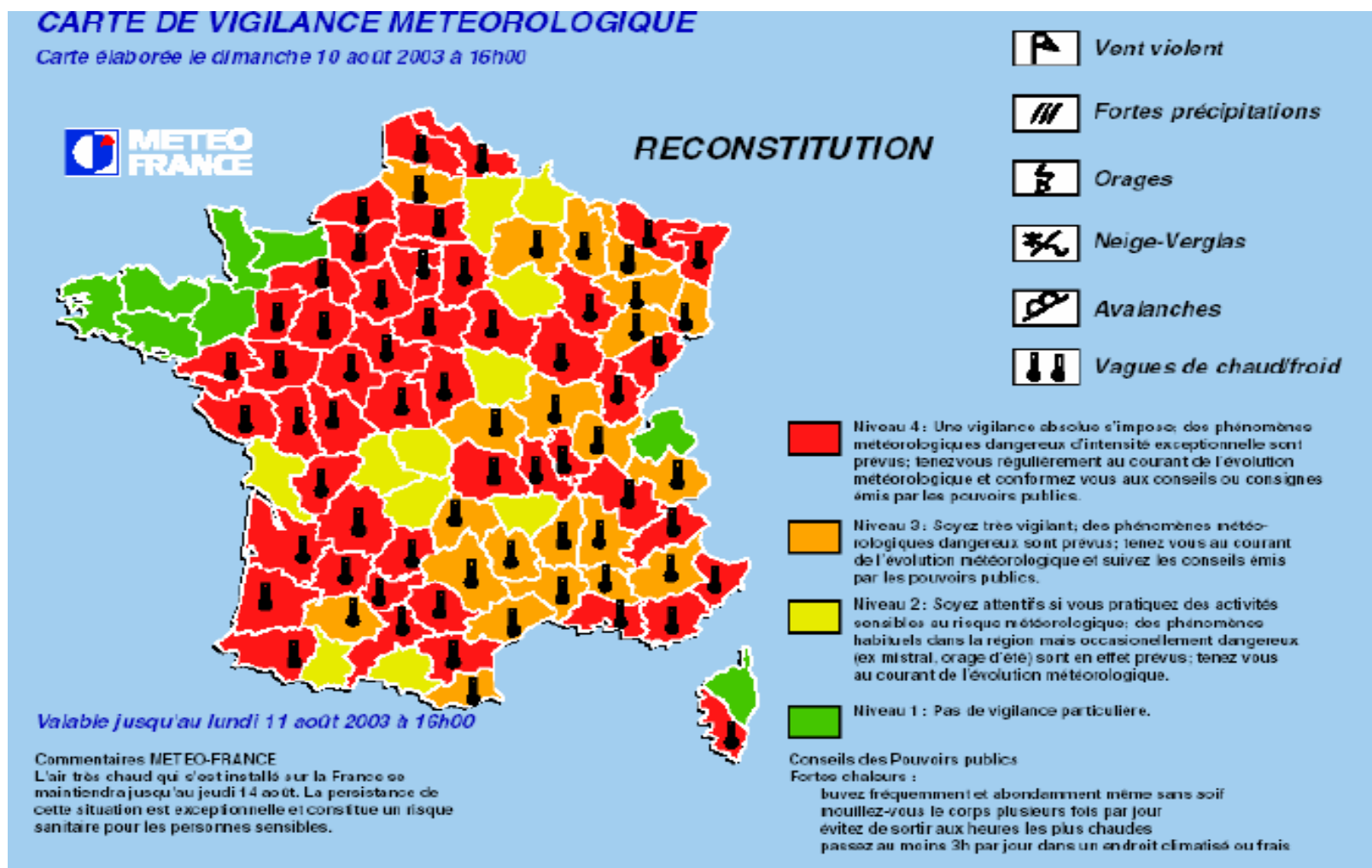


## National Heatwave Plan : main stakeholders

- Meteo France : French Weather Bureau : indicator : moving average on three days of the minimal and the maximal temperatures
- CIRE : interregional epidemiological offices : local mortality data
- InVS : National Institute for Health : analysis of the indicators of mortality and morbidity
- DGS : General Health Direction, Ministry of Health : communication and coordination
- DGAS : general social action Direction : action plan



# Public climate information online



Source : InVS, SACS 2005 rapport opérationnel

## National Heatwave Plan

“Blue Plan” : cooled places for old people

“Velvet Plan” : list of all old or vulnerable  
isolated persons : to be done by each city

“White plan” Healthcare establishments internal  
planning : : 15.000 more hospital beds, 160  
mobile healthcare units for old people (130  
M€)

It works ! Heat wave of 2006, second highest in  
France, 112 additional dead people

Source :

# Heat wave and air pollution : ozone peak record in France

- Highest ozone level ever recorded since 1991
- Concentration  $>180 \mu\text{g}/\text{m}^3$  (information level) ; High duration : 4800 h above alert level in august 2003 (more than for all the year 2001)
- Concentration  $>240 \mu\text{g}/\text{m}^3$  for 13 days (max  $306 \mu\text{g}$ )
- Ozone has an additional measurable impact on mortality for this heat wave :
  - + $10 \mu\text{g}/\text{m}^3 \text{ O}_3 = + 0,7 \%$  increase of daily mortality
- Adaptation measure : free public transportation in Grenoble, alternative circulation in Lyon

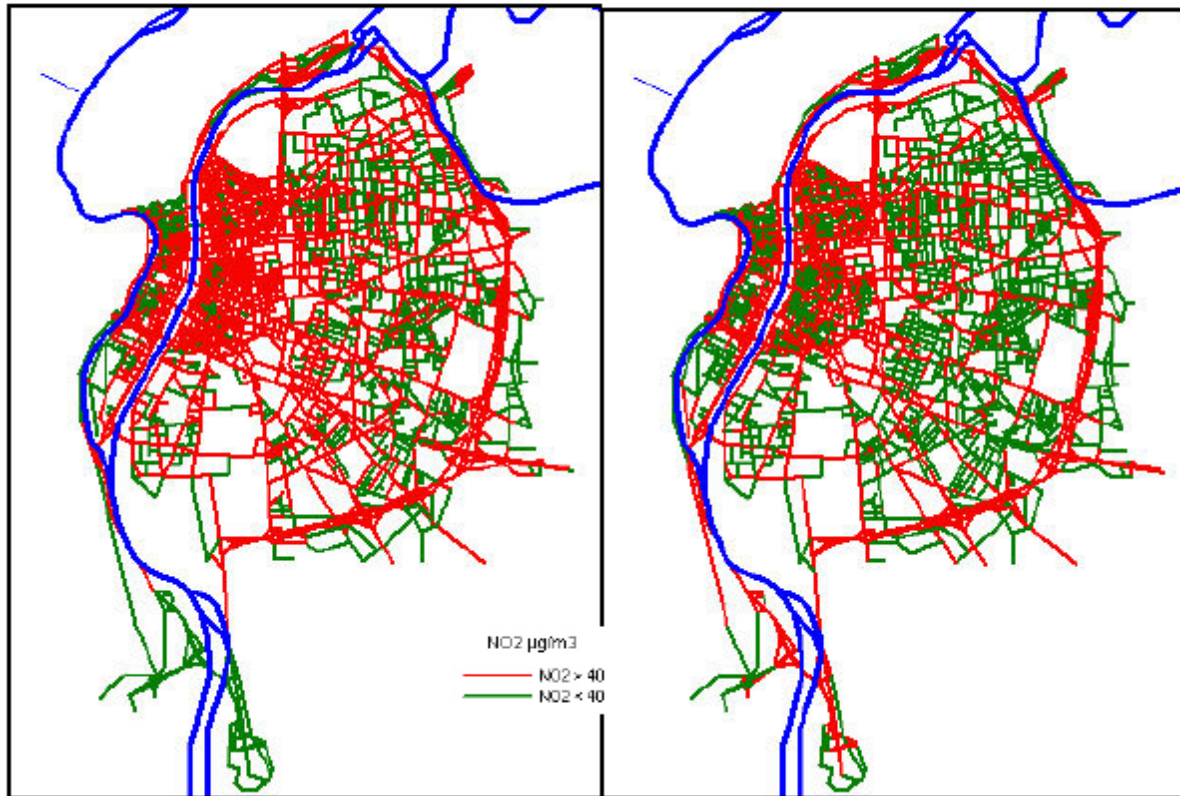
Source : ADEME, comm de presse du 13 aout 2003,  
InVS rapport Temperature pollution et mortalité

# Local answer to air pollution (i.e. ozone peaks): « atmosphere protection plan »

- Target: reducing high concentrations of air pollutants

Etat de base 2004

2010 scénario tendanciel



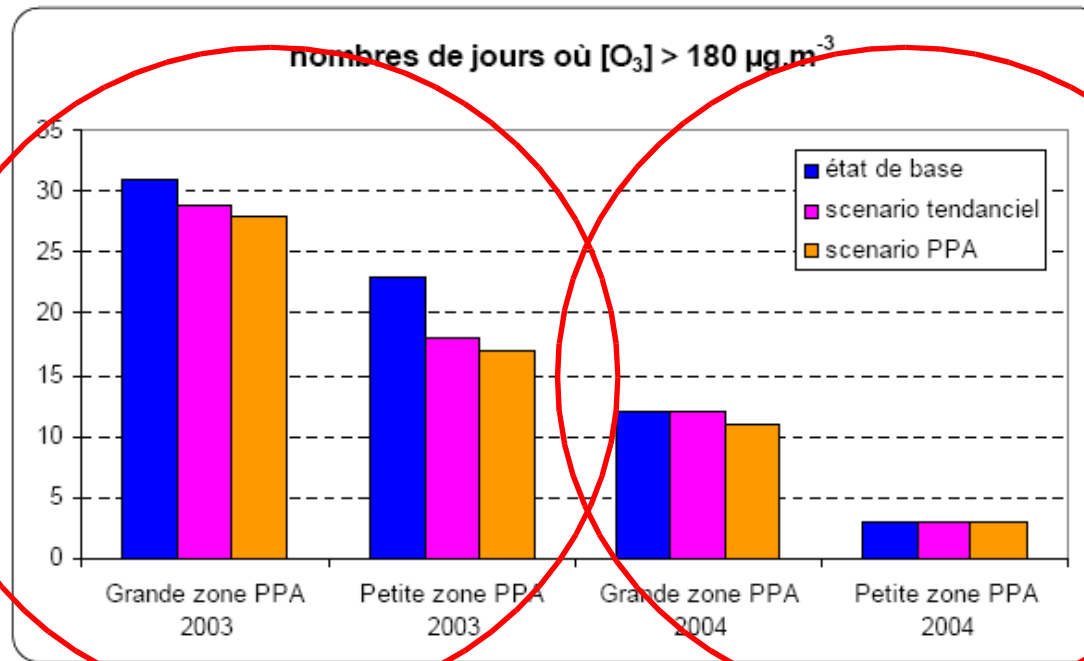
2010 scénario PPA



# Local answer to air pollution (i.e. ozone peaks): « atmosphere protection plan »

- Reducing ozone peaks means
  - reducing NOx emissions: « hard » transport reduction propositions (i.e. congestion charging zone)
  - Define « large scales » actions (Greater Lyon's scale is not great enough!)

« 2003-like »  
year



« 2004-like »  
year



# Urban planning: development of the SCOT of Lyons agglomeration

## 4 strategic axes for a mitigation Policy :

3. **Put in coherence the choices of urban planning and public transports to support “the city of the short distances”**: urban development firstly around the axes of collective transports and increased urban density , developing the poles of proximity services to support the logic of the short distances and the recourse to the soft modes, modal transfer for the carriage of goods,
5. **Develop a grid of public transports on the scale of the metropolis** : jointly sit the multipolarity on grid systems coherent (combined tariffing, clocking of the service road, coordination of the offers), development of REAL project, reinforcing the network of the park-relays, territorial grid of the axes of collective transport by the creation of North-South lines supplementing the radial railway system :
7. **Seek the energy effectiveness in the field of construction** : adopting reference frames “sustainable habitat” adapted to the new buildings and the rehabilitation of old ones
9. **Systematize the use of renewable energies** : best use of incinerations factories for household refuse, developing new manufacturing units in sectors of urban valorization, developing “wood-energy” dies

# Coming climate policy

- « self engagement » of reducing GES emissions
- Sectorial climate policies (including mitigation and adaptation):
  - Transportation
  - Habitat (i.e. integration of adaptation measures into « sustainable habitat » reference frames)
  - Agriculture
  - Management / Business
- Renewable energies action plan
- « Greater Lyon's future energies » local debate