

Global Agenda for Sustainable Livestock



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STRENGTHENING NOMADIC HERDERS' TRADITIONAL USER GROUPS FOR SUSTAINABLE RANGELAND MANAGEMENT IN MONGOLIA

LESSONS LEARNED: OVER COMING TRAGEDY OF COMMONS

Ulaanbaatar, 8th MSP Meeting
11-15 June, 2018

BUILDING TOGETHER SUSTAINABLE LIVESTOCK
for people, for the planet





Mongolian National
Federation of PUGs



ГАЗАР ЗОХИОН
БАЙГУУЛАЛТ, ГЕОДЕЗИ
ЗУРАГЗҮЙН ГАЗАР



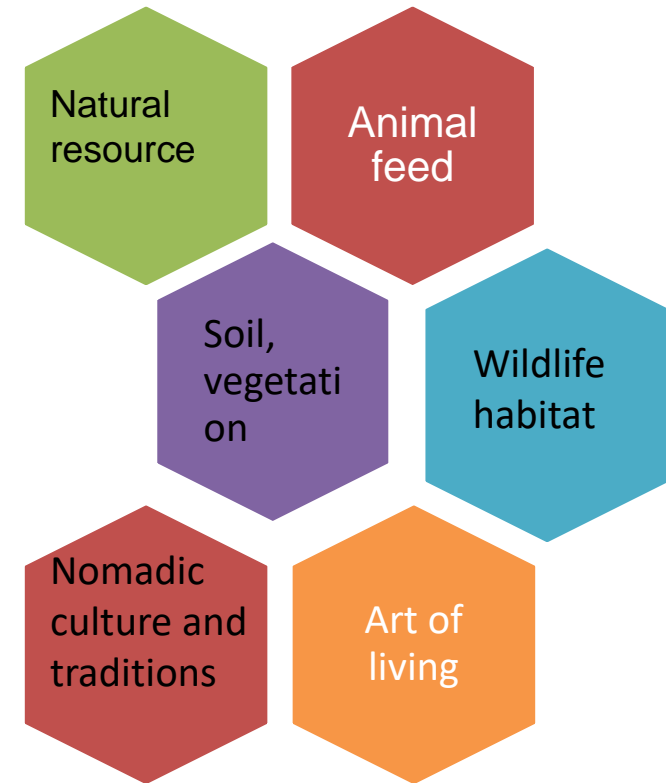
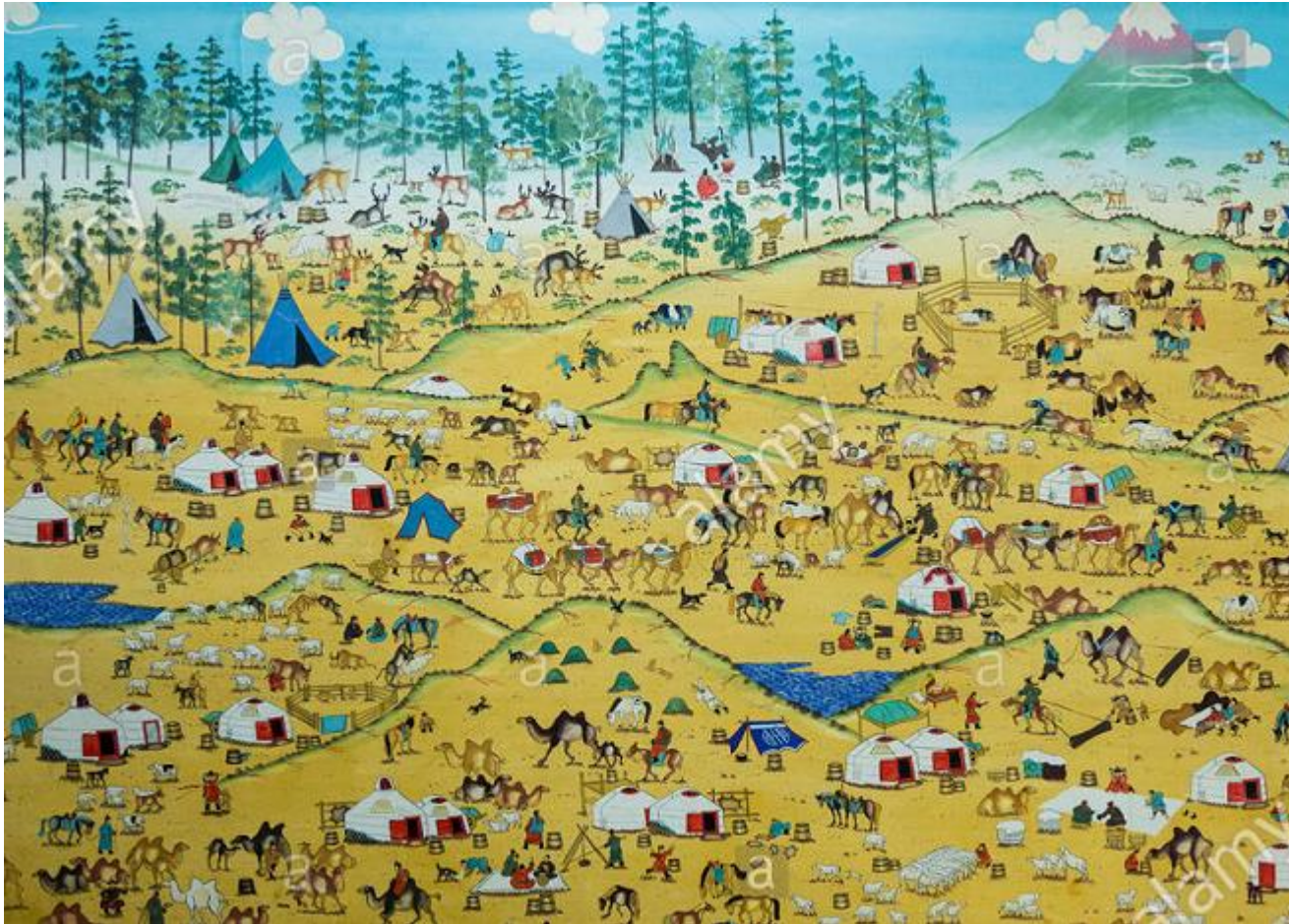
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC

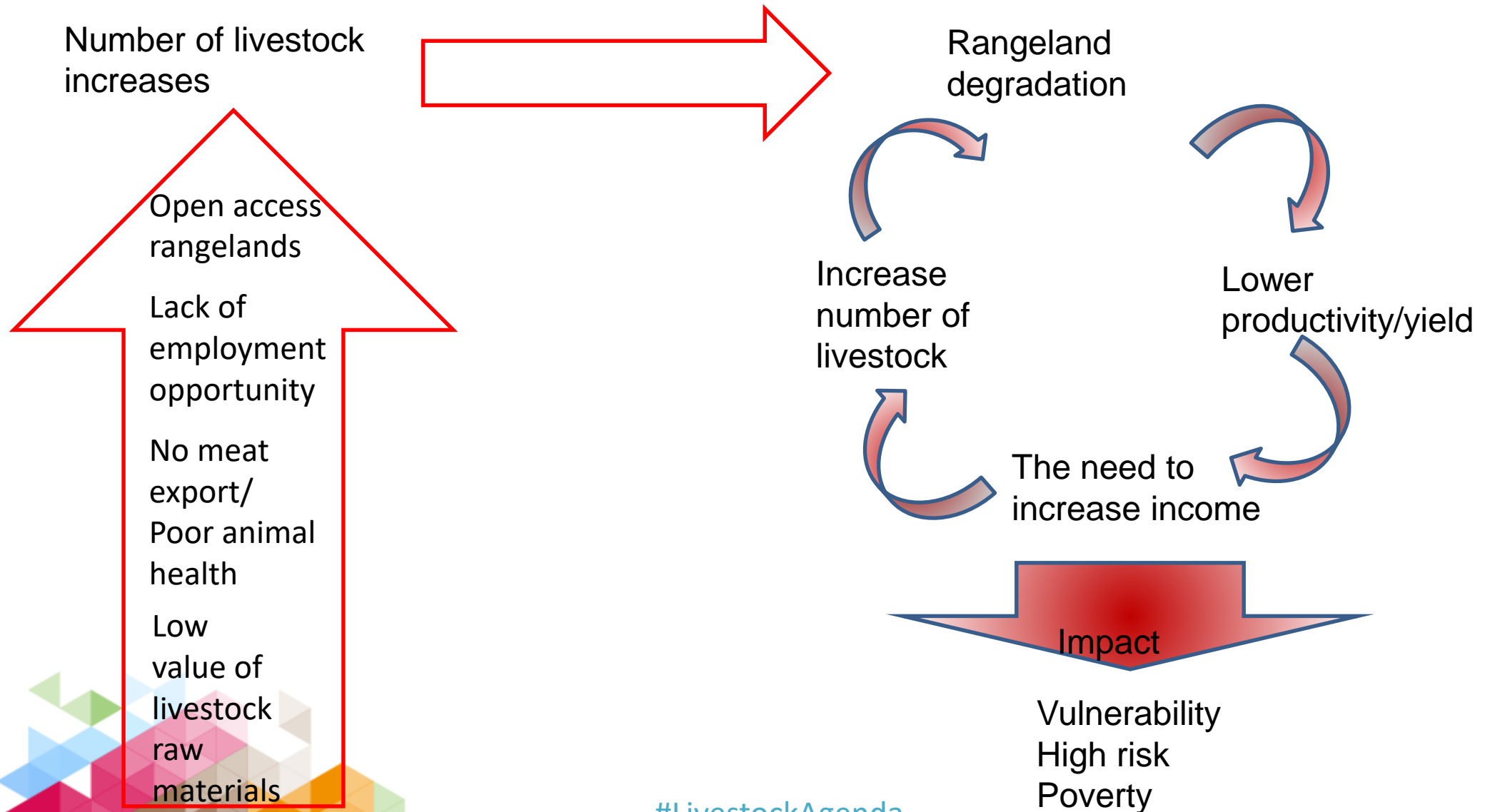


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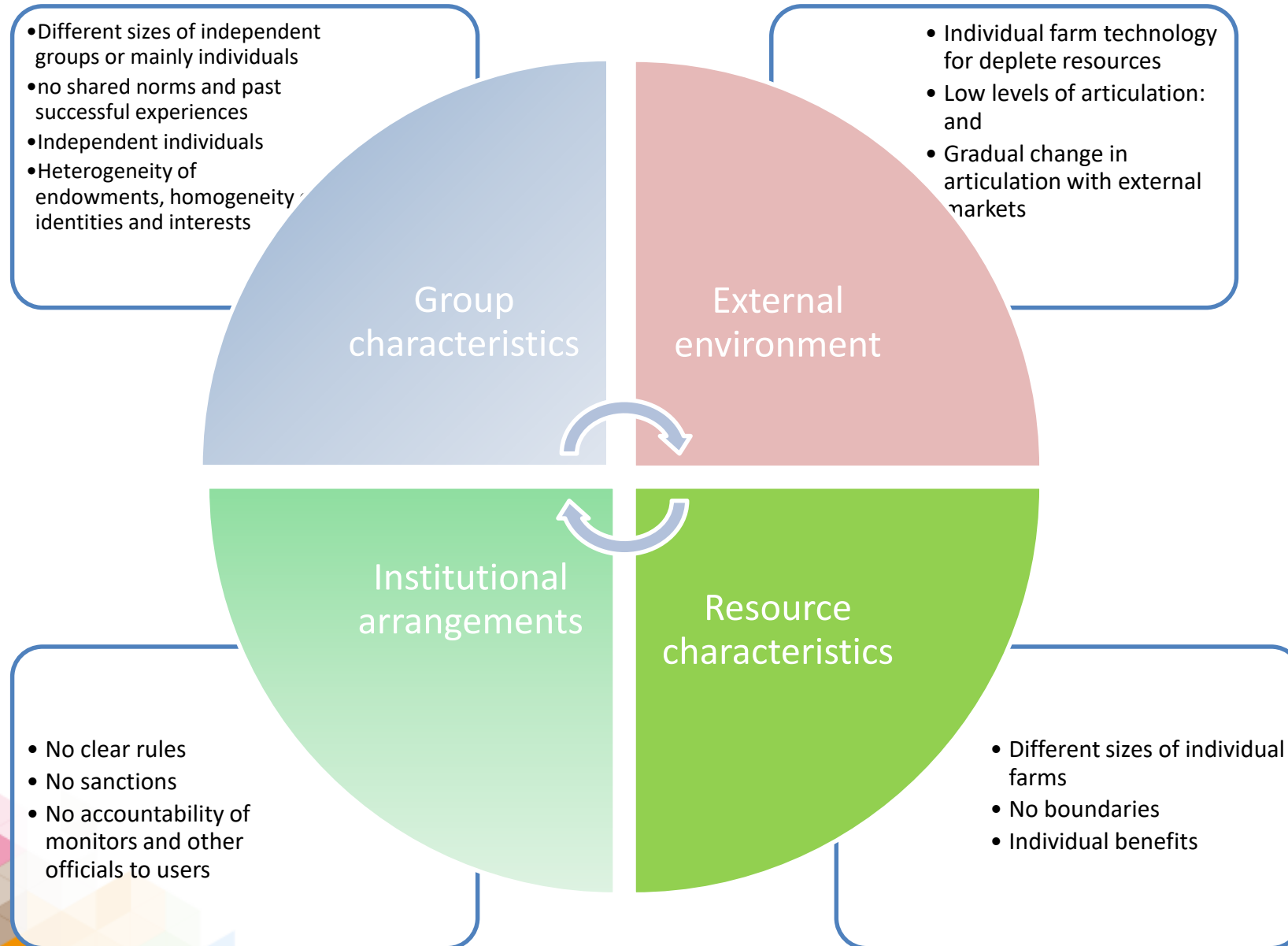
The role and importance of Mongolian nomadic livestock herding



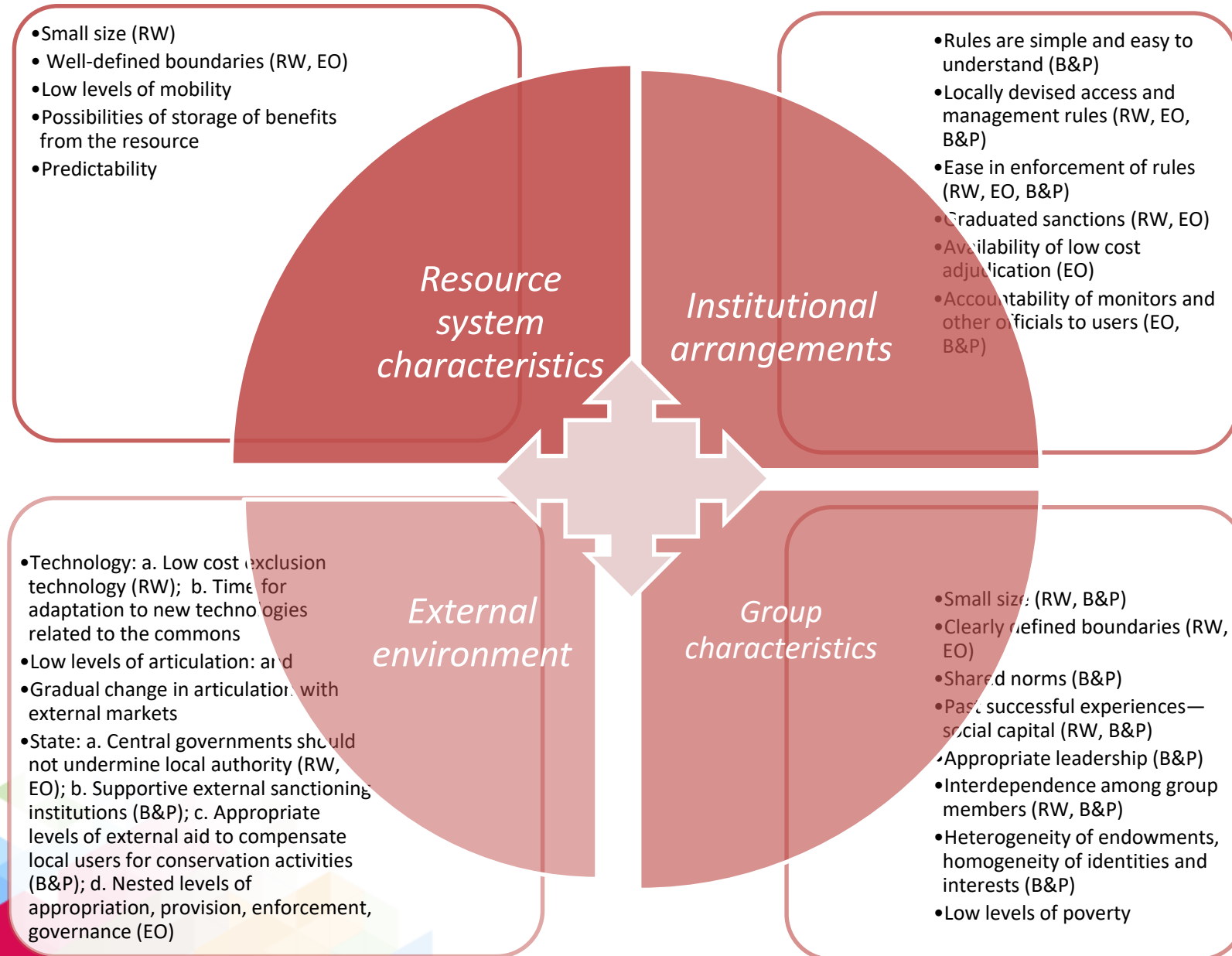
Current context and main challenges



THEORETICAL FRAMEWORK OF ANALYSES (TRAGEDY OF COMMONS)



THEORETICAL FRAMEWORK OF ANALYSES (COLLECTIVE ACTION AND GOVERNANCE OF COMMONS)



COMPARISON OF THE THEORIES

- Small size (RW)
- Well-defined boundaries (RW, EO)
- Low levels of mobility
- Possibilities of storage of benefits from the resource
- Predictability

*Resource
system
characteristics*

- Different sizes of individual farms
- No boundaries
- Individual benefits

COMPARISON OF THE THEORIES

- No clear rules
- No sanctions
- No accountability of monitors and other officials to users

Institutional arrangements

- Rules are simple and easy to understand (B&P)
- Locally devised access and management rules (RW, EO, B&P)
- Ease in enforcement of rules (RW, EO, B&P)
- Graduated sanctions (RW, EO)
- Availability of low cost adjudication (EO)
- Accountability of monitors and other officials to users (EO, B&P)

COMPARISON OF THE THEORIES

- Different sizes of independent groups or mainly individuals
- no shared norms and past successful experiences
- Independent individuals
- Heterogeneity of endowments, homogeneity of identities and interests

Group characteristics

- Small size (RW, B&P)
- Clearly defined boundaries (RW, EO)
- Shared norms (B&P)
- Past successful experiences—social capital (RW, B&P)
- Appropriate leadership (B&P)
- Interdependence among group members (RW, B&P)
- Heterogeneity of endowments, homogeneity of identities and interests (B&P)
- Low levels of poverty

COMPARISON OF THE THEORIES

- Technology: a. Low cost exclusion technology (RW); b. Time for adaptation to new technologies related to the commons
- Low levels of articulation: and
- Gradual change in articulation with external markets
- State: a. Central governments should not undermine local authority (RW, EO); b. Supportive external sanctioning institutions (B&P); c. Appropriate levels of external aid to compensate local users for conservation activities (B&P); d. Nested levels of appropriation, provision, enforcement, governance (EO)

External environment

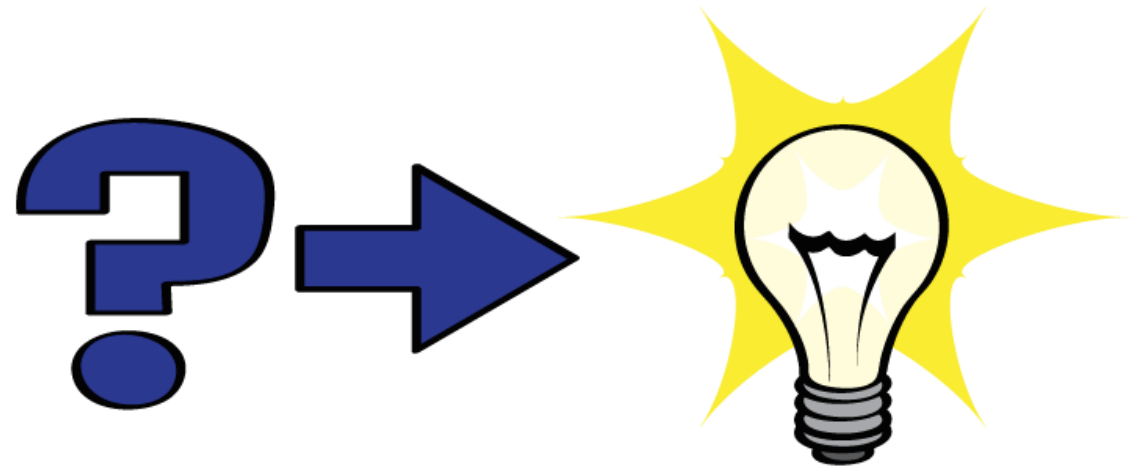
- Individual farm technology for deplete resources
- Low levels of articulation: and
- Gradual change in articulation with external markets

What symptoms are prevalent in the nomadic management of Mongolian rangelands?



Hypothesis

1. Herders having organized reduce conflict with access to common rangelands?
2. Improved enforcement of grazing management by herders
3. Herders and local authority are enabled to make planned and demand driven investment

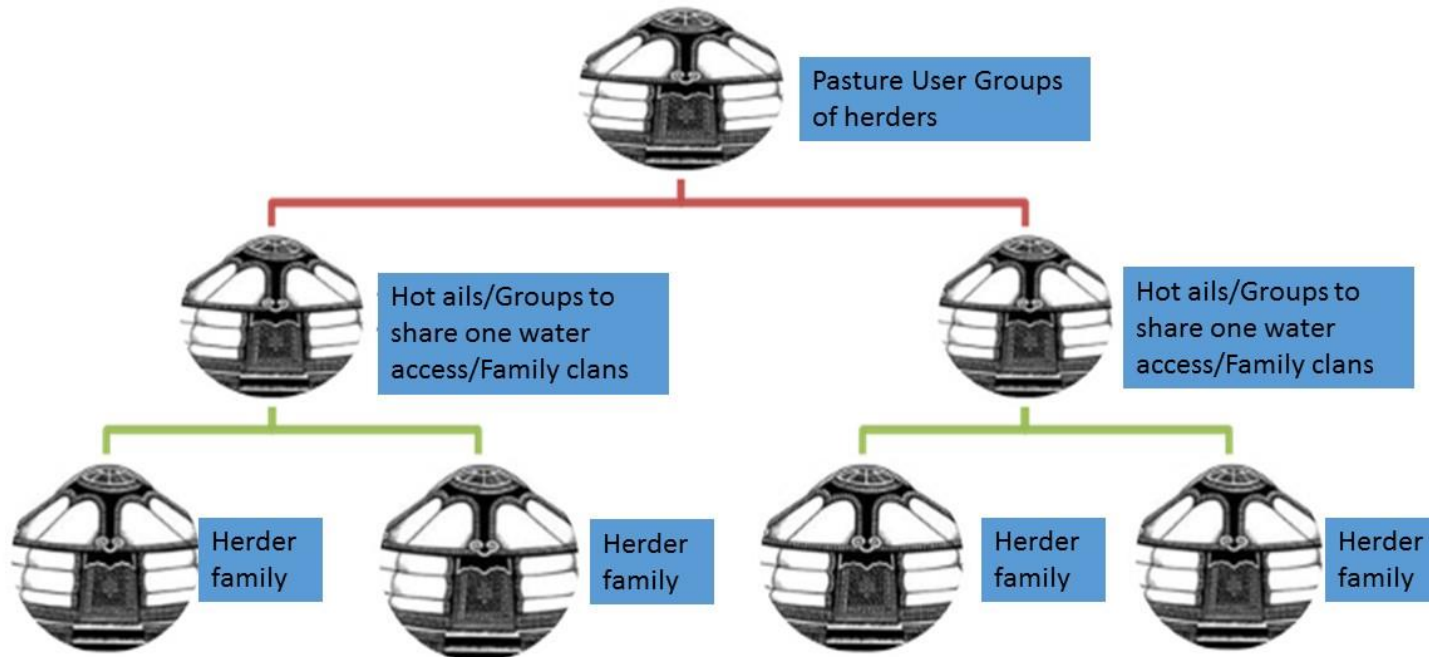


Scope of research area

The research was carried out among 890 PUGs of herders organized in 7 aimags as of September 2015

Aimags	Soums	PUGs	Membership, (herder family)	Number of livestock		Rangelands (ha)	
				Herders organized into PUGs	Percentage in national total	Rangelands belong to PUGs	Percentage in national average
Gobi-Altai	14	108	3791	1,100,000	2.2	5,300,000	4.7
Uvs	18	119	4212	1,300,000	2.8	5,700,000	5.0
Zavkhan	23	218	6474	2,100,000	4.6	6,600,000	5.8
Bayan-olgy	12	194	8390	1,600,000	3.5	3,400,000	3.0
Hovd	16	128	3280	1,000,000	2.2	4,900,000	4.3
Arkhangai	7	100	2853	700,000	1.5	1,500,000	1.3
Bayanhongor	4	24	2214	400,000	0.8	1,900,000	1.6
Total	93	891	31,214	8,200,000	17.6	29,300,000	25.7

“Herders’ Pasture user groups”- Collective organization of herder families and Hot ails with common rangelands and water access.



Main functions of PUGs:

- Members agreed on grazing boundaries of common rangelands
- Develop seasonal movement plan and schedules
- Develop rules to implement the plan
- Enforce and monitor the implementation of plan



Following factors to consider in the definition of grazing boundaries/management in the context of Mongolia:

- Natural resource boundaries (mountains, river, landscapes), rangeland infrastructure (hay lands, crop land, wells, roads etc.,)
- Factors that affect seasonal grazing (temperature, water access, wind directions, rainfall, snow fall etc.,)
- Social boundaries (traditions, customs, relationships among people, clans, network of family and friends, labor needs)



Rangeland use agreement:

- Validate grazing boundaries
- Validate members and livestock number
- Assess the state of current rangeland health/productivity
- Define rangeland carrying capacity
- Define current stocking rate
- Develop rangeland use plan
- Develop and enforce rules to implement the plan



Бэлчээр ашиглуулах ИТХ-ын 11 дугаар тогтоолын гэрээний хавсралт № 01

Бэлчээр ашиглалтын гэрээнд гарын үсэг зурсан өрхийн төлөөллийн нэрсийн жагсаалт /2016 оны 09 сарын 17-ний өдөр /

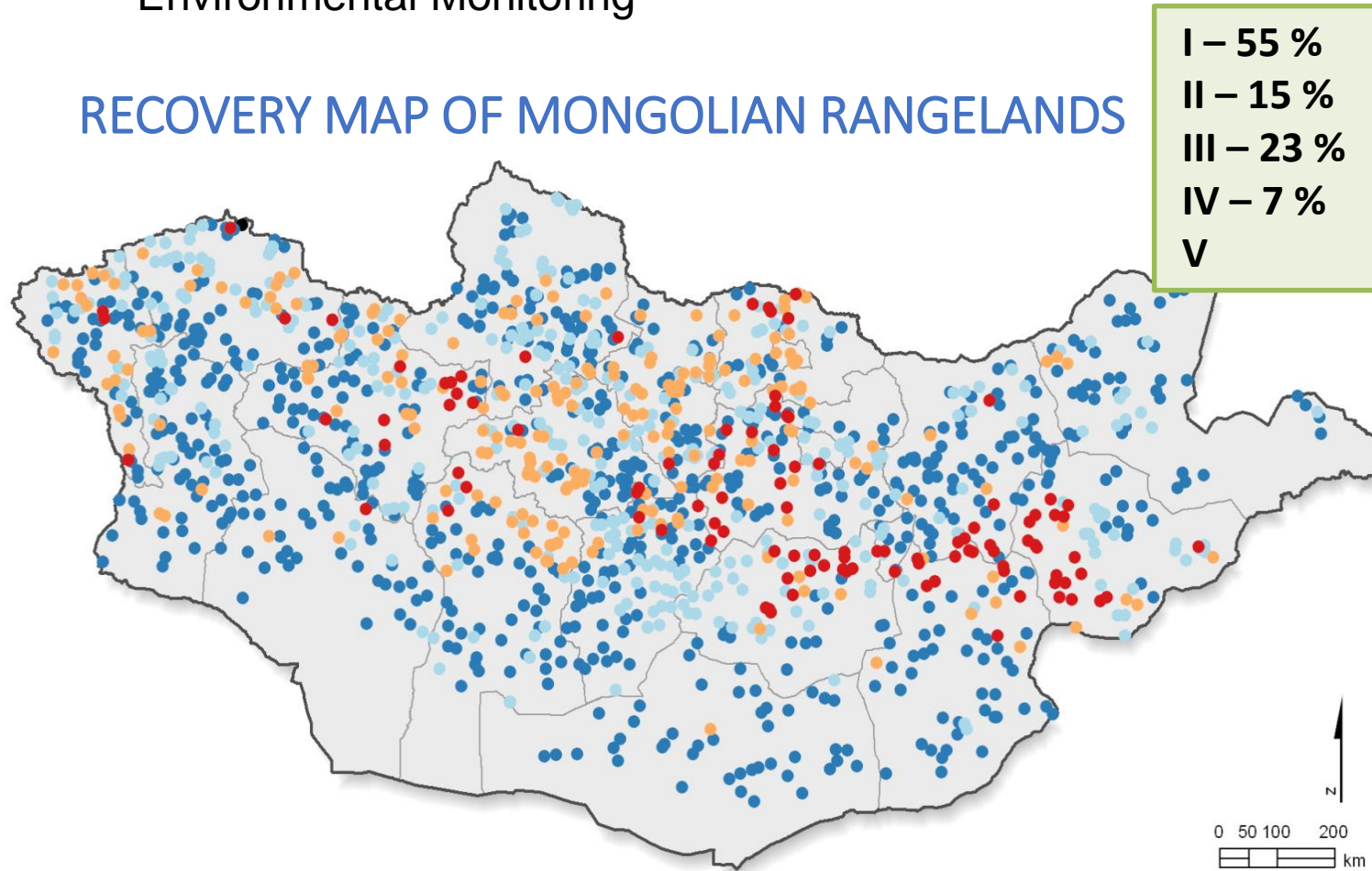
"Тамч" БАХ-ийн бэлчээр ашиглагч өрхийн эргэстэй, эмэгтэйтөлөөлөл

№	Гарын үсэг зурсан хувий овог	Гарын үсэг зурсан гишүүний нэр	Регистр	Харьяа баг (Нэрээр)	Малын тоо	Гарын үсэг
1	Норсобоо	Товбооцог	DU 85061015	Тамч	1200	Товбооцог
2	Сүх	Бовингийн	DU 82052912	Тамч	1860	Бовингийн
3	Харао	Ортогон	DU 83082822	Тамч	1860	Ортогон
4	Гараб	Ивсэвчид	DU 82091311	Тамч	289	Ивсэвчид
5	Дандином	Бурман	DU 82052115	Тамч	350	Бурман
6	Ари	Ан.Осор	DU 82091015	Тамч	1000	Ан.Осор
7	Ивсэвчид	Авгацар	DU 81080909	Тамч	1000	Авгацар
8	Төхтүр	Осор	DU 82012513	Тамч	300	Осор
9	Зоригбаяр	Сүх	DU 82080808	Тамч	500	Сүх
10	Тонбооцог	Сүх	DU 82010406	Тамч	950	Сүх
11	Аталх	Хатамбайр	DU 84021916	Тамч	750	Хатамбайр
12	Халин	Отгонбаяр	DU 79111201	Тамч	350	Отгонбаяр
13	Ивсэвчид	Харуу	DU 77121113	Тамч	350	Харуу
14	Товбооцог	Сүх	DU 82100416	Тамч	950	Сүх
15	Тамч	Ивсэвчид	DU 82080808	Тамч	400	Ивсэвчид
16	Сүх	Ивсэвчид	DU 82100416	Тамч	852	Ивсэвчид
17	Зоригбаяр	Тамч	DU 82070702	Тамч	852	Тамч
18	Сүх	Бовингийн	DU 82070702	Тамч	400	Бовингийн
19	Хатамбайр	Сүх	DU 82080808	Тамч	500	Сүх
20	Хатамбайр	Бовингийн	DU 82070702	Тамч	1000	Бовингийн
21	Хатамбайр	Бовингийн	DU 82070702	Тамч	1000	Бовингийн
22	Хатамбайр	Бовингийн	DU 82070702	Тамч	630	Бовингийн

Rangeland use agreement enforcement mechanisms

1. Rangeland health reference database at the National Agency of Meteorology and Environmental Monitoring

RECOVERY MAP OF MONGOLIAN RANGELANDS



I – 55 %

II – 15 %

III – 23 %

IV – 7 %

V



Class I: Reference and slightly altered conditions. It requires 1-3 growing seasons for recovery from minor changes.

Class II: May be rapidly recovered (3-5 growing seasons)

Class III: May take 5-10 growing seasons to recover; many ecosystem services lost

Class IV: Local loss of key plant species, invasion of noxious plant species, or alteration of hydrology that is unlikely to be recovered for over a decade to many decades without intensive interventions

Class V: Extensive soil loss, accelerated erosion rates, or salinization. Usually impractical to recover former community (true desertification).

Recovery class

● I ● II ● III ● IV ● Not reported

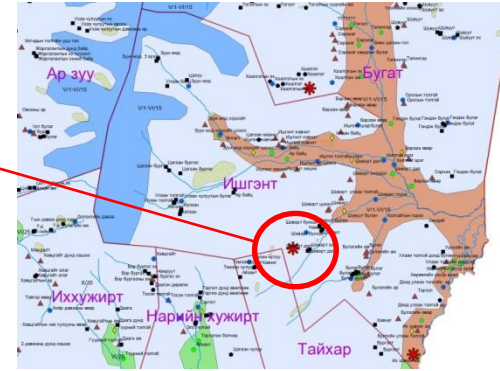
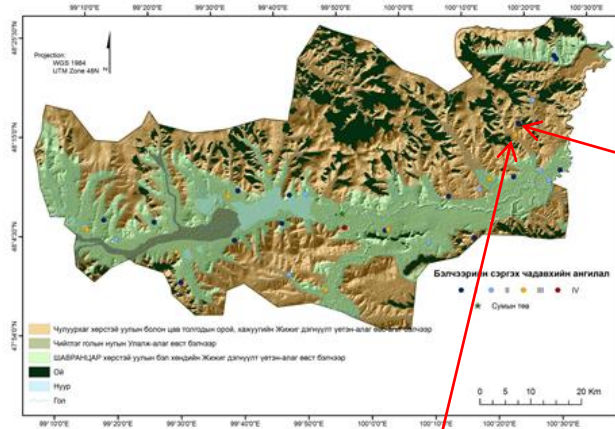
Projection:
WGS 84
UTM48 North

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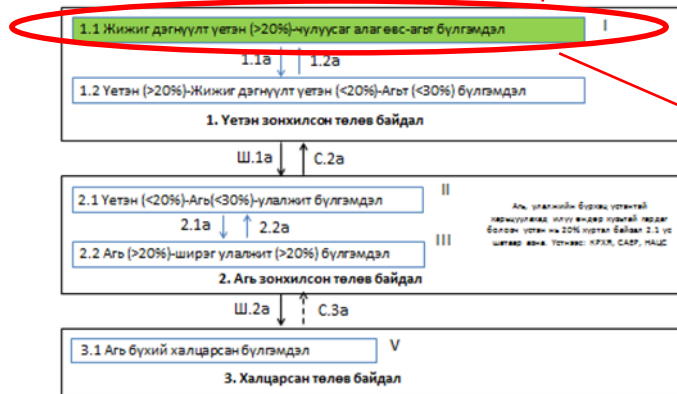
National Agency of Meteorology and Environmental Monitoring monitors the state of rangeland health.

For instance: Hongor ovoo PUG of Ih Tamir soum of Arkhangai aimag

- Small bunch grass-forb-ARFRI rangeland in Gravelly hills ESG in Forest steppe.
- Recovery class One .



1а. Чулуурхаг хөрстэй уулын энгэр болон цав толгодын орой, хажуугийн Жижиг дэгнүүлт үетэн-чулуусгаг алаг өвс-агьт бэлчээр

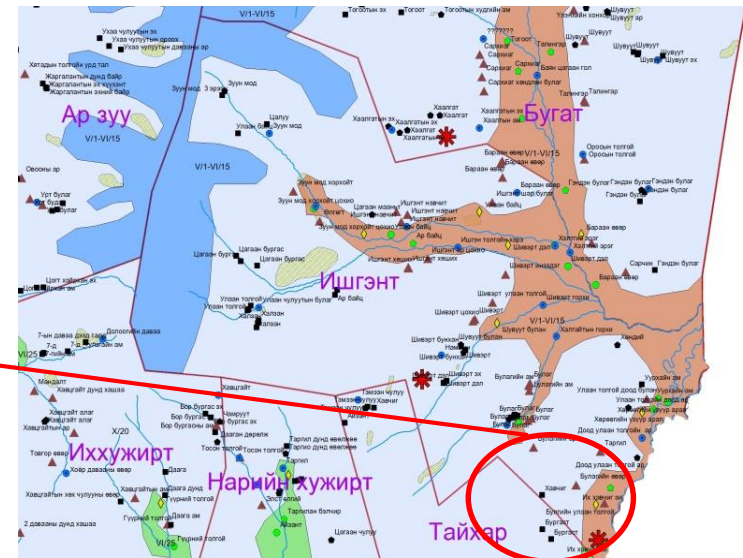


Rangeland use agreement enforcement mechanisms

2. The Agency of Land Affairs Geodesy and Cartography monitors the impact of grazing/use on rangeland health



Year	Total cover %/	Percentage of edible species %/
2014	80.0	12
2015	56.0	13
2016	55	9



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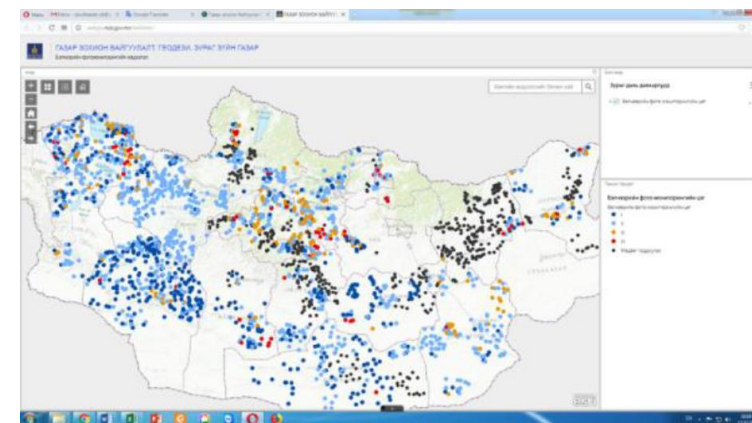
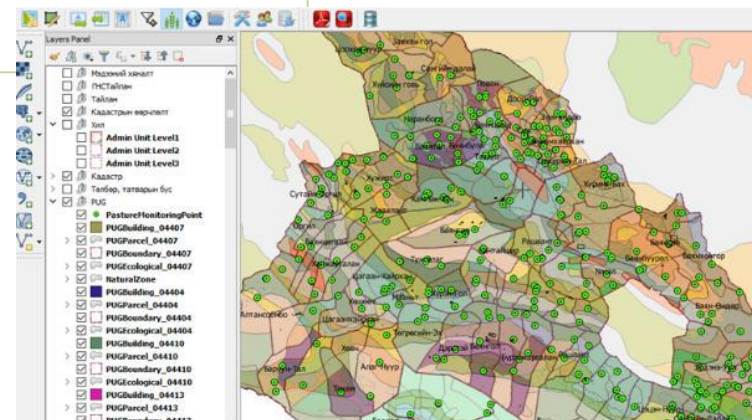
Rangeland grazing impact monitoring database at the Agency of Land Affairs Geodesy and Cartography

Zavkhan-Bayantes-Bujir-Bujiriin uvur

- Foliar cover-58%
- Grass-19.5%
- Sage-31%
- 188 кг/ha



- Foliar cover-82%
- Grass-42.5%
- Sage-23%
- 507 кг/ha

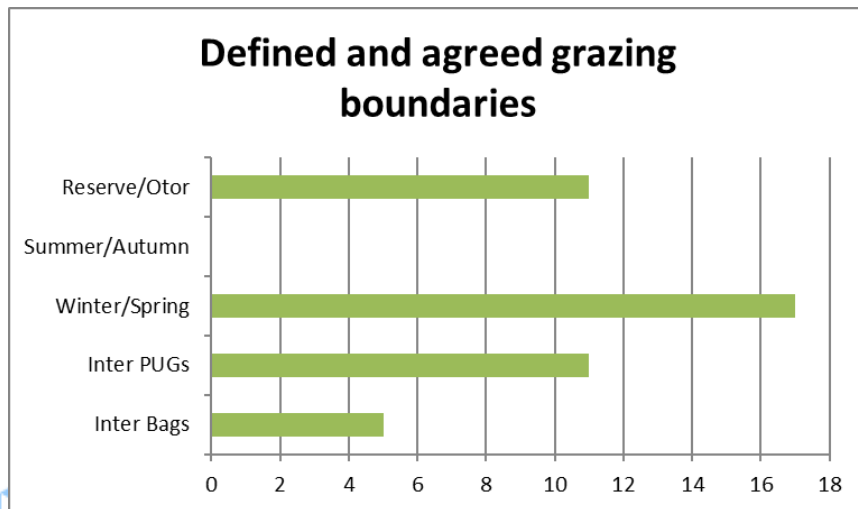
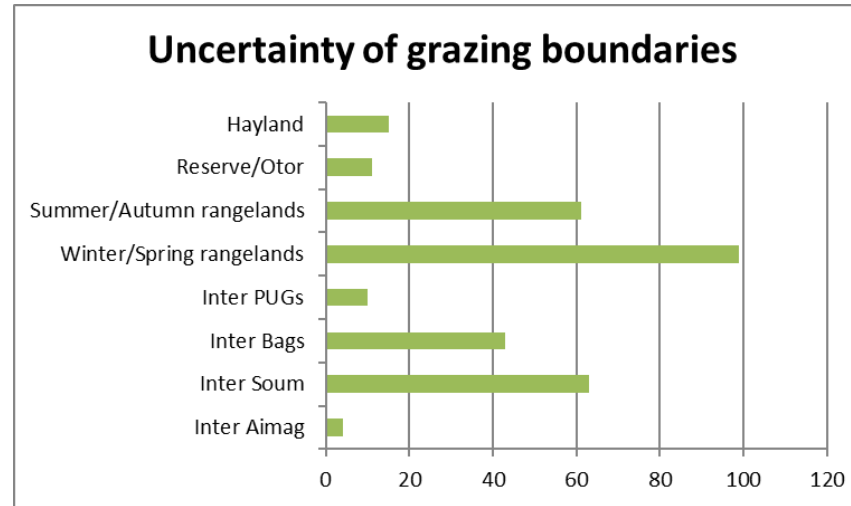
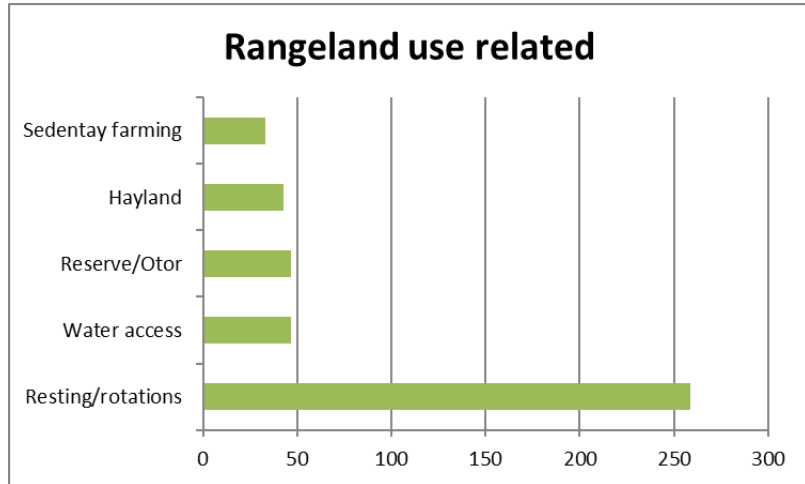


Findings



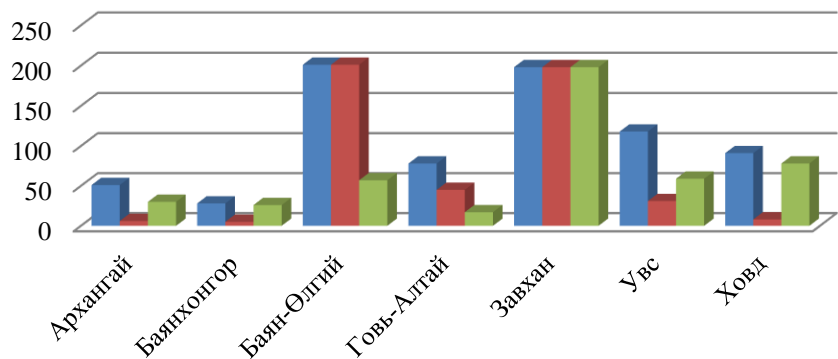
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Conflicts among herders with access /use of commons rangelands reduced



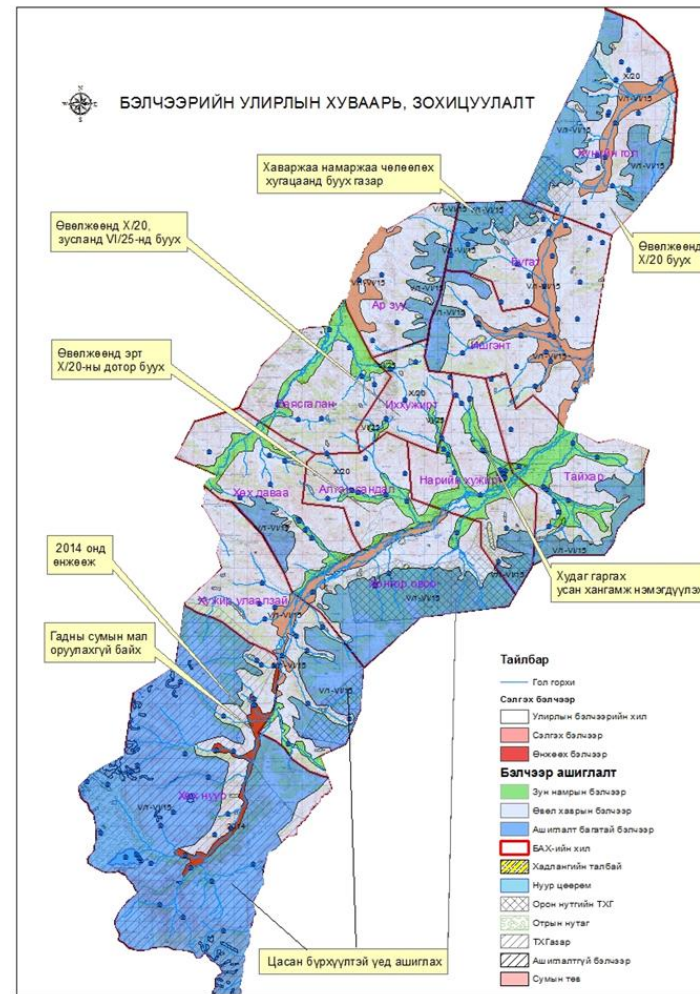
- The main reason of conflicts (306) or 40% is due to unclear grazing boundaries
- After grazing boundaries are discussed and agreed conflicts have reduced to 6%.

Regular and stabilized rotational grazing



■ БАХ-ийн тоо ■ Бэлчээрээ өнжөөж буй БАХ ■ Бэлчээрээ сэлгээж буй БАХ

70% of PUGs pursued rotational grazing and resting schedules as agreed in the plan.



As a result of clear grazing boundaries, carrying capacity and availability of rangelands, both herders and local authority has better planning and investment

Investment in protection of hay land to increase productivity:

Year	Improved hay making/ha/
2010	500
2012	750
2013	1000
2014	1500
2015	5000
2016	7000

Increased investment in forage planting

Year	Forage planting area /ha/
2010	50
2012	60
2013	100
2014	320
2015	400
2016	450

Findings

- If there are clear rules and enforced for the use of common rangelands, it is possible to ensure its sustainable use:
 - Conflicts among herders are reduced with clear grazing boundaries and better planning
 - Stable rotational grazing/resting
 - Increased investment on rangeland management both from herders and local government
- We observe that Mongolian nomadic management of common rangelands more in line with “principles of common pool resources” of Eleonor Ostrom

Clear boundaries of common pool resources

Traditional seasonal grazing boundaries of Hot ails and PUGs (winter, summer, autumn, spring)

Seasonal grazing schedules

Access to shared water and minerals

Ensure participation of all relevant stakeholders in the development of rules and enforcement

PUG and Bag meetings

Soum and Aimag WGs (land managers, rangeland experts, herders, environmental inspectors, Soum Governors etc.,)

Acceptance or rules by government and other stakeholders

Soum rangeland regulation

Soum annual rangeland management planning, implementation and enforcement

Common pool resource regulation specific per context

PUG internal regulation

PUG rangeland use agreement

Soum rangeland use regulation

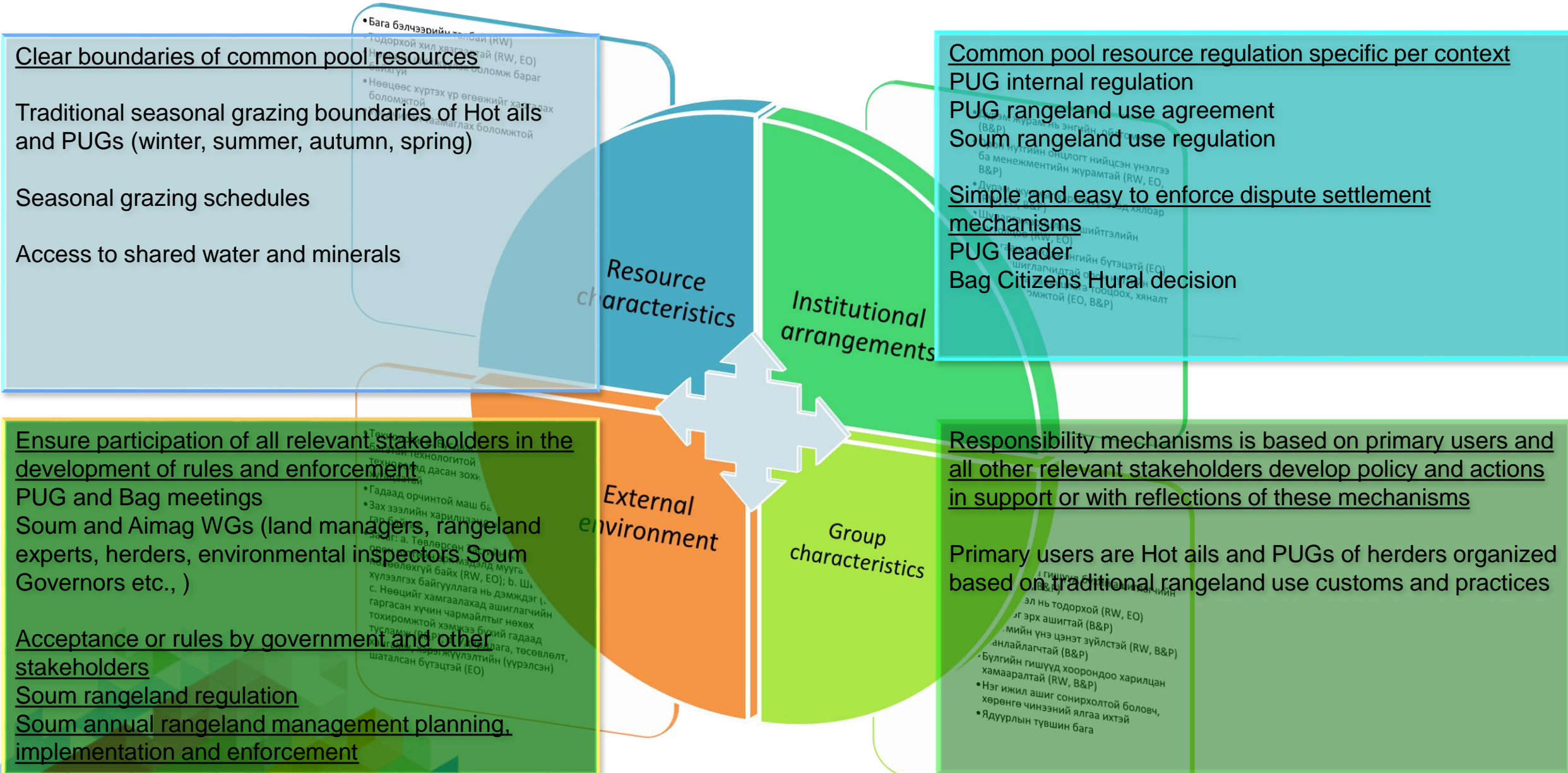
Simple and easy to enforce dispute settlement mechanisms

PUG leader

Bag Citizens Hural decision

Responsibility mechanisms is based on primary users and all other relevant stakeholders develop policy and actions in support or with reflections of these mechanisms

Primary users are Hot ails and PUGs of herders organized based on traditional rangeland use customs and practices



Thank you very much for your attention!



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