



Capacity Building Workshop Climate-Smart Snow Leopard Landscape Management Planning

20-23 April 2016

And

Capacity Building Workshop for Snow Leopard Landscape Mapping

25-27 April 2016

Hotel Tibet International, Boudha, Kathmandu, Nepal

Government of Nepal & Global Snow Leopard and Ecosystem Protection Program

Partners:



Co-hosts



MEETING REPORT

Introduction

The Global Snow Leopard and Ecosystem Protection Program (GSLEP) is a unique alliance that brings together governments and non-government organizations from the 12 snow leopard range nations and beyond on a single platform to conserve the snow leopard and its mountain habitat. The program was the key outcome of the Global Snow Leopard Conservation Forum, hosted by the Kyrgyz Republic in October 2013 where the countries endorsed the Bishkek Declaration. With a mandate to secure at least 20 landscapes by the year 2020, the program is currently in its management planning phase where range countries are working to prepare land-scape specific management plans. The GSLEP Secretariat based in Bishkek is helping with coordination and support to the range countries.

Conservation of the snow leopard and its habitat is strongly linked to the welfare of local communities. Rapidly changing climate patterns and an increase in the number of extreme weather events are having negative impacts on mountain ecosystems in South and Central Asia as well as causing economic losses to humans residing in these mountainous regions. Therefore it is imperative to link community based snow leopard conservation, a cornerstone of the GSLEP program, with efforts to improve climate adaptation capacity in this ecologically fragile region.

Representatives from nine snow leopard range countries convened in Kathmandu 20-27 April 2016 for a two-part workshop on climate-smart landscape

management planning and mapping in order to conserve the snow leopard and its habitat. The workshop started on Wednesday, 20 April, and the first half focused on building capacity for landscape level planning for snow leopard conservation among participant countries. The second half of the workshop, beginning 25 April, focused on mapping work in support of landscape management plan development and implementation.

Over 40 practitioners from nine countries attended the workshop organized by the Global Snow Leopard Ecosystem Protection Program (GSLEP) Secretariat and the Government of Nepal. The workshop was co-organized by the Snow Leopard Trust and the WWF Conservation and Adaptation in Asia's High Mountain Landscapes and Communities Project, funded by USAID. Participants included representatives of snow leopard range nation governments, NGOs, and researchers. The keynote opening addresses were given by the Secretary of the Ministry of Forests and Soil Conservation, Mr. Uday Chandra Thakur, and the Director General of the Department of National Parks and Wildlife Conservation, Maheshwar Dhakal

"This workshop is part of the process to secure 20 snow leopard landscapes by 2020," said Koustubh Sharma, the GSLEP program's international coordinator. "A lot of the work has already gone in, and we hope our work here will result in landscape management plans which will be blueprints for securing the snow leopard landscapes."

DNPWC Deputy Director General Maheshwar Dhakal gives his opening remarks.



Part 1: Climate-Smart Snow Leopard Landscape Management Planning

The workshop opened on Wednesday, 20 April 2016, and the first half focused on building capacity for landscape level planning for snow leopard conservation among participant countries.

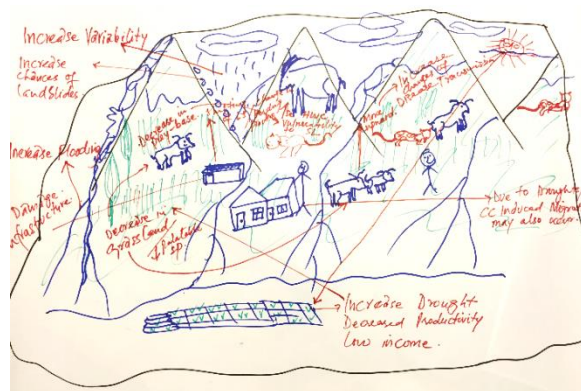
The first four days of the workshop focused on providing tools to practitioners to champion climate-smart landscape-level planning and management for snow leopard conservation. Working in both national groups and on a plenary pilot landscape, the participants worked through the steps and tools of the “*Open Standards for the Practice of Conservation*,” a strategic planning framework widely used in protected areas and conservation projects of all types and sizes. The work during these four days was intended to be the basis for developing comprehensive landscape management plans addressing key issues and threats, including climate change.

The participants initially considered how they would characterize the health of snow leopard populations and their prey in the respective landscapes. Next they identified the conventional, non-climate threats to snow leopards and their prey. Once the conventional threats were identified, an effort was made to rate the scope, severity, and irreversibility of the each threat in the pilot landscape, as an example. The drivers, or root causes of each threat was carefully mapped out until a box-and-arrow model emerged which described the conservation situation in the pilot landscape (see photo below).



Facilitator John Morrison from WWF guides participants in developing a conceptual model integrating climate change.

An afternoon was devoted to understanding the potential impacts of climate on snow leopards, snow leopard prey, humans living in and around the landscape, and the potential impacts resulting from human reactions to a changing climate. Four equally likely climate scenarios had been developed before the workshop, encompassing the uncertainty found in climate models and climate projections (Figure 5 below). The participants broke up into the four scenario groups and attempted to understand the implications of each scenario for the pilot snow leopard landscape.



Ecological drawing created by participants to understand linkages between climate change and local system dynamics.

“Climate change is happening more rapidly, and having more visible effects in the high mountains of Asia than many other regions of the world,” said Ryan Bartlett, Senior Program Officer for Climate Change Adaptation at WWF, “it is thus critical to address climate change in our conservation programs; otherwise we risk losing any progress in conserving the snow leopard and the ecosystems and habitat it represents that provide critical services for millions of people downstream.”

Climate change and conservation planning experts from WWF and Columbia University’s Center for Climate Systems Research guided participants through the process of incorporating climate change impacts into their landscape conservation models. Climate change was disaggregated in each scenario in order to understand the direct impacts on the snow leopard, but also how it can exacerbate

existing threats like overgrazing, poaching and retaliatory killing.

The most severe climate impacts were fed back into the box-and-arrow situation diagram, and with the comprehensive climate-changed situation in front of them, the group brainstormed an exhaustive set of potential strategies to address the threats and their drivers. The group then considered criteria such as cost, feasibility, and whether the strategy would be effective in all of the climate scenarios, to prioritize the list of strategies.

One strategy, the use of improved corrals to protect livestock, was taken as an example, and a logic-model, or “results chain” was developed to illustrate the strategy’s theory of change – showing both how

the strategy was intended to change behavior and eventually reduce human wildlife conflict, and how other strategies (e.g., targeted awareness raising, capacity building, sustainable finance for materials, etc.) were necessary to make the one strategy work effectively.

Additional sessions in the first half of the workshop focused on turning the strategic planning efforts into a landscape management document, the need to follow through with actual implementation of the plan, and several examples of how similar efforts have been implemented.

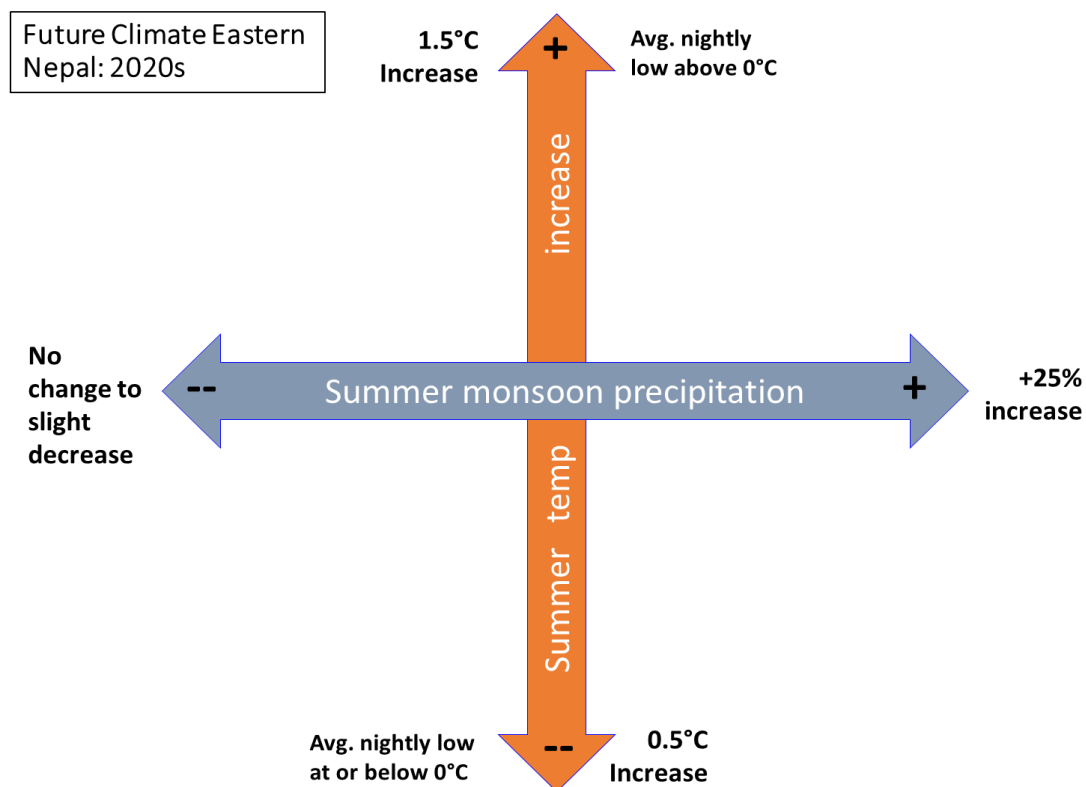


Figure 1. Climate scenario axes developed by WWF and the Columbia University Center for Climate Systems Research (CCSR) to evaluate future climate change impacts in the eastern Nepal GSLEP landscape

Part 2: Snow Leopard Landscape Mapping

Facilitated by WWF Climate Adaptation expert Ryan Bartlett and GIS consultant experts in mapping snow leopard presence and spatial hydrology and climate change, Jessica Forrest and Nikolai Sindorff, the second half of the workshop focused on mapping work in support of landscape management plan development and implementation. Topics addressed not only included snow leopard and habitat distribution, particularly under a changing climate, but also mapping of development activities, natural resources, and the connections between snow leopard habitat and important areas for water supply under different future climate scenarios.

Day 1 began with a review of existing mapping efforts across the snow leopard range, with each country group presenting its current mapping analysis for each of its landscapes in brief, 5-10 presentations to establish a baseline of information. This helped the facilitators, GIS experts in snow leopard distribution and water and climate issues, to better understand exactly what information already exists and could be used for additional mapping planned for the USAID-funded WWF Asia High Mountains Project in support of the landscape planning process.



Participants from Nepal discuss the borders of the eastern Nepal GSLEP landscape.

As part of larger workshop goals to coordinate mapping efforts across the range, experts then presented a proposed, draft analysis for Nepal's eastern landscape, including an assessment of snow

leopard presence and climate change and local hydrology. Participants debated the merits of these approaches in a session where they were tasked to develop their own mapping vision in support of the landscape planning and implementation process.

With day 1 focused more generally to gather baseline information, participants in day 2 dove into much greater detail, discussing specific mapping data and methods. Example discussions included agreed upon definitions for snow leopard habitat, corridors, bottlenecks, important water provision areas, and critically, areas of climate resilience. These included refugia for snow leopards and areas of water provision likely to be most resilient under future climate scenarios.

Afternoon sessions on day 2 were devoted to agreeing upon a standardized approach to mapping snow leopard habitat and climate change impacts moving forward. In their country groups, participants then began working on GIS shapefiles and preparing a list of data needs for analyses to support landscape plans.

Participants also discussed in plenary an agreed upon approach to determining the exact analysis extents, ie geographic boundaries, for each landscape. They decided to assess the larger sub-watershed outside of landscape borders where relevant, and to use local level district boundaries along international boundaries to define exact landscape outlines.

The final day of the mapping session was devoted to working training sessions for each country group to begin developing maps and working with real data. Facilitators worked with each group to begin creating maps based on the standard, agreed upon approach in days 1 and 2. Basic outline plans for developing maps in support of each landscape plan were drafted and next steps determined, including responsibilities for moving forward.

To close, key action items and next steps to develop maps in support of the landscape plan development and implementation process were decided upon.

Participants agreed to continue to engage with the WWF Asia's High Mountains Project GIS mapping team as they create maps in support of landscape planning for the 6 AHM countries: Mongolia, Kyrgyzstan, Pakistan, India, Nepal, and Bhutan. And where possible, the mapping team agreed to continue to provide guidance to support a standardized mapping approach across the entire snow leopard range.

Next Steps

Each national team left the workshops with a template that addressed the key elements of a landscape management plan. The idea was for each team to go back home with the template in hand, discuss among their own larger national teams, and develop a process for developing management plans for each snow leopard landscape.

"While each country ultimately formulates its own plans, there was a certain amount of standardization in the country plans for the Global Tiger Initiative. That was important because we were then able to go to global funders like the international finance institutions," said Keshav Varma, Head of the Global Tiger Initiative Council and Senior Advisor to the GSLEP program, addressing the

country representatives at the closing of the landscape planning workshop.

Mr. Varma also encouraged countries to tap international expertise and resources for their snow leopard conservation work. "If you think there are resources out there that we can bring to help you as you formulate your plans, we would be more than willing to help," he added.

Participants also left the workshop with initial steps on data development for mapping analyses to be completed in support of the landscape plan development process, and with assistance from the WWF AHM mapping team in the coming months.

That team will be following up with each of the six AHM GSLEP countries specifically in the coming months to continue collaboration in developing maps on snow leopard presence and climate change that will be key information sources for the landscape management plans.

Participants will meet again at the "Landscape Management Planning Stocktaking Dialogue," to assess progress in the landscape plan development process, including mapping, and discuss regional issues like illegal wildlife trade.



Group photo of all workshop participants.

Appendix: Workshop Agendas

Part I: Snow Leopard Landscape Management Planning

20-23 April 2016

Hotel Tibet International, Kathmandu, Nepal

Objectives

The fundamental objectives of the workshops are to:

- Share knowledge & build capacity of in snow leopard range countries for management planning for GSLEP landscapes
- Use General Guidelines for Snow Leopard Landscape Management Plan, articulated through Climate-Smart Open Standards conservation planning approach, to begin to develop management plan for pilot GSLEP landscape (Kanchenjunga) as well as the other snow leopard landscapes.

20 April 2016		
8:00	Registration	
8:30	Workshop Inauguration <ul style="list-style-type: none">• Introduction to the GSLEP program (GSLEP Secretariat)• Welcome remarks (DNPWC)• Opening remarks (USAID, WWF Nepal)• Closing remarks (Secretary, MoFSC)• Vote of thanks (Dept of Forest)	90 min
10:00	BREAK	30 min
11:00	Welcome & Introductions <ul style="list-style-type: none">• Icebreaker introductions• Review workshop objectives & agenda, ground rules <i>Objective: Everyone understands why they are here</i>	45 min
11:45	Review of General Guidelines for Snow Leopard Landscape Management Planning & Snow Leopard Landscapes <i>Objective: Understanding basic General Guidelines & Advice Docs</i>	45 min
12:30	LUNCH	60 min
13:30	Climate-Smart Open Standards Planning Process & Snow Leopard Management Planning <i>Objective: overview of an optional suggested process & how it helps with Snow Leopard Management Planning</i>	60 min
14:30	<u>Baseline Knowledge for Kanchenjunga Pilot Site</u>	30

	<ul style="list-style-type: none"> General Attributes (location, landscape characteristics, human population characteristics, lifestyle, etc.) <i>Objective: Everyone understands the basics of the pilot site we will be working with during the week.</i>	min
15:00	BREAK	30 min
15:30	Snow Leopard <u>Vision Statement</u>, <u>Baseline Status</u>, <u>Goals</u> (Kanchenjunga) <i>Objective: Discussion of standard measures of snow leopard status, its current condition, and future goals in Kanchenjunga.</i>	60 min
16:30	List Conventional Snow Leopard <u>Threats</u> in Kanchenjunga <i>Objective: Understanding of conventional Snow Leopard threats</i>	30 min
17:00	All Landscape Managers Session: List Conventional <u>Threats</u> <i>Objective: Understanding of conventional Snow Leopard threats</i>	30 min
17:00	Review of the Day <ul style="list-style-type: none"> +/- & wrap-up 	15 min
17:15	Optional Evening Session: Assistance with Plan Template <i>Objective: Provide any needed assistance to landscape staff</i>	45 min
18:30	DINNER	

Checklist to do's do before Day 2

- ✓ Use Shaun Martin's data sheet for documenting climate impacts

21 April 2016		
07:00	BREAKFAST	
08:30	Welcome and Introduction to the Day	15 min
08:45	Conventional <u>Threats</u> Rating <i>Objective: Understanding of importance of snow leopard threats</i>	75 min
10:00	<u>All Landscape Managers Session: Threat Rating</u> <i>Objective: Understanding priority threats</i>	45 min
10:45	BREAK	30 min
11:15	<u>Situation Analysis for Kanchenjunga (Conceptual Model)</u> <i>Objective: Understanding threat drivers</i>	60 min
12:15	<u>All Landscape Managers Session: Situation Analysis</u> <i>Objective: Understanding threat drivers</i>	15 min
12:30	LUNCH	45 min

13:15	<u>Threats</u> - Overview of Climate Scenarios (Kanchenjunga) <i>Objective: Everyone has a basic understanding of likely future climate futures for Kanchenjunga pilot site.</i>	30 min
13:30	<u>Threats</u> – Climate vulnerability of the snow leopard <i>Objectives: Everyone has an understanding of the typical climate-driven threats to snow leopards</i>	15 min
14:00	Identify Ecological CC Impacts/<u>Threats</u> (Kanchenjunga) <ul style="list-style-type: none"> Use ecological drawings first, and compile on wall mounted scenarios (using flip chart pages taped together) <i>Objective: Everyone understands ecological climate impacts of the selected climate scenarios.</i> (All Landscape Managers join one of the four Kanchenjunga teams)	45 min
14:45	Identify Human CC Impacts/<u>Threats</u> (Kanchenjunga) <ul style="list-style-type: none"> Use ecological drawings first, and compile on wall mounted scenarios (using flip chart pages taped together) <i>Objective: Everyone understands human climate impacts of the selected climate scenarios.</i> (All Landscape Managers join one of the four Kanchenjunga teams)	30 min
15:15	Identify Human Reaction CC Impacts/<u>Threats</u> (Kanchenjunga) <ul style="list-style-type: none"> Use ecological drawings first, and compile on wall mounted scenarios (using flip chart pages taped together) <i>Objective: Everyone understands human reaction climate impacts of the selected climate scenarios.</i>	30 min
15:45	BREAK	15 min
16:00	Situation Analysis - Climate-Integrated Conceptual Model (Kanchenjunga) <i>Objective: Everyone understands the interaction of climate and conventional threats – including the differences between climate scenarios. Discuss re-rating threats.</i>	60 min
17.15	Review of the Day <ul style="list-style-type: none"> + / Δ & wrap-up 	15 min
17:15	Optional Evening Session: Assistance with Plan Template <i>Objective: Provide any needed assistance to landscape staff</i>	45 min
18.30	DINNER	
20:00	Optional Evening Session for All Landscape Managers: Climate Projections & Scenarios	

	<i>Objective: A clinic to explain how climate projections should be handled to determine the range of uncertainty and do develop climate scenarios</i>	
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Check-list to do's before Day 3

- ✓ Arrange the room
- ✓ Develop table on flipchart for prioritizing strategies

22 April 2016		
07:00	BREAKFAST	
08:30	Welcome and intro to the day	15 min
08:45	Brainstorm Strategies for <u>Addressing Threats</u> (Kanchenjunga) <i>Objective: Identifying a range of strategies that could potentially help address issues in the landscape.</i>	60 min
09:45	<u>All Landscape Managers Session: Addressing Threats</u> <i>Objective: Identifying a range of strategies that could potentially help address issues in the landscape.</i>	30 min
10:15	BREAK	30 min
10:45	Prioritize & Climate-Test Strategies for <u>Addressing Threats</u> (Kanchenjunga) <i>Objective: Develop criteria & understanding of which priority strategies will or will not work in selected potential future climates.</i>	60 min
11:45	<u>Addressing Threats</u> - Results Chain for 1 Strategy (Kanchenjunga) <i>Objective: Spell out the logic and <u>Activities</u> of one strategy & how it will be supported by other strategies</i>	45 min
12:30	LUNCH	60 min
13:30	Continued – <u>Addressing Threats</u> - Results Chain	90 min
15:00	BREAK	30 min
15:30	<u>Outputs, Outcomes, Indicators, Responsibilities</u> for 1 Strategy (Kanchenjunga) <i>Objective: Understanding the measurable objectives, responsibilities, and timeline for 1 strategy</i>	60 min
16:30	Review of day <ul style="list-style-type: none"> • +/- & wrap-up 	15 min
17:00	Optional Evening Session for All Landscape Managers: Prioritizing Strategies <i>Objective: Develop criteria & understanding of which priority strategies</i>	45 min

	will or will not work in selected potential future climates.	
18.30	DINNER	

Check-list to do's before Day 4

- ✓ Arrange the room

23 April 2016		
07:00	BREAKFAST	
08:30	Welcome and intro to the day	15 min
08:45	Review of Landscape Planning Approach <i>Objective: Everyone is reminded of the steps we took in the previous days. Discussion & questions.</i>	45 min
09:30	Developing a Landscape Management Plan Document <i>Objective: Everyone understands how the information and thinking that has been generated can be turned into a planning document.</i>	60 min
10:30	BREAK	30 min
11:00	<u>All Landscape Managers Session: Addressing Threats</u> <i>Objective: Landscape managers work on their "plan to develop management plan"</i>	90 min
12.30	LUNCH	60 min
13:30	Landscape Management Plan Implementation <i>Objective: Everyone understands how the plan should be implemented (in general).</i>	120 min
15:00	BREAK	30 min
15:30	Closing Ceremony <ul style="list-style-type: none"> • Wrap up • Review • Next steps • Valedictory 	60 min
17:00	Facilitators Meeting	
18.30	DINNER	

Part II: Coordinating Geospatial Mapping Across the Snow Leopard Range

25-27 April 2016

Hotel Tibet International, Kathmandu, Nepal

Objectives

The fundamental objective of the workshop is to:

- Coordinate among field scientists and mapping experts to develop a standardized approach to address key spatial planning needs in Global Snow Leopard and Ecosystem Protection (GSLEP) landscapes
- Additional key outputs:
 - Endorse a standard vision for maps to support the key spatial planning needs in GSLEP landscapes
 - Develop and agree upon mapping methodologies to support the vision
 - Draft Guidance Document outline of mapping approach
 - Assessment of data availability and gaps to support the mapping
 - Determine needs to update/modify web portal to serve as data sharing mechanism and communications tool
 - Next steps to produce maps for at least six AHM/GSLEP landscapes

25 April 2016		
09:00	Welcome & Introductions <ul style="list-style-type: none">• Introductions• Review workshop objectives	30 min
09:30	<i>Review of Planning Workshop Outcomes</i> <ul style="list-style-type: none">• Key spatial planning needs that emerged• Specific data gaps and recommended methods <i>Objective: Understand how workshop outcomes will inform the planning process</i>	30 min
10:00	<i>Review of General Guidelines for Snow Leopard Landscape Management Planning</i> <ul style="list-style-type: none">• Present guidelines, specific sections requiring mapping inputs <i>Objective: Understanding the basic General Guidelines & Advice Documents to understand how mapping will inform the planning process</i>	45 min
10:45	BREAK	30 min

11:15	<p>Review Existing Mapping Efforts Across the SL Range</p> <ul style="list-style-type: none"> Representatives from each AHM landscape present baseline knowledge on: SL abundance, climate vulnerability, water provision Snow leopard distribution in each country, how they overlap with the GSLEP landscapes Additional recent spatial assessments: climate, water (ICIMOD, etc). <p><i>Objective: Understanding existing analysis, needs, and gaps to inform planning across all the GSLEP landscapes</i></p>	90 min
12:45	LUNCH	60 min
13:45	<p>Review of 2013 Range-Wide Mapping</p> <ul style="list-style-type: none"> Brief presentation on data, methods, and results from 2013 <i>Guardians of the Headwaters</i> mapbook Presentation of draft GIS maps on water, climate, snow leopard presence for Kanchenjunga landscape <p><i>Objective: Outline draft approach based on application of 2013 method to develop draft Kanchenjunga maps</i></p>	60 min
14:45	BREAK	30 min
15:15	<p>Map Vision for Landscape Planning</p> <ul style="list-style-type: none"> Breakout groups for each landscape discuss mapping vision in support of landscape plan development Plenary presentations: example group presents top map(s) most critical for their landscape plan development 	90 min
16:45	<p>Review of the Day</p> <ul style="list-style-type: none"> +/- & wrap-up 	15 min
17:15	Facilitators Meeting	
18:30	DINNER	

26 April 2016		
09:00	<p>Review Day 1, Focusing on Map Vision</p> <ul style="list-style-type: none"> Presentation of agreed approach/process 	30 min
09:30	<p>Group Discussion 1: Criteria to identify and depict current environment (habitat and water)</p> <ul style="list-style-type: none"> Coarse vs fine filter approach Existing environment: SL habitat, corridors, water provision areas, degraded lands, snow leopard-human conflict hot spots Infrastructure, socioeconomic/demographics 	60 min
10:30	BREAK	30 min

11:00	Group Discussion 2: Criteria to identify and depict future environment (habitat and water) <ul style="list-style-type: none"> • Coarse vs fine filter approach • Areas of resilience: climate refugia for SL and prey, climate-resilient water provision areas • Priority management areas 	90 min
12:30	LUNCH	60 min
13:30	Approach for defining analysis extent, data format <ul style="list-style-type: none"> • For freshwater provision and climate • Snow leopards, prey base, other wildlife 	30 min
14:00	Data Assessment <ul style="list-style-type: none"> • In plenary: presentation of universal list of data requirements • Breakout groups: each landscape group identifies best available data sources, gaps, and needs using spreadsheet provided • In plenary: 10 minute/group presentations of data availability, limitations 	60 min
15:00	BREAK	30 min
15:30	Data Preparation and Standardization <ul style="list-style-type: none"> • Landscape groups prepare two analysis extent files according to agreed approach discussed above • Presentation on format for sharing data with mapping team, across the range: extent, scale, projection, metadata, etc 	90 min
17:00	Review of the Day <ul style="list-style-type: none"> • +/- & wrap-up 	15 min
17:15	Facilitators Meeting	
18:30	DINNER	

27 April 2016		
09:00	Review Day 2, Intro to Day 3 <ul style="list-style-type: none"> • Outline main goals and objectives for Day 3, what needs to be accomplished before close 	30 min
9:30	Working Session 1: Data Standardization <ul style="list-style-type: none"> • Breakout groups for each landscape begin working to standardize and clean data 	60 min
10:30	BREAK	30 min
11:00	Working Session 1: Data Standardization, Continued <ul style="list-style-type: none"> • Next steps determined for each landscape, including responsibilities 	60 min

12:00	LUNCH	60 min
13:00	Third Pole Geolab Data Sharing Site <ul style="list-style-type: none"> • Review current site, discuss next phase • Breakout group discussion: discuss needs for centralized data repository • Plenary discussion: what do we need to do to make it a fully operational database for the entire mapping group? 	60 min
14:00	Plenary Session: Coordinated Mapping Timeline <ul style="list-style-type: none"> • For discussion: map sequencing, how AHM landscape map development can support remaining landscapes 	60 min
15:00	Closing Session: Review Progress, Key Action Items Moving Forward and valedictory <ul style="list-style-type: none"> • Agree on general outlines for Guidance Document describing standardized mapping approach 	30 min
15:30	CLOSING TEA BREAK	30 min
16:30	Post-Session: Mapping Team Available for Questions	60 min

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