



Resting place of the animals next to the herder's tent. (Christian Wirz (Switzerland))

Daily and seasonal rotation on grassland ()

Dajmardei Kaspi (professional herder)

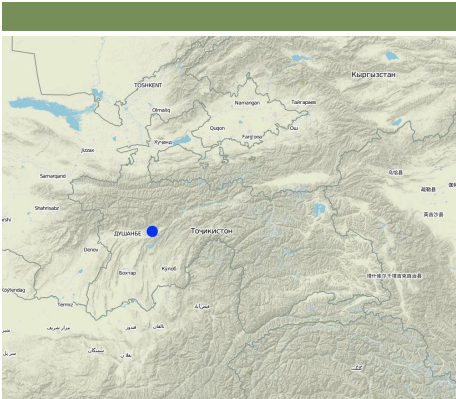
Extensive grazing of sheep and goats by the means of a precise rotational scheme

Half-year herding with 500 sheep, goats and cows (very few), with 7-8 different locations of the herder's tent. The herder visits each place twice to thrice per grazing season and stays in one place for one week to maximally one month (during the Ramadan period, due to limited forces). The area is grazed from the higher zone (around 2000m) to the lower zone (around 1600m) twice per season, in a sort of circle. Every day the herder starts in another direction from his tent and leads the animals to the pastures, once in the morning and once in the evening. He passes a stream once (autumn) to twice (summer) a day.

Purpose of the Technology: The grass should not get dusty and dirty, explaining why the herder daily changes the pastures, only revisiting the same places every two to three days.

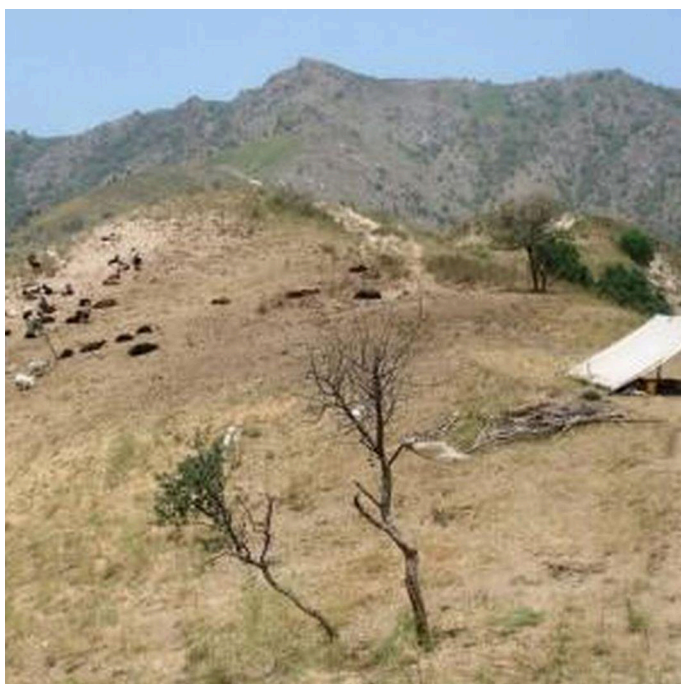
Establishment / maintenance activities and inputs: After accompanying his father as a child and a kind of an apprenticeship (of one year) later on, M. is considered by the villagers as a good herder and they give him their animals for herding. But M. applies for land on the forest department only after working as a guardian and as a tractor driver for 20 years. For the herding profession observing the animals precisely is necessary, in order not to lose any of them. And the maintenance of the pastures is guaranteed by the strict rotational scheme.

Natural / human environment: The pasture-area is in a generally well-conserved state. Moderate to high values of fractional vegetation cover can be observed and only few signs of recent erosion processes (through water) are visible. The area is characterised by steep slopes where still signs of past tree-planting during the USSR period are visible by some trees, many little platforms made for tree-planting and a few terraced areas. Eventhough, many trees have been grazed and do not stand anymore. Besides steep areas there are small, quite flat areas (where the herder installs his tents), that used to be cultivated (wheat) till 1966. These areas generally have low cover-values and signs of rill-erosion, which the herder attributes to the past tilling activity. However, it might also be the trampling and sitting of the animals (staying near the herder's tent at noon-time and during the night) causing this erosion. Nutrient management is provided for by the dung of the animals which is not collected, contrarily to the pastures near the villages.



: Faizabad, Region of Republican Subordination,

		:
• 69.3771, 38.6213		
		:
		?:
() :		50
✓		(> 50)
		/



QUESTION



A cartoon cow with glasses and a bow tie stands next to a sign that says "Vite".

	500
	500

, COWS

<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	/		- Cn: (
			- BS: /

- **SLM** (pastoralism)  **SLM**, M4: - M1:

- 251-500
- ✓ 501-750
- 751-1,000
- 1,001-1,500
- 1,501-2,000
- 2,001-3,000
- 3,001-4,000
- > 4,000

- (0-2%)
 - (3-5%)
 - (6-10%)
 - 15%)
 - (16-30%)
 - ✓ (31-60%)
 - ✓ (>60%)
- 0-100
 - 101-500
 - 501-1,000
 - 1,001-1,500
 - ✓ 1,501-2,000
 - 2,001-2,500
 - 2,501-3,000
 - 3,001-4,000
 - > 4,000

- (0-20)
 - ✓ (21-50)
 - (51-80)
 - (81-120)
 - (> 120)
- ()
 - ✓ ()
 - ()
 - ()
- (> 20)
 - ()
 - ()
 - ()
- (>3%)
 - (1-3%)
 - ✓ (<1%)

- < 5
 - 5-50
 - > 50
- ()
 - ✓ ()
 - ()
 - ()
- ?
 - /
 - ()
 - ()
 - /

- ✓
 -
 -
- -
 -

SLM

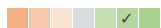
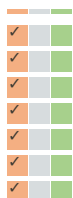
- ()
 - ()
 - /
 - /
- ✓ 10%
 - 10-50%
 - 50%
- ()
 - ()
 - /

- ✓
 -
- ✓
 - /
 - /
 - ()
 - ()
- ✓
 -
 -
 -

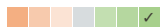
- < 0.5
 - 0.5-1
 - 1-2
 - 2-5
 - 5-15
 - 15-50
 - ✓ 50-100
 - 100-500
 - 500-1,000
 - 1,000-10,000
 - > 10,000
- ✓
 -
- ✓
 -
 -
 -
 -
- ()
 - ()
 - ✓
 - ()
 - ()
 - ✓
 - ()



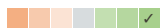
(.)



Higher vegetation cover and biomass values than for village-pastures



Much less impalatable species' frequency



The animals get much fatter and are sold for around 50% higher price than animals from common pastures



The herder says that tree density has decreased, due to livestock but also to chopping. Additionally chopping of living trees is generally forbidden (since the 1960s, when the forest department was created as a new land use type), not making possible the

(
/
)

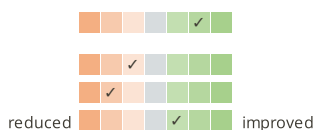


The use of the land for fruit production is not possible with animals grazing, but this was also the case before, as to the herder's opinion



Due to reduced stocking rates in comparison with village-pastures (and the soviet times), better water quality

Livelihoods and human well-being



Better control of runoff, but steeper land



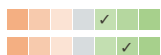
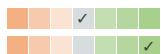
SLM: 40%
SLM: 80%
Higher cover than on village-pastures



SLM: 36 species
SLM: 47 species
More plant systematical diversity

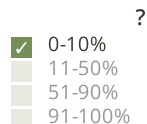


According to forest department the area above Karsang, due to ist trees, is more prone to fires than other areas

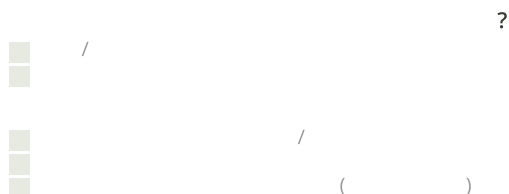


4 Years ago a herd of 400 animals had to be sold due to disease. Since then M was able to rebuild a herd of 500 animals. On a short term investing into animals is expensive but pays quickly. The maintenance costs are finally decisive, but quite constant.

()



1 Household



- / / :
- Tree planting is not possible as long as the area is used for grazing. By giving people land for longer periods (than one year) and with more freedoms in its use, people would gain interest in diversifying use: They would split up "their" land into haymaking, orchard and pasture areas.
- / / :
- The main problem of this form of grazing is that it doesn't allow the regrowth of trees. Changing the areas use for grazing, respectively haymaking, every few years.
 - Cover is markedly reduced around the places where tents are installed. By changing the camping place (but: limited flat areas!) or not keeping the animals in the same place at noon time and during night time, these areas might recover.

- :
- Grazing stabilises the soils and is thus a prevention against gully erosion in areas with low cover (former cropland). Animals have the same effect as the terraces built years ago.

How can they be sustained / enhanced? Grazing activity should continue, once M. is too old for working.

- The animals provide for soil fertility by their dung, instead of the fertilisers used in Soviet times. This positively influences the share of palatable plants and cover in general and, by this, soil moisture.
- The area on the forest department is a good alternative to the much too small pasture-area near the village

:

- Form of land use making it possible to take some pressure from the common pastures without great damages.

How can they be sustained / enhanced? It needs to be assured that also poorer families, who depend even more on livestock breeding than richer ones, can give their animals to M. or other professional herders. This could be realised by engaging herder assistants from poor families

- The rotational scheme is much more elaborated than in the case of the villages' pastures, which can be explained by more land available

How can they be sustained / enhanced? Land users like M. should be addressed by forest administration to elaborate legal forms of herding with little damages on natural resources on this land. This will probably require land reforms.



Editors

Christian Wirz

David Streiff
Alexandra Gavilano

: 7

2011

: 4

2019

Christian Wirz -

SLM

https://qcat.wocat.net/km/wocat/technologies/view/technologies_1407/

SLM

Approaches: Seminomadic individual herding https://qcat.wocat.net/km/wocat/approaches/view/approaches_2565/

- CDE Centre for Development and Environment (CDE Centre for Development and Environment) -
- NCCR North-South (NCCR North-South) -
-

This work is licensed under [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International](#)

