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

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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 »
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.
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)
Combating Against Desertification

Desertification:
It is defined as degradation of land, sand and semi-arid lands due to climate change and human activities. It is the transformation of productive land into land that is not productive or requires reclamation in order to renew productivity. It is a slow, but continuous process. However, certain actions taken by humans are more effective in desertification. The soil is eroded by human activity and improper agricultural practices. Excessive grazing damage the vegetation, causing the soil to lose its ability to hold water. In addition, desertification is a result of climate change and other factors. Therefore, it is necessary to implement proper irrigation methods. The image shows the effect of desertification on a natural landscape.

Desertification in the World:
Considering the fact that 1.2 billion people, 25% of all crops, 75% of arable land and 10% of forests, 90% of which are developing, are under threat of desertification, various preventive measures are needed. Desertification is devastating and can result in the loss of livelihood and even the loss of life. In addition, desertification affects every country in the world, and it can be reduced by taking proper measures. The image shows the effect of desertification on a natural landscape.

UNCCD
General Directorate of Environmental Management
Climate Change Department

May 2010

Republic of Turkey
National Climate Change Strategy (2010-2020)
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

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