

V Encontro Nacional,
I Congresso Internacional
de **RISCOS**

Auditório da Reitoria
Universidade de Coimbra

29, 30 e 31 de Maio de 2009

**Forgotten disaster or mastered risk ?
Geo - historical approach of flood risk in
urban area. Example of Mulhouse (France).**

Program TRANSRISK

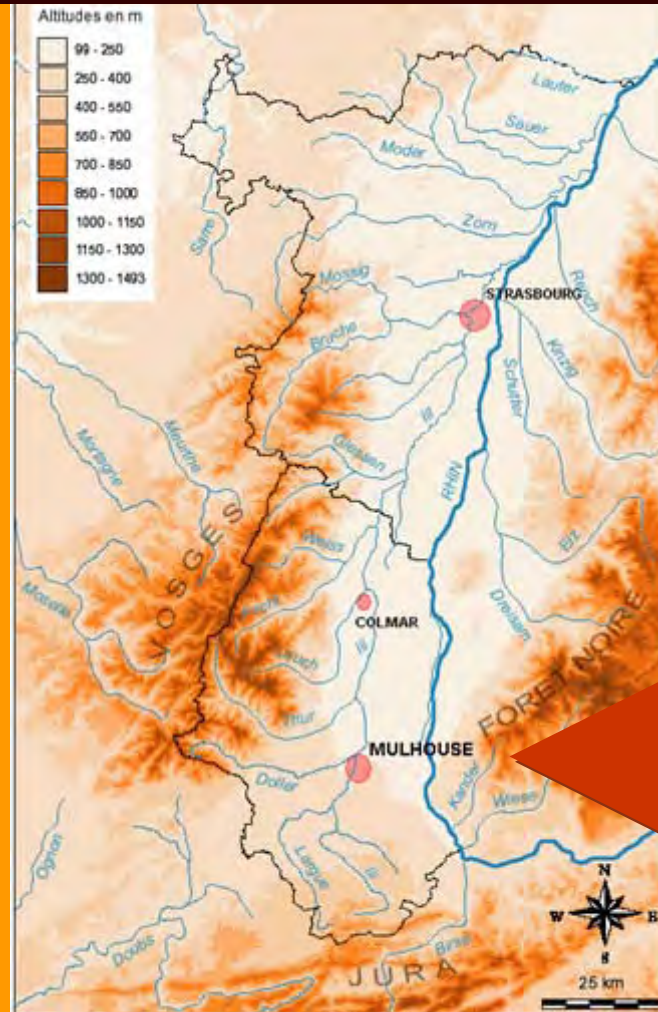
*R.Ansel, O.Guerrouah, B.Martin, MC.Vitoux, L.With (CRESAT, Mulhouse)
T.Baumann, A.Drescher, R.Gläser (IPG, Freiburg)*

Forgotten disaster or mastered risk ?

1. What about flood risk in Mulhouse ?

- *The city of Mulhouse and the Ill river*

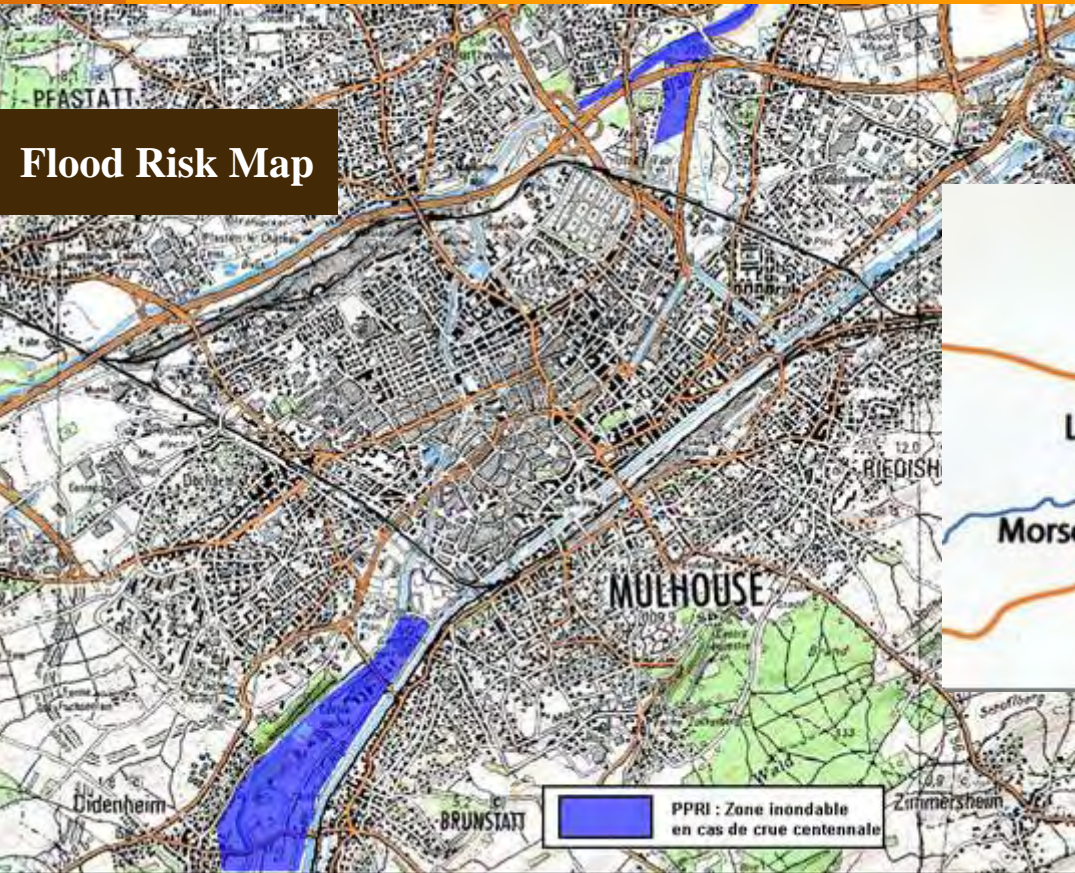
Basin	4760km ²
Length	223 km
heights	130-620m
Flow	58m ³ /s



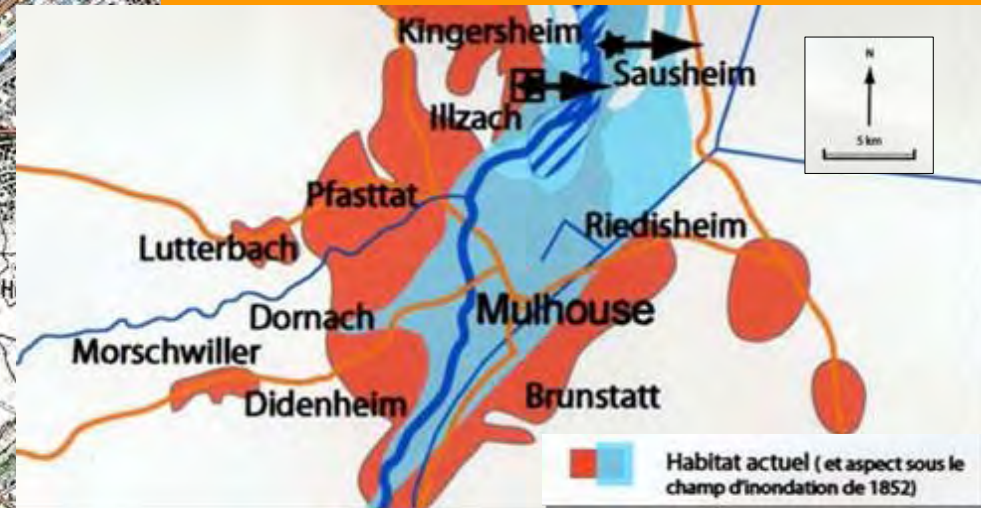
Forgotten disaster or mastered risk ?

1. What about flood risk in Mulhouse ?

- *Flood Risk Map (PPRI) and flood history...*



Flood of 1852



Forgotten disaster or mastered risk ?

1. What about flood risk in Mulhouse ?

- *Flood Risk Map (PPRI) and flood history...*

discrepancies ?

• Climatic explanation ?

• Change in vulnerability ?

• No...

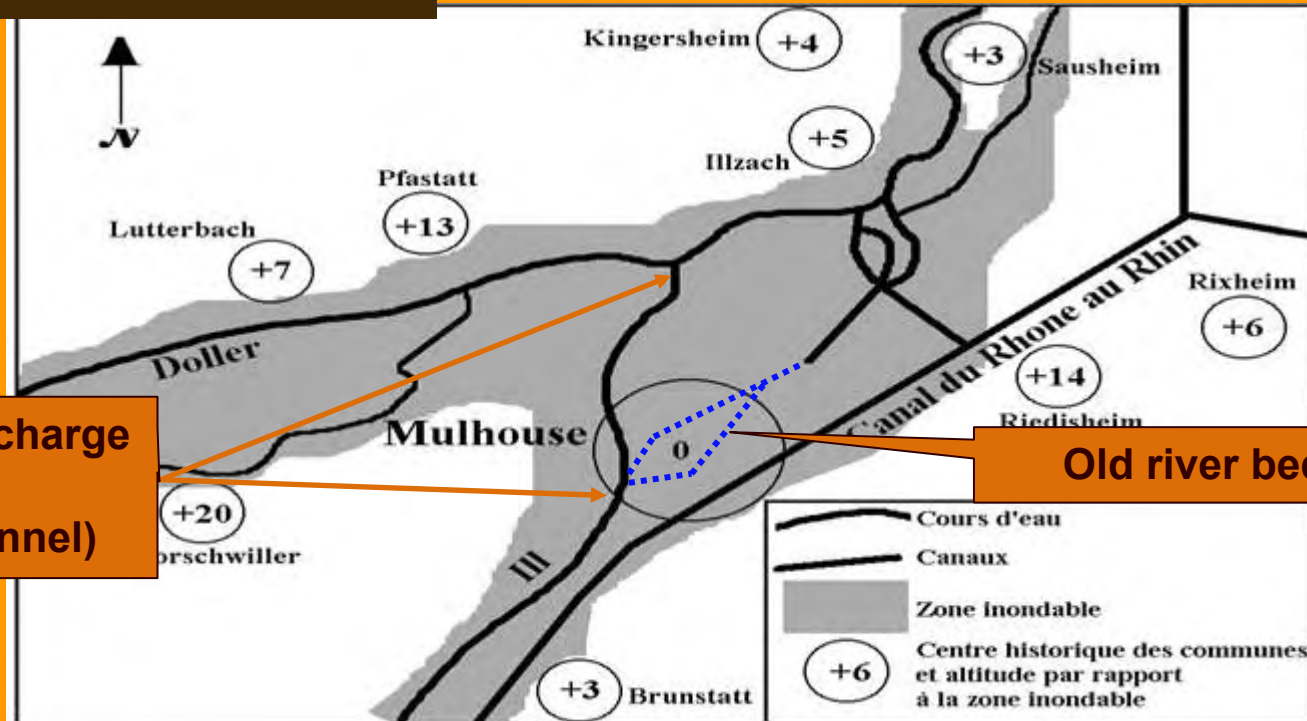
• Yes ?

Forgotten disaster or mastered risk ?

1. What about flood risk in Mulhouse ?

- *A channel to protect the city...*

Modification of the river bed



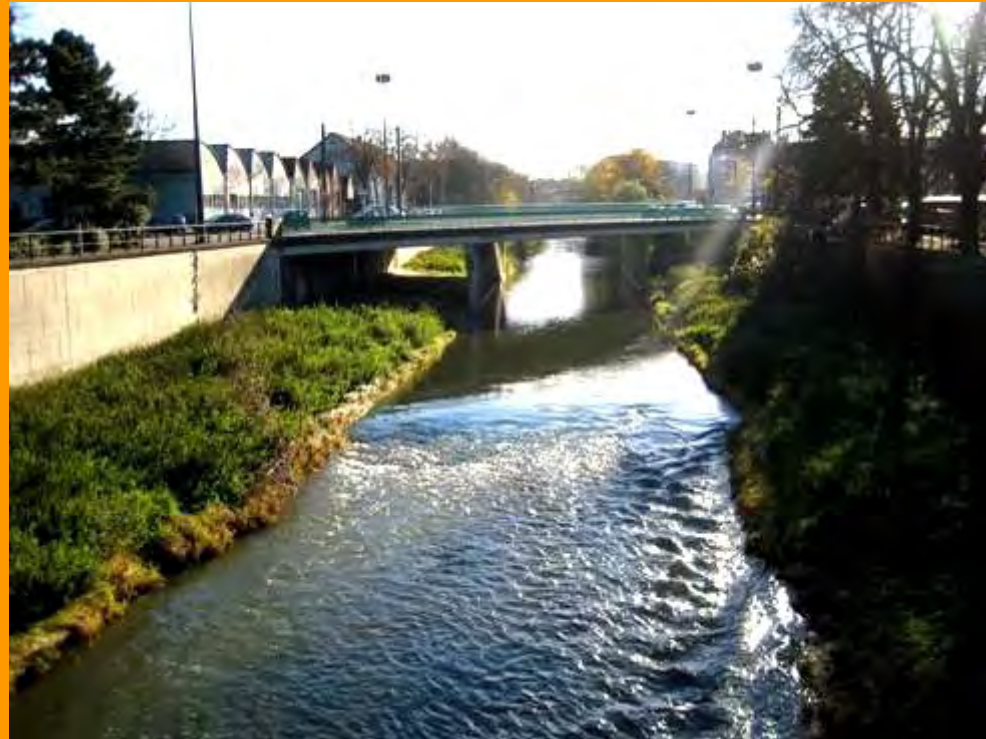
« Canal de décharge
de l'III »
(bypass channel)

Old river bed

Forgotten disaster or mastered risk ?

1. What about flood risk in Mulhouse ?

- *A channel to protect the city...*



Length

3,5 km

Width

≈ 40m

Depth

≈ 5-6m

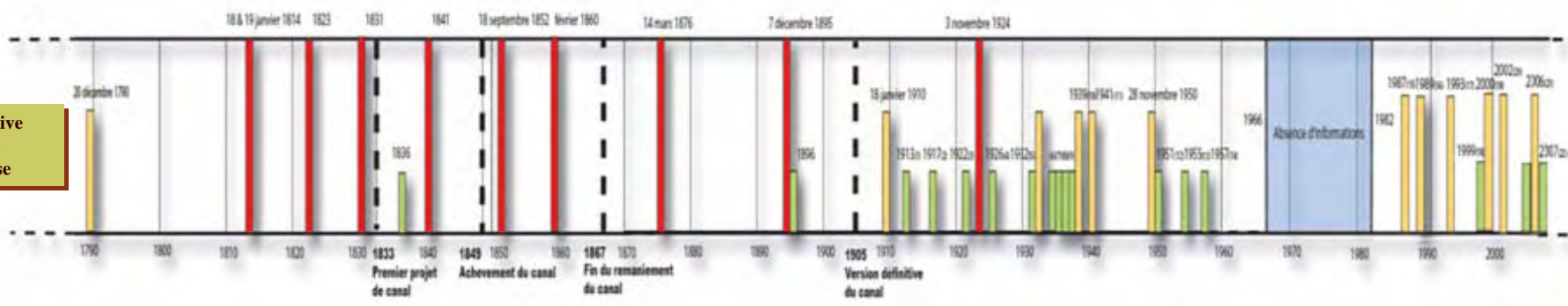
Forgotten disaster or mastered risk ?

2. Evaluation of protection against the floods

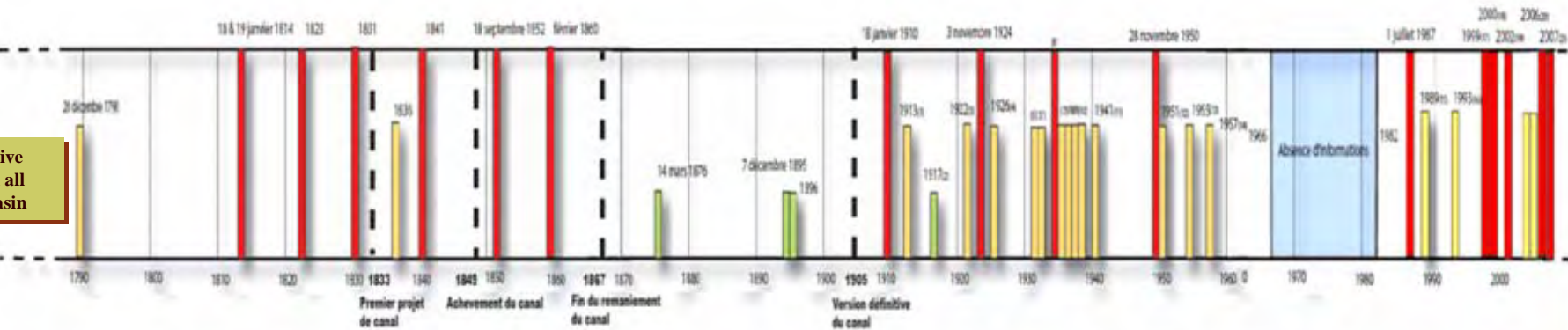
- *geo – historical study (1700 – 2009)*

- 
- **chronology**
 - **classification**
 - **comparison**
 - *floods in all the Ill basin*
 - *floods only in Mulhouse*

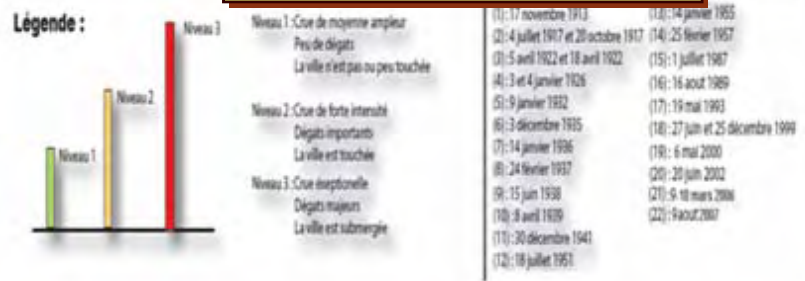
Destructive floods in Mulhouse



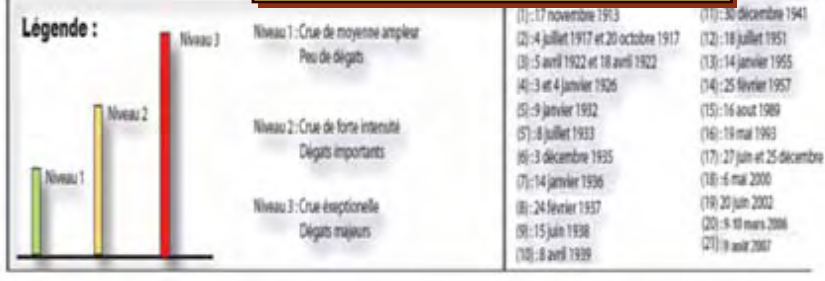
Destructive floods in all the Ill basin



Destructive floods in Mulhouse



Destructive floods in all the Ill basin



Forgotten disaster or mastered risk ?

3. Contextualisation

- *floods and solidarity between territories
(systemic approach)*

- upstream – downstream
 - *alert*
 - « *sacrifice* » *downstream*
 - *protection of flooded areas
upstream*

But...

Forgotten disaster or mastered risk ?

3. Contextualisation

- *floods and solidarity between territories
(systemic approach)*

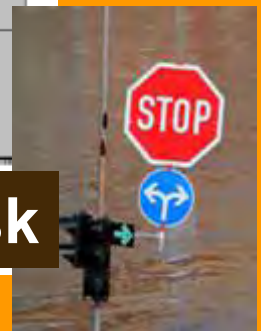
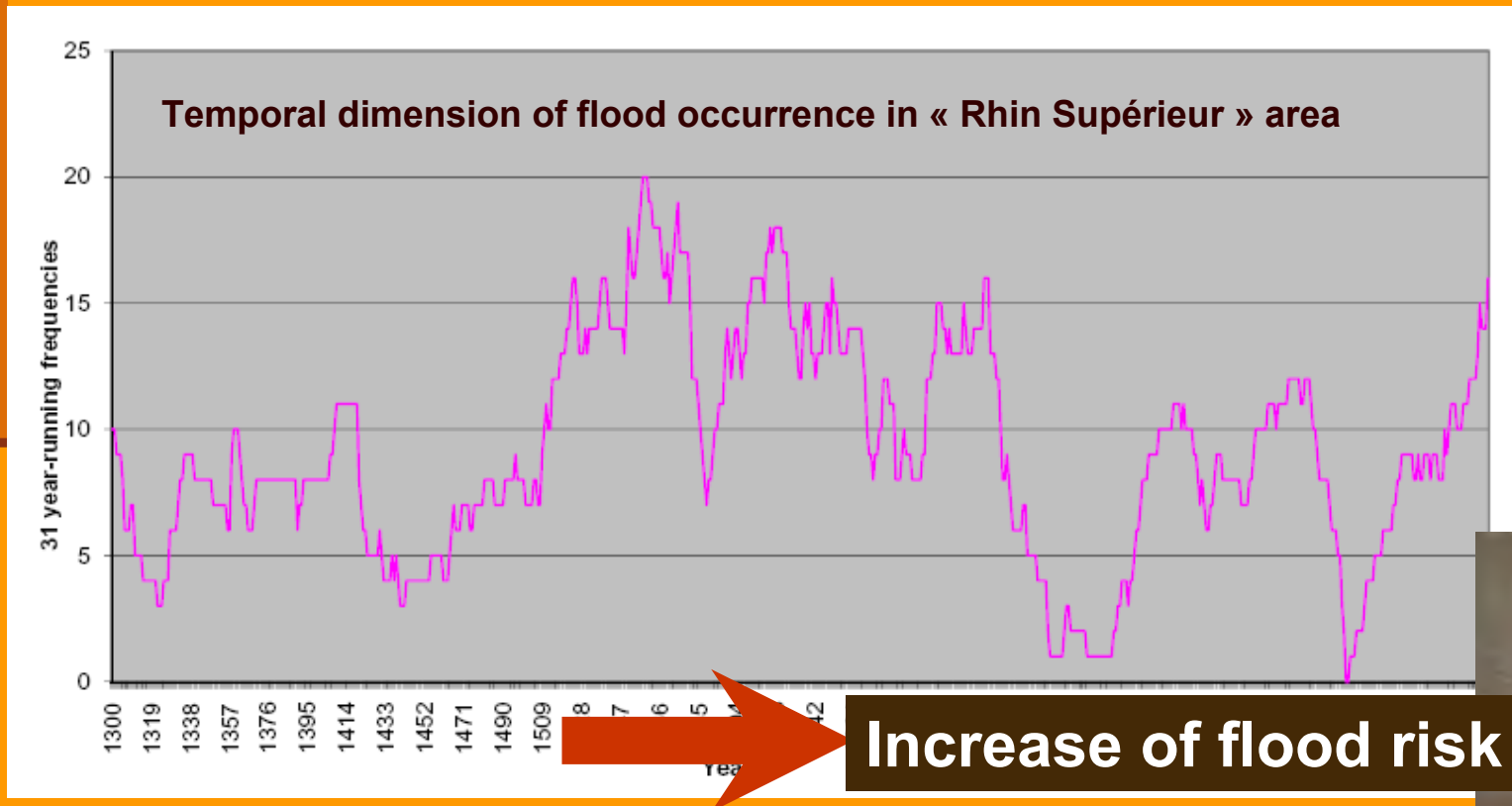
- upstream – downstream
 - *call for more protection*
 - *dikes, dams...*
 - *land pressure*
 - *landuse changes*

And...

Forgotten disaster or mastered risk ?

3. Contextualisation

- knowledge of extrem events ?



Forgotten disaster or mastered risk ?

4. Discussion

- *Is the channel under-sized, now ?*

August 2007



November 2007



Danger...

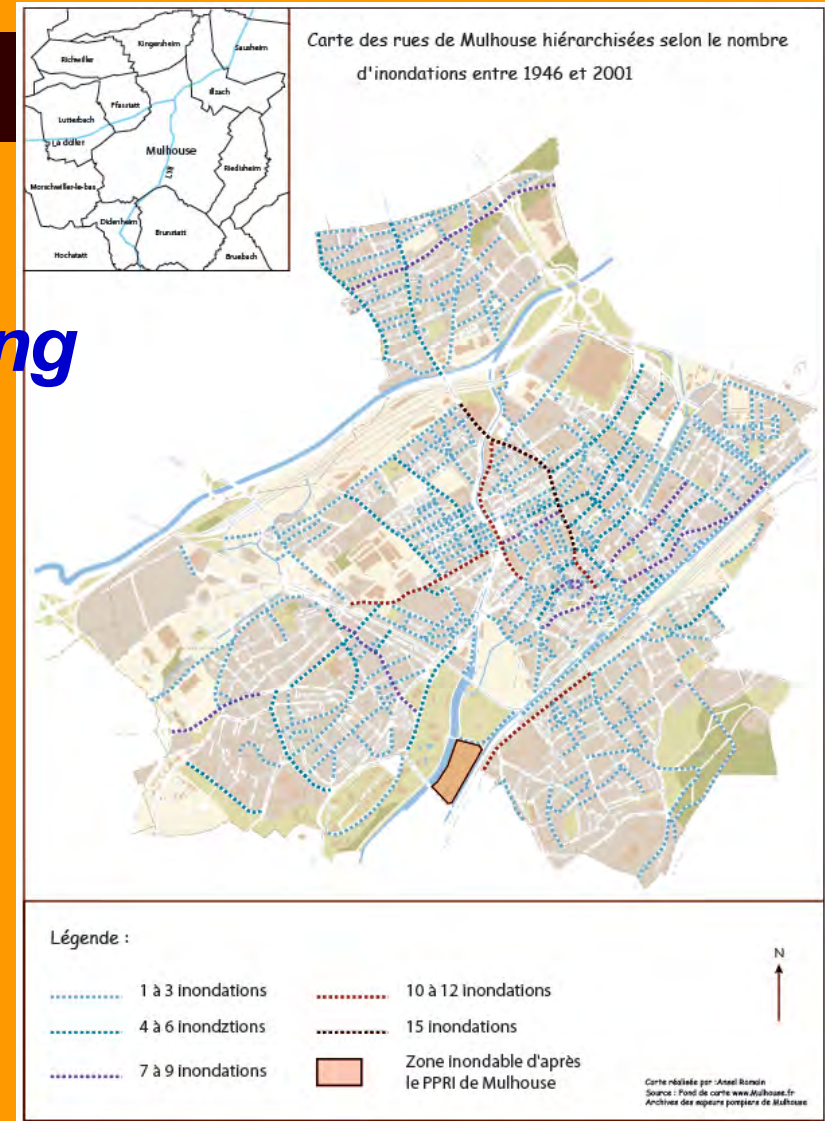
Forgotten disaster or mastered risk ?

4. Discussion

*The city is exposed to a new risk : **urban streaming***

- *Frequent, moderate*
- *« Mastered » ?*
- *No mapping !*

...Forgetting and underestimation



Forgotten disaster or mastered risk ?



Thanks a lot