

(IN)JUSTICE AND (IN)EQUALITY IN ADAPTATION PROCESSES TO CLIMATE CHANGE: DESERTIFICATION AND FARMERS' MOBILITY IN KONYA PLAIN IN TURKEY

Gülçin Erdi Lelandais

CNRS Research Fellow, University of Tours François Rabelais

Presentation of the research and the methodology

- EXCLIM Project : Drought and Desertification in Konya Plain and the Future of the Farmer Population
- 2 dimensions :
 - -understanding the public policy scheme of climate change
 - analyzing the management of climate change's impacts on agriculture in Konya plain in order to understand the durability and the mechanisms of migration

Methodology:

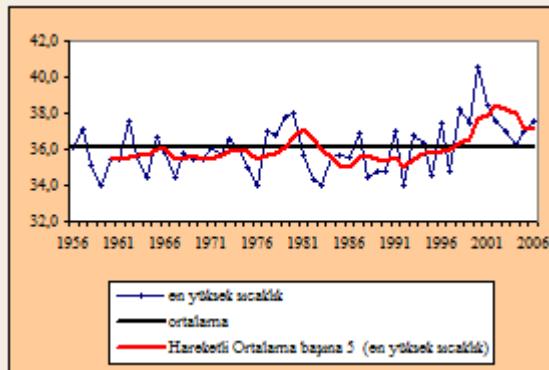
- Research realised both national and local level
- Between 2010 and 2012
- First stage in 2010 in Ankara: in-depth and focus-group interviews with responsables from Ministry of Environment, Ministry of Agriculture, UNDP and NGOs (Greenpeace, WWF, Regional Center for Environment)
- Second stage in 2010 and 2012 in Konya Plain : In-depth interviews with farmers in Cihanbeyli, Konya (city), Karapinar, participation in weekly meetings of Chamber of Agriculture in Karapinar, interviews with the governor of Konya, Karapinar and local civil servants, representatives of TEMA (Foundation for Combating Erosion) and the Chamber of Agriculture

Case Study : Konya Plain

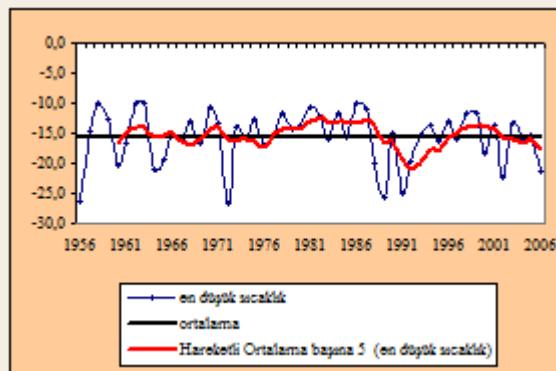


Progressive changes in the climate and the nature of Konya

- Highest annual temperatures



- Lowest annual temperatures

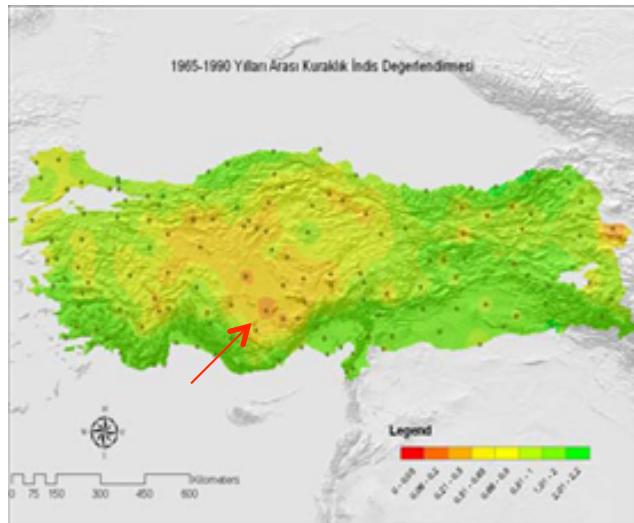


- Konya's climate from semi-dry to dry
- Increase of desertification
- Drought critical level depending on years
- Increasing water stress
- Increasing the number of « obruk »

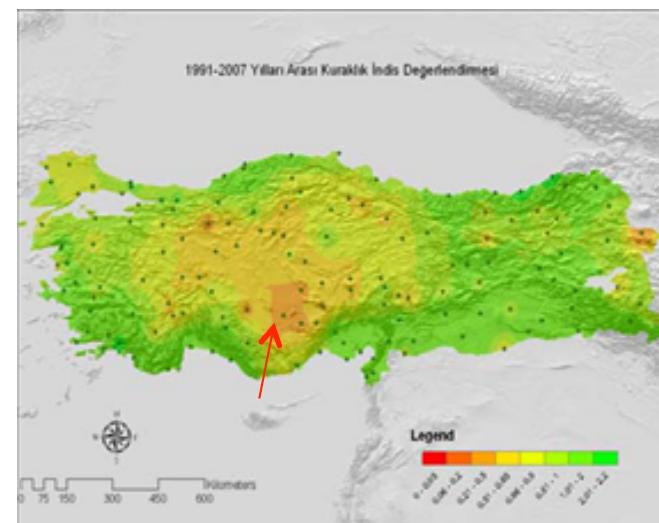
Progression of desertification in Konya

- The map A shows dry areas for the period 1965-1990. The small orange area south of central Anatolia shows the risky area for desertification. On the map B, the progress of this area is clear.

A (1965-1990)



B (1991-2007)



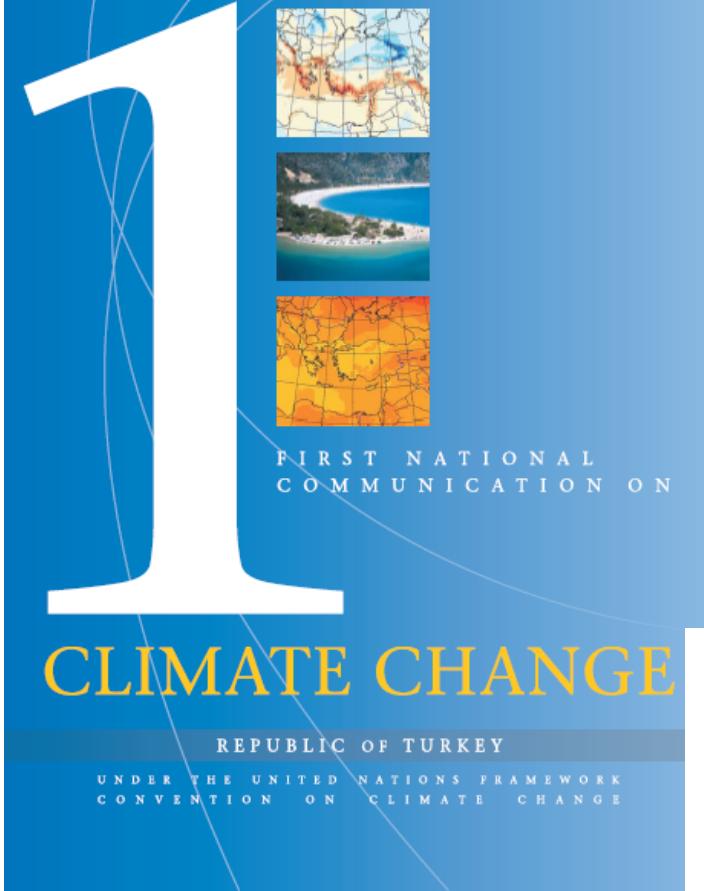
Findings

□ General findings:

Climate change as public policy in Turkey

- Impulse of International Politics : signature of UNFCCC in 2004 and Kyoto in 2009
- Creation of « climate change » department inside the Ministry of environment in 2010
- Environment was not a priority vis-à-vis economic development until the second half of 1990s→GAP

- Environment policy was longtime limited to the struggle against deforestation linked to the erosion
- Today, a substantial legal framework in the environmental field, with environmental rights and duties perfectly defined between the central government and local authorities
- Majority of programs on climate change founded by foreign countries and IGOs→ UNDP, UNEP, EU, UK, Spain, Netherland and Japan
- A big gap between theory and practice
- Climate change as a policy transfer and “image-maker” :
“improving Turkey's international prestige goes through the ratification of international agreements proposed by Western countries in several areas, including those of human rights and the environment” (a Turkish diplomat, Strasbourg, 2009)



REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT AND FORESTRY
GENERAL DIRECTORATE OF
AFFORESTATION AND EROSION CONTROL

AGM

Combating With Desertification

UNCCD

Combating Against Desertification

Desertification:

Is defined as decomposition in arid, semi arid and semi humid lands due to climate changes and human activities.

Desertification usually occurs in arid regions where the soil layer is extremely thin.

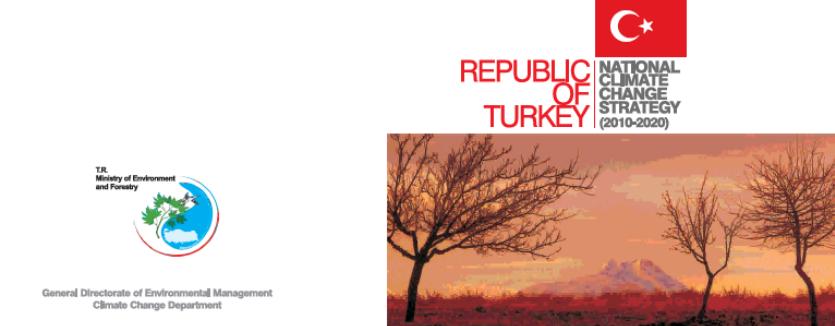
However four other actions of humans are more effective on desertification. The soil is exhausted by misuse of lands and improper agricultural practices. Excessive grazing damages the vegetation cover, leading the soil to erosion. Every year 500,000 hectares of land are facing desertification as a result of destruction of forest lands, salinated farmlands due to implementing improper irrigation methods, etc. This figure equals to each new land opened for irrigation.

Desertification in the World

Considering the fact that 1.2 billion people, 25% of lands, 75% of arid lands and 110 countries, 90% of which are developing, are under threat of desertification; serious precautions should be taken against this.

Desertification is continuing in regions where the soil layer is extremely sensitive, vegetation layer is extremely thin and the climate is extremely harsh. (The soil can be degraded anywhere, yet degradation in arid climate is called desertification). 70% of arid farmlands of 5,200,000 hectares farmland have lost their farming characteristics all over the world. Therefore, the affected farms 30% of total lands.

United Nations Environment Programme (UNEP) calculated the general cost of desertification as 42 billion dollars. Annual loss of Africa, for instance, is 9 billion dollars.





□ Local findings

Impacts of climate change and adaptation policies and attitudes

- Agricultural projects against drought and desertification : accustoming farmers to the dropwise irrigation technics, varying grains, irrigation chains, financial supports
- Diversifying economic activity : sites for solar energy
- Any direct measure on migration
- Any accompaniment of migrants

(In)justice and (In)equality in Adaptation to the Desertification in Konya Plain

- Local struggle on climate change is new for Turkey
- Konya region has been longtemps alone against the progressive impacts of climate change
- Farmers received any formation or education program on how to use water sources of the plain. New programmes started just a few years ago
- Overuse of natural resources
- Reduction of agriculture lands and the level of groundwater and the formation of « obruks »



Social mechanisms

- **3 types of farmer in Konya Plain :**
 - a) large-scale land owners
 - b) small-scale land owners
 - c) farmers without land
- **Types of public policies conceived for difficulties in Konya Plain :**
 - a) system of insurance against natural disasters
 - b) financial support for agricultural production
 - c) system of low-interest loans

But,

- Insurance does not include the drought
- Bank loans are layed on 5-7 years but with land mortgage
- As the drought is becoming intensive depending years, small farmers have not enough harvest to pay back ➔ no insurance
➔ lost of lands
- Collection of lands in the hand of large land owners
- System protect mostly large land owners who have agreements with food industry
- Karapinar Chamber of Agriculture : 18 000 members.
Members who use public credits : 500

Another vicious circle

- Installation of dropwise irrigation technique is highly expensive even though NGOs like WWF help to establish the system on several agricultural fields
- Some farmers prefer to take groundwater illegally.
- When the level decrease, the land drop down and farmer loses his land
- Desertification + drought + Loss of agricultural lands + not enough insurance + not enough public assistance →→ Migration

- As a result, the role of state interventions to combat social inequalities in environmentally degraded and disaster prone areas for adaptation and environmental migration remains not enough or perceived as increasing social inequalities :

“There is a social injustice. State does not have special programs for small land farmers. They don’t have the right to exist and are suffered by large land owners’ prices and speculations on products”

(president of Karapinar Chamber of Agriculture, Konya, 2012)

Absence of a well-managed and targeted public policy on climate change

- Combatting desertification
- Introduction of new irrigation techniques
- Education and formation
- Support of products needing a lot of water (sugar beet)
- Absence of research on seeds adaptable to the drought
- No substantial support for plants resisting to drought
- Determination of the range of plants depending on international food market, WTO engagements and EU quotas

Several inequalities which lead to the migration of a part of farmers towards big cities

- Resource inequalities : absence of solidarity mechanisms between farmers and State, and also among farmers (high cost of irrigation, education, formation and credits)
- Status inequalities : low level of education among farmers, absence of awareness relating their problems to the maladjustment of public policies, interpreting drought as a will of God
- Power inequalities : absence of deliberative democratic decision-making mechanisms, top-down public policy

Migration in Konya

Year	Konya Population	Konya (migration)	Konya (net migration)	First 3 cities receiving immigration from Konya
2000	2 192 166	-	-	-
2008	1 969 868	56760	11 258	Antalya-Istanbul-Ankara
2009	1 992 675	51006	4 964	Istanbul-Ankara-Antalya
2010	2 013 845	56 729	8 828	Istanbul-Antalya-Ankara
2011	2 038 555	54 533	2 399	Ankara-Istanbul-Antalya