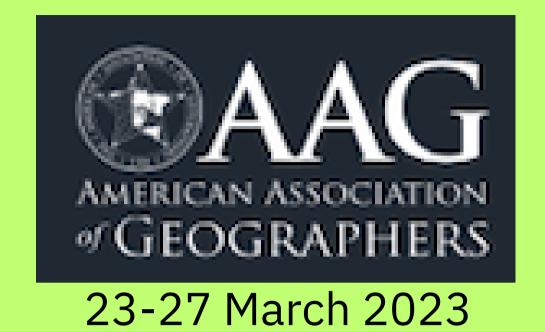# Local perceptions of human mobility in a context of environmental degradation in Morocco

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UNIVERSIDADE AbERTA
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SCIENCE FOR PEOPLE & THE PLANET

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# BACKGROUND OF THE STUDY

Environmental change and human mobility are shaping modern societies (Falco et al, 2019).

Some regions in Morocco are in a water stress situation, with a strong impact on the agricultural sector, which employs over half of the population in rural areas. (Hssaisoune et al, 2020; Clement et al, 2021).

IPCC 6th Assessment Report projects a duplication of the frequency and duration of meteorological drought overall in the Northern Africa region.

# Research Objectives

- to understand how members of different communities perceive their environmental and climate changes and the adaptation strategies that are being deployed by the population.

- to describe how human mobility is being considered within the overall adaptation to environmental changes.

- to provide insights into how the population perceives the impact of both environmental changes and human mobility on their quality of life in general.

- to compile a list of proposals to support the reduction of vulnerabilities and to improve the quality of life.

# Methodology

**Definition of the focus region :**
- regional gaps in existing studies
- discussion with experts

**Souss-Massa region**

**Tool :**
Semi-structured interviews

**Target :**
- migrants from the region in Casablanca
- inhabitants from Souss-Massa
- Agriculture

**Interviewees**
- 34 in total
- 22 migrants in Casablanca and 12 residents in Souss-Massa
- Nearly all participants have links to the agricultural sector
- 21 Amazigh native speakers
- Average age: 49 years
- Up to 4 years of education: 15 participants

Timeline: October 2022 and January 2023.
Further details: Cultural and linguistic mediators; recording of voice; transcription and qualitative coding and analysis using MAXQDA.

# RESULTS PERCEPTION OF ENVIRONMENTAL CHANGES

| | # participants |
|---|---|
| Less water available | 23 |
| Less rain | 18 |
| Changes in average temperatures | 9 |
| Pollution | 9 |
| Changes in seasonal patterns | 8 |
| Changes in natural landscape | 2 |
| Use of chemical products for growing food | 2 |
| Not aware of changes in environment | 1 |

**"There are a lot of areas with less water. The wells are getting deeper and deeper."**
Participant S33, a collaborator with the agricultural council in Souss-Massa

**"There is less rain. It rains later in the year than it used to, and some years it doesn't rain at all"**
Participant S29, a daily worker in agricultural farms in ouss-Massa

# Results
## Perceived causes of environmental change

| | # participants |
|---|---|
| Divine causes | 10 |
| Pollution | 9 |
| Industry & Cars | 8 |
| Natural causes | 6 |
| Fossil fuels / GHG emissions | 2 |
| Does not know / answer | 12 |

| | # participants |
|---|---|
| Ozone hole | 1 |
| Deforestation | 1 |
| Increased consumption | 1 |

**"Rain is a gift from God, and it makes the land alive"**
Participant S24, farmer in Souss-Massa

**"May God gives us rain and have mercy on us."**
Participant S25, farmer in Souss-Massa

14 participants (41%) identified an anthropogenic cause.

# Results
## Sectors being affected

75% of the respondents claimed that the agricutural sector was being negatively impacted

"Every year the farmers pay more to dig deeper wells"

Participant S30, farmer in Souss-Massa

The agricultural yield has decreased in the regions with water because they are being overexploited. The soil in the regions without water is still good"

Participant S32, agronomist in Souss-Massa

# Results
## Most frequent adaptation measure mentioned

**"Agriculture has been very impacted. That's why people leave and move to the city"**
M1, migrant from Souss-Massa in Casablanca

**MIGRATION**

Mentioned by nearly 75% of participants

**"If you don't have water you don't have anything. You cannot stay."**
S29, agricultural daily worker in Souss-Massa

**"The people that own a lot of farm animals, sell them in order to cover their expenses. But for the most part, they move to the cities."**
M8, migrant fromSouss-Massa in Casablanca

**"Now it is no longer possible to work on his own small plot of land. People either go working for larger farms or they migrate."**
M4, migrant from Souss-Massa in Casablanca

# Results
## Response to environmental and climate changes

Water desalination

Reduced Consumption

Selling Property

Selling Cattle

Change of Economic Activity

Reliance on remittances

Interventions by Local Associations and Cooperatives

No adaptation: Deterioration of living conditions

Praying

# Results
## Experiences of Human Mobility
## Reasons for migrating

**Economic: 70%**

**Economic but implicitly rooted in environmental factors: 21%**

**Household and personal preferences : 18%**

**Environmental: 18%**

**Seeking education:12%**

"The ones with hope! Those are the ones that migrate!"
Participant S25

# Perception of Quality of Life

The analysis was supported by the capabilities approach (Nussbaum, 2011) and its adaptation by Fernández et al (2019) and further expanded to include other capabilities such as concern for coming generations.

- **ownership of property and movable goods, including financial abundance, are the most important perceived factors for quality of life; and also the one most negatively impacted by environmental changes**

- **no participant stated a positive impact of environmental change on their quality of life**

- **4 participants did not identify a relationship between environmental changes and their own quality of life**

# Results
# Perception of Quality of Life

- **1/3 participants - positive relationship between quality of life and mobility**

- **9 participants claimed that mobility had positive and negative impacts on the quality of life**

- **Most common negative impact: Emotions**

- **Most common positive impact: Control over own material environment**

"People migrate to improve their quality of life"
M5

"Being far from one's family, from our parents, is not good"
M1

# Main proposals for adapting to environmental change

Water resources management

Create employment opportunities (outside agriculture)

No action possible / God's will

# Proposals for mitigating environmental change

**1/3 of participants indicate:**

- **controlling pollution from industrial activities and transportation**

- **shifting toward renewable energy.**

# Conclusion

- **generalized perception of a reduction in water availability and precipitation**

- **the majority does not identify anthropogenic causes for the changes**

- **human mobility is a response to changes in the environment by providing opportunities for the economic diversification of households**

- **environmental changes are negatively impacting the quality of life, particularly among agricultural communities**

- **human mobility has both positive and negative impacts on the quality of life of the migrants**

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# Support
# Information

# Results
# Obstacles/facilitators in human mobility

| Obstacles | # participants |
|---|---|
| Only speaking Amazigh | 6 |
| Cost of moving | 3 |
| Period of adaptation | 3 |

| Facilitators | # participants |
|---|---|
| Male gender | 12 |
| Age - Young | 11 |
| Social and migrant networks | 6 |
| High socioeconomic level | 5 |
| Higher level of education | 5 |
| Female gender | 3 |

"Leaving is never easy"
Participant M15

"Where could I go?"
Participant S25

# Results
# Consequences of human mobility

**ORIGIN**

"Those regions are forgotten. We forget about them." Participant M6

**DESTINATION**

"It's an amalgamation It's an heterogeous unity. Everyone has their own culture". M6

| | |
|---|---|
| Economic, inc. receiving remittances | 19 |
| Demographic | 17 |
| Social | 7 |
| Cultural | 2 |
| Legal & Political | 2 |

| | |
|---|---|
| Economic | 19 (12 positive and 7 negative) |
| Demographic | 13 |
| Social | 3 |
| Cultural | 2 |