## Integrating hunter knowledge with community-based conservation in the Pamir Region of Tajikistan.

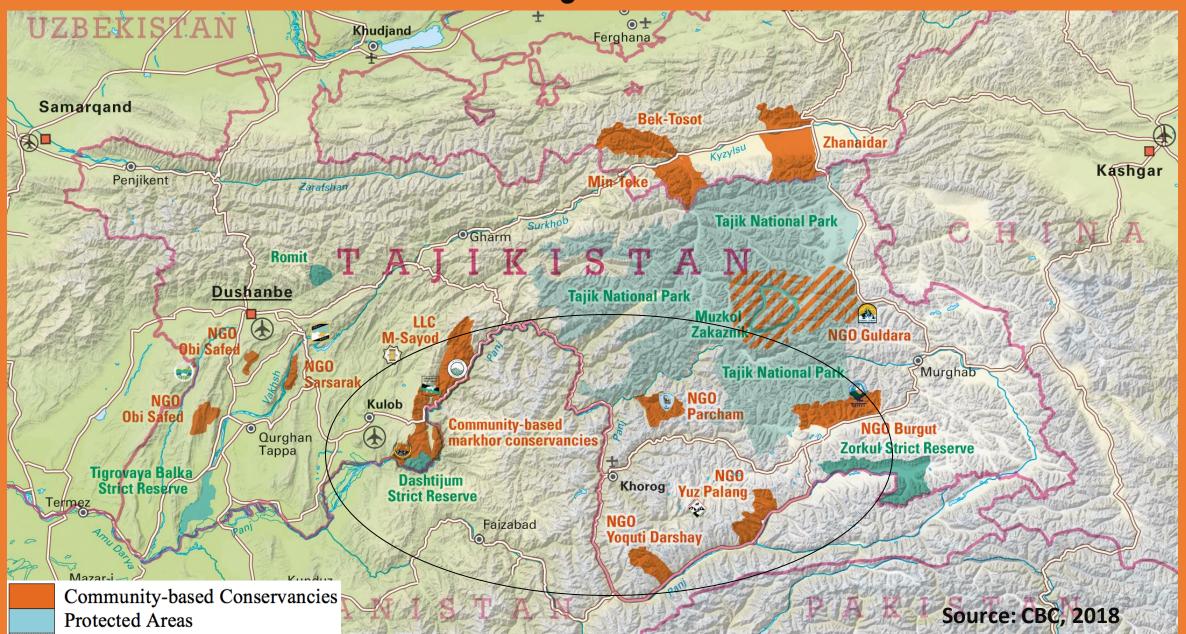
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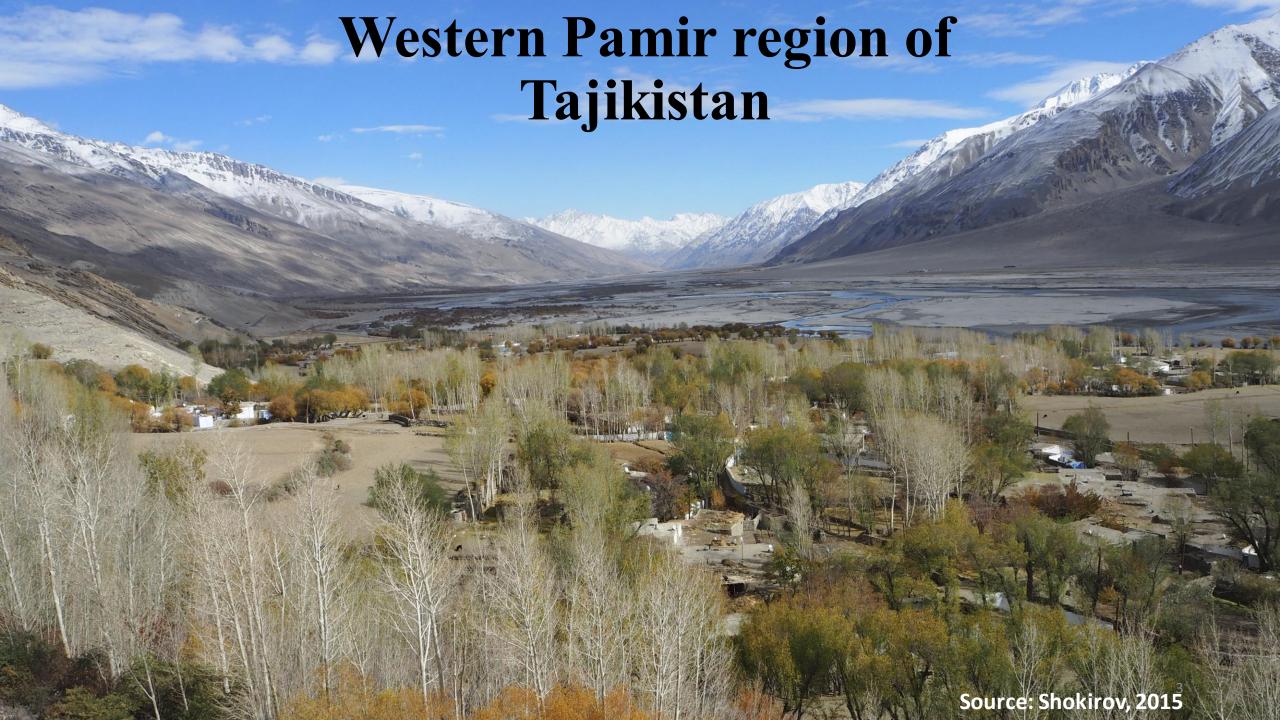


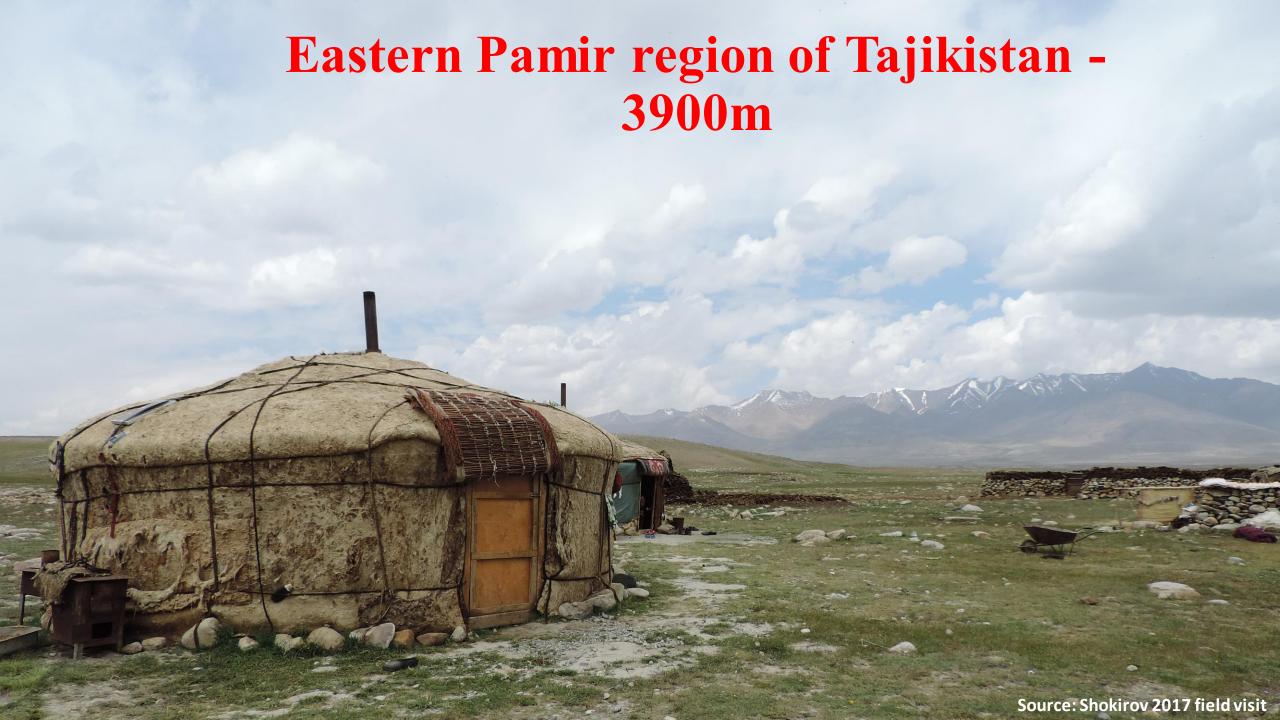




#### Study area







#### **Objectives**

We aimed to analyze the existence and contribution of TEK to wildlife management in community-based conservancies in Tajikistan.



#### Methodology





Interviews (41)





Participant observation

Archival literature review 1850-1950

#### Concepts and theories

## **Traditional** Ecological Knowledge concept

Is a cumulative body of knowledge, practice and belief, evolves by adaptive processes and handed down through generations by cultural transmission, about the relationship of living being (including humans) with one another and with their environment

(Berkes 1993; Gadgil et al., 1993; Berkes et al., 1995)

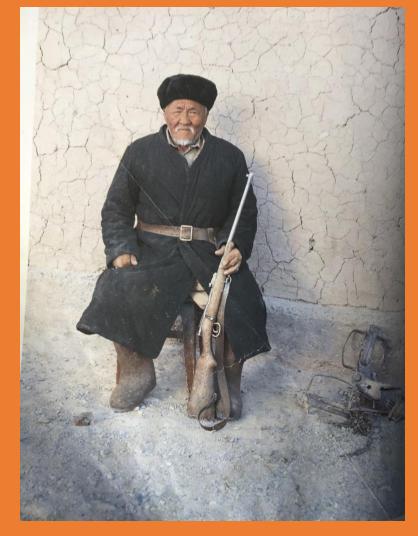
#### Research outcomes

- Traditional hunters and their knowledge 1850 1950
- Mechanization of traditional practices during Soviet Era 1924-1990
- Independence Era 1991 onward Community-based Conservation Approach



### Traditional Hunters and their knowledge 1860 - 1920

"Chegebai has great knowledge of his mountains, ibex, mountain sheep, and the snow leopard. He knows where and when a herd of mountain goats will move. He sees which path they will take and where the snow leopard is waiting for them" (Govrilyuk and Yaroshenko, 1987: 436).



(Govrilyuk and Yaroshenko, 1987: 436).

## Traditional Ecological knowledge of Hunters 1850-1950

• Local Knowledge of land and wildlife

• Spiritual practice and beliefs





### Resettlement of mountain communities to lowlands – 1930s



Photo credit: Pamir Archive – Feb 2016

#### Mechanization of subsistence hunting during Soviet Era 1924-1980

Transformation of subsistence activities into mechanized agriculture led to dramatic decline hunting knowledge and practice.



Photo credit: Pamir Archive – Feb 2016

#### Militarization of Pamir Region

 Militarization and introduction of guns contributed significantly to decline of wildlife during the Soviet Times.



Photo credit: Pamir Archive – Feb 2016

#### Civil War 1992-1997

• Extensive hunting took place as people had to depend on natural resources for survival



## Introduction of Community-based Wildlife Management Approach

• Application of state-of-theart methods: double observer, camera trapping...



Photo credit: Conservancies Joel Caldwell/Panthera – March 2017

Importance of the approach of Community-based Conservancies.



#### TEK and Community-based conservation

All conservancies are united under the umbrella organization called Hunting & Conservation Alliance of Tajikistan



Having sense of control over their natural resources



Women and Conservation



#### **Conclusions**

- Inclusion and Integration of hunter knowledge in CBC created opportunities for the older generation of hunters to teach a younger generation, e.g., hunting skills, ethics, and values.
- CBC designs align well with subsistence hunting cultures that existed before Soviet intrusion. Such practice is rare when state manages wildlife.



#### **Conclusions**

- CBC created an opportunity for knowledge sharing and capacity building between locals (TEK) and scientists (technical approaches).
- CBC empowered and incentivized traditional hunters to take responsibility of wildlife management.



#### Thank you!







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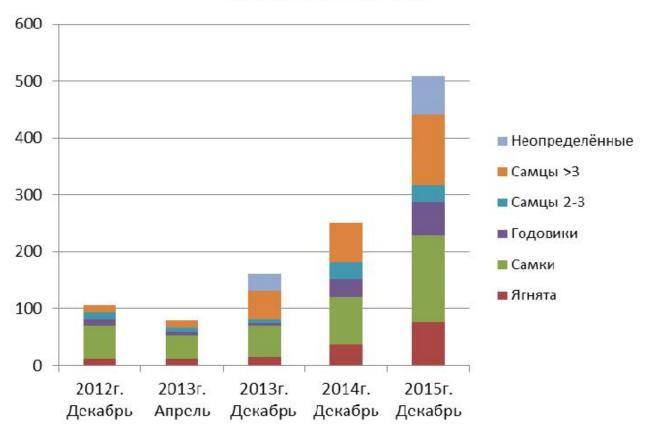
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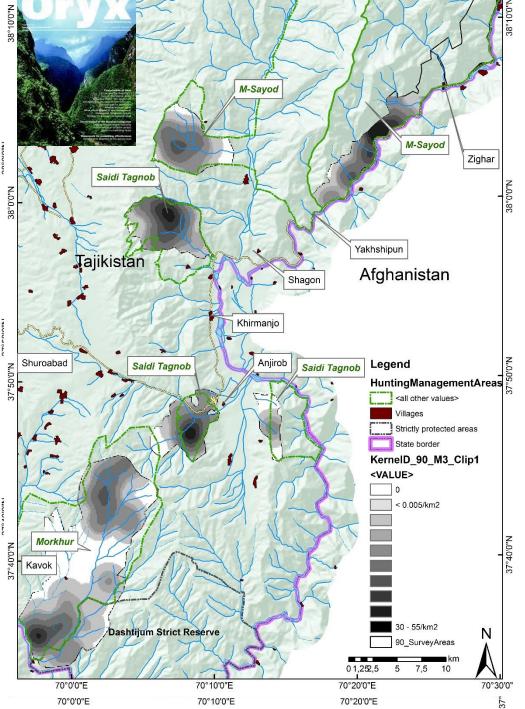
## Community Based Wildlife Management

- About 300,000 ha of habitat are effectively managed as wildlife conservancies.
- Currently more than 2,500 Asiatic ibex, at least 1,900 markhor, more than 500 Marco Polo sheep and about 150 urials are protected by the local communities.

#### Диаграмма изменения численности и половозрастного состава популяции барана Марко Поло в Аличуре за период 2012-2015 годы.



Kh. Karimov at al. 2016 Учет численности горного козла и барана Марко Поло в охотничьем угодье Северный Аличур (ОО "Бургут").

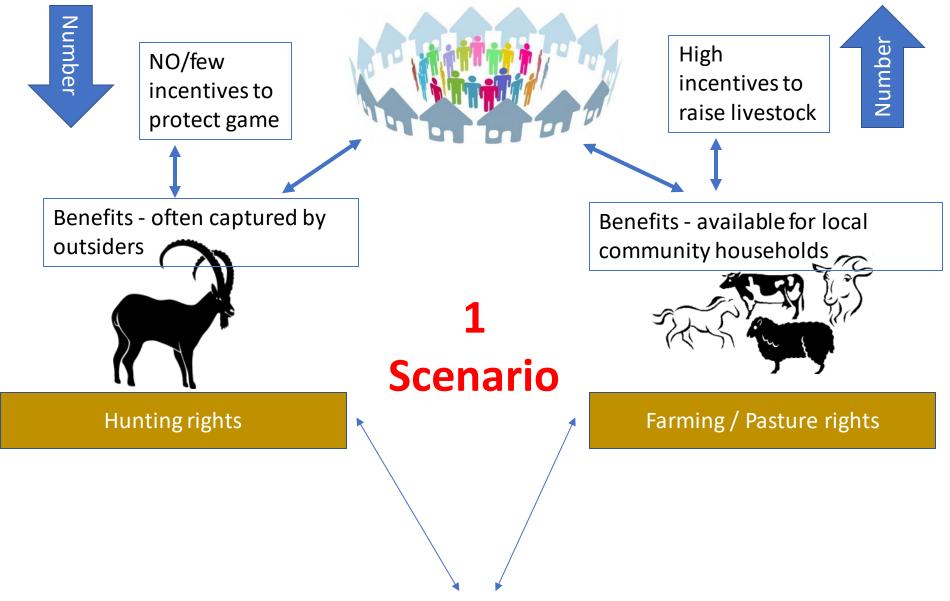


Markhor survey 2012 – 1018 animals Markhor survey 2014 – 1300 animals Markhor survey 2016 – 1438 animals

Management units	total	age 8+	max	min	Sugges ted
M-Sayod	<u>543</u>	<u>41</u>	5	4	4
Saidi Tagob	468	<u>17</u>	2	1	1
Morkhur	<u>285</u>	<u>10</u>	2	1	2
			<u>=</u>	<u>6</u>	Z

Why like this? The map can easly explain...





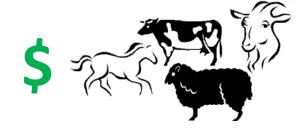
Both rights can be assigned on the same area, which is often the case!

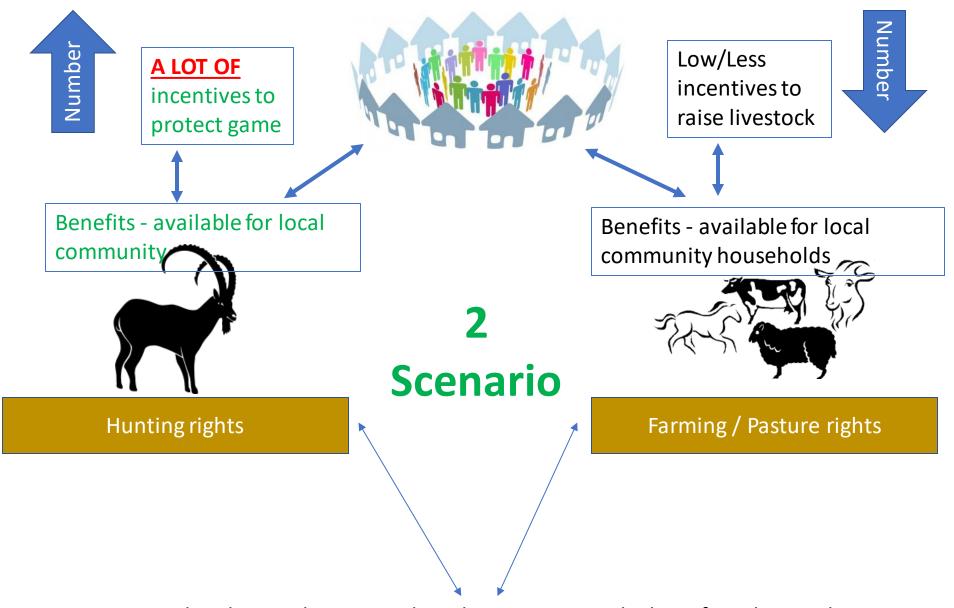


#### First scenario









Both rights can be assigned on the same area, which is often the case!



#### Second Scenario











If the hunting rights do not belong to the local community and the local people can not fairly benefit from hunting, conservation efforts are not successful.

Sustainable and well-regulated hunting is an important element of conservation and an important part of the livelihoods and culture of local communities.



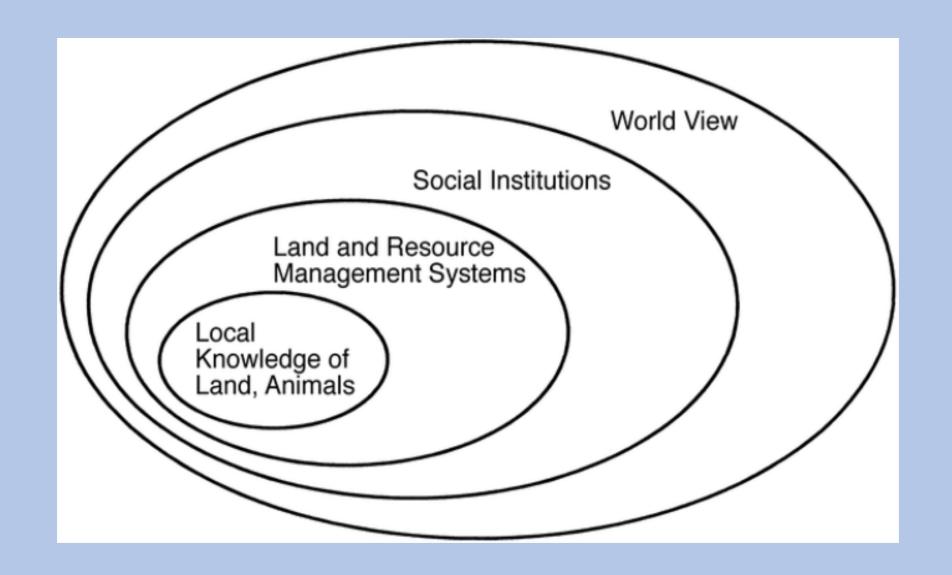
#### Research findings

Hunter specific TEK survived through the socio-economic changes during and after Soviet Era





#### Knowledge-Practice-Belief framework



All conservancies are united under the umbrella organization called Hunting & Conservation Alliance of Tajikistan





## Limitations to development of CBWM

- Limited tourism development in the region
- Unfair permit regulations for Marco Polo sheep

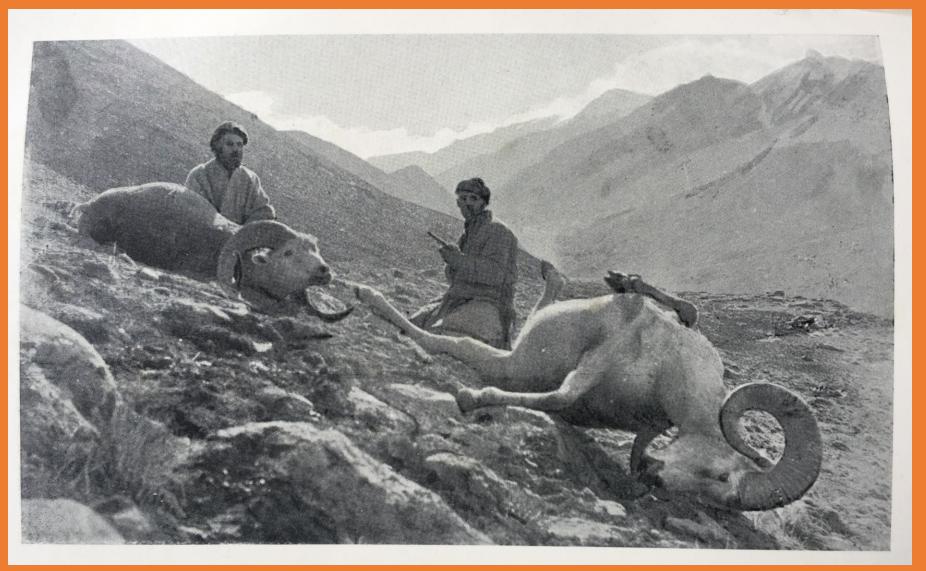


#### Field Work

**Total Interviews** (41)



## Traditional hunting knowledge and practice 1860 - 1920



Travel and Sport in the Pamirs By Ralph P. Cobbold – 1900.



## Future research agenda

• With this research, we also seek to implement a comparative case study of hunting systems (e.g., Dall sheep; Ovis dalli) in Alaska to explore similarities and differences in community-based hunting practice and wildlife management.



#### Concepts and theories

#### Comanagement

(Berkes et al., 1991 and Singleton 1998)

# Traditional Ecological Knowledge Concept

(Berkes 1993; Gadgil et al., 1993; Berkes et al., 1995)

## Socialecological resilience

(Folke, 2006)





#### Russian invasion of Central Asia 1860-1920