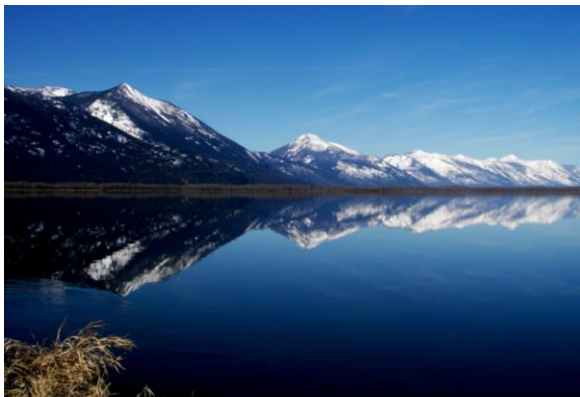# KOOTENAY CONSERVATION PROGRAM STEWARDSHIP FRAMEWORK 2018-2021

September 2018 (revised February 2020)

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February 2020 Revision

KCP's Stewardship Framework was revised in February 2020 in order to update the Stewardship Program's priorities. Priority 3, which addresses landowner outreach, was updated to include the new Stewardship Solutions Toolkit developed and released in 2019. A new Priority 4 was added, "Foster a Landscape Approach to Conserve Biodiversity, Wildlife Corridors and Ecological Connectivity," that describes KCP's new Kootenay Connect initiative. Priority 5 which focuses on local government was revised to include new voluntary and regulatory tools to promote stewardship on private land, and to apply the science of landscape linkage to local government regulation and policy.

Introduction

Kootenay Conservation Program (KCP) is a broad partnership of over 80 organizations from across the Kootenays. KCP's role is to support its partners in protecting species and habitats at risk on private land in order to conserve biodiversity and landscapes that sustain naturally functioning ecosystems. KCP envisions vibrant communities that demonstrate the principles of environmental stewardship that can in turn support economic and social well-being.

The goal of KCP's Stewardship Program is to increase the effectiveness and coordination of stewardship activities taking place on private lands. Since 2015, the Stewardship Program has been guided by a Stewardship Framework that was developed collaboratively by a diverse group of KCP partners including representatives from both government and non-governmental organizations across the KCP Service Area (Figure 1). The Framework provides strategic guidance to KCP and its partners for how to collectively identify and advance stewardship priorities in the region.

This revised Stewardship Framework builds upon the initial foundation and incorporates new initiatives emerging within KCP's Stewardship Program. This Framework is a living document that has been revised in both 2019 and 2020. Key contributions came from:

- KCP's Landowner Outreach Workshops (October 2016 in Nelson and Cranbrook);
- KCP's Annual Fall Gatherings (2016 to 2019);
- KCP Strategic Planning Workshop (May 2017 in Creston);
- East and West Kootenay Spring Stewardship Committee meetings (May 2017 in Invermere and Meadow Creek);
- Slocan Lake Watershed Science & Conservation Action Planning Forum (February 2017 in Silverton) and Columbia Valley Conservation Action Planning Forum (December 2017 in Invermere);
- Special session on Kootenay Connect at KCP's Fall Gathering (October 2018 in Nelson) which inspired the preliminary report, *Kootenay Connect: Riparian Wildlife Corridors for Climate Change* (Proctor and Mahr, 2019); and,
- Local Government Forum: Tools for Conservation (March 2019 in Creston).

These events incorporated new perspectives, approaches, tools and people that have influenced and inspired the direction of KCP's Stewardship Program in order to support its partners in working more strategically and collaboratively to benefit species and ecosystems at risk, and build capacity for new opportunities to collaborate on projects.

KCP's Stewardship Framework should be reviewed annually and updated as necessary with a comprehensive review in 2022.

Background and Purpose

KCP Service Area

This Stewardship Framework applies to the KCP Service Area in the south-eastern region of British Columbia (Figure 1).
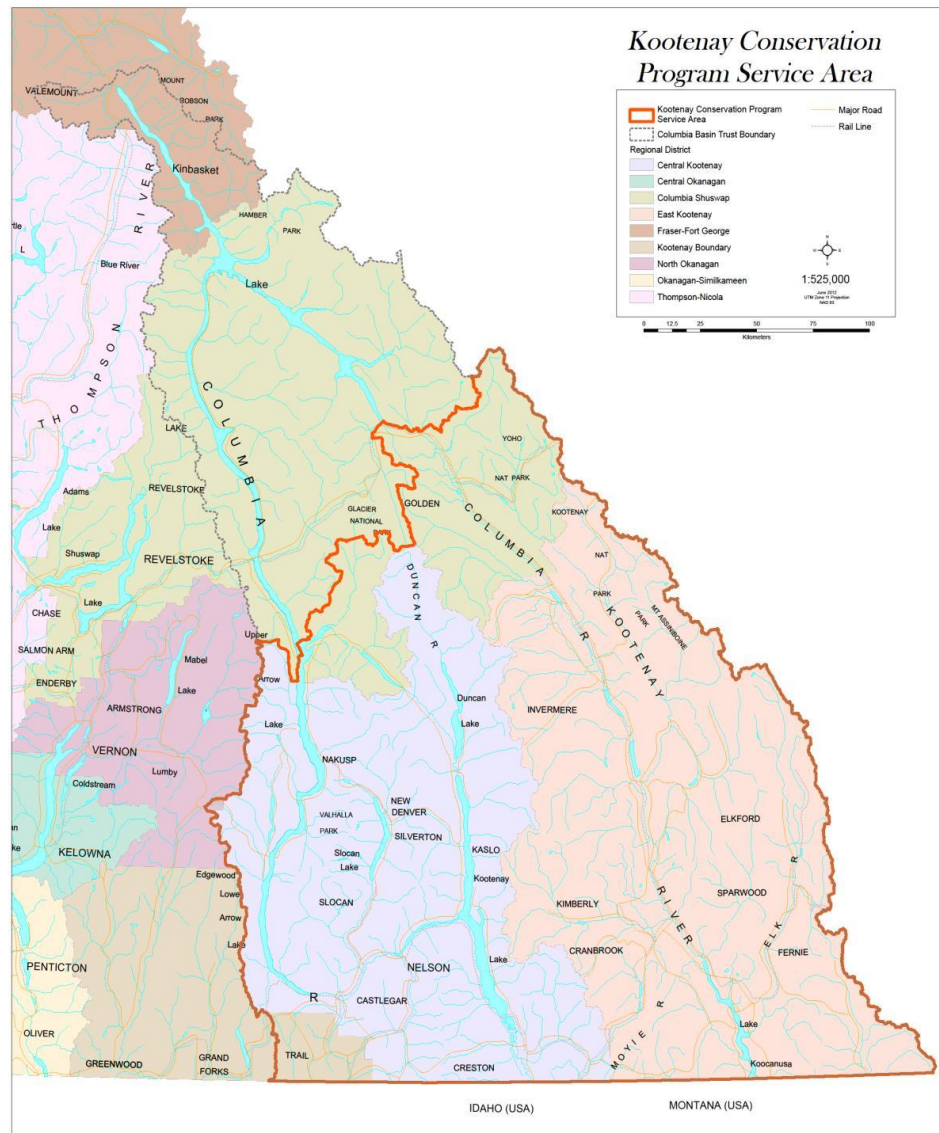

Figure 1. Kootenay Conservation Program Service Area (outlined in red) includes the Regional Districts of East Kootenay, Central Kootenay, and portions of the Kootenay Boundary and Columbia Shuswap.

Goals of Stewardship Framework

The Goals of this Framework are to provide a strategic approach for how KCP's Stewardship Program supports our partners by:

1. Identifying common priorities to create efficiencies, synergies and ultimately greater effectiveness in delivering stewardship and conservation activities;
2. Strengthening capacity for engagement, collaboration, communication and education within the partnership; and
3. Providing both a local and regional context for our partner's achievements conserving native species, habitats and ecosystems at risk.

Conservation Foundation of KCP's Stewardship Framework

For the purpose of KCP's Stewardship Framework, stewardship is defined as: *an ethic that embodies the careful and responsible use and protection of the natural environment through conservation and sustainable practices.* For KCP and its partners, stewardship activities are also guided by the principles of conservation biology to protect and restore biodiversity and ecosystem services in order to increase ecosystem health by enhancing, maintaining or restoring populations of vulnerable species, sensitive habitat, essential ecosystem functions, and connected landscapes. KCP's partners have a common interest and desire to minimize or remedy human impacts on natural systems. Some KCP partners lead projects that identify and protect species at risk and sensitive areas, while others contribute to species and ecosystem recovery by managing or removing threats to species and habitat through planning, sustainable management practices, and on the ground restoration and enhancement projects.

Stewardship Priorities for 2017-2022

KCP's role in stewardship is to encourage greater collaboration between partners; provide new opportunities for learning; and increase capacity and strategic support for local and regional partner-led conservation initiatives. KCP's Stewardship Program was updated in 2017 as part of KCP's Strategic Priorities 2017-2022. The current goal is to:

Increase the Effectiveness and Coordination of Stewardship Activities Taking Place on Private Land

Specifically, the KCP Stewardship Priorities are to:

1. Increase collaboration and coordination between partners.
2. Facilitate neighbourhood conservation planning to identify conservation targets and high priority actions.
3. Promote a coordinated approach to landowner outreach for conservation.
4. Foster a landscape approach to conserving biodiversity, wildlife corridors and ecological connectivity. [NEW]
5. Support local governments to incorporate and apply conservation principles into local land use planning.

Accomplishing the above priorities will result in improved communication and coordination within KCP Stewardship Committees; increased resiliency of the Kootenay region to respond to ecological threats; effective efforts to maintain and restore populations of species at risk and habitat they depend upon; and more capacity within the partnership to increase stewardship on private land.

Priority 1: Increase Collaboration and Coordination Between Partners

KCP will work towards this priority by 1) maintaining stewardship committees to promote coordination and collaboration and, 2) identify priority conservation targets, ecological impacts, threats and urgency for stewardship in the region.

KCP Stewardship Committees

KCP facilitates two Stewardship Committees, one in the East Kootenay and one in the West Kootenay, in order to support partners in identifying ways to collaborate on stewardship activities involving conservation and restoration of species and habitats. Stewardship Committee meetings occur at least once a year in each region, typically in the Spring. These meetings are designed to be engaging, educational and inspiring, and provide stewardship partners with opportunities to provide strategic input into KCP's Stewardship Program. Occasionally, KCP will offer field tours to showcase partners' projects as well as hands-on professional training opportunities to enhance stewardship capacity within the partnership.

Identify Conservation Targets, Ecological Impacts, Threats and Urgency

Conservation Targets

The Kootenay Region is known for its diverse mountainous landscapes that provide habitat for suites of native species that have existed here for thousands of years. The most biologically diverse land is concentrated in the valley bottoms between mountain ranges, a significant portion of which is privately owned and contains our greatest chance for connecting and maintaining native biodiversity in the Kootenays. KCP partners' stewardship activities focus on this ecologically valuable low elevation private land that is typically under pressure from residential, commercial and recreational development.

Stewardship priorities guide where to focus inventory, monitoring and habitat enhancement efforts. Conservation targets include: species at risk, vulnerable habitat types, special habitat features, and rare ecosystems. By supporting its partners in restoring, enhancing and monitoring these values on private land, KCP is contributing to the protection of native biodiversity, critical habitat and connectivity in landscapes throughout the Kootenays.

KCP partners work on a variety species; many, but not all, are species that are provincially red or blue-listed as well as federally listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and officially listed under Schedule 1 of the Species At Risk Act (SARA) (Table 1). The Conservation Data Centre, BC Ecosystems & Species Explorer, E-Fauna and E-Flora are important resources for obtaining species-at-risk information for local landscapes.

Table 1: Examples of rare species that are priorities for private land conservation in the East and West Kootenay.

Examples of rare species that are priorities for private land conservation in the Kootenays:
- American Badger *(Taxidea taxus)* – Red-listed; E (COSEWIC); SARA   - Grizzly Bear (*Ursus arctos*) – Blue-listed; SC (COSEWIC); SARA   - Mountain Caribou – southern pop. (*Rangifer tarandus*) – Red-listed; E (COSEWIC); SARA   - Northern Myotis (*Myotis septentrionalis*) – Blue-listed; E (COSEWIC); SARA   - Townsend's Big-eared Bat (*Corynorhinus townsendii*) – Blue-listed   - Little Brown Myotis *(Myotis lucifugus)* – Yellow-listed; E (COSEWIC); SARA   - American Bittern (*Botaurus lentiginosus*) – Blue-listed   - Bobolink *(Dolichonyx oryzivorous)* – Blue-listed; T (COSEWIC); SARA   - Great Blue Heron *(Ardea herodias)* – Blue-listed   - Lewis's Woodpecker (*Melanerpes lewis*) – Blue-listed; T (COSEWIC); SARA   - Long-billed Curlew *(Numenius americanus)* – Blue-listed; SC (COSEWIC)   - Western Screech-Owl (*Megascops kennicottii macfarlanei*) – Blue-listed; T (COSEWIC); SARA   - Williamsons Sapsucker (*Sphyrapicus thyroideus*) – Blue-listed; E (COSEWIC); SARA   - Yellow-breasted Chat (*Icteria virens*) – Red-listed; E (COSEWIC); SARA   - White Sturgeon (*Acipenser transmontanus*) – Red-listed; E (COSEWIC); SARA   - Bull Trout (*Salvelinus confluentus)* – Blue-listed; SC (COSEWIC)   - Westslope Cutthroat Trout (*Oncorhynchus clarkii lewisi)* – Blue-listed; SC (COSEWIC); SARA   - Northern Leopard Frog (Lithobates pipiens) – Red-listed; E (COSEWIC); SARA   - Western Toad (*Anaxyrus boreas)* – Yellow-listed; SC (COSEWIC); SARA   - Western Painted Turtle – Intermountain / Rocky Mtn pop. (*Chrysemys picta*) – Blue-listed; SC (COSEWIC); SARA   - Hairstem Groundsmoke (*Gayophytum ramosissimum*) – Red-listed   - Prairie Golden Bean (*Thermopsis rhombifolia*) – Red-listed   - Scarlet Gaura (*Gaura coccinea*) – Red-listed   - Spurless Touch-me-not (*Impatiens ecornuta)* – Blue-listed   - Canada Anemone (*Anemone canadensis*) – Blue-listed   - Montana Larkspur (*Delphinium bicolour)* – Blue-listed   - Common Twinpod (*Physaria didymocarpa*) – Blue-listed   - Bent-flowered Milk-Vetch (*Astragalus vexilliflexus*) – Blue-listed

Habitat Types at Risk

KCP supports partners to focus on the following low-elevation habitats for stewardship activities. These habitats include priority biogeoclimatic ecosystem classification (BEC) zones as well as priority habitat types (Table 2).

Table 2: Priority BEC zones and habitat types in East and West Kootenay for stewardship activities.

KCP Priority BEC Zones *Note: BEC subzones and variants will differ between EK & WK*	
East Kootenay: • Ponderosa Pine • Interior Douglas Fir • Mixed Forest • Interior Cedar Hemlock	West Kootenay: • Ponderosa Pine • Interior Douglas Fir • Mixed Forest • Interior Cedar Hemlock
KCP Priority Habitat Types	
East Kootenay: • Grassland or dry, open forest • Wetland • Deciduous riparian forest containing cottonwood, deciduous upland forest, and mixed wood forest • Montane forest (all other forest >30% crown closure)	West Kootenay: • Grassland or savannah • Wetland • Riparian forest • Other forest: ponderosa pine, white pine, Douglas-fir, western larch, western red cedar or western hemlock forest

Within these habitats, stewardship priority should be given to activities that aid in protecting, restoring and/or enhancing the following special highly valued ecosystems and ecosystems at-risk:

- Riparian Cottonwood Forest
- Wetlands
- Grasslands

Stewardship priority should also be given to habitat features which provide the physical ecosystem elements used by wildlife to meet one or more of their important habitat requirements (Table 3). They are spatially located and are generally small areas. Examples include a significant mineral lick or wallow, a nest used by a bird, bat hibernaculum, or a burrow or den used by a mammal. Reducing impacts and preserving these features on private lands can play a critical role in sustaining healthy wildlife.

Wildlife Habitat Features from Forest and Range Practices Act	
1. A fisheries sensitive feature*	8. A nest of a Lewis's woodpecker
2. A nest of a bald eagle	9. A nest of a Williamson's sapsucker
3. A nest of an osprey	10. An American badger burrow
4. A nest of a flammulated owl	11. A grizzly bear den
5. A nest of a western screech-owl *macfarlanei* ssp.	12. A significant mineral lick
6. A nest of a great blue heron	13. A significant wallow
7. A nest of a white-headed woodpecker	14. A bat hibernaculum
	15. A bat maternity roost
	16. A hot spring or thermal spring

* Fisheries sensitive features (FSFs) include waterbodies that do not meet the FRPA definition of stream, are not classified as lakes or wetlands, but are occupied at least some time of the year by fish.

Assessment of Threats & Urgency

Threats to Stewardship Values

Thriving species, healthy watersheds, connected landscapes and ecosystem resiliency occur when land and water use supports these desired conditions. In situations where resource use has impacted or threatens to impact the ecological conditions and functioning of natural systems, stewardship is essential for prevention, restoration and remediation.

KCP uses the International Union for the Conservation of Nature (IUCN) Classification of Direct Threats to Biodiversity to determine the top threats in KCP's Service Area (Table 4).

Table 4: Threats to conservation in the Kootenays based on IUCN classification.

IUCN Classification of Direct Threats to Biodiversity
Residential and Commercial Development • Impacts from housing and urban areas, commercial and industrial areas (including impacts from industrial development and natural resources extraction) • Impacts from tourism and recreational uses • Losses, degradation and fragmentation of habitat • Impacts on water systems from increasing demand in urban areas
Climate Change • Increases in temperature, declining snowpack, and increases in storm intensity • Shifts, alterations and removal of habitat • Effects of droughts, temperature extremes and flooding • Changes in climate affecting fire and hydrologic regimes, as well as plant and animal distribution and abundance

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Invasive Species
- Disruptions/degradation of natural ecological processes and habitats
- Loss of biodiversity

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Natural Systems Modifications
- Interruptions of normal fire regime including forest encroachment onto grasslands and in-growth into open forests
- Dams, reservoirs, and water management issues – impacts of altered hydrologic regimes including changes to animal and plant distribution and abundance

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Transportation and Service Corridors
- Impacts from roads, rails, utility and service lines
- Increased rates of wildlife mortality
- Habitat fragmentation

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Human Intrusions and Disturbance
- Impacts of recreational activities resulting in adverse effects such as wildlife disturbance, soil compaction, erosion, and spread of invasive plants

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Urgency

Ecological threats facing a property or a landscape can have immediate and long-term impacts on local conservation values. Here are definitions used by KCP's Securement Committee that can rate the urgency of threats that were listed above.

Urgency of threats facing a property is defined as:

1) *Threatened with irreversible change within 10 years*
   - For example: major development, mining, landfill, urban sprawl
2) *Threatened with reversible change within 10 years*
   - For example: grazing of climax grasslands, logging of mature forest
3) *No short-term threat – No reasonable expectation of the above*

Priority 2: Facilitate Neighbourhood Conservation Action Planning to Identify Conservation Values as Targets for High Priority Actions

Defining Conservation Neighbourhoods

In 2017, KCP began using focal areas as a consistent way of organizing both securement and stewardship activities within locally recognized subregions of the larger Kootenay region. The concept of focal areas helps guide how KCP integrates private land stewardship activities and conservation action planning within KCP Stewardship Program's initiatives in landowner outreach through Stewardship Solutions and Conservation Action Planning (Table 5). Using this approach, KCP works with groups of partners in focal areas referred to as "Conservation Neighbourhoods" to ensure that private land conservation and stewardship at the local scale fits into the larger picture of conservation in the Kootenay region.

During the development of this Framework in 2018, the list of Securement focal areas were refined by KCP's Stewardship Committees to better reflect how local landscapes makes sense ecologically and culturally as local stewardship and conservation planning units. The focal areas for Stewardship are listed in Table 5 and mapped in Figure 2.

Table 5. KCP's Conservation Neighbourhoods (bold) in the East Kootenay, West Kootenay and North Columbia for coordinating conservation and stewardship activities. Locations listed in parentheses are names of focal areas used by KCP's Securement Committee.

Focal Areas – EK (5)	Focal Areas – WK (9)	Focal Area – Extended (1)
Golden (Donald – Steamboat)	**Upper Arrow Lake**	**North Columbia - Revelstoke**
Columbia Valley (Columbia Lake, Radium, Spilimacheen)	**Lower Arrow Lake** (Nakusp)	
Upper Kootenay River Valley (Island Pond – Torrent; Skookum – Wildhorse)	**Lower Columbia River** (Castlegar, Trail – Pend d'Oreille)	
South Country (St Mary Valley, Cranbrook, Steeples, Koocanusa North, Newgate, Tobacco – Grasmere, Wigwam – Sheep Mtn)	**Duncan – Trout Lake** (Meadow Creek, Argenta)	
	Slocan Valley	
	Kootenay Lake	
Elk Valley (Flathead Valley)	**Kootenay Lake West Arm**	
	South Selkirks – Salmo	
	Creston Valley – Purcells	

Focal areas as conservation neighbourhoods define a geographic area so stewardship partners can more efficiently develop an ecosystem-based approach to identifying priority actions for local landscapes. Through hosting Conservation Action Forums, KCP collaborates with local working groups of stewardship partners in Conservation Neighbourhoods to develop a common vision and process for identifying and prioritizing conservation actions.
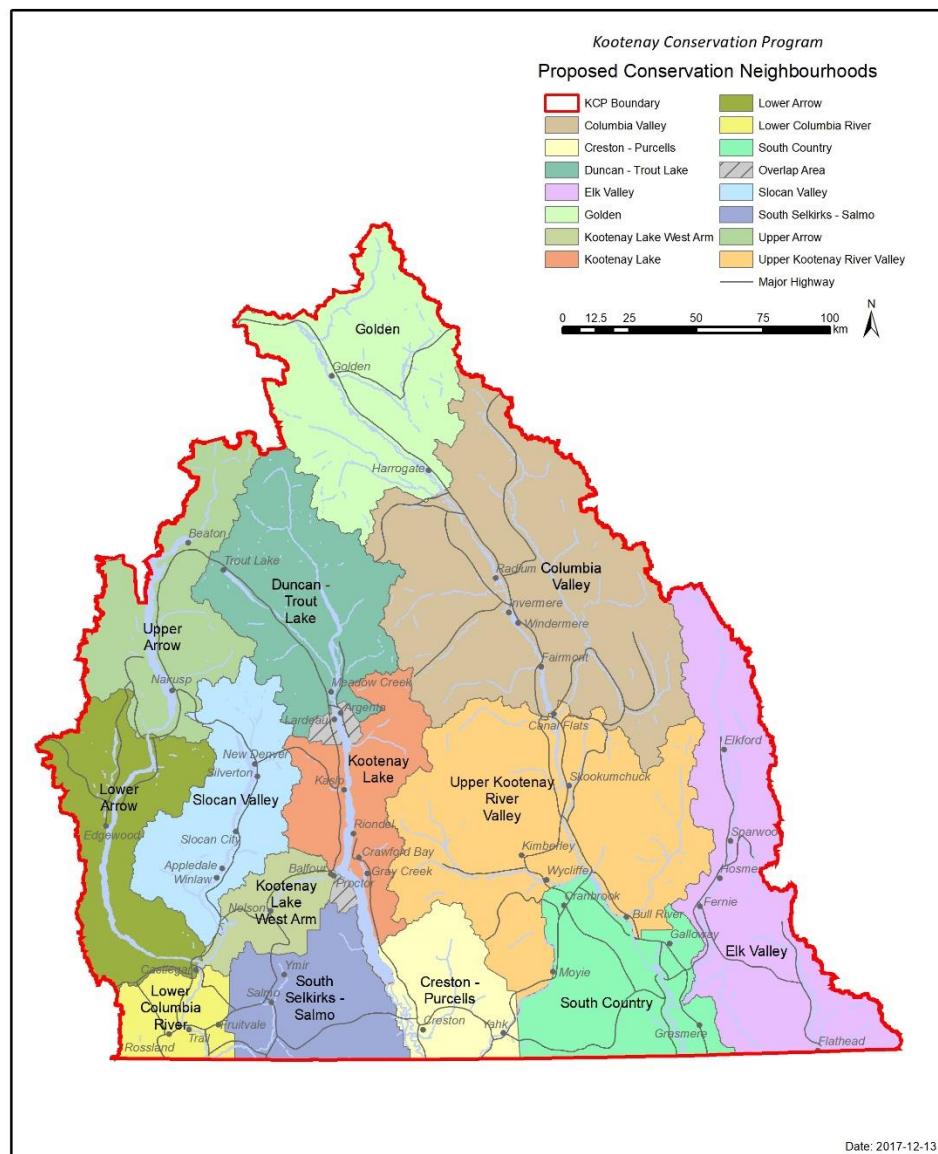

Figure 2. KCP's 14 Conservation Neighbourhoods listed in Table 5 that promote collaboration and priority-setting for conservation and stewardship efforts.

Neighbourhood Conservation Action Forums

Conservation Action Forums rely upon a working group of KCP partners in a local area, or neighbourhood, that want to cooperatively identify and address priorities for conservation. Each Conservation Neighbourhood group designs its own goals and process. KCP's role is to provide strategic support and facilitation to identify priority actions based on collaboration among a diversity of organizational or agency mandates, plans, policies, and programs to achieve alignment in making a significant positive impact. As actions move forward throughout the neighbourhoods, KCP helps demonstrate how private land stewardship at the local scale fits into a larger landscape scale and the grand picture of conservation in the Kootenay region.

Neighbourhood Conservation Action Forums are based on key questions and considers habitat targets and threats in order to identify high priority actions that partners with diverse mandates can undertake individually or as a group.

> ### Questions guiding Conservation Action Forums
> 1. What is the current knowledge regarding species of concern, critical habitats and processes in this area? What more do we need to know?
> 2. Based on scientific findings, what actions will make the most difference in protecting high quality habitats, enhancing and restoring degraded ecosystems, enhancing connectivity and corridors, reducing human-wildlife conflict and recreational pressure, controlling invasive species, and promoting climate change resilience?
> 3. Where do you see opportunities in your organization's or agency's plans, policies, programs, budgets and communications for realizing these actions?
> 4. What kind of alignment do we need to foster between scientists, non-profit organizations, First Nations, and local and provincial government to effectively collaborate and make a significant, positive impact while also meeting organizational mandates?

Priority 3: Promote a Coordinated Approach to Landowner Outreach for Conservation ("Stewardship Solutions")

Priorities for Coordinated Approach to Landowner Outreach

The purpose of KCP's Stewardship Solutions (Landowner Outreach) initiative is to assist partners in becoming more coordinated and collaborative in promoting stewardship solutions on private land in the Kootenay region. In 2016, KCP Stewardship Committee members identified five priority actions as key to improving private landowner outreach in the East and West Kootenays.

1. Develop a **Conservation Ambassadors Program** whereby KCP would identify and train key contacts in each region of the Kootenays who can visit private properties to discuss stewardship concepts with landowners. Conservation Ambassadors would be existing resource people in communities who visit properties for their own purpose (e.g., invasive plants, environmental farm planning, species inventory) and would be trained on other aspects of stewardship and resource management. The Conservation Ambassador would visit properties to help landowners understand opportunities for stewardship and work with those willing landowners to put together a conservation plan for the property.

2. Provide **Training and Professional Development** to increase expertise of KCP Partners to do their own outreach. For example, KCP could provide educational opportunities to address communications and marketing techniques for working with landowners on stewardship issues, as well as organize local field tours for resource people and landowners.

3. Compile an **Online Resource Toolkit** that links to existing landowner outreach resources in the Kootenays that would be available to both KCP partners and landowners.

4. Serve as a **"Front Counter for Conservation"** in the Kootenays whereby KCP would act as a one-stop shop for private landowners to access contacts and information on stewardship. KCP would advertise itself more broadly to raise public awareness about this service.

5. Become a **Resource for Local Government Planning Departments** to actively support conservation and stewardship.

Given KCP's mandate to build partner capacity (and not actually "do" landowner outreach), KCP's Stewardship Program is leading a Landowner Outreach Initiative called "Stewardship Solutions" that incorporates elements of the priorities mentioned above in order to develop a regional community of practice. The strategic outcomes of the stewardship solutions initiative are to:

> ## Strategic outcomes that guide the Stewardship Solutions Initiative
> 1. Build capacity of partners, including their knowledge of stewardship actions.
> 2. Offer practical experience to partners who visit properties for conservation.
> 3. Develop a hardcopy resource package from partners' existing resources.
> 4. Develop an online hub of stewardship resources as a toolkit for landowners, partners and local government.

Landowner Outreach Target Audiences

KCP Stewardship partners have identified four target audiences as key to our success on private land:

- Landowners with lakeshore, wetlands and riparian areas
- Large landowners such as industrial landowners, developers and agricultural producers
- Local government staff and elected officials
- Realtors

Promoting Stewardship Solutions

An online resource toolkit (#3 above), was developed and launched in mid-2019 in order to coordinate services for private landowners. Stewardship Solutions was developed to assist landowners in thinking holistically about their land and managing a suite of issues that come with owning land.

The Stewardship Solutions Online Toolkit is a portal to a list of Kootenay-based services and programs that address stewardship issues on private land. These resources are organized by the 14 Conservation Neighbourhoods on an interactive home page map. Clicking on a neighbourhood links to the organizations that provide stewardship solutions in a particular area of the Kootenays. The majority of these services are provided by KCP's partners, ranging from habitat enhancement and restoration, fire prevention, invasive species control, water quality monitoring, wildlife reporting, free environmental farm planning, and more.

The toolkit is designed as a one-stop shop for anyone with an interest in conservation, including local government planners, private landowners and residents wanting stewardship options for their property, and stewardship practitioners. Convenient symbols show which solutions relate to Wildlife, Habitat, Monitoring, Farms & Ranches, and Funding. To access the online toolkit visit: https://kootenayconservation.ca/toolkit/

Priority 4: Foster a Landscape Approach to Conserving Biodiversity, Wildlife Corridors and Ecological Connectivity

Protecting biodiversity hotspots, connecting high quality habitats, and maintaining wildlife corridors and connectivity areas for both current movement and future opportunities in the face of climate disruption are key components of a long-term conservation strategy. Since populations of plants, wildlife, fish, etc., operate over large spatial scales, taking a landscape approach to conservation within the mountainous topography of the Kootenays means looking both north-south along our valleys <u>and</u> east-west across our valleys and ridgelines to include varying elevational gradients. This broad scale perspective captures the spatial extent of important habitats, biodiversity, and ecological processes. There is also increasing concern over the temporal dimension of habitat connectivity as a changing climate influences species' habitat requirements and, as a result, their movement on both longitudinal and elevational gradients since species' ranges will be unpredictably shifting over time in response to climate.

Connectivity conservation is of great importance to KCP and its partners, especially given the negative impacts of ongoing habitat fragmentation and rapid climate change. There is awareness within the partnership that coordinated and focused conservation and stewardship efforts are needed to increase ecosystem resilience and provide opportunities for species to adapt to changing conditions.

At KCP's 2017 Fall Gathering, partners identified the need to analyze and map wildlife corridors throughout the Kootenays in order to address connectivity in specific geographic areas and at a regional scale. The approach, coined "Kootenay Connect", was also the focus of a special session the following year at KCP's 2018 Fall Gathering which provided direction for Michael Proctor and Marcy Mahr to begin a preliminary analysis of landscapes throughout the region to identify biodiversity hotspots, wildlife corridors, and ecological connectivity for climate resilience and adaptation. In early 2019, Proctor and Mahr summarized their results in a preliminary report called, *Kootenay Connect: Riparian Wildlife Corridors for Climate Change[1]*, which provided a framework for how to bring a landscape level approach to conserving corridors in the Kootenays based on a science-based 'proof of concept" developed in the Creston Valley involving both securement and stewardship efforts.

Proctor and Mahr's Kootenay Connect report identified 12 corridors based on grizzly bear and other species occurrence data integrated with large riparian-wetland complexes (Figure 3). These corridors are high priority for increased conservation efforts. Five of the identified corridors were initially selected as potentially ready places to start because these were areas

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[1] https://kootenayconservation.ca/wp-content/uploads/Kootenay-Connect_KCP-08Mar2019-compressed.pdf

where groups with diverse interests had a history of working well together on private and public lands. These so-called "corridors with champions" included: Wycliffe Wildlife Corridor, Columbia Wetlands, Columbia Lake Wetlands, Creston Valley, and Bonanza Biodiversity Corridor.

> **Kootenay Connect** *helps KCP bring a connectivity lens to its approach to Neighbourhood Conservation Action Forums by blending science and community-based approaches to large landscape conservation thereby identifying connectivity areas throughout the Kootenays. This approach targets local landscapes that collectively will form a regional network of habitat connectivity areas. Enhancing ecological connectivity and habitat networks in the Kootenays nests within the IUCN's World Commission on Protected Areas work at a global scale, i.e., when large terrestrial and aquatic ecosystems are connected they are more resilient to climate change because ecological processes important for ecosystem stability are able to function and species are able to move and shift their ranges to adapt to new, suitable habitat and climates.*

Four of these corridors became the focus for KCP and 12 of its partners ("the champions") to collaborate on a proposal to Environment and Climate Change Canada's (ECCC) Canada Nature Fund for "Community-Nominated Priority Places", with the goal: *to protect and restore species at risk across local landscapes by focusing on habitat connectivity within and between valley bottoms and mountain ranges to sustain exceptional places of biodiversity*. This team, coordinated by KCP, has received $2 million over four years (2019-2023) to conduct on-the-ground species at risk work in the Wycliffe Wildlife Corridor, Columbia Wetlands, Creston Valley and Bonanza Biodiversity Corridor, encompassing 10,000 km2 in total. Kootenay Connect's ECCC funding is supporting delivery of over 50 projects to benefit species at risk, such as American Badger, Grizzly Bear, Northern Leopard Frog, Western Painted Turtle, Lewis's Woodpecker, Williamson's Sapsucker, Great Blue Heron, several bat species, and many more, as well as the habitats they depend upon such as grasslands, wetlands, riparian floodplains, and mature dry pine-fir and cedar-hemlock forests (priorities identified above in Tables 1 and 2).

Kootenay Connect Priority Places' projects require comprehensive and detailed planning at the ecosystem, hydrologic watershed, habitat, and individual species scales to inform a suite of activities designed to increase ecosystem and species resilience. The team's efforts will lead to habitat and hydrological improvements in the four key connectivity areas. Planning and cooperative effort with land trusts such as Nature Conservancy of Canada and the Nature Trust of BC, will increase the amount of protected lands in the corridors and will further contribute to

Canada's Target 1 Goal under Canada's 2020 Biodiversity Goals and Targets:

"By 2020, at least 17 percent of terrestrial areas and inland water, and 10 percent of coastal and marine areas, are conserved through networks of protected areas and other effective area-based conservation measures."
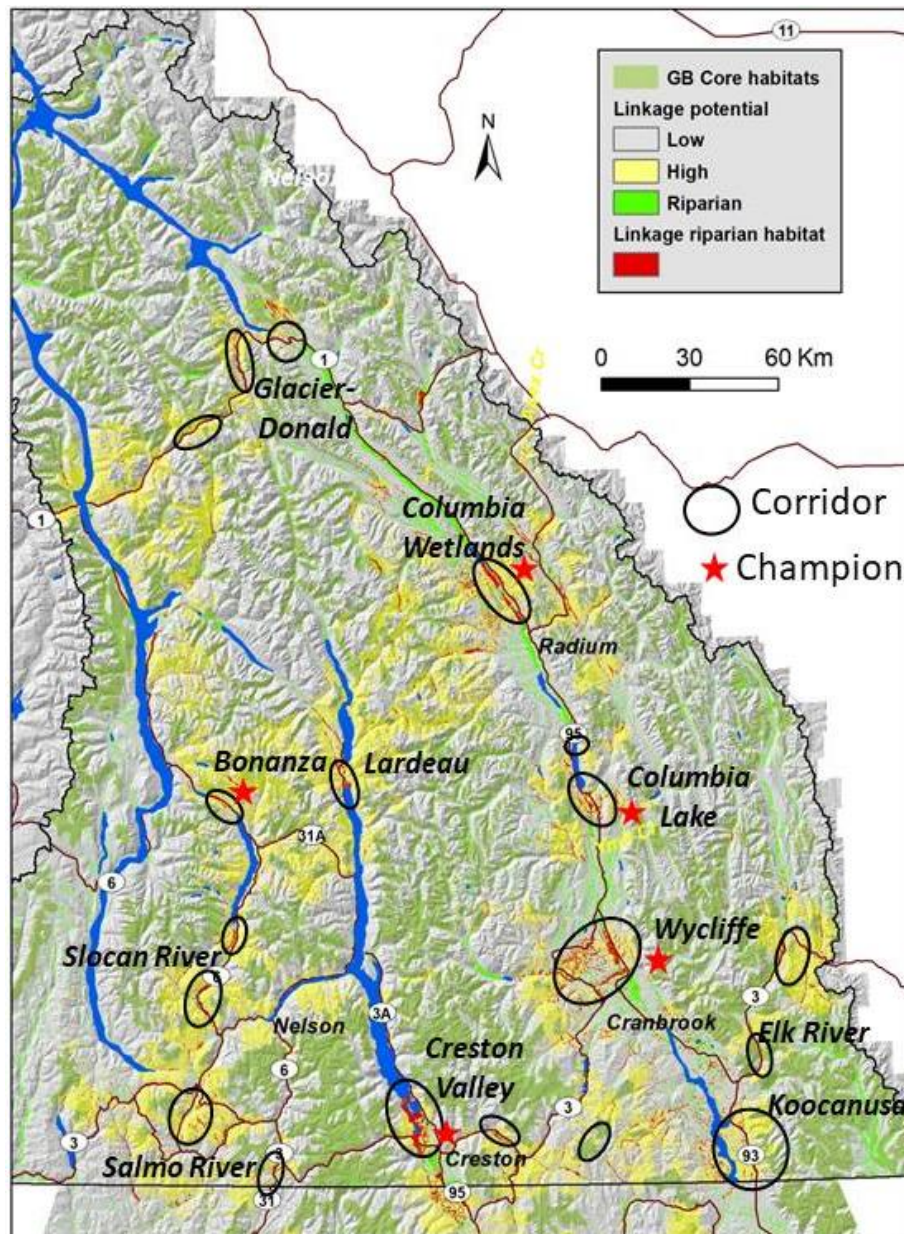

Figure 3. Kootenay Connect's 12 target corridors based on high ecological value, intact grizzly bear habitat integrated with riparian-wetland areas. Corridors with local champions are identified by a star.

Priority 5: Support Local Governments to Incorporate and Apply Conservation Principles into Local Land Use Planning

A goal of KCP's Stewardship Program is building capacity within the partnership to increase opportunities for stewardship activities on private land. Given the importance of local governments in private land stewardship, it is critical that they are engaged in this process. In order to better explore local government tools for conservation, KCP hosted a Local Government Forum[2] in March 2019 for local government elected officials and staff to showcase examples of how local governments have successfully integrated conservation into their activities as well as to explore local tools, resources, and needs of local government in the East and West Kootenays. The goal of this Forum was to identify specific tools/resources required by local governments of the Kootenays to integrate conservation principles into planning. Three areas have been identified for KCP to support local governments in conservation including: 1) Local Conservation Funds; 2) Voluntary Tools for Conservation; and, 3) Regulatory Tools for Conservation.

Local Conservation Fund Expansion in the Kootenays

In November 2008, the KCP, in partnership with the Regional District of East Kootenay (RDEK), created the first Local Conservation Fund in Canadian history through referendum. The fund generates up to $230,000 annually through a $20/parcel tax/levy on all privately owned properties in the Upper Columbia Valley (Canal Flats to Spillimacheen). The fund then makes grants to qualified organizations to undertake conservation projects throughout the service area.

In November 2014, the KCP, in partnership with the Regional District of Central Kootenay (RDCK), created the second Local Conservation Fund in Canada through referendum. The fund generates up to $130,000 annually through a $15/parcel tax/levy on all privately owned properties in Electoral Areas A, D and E (Kootenay Lake region) of the RDCK. The fund then makes grants to qualified organizations to undertake conservation projects throughout the service area.

KCP partners, including local government representatives, are interested in expanding this Fund to other regions in the Kootenays. KCP engaged a market research firm in 2018 to conduct polling to determine which additional regions in the Kootenays are likely to support the concept of a Local Conservation Fund and using the poll results will assess options for Fund expansion.

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[2] https://kootenayconservation.ca/events/local-government-forum/

Voluntary Tools for Conservation: Stewardship Solutions

For voluntary tools for conservation, KCP has recently launched the Stewardship Solutions Toolkit which provides information to private landowners on how to be better stewards of their property[3] (see Priority 3).

Regulatory Tools for Conservation: Applying the science of landscape linkage to local government regulation and policy

Local government representatives have shown interest in integrating the science of ecological corridors, as described in 'Kootenay Connect' (Priority 4) to local government planning, policies and regulation. Local Governments in the Kootenays derive their core authority from the Local Government Act[4] (LGA). Planning and regulatory tools currently available to local governments in the Kootenays include Official Community Plans (OCPs), Zoning, Development Permit Areas (Environmentally Sensitive Area DPA) and other Bylaws (e.g. Floodplain Management or Subdivision). Although there are many other regulatory tools for conservation in BC[5], these ones are the most relevant to the Kootenays. KCP will support partners, particularly local governments, to integrate information from Kootenay Connect into their activities.

Figure 4. Creston Valley Wildlife Management Area, Creston, BC. (Photo courtesy of CVWMA)

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[3] https://kootenayconservation.ca/KCPStewardship/
[4] http://www.bclaws.ca/civix/document/id/complete/statreg/r15001_00
[5] https://www.toolkit.bc.ca/sites/default/files/GreenBylaws_toolkit.pdf

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Appendix A – List of Regionally Applicable Strategic Plans Consulted in 2015-2019

List of applicable plans that should be considered by organizations and individuals to more effectively guide stewardship activities:

- Fish and Wildlife Compensation Program - Columbia Basin Strategic Plan and associated Action Plans:
    - Columbia Basin Plan
    - Reservoirs and Large Lakes Action Plan
    - Rivers and Riparian Areas Action Plan
    - Small Lakes Action Plan
    - Wetlands and Riparian Areas
    - Upland and Dryland Action Plan
- Columbia Basin Trust – Environmental Strategic Plan
- East Kootenay Invasive Species Council
- Central Kootenay Invasive Species Society
- Columbia Basin Watershed Network Strategic Plan
- Columbia Basin Environmental Education Network (CBEEN) Strategic Plan
- Official Community Plans
- Forests Lands and Natural Resource Operations
- Ministry of Environment
    - Fisheries Program Plan
    - Wildlife Program Plan
    - Ecosystem Program Plan
    - Wetland Ways: Interim Guidelines for Wetland Protection and Conservation in British Columbia
- Nature Conservancy of Canada - Kootenay Rockies Natural Area Conservation Plan
- Forest Stewardship Plans
- Environmental Farm Plans
- Kootenay Lake Partnership – Kootenay Lake Scoping Study
- Teck Metals Ltd.—Lower Columbia Ecosystem Management Plan

Appendix B – Glossary of Terms

Given the debate among conservation planners and practitioners as to the relative meaning of technical terms such as goals, objectives, activities, targets, milestones, outputs, and results, it seems that every organization, project, and individual have their own preferred set of terms. Although there is no right answer, having a single set of definitions may allow us to address this confusion and provide clarity across our KCP activities and improve our overall effectiveness.

The technical terms and definitions in this Glossary are based on current usage by members of the Conservation Measures Partnership (CMP), other conservation organizations, and planners in other disciplines. They form the foundation of the Open Standards for Conservation. Many, but not all, of these terms are referred to in KCP's Stewardship Framework.

Action Plan – A description of a project's goals, objectives, and strategies that will be undertaken to abate identified threats and make use of opportunities.

Activity – A specific action or set of tasks undertaken by project staff and/or partners to reach one or more objectives. Sometimes called an action, intervention, response, or strategic action. See relationship to strategies below.

Adaptive Management – The incorporation of a formal learning process into conservation action. Specifically, it is the integration of project design, management, and monitoring, to provide a framework to systematically test assumptions, promote learning, and supply timely information for management decisions.

Assumption – A project's core assumptions are the logical sequences linking project strategies to one or more targets. Other assumptions are related to factors that can positively or negatively affect project performance. See risk factor below.

Audience – Those individuals or groups a project team is trying to reach, be it for communication purposes or to influence a particular behavior.

Audit – An assessment of a project or program in relation to an external set of criteria such as generally-accepted accounting principles, sustainable harvest principles, or CMP's open standards. Compare to evaluation below.

Biodiversity Target – A synonym for conservation target.

Community of Practice – A group of practitioners who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.

Conceptual Model – A diagram that represents relationships between key factors identified through situation analysis that are believed to impact or lead to one or more conservation targets. A good model should link the conservation targets to threats, opportunities, stakeholders, and key intervention points. In a conceptual model, a team can develop strategies that will influence those factors and also indicate which factors are most important to monitor.

Conservation Target – An element of biodiversity at a project site, which can be a species, habitat, or ecological system that a project has chosen to focus on. All targets at a site should collectively represent the biodiversity of concern at the site. Synonymous with biodiversity target.

Critical Threat – Direct threats that have been prioritized as being the most important to address.

Direct Threats – Primarily human actions that immediately degrade one or more conservation targets. For example, "logging" or "fishing." They can also be natural phenomena altered by human activities (e.g., increase in extreme storm events due to climate change). Typically tied to one or more stakeholders. Sometimes referred to as a "pressure" or "source of stress." Compare with indirect threat.

Driver – A synonym for factor.

Enabling Condition – A broad or high-level opportunity within a situation analysis. For example, the legal or policy framework within a country.

Evaluation – An assessment of a project or program in relation to its own previously stated goals and objectives. See monitoring and compare to audit.

Factor – A generic term for an element of a conceptual model including direct and indirect threats, opportunities, and associated stakeholders. It is often advantageous to use this generic term since many factors – for example tourism – could be both a threat and an opportunity. Also known as root causes or drivers.

Goal – A formal statement detailing a desired impact of a project, such as the desired future status of a target. A good goal meets the criteria of being linked to targets, impact oriented, measurable, time limited, and specific.

Human Wellbeing Target - In the context of a conservation project, human wellbeing targets focus on those components of human wellbeing affected by the status of conservation targets. All human wellbeing targets at a site should collectively represent the array of human wellbeing needs dependent on the conservation targets

Impact – The desired future state of a conservation target. A goal is a formal statement of the desired impact.

Indicator – A measurable entity related to a specific information need such as the status of a target/factor, change in a threat, or progress toward an objective. A good indicator meets the criteria of being measurable, precise, consistent, and sensitive.

Indirect Threat – A factor identified in an analysis of the project situation that is a driver of direct threats. Often an entry point for conservation actions. For example, "logging policies" or "demand for fish." Sometimes called a root cause or underlying cause. Compare with direct threat.

Information Need – Something that a project team and/or other people must know about a project. The basis for designing a monitoring plan.

Intermediate Result – A specific result that a project is working to achieve en route to accomplishing a final goal or objective (in this case, "intermediate" typically refers to a temporal dimension).

Key Ecological Attribute – Aspects of a target's biology or ecology that if present, define a healthy target and if missing or altered, would lead to the outright loss or extreme degradation of that target over time.

Key Intervention Point – Priority factors (threats, opportunities, or targets) within a conceptual model on which a team should take action.

Learning Questions – Questions that define what you want to learn based on the implementation of your project. Learning questions drive the identification of information needs, and thus, your monitoring plan.

Logical Framework – A matrix that results from a logical framework analysis that is used to display a project's goals, objectives, and indicators in tabular form, showing the logic of the project.

Monitoring – The periodic collection and evaluation of data relative to stated project goals and objectives. People often also refer to this process as monitoring and evaluation (abbreviated M&E).

Monitoring Plan – The plan for monitoring your project. It includes information needs, indicators, and methods, spatial scale and locations, timeframe, and roles and responsibilities for collecting data.

Method – A specific technique used to collect data to measure an indicator. A good method should meet the criteria of accurate, reliable, cost-effective, feasible, and appropriate.

Objective – A formal statement detailing a desired outcome of a project such as reducing a critical threat. A good objective meets the criteria of being results oriented, measurable, time limited, specific, and practical. If the project is well conceptualized and designed,

realization of a project's objectives should lead to the fulfillment of the project's goals and ultimately its vision. Compare to vision and goal.

Operational Plan – A plan that includes analyses of: funding required; human capacity and skills and other non-financial resources required; risk assessment and mitigation; and estimate of project lifespan and exit strategy.

Opportunity – A factor identified in an analysis of the project situation that potentially has a positive effect on one or more targets, either directly or indirectly. Often an entry point for conservation actions. For example, "demand for sustainably harvested timber." In some senses, the opposite of a threat.

Outcome – The desired future state of a threat or opportunity factor. An objective is a formal statement of the desired outcome.

Practitioners – All people involved in designing, managing, and monitoring conservation projects and programs.

Primary Interests – What your stakeholders ultimately care about or value. Depending on the type of stakeholder, these could be conservation targets or contributing factors (indirect threats and opportunities) in a conceptual model.

Program – A group of projects which together aim to achieve a common broad vision. In the interest of simplicity, this document uses the term "project" to represent both projects and programs since these standards of practice are designed to apply equally well to both.

Project – A set of actions undertaken by a defined group of practitioners – including managers, researchers, community members, or other stakeholders – to achieve defined goals and objectives. The basic unit of conservation work. Compare with program.

Project Area – The place where the biodiversity of interest to the project is located. It can include one or more "conservation areas" or "areas of biodiversity significance" as identified through ecoregional assessments. Note that in some cases, project actions may take place outside of the defined project area.

Project Team – A specific core group of practitioners who are responsible for designing, implementing, and monitoring a project. This group can include managers, stakeholders, researchers, operations staff, and other key implementers.

Result – The desired future state of a target or factor. Results include impacts which are linked to targets and outcomes which are linked to threats and opportunities.

Results Chain – A graphical depiction of a project's core assumption, the logical sequence linking project strategies to one or more targets. In scientific terms, it lays out hypothesized relationships.

Risk Factor – A condition under which the project is expected to function, but which can cause problems for the project. Often, a condition over which the project has no direct control. Killer risks are those that when not overcome, will completely stop the project from achieving its goals and objectives.

Root Cause – A synonym for factor.

Scope – The broad geographic or thematic focus of a project.

Stakeholder – Any individual, group, or institution that has a vested interest in or can influence the natural resources of the project area and/or that potentially will be affected by project activities and have something to gain or lose if conditions change or stay the same. Stakeholders are all those who need to be considered in achieving project goals and whose participation and support are crucial to its success.

Strategic Plan – The overall plan for a project. A complete strategic plan includes descriptions of a project's scope, vision, and targets; an analysis of project situation, an Action Plan, a Monitoring Plan, and an Operational Plan.

Strategy – A set of actions with a common focus that work together to achieve specific goals and objectives by targeting key intervention points, integrating opportunities, and limiting constraints. A good strategy meets the criteria of being linked, focused, feasible, and appropriate.

Stress – An impaired aspect of a conservation target that results directly or indirectly from human activities (e.g., low population size; reduced river flows; increased sedimentation; lowered groundwater table level). Generally equivalent to a degraded key ecological attribute (e.g., habitat loss).

Target – Shorthand for biodiversity/conservation target.

Task – A specific action in a work plan required to implement activities, a Monitoring Plan, or other components of a Strategic Plan.

Threat – A human activity that directly or indirectly degrades one or more targets. Typically tied to one or more stakeholders. See also direct threat and indirect threat.

Vision – A description of the desired state or ultimate condition that a project is working to achieve. A complete vision can include a description of the biodiversity of the site and/or a map of the project area as well as a summary vision statement.

Vision Statement – A brief summary of the project's vision. A good vision statement meets the criteria of being relatively general, visionary, and brief.

Work plan – A short-term schedule for implementing an action or monitoring plan. Work plans typically list tasks required, who will be responsible for each task, when each task will need to be undertaken, and how much money and other resources will be required.