



Eroded path through the pastureland (Malgorzata Conder)

Pasture management of a communal grazing land (ຕາຈິກີສະຕານ)

ຄຳອະທິບາຍ

Pasture management of a communal land through daily rotation

The total area of the pasture accounts for 300 – 500 ha. The pasture is property of the Doshmand village but it includes also some private properties, mainly potato and wheat crops. After the harvest, livestock is also grazing on these crops. Eighteen households are currently using the pasture with a total of 150 cows and 500 small animals. Additionally, three groups of herds from other villages graze irregularly on this pasture mainly on the lateral parts as it is less guarded by the villagers. The interviewee estimates that over 1000 cows, goats and sheep are coming from other villages. Other herds cross this pasture when migrating to or coming back from the summer pasture in spring and autumn, respectively. Nevertheless Doshmand residents claim that this intrusive grazing is accepted as “every animal has to be fed”. This shows the need of a pasture management not only on village but also on watershed level.

During Soviet time the inhabitants of Doshmand were forced to migrate to the valley. In 2003, the resettlement of the ancient location started with two families. Simultaneously, the pasture management was established and joined by each family who resettled. The controlled area is divided in 4 subparts. The herd switches daily within them. Every household looks after the herd for a day, which results in a rotational cycle of 18 days. There are no fixed and regular meetings for pasture management within the village pasture. However, two subsequent herders communicate to know where the herd has been grazing and where to graze the next time.

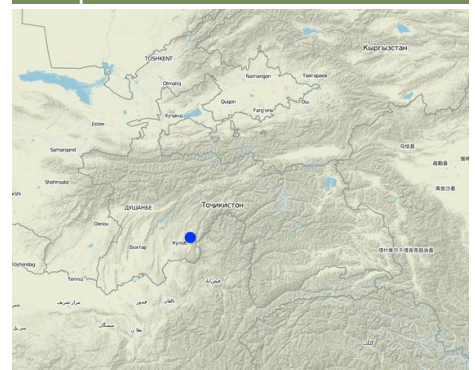
Purpose of the Technology: Purpose of the rotational grazing is to graze on one subpart, while the three other areas are resting. This reduces the impact of grazed and trampled areas per subpart and allows the growth and recovery of the vegetation in the other parts. The task of herding is shared among the families. The rotational grazing is organized orally and freely, why it's not sure if that approach is strictly binding. Discussions about pasture management rise only in case of need.

Establishment / maintenance activities and inputs: Doshmand village got the pasture in a good condition at the time of establishment. Vegetation cover was high. The only investment consisted in building a water point for the livestock. A further investment was to buy a water pipe and dig out a channel for the pipe to conduct the water from the water point to the village. Money was collected by the families and many villagers were involved in digging the channel.

No further input was and is required except coordination between the herders.

Natural / human environment: The pasture of Doshmand village is located in the middle and upper zone of the watershed. Thanks to the distance to other settlements, the pasture is less affected by overgrazing than other communal pastures in the watershed. Nevertheless, the pasture is heterogeneously grazed, with some areas which are difficult to access even for livestock and hence abundant vegetation. Other areas, especially those situated next to the village show a more bare vegetation cover.

ສະຖານທີ່



ສະຖານທີ່: Muminabad, Khatlon, Tajikistan, ຕາຈິກີສະຕານ

ຈຳນວນ ພື້ນທີ່ ທີ່ໃຊ້ ເຕັກໂນໂລຢີ ທີ່ໄດ້ວິເຄາະ:

ການຄັດເລືອກພື້ນທີ່ ທີ່ອີງໃສ່ຂໍ້ມູນທາງພູມິສາດ
• 70.04219, 38.01485

ການແຜ່ກະຈາຍຂອງເຕັກໂນໂລຢີ: ແຜ່ຂະຫຍາຍຢ່າງໄວວາໃນພື້ນທີ່ (approx. 1-10 ກມ 2)

ຢູ່ໃນເຂດປ່າສະຫງວນທີ່ບໍ່:

ວັນທີຂອງການປະຕິບັດ: 10-50 ປີ ຜ່ານມາ

ປະເພດຂອງການນຳສະເໜີ

- ☒ ໂດຍຜ່ານນະວັດຕະກຳຄິດຄົ້ນຂອງຜູ້ນຳໃຊ້ທີ່ດິນ
- ☐ ເປັນສ່ວນໜຶ່ງຂອງລະບົບຜົນເມືອງ (>50 ປີ)
- ☐ ໃນໄລຍະການທົດລອງ / ການຄົ້ນຄວ້າ
- ☐ ໂດຍຜ່ານໂຄງການ / ການຊ່ວຍເຫຼືອຈາກພາຍນອກ



Heterogenous vegetation cover within the watershed (Malgorzata Conder)

ການໄຈ້ແຍກເຕັກໂນໂລຢີ

ຈຸດປະສົງຕົ້ນຕໍ

- ປັບປຸງ ການຜະລິດ
- ✓ ຫຼຸດຜ່ອນ, ປ້ອງກັນ, ຝົນຝຸ ການເຊື່ອມໂຊມຂອງດິນ
- ✓ ການອະນຸລັກ ລະບົບນິເວດ
- ປົກປັກຮັກສາ / ນໍ້າຝົນທີ່ - ປະສົມປະສານກັບ ເຕັກໂນໂລຢີອື່ນໆ
- ປົກປັກຮັກສາ / ການປັບປຸງຊີວະນາໆພັນ
- ຫຼຸດຜ່ອນຄວາມສ່ຽງ ທາງ ໄພພິບັດທໍາມະຊາດ
- ປັບຕົວຕໍ່ກັບການປ່ຽນແປງດິນຟ້າອາກາດ / ທີ່ຮ້າຍແຮງ ແລະ ຜົນກະທົບ
- ຫຼຸດຜ່ອນຜົນກະທົບ ຈາກການປ່ຽນແປງດິນຟ້າອາກາດ
- ສ້າງຜົນກະທົບ ທາງເສດຖະກິດ ທີ່ເປັນປະໂຫຍດ
- ສ້າງຜົນກະທົບ ທີ່ເປັນທາງບວກ ໃຫ້ແກ່ສັງຄົມ

ການນໍາໃຊ້ດິນ



ດິນທີ່ປູກພືດ

- ການປູກພືດປະຈໍາປີ: ທັນຍາພືດ - ເຂົ້າສາລີ, ທັນຍາພືດ - ເຂົ້າສາລີ (ລະດູໜາວ), ການປູກພືດໃຫ້ຮາກ / ຫົວ - ມັນຝລັງ

ຈໍານວນ ລະດູການ ປູກໃນປີໜຶ່ງ: 1



ທົ່ງຫຍ້າລ້ຽງສັດ

- ການລ້ຽງສັດແບບເຄິ່ງປ່ອຍ
- rotational grazing

ການສະໜອງນໍ້າ

- ✓ ນໍ້າຝົນ
- ປະສົມປະສານ ກັນລະຫວ່າງ ນໍ້າຝົນ ແລະ ນໍ້າຊົນລະປະທານ
- ນໍ້າໃຊ້ ນໍ້າຊົນລະປະທານ ພຽງຢ່າງດຽວ

ຈຸດປະສົງທີ່ກ່ຽວຂ້ອງກັບການເຊື່ອມໂຊມຂອງດິນ

- ປ້ອງກັນການເຊື່ອມໂຊມຂອງດິນ
- ✓ ຫຼຸດຜ່ອນການເຊື່ອມໂຊມຂອງດິນ
- ✓ ການຝົນຝຸ / ຝົນຝຸດິນທີ່ຊຸດໂຊມ
- ປັບຕົວຕໍ່ການເຊື່ອມໂຊມຂອງດິນ
- ບໍ່ສາມາດໃຊ້ໄດ້

ການເຊື່ອມໂຊມ ທີ່ຕ້ອງໄດ້ເອົາໃຈໃສ່



ດິນເຊາະເຈືອນ ໂດຍນໍ້າ - Wo: ຜົນກະທົບ ຂອງການເຊື່ອມໂຊມ ຕໍ່ພື້ນທີ່ພາຍນອກ



ການເຊື່ອມໂຊມ ຂອງດິນ ທາງເຄມີ - Cn: ຄວາມອຸດົມສົມບູນ ລົດໜ້ອຍ ຖອຍລົງ ແລະ ສານອິນຊີວິດຖູລົດລົງ (ບໍ່ແມ່ນສາເຫດມາຈາກການເຊາະເຈືອນ)



ການເຊື່ອມໂຊມ ຂອງດິນ ທາງກາຍະພາບ - Pc: ການອັດແໜ້ນ



ການເຊື່ອມໂຊມ ທາງຊີວະພາບ - Bc: ການຫຼຸດຜ່ອນການປົກຫຸ້ມຂອງພືດ, Bs: ຄຸນນະພາບ / ການອັດແໜ້ນ ຂອງສາຍຜັນຫຼຸດລົງ

ກຸ່ມການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ

- ການຄຸ້ມຄອງສັດລ້ຽງ ແລະ ທົ່ງຫຍ້າລ້ຽງສັດ

ມາດຕະການ ການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ



ມາດຕະການ ທາງດ້ານການຄຸ້ມຄອງ - M2: ການປ່ຽນແປງ ການຈັດການຄຸ້ມຄອງ / ລະດັບຄວາມໜາແໜ້ນ

ເທັກນິກການແຕ້ມຮູບ

ຂໍ້ກຳນົດທາງເທັກນິກ

Livestock from Doshmand village (DM) is grazing in the four subparts of the communal pasture. Livestock from other villages, located in the valley Sarmadoni I (SMI) and II (SMII) and Dehibaland (DB), can invade the guarded and unguarded communal pasture of Doschmand. In spring and autumn also other livestock crosses Doshmand's pasture when migrating to or leaving the summer pasture.

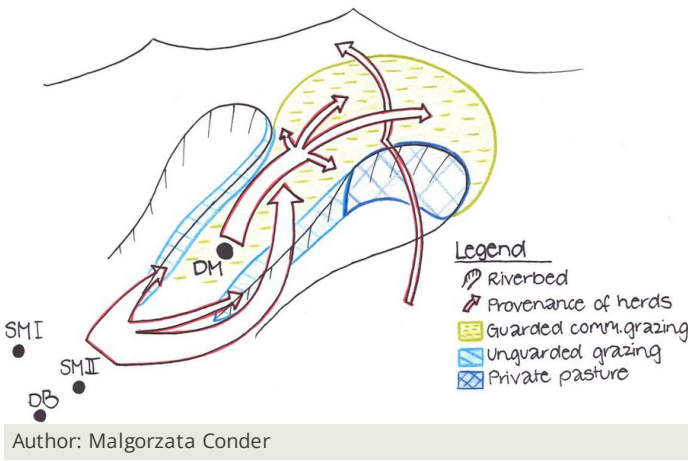
Location: Chukurak watershed. Muminabad, Khatlon

Technical knowledge required for land users: low

Main technical functions: improvement of ground cover, increase of infiltration

Secondary technical functions: improvement of topsoil structure (compaction), stabilisation of soil (eg by tree roots against land slides), increase in organic matter

Change of land use practices / intensity level: Rotational grazing at village level



ການຈັດຕັ້ງ ແລະ ບຳລຸງຮັກສາ: ກິດຈະກຳ, ວັດຖຸດິບ ແລະ ຄ່າໃຊ້ຈ່າຍ

ການຄຳນວນ ປັດໃຈການຜະລິດ ແລະ ຄ່າໃຊ້ຈ່າຍ

- ຄິດໄລ່ຄ່າໃຊ້ຈ່າຍ:
- ສະກຸນເງິນທີ່ໃຊ້ສຳລັບການຄິດໄລ່ຄ່າໃຊ້ຈ່າຍ: **USA**
- ອັດຕາແລກປ່ຽນ (ເປັນເງິນ ໂດລາ): 1 USD = ບໍ່ມີຂໍ້ມູນ
- ຄ່າແຮງງານສະເລ່ຍ ຂອງການຈ້າງແຮງງານຕໍ່ມື: 12.40

ປັດໄຈທີ່ສຳຄັນສຸດທີ່ສົ່ງຜົນກະທົບຕໍ່ຄ່າໃຊ້ຈ່າຍ

There are no costly factors, the most important input is a good planning, coordination and consistent execution of the rotational grazing system. The installation of a waterpoint would be needed but it is a very costly installation.

ກິດຈະກຳການສ້າງຕັ້ງ

- 1. Coordination with villagers and herders (ໄລຍະເວລາ / ຄວາມຖີ່: Reestablishment of village)

ປັດໄຈນຳເຂົ້າໃນການຈັດຕັ້ງ ແລະ ຄ່າໃຊ້ຈ່າຍ

ລະບຸ ປັດໃຈ ນຳເຂົ້າ ໃນການຜະລິດ	ຫົວໜ່ວຍ	ປະລິມານ	ຕົ້ນທຶນ ຕໍ່ ຫົວໜ່ວຍ (USA)	ຕົ້ນທຶນທັງໝົດ ຂອງປັດໃຈ ນຳເຂົ້າ ໃນການ ຜະລິດ (USA)	% ຂອງຕົ້ນທຶນ ທັງໝົດ ທີ່ຜູ້ນຳ ໃຊ້ທຶນ ໃຊ້ ຈ່າຍເອງ
ແຮງງານ					
Coordination with villagers and herders	-	1.0			

ກິດຈະກຳບຳລຸງຮັກສາ

- 1. Consultation with village herders (ໄລຍະເວລາ / ຄວາມຖີ່: If needed)

ປັດໄຈນຳເຂົ້າໃນການບຳລຸງຮັກສາ ແລະ ຄ່າໃຊ້ຈ່າຍ

ລະບຸ ປັດໃຈ ນຳເຂົ້າ ໃນການຜະລິດ	ຫົວໜ່ວຍ	ປະລິມານ	ຕົ້ນທຶນ ຕໍ່ ຫົວໜ່ວຍ (USA)	ຕົ້ນທຶນທັງໝົດ ຂອງປັດໃຈ ນຳເຂົ້າ ໃນການ ຜະລິດ (USA)	% ຂອງຕົ້ນທຶນ ທັງໝົດ ທີ່ຜູ້ນຳ ໃຊ້ທຶນ ໃຊ້ ຈ່າຍເອງ
ແຮງງານ					
Consultation with village herders	-	1.0			

ສະພາບແວດລ້ອມທຳມະຊາດ

ສະເລ່ຍປະລິມານນ້ຳຝົນປະຈຳປີ

- < 250 ມິລີແມັດ
- 251-500 ມິລີແມັດ
- 501-750 ມິລີແມັດ
- 751-1,000 ມິລີແມັດ
- ✓ 1,001-1,500 ມິລີແມັດ
- ✓ 1,501-2,000 ມິລີແມັດ
- 2,001-3,000 ມິລີແມັດ
- 3,001-4,000 ມິລີແມັດ
- > 4,000 ມິລີແມັດ

ເຂດກະສິກຳ-ສະພາບອາກາດ

- ຄວາມຊຸ່ມ
- ✓ ເຄິ່ງຄວາມຊຸ່ມ
- ເຄິ່ງແຫ້ງແລ້ງ
- ແຫ້ງແລ້ງ

ຂໍ້ມູນຈຳເພາະກ່ຽວກັບສະພາບອາກາດ

Annual rainfall (1,001-1,500 mm): Totally 800mm: 700mm in winter-spring, July-Sept dry season (At 1200mm asl, weather station Muminabad)

Annual rainfall (1,501-2,000 mm): Precipitation increases 60mm per 100m of altitude in average. Here up to 1600mm.

Thermal climate class: temperate

LPG from April until September

ຄວາມຄ້ອຍຊັນ

- ຜົນທີ່ຮາບພຽງ (0-2%)
- ອ່ອນ (3-5 %)
- ປານກາງ (6-10 %)
- ນ້ອນ (11-15 %)
- ✓ ເນີນ(16-30%)
- ✓ ຊັນ (31-60%)
- ຊັນຫຼາຍ (>60%)

ຮູບແບບຂອງດິນ

- ພູພຽງ / ຫິງພຽງ
- ສັນພູ
- ✓ ເນີນພູ
- ✓ ເນີນພູ
- ຕົ້ນພູ
- ຮ່ອມພູ

ລະດັບຄວາມສູງ

- 0-100 ມັດ a.s.l.
- 101-500 ມັດ a.s.l.
- 501-1,000 ມັດ a.s.l.
- 1,001-1,500 ມັດ a.s.l.
- ✓ 1,501-2,000 ມັດ a.s.l.
- ✓ 2,001-2,500 ມັດ a.s.l.
- 2,501-3,000 ມັດ a.s.l.
- 3,001-4,000 ມັດ a.s.l.
- > 4,000 ມັດ a.s.l.

ເຕັກໂນໂລຢີເຕັກໂນລຳໃຊ້ໃນ

- ລັກສະນະສວດ
- ລັກສະນະກົວ
- ບໍ່ກ່ຽວຂ້ອງ

Strengthening of the community sense and awareness through increased coordination for rotational grazing between villagers. Higher fodder availability leads to healthier livestock.

Figure 1 is a 3x3 grid of colored squares (orange, grey, green) with checkmarks, illustrating the relationship between 'improved' and 'reduced' states for 'ເພີ່ມຂຶ້ນ' (Increased) and 'ຫຼຸດລົງ' (Decreased).

ເພີ່ມຂຶ້ນ	orange	orange	orange	grey	✓	green	ຫຼຸດລົງ
ເພີ່ມຂຶ້ນ	orange	orange	orange	grey	✓	green	ຫຼຸດລົງ
ຫຼຸດລົງ	orange	orange	orange	grey	✓	green	ເພີ່ມຂຶ້ນ
ເພີ່ມຂຶ້ນ	orange	orange	orange	grey	✓	green	ຫຼຸດລົງ
ເພີ່ມຂຶ້ນ	orange	orange	orange	grey	✓	green	ຫຼຸດລົງ
ຫຼຸດລົງ	orange	orange	orange	grey	✓	green	ເພີ່ມຂຶ້ນ
ເພີ່ມຂຶ້ນ	orange	orange	orange	grey	✓	green	ຫຼຸດລົງ
improved	orange	orange	orange	grey	✓	green	reduced

[illegible]

ຜົນຕອບແທນ ໃນໄລຍະສັ້ນ ຜົນຕອບແທນ ໃນໄລຍະຍາວ	ຜົນກະທົບທາງລົບ ຜົນກະທົບທາງລົບ	ຜົນກະທົບທາງບວກ ຜົນກະທົບທາງບວກ
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[illegible]

ໄລຍະເວລາການຂະຫຍາຍຕົວຫຼຸດລົງ

- 0-10%
- 11-50%
- 51-90%
- 91-100%

- ການປ່ຽນແປງດິນຟ້າອາກາດ / ຮ້າຍແຮງ
- ຕະຫຼາດມີການປ່ຽນແປງ
- ມີແຮງງານ (ຖືວ່າຢ່າງ, ເນື່ອງຈາກການເຄື່ອນຍ້າຍແຮງງານ)

ຄວາມເຂັ້ມແຂງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ນຳໃຊ້ທີ່ດິນ

- No big input, coordination between farmers exists anyway

ຄວາມເຂັ້ມແຂງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ປ່ອນຂັ້ນເມືອງ

- In a rotational grazing system at village level every family is responsible for the sustainability of the pasture

How can they be sustained / enhanced? Give more responsibility and co-determination to individuals

- High establishment potential as rotational grazing do not demand any costs, except coordination and organization on village level

How can they be sustained / enhanced? Disseminate the idea of rotational grazing also on watershed level

- Ecologic benefits as high vegetation cover, less erosion etc. can be achieved without monetary investment

How can they be sustained / enhanced? Spread knowledge of long-term effects by rotational grazing

- Being a pasture of a big area extent in the uphills, the good quality of the pasture plays an important role for all the settlements and cultivations downstream

How can they be sustained / enhanced? Raise the awareness about the upstream-downstream interrelation in the watersheds

ຈຸດອ່ອນ / ຂໍ້ເສຍ / ຄວາມສ່ຽງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ນຳໃຊ້ທີ່ດິນ ວິທີການແກ້ໄຂແນວໃດ

ຈຸດອ່ອນ / ຂໍ້ເສຍ / ຄວາມສ່ຽງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ປ່ອນຂັ້ນເມືອງ ເອງວິທີການແກ້ໄຂແນວໃດ

- In reality, rotational grazing is not executed strictly enough
Stricter separation of the subparts needed
- Herds from other villages graze in the same pasture Strengthen coordination of grazing between and within villages
- Some flanks show high vegetation because they are not accessible for livestock and not because of the rotational grazing

ເອກກະສານອ້າງອີງ

ການລວບລວມ

Malgorzata Conder

Editors

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ບຸກຄົນທີ່ສຳຄັນ

Malgorzata Conder - ຜູ້ຊ່ຽວຊານ ຕົ້ນການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ

Sa'dy Odinaev - ຜູ້ຊ່ຽວຊານ ຕົ້ນການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ

ການບັນຍາຍລາຍລະອຽດ ໃນຖານຂໍ້ມູນ ຂອງ WOCAT

https://qcat.wocat.net/lo/wocat/technologies/view/technologies_1555/

ຂໍ້ມູນການເຊື່ອມໂຍງຂໍ້ມູນການຄຸ້ມຄອງການນຳໃຊ້ທີ່ດິນແບບຍືນຍົງ

n.a.

ເອກກະສານ ແມ່ນໄດ້ອ່ານວຍຄວາມສະດວກໂດຍ

ສະຖາບັນ

- CARITAS (Switzerland) - ສະວິດເຊີແລນ
- CDE Centre for Development and Environment (CDE Centre for Development and Environment) - ສະວິດເຊີແລນ

ໂຄງການ

- n.a.

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