

Socio-Economic Atlas of Tajikistan



The World Bank



THE STATE STATISTICAL COMMITTEE
OF THE REPUBLIC OF TAJIKISTAN

DFID Department for
International
Development



1) *Background*

- **Why there is a need** for socio economic atlas?
- Need for a better understanding of the spatial distribution of poverty at a lower level than previously available

- BUT.....Poverty – multidimensional concept

- Many indicators are required

- Material poverty
- Socio- economic characteristics
- Environment
- Etc..



1) *Background*

- Why this will be useful?
- Nationally consistent dataset – many indicators at the same area of aggregation
- This has the potential to inform geographical targeting
- Some indicators require further elaboration using additional data.



Overview

- 1) Statistical Modelling of TLSS and Census to produce spatially disaggregated estimates of welfare at the Jamoat level
 - Statistical modelling
 - Base Unit Map (Jamoat)
 - PCode / Administrative code matching exercise



2) Atlas

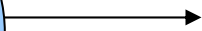
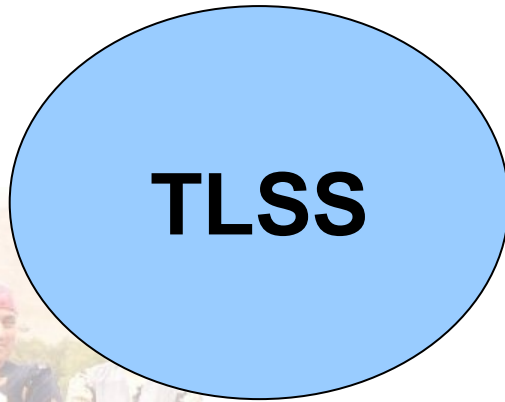
- Creation of a series of maps for different indicators
- Aggregated Jamoat data from 2000 Census
- Additional layers (land cover, terrain, infrastructure)

3) Digital versions

- CD
- Internet Atlas

2) *Statistical Modelling to produce estimates of poverty at the Jamoat level*

↳ **Material poverty**



Poverty

National

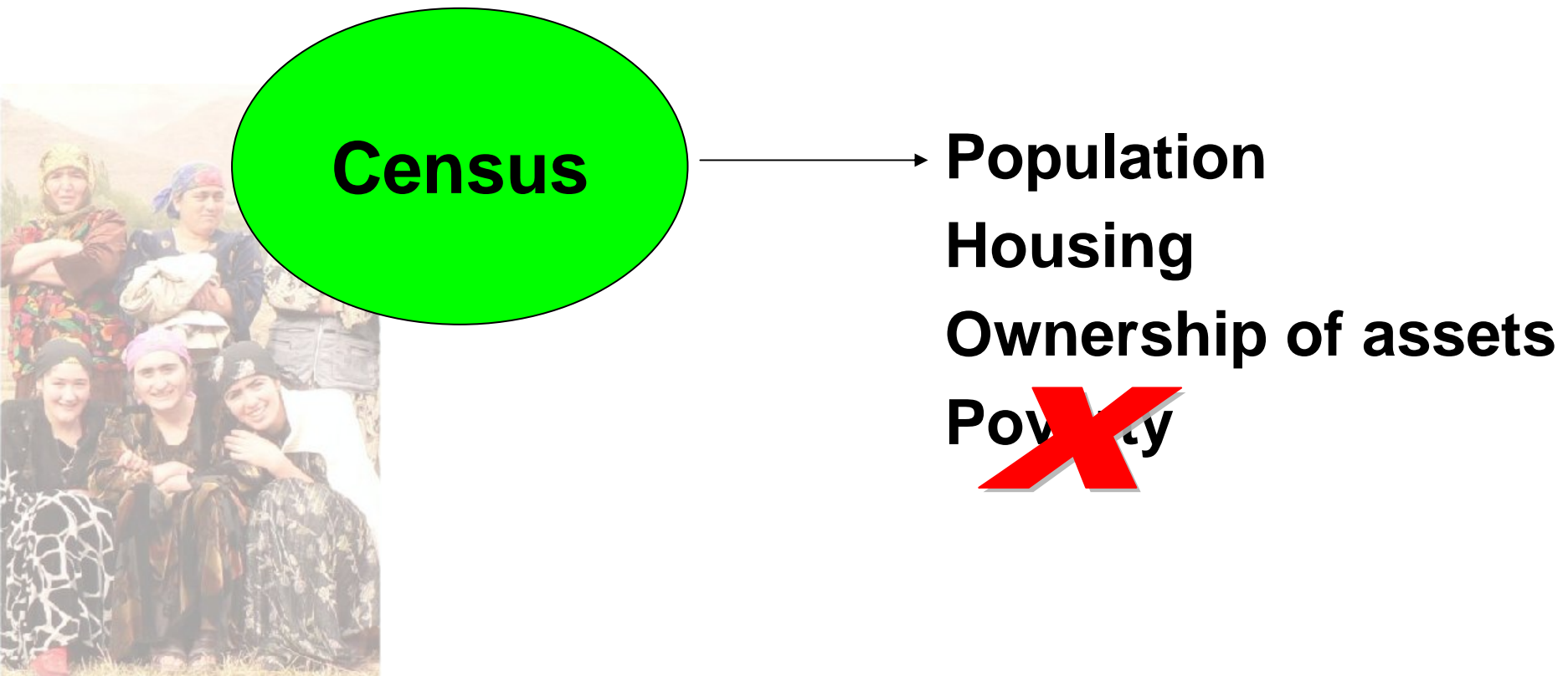
Oblast

~~Rayon~~

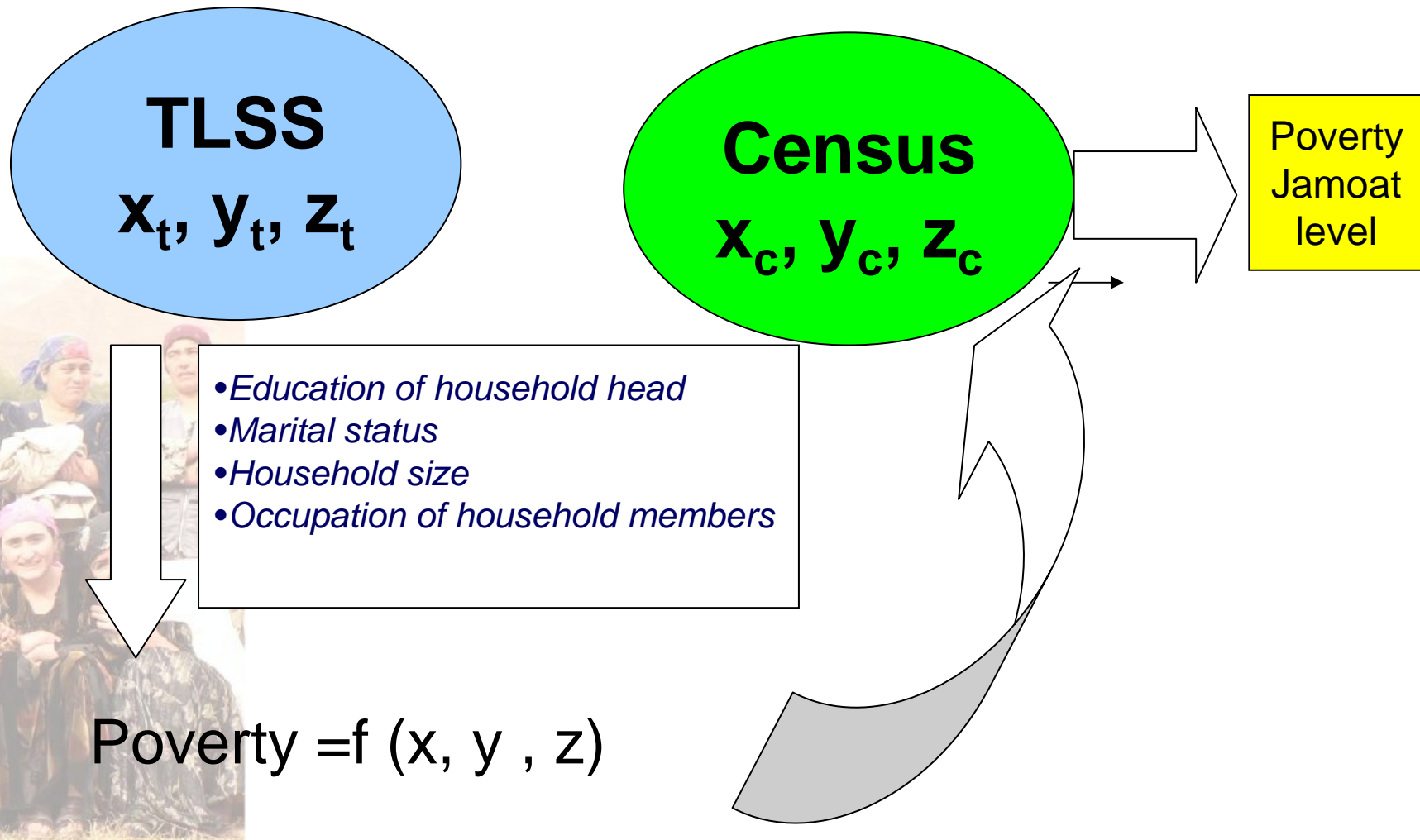
~~Jamoat~~



1) Statistical Modelling to produce estimates of poverty at the Jamoat level

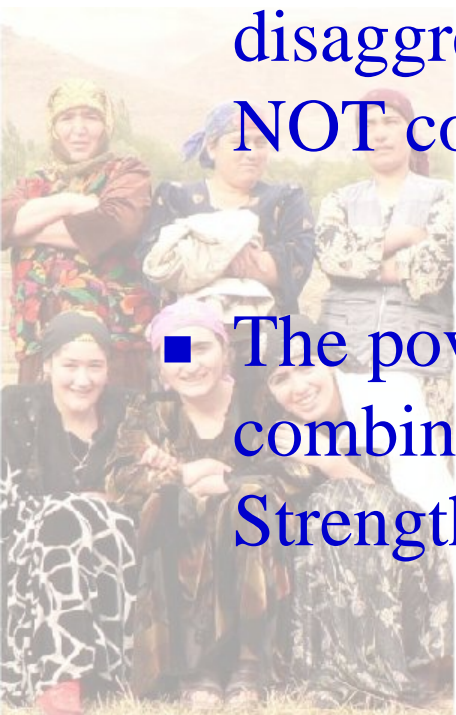


1) Statistical Modelling to produce estimates of poverty at the Jamoat level




Modelling

- **TLSS** does **NOT** allow to produce poverty estimate below the oblast level
- **CENSUS** allows analysis at an area of disaggregation below the oblast level **BUT** does **NOT** contain information on poverty
- The poverty mapping procedure allows to combine the strength of the **TLSS** and the Strength of the **CENSUS**



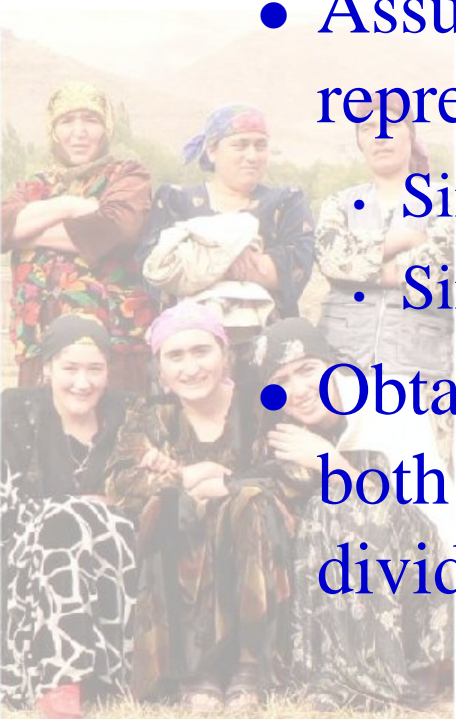
Tajikistan Poverty Mapping

- TLSS 2003
 - 2000 Census of Tajikistan
- 
- Stage 1: identify common variables
 - Stage 2: prepare consumption model
 - Stage 3: run simulation on the census dataset in order to get disaggregated estimate of welfare

THREE steps:

Step 1

- Select a set of key indicators common to Census & Survey
 - Assume variables have the same meaning & represent the same population
 - Similar wording
 - Similar average values
 - Obtain descriptive statistics on indicators for both Census & Survey for each strata (oblast divided by urban/rural)



Step 2

- Carry out series of regression analysis using variables which have a similar distribution

$$\log(\text{consumption}) = \beta_0 + \beta * \text{water} + \beta * \text{prop15to59} + \beta * \text{hh_sec} + \beta * \text{hh_high}$$

- R-square-----how good the predictions are.

- In order to reduce location effect.....

- we need to include locational variables

- such as village means calculated from Census
- plus environmental variables calculated with GIS analysis

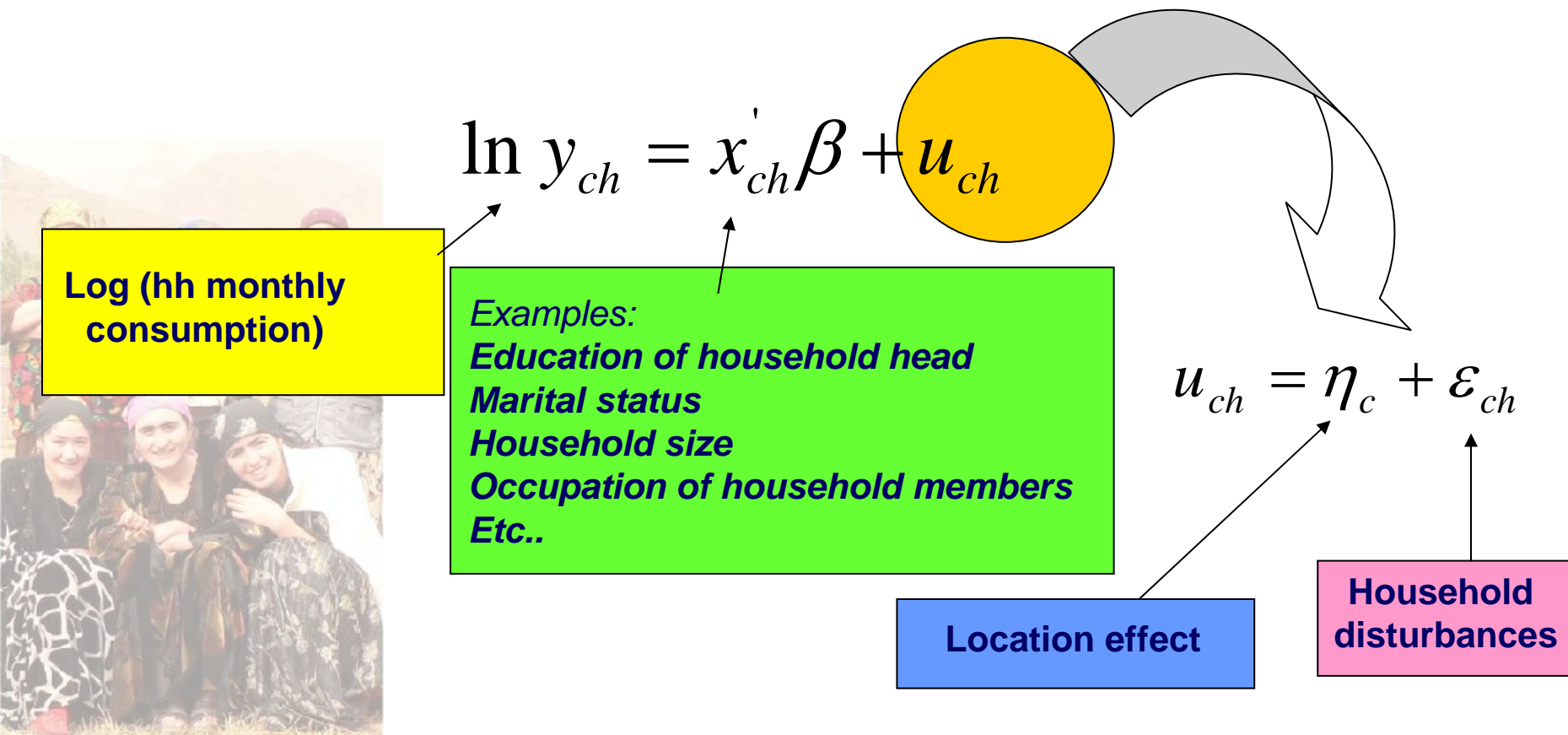
- This requires assigning a pcode/TER to each PSU in the Survey to LINK the datasets

- E.g. 3507 268 860



Modelling

- We derived a model of poverty using a set of explanatory variables common to the TLSS and Census



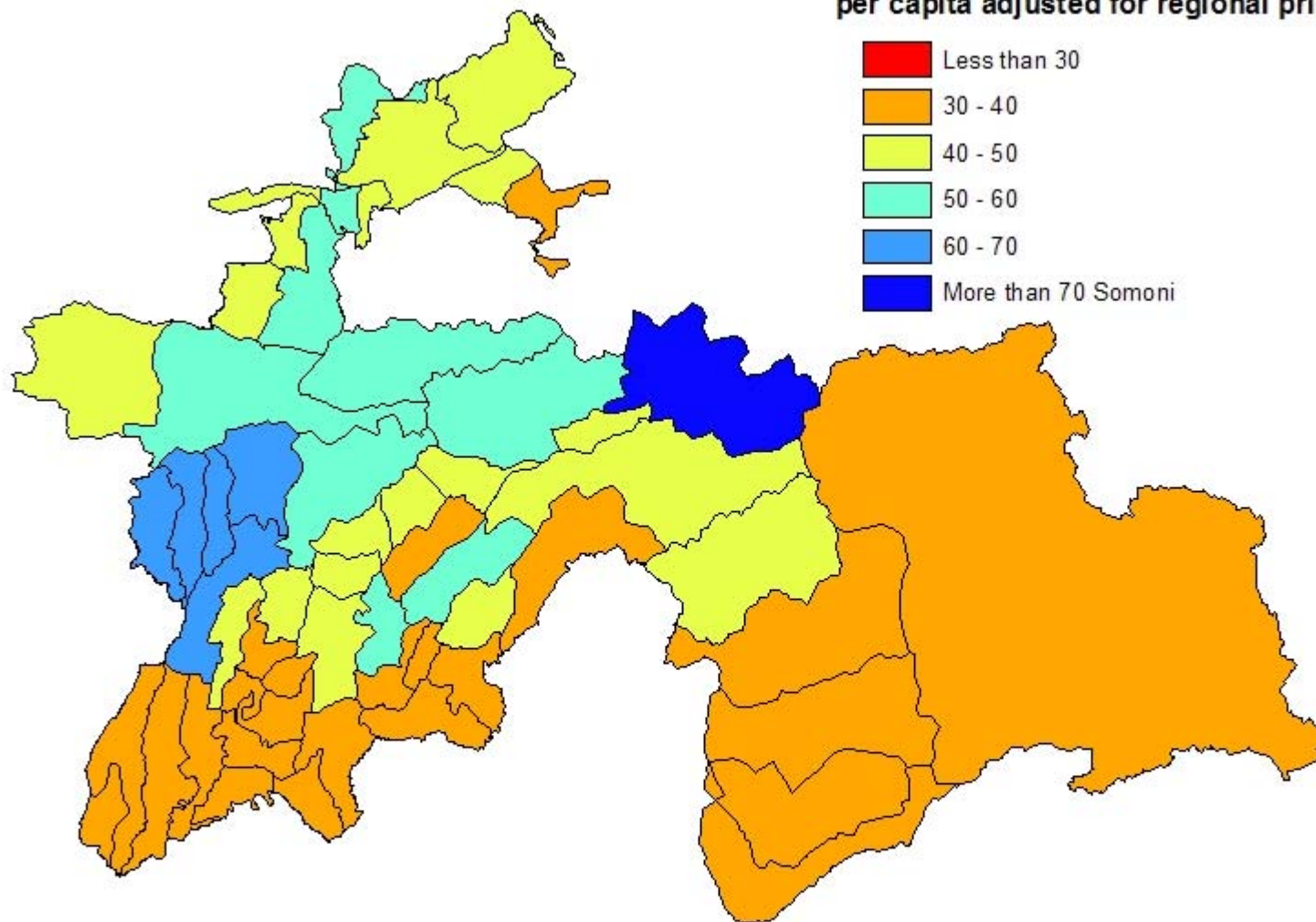
Step 3

- Simulation of several parameters...
- This stage allows to capture the location effect and allows to lower the level of aggregation

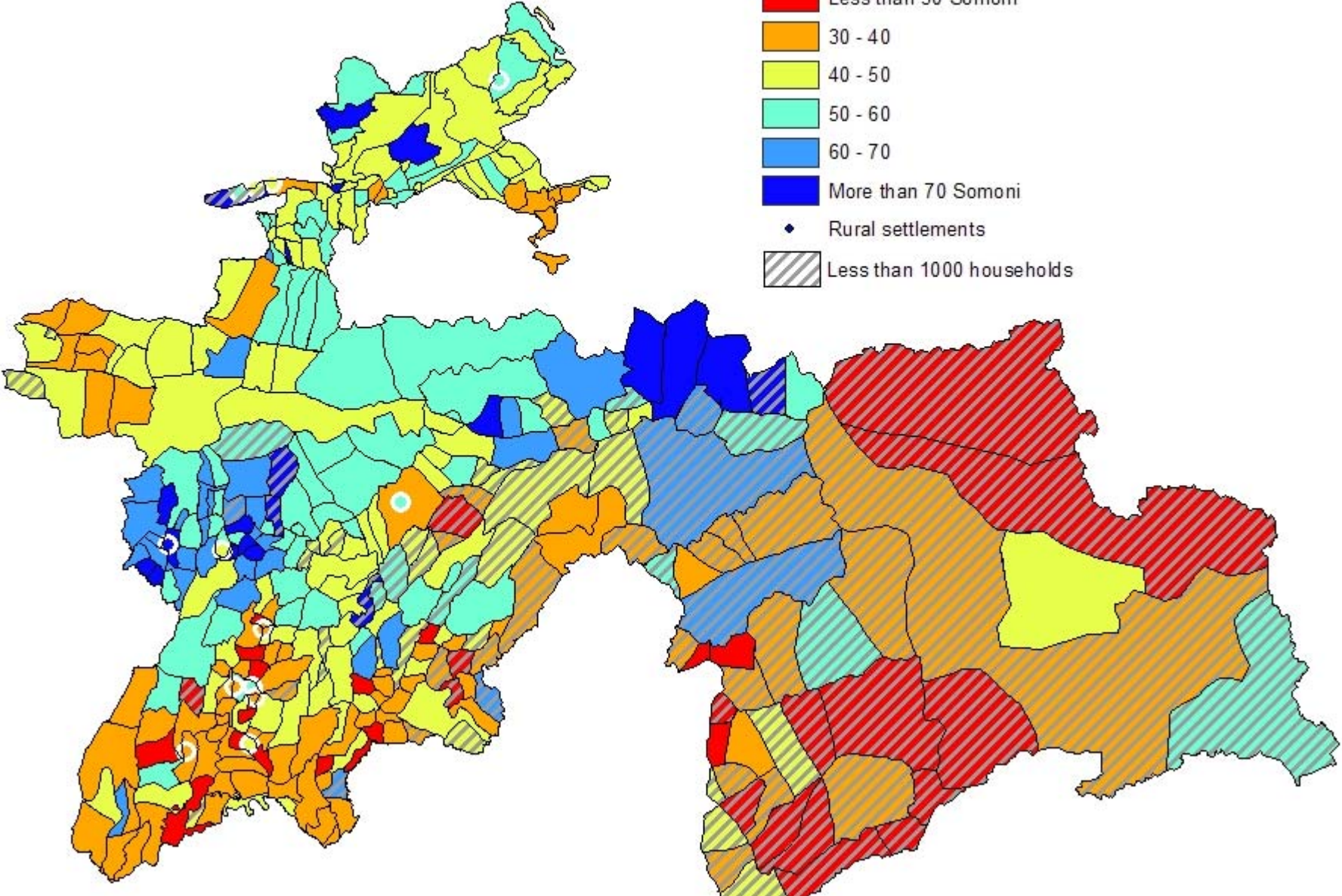
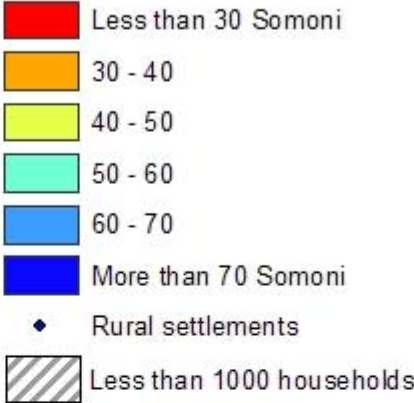


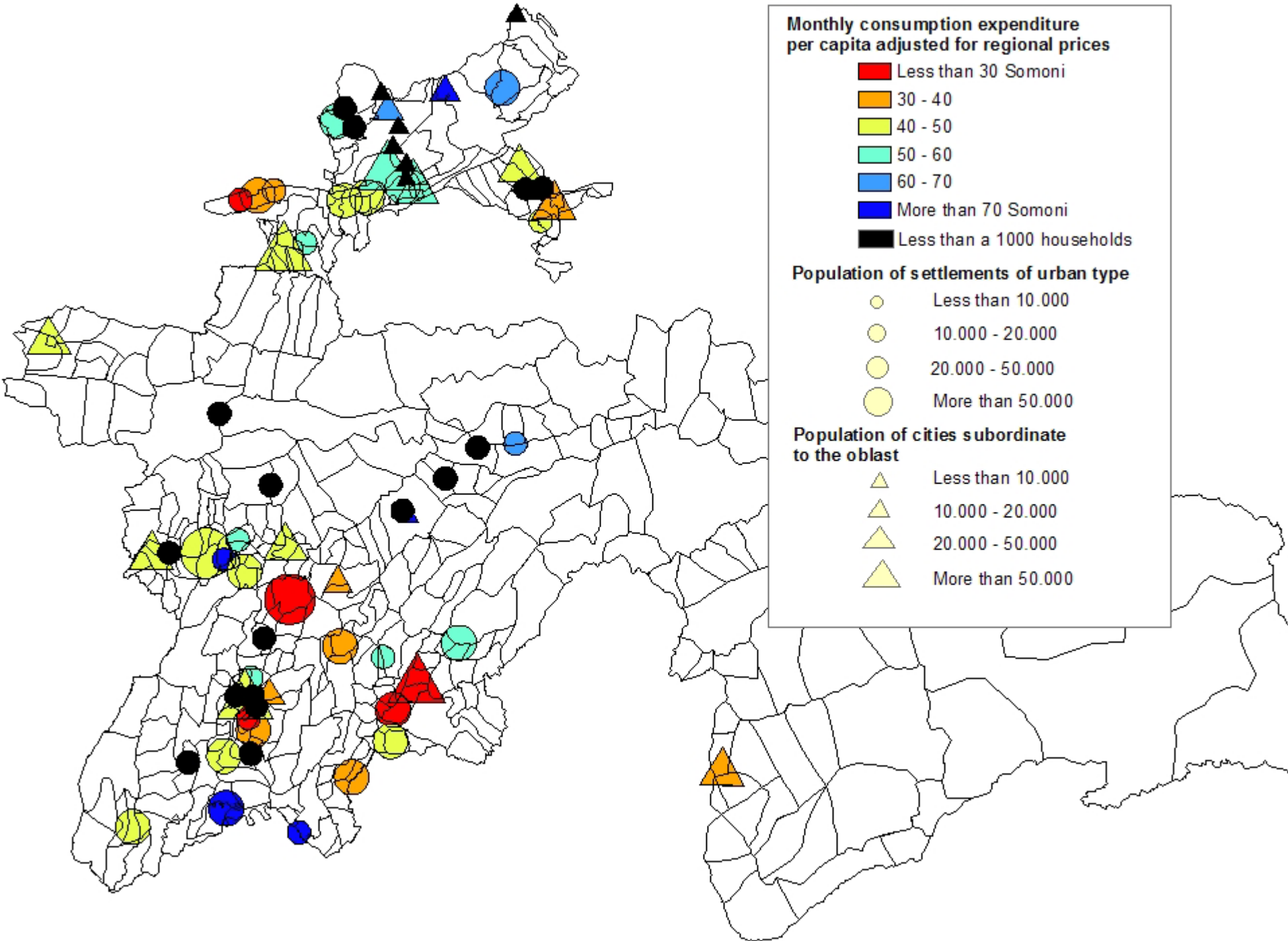
- The RESULTS...

Monthly consumption expenditure per capita adjusted for regional prices

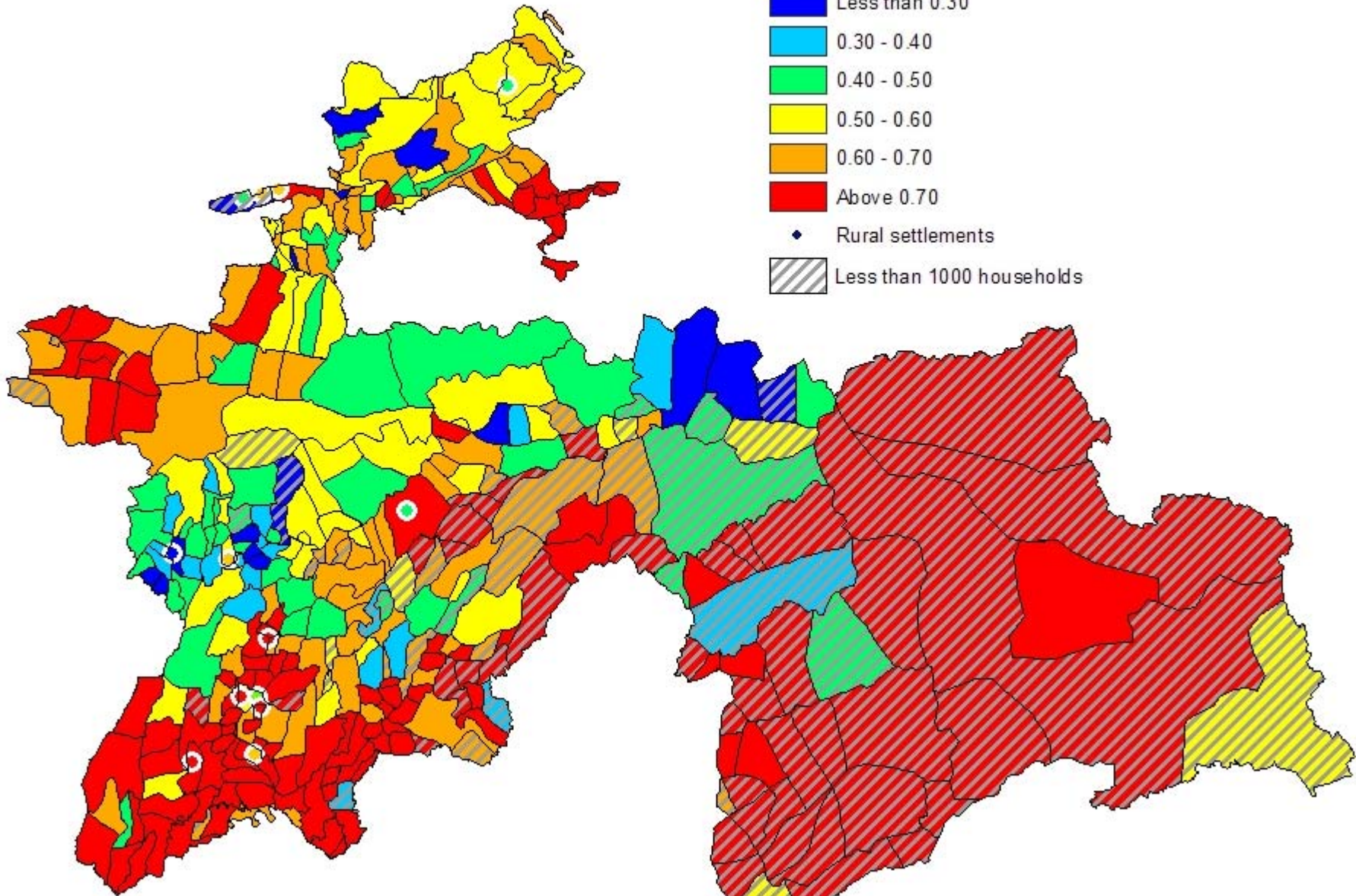
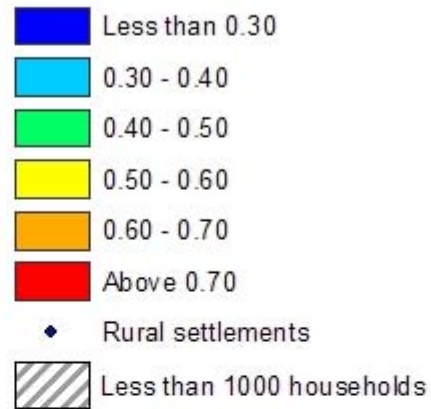


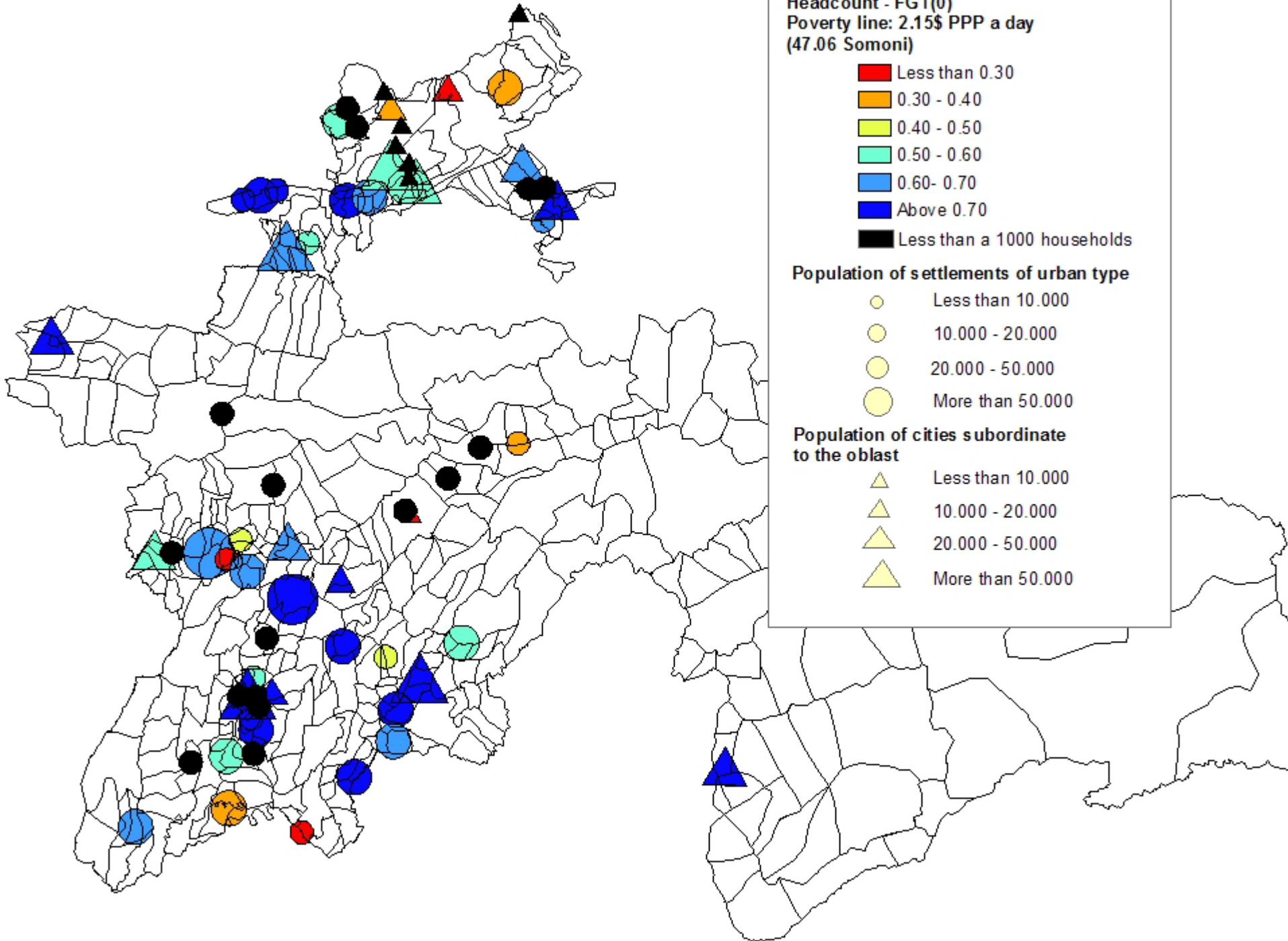
Monthly consumption expenditure per capita adjusted for regional prices





Headcount - FG T(0)
Poverty line: \$2.15 PPP a day
(47.06 Somoni)





Atlas

- Paper Version



Atlas

- CD
- www.geodata.soton.ac.uk/poverty_atlas



Further work

- Combine Variables
- Map Change over time
- Combine with other map data

