

Séminaire de Pôle Suds : Fertility transitions in the Arab countries

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The Diffusion of New Fertility Behaviours in Algeria: Geographical Changes Observed between 1987, 1998 and 2008 Censuses

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Total Fertility Rate

From 8 to 2 within 3 decades

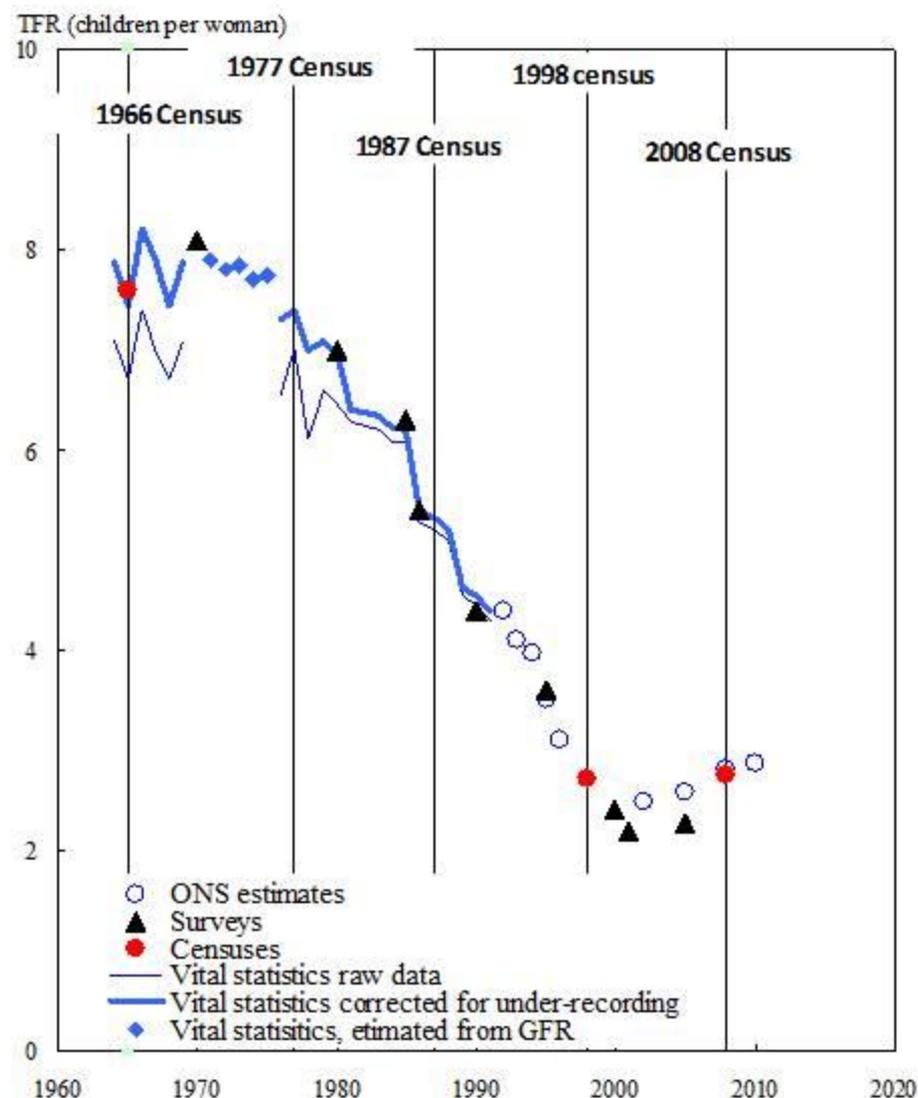
In Algeria fertility rate fell dramatically from the mid 1970s to the end of the 1990s. Then it increased during the last decade.

It will be interesting to study the diffusion of these changes of fertility behaviours over this periode.

But:

- only censuses can provide detailed geographical information
- the census of 1977 does not provides any information on fertility.

So we are interested here in the période 1987-1998 (rapid decline) and 1998 -2008 (increase) and their diffusion over all the country



Two questions

1. How these new fertility behaviours diffused over the whole Algerian territory?
2. What about the changes of age at marriage, first way of the fertility control?

Data and sources

- 3 censuses :
 - 1987 : children ever born, marital status
 - 1998 and 2008: children ever born, date of birth of the last child, date of 1st marriage, marital status
- 3 levels of analysis :
 - « *wilayates* » 15 in 1966, 31 in 1977 and 48 in 1987 and over
 - « *dairates* » : 91 in 1966, 160 in 1977, 548 in 1998 and over
 - « *Communes* » : 676 in 1966, 703 in 1977, 1541, in 1987 and over

1. Fertility changes

1. Geographical differences in **total fertility rate** : available only for the 1998-2008 period (while fertility stopped to decline and rose)
2. From 1987 to 1998, **Parity at 35-39 years**, may serve as a good proxy to investigate this period of decline

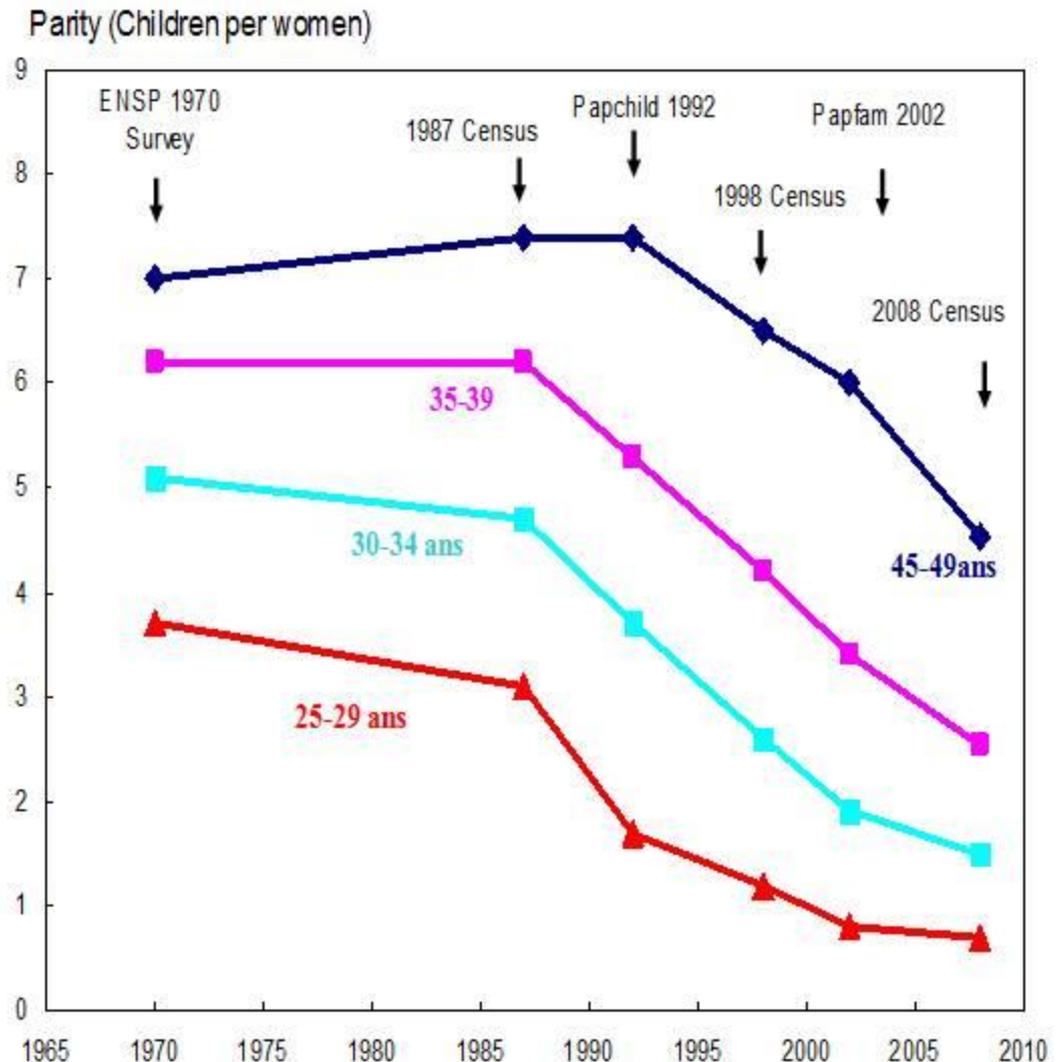
1. Period 1987-1998 : Geographical
différencies in **Parities**

Parities at various ages

-Until the middle of 1980s parities remained higher (>5 children per woman) at ages 30 years and over.

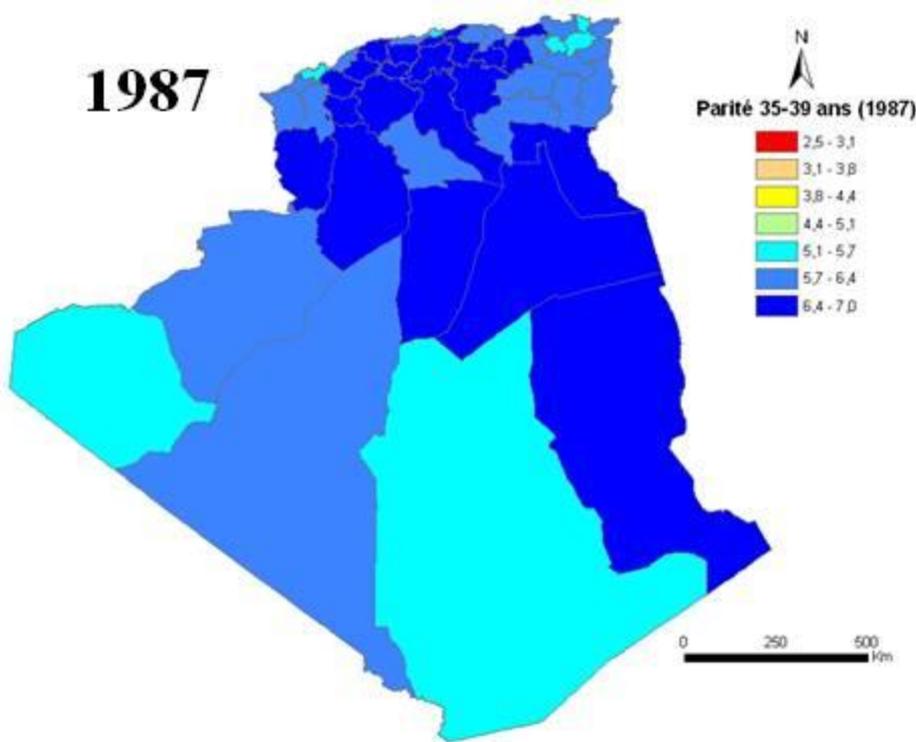
- Only women of 30 years and above began to reduce their fertility, essentially by reporting their age at marriage

-From 1987 to 2008, all parities declined strongly and the P35-39 ans is still decreasing with rapid rythm

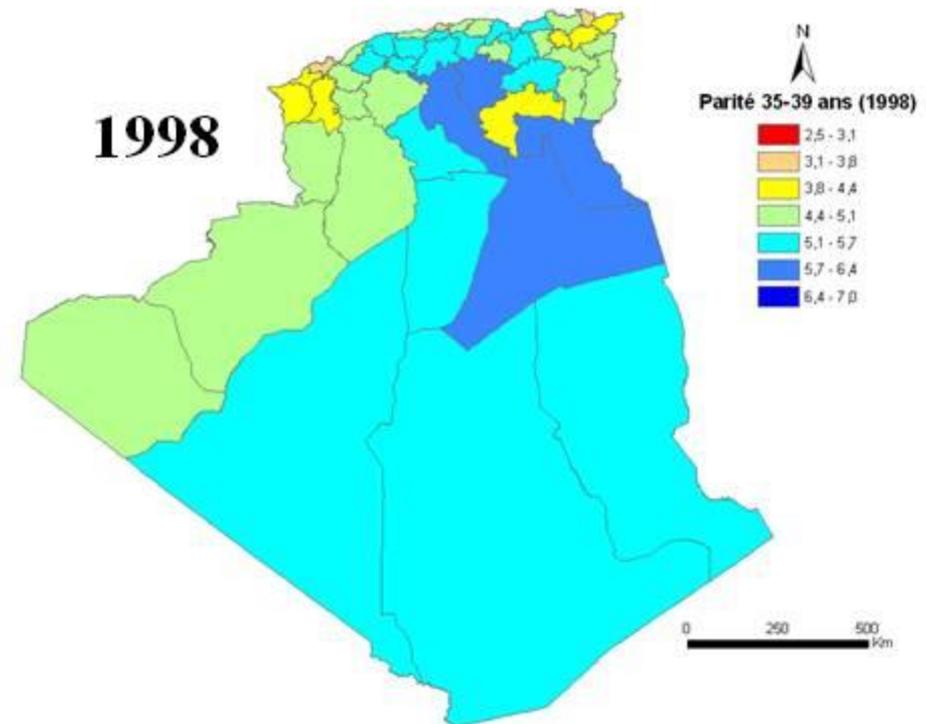


Parity at 35-39 years by « wilaya » All Algeria

1987



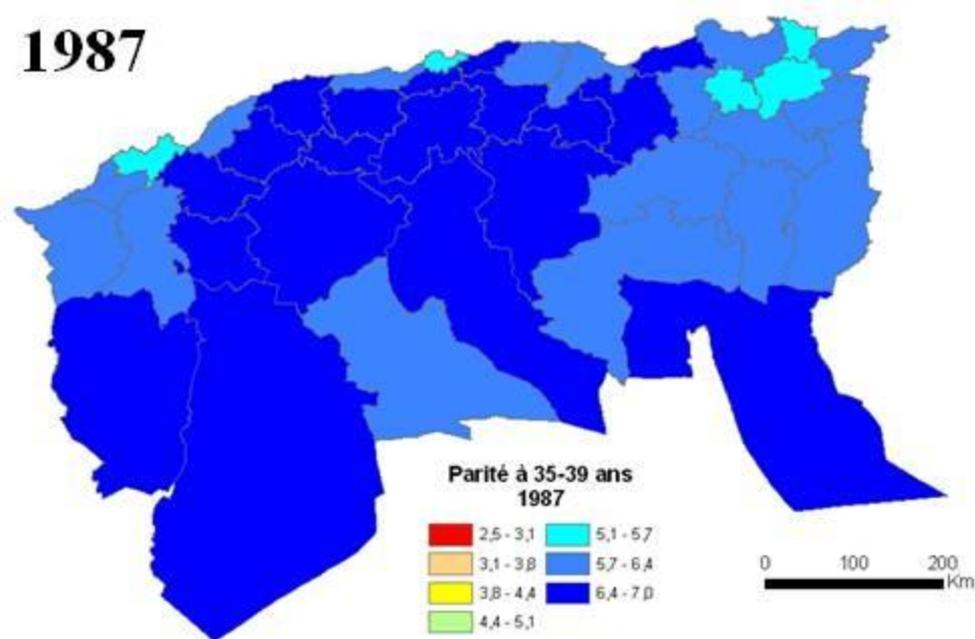
1998



-In 1987, fertility is higher ($>5,7$) in all Algeria only 7 wilaya had parities at 35-39 ans between 5,1 and 5,7 child per woman.

-From 1987 to 1998, the decline of fertility at 35-39 ans began to diffuse to all the country. There was no stratification North/south.

1987



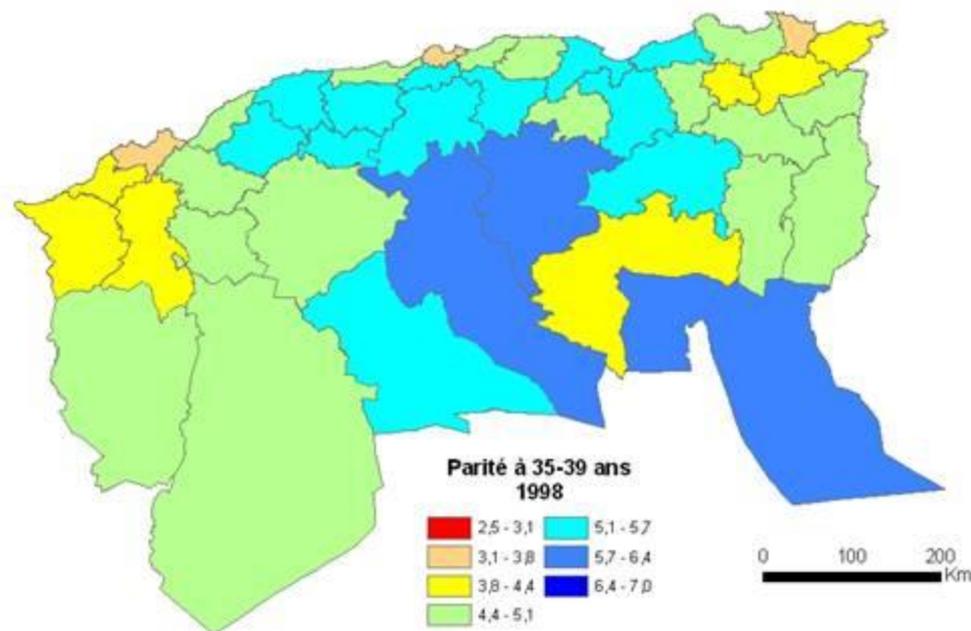
Parity at 35-39 years by « wilaya » North part of Algeria

- But in the North, in 1987, fertility was less than parity in the other wilaya of the country. Algiers, Oran, Constantine, Annaba and Skikda (5,1 to 5,7 child per woman).

- At the 1998 Census, fertility at 35-39 years began to decline from the metropol to all the country, .

- In Algiers, Oran (West) and Annaba (East), parity go under 4 child per women (3,1 to 3,8).

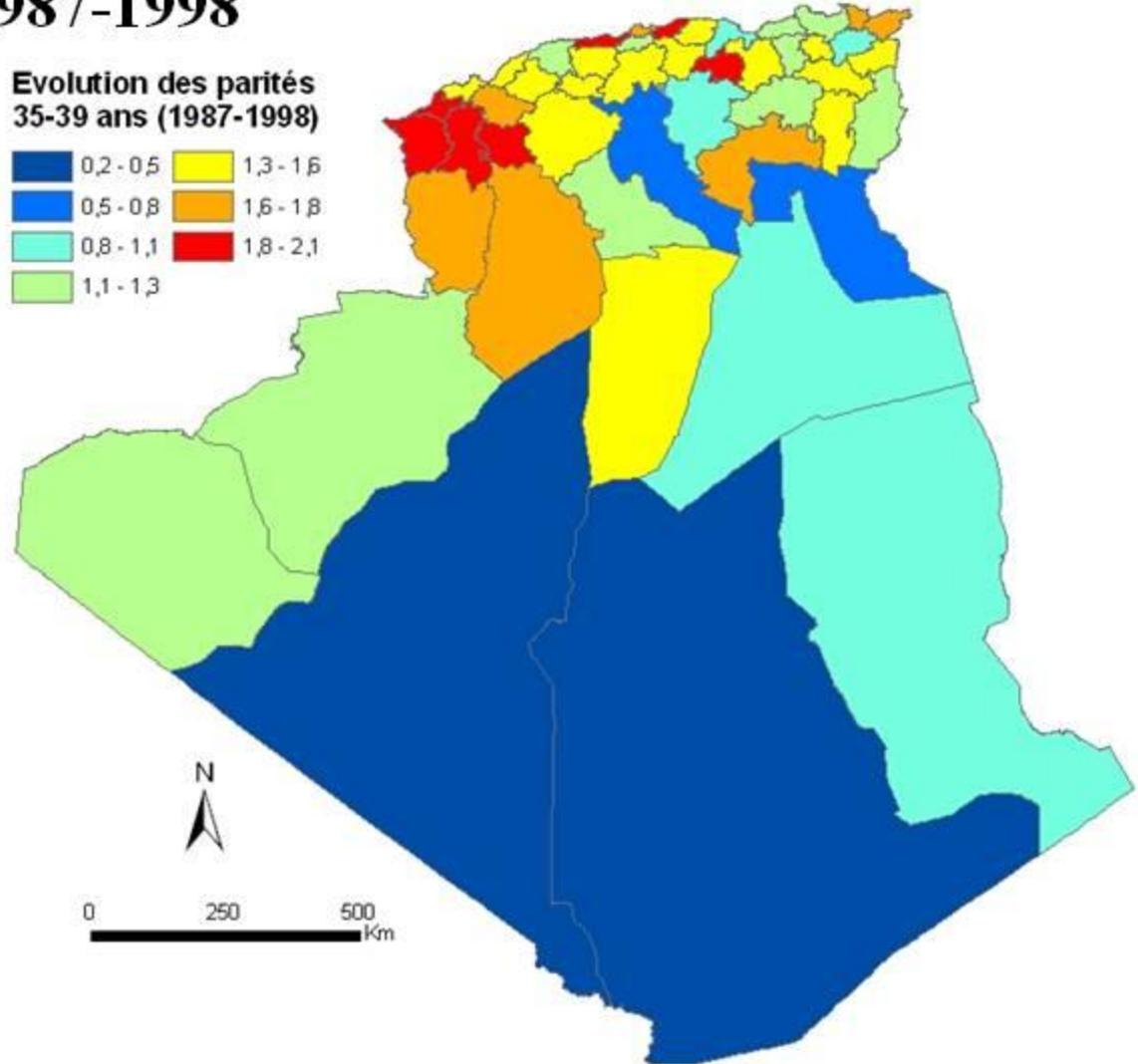
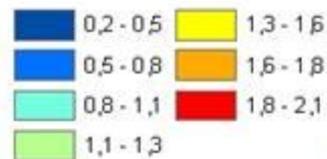
1998



Variation of 35-39 years parity by « wilaya » All Algeria

1987-1998

**Evolution des parités
35-39 ans (1987-1998)**

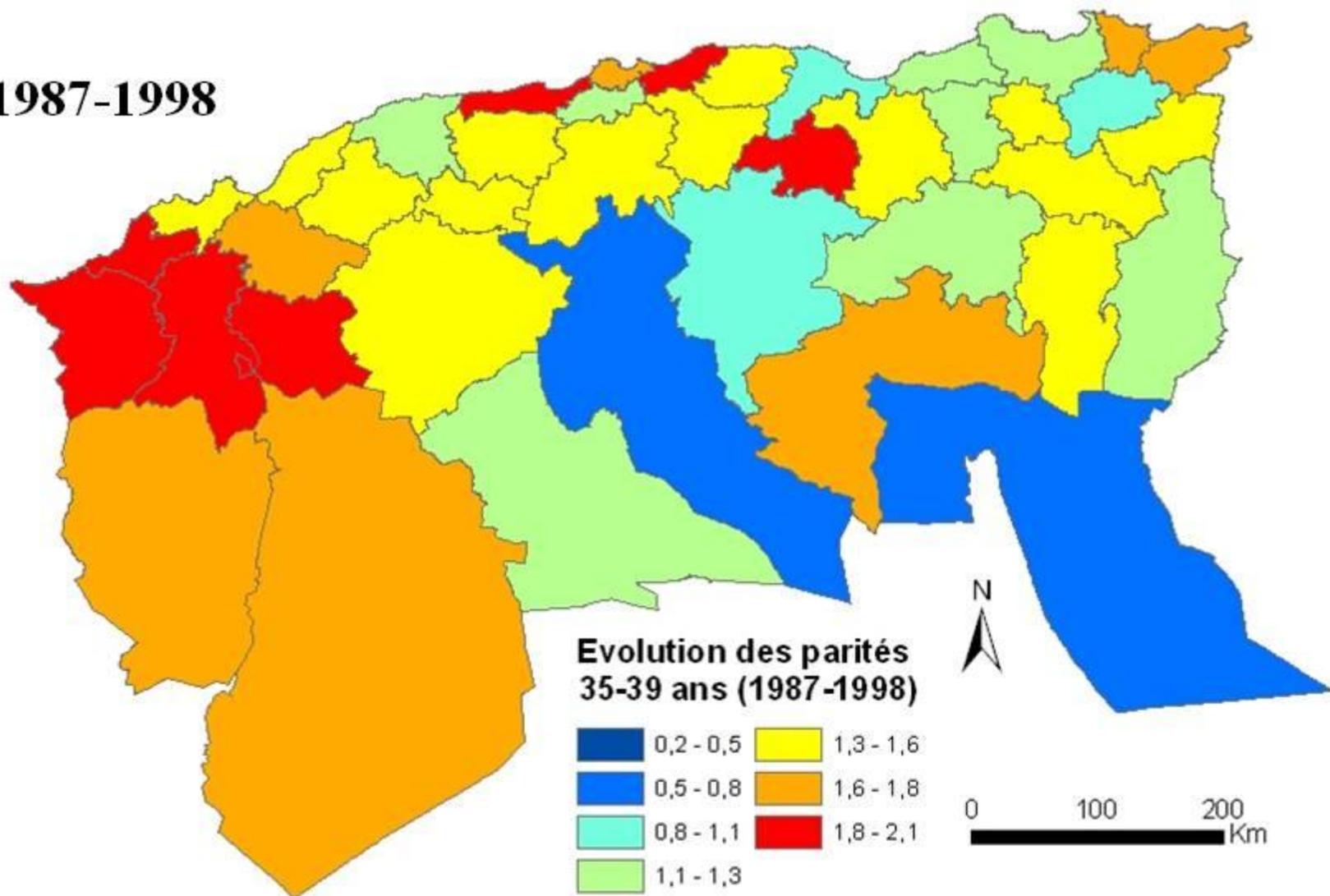


- In 7 « wilaya », women of 35-39 years reduced their fertility by 1,8 to 2 children in one decade

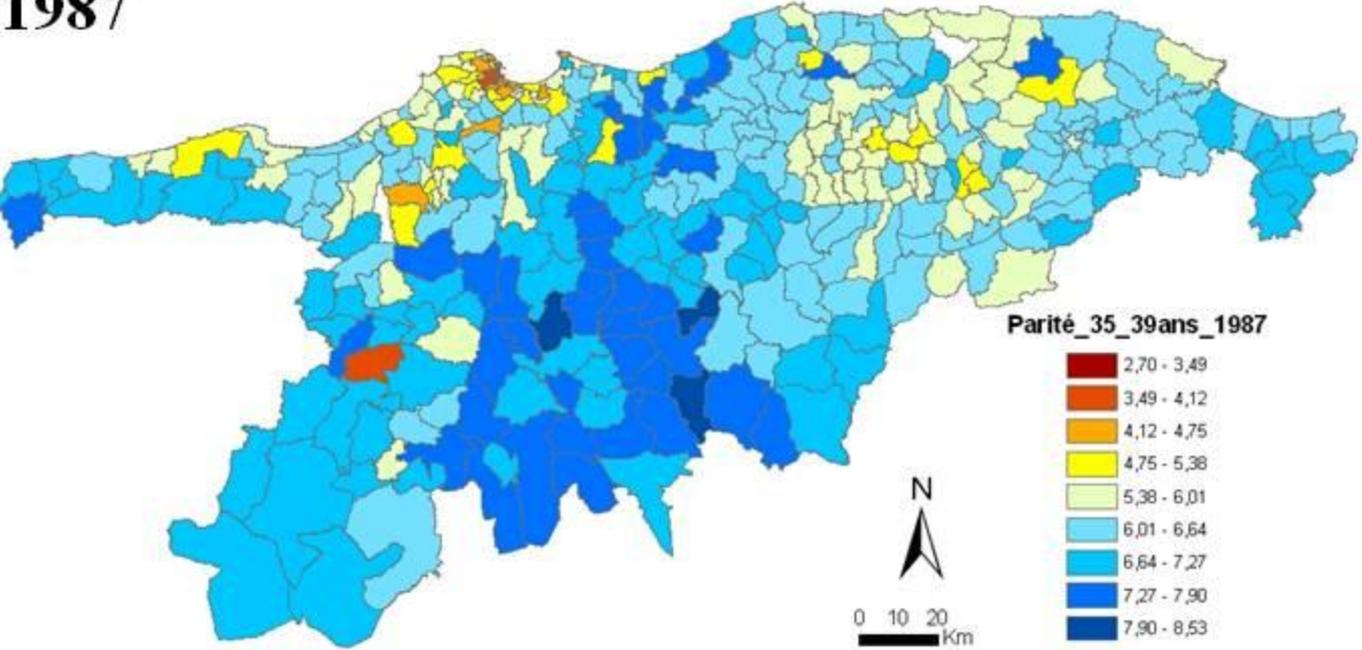
Between 1987 and 1998, fertility decreased and most strongly in the North.

Variation of parity at age 35-39 by « wilaya » North part of Algeria

1987-1998



1987

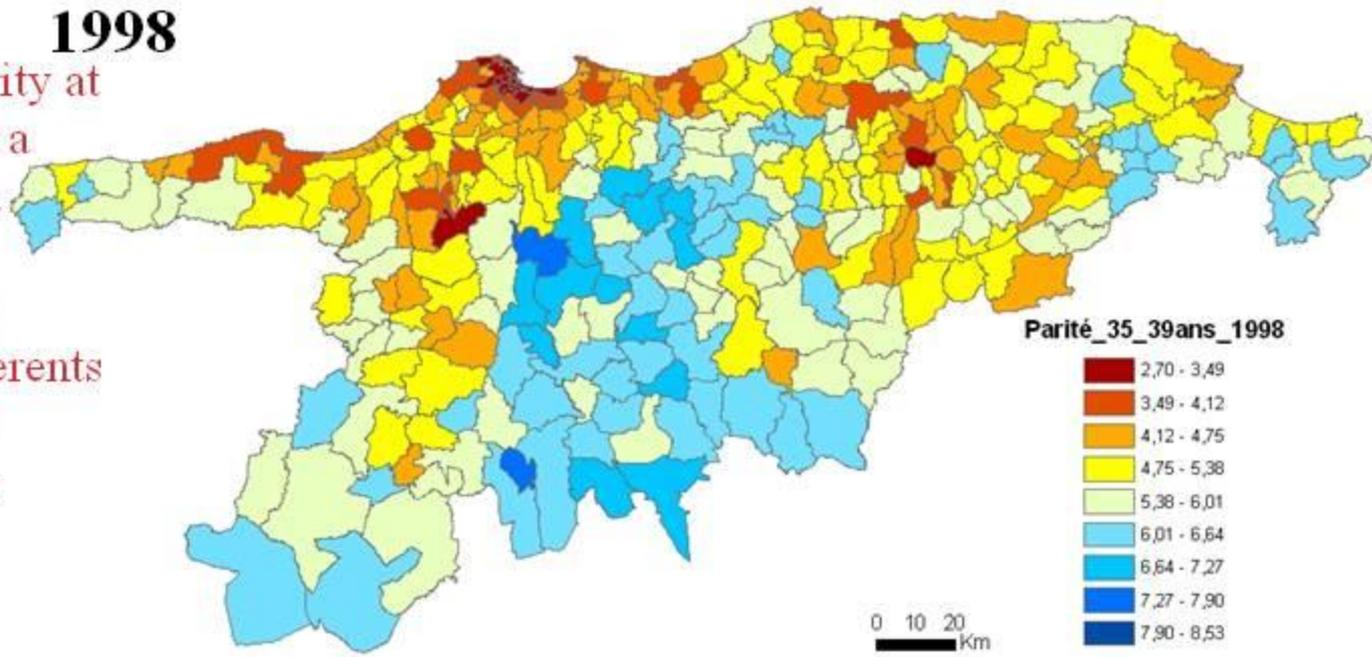


Parity at 35-39 years by
 « communes »
 « 8 center wilaya »

1998

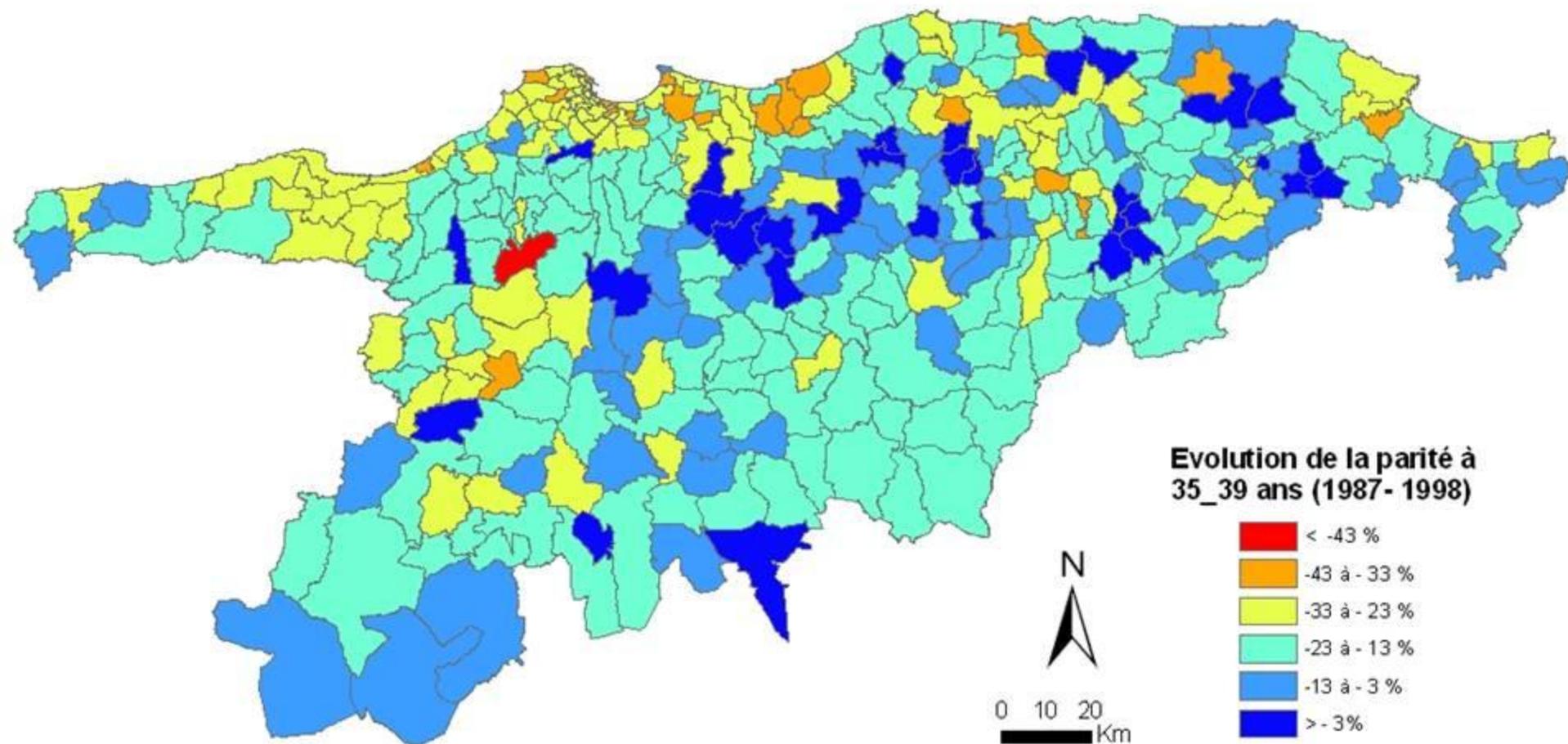
- At the 1987 Census, Parity at 35-39 years is high in the a large part of the 8 wilaya.

Between 1987 and 1998, fertility decreased in different parts of the 8 wilaya and especially around Algiers



0 10 20 Km

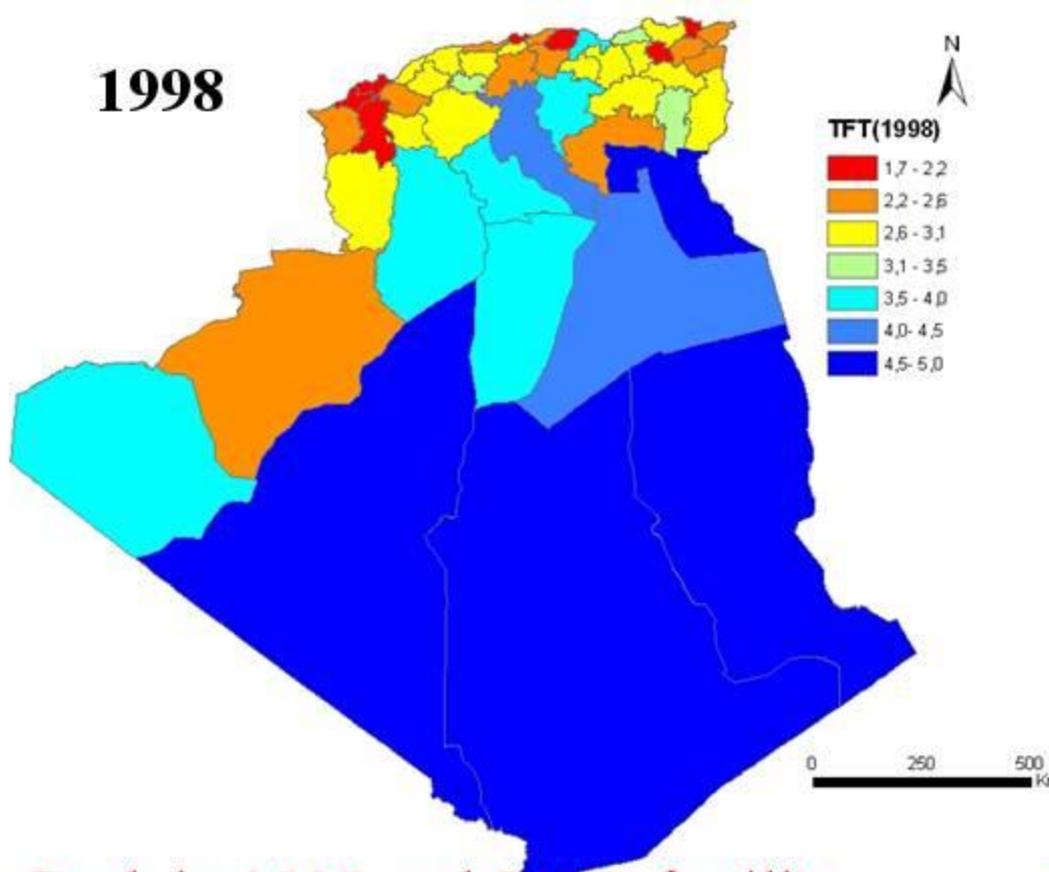
Variation (%) of parity at age 35-39 between 1987 and 1998 by
« communes » « 8 center wilaya »



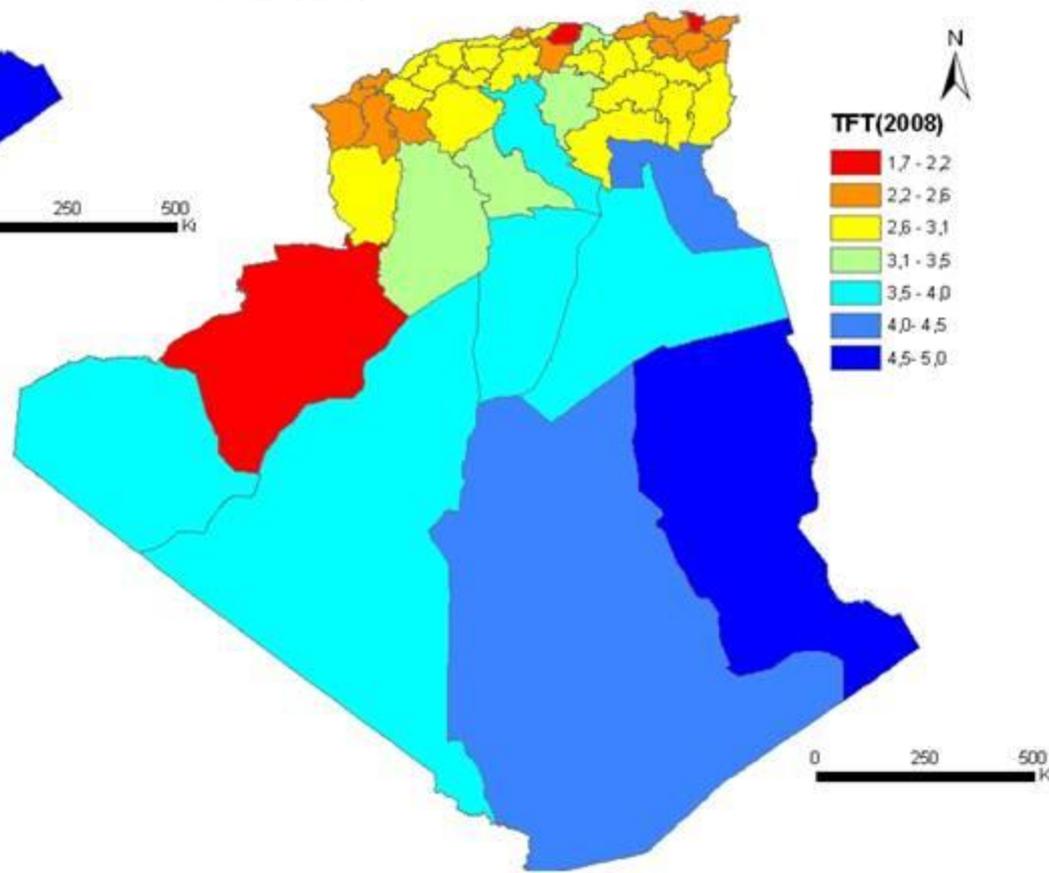
2. Period 1998-2008 : Geographical différencies in **total fertility rate**

Total fertility rate by « *wilaya* » All Algeria

1998



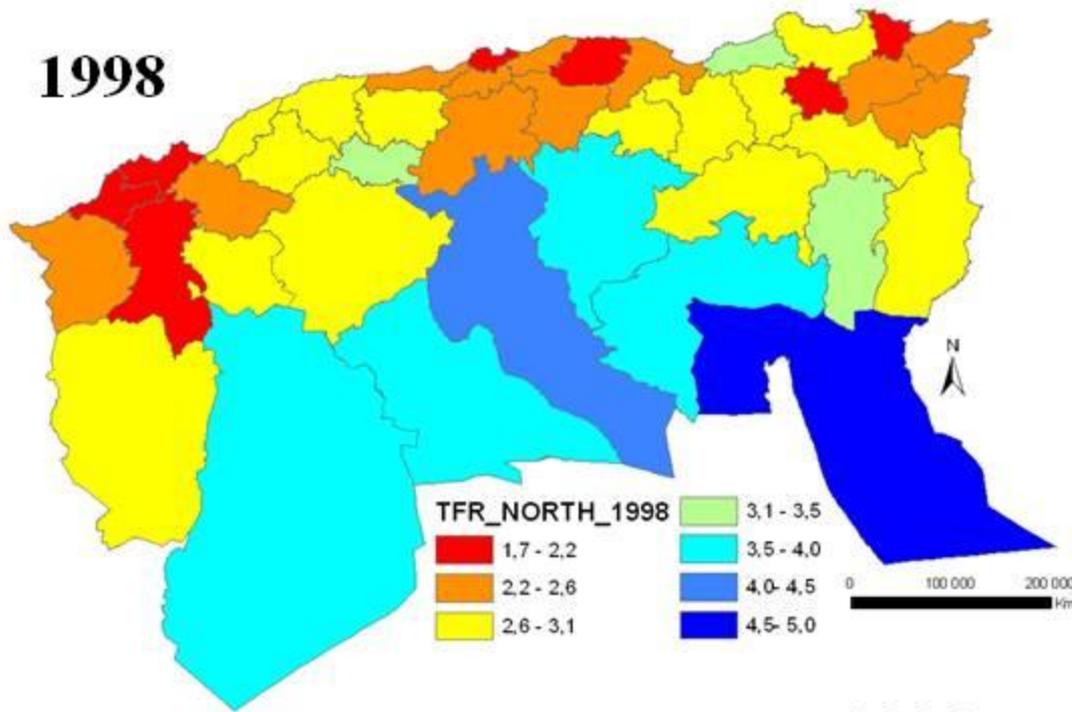
2008



-Both in 1998 and 2008, fertility is higher ($>3,5$) in the south (Sahara and H. Plateaux)

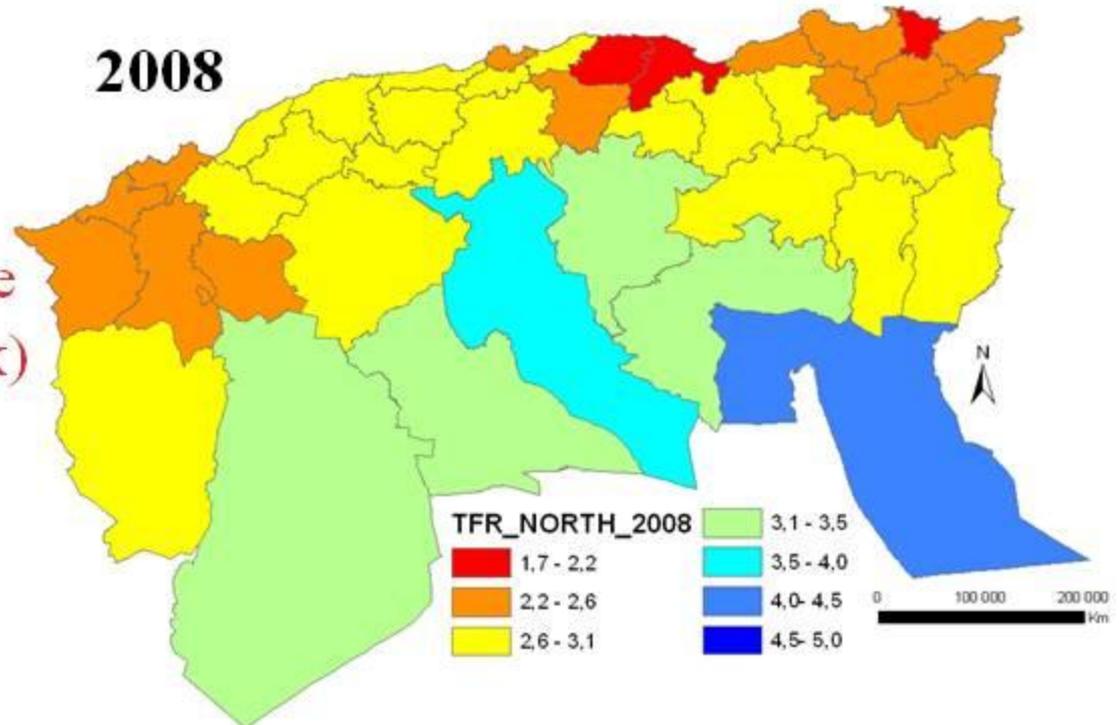
From 1998 to 2008, TFR continued its decline in some areas and rose in others, especially in the North

1998



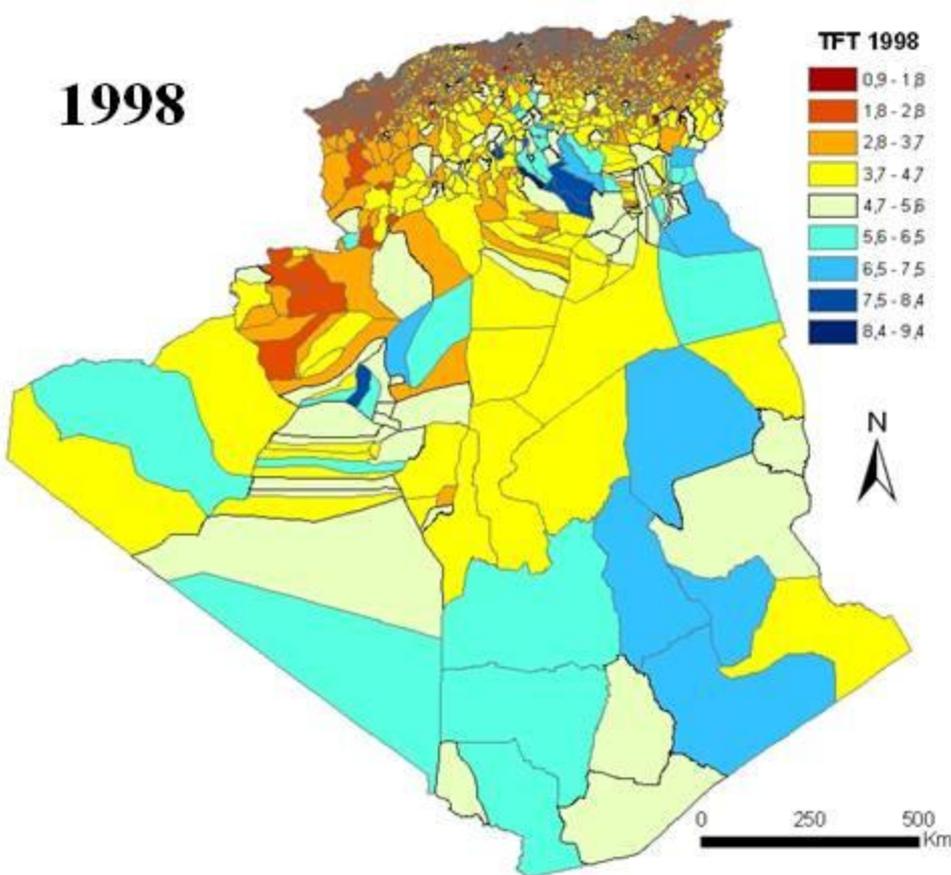
Total fertility
rate by
« *wilaya* »
North part of
Algeria

2008



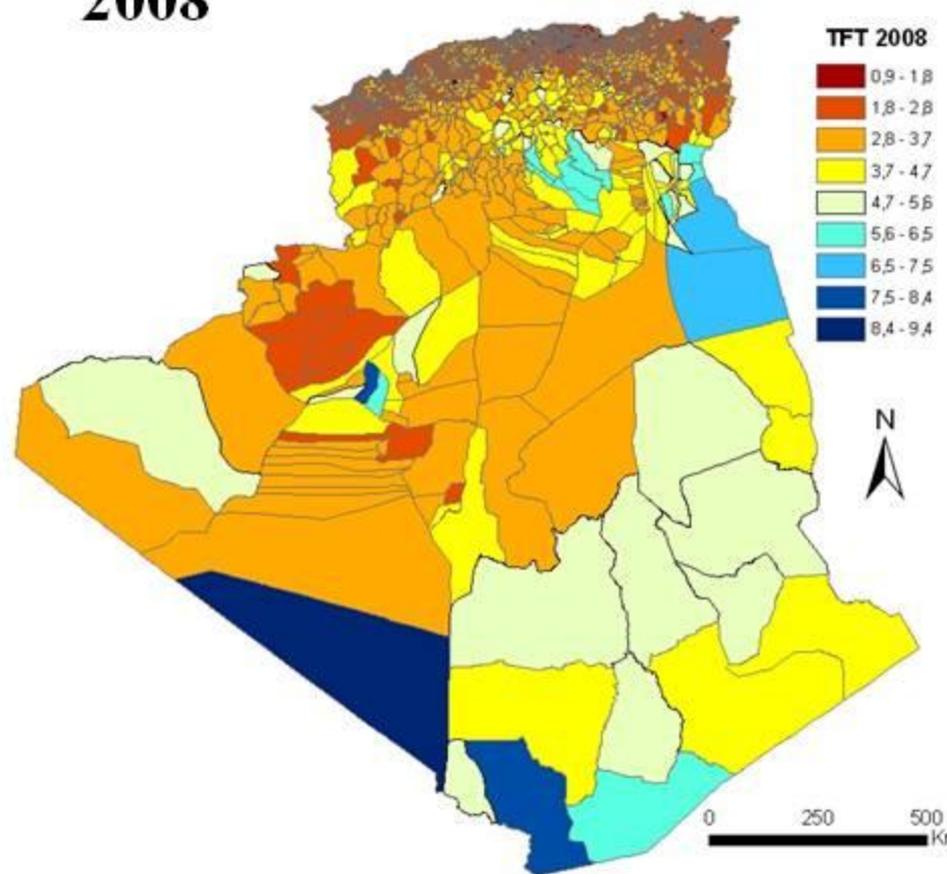
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1998



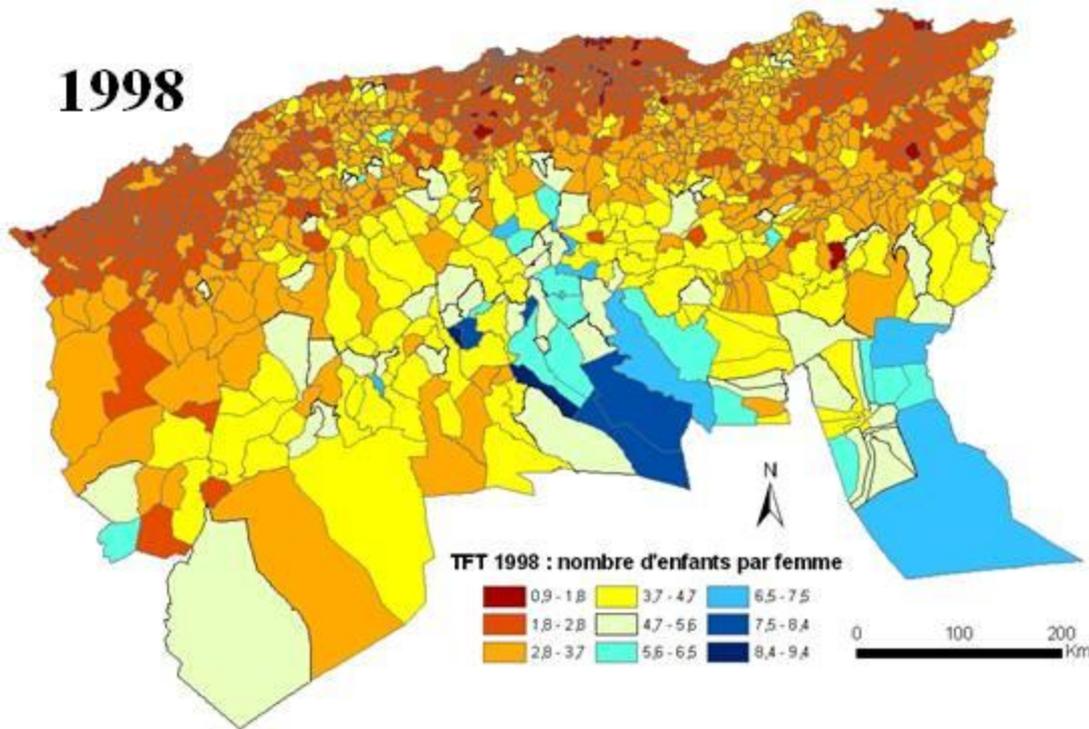
Total fertility rate by « *communes* » All Algeria

2008



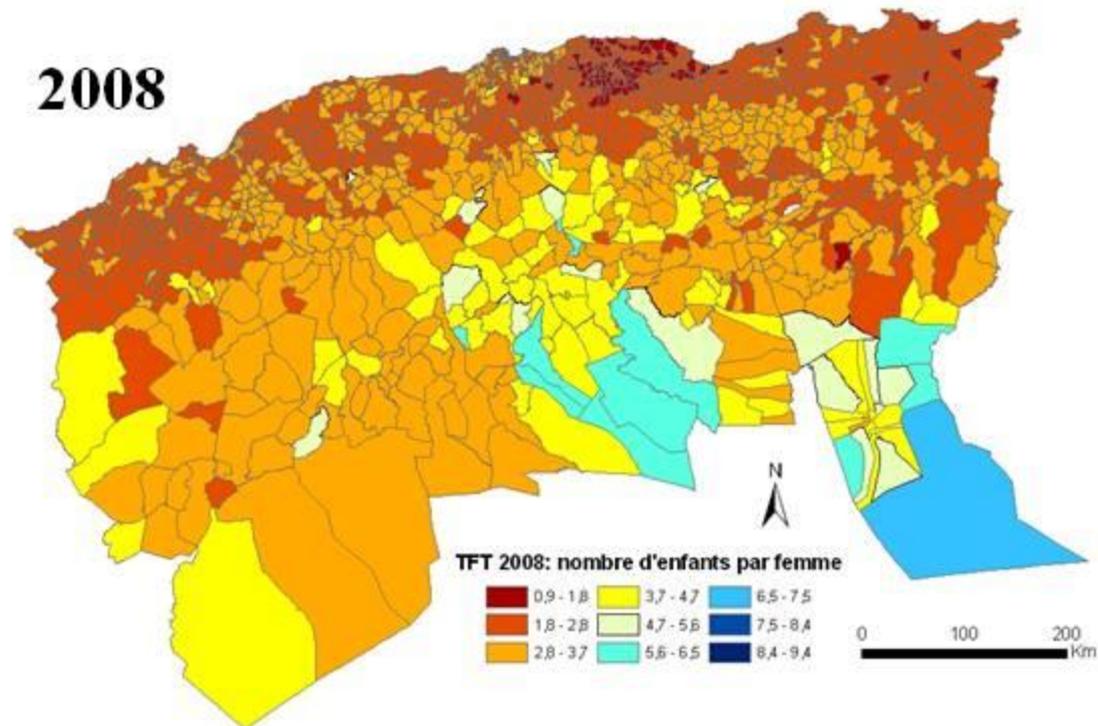
- In the South of Algeria (Sahara and H.Plateaux), TFR continue its decline from 1998 to 2008.

1998



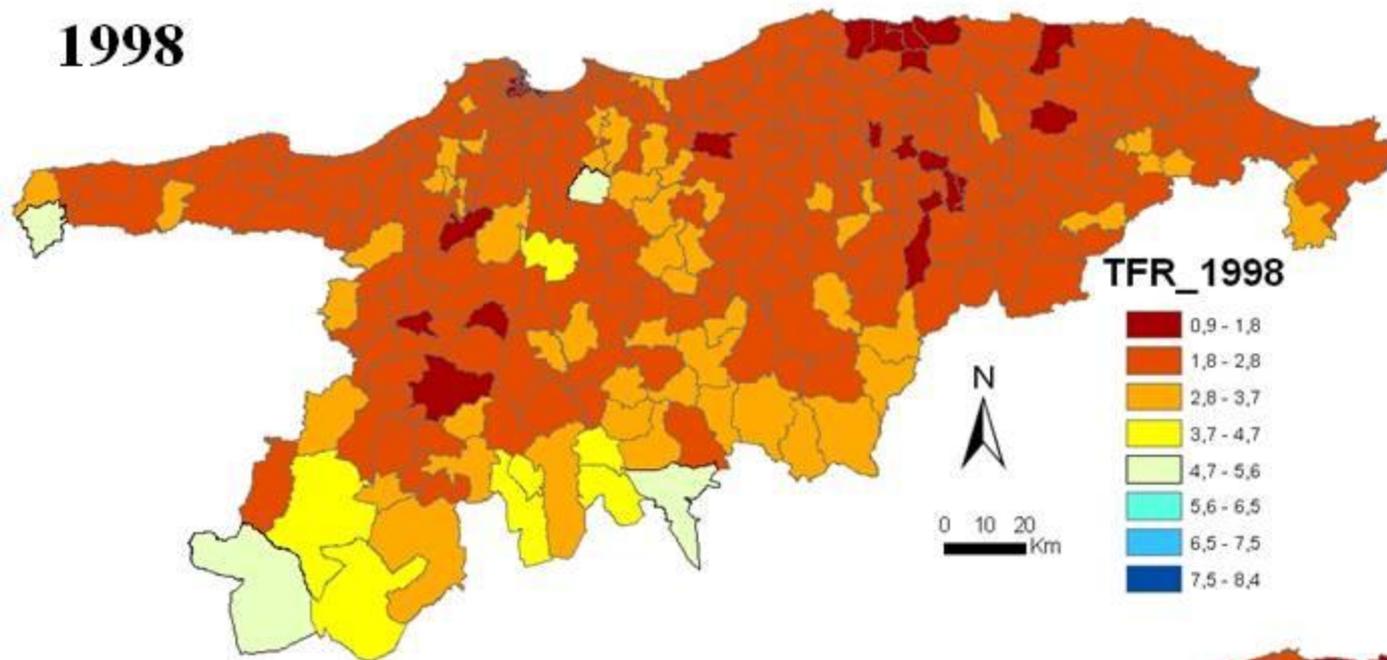
Total fertility rate
by « *communes* »
North part of
Algeria

2008



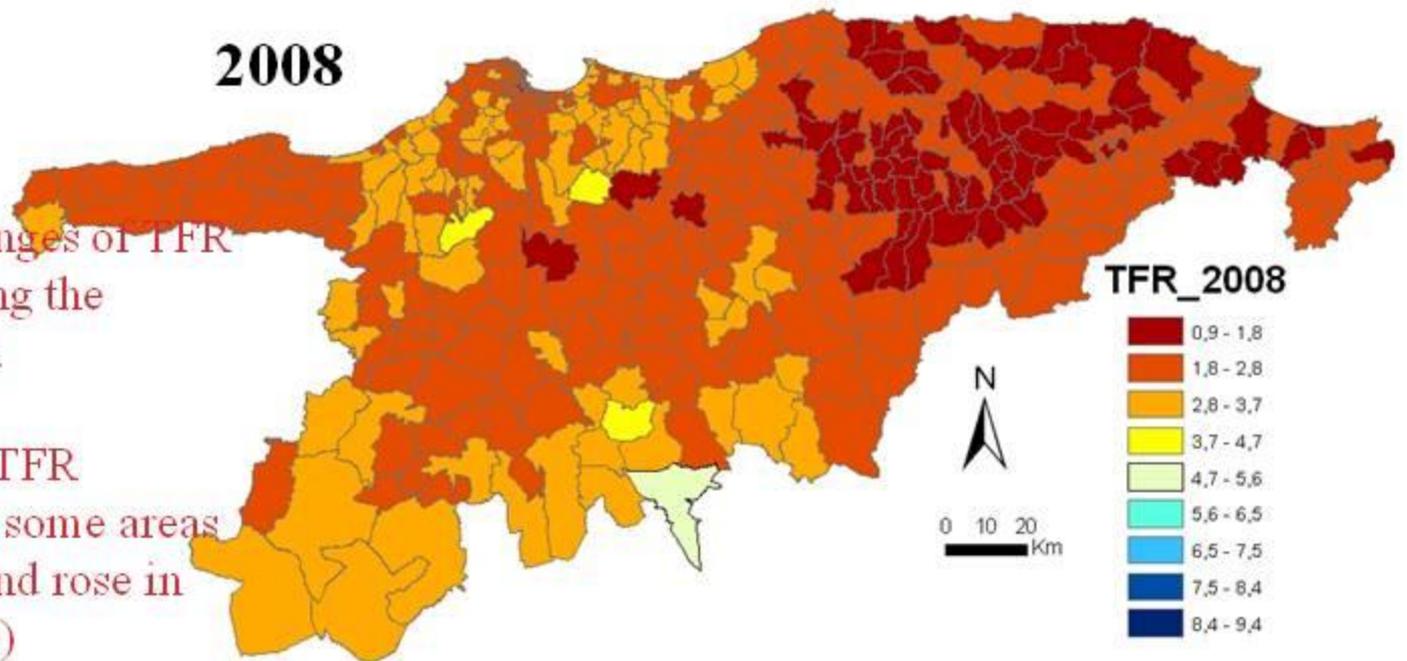
-In the North part of Algeria, from 1998 to 2008, TFR continue its decline in some areas (in the East part and north of hauts plateaux) and rose in others (Algiers for exemple).

1998



Total fertility rate
by « *communes* »
« 8 center wilaya »

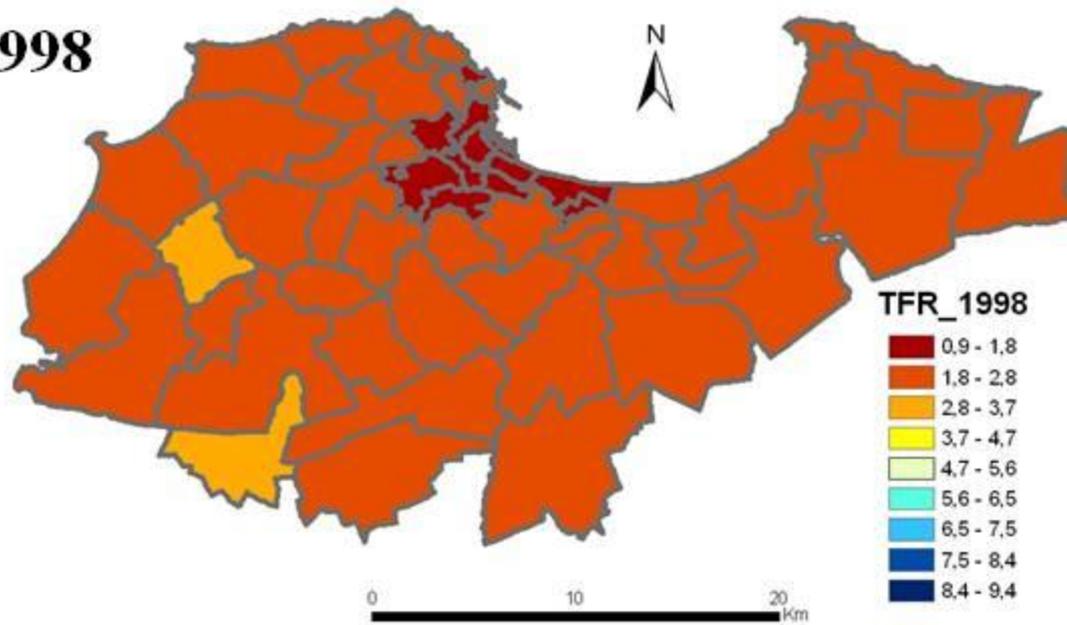
2008



-We can see these changes of TFR
in the north by mapping the
wilaya around Algiers.

- From 1998 to 2008, TFR
continue its decline in some areas
(East part : *Kabylie*) and rose in
others (around Algiers)

1998



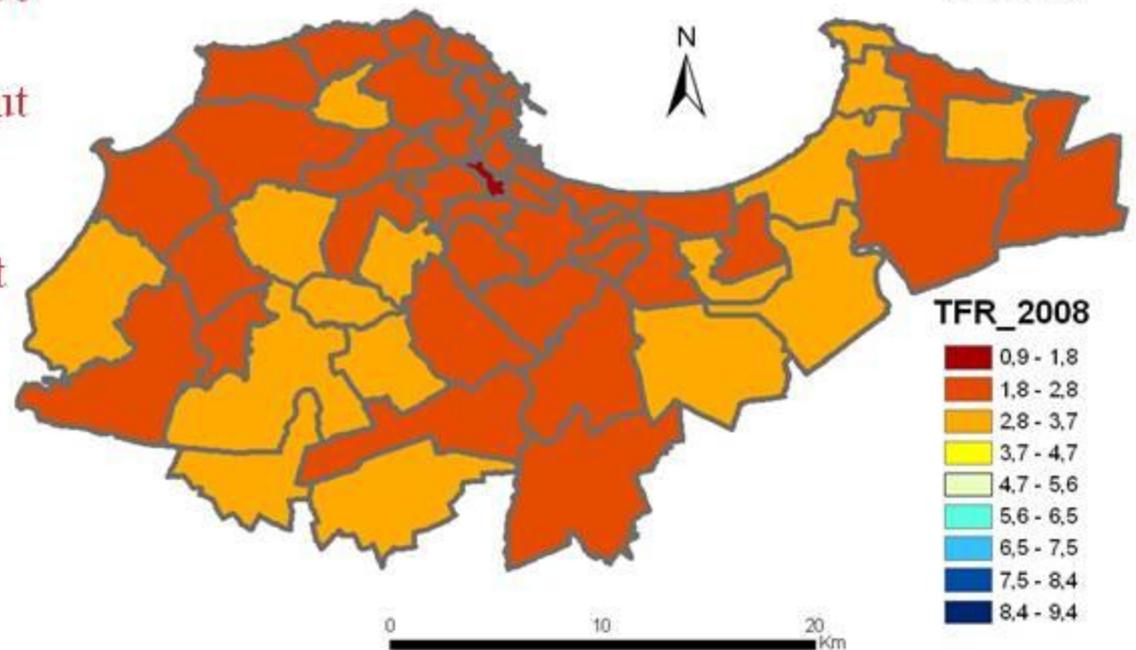
Total fertility
rate by
« communes »
Algiers

- In 15 « communes », TFR rose by 30
to 55% between 1998 and 2008
In 43 « communes, the rose was about
10 to 30%

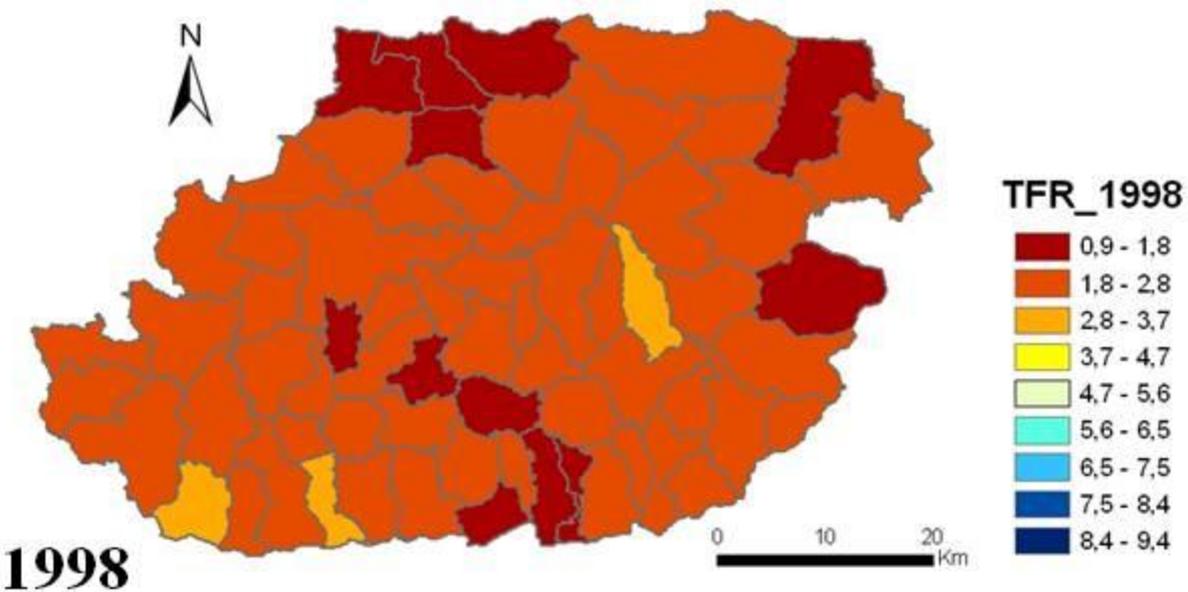
5 « communes » TFR rose by 10% at
least
In 2 « communes » TFR remained
stable

Only one « commune » observed a
decrease of TFR (-7%)

2008



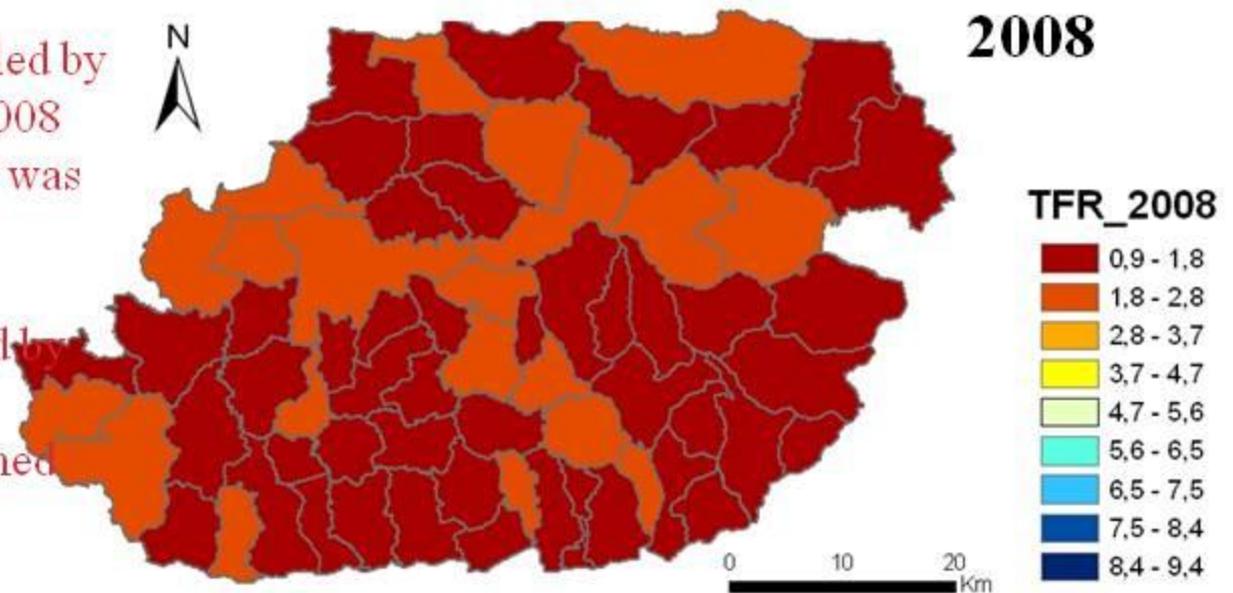
Total fertility rate by « communes » Tizi Ouzou



- In 20 « communes », TFR falled by 30 to 55% between 1998 and 2008
In 27 « communes, the decease was about 10 to 30%

In 13 « communes » TFR falled by 10% at least
In 5 « communes » TFR remained stable (0 to 6%)

Only 2 « communes » observed an important increase of TFR (20 to 30%)



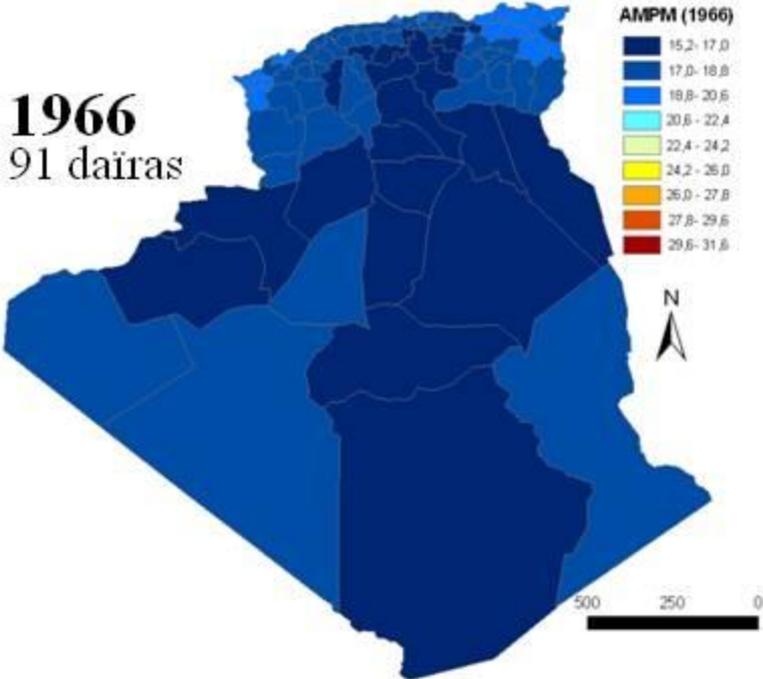
Sumurray : Period 1998-2008

- **At the national level** : a stability of TFR from Census data : from 2,72 to 2,75 (minimum was observed in 2002)
- **At the « wilaya » level** :
 - Important decline (-15 to -25%) : East region (Tizi, Bejaia,...)
 - Medium decline (-5 to -15%) : Hauts plateaux
 - Stability : (+- 4%) : different *wilaya* East/ouest
 - Medium rise (5 à 15%) : proximate regions around Big metropol
 - High increase (15 to 30%) : Algiers and other big métropol (Oran, Constantine) and cities (Boumerdes, Blida)
- **At the « commune » level** : 2 trends
 - diffusion of the decline of fertility in the largest part of the country
 - Stop of decline and sometimes rise of in fertility in an other part, especially in the North around the capitale and the big metropol.

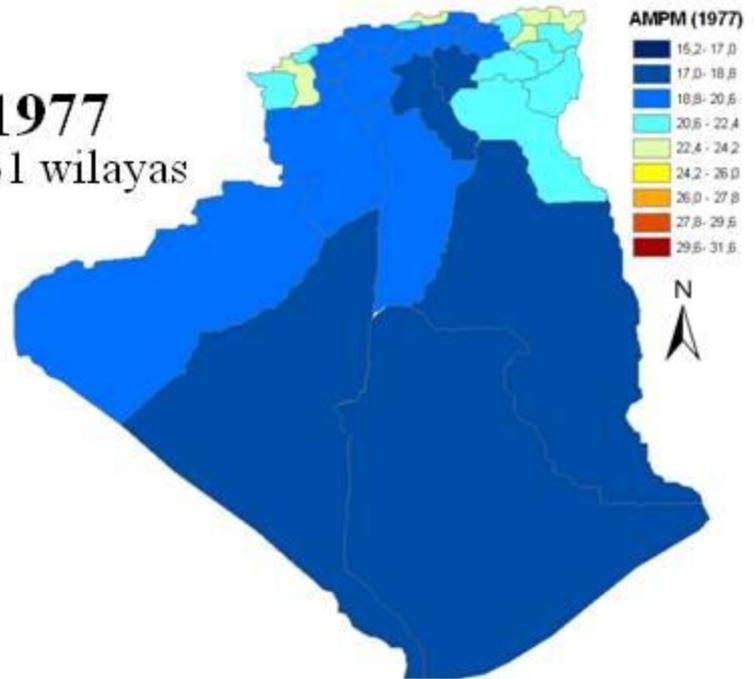
II. The rise of age at marriage

- Historical data easier to access (marital status at censuses)
- Differences at the « *wilaya* » level 1966 to 2008 have been mapped
- Differences at the « communes » level have been mapped for 1987 and 1998

1966
91 daïras

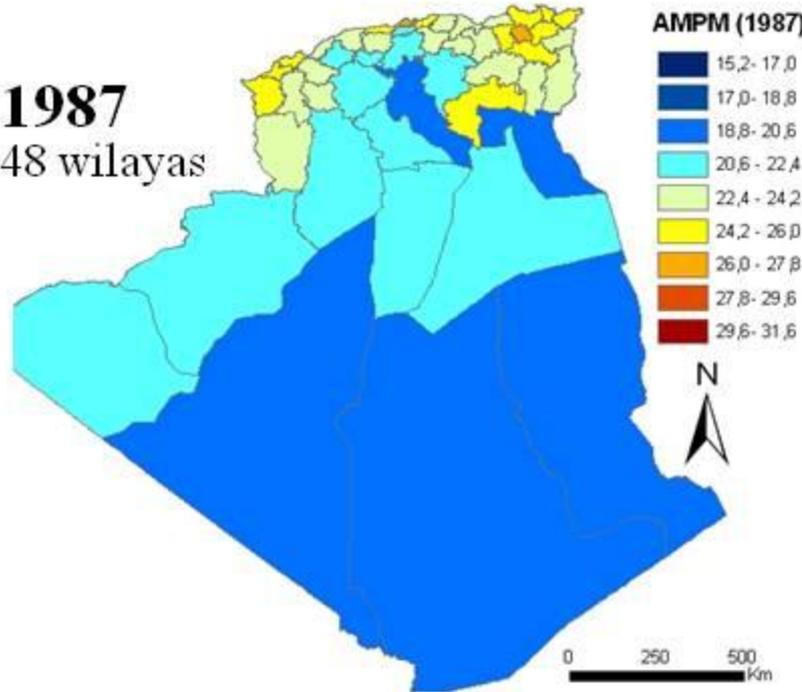


1977
31 wilayas

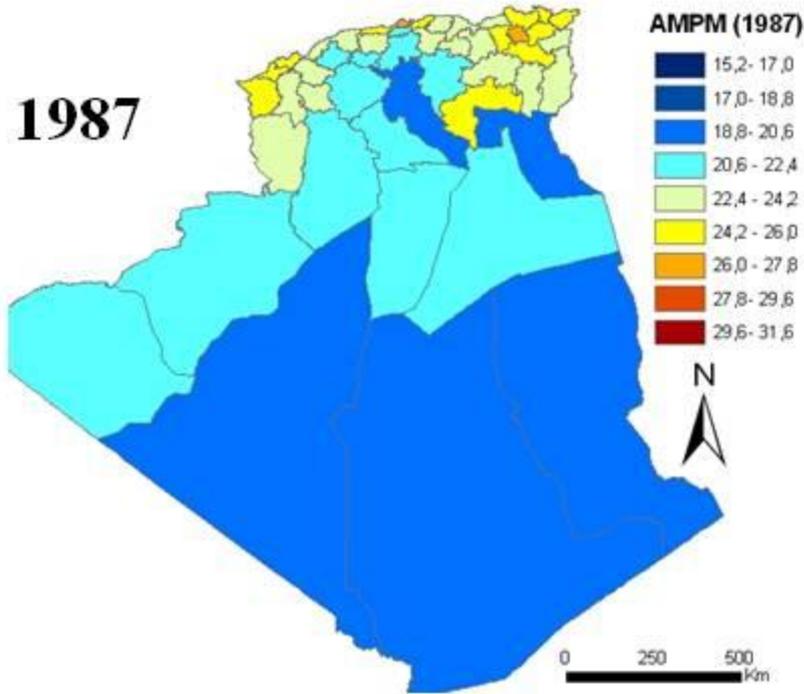


**Female mean
age at first
marriage
by « wilaya »
All Algeria**

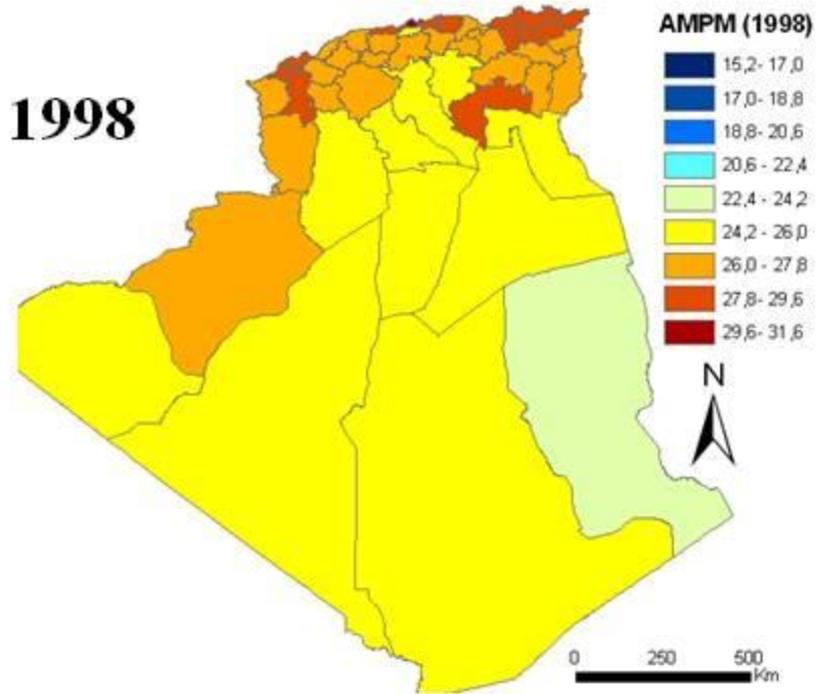
1987
48 wilayas



1987

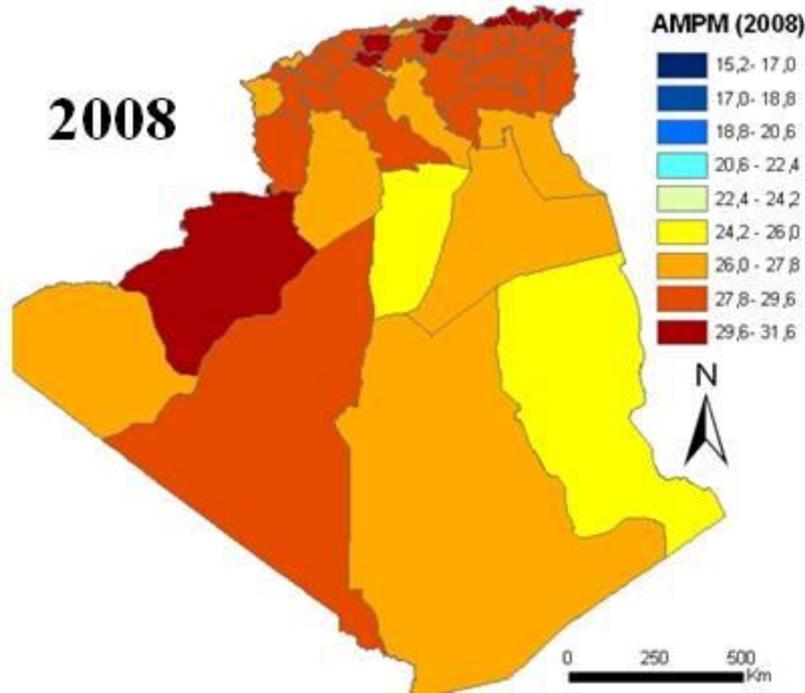


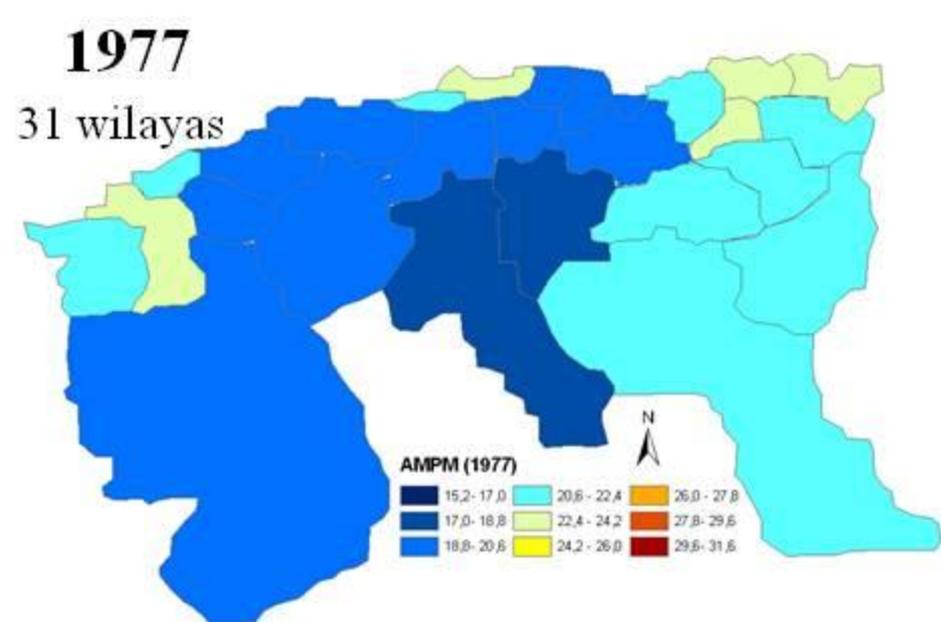
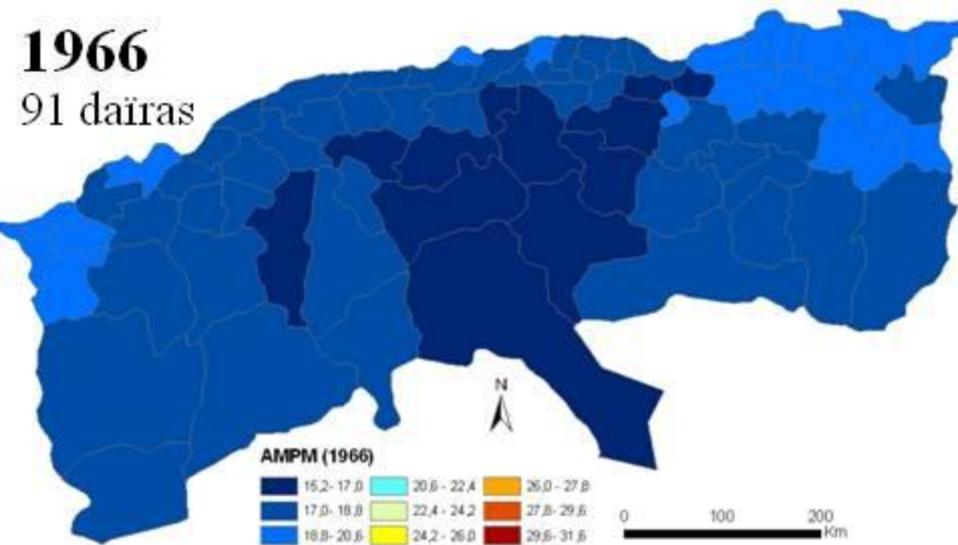
1998



Female mean
age at first
marriage
by « *wilaya* »
All Algeria

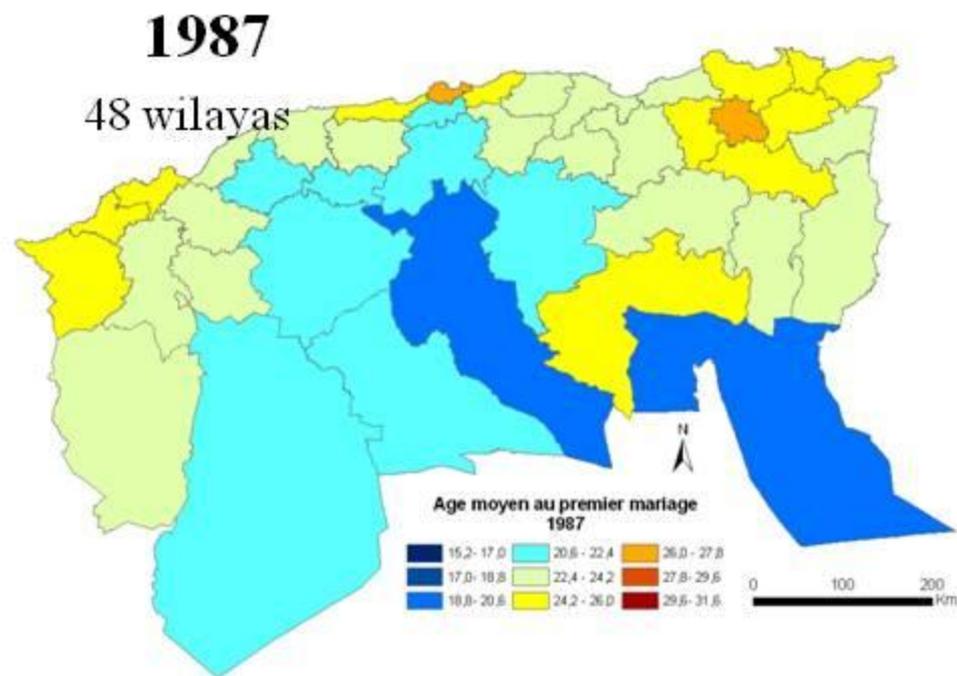
2008



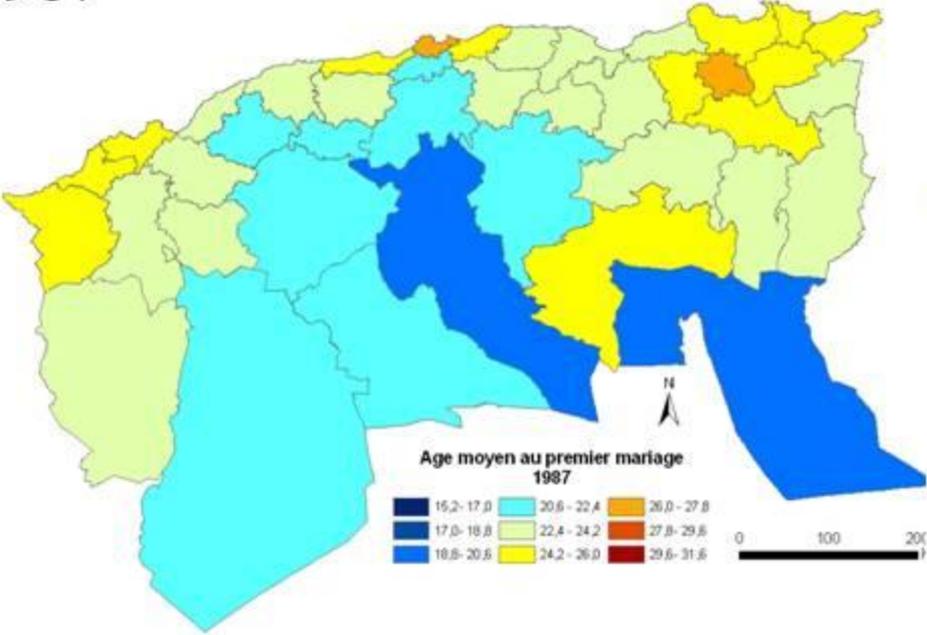


Female mean age
at first marriage
by « wilaya »

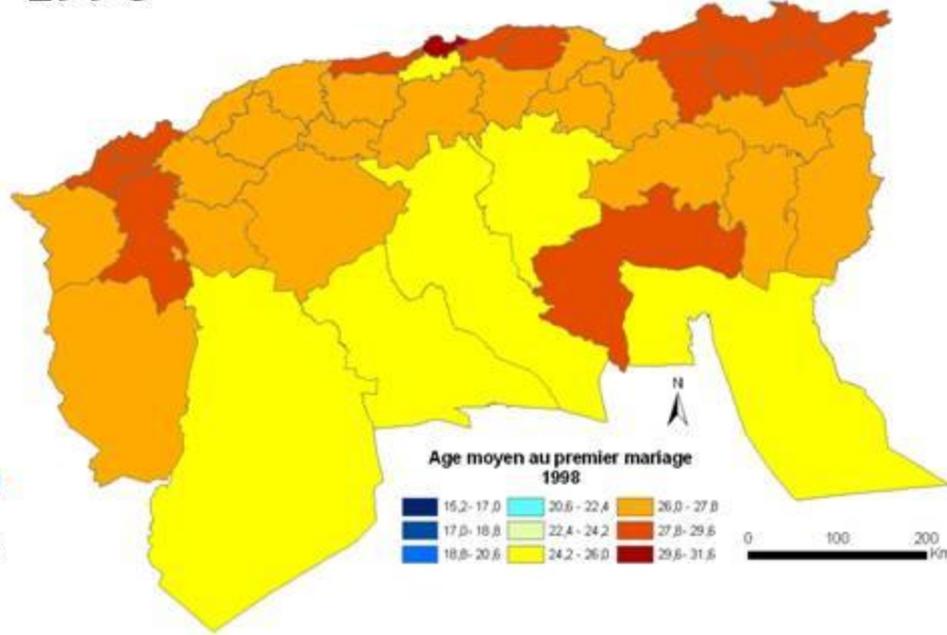
North part of Algeria



1987



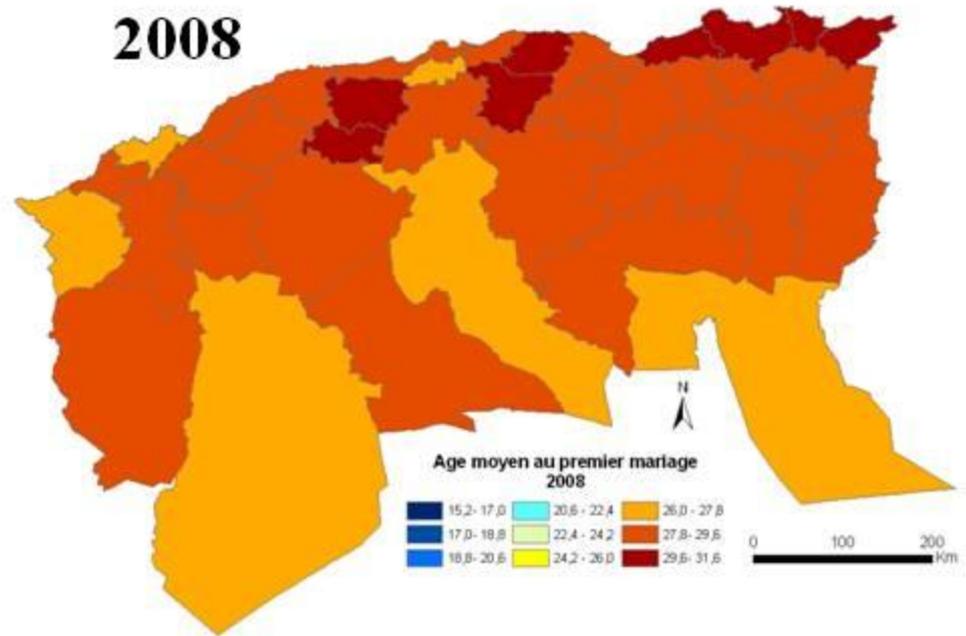
1998



Female mean age
at first marriage
by « wilaya »

North part of Algeria

2008



Sumurray : Changes in marriage Period 1987-2008

- In 1987, in 41 Wilaya , the singulate mean at first marriage was less than 25 ans among women

-20 years later, there is no wilaya where women marry under 25 ans

- At the national level, 35% of women of 40-34 years old are sigle at the 2008 census

-At the East region these pecent is >40% (Tizi 46%, Jijel 43%,...)

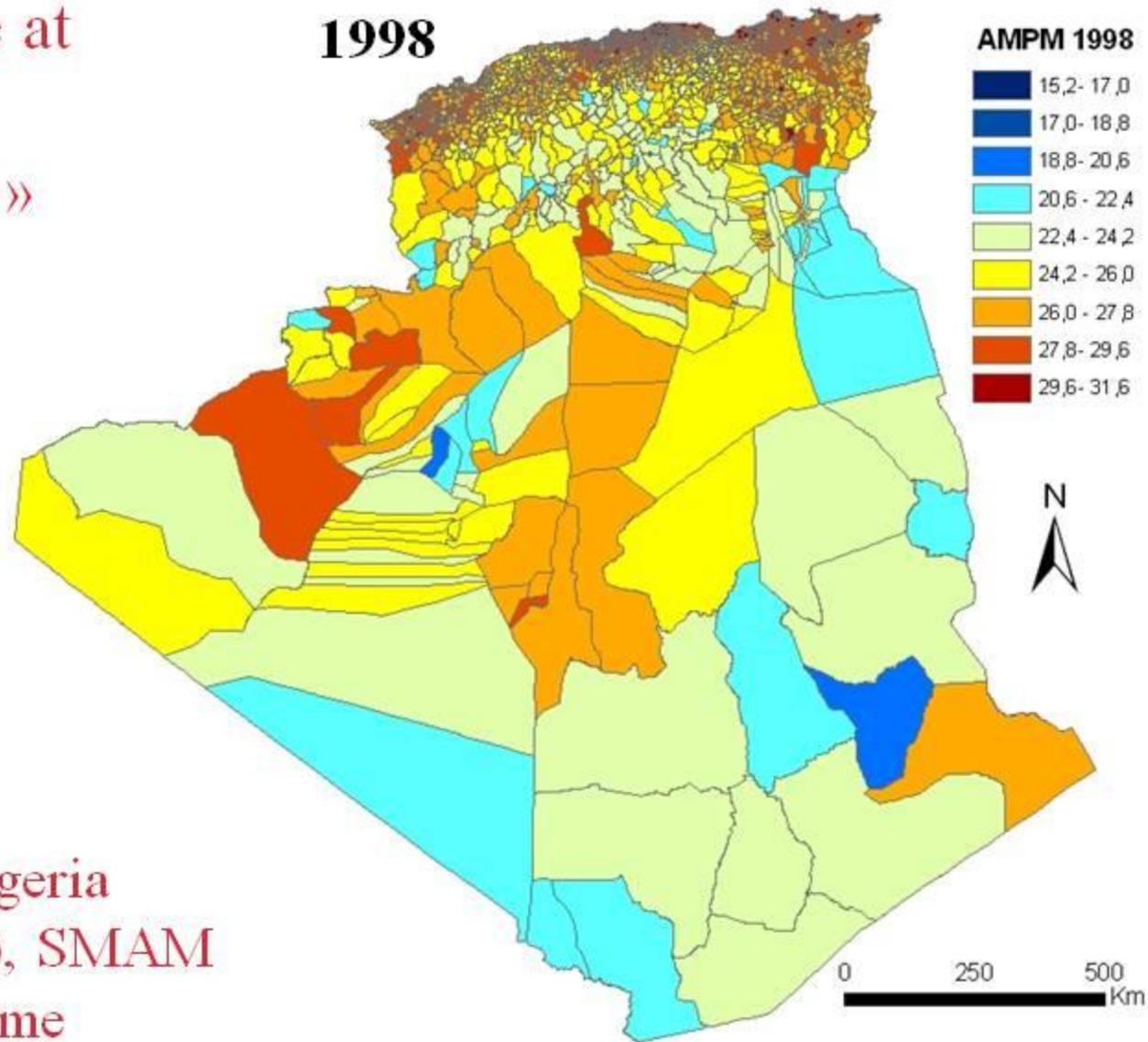
-In 38 Wilaya the percent of single women at 30-34 ans is higher than 30% at the 2008 census

-

SMAM	Nb of wilaya at different Census		
	1987	1998	2008
< 25 ans	41	6	0
[25-30[7	41	43
30 et plus	0	1	5
Total Wilaya	48	48	48

Female mean age at
first marriage
by « *communes* »

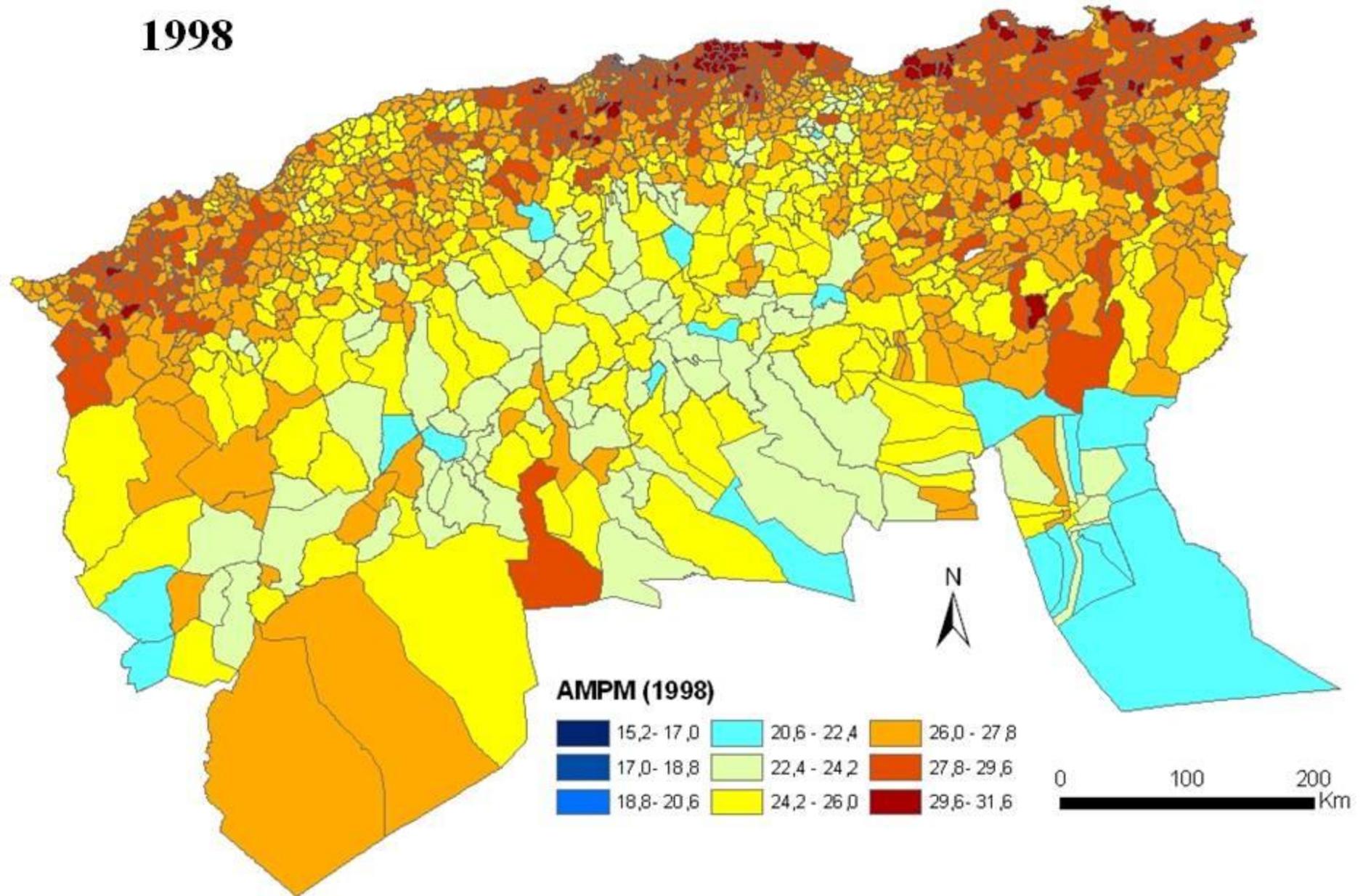
All Algeria



- In the South part of Algeria
(Sahara and H.Plateaux), SMAM
is variable but except some
« *communes* » it remains high
(22,2 to 27,8 years).

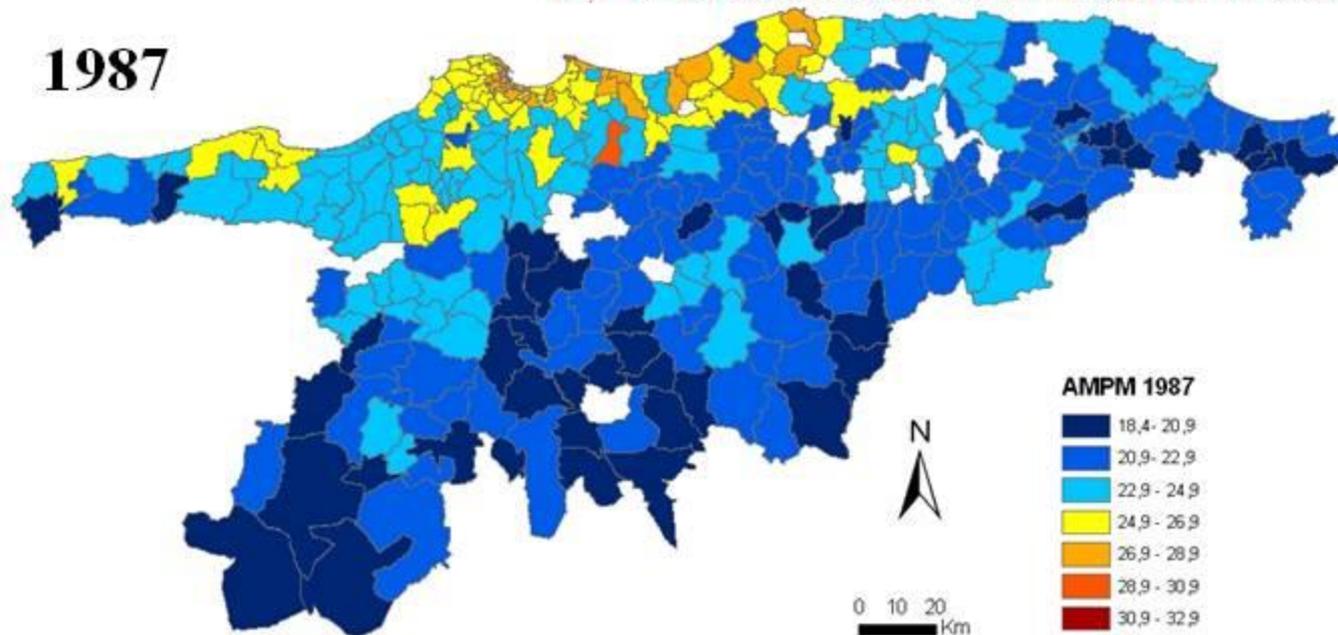
Female mean age at first marriage by « communes » North part of Algeria

1998



Female mean age at first marriage by « communes » 8 center wilaya

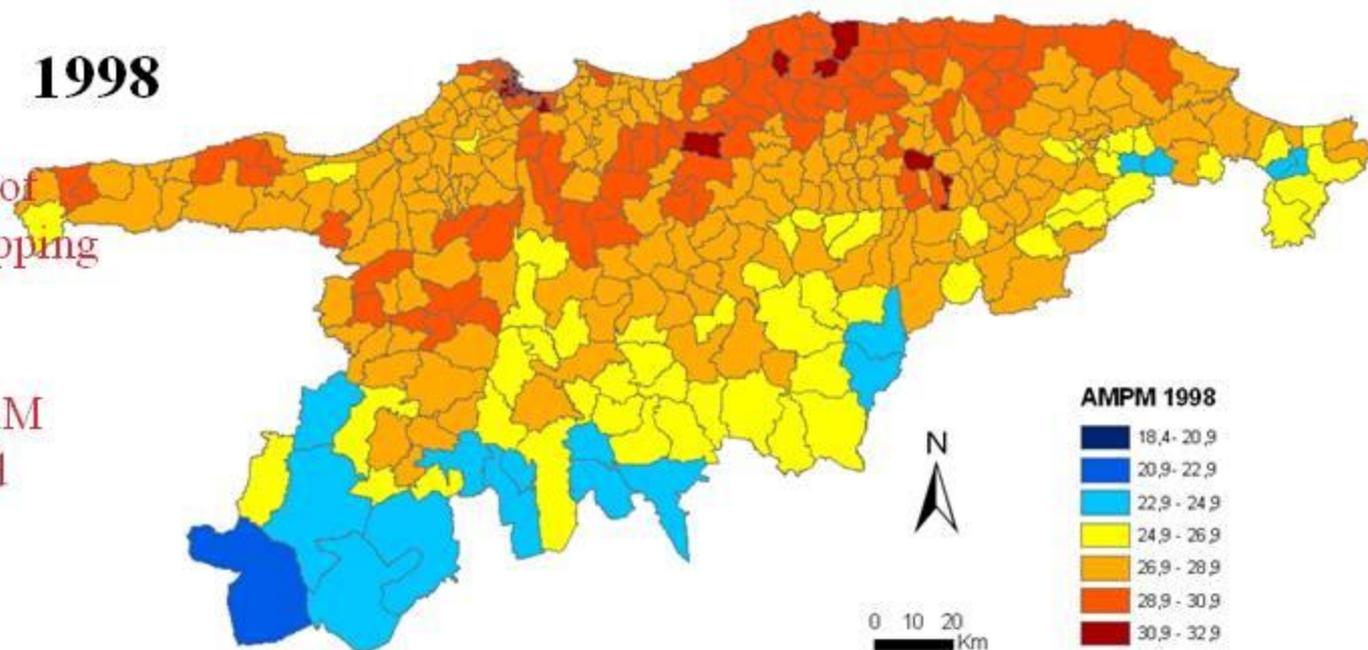
1987



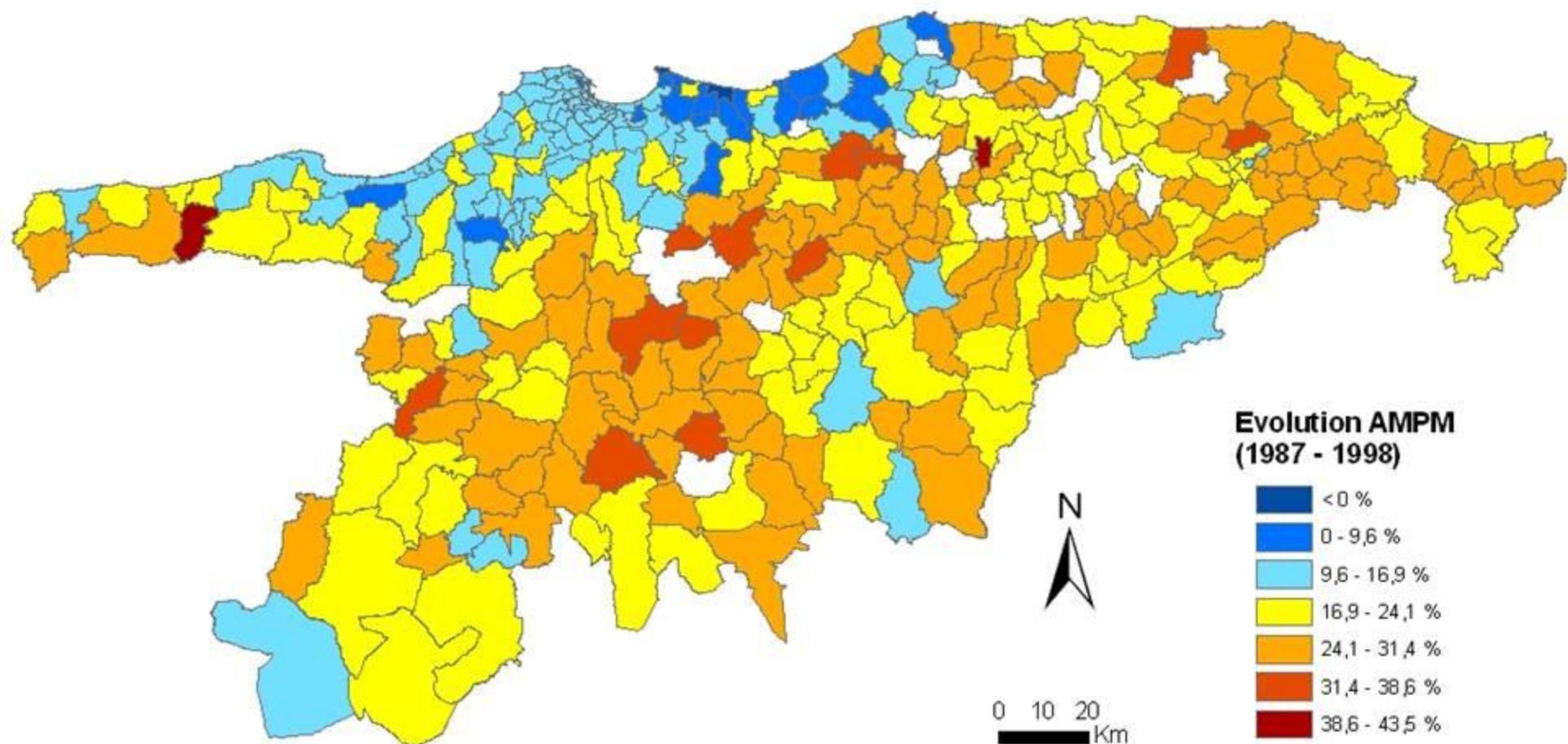
1998

-We can see these changes of SMAM in the north by mapping the wilaya around Algiers.

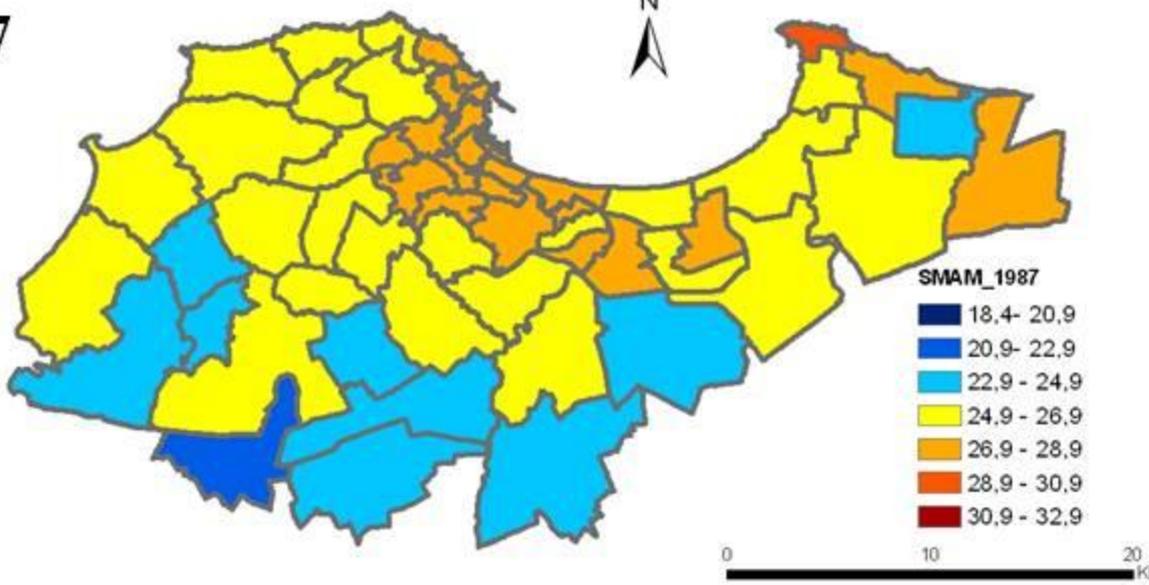
- From 1998 to 2008, SMAM increase in all the areas and espacially in the East part.



Changes (%) in female mean age at first marriage
by « communes » 8 center wilaya between 1987 and 1998



1987

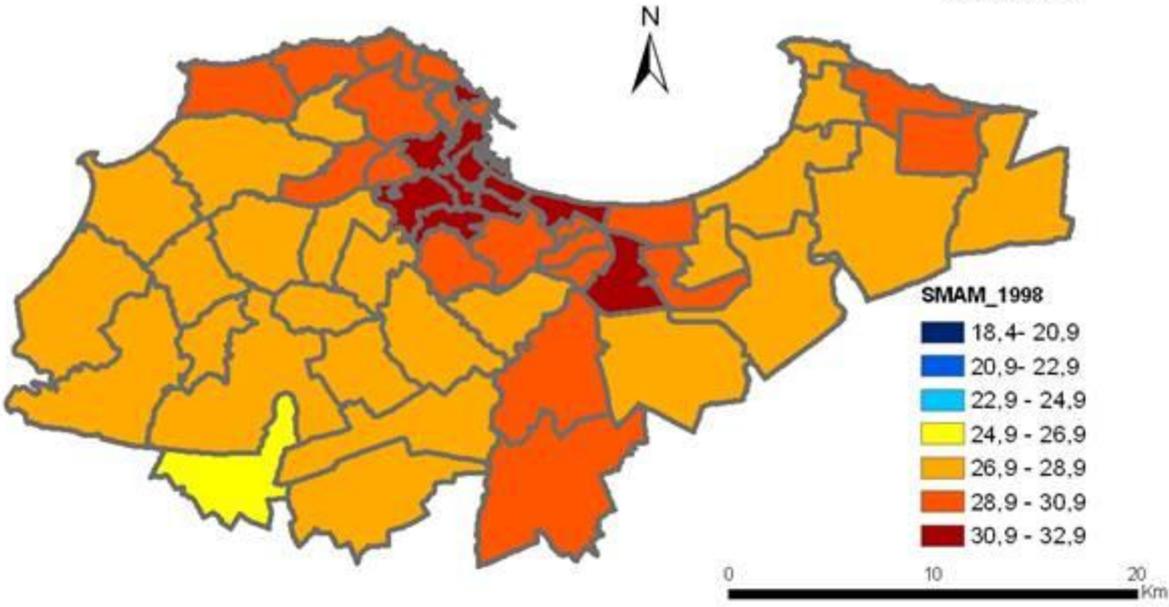


Female mean age at first marriage by « communes » Algiers

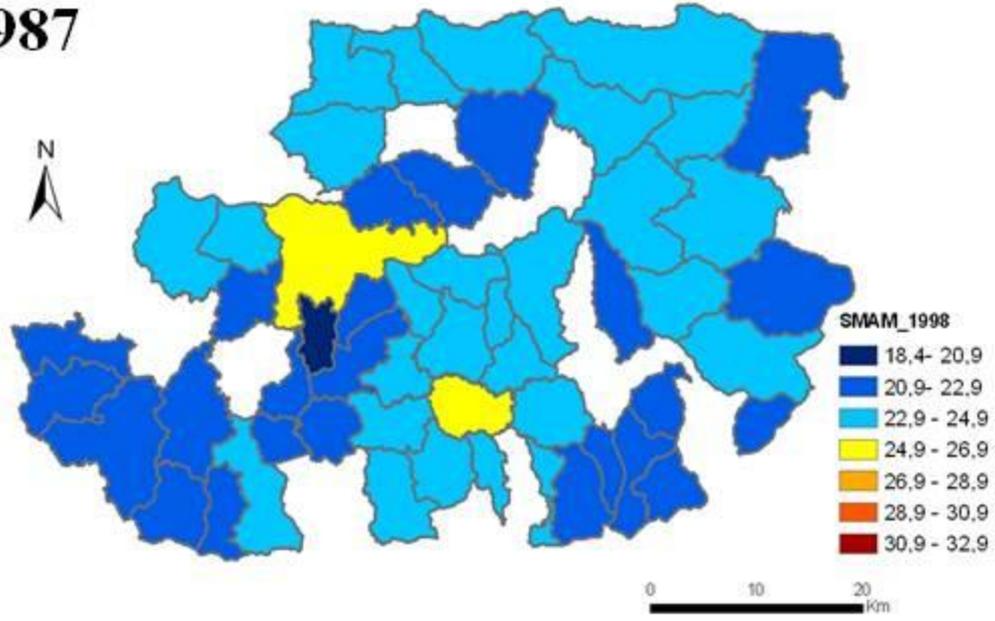
- In 1987 Census, 22 « communes », SMAM was about 26,9 and 28,9 years. Only in one « commune » (*la Masra*), women married after 30 years.

-Ten years later, in 22 « communes », SMAM was higher than 30 years

1998



1987

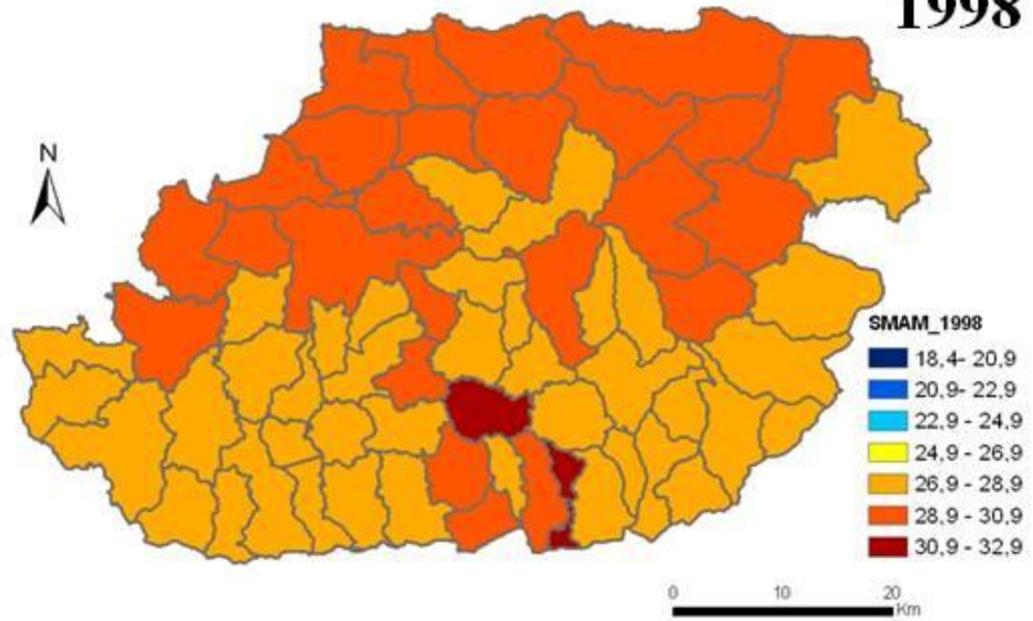


Female mean age at first marriage by « communes » Tizi Ouzou

- In 1987 Census, except 2 « communes », in all the wilaya SMAM was less than 24,9 and. Only one two commune (Tizi Ouzou et Beni Yeni), women married after 25 years.

-At the 1998 Census, in 28 « communes », SMAM was higher than 28,9 years

1998



Conclusion : An other question

- How will these new fertility behaviours change in the near futur?
- There is various sheddules of fertility transition in Algéria
- Some regions wich had began earlier the decline of fertility had reached the level of replacement and sometimes go below.
- Other regions that started their fertility transition later are continuing the mouvement of decline.

Two examples of these transitions

- Algiers which reached 2 children per woman in 1998, 1,4 in 2002 and where 29 « *communes* » on a total of 57 had TFR<2,1
- Djelfa which all its « *communes* » (36) had TFR>3,4 in 1998 and 20 communes had TFR between 5 and 9 children per woman

Link between TFR level in 1998 and changes (%) in TFR 1998-2008

- When TFR is low in 1998, the changes between the 1998 and 2008 censuses are positifs (rise in fertility)

- When TFR is high in 1998, the changes between the 1998 and 2008 censuses are negatifs (decrease in fertility)

