

Upscaling of Anthropological Data The IMPETUS Case

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Goal: Up-scaling of anthropological data on livelihood security and water use

Background: Phenomena occurring at any level of spatial resolution are affected by mechanisms occurring at the same level, by the level immediately below, and the level immediately above. Thus, much of the research on water and livelihood processes must be examined from a holistic multilevel perspective. Additionally gender and population density (rural / urban areas) have to be taken into account.

The **multilevel approach** required:

- 1) an **INITIAL SURVEY** 2) thorough **FIELD RESEARCHES IN FOCUS VILLAGES** 3) a representative **REGIONAL SURVEY**

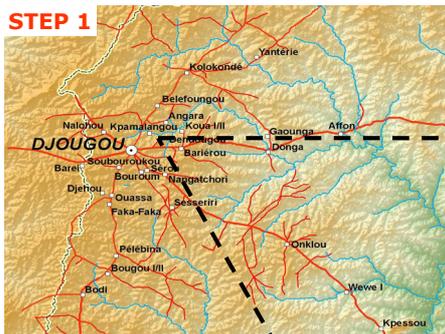
INITIAL SURVEY

Goal: Initial data on a regional level and choice of focus villages.

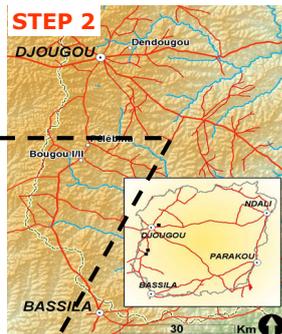
Results: data on water, social organization, economy, medicine.

Scale: 30 regional villages (2001).

STEP 1



STEP 2



FOCUS VILLAGES

Goal: Applied anthropological field research in close and daily cohabitation with the population.

Results: Holistic research on water, economy and medicine.

Scale: 3 focus villages (12 months of research, 2001-2002).

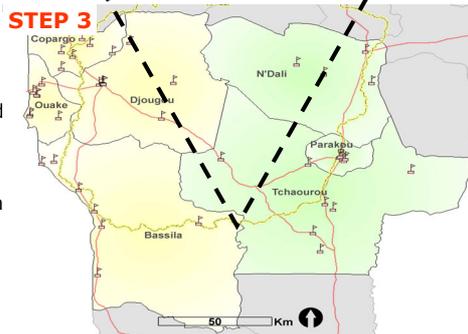
REPRESENTATIVE REGIONAL SURVEY

Goal: Comparison of past insights on the micro level with the macro level by a statistically representative data on livelihood security, well-being and the satisfaction of basic requirements (2004).

Results: Statistically representative data on Livelihood Security (Water, Work, Capital, Health, Risk Strategies, Nutrition).

Scale: 20.000km², 64 places (urban / rural), 839 people (men / women).

STEP 3



Statistic background

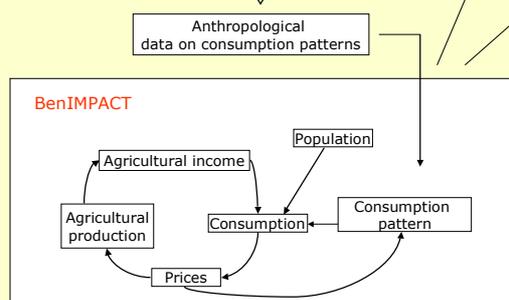
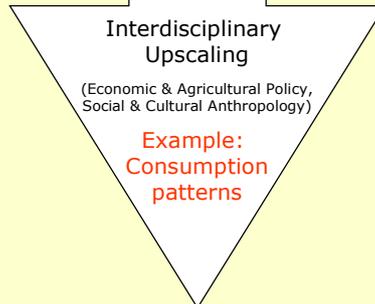
The highest **probability** (99% respective 95% with sensitivity to sex) and the most favourable **confidence interval** achieve the data on a regional level and as a computed value also on the national level.

However the data should be applied to national level only with caution due to the high heterogeneity of the country.

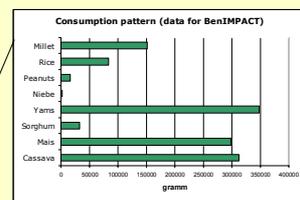
METHODOLOGICAL PROCEDURE

- Recording of the ingested foods and beverages per person in the last 24 hours as well as emic perception of consumed amount (meal / snack).
- Conversion of data on meals (product types / 24h / person) into grams / product types / person / day.
- Ongoing: verification of data. Up to date the data on consumed foods are higher than in comparative surveys. Possible sources of this discrepancy are:
 - very exhaustive information resulting out of the methodological approach of a very short recall-period (24 hours); e. g. up to 3 substantial meals and 5 snacks were reported by single persons.
 - every content was counted (e.g. corn flour in cakes and biscuits, millet in beer, fish and vegetables in sauces).
- Provision of the verified data for the Agrarian Sector Model BenIMPACT.
- Upscaling: Calculation of a consistent commodity balance for model regions based on collected data of per capita consumption, but as well with simultaneous consideration of further sources.

$$\text{production} + \text{inflows} = (\text{consumption per capita} \times \text{population}) + \text{outflows}$$

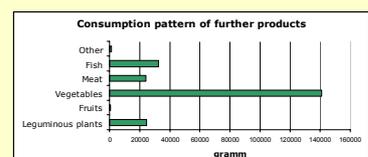


FIRST RESULTS



Data Input

IFPRI (GTZ)
FAO
other



In case that *all* consumed products are counted, the menu-list has to be extended by vegetables and leguminous plants (ingredients of sauces). Fruits barely played a role in the survey period (mars / mai 2004). The category "other" includes e. g. sugar and bread.

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