



Avian Influenza in the Netherlands

Outbreak 2003 - Regionalisation

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landbouw, natuur en
voedselkwaliteit

AI in the Netherlands | SW | okt 04

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The Netherlands

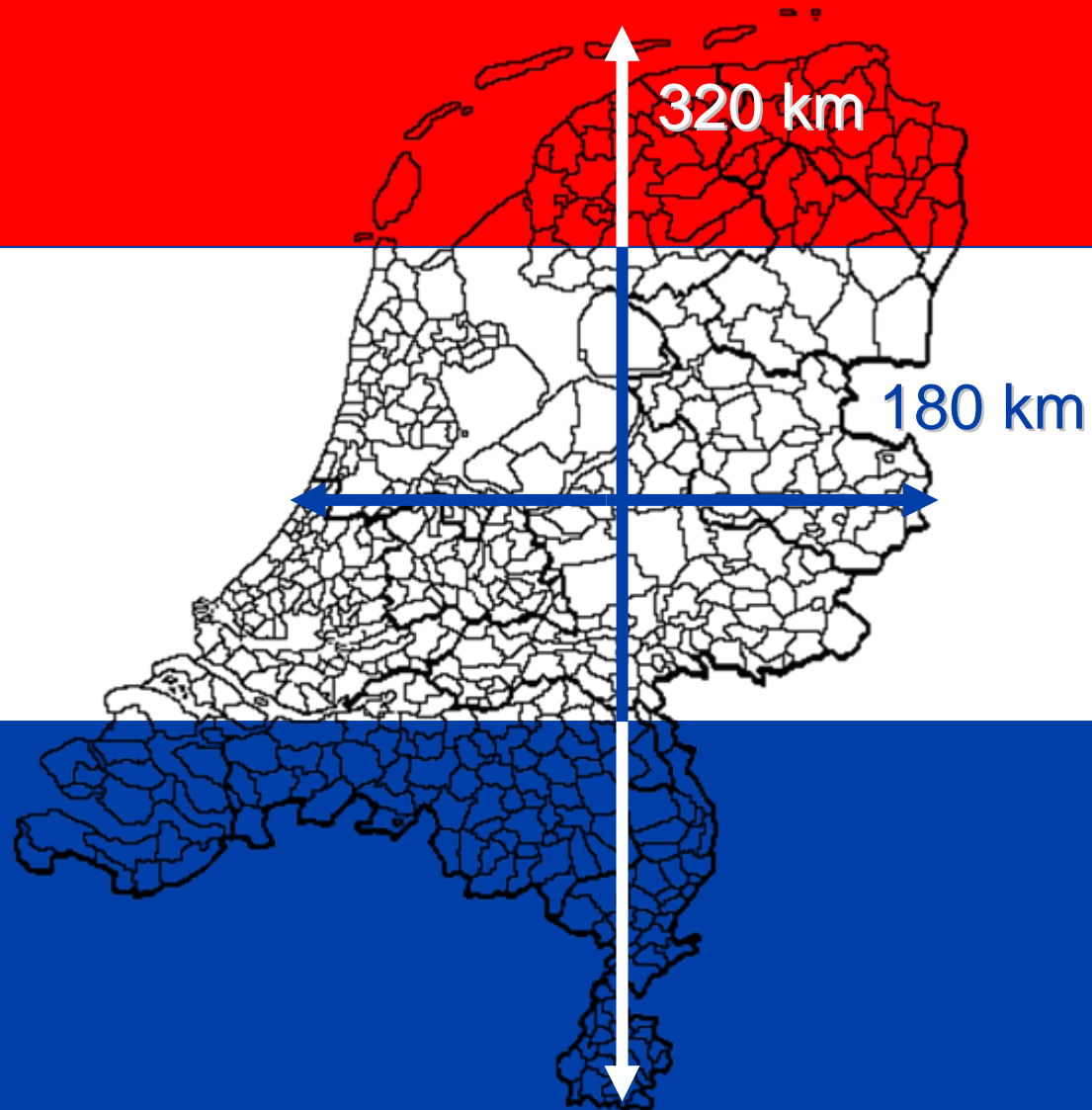
41,160 km²

16 million inhabitants

4 million cattle

12 million pigs

100 million poultry





Agenda

- **Facts and figures**
- **The epidemic**
- **Chain of command**
- **Eradication**
- **Monitoring**
- **Lessons learned**
- **Hobby-poultry**



Facts and figures (1)

Virus: HPAI H7 N7

Period: February 28, 2003 until May 7, 2003

Costs: €270 million: Government, control of the disease
€500 million: Industry, trade disruption

Facts and figures (2)

Infected holdings:	241	6.000.000 birds
Serologically positive holdings:	14 + 3	73.000
Holdings culled pre-emptively :	1.086	19.500.000
Holdings culled for welfare reasons:	109	4.500.000
Hobby-Poultry addresses:	16.500	175.000

Total: 1.453 + 16.500 = 17.953 holdings

30,3 million birds (= 30% of all Dutch poultry)

Eradication Measures/Strategy

EU directive 92/40 and Dutch legislation

- **HPAI is notifiable**
- **Protection zone: 3 km**
- **Surveillance zone: 10 km**
- **Stand still 72 hours**
- **Culling of the infected holding**
- **Tracing, epidemiological enquiry and screening**
- **Pre-emptive culling** - in zone with radius 1 km
- dangerous contacts
- **Export stop**
- **Compartmentalisation**



The epidemic (2)

Symptoms:

Mortality (>80%), egg drop, decrease of food and water intake, swollen heads, cyanosis, diarrhea and dyspnoe

February 28:

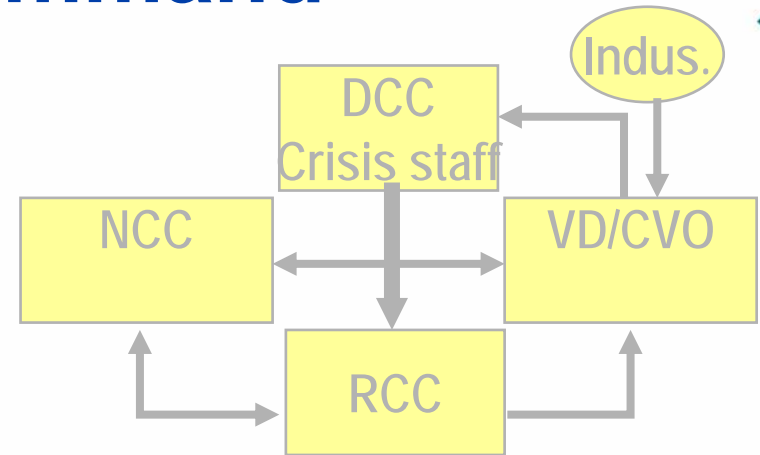
High mortality reported on both farms

17.00 hours IFT for AI positive:

notification of suspicion



Chain of Command



Departmental:

Crisis staff (DCC): Strategy, decision making

Policy team (DBT): make policy options

Central/Regional:

NCC/RCC: tactics and operations

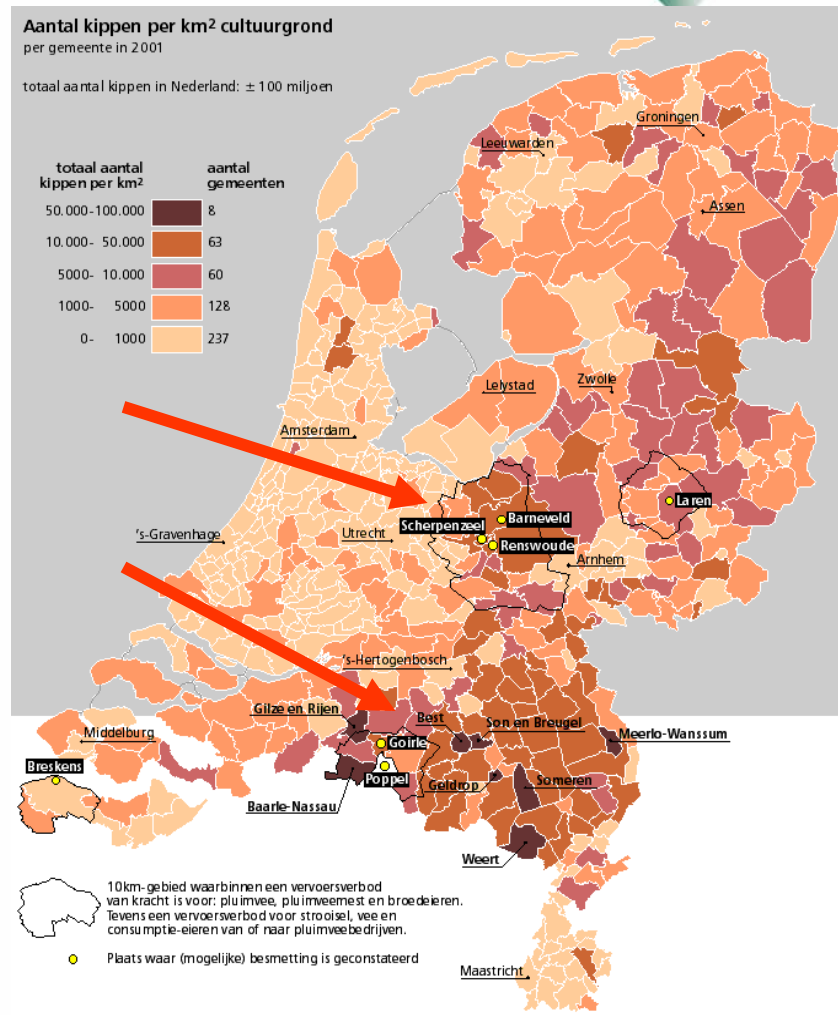
Development of the epidemic

- HPAI H7N7
- Mortality very high
- Rapid spread of infections between farms
- Buffer zone established
- Both chicken farms as turkey farms were infected
- ‘Problem’ with culling





Density of poultry holdings in The Netherlands



Trouw: MEHEL VAN ELK

Bron: C 15



Eradication (1)

March 1,

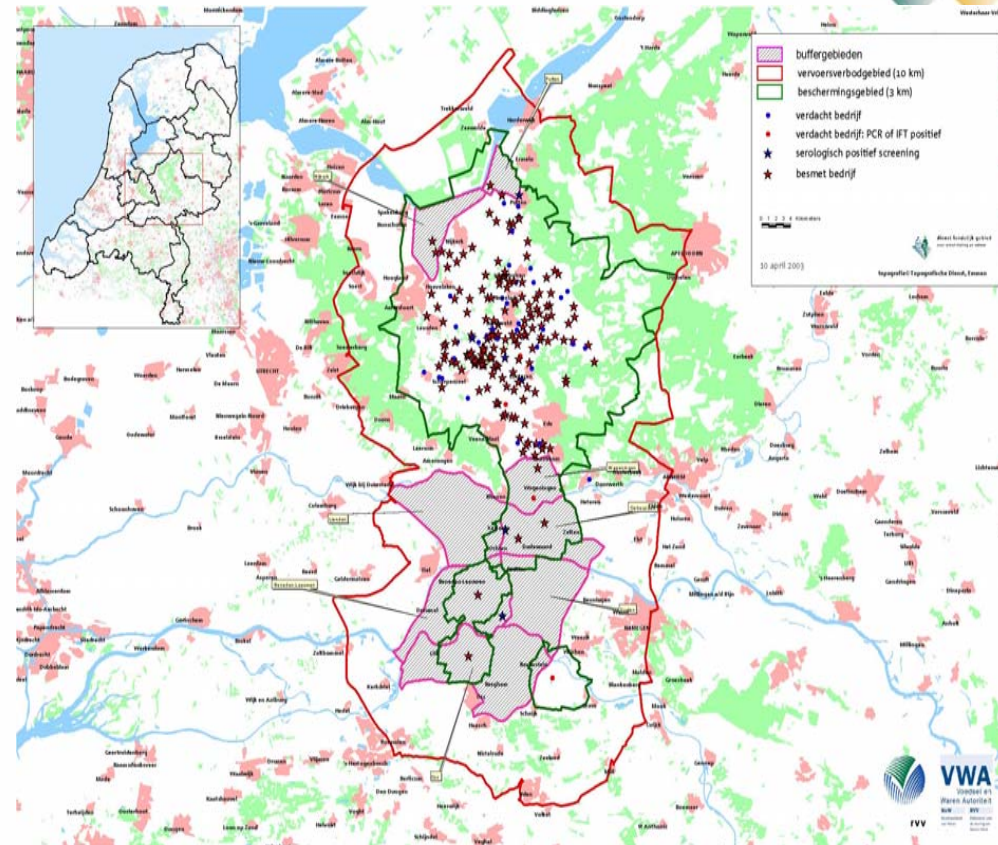
- **Stand-still 72 hours**

March 4,

- **First holdings have been culled + pre-emptive culling 1 Km**

March 25,

- **Beneden Leeuwen**
- **Culling of bufferzones (Wageningen and Putten)**





Eradication (2)

- March 27:** Start compartmentalization
- April 1:** Culling protection zone GV
- April 3:** Ospel (Nederweert)
- April 4:** 2nd stand-still (until 10 April!)
- May 11:** Last infected farm has been culled

Compartmentalization, 28 April 2003



After culling cleaning and disinfection started



Eradication (3)

- June 1:** Removal of the manure from the infected holdings
- June 27:** Start sentinel procedure
- July 16** Lifting Surveillance zones
- until august 22:** No restrictions anymore within the EU
- November 11, 2003:** The Netherlands fulfil all conditions of the OIE

Monitoring (1)

Introduction through wild water fowl?

Is LPAI present from which HPAI may have been developed?

1. Monitoring wild life in infected areas

2. Monitoring poultry whole country



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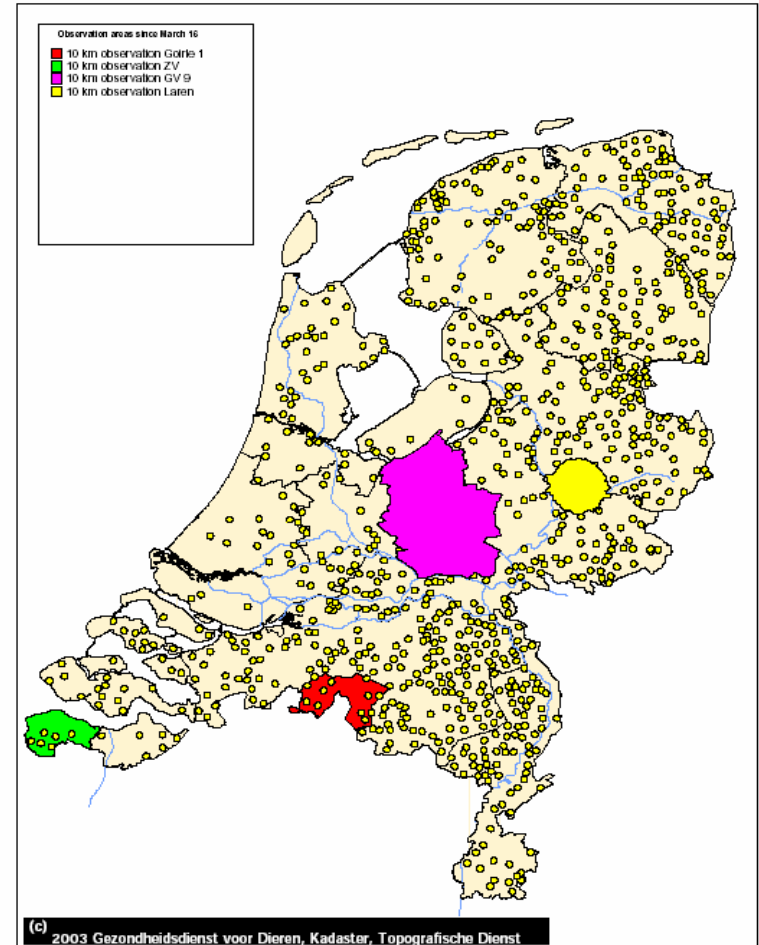


Monitoring (2)

All poultry holdings in The Netherlands

Poultry farms NL with Observation Areas AI (situation 16-03-2003)

(Source: Geographic Information System Gezondheidsdienst voor Dieren (Animal Health Care))





Monitoring (3)

All poultry holdings which were monitored for LPAI

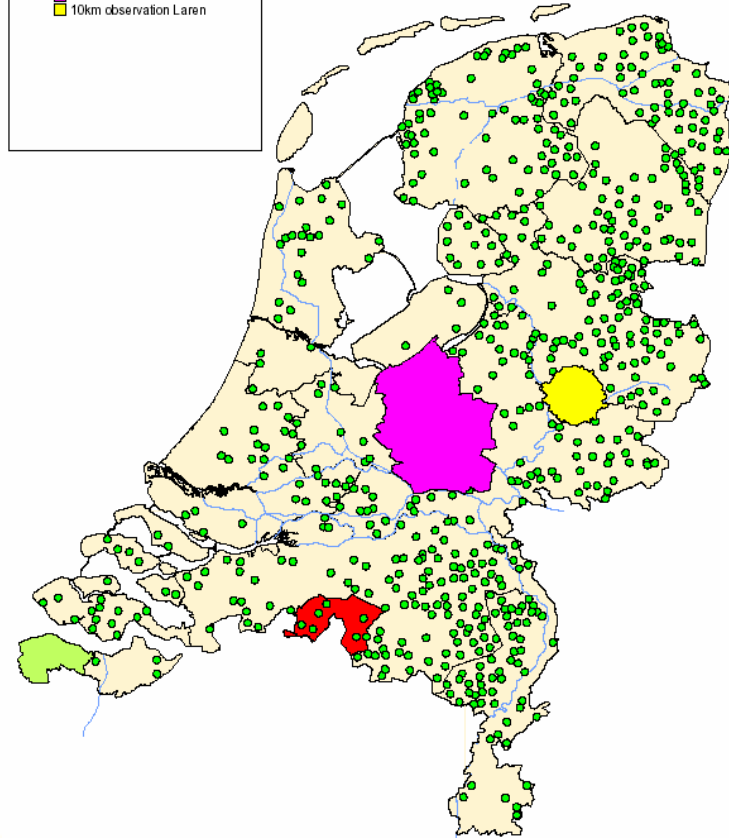
1.224 holdings
27.010 samples

Poultry farms, screened on AI, including observation areas (situation 16-03-2003)

(Source: Lab Information System Gezondheidsdienst voor Dieren (Animal Health Care))

Observation areas since March 16

- 10 km observation Goirle 1
- 10 km observation ZV
- 10km observation GV 9
- 10km observation Laren

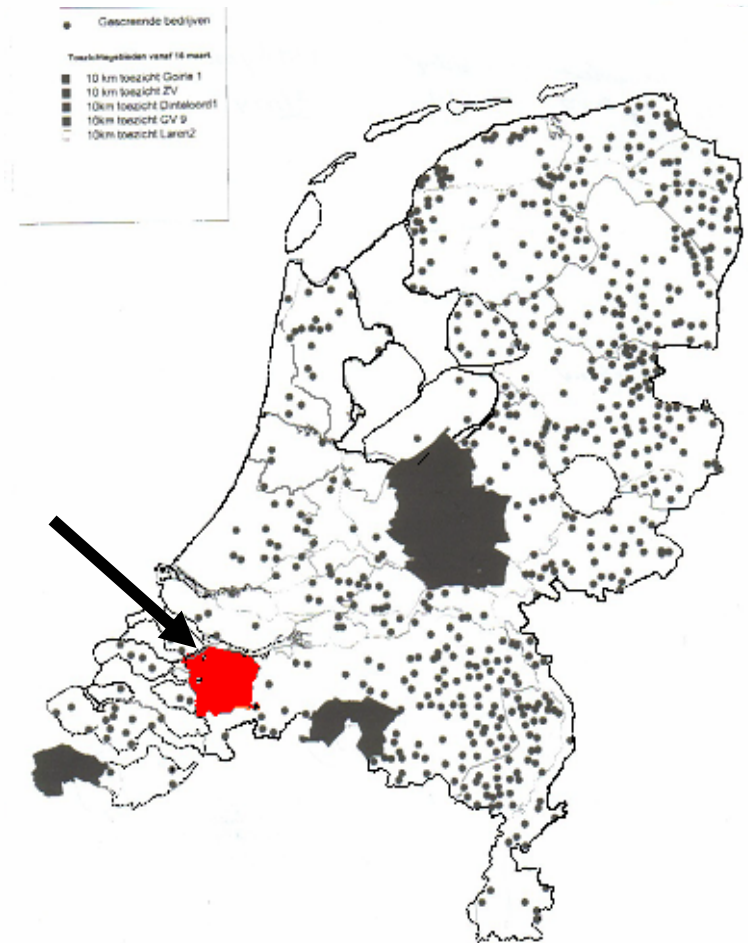




Monitoring (4)

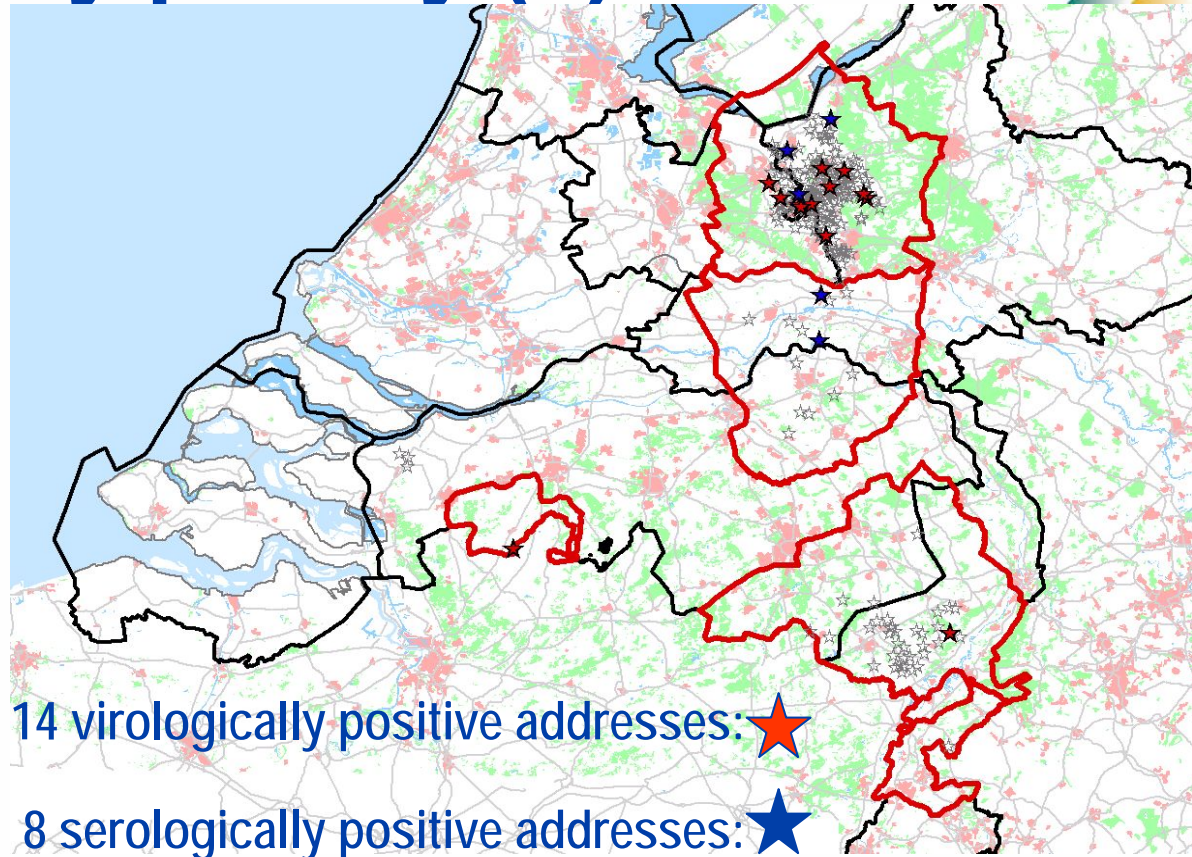
Locations of the holdings which found sero-positive

3 holdings sero-positive (red) for LPAI





Hobby poultry (1)





Hobby poultry (2)

- Culled 16.500 addresses
- 175.000 birds
- High poultry density
- Back yard flocks are at risk
- Infected back yard flocks



Lessons learned

Veterinary

- Be aware of emerging infectious diseases
- Importance of early detection/early warning
- Importance of monitoring for LPAI
- Regionalisation:
 - essential tool
 - safe in practice
 - Wish for fixed borders



Thank you for your attention

