

Multi species cross valley upland corridors in the Columbia River Valley



Michael Proctor



Trans-Border Grizzly Bear Project

IUCN Connectivity Conservation Specialist Group

Hilty et al 2020



Guidelines for conserving connectivity through ecological networks and corridors

Jodi Hilty, Graeme Worboys, Annika Keeley, Stephen Woodley, Barbara Lausche,
Harvey Locke, Mark Carr, Ian Pulsford, James Pittock, William White, Dave Theobald,
Jessica Levine, Mely Reuling, James Watson, Rob Ament and Gary Tabor

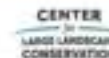
Orsig Groves, Series Editor



***These Guidelines “recommend formal
recognition of ecological corridors to
develop conservation networks and thus
ensure effective conservation of biological
diversity.”***



Best Practice Protected Area Guidelines Series No. 30





Ecological connectivity :

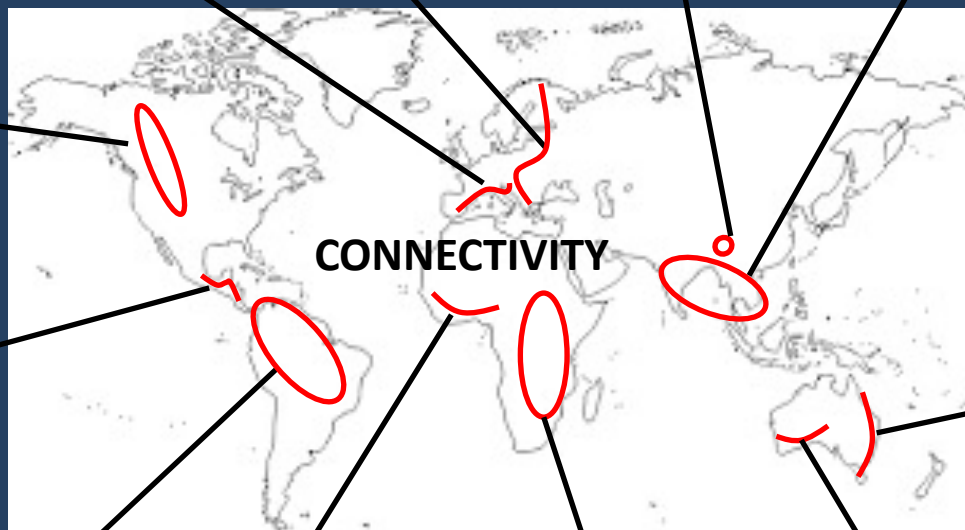
The movement of genes, individuals, species, material, and energy between populations, communities, and ecosystems

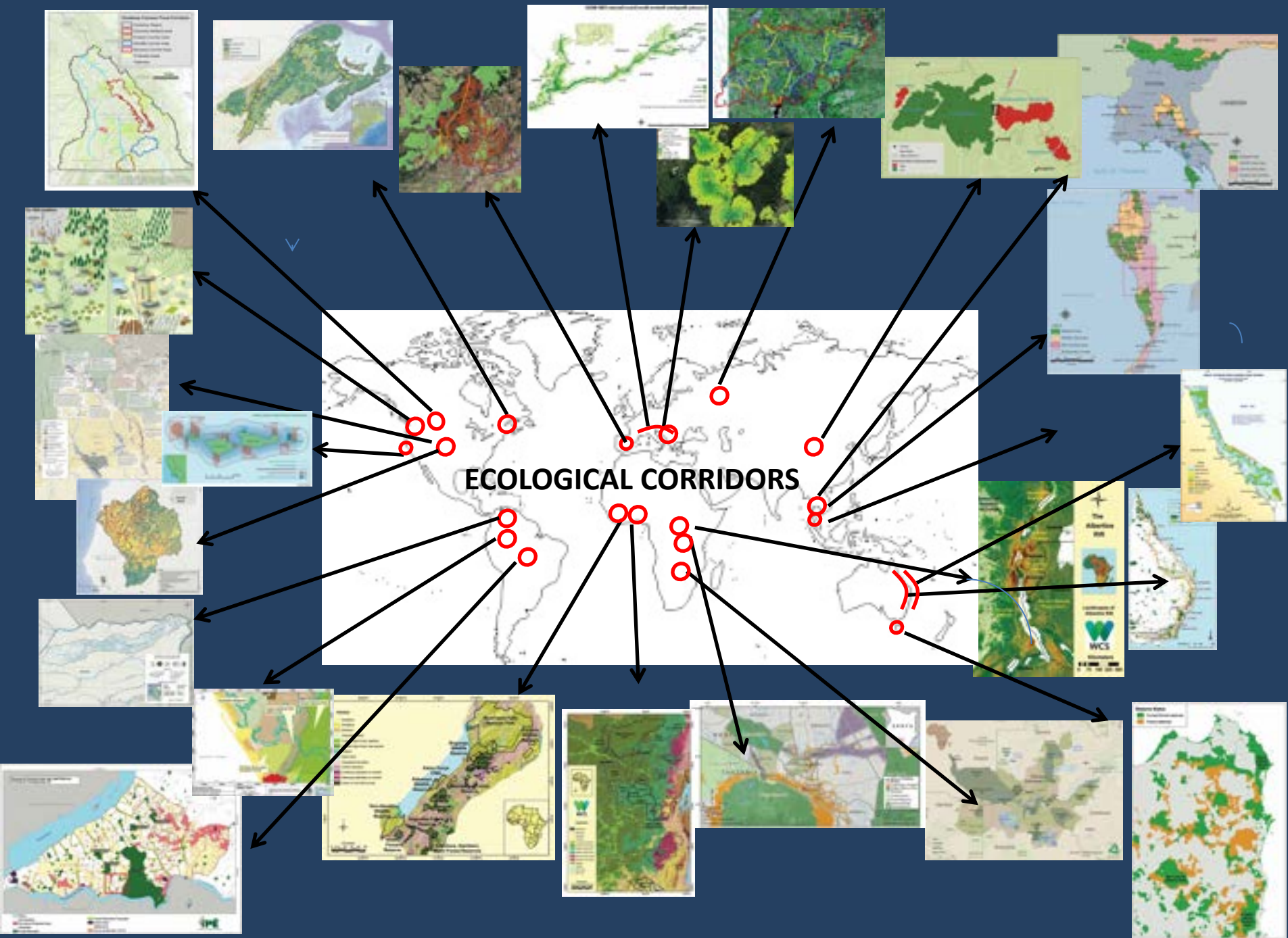
Ecological corridor:

A clearly defined geographical area, not necessarily recognized as a 'protected area', that is governed and managed over the long-term to conserve or restore effective ecological connectivity with associated ecosystem services and cultural and spiritual values.

Ecological corridors may support a variety of human activities that practice sustainable use including farming, forestry, grazing, hunting, fishing, and other resource extraction, as long as they are also managed for, and effectively achieve, the identified ecological connectivity objectives.

Includes Public AND Private lands





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for
LARGE LANDSCAPE
CONSERVATION

Conserving Life on Earth by Reconnecting Our Natural World

We Must Reconnect and Restore

The Center for Large Landscape Conservation is the hub of a growing global movement to reverse the fragmentation of the earth's landscapes and restore nature's resilience to climate change.

We network and collaborate with experts, practitioners, and local communities. The work of landscape conservation restores human connection, civility, and respect. It is essential to our survival and the quality of our lives.

Our Approach

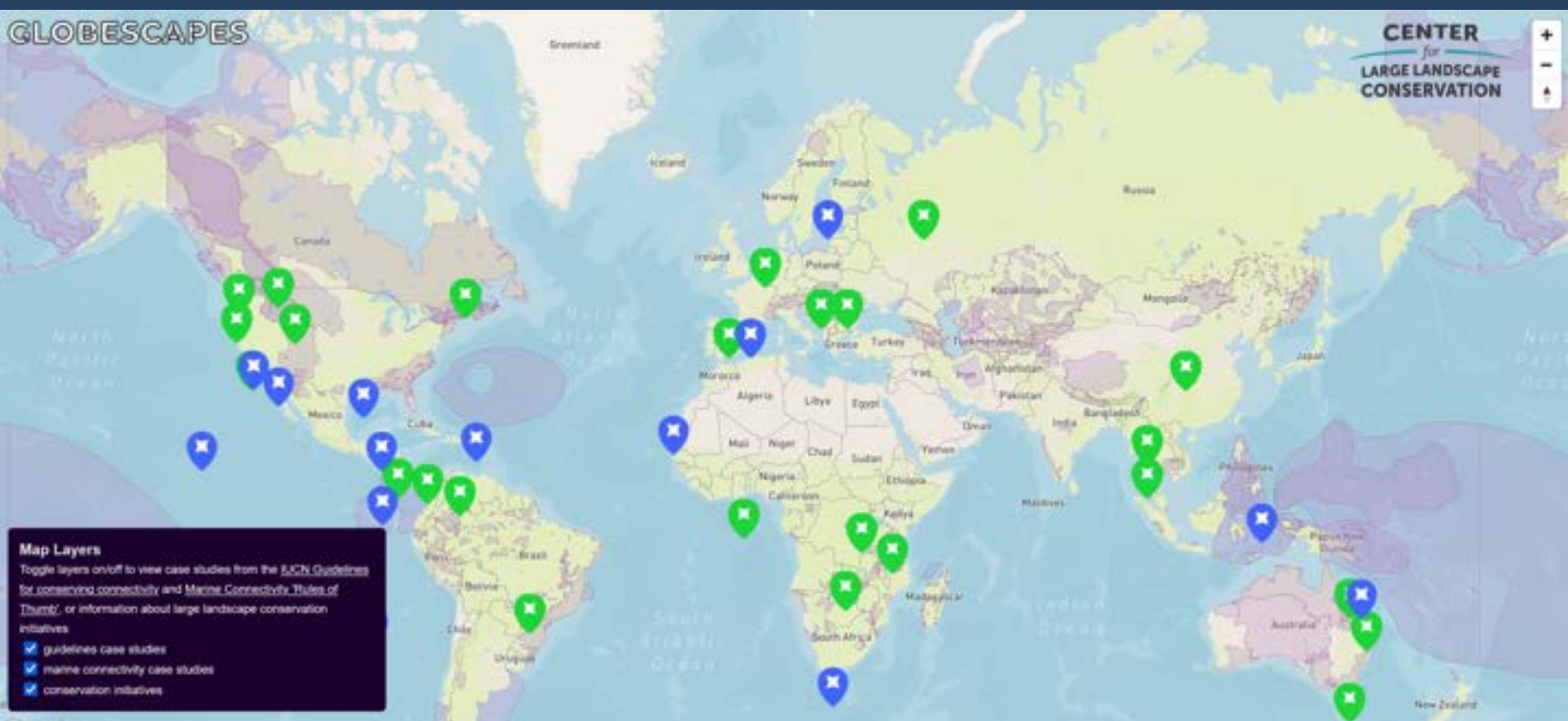
We develop science, craft policy, and support planning for use by more than 2,000 community-based conservation efforts. Together with our partners, we form a world-wide network of conservation professionals, scientists, and decision makers. The Center engages in four ways:

'Global hub'

'2000 efforts'

GLOBESCAPES

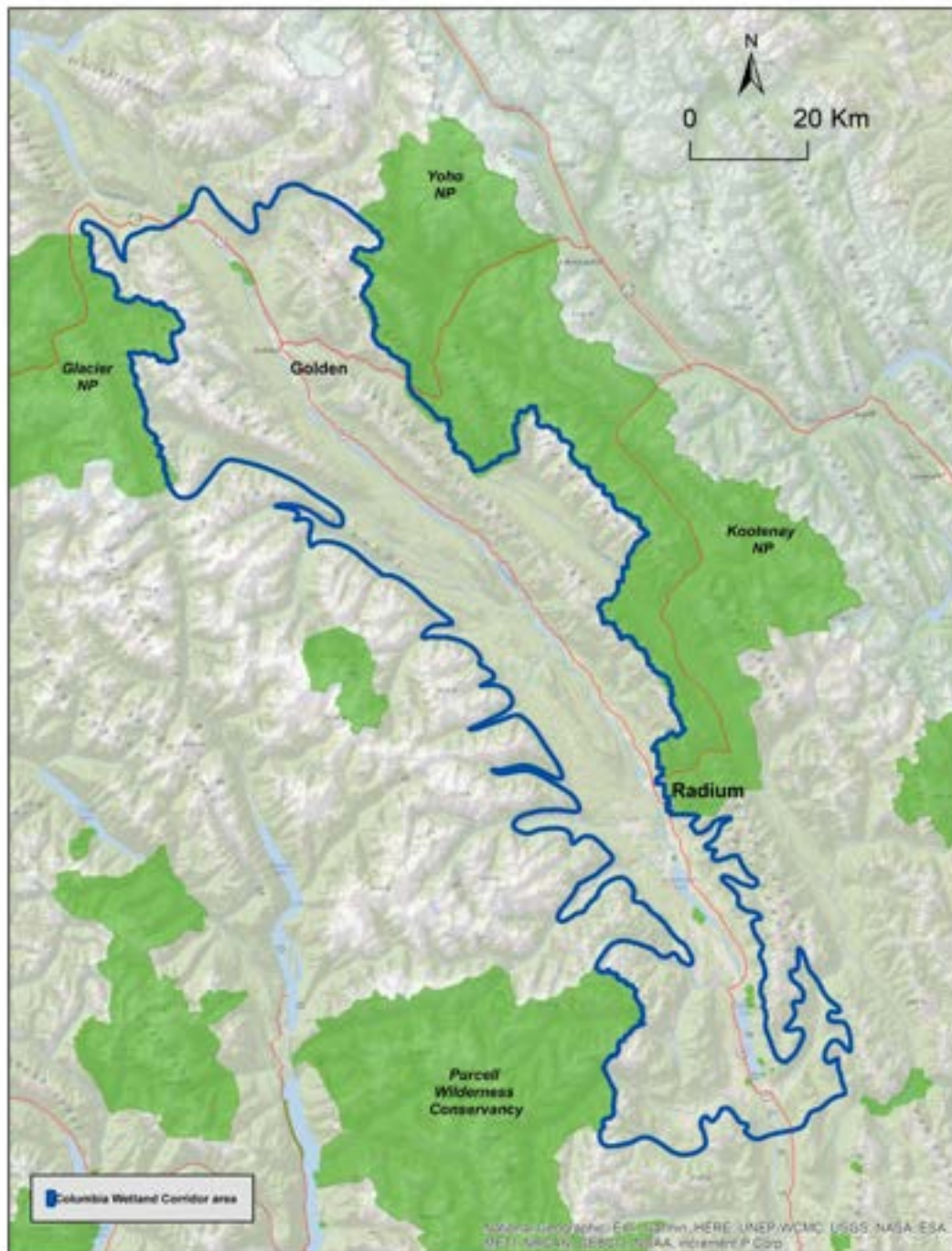
CENTER
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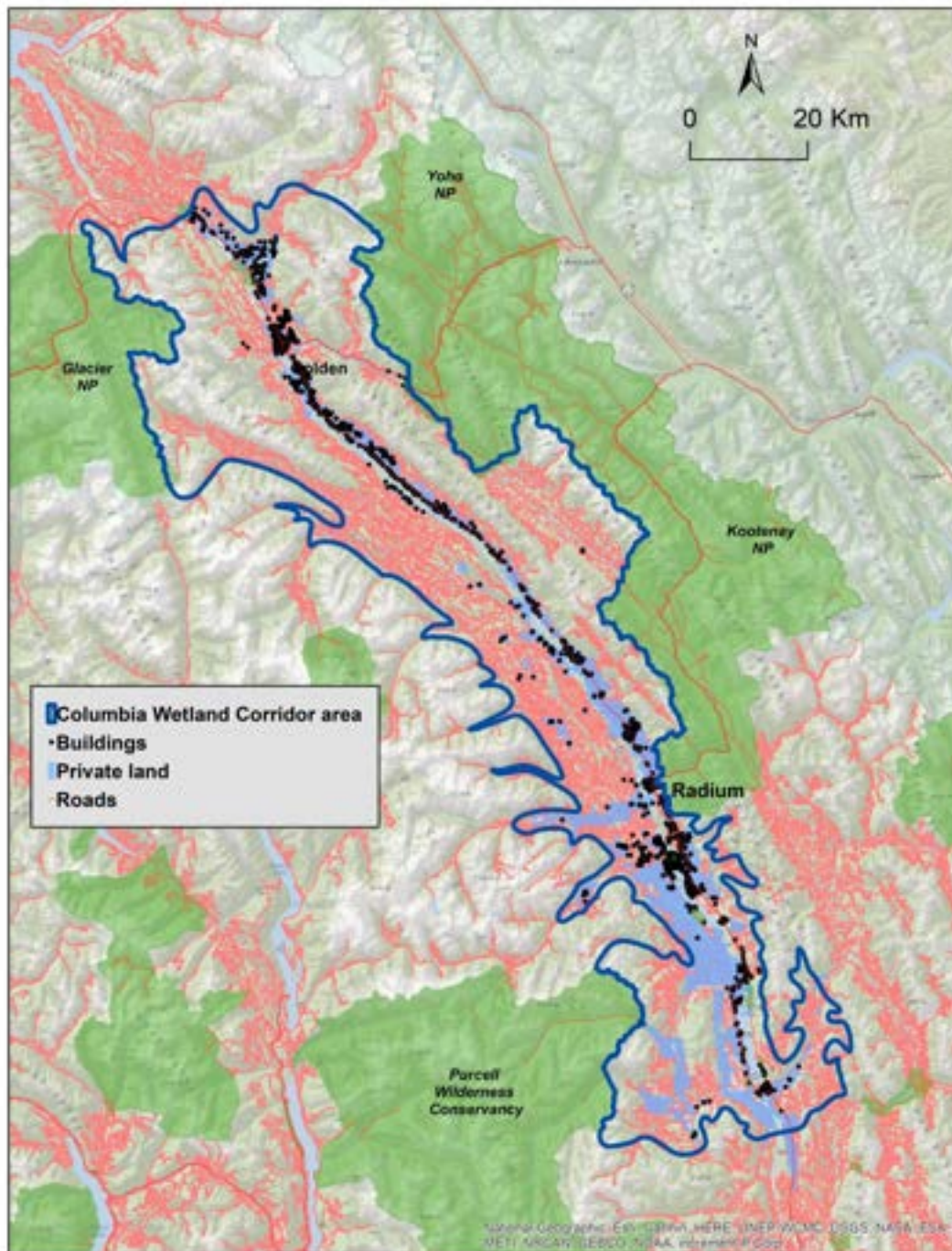


Map Layers

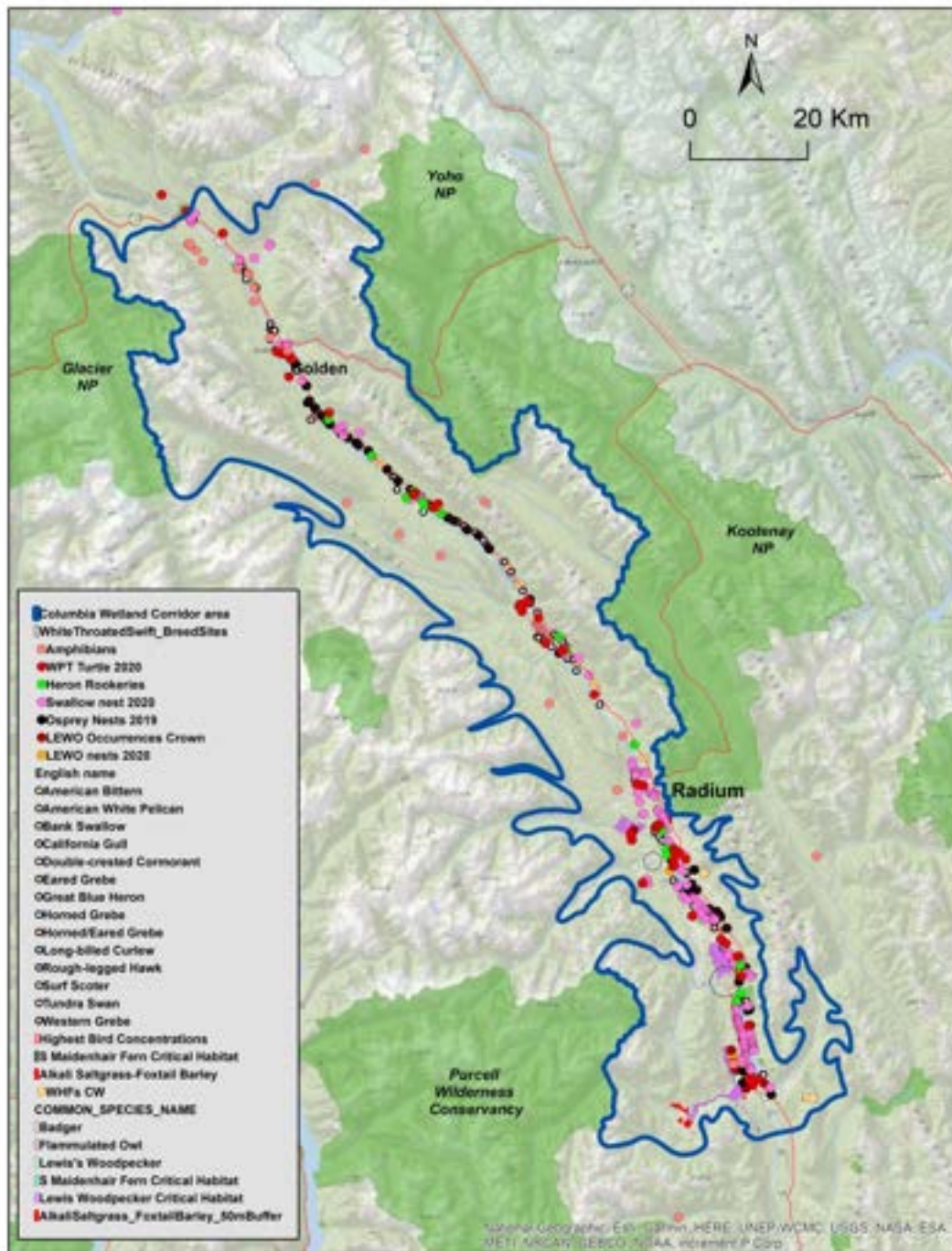
Toggle layers on/off to view case studies from the [SUN Guidelines for connected connectivity](#) and [Marine Connectivity Rules of Thumb](#), or information about large landscape conservation initiatives

- ☒ guidelines case studies
- ☒ marine connectivity case studies
- ☒ conservation initiatives



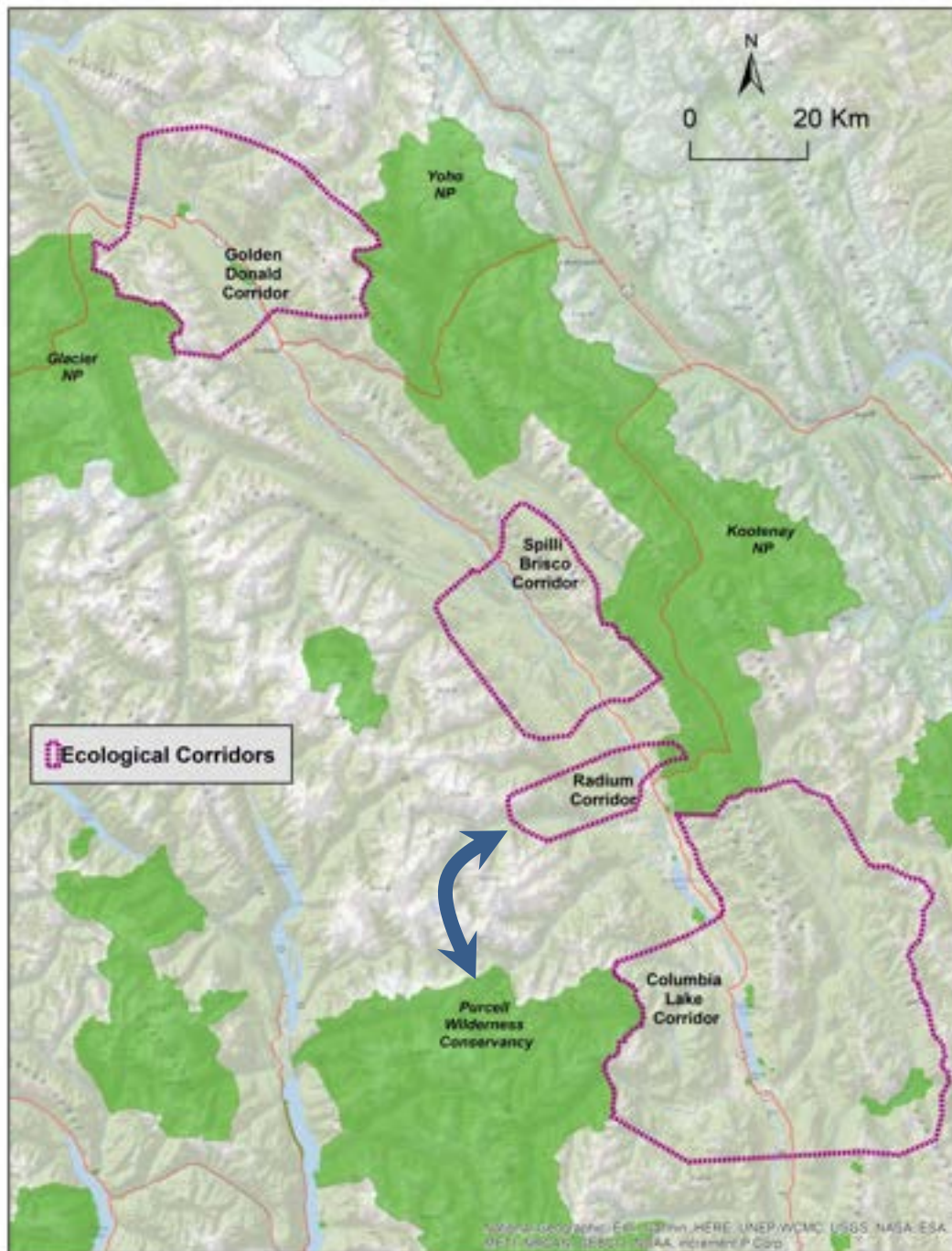






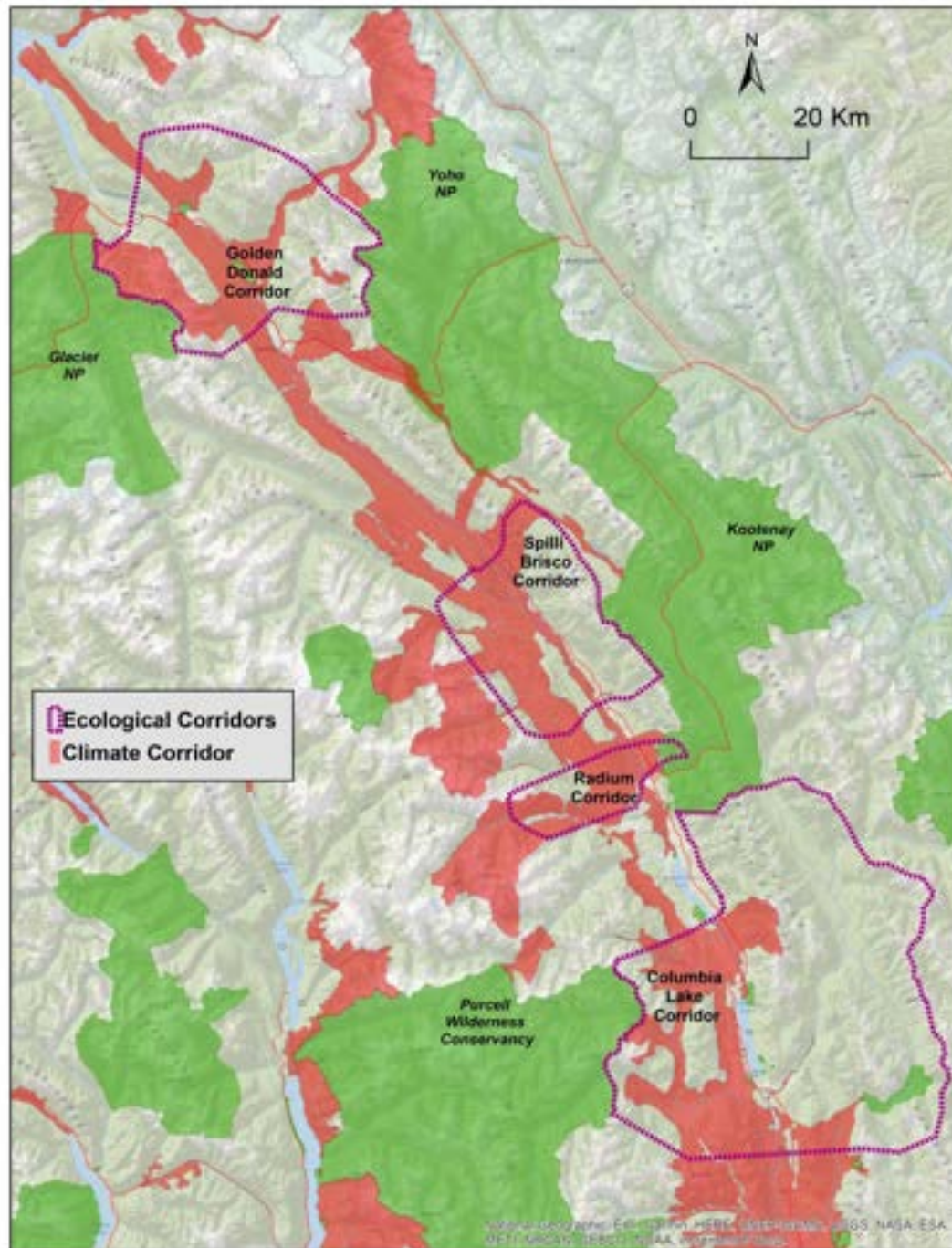
First!

***The whole Columba
Wetlands is a North-
South Climate,
biodiversity corridor***



Climate corridors

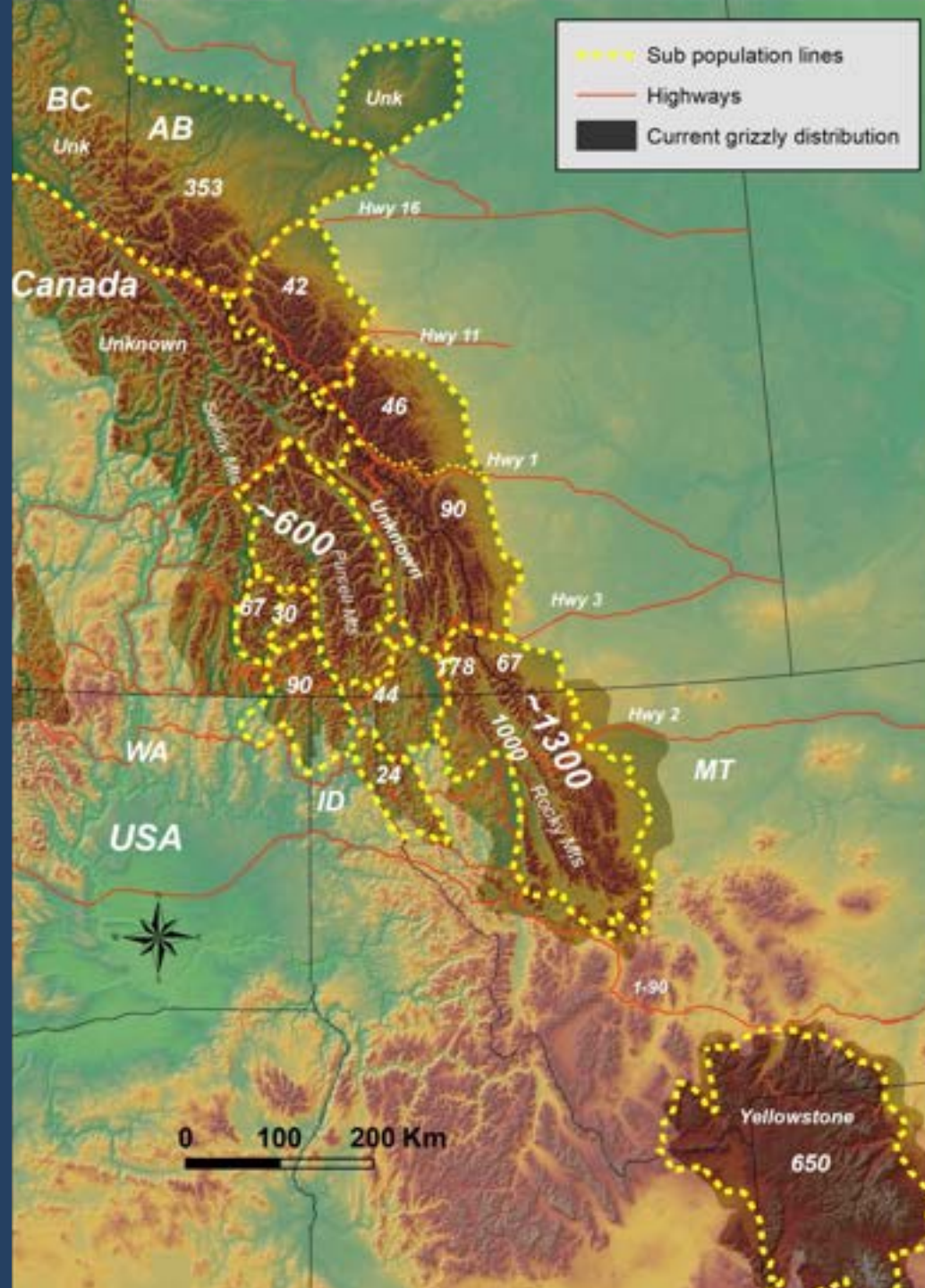
Utzig 2019



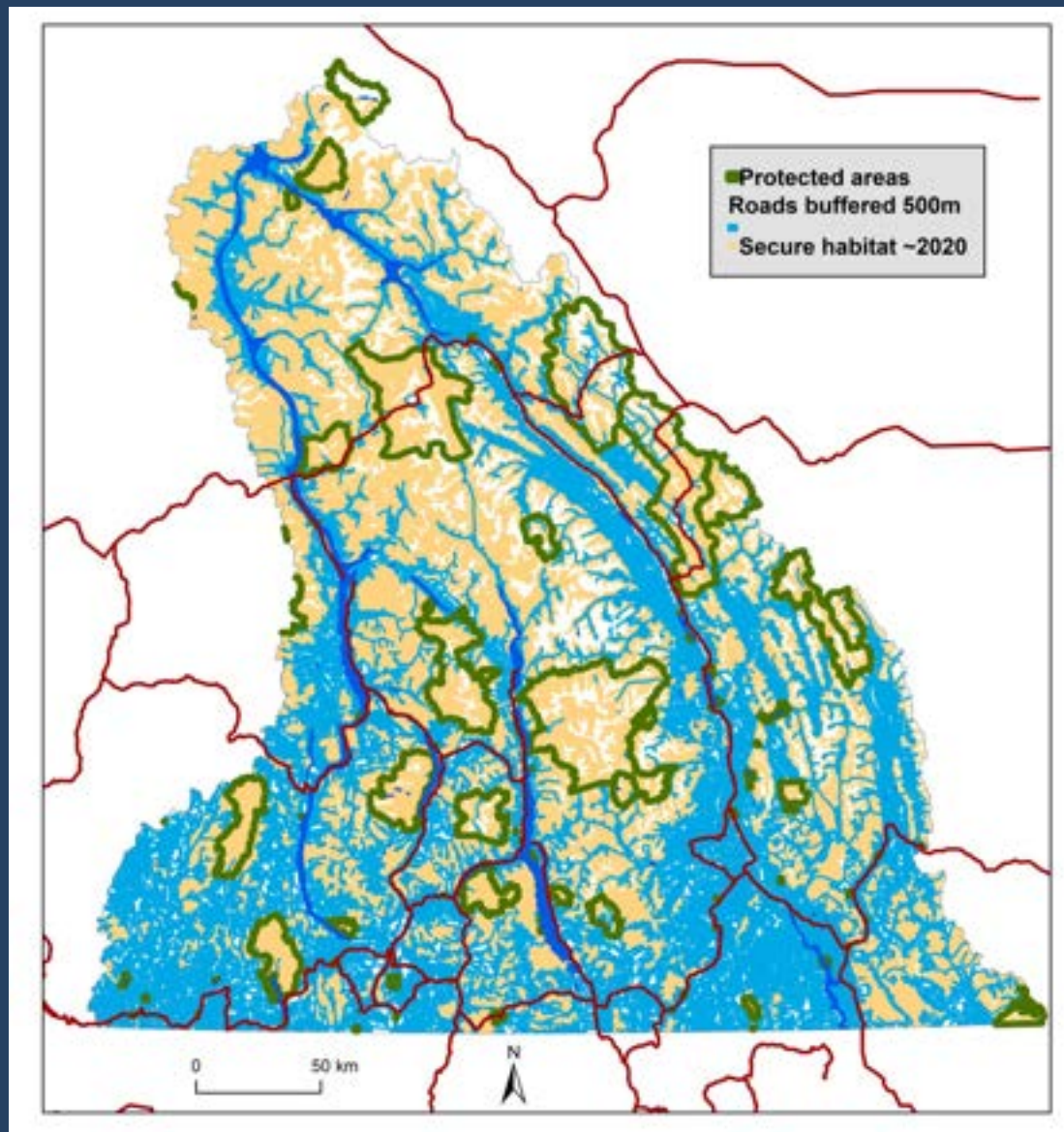
Grizzly corridors

Proctor et al
2015

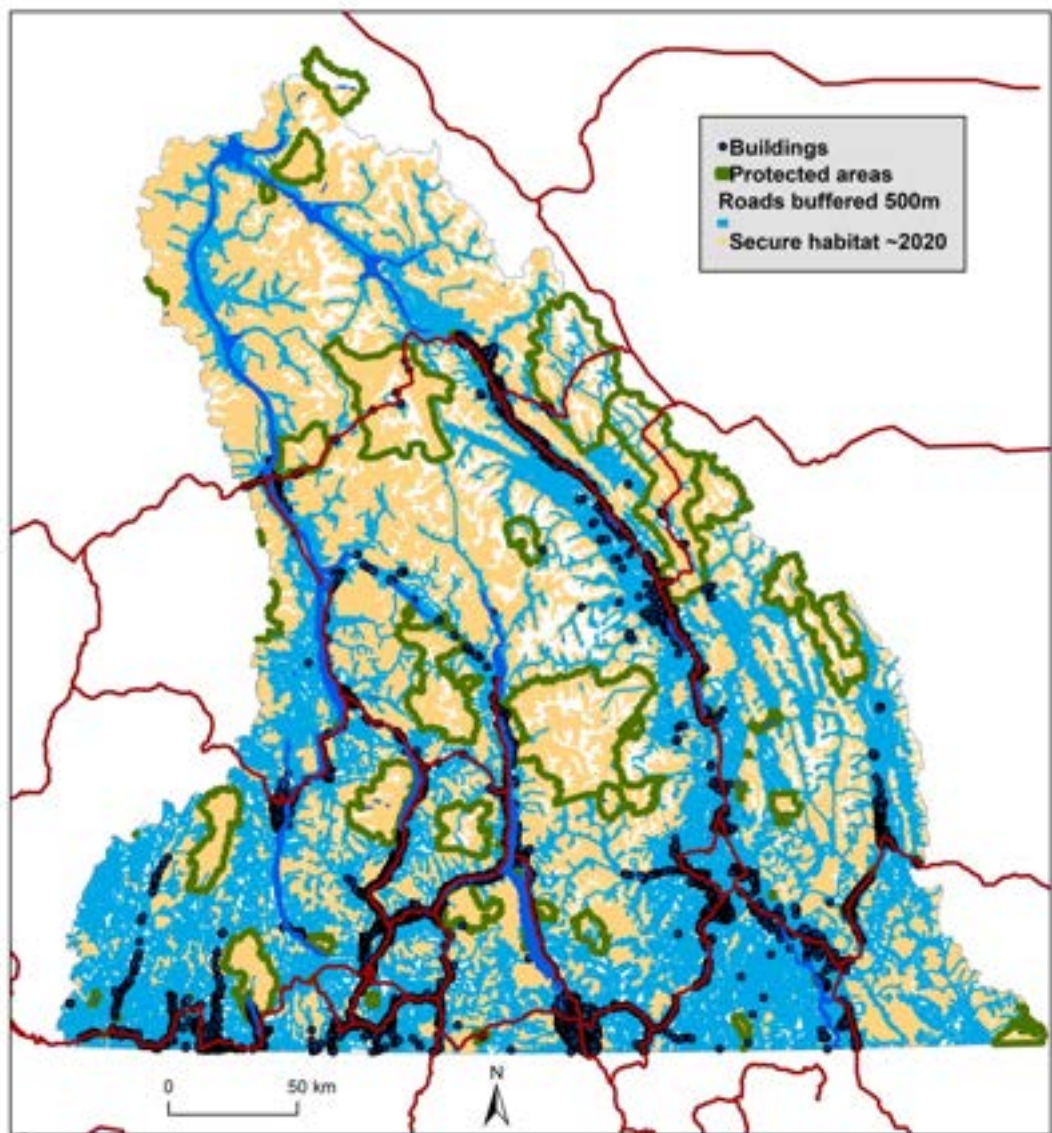




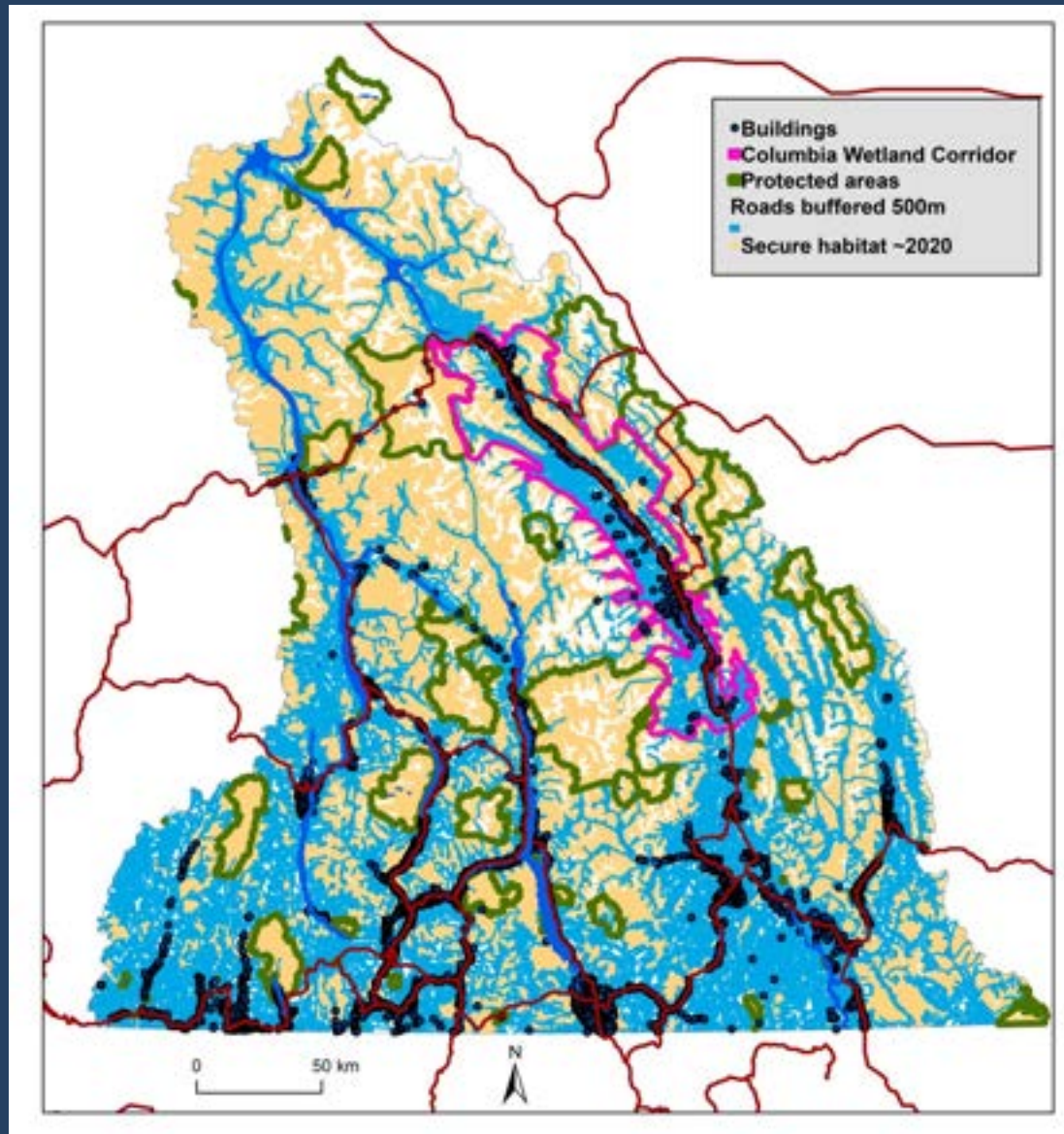
Roads & Secure Habitat &



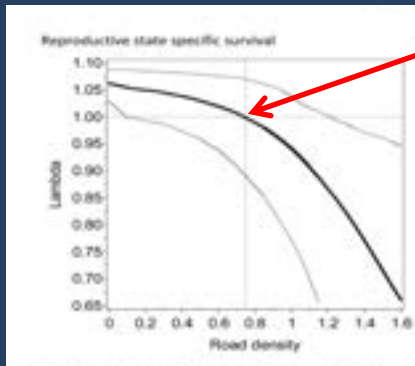
Roads & Secure Habitat & People



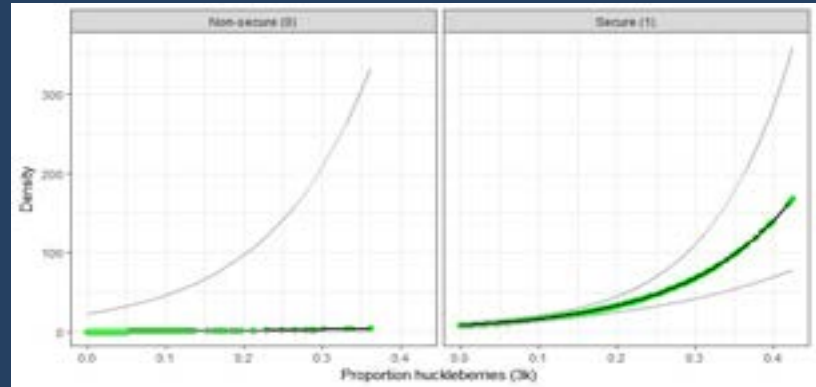
**Roads &
Secure Habitat &
People & Columbia
Wetlands region**



Boulanger and Stenhouse 2014

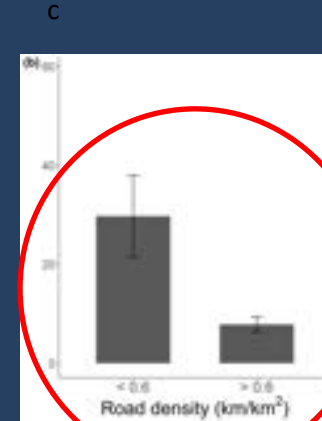
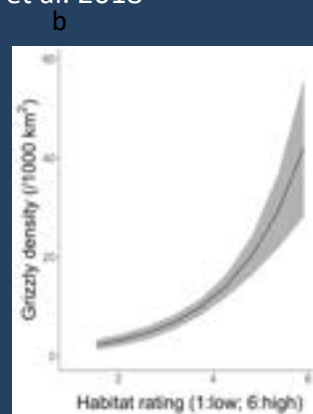
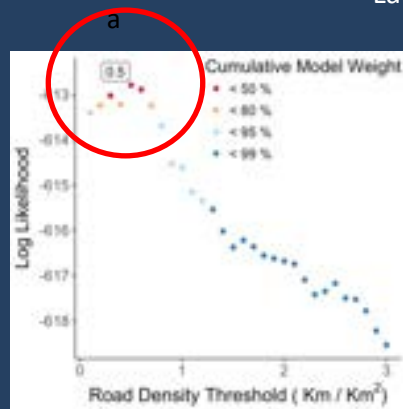


Huck patches in non secure habitat don't translate into GB density (or reproduction)



Proctor et al. 2022

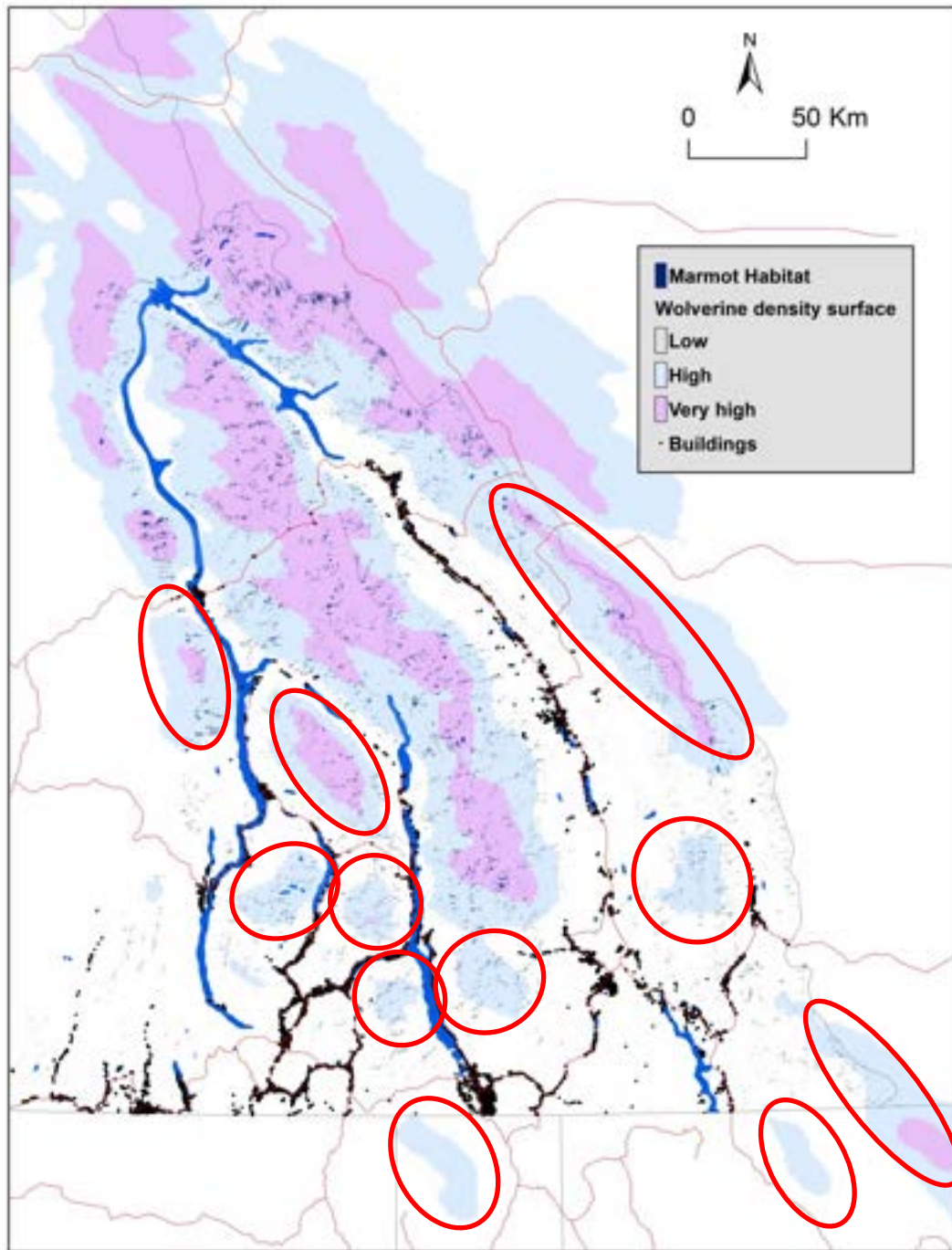
Lamb et al. 2018

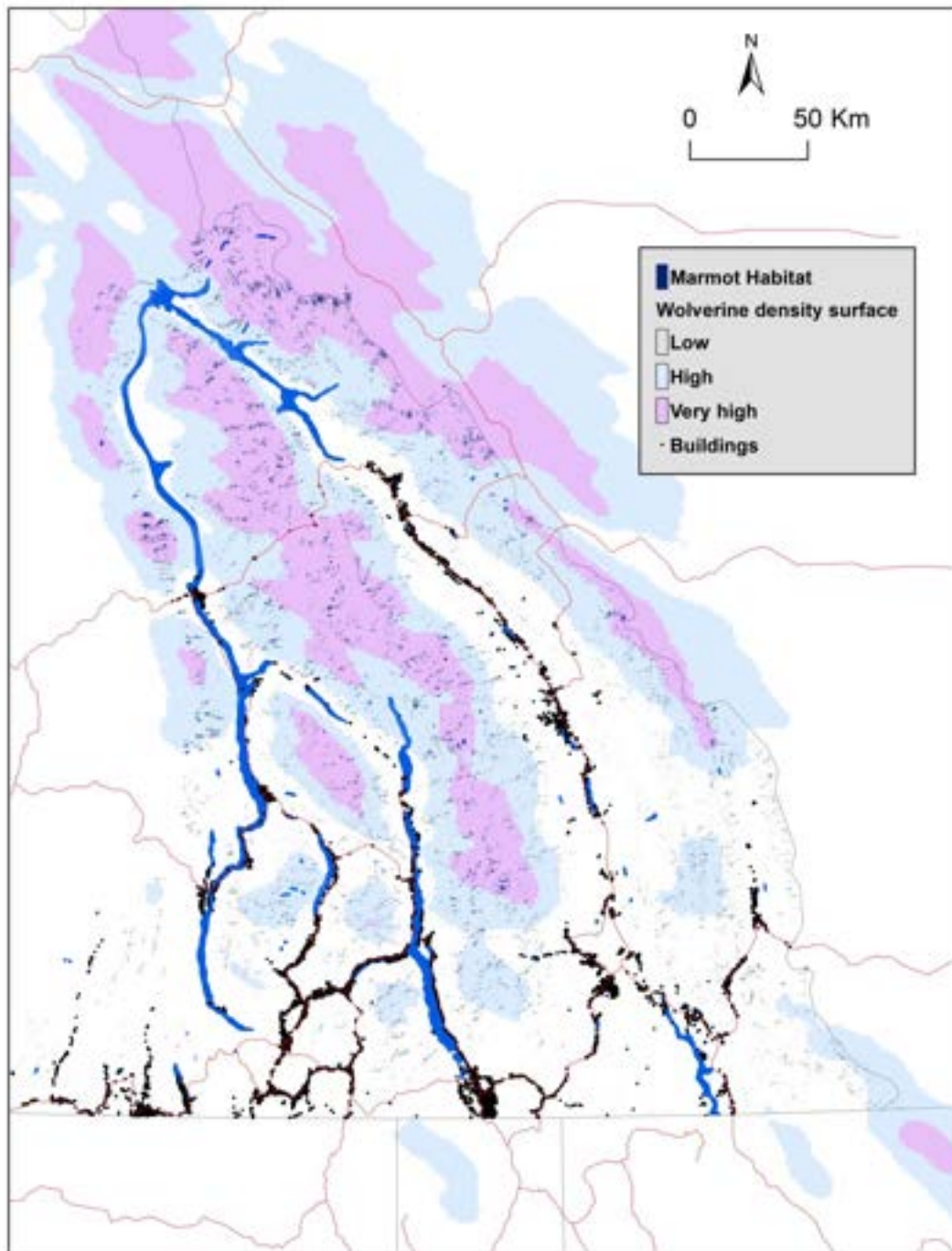


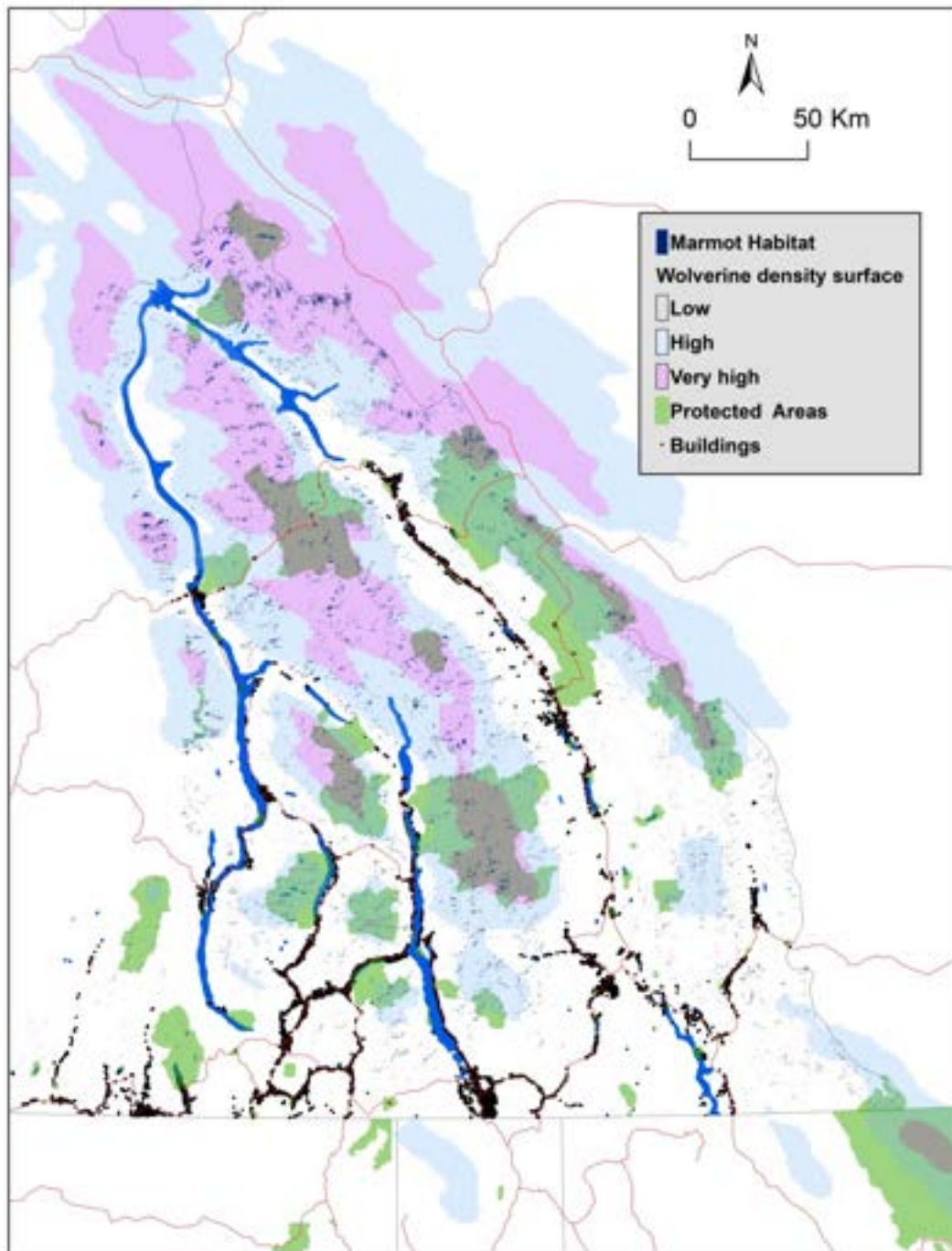
Wolverine density

Mowat et al
2020









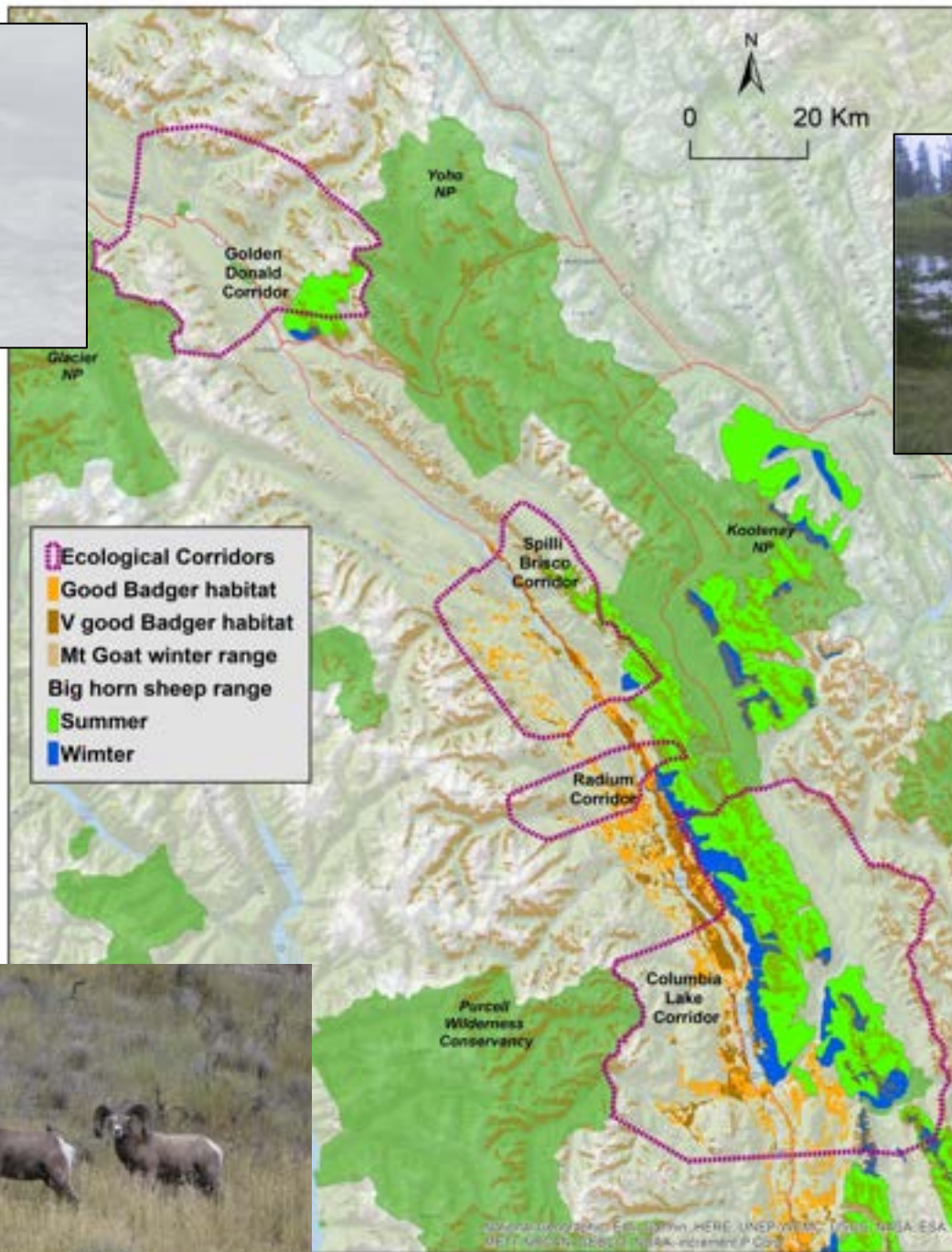


Mt Goat

Ross &
Vander
Vennen 2021

Big horn Sheep range

Poole & Ayotte
2020



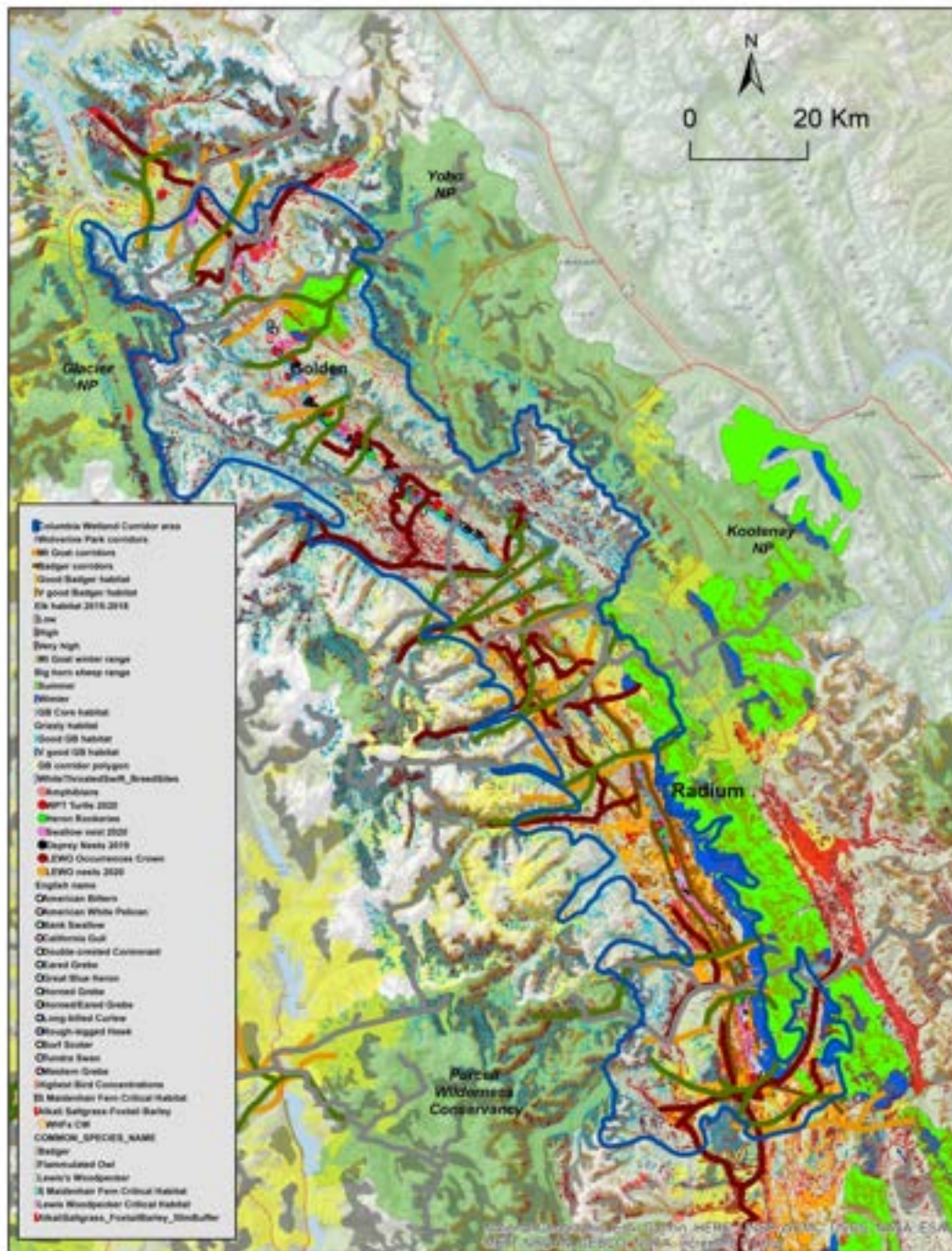
Badger habitat

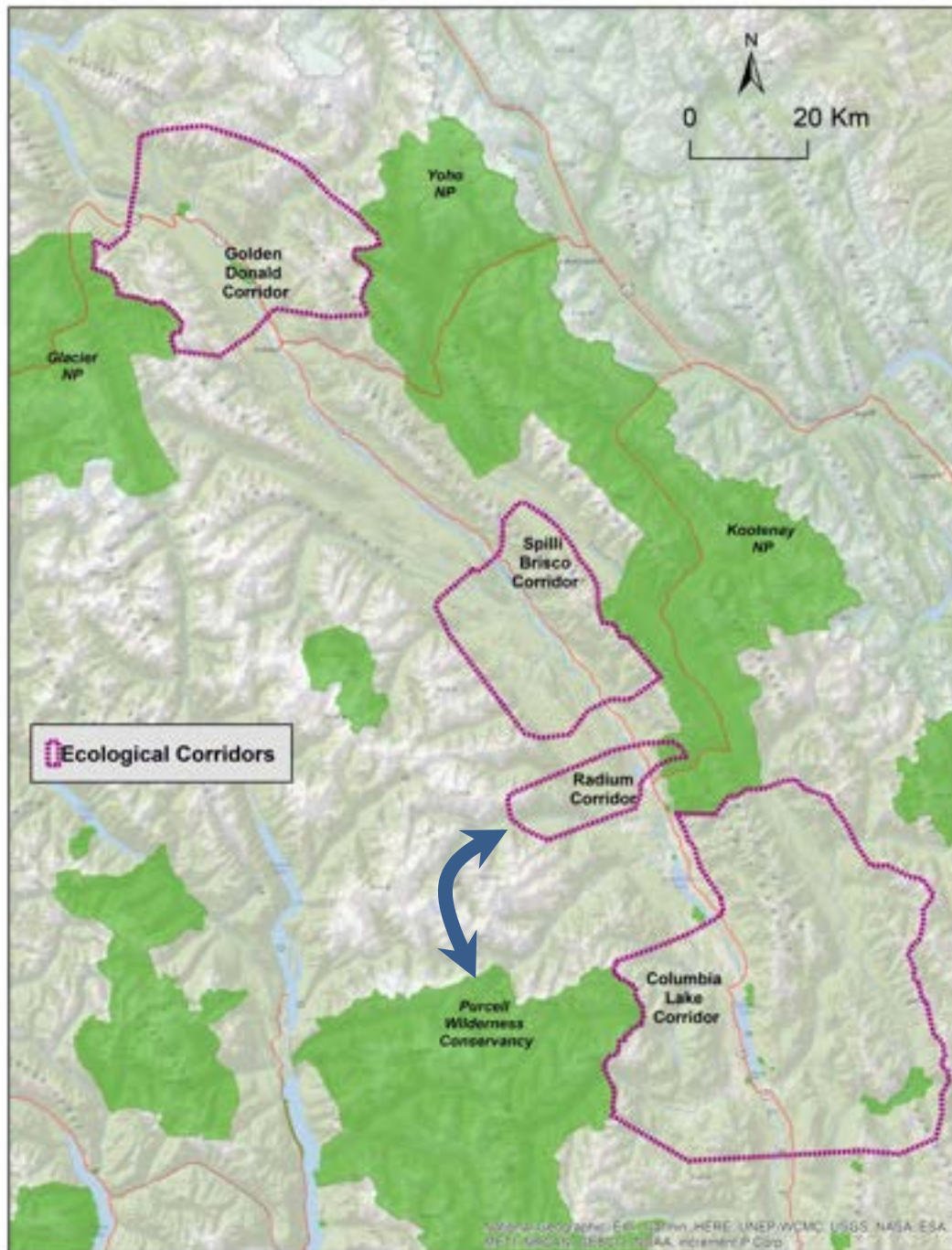
Kinley et al
2014

Elk habitat

Mulligan 2019







Ecological Values within the Proposed Spillamacheen & Radium North Corridor

Legend

- Highway Major & Minor
- Lakes & Rivers
- CRAFT Upland wildlife corridor Spillamacheen & Radium foot
- National Parks
- Parks and Protected Areas

Old Growth Potential

- very high
- high
- moderate
- low
- very low

Bird Species Spatial Distribution

- Flammulated Owl
- Great Blue Heron
- Columbia Spotted Frog
- Western Toad
- Western Painted Turtle
- Barn Swallow Nest Sites
- Olive-sided Flycatcher Locations
- Bank Swallow Nest Sites

Columbia Wetlands - Ecological Communities

- Aspen - Dogwood - Water birch mid-bench floodplain (fnd07)
- Burush Marsh (fnd06)
- Cattail Marsh (fnd05)
- Cottonwood - Spruce - Dogwood mid-bench floodplain (fnd02)
- Sandbar willow low-bench floodplain (fnd0)
- Swamp Horsetail Marsh (fnd02)
- Silka willow - Silka sedge swamp (fnd05)

0 1.25 2.5 5 km

ECOTENAC CONNECT

