

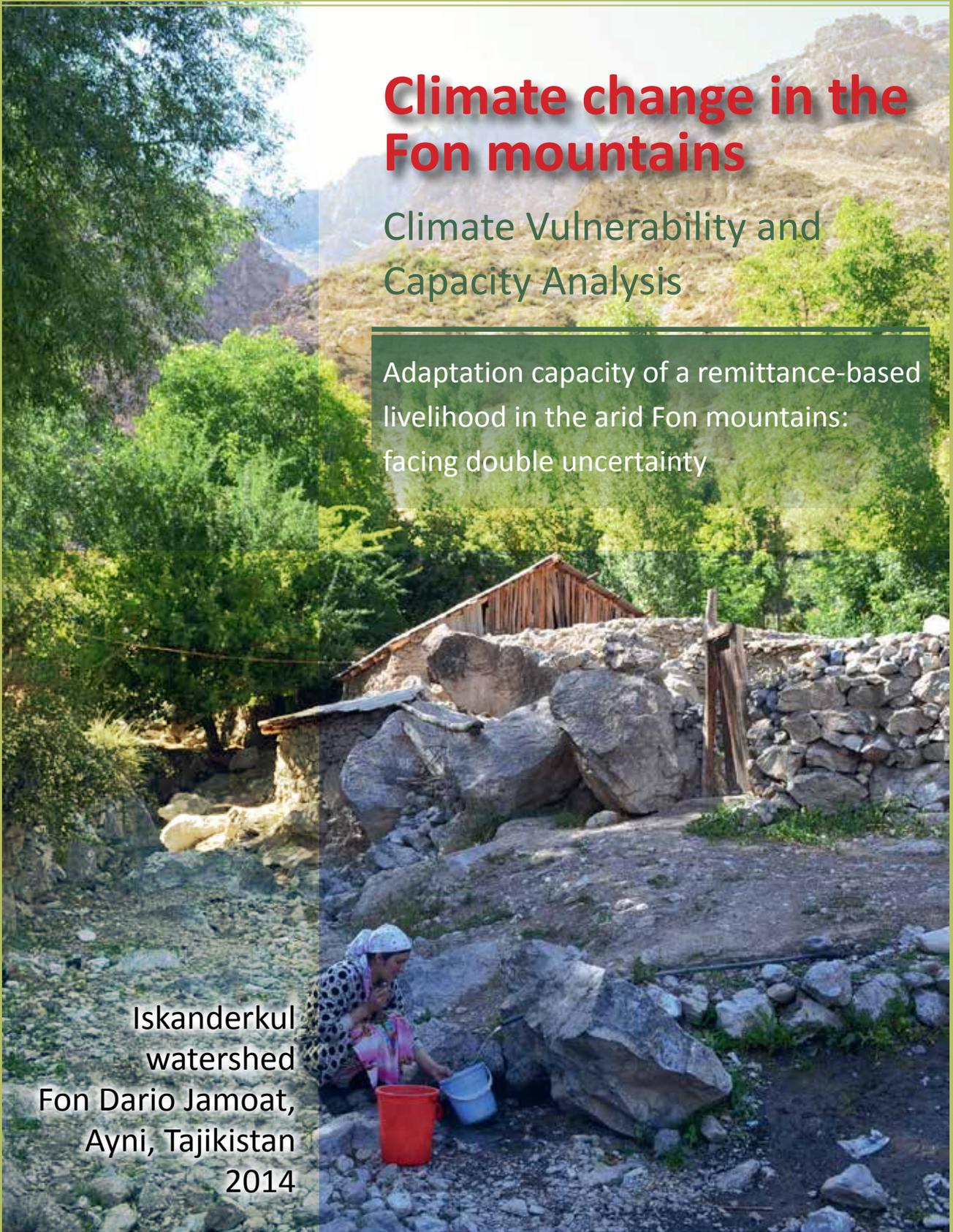


Climate change in the Fon mountains

Climate Vulnerability and Capacity Analysis

Adaptation capacity of a remittance-based
livelihood in the arid Fon mountains:
facing double uncertainty

Iskanderkul
watershed
Fon Dario Jamoat,
Ayni, Tajikistan
2014



Fon Dario jamoat

Tajikistan is considered as the most vulnerable country to climate change in Europe and Central Asia, as it already suffers from low agricultural productivity, water stress, and high losses from disasters.

The jamoat of Fon Dario is situated in the district of Ayni, in the Sughd region, north of Dushanbe.

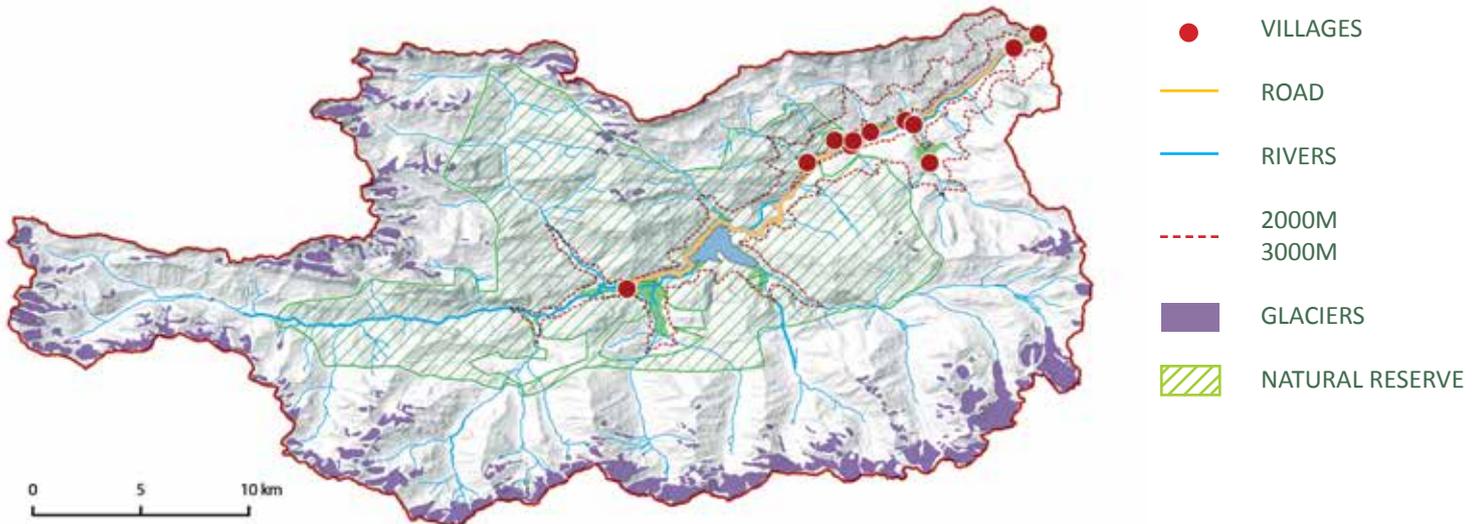
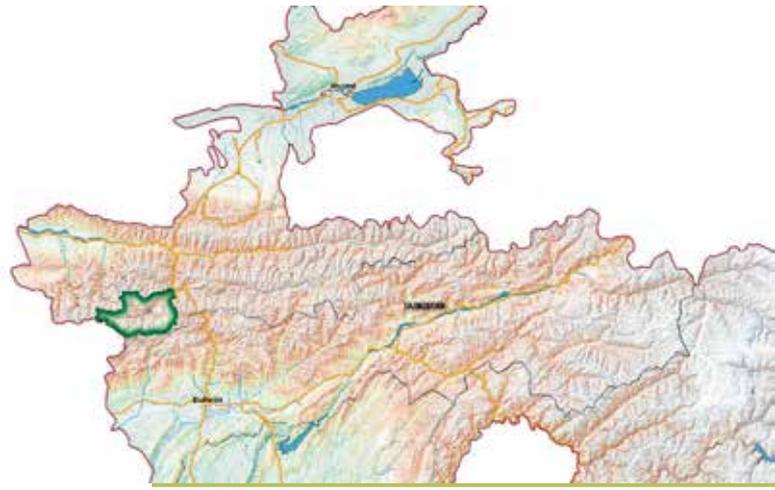
Iskanderkul watershed

The watershed is 50 km long, and 28 km wide, it is situated in the Fon mountains, with numerous peaks above 4000m and shelters a lot of small glaciers.

Iskanderkul is a glacial lake that gathers the water melting from the glaciers and snowfields.

The main river "Iskanderdario" flows down to ultimately join the water of the Amu Daria.

The climate is Mediterranean and continental (cold winters, warm summers, 50% precipitations in spring)



Methodology of the vulnerability assessment

Analysis of quantitative data

Baseline survey in 2011

Socio-energy assessment on domestic practices (SEADep) in 2012

Meteorological data from Iskanderkul weather station, 1930-2013

Analysis of qualitative data

17 focus groups conducted in July 2014

Interviews with administration officials

Aim

- Finding out the impacts of climate change at a watershed level
- Providing main findings to local authorities (hukumat, jamoat and mahalla) so that they have the knowledge to adapt
- sharing main findings with neighboring jamoats with an informative aim on climate change and need to adapt



CLIMATE CHANGE IS HAPPENING!

- DECADE 2000-2009 IS THE HOTTEST SINCE 1930 : + 0,7°C WARMER THAN THE AVERAGE SINCE 1930
- SPRING MONTHS ARE WARMER: MARCH AND APRIL: +1,8°C
- WINTER NOT AS COLD AS IN THE PAST: MINIMUM WINTER TEMPERATURES ARE INCREASING
- PRECIPITATIONS (SNOW AND RAIN) DON'T CHANGE
- GLACIERS ARE MELTING
- MAXIMUM LEVEL OF ISKANDERKUL HAS INCREASED : + 0,6 M
- THERE IS NO CHANGE IN NATURAL HAZARDS*



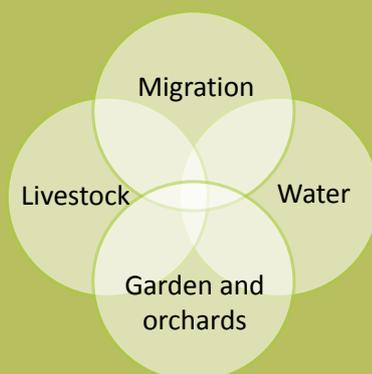
Tuda village in iskanderkul valley

«IF THE GLACIER ARE DONE, WE ARE DONE TOO»

Men focus group in Makshevat

IT IMPACTS* THE LIVELIHOODS OF THE POPULATION

*according to focus groups with the population of Iskanderkul valley



- 64% OF THE HOUSEHOLDS RECEIVE MORE THAN 50% OF THEIR INCOME FROM REMITTANCES,
- AGRICULTURE (LIVESTOCK, FRUITS, VEGETABLES) REPRESENTS A PART OF ALL INCOMES AND IS THE SAFETY NET IN CASE REMITTANCES DON'T COME,
- REMITTANCES ARE DEPENDENT ON THE ABILITY OF THE MIGRANT TO FIND A JOB, AND ON THE GLOBAL TREND OF THE ECONOMY, WHILE AGRICULTURE DEPENDS ON THE CLIMATE. BOTH INCOMES ARE NOT ENTIRELY RELIABLE. HOUSEHOLDS THUS FACE A DOUBLE UNCERTAINTY ON THEIR LIVELIHOODS.
- CLIMATE CHANGE IS AFFECTING THE HYDROLOGICAL PATTERNS OF THE WATERSHED: SPRINGS ARE DRYING UP, IRRIGATION WATER IS GETTING SCARCE,
- IN THE LONG-TERM, SMALL GLACIERS WILL DISAPPEAR,
- IT IMPACTS THE ECOSYSTEMS: PASTURES (LESS GRASS IF MORE HEAT), FORESTS, LESS MEDICINAL HERBS.

RECOMMENDATIONS FOR ADAPTATION

Governmental level

- Engage the local authorities in the design of the national adaptation plan:
- Provide mechanisms to allocate funding for most immediate needs on adaptation to climate change for the local authorities (water, forest, pastures management)
- Provide beneficial environment for developing local businesses
- Coordinate scientific data collection at the national level to feed a database of local impacts of climate change

Jamoat level and Mahalla committee level

- Organize common goods management (water, pastures, forests)
- Promote women's involvement in community matters
- Provide information on climate change to the population



Household level

Increase gardening practices as a safety net (vegetables and fruits), adapt agricultural practices to water scarcity: mulch, compost, agroforestry, plant trees, sowing periods
Minimize dependency on livestock, implement energy efficient techniques and renewable energies for the household

