

Snow leopard (Panthera uncia) Conservation

## **WWF-India Initiative**

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Species Conservation Programme

WWF-India



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# **Current Status**



Population: 400-700 (Not precise)

**Population trend: Stable** 

**Habitats and Prey** 

Total Potential habitats: 1,29,000 km<sup>2</sup>

Prey Species: Blue sheep, Asiatic ibex, Ladakh urial, markhor, Tibetan argali, marmot etc.

**Prey Population Status for each area: NA** 





#### Geographical scope of the Project Snow Leopard in the five Himalayan states. Source: Project Snow Leopard Document

State	State's Area (km²)	Potential Area Under PSL (km <sup>2</sup> )	Percent Geographical Area Under PSL
Jammu & Kashmir*	1,28,534	77,833	61
Himachal Pradesh	54,975	27,846	51
Uttarakhand	59,846	13,885	23
Sikkim	8,318	3,031	36
Arunachal Pradesh	81,174	6,162	08
Total	3,32,846	1,28,757	39



# Threats

- Poaching for skin/bones
- •Retaliatory killings to reduce livestock depredation
- Depletion of prey base
- Habitat degradation/fragmentation
- •War and related activities in the snow leopard distribution range









# Why Surveys in Uttarakhand, Himachal Pradesh and Jammu and Kashmir ?

- Information on the distribution and abundance is as scanty as the animal itself
- Very few population estimates are available- generally extrapolations based on quality of snow leopard habitat
- In India areas best studied are Leh and Spiti
- Uttarakhand and Himachal Pradesh surveyed based on information available, urgency, resources available



## Survey Objectives in Uttarakhand and Himachal Pradesh

- 1. Assess the occurrence and distribution of snow leopard
- 2. Assess snow leopard human conflicts
- 3. Investigate grazing pressure and human disturbance

Based on the intensity of the above - select area and plan for interventions for snow leopard conservation





# **Distribution and Habitat**



SNOW LEOPARD CONSERVATION in Uttarakhand and Himachal Pradesh

- First focused surveys on snow leopard in Uttarakhand
- Almost 10 Protected Areas were surve
- 13 evidence of snow leopard in Uttarakhand in the form of scals (9) and pugmarks (4).
  - <u>Three snow leopards are identified</u> genetically (WII, unpub.)
- Potential areas identified in Uttarakhand
- No evidence in the areas surveyed Himachal Pradesh

# Large carnivore-human conflicts in Uttarakhand-2008





# Snow leopard-human conflicts in Uttarakhand-2008





# Threats to snow leopard and its habitat 2008



⇒Targets⇒ ∜Threats∜	Snow leopard	Snow leopard habitat
Snow leopard-human conflicts	Low	
Tourism		Low
Human settlements		Low
Grazing		Low
Developmental activity		Medium
Target threat rating	Low	Low

# Areas with good Potential of snow leopard conservation

**Gangotri National Park** 

Nanda Devi Biosphere Reserve

Askot Wildlife Sanctuary







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#### Kargil, Ladakh?







### **Objectives**

- Surveys for the status and distribution of snow leopard and other large carnivores and their prey
- Estimate abundance of prey species
- Food habits of snow leopard and other large carnivores based on scat analysis
- Snow leopard Human conflicts
- Conservation awareness programme for local communities



#### Surveys for the status and distribution of snow leopard and other large carnivores and their prey

#### **Direct and Indirect evidence**

- Snow leopard sighting
- Pugmarks, scats, scraps







# Estimate abundance of prey species

Vantage Sampling

Prey availability: Asiatic ibex (0.09/km<sup>2</sup>) Stable Ladakh urial (0.06/km<sup>2</sup>) Stable



#### **Diet of Snow leopard**

Wild prey: 55 % Domestic Livestock: 45 %



# Diet of Tibetan wolf

Wild prey: 46 % Domestic Livestock: 45 %



#### Precentage frequency (%) of prey species in the diet of snow leopard



Figure 3. Percentage frequency (%) of prey species in the diet of Tibetan wolf



#### Large carnivore-human conflicts

Total livestock 13356 and loss 427 by Snow leopard: 18% Tibetan wolf: 41% Unidentified: 37%

#### Slight increase during 2011

Total value (USD) of livestock loss by large carnivores in Kargil and Drass







Large carnivores

## **Conservation Awareness Creation**





Four workshops with the locals, teachers, students and villagers: To generate awareness One workshop with the Administrators and District Officials: To deliberate on wildlife conservation issues



# intreats

# Habitat degradation and frag

Decline in prey

# **Future and ongoing Steps**

- Mitigate carnivore-human conflicts
   in Kargil, Ladakh
- Predator-proof corral pens On going
- Enhance scientific knowledge on snow leopard
- Conservation awareness meetings

   On going
- Camera trapping On going



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## **Constraints / Limitations**

Limited accessibility in the areas

 Inadequate administrative capabilities and infrastructure

- Indecedent and for dure provitoring