

# Sanitary impacts of the CMMP plant in Aulnay-sous-Bois (Seine-Saint-Denis / France)

*elements of comparison with  
the Kubota plant*

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# Intervention

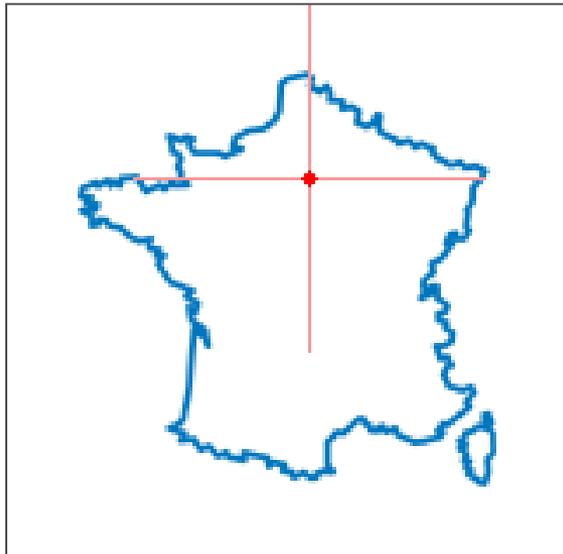
I. A brief history of the CMMP

II. The asbestos related diseases in the neighborhood of the plant

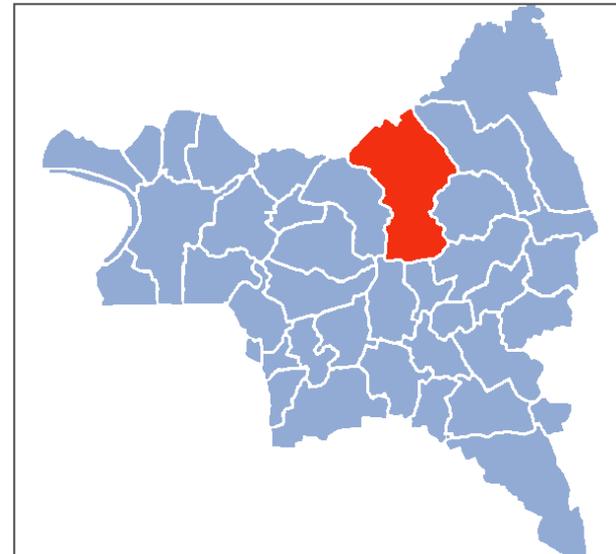
III. Kubota and CMMP : resemblances and disparities

# I - A brief history of the CMMP

- CMMP – “Comptoir des minéraux et des matières premières” (*Counter of minerals and raw materials*)
- Location : department of Seine-Saint-Denis (region Ile-de-France)



Location in France

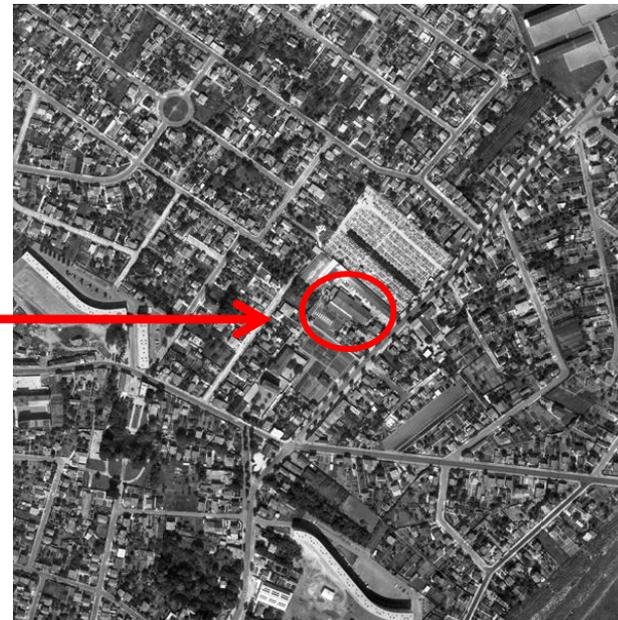


Location in Seine-Saint-Denis

# I - A brief history of the CMMP

- The CMMP company transformed and marketed various minerals such as raw asbestos (officially until 1975), zircon and mica. The company settled down in 1938 in an already urbanized zone containing houses, businesses and a school built in 1926. This zone was quickly going to densify and to welcome new schools.

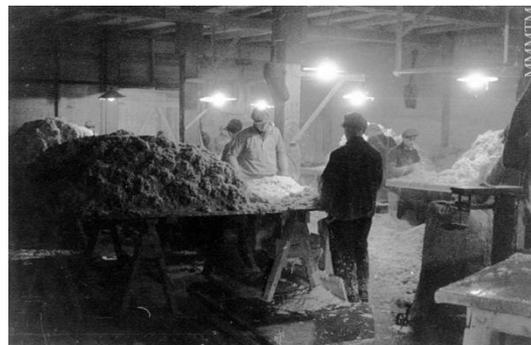
Situation of the  
CMMP in the urban  
tissu



Source : IGN - 1962

# I - A brief history of the CMMP

- After an interruption during the war, the company resumed its activity until 07/1991. The ground was acquired in 1999 and a request of construction of a lot deposited in January 2000.
- The activities of transformation of crocidolite from South Africa doubtless began in January 1938 to stop in 1940 with the arrival of the Germans. During this period, the tonnage of transformed material is included between 1 800 and 4 200 tons. Then, the activities started again in 1946 with a progressive extension of concerned minerals: mica, zircon besides asbestos
- The tonnage of asbestos fluctuated around annual 500 tons until 1968, decreased until 1975 (date of the official stop of the asbestos treatment in the CMMP).



Bagging activity  
similar to the one  
done in the CMMP

Source : musée minéralogique  
et minier de Thetford Mines

## II – The asbestos related diseases in the neighborhood of the plant

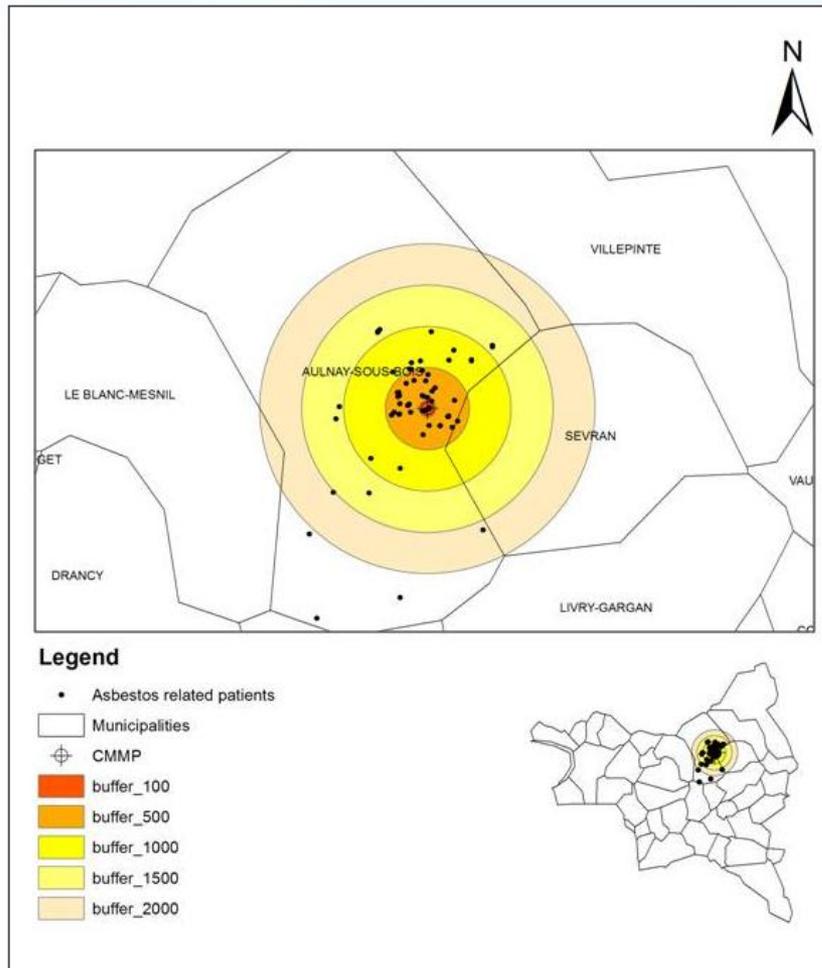
- a strong occupational exposure :
    - 900 to 1650 F/mL for the **grinding** activity
    - 400 to 1000 F/mL for the **bagging** activity
  - a doubtless environmental exposure :
    - many complaints of the neighbors from the 50's
    - white dusts deposits in the neighborhood
- a first estimation of the mesotheliomas numbers over the period 1968-1999 indicates an abnormally high death rate induced by this pathology compared to the Seine-Saint-Denis and to the whole France

## **II – The asbestos related diseases in the neighborhood of the plant**

A geolocalization of the patients has been realized on the basis of the Ban-Asbestos Association data.

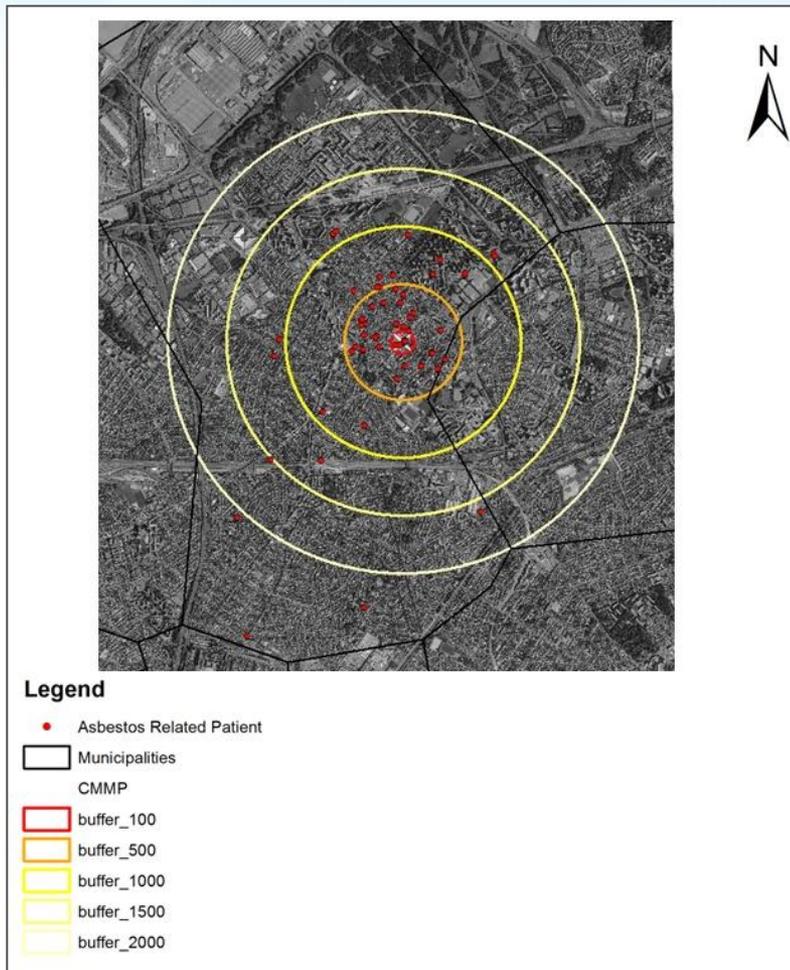
- **Ban-Asbestos Association** (data kindly supplied by Gérard Voide)
  - association organized in 2000
  - census of all patients suffering from asbestos-related pathologies close to Aulnay-sous-Bois
  - systematic census from 2000 and anterior data when proofs
- **118 found patients** with a few types of indications (date of birth, sex, place of birth, adress, type of diagnosis, type of exposure etc. ...)
- **73 geolocalized patients** : 61,9% of the preliminary database (Losses due to absence of addresses or erroneous addresses)

## II – The asbestos related diseases in the neighborhood of the plant



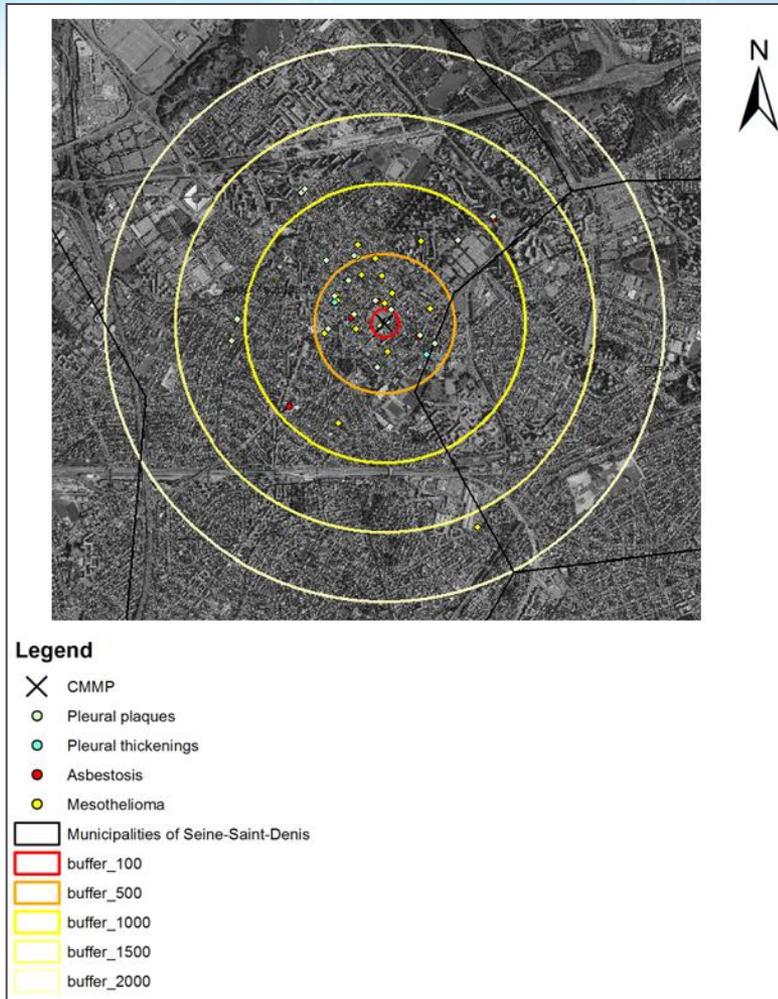
- Asbestos-related diseases in Aulnay-sous-Bois :  
*a function of the distance to the CMMP*
- 57 % of the geolocalized patients have had an address at a distance inferior to 500 meters to the CMMP

## II – The asbestos related diseases in the neighborhood of the plant



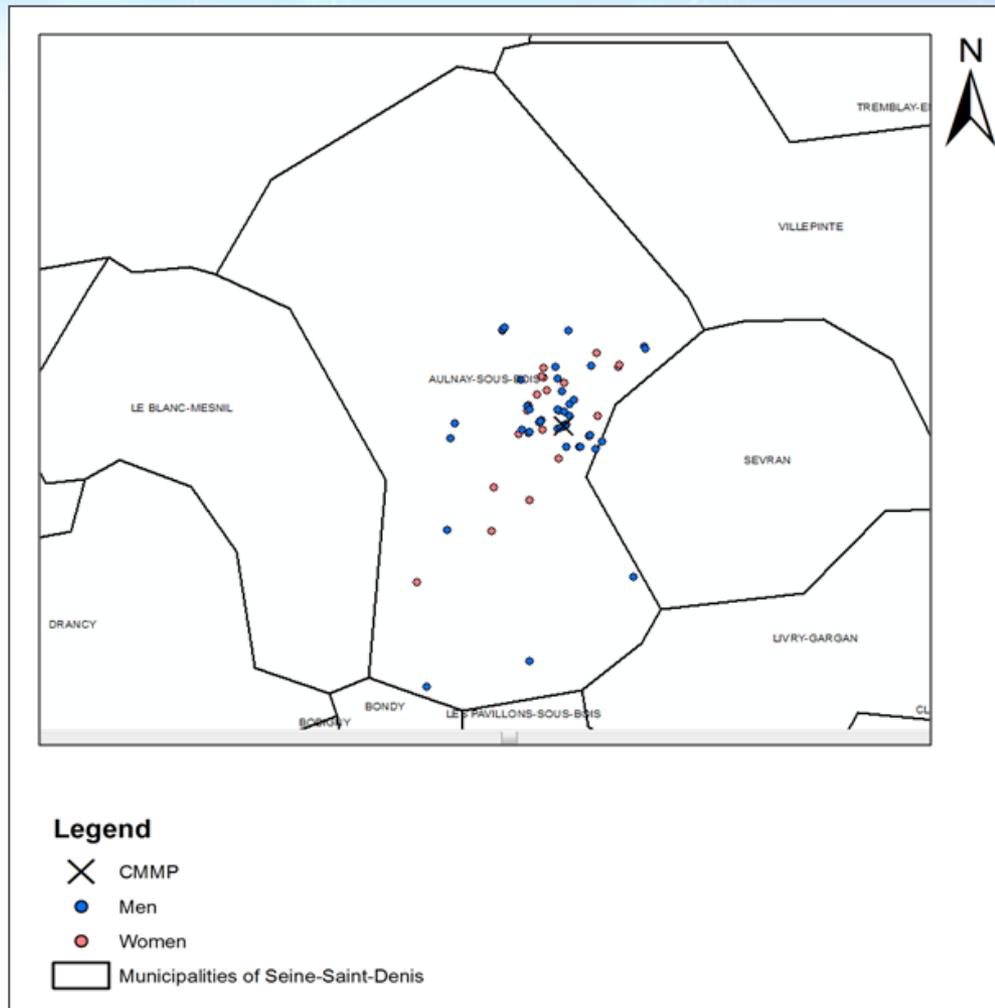
- All the patients had their addresses in a dense urban tissu

## II – The asbestos related diseases in the neighborhood of the plant



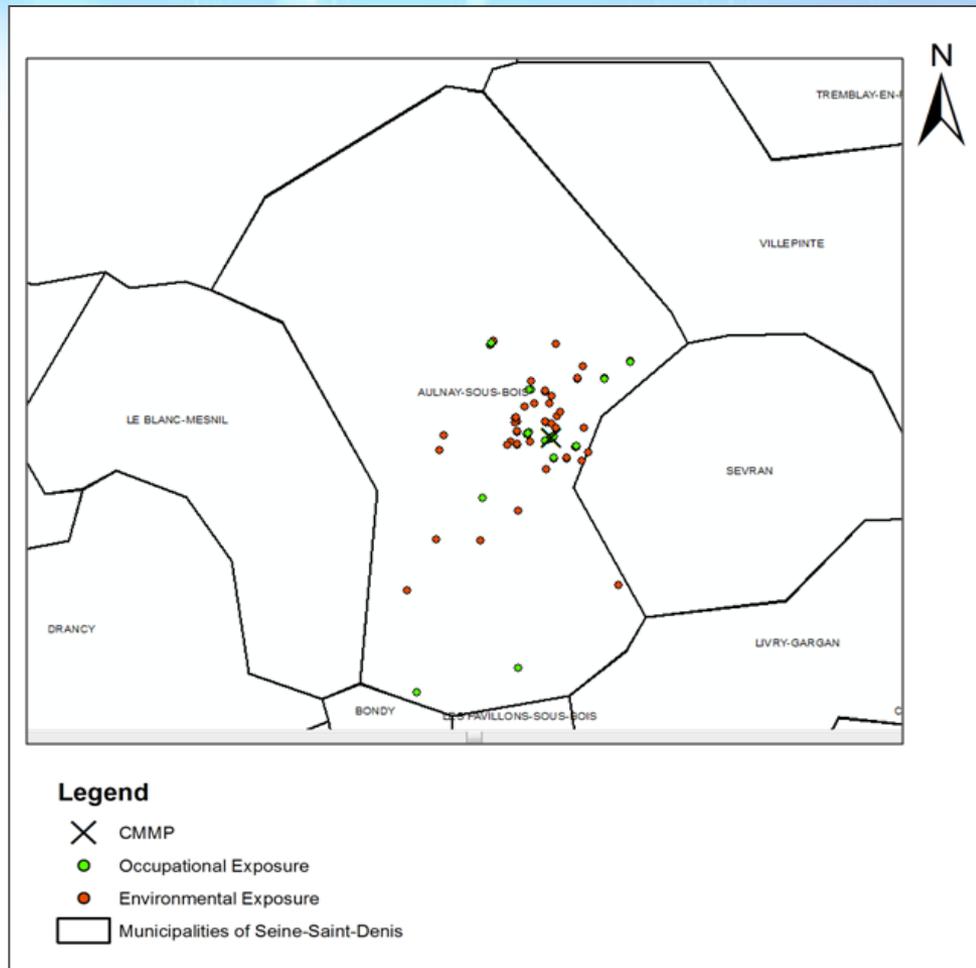
- Asbestos-related diseases around the CMMP (*diagnosis selection*)
  - Mesotheliomas : 18 cases (25%)
  - Pleural plaques : 24 cases (33%)
  - Asbestosis : 6 cases (8%)
  - Pleural thickenings : 3 cases (4%)

## II – The asbestos related diseases in the neighborhood of the plant



- A well-balanced sex-ratio
    - 41 Men (56%)
    - 32 Women (44%)
- but... women only had environmental exposures !

## II – The asbestos related diseases in the neighborhood of the plant

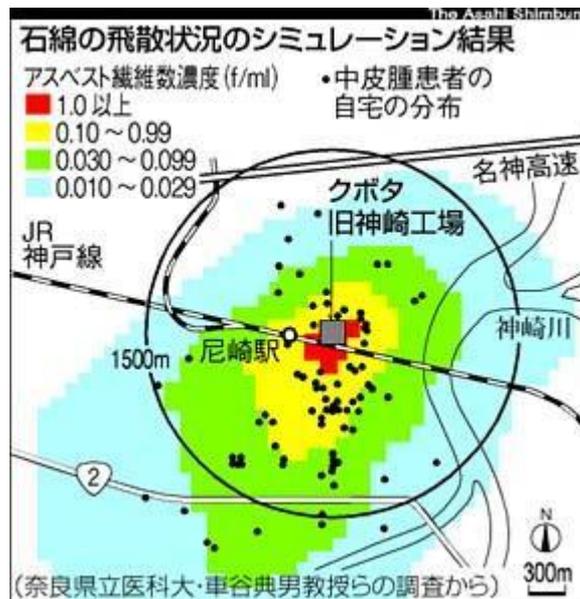


- Asbestos-related diseases around the CMMP :  
*occupational Vs environmental exposures*
  - only environmental : 58 cases
  - only occupational : 2 cases
  - both : 10 cases

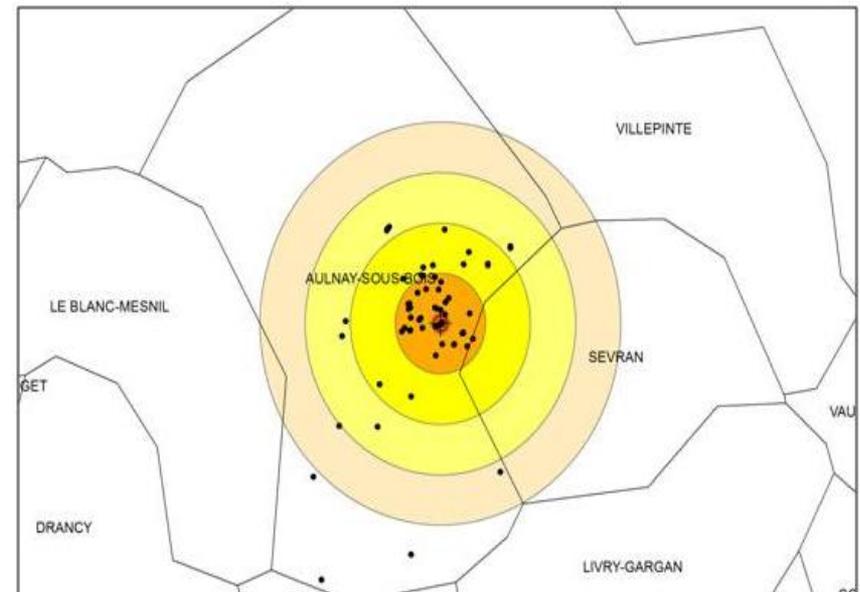
**A majority of environmental exposures**

# III – Kubota and CMMP : resemblances and disparities

- A strong density of cases in the immediate environment



*Kubota*  
(Nakaya, 2010)



*CMMP*

# III – Kubota and CMMP : resemblances and disparities

- Many lethal cases

**54 deaths**

(for both occupational  
and environmental  
exposures) in

**Aulnay-sous-Bois**

*(based on Gerard Voide  
data)*

**300 deaths**

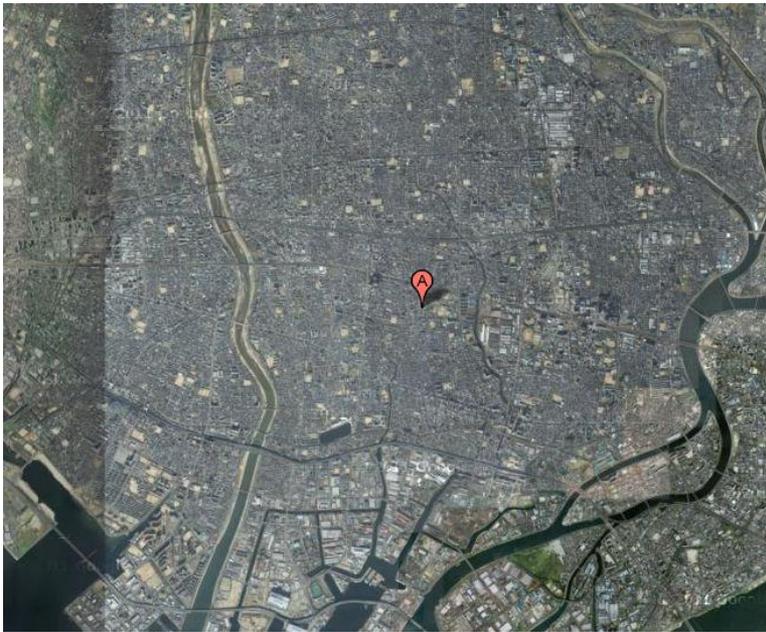
(workers and citizens) of  
asbestos-related diseases  
in

**Amagasaki**

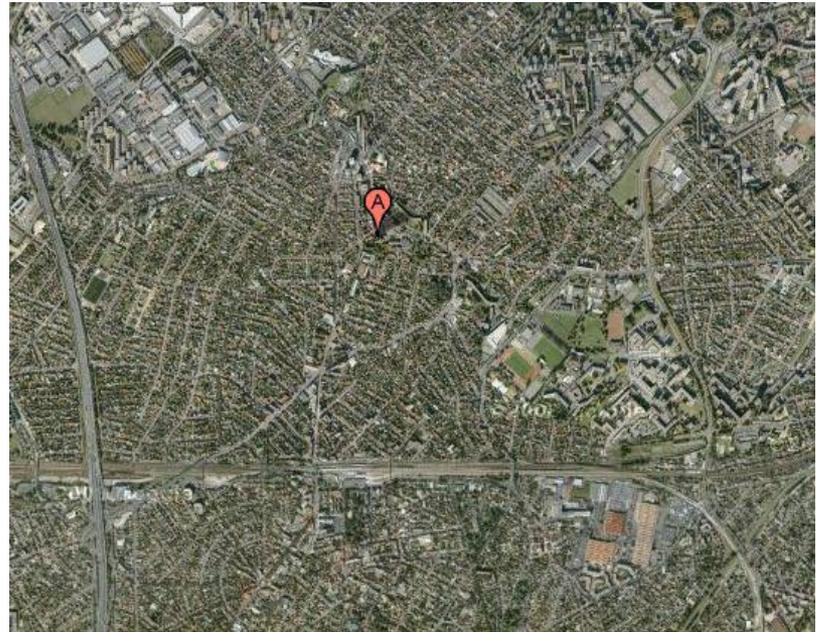
*(Lessons from Asbestos Problems  
in Japan, 2010. Hiroyuki MORI)*

# III – Kubota and CMMP : resemblances and disparities

- A dense urban tissu



Amagasaki



Aulnay-sous-Bois

# III – Kubota and CMMP : resemblances and disparities

- Tonnages involved :

## Annual use

- 4,670 tons in crocidolite and 4,600 tons in chrysotile from 1957 to 1975
  - 2,850 tons in chrysotile from 1976 to 1995
- [Kubota Corp., 2005]

Amagasaki

## Annual use

- Between 1,800 and 4,200 tons in the end of the 30's
- Around 500 tons / year until the middle 70's

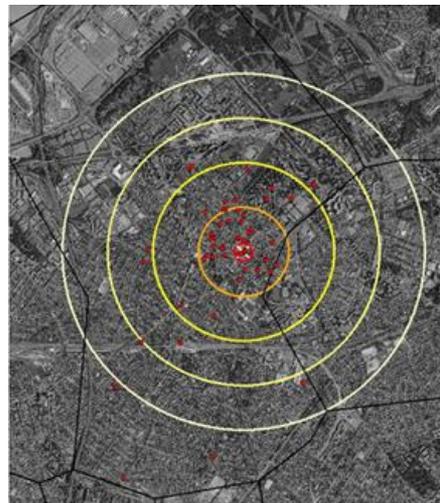
Aulnay-sous-Bois

# III – Kubota and CMMP : resemblances and disparities

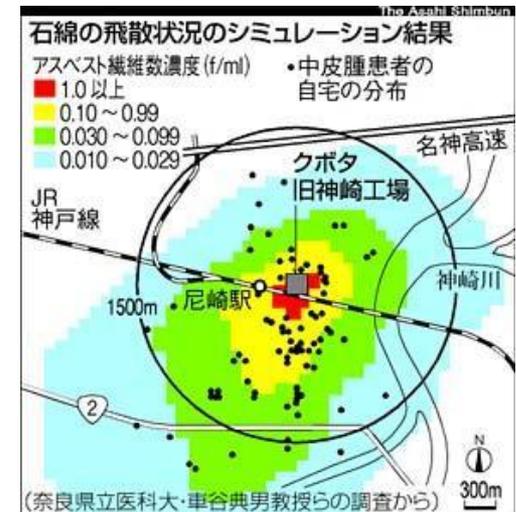
- As for the Amagasaki plant, epidemiological studies could be led in the CMMP example following the same framework...



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*Dispersion of the fibers around the CMMP*

*Geolocalization of the cases in Aulnay-sous-Bois*

*Possibilities to obtain the same results as in Japanese studies ?*



Thank you