Population Dynamics in the Dr, a Catchment

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In the IMPETUS Project, demographical dynamics are of major importance for research concerning water and land use, economic development and life quality. The recent droughts in the Draa catchment the livelihood basis of most households was affected. The declining influence population dynamics both directly and indirectly. Changes in population seize, distribution and structure are analyzed by means of selected response indicators: fertility, mortality and migration. The local

1. Introduction

scarcity is **migration** to expanding cities in other parts of Morocco. Demographic data about the selected response indicators are ascertained on the Drâa catchemnt level. Moreover, **anthropological fieldwork** provides data from two case studies in the Drâa valley which highlight changes on both household and village level.

2. Effects of Droughts on Demographic Factors **DROUGHTS** Reduction of 1. Irrigation water use 2. Drinking water use Malnutrition Age structure Urbanisation

6. Migration in the Drâa Valley

Circular migration stretches the ties between the married or unmarried migrant and his family as well as the family-based social community of the village. The migrant's main intention is to guarantee his familyís live basis in the village which means life long labour migration for many migrants (Amersfoort 1978).

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 1) social driving forces

 belonging to ethnically disadvantaged groups

 belonging to the group of impoverished farmers

 radical changes within a family (death, vilovree)

 high percentage of young and active population (see above)

 modern communication/media (TV) invoke new needs and desires

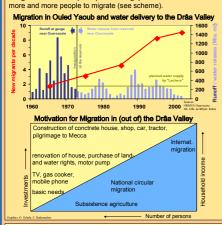
 education induces new needs, but also chances for employment

economic/natural driving forces

- collapse of alfalfa and date prices, diseases affecting dates (bayoud)

 higher costs of living for migrants in the cities (more migrants are needed to support the family at home)
 no job perspective in the Dr. a valley
 subsistence production insufficient, perceived decline of agriculture
 lowering of groundwater levels (deepening of wells is costly)

The increasing number of migrants indicates a more complex interrelation than could be explained by natural conditions like droughts and decreased water delivery via Nachersi from the reservoir near Quarzazate alone (see figure). Securing the basic living standard and perhaps realising personal ambitions force more and more people to migrate (see scheme).



interconnectedness population growth is largely negligible, with scenarios for 2020 showing only slight differences (see 5.).





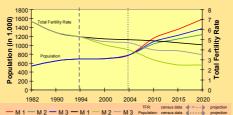
4. Urbanisation



Annual population growth rates between 1994 and 2004 were generally low and even negative (3.1% for urban and 0.8% for rural communities). This is accompanied by a high migration rate (31% of the economically active male population). 77.6% of the migrants are heading to urban centres outside the region. In addition, the region is urban centres outside the region. In addition, the regions urban communities are steadily growing (regional urbanisation rates: 18.7% in 1994, 19.2% in 2004). Droughts can provoke whole families to leave the countryside, predominantly looking for alternatives to agriculture as basis for living, but also other improvements of daily life such as access to water and electricity, sanitation equipement, and education.

Sources: Roy. Maroc, RGPH 1994 & 2004; Survey of R. Penitsch, May 2004

5. Population Growth & Structure



The region population is only slowly growing due to:

- high migration: 31% of the male active population in 2004 decreasing fertility rate: 5.45 in 1994 to 4.26 in 2004 longer birth intervals

The different scenarios for 2020 show rather weak differences for the total population, as the complex demographic processes are reacting only slowly to changes

7. Case Study: Ouled Yaoub

Arabic village Ouled Yaoub, located in the oasis of Tinzouline 120 permanent households (1226 inhabitants) 122 hectares of arable land, 63 wells supplied with motor pumps Products: wheat, barley, affalfa, vegetables and dates

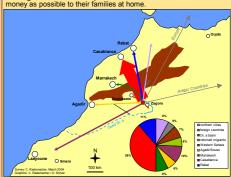
Motor-pump irrigation superseded traditional irrigation via Oued Dr, a. As not all farmers can afford a well with a motor-pump, alternative income strategies are of major importance for the people/s survival in the oasis. Labour migration to different Moroccan towns and (to a smaller extent) to foreign countries has become the most important strategy since extent) to foreign countries has become the most important strategy since Moroccois independence in 1956 (see map to the right). Mostly young, unmarried men have left the village; 75% of which found work in the producing sector, mainly in construction. Today, migrants can be found among all age groups. The vast majority of them continue to be migrants for the rest of their active work life.

For Ouled Yaoub, where 246 men in working age were migrating (own

survey 2004), this means that more than 80% of the male population is living somewhere else. Most migrants families stay in the village, so that the family is split up. Wife and children mostly live under the authority of the migrants father or brother which often causes problems. The migrants themselves come home only 2-4 times a year. Only long-term migrants normally live united with their nuclear families. During long times of drought more and more complete families leave the village to look for a better life in the city. The absence of active males deeply affects family as well as socio-political structures

8. Work Destinations of Ouled Yaoub Migrants

Circular migrants are very mobile; especially construction workers follow construction sites and similar work opportunities all over the country. As the costs of living in the North have remarkably increased, some migrants try to earn more money in the Western Sahara, where housing and food is cheaper. Their intention is to send as much money as possible to their families at home.



9. Results and Perspectives

The complex interrelations between demographic factors and water scarcity within the local natural, economic and socio-cultural context is highlighted in this problem cluster. Due to this

Migration is the most striking consequence of droughts, inflicting long-lasting changes on every aspect of social life, e.g. in local social hierarchy. As a consequence, **international and governmental** support programmes are urgently needed to invest in education, the creation of jobs, health and agriculture to secure life in the Dr, a-Valley.







