Importance of *Intact* forests & climate change:

- Corridors for movement of species
- Sources of genetic variants—warmer genotypes
- "Uniform" storage and release of water—counteract drought stress & freeze-thaw damage
- Delay permafrost melt by decades/centuries
- Late seral/old-growth/mature forests best able to:
  - modify effects of warmer, drier
  - furnish "replacement" & "adapted" individuals

***some reminders*.....**

- **Ages of trees not the age of the forest**
- **Old-growth forests:**
  - **older than appear**
  - **some survive landscape level disturbances**
  - **carbon sinks not carbon sources**
  - **greatest number of species & specialist species**
  - **highest quality water**

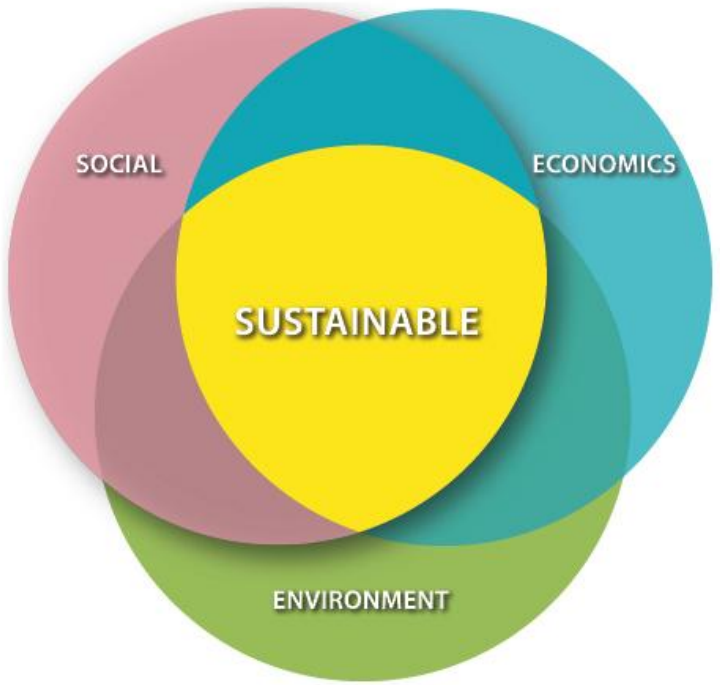
Anthropocentric Values….

- Linear
- Human-centred
- Earth = resources for human needs
- Interdependence, interconnections of ecosystems of little value

Short-term economic imperatives take priority over ecosystem integrity

Easier to change the image than fix the problem

Anthropocentric values consistent with *Sustainable Development Model*



The environment (ecosystems), society (culture), and the economy are given relatively equal consideration in designing a plan.

Where these factors "intersect" is where plans are considered to provide for sustainable activities.

Kincentric Values….

Holistic

We are part of the system that sustains us—all our relations

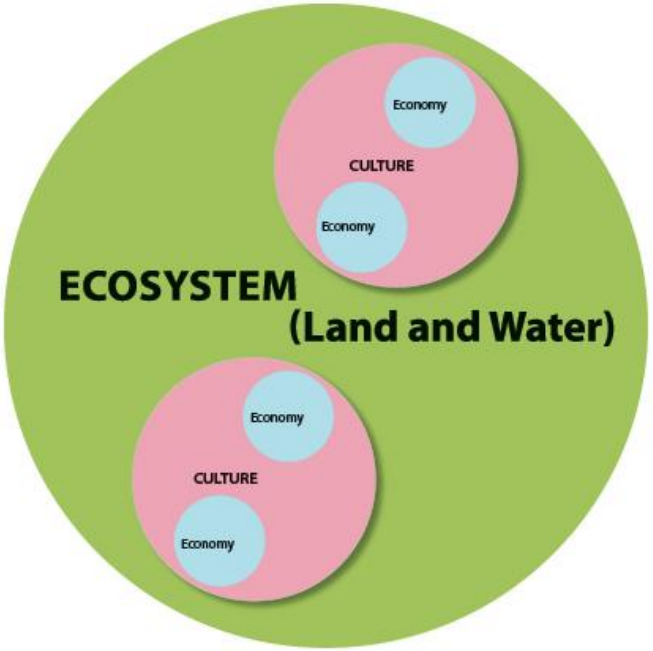
We have a responsibility to maintain natural system while meeting our needs

Identities to be respected, not objects to be dominated

Kincentric values consistent with....

Ecosystem-based Conservation Planning

AN ECOSYSTEM-BASED CONSERVATION PLAN IS BASED UPON A HIERARCHIAL RELATIONSHIP



Economies are part of human cultures, which are part of ecosystems. Therefore, maintaining the integrity of ecosystems provides the basis for sustainable cultures, including their economies.

Interesting Terminology….

ECOSYSTEM

eco (Greek) means home

HOME SYSTEM

+

ECONOMICS

nomics (Greek) means management

HOME MANAGEMENT

Ecosystem Economics means Management of the Home System

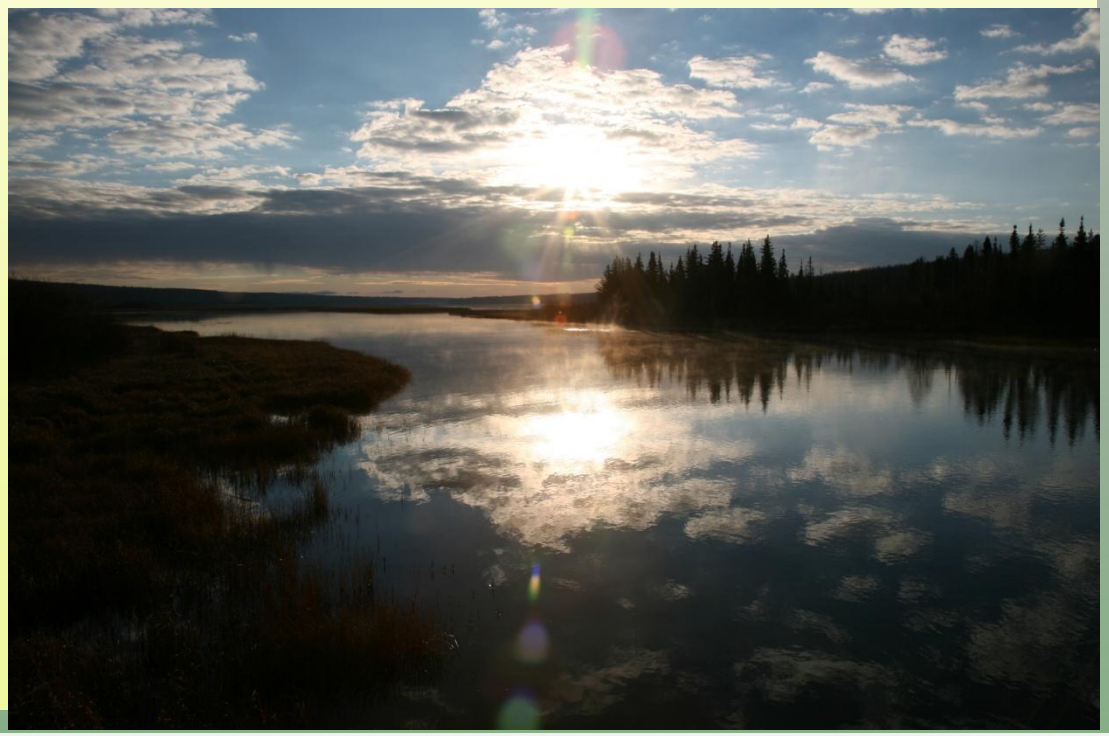

MONS LAKE
PUBLIC
LIBRARY
FOUL GROUND
LOW
SHOULDER

Focus on what to protect

Then on what to use....

Ecological time frames...250, 500 years +

generations of people live through an EBCP



The priorities of *Ecosystem-based Conservation Planning (EBCP)....*

First Priority: **Protect or restore *ecological integrity***

Second Priority: **Provide for *balanced human & non-human* ecosystem use across the landscape**

Priorities of EBCP achieved through....

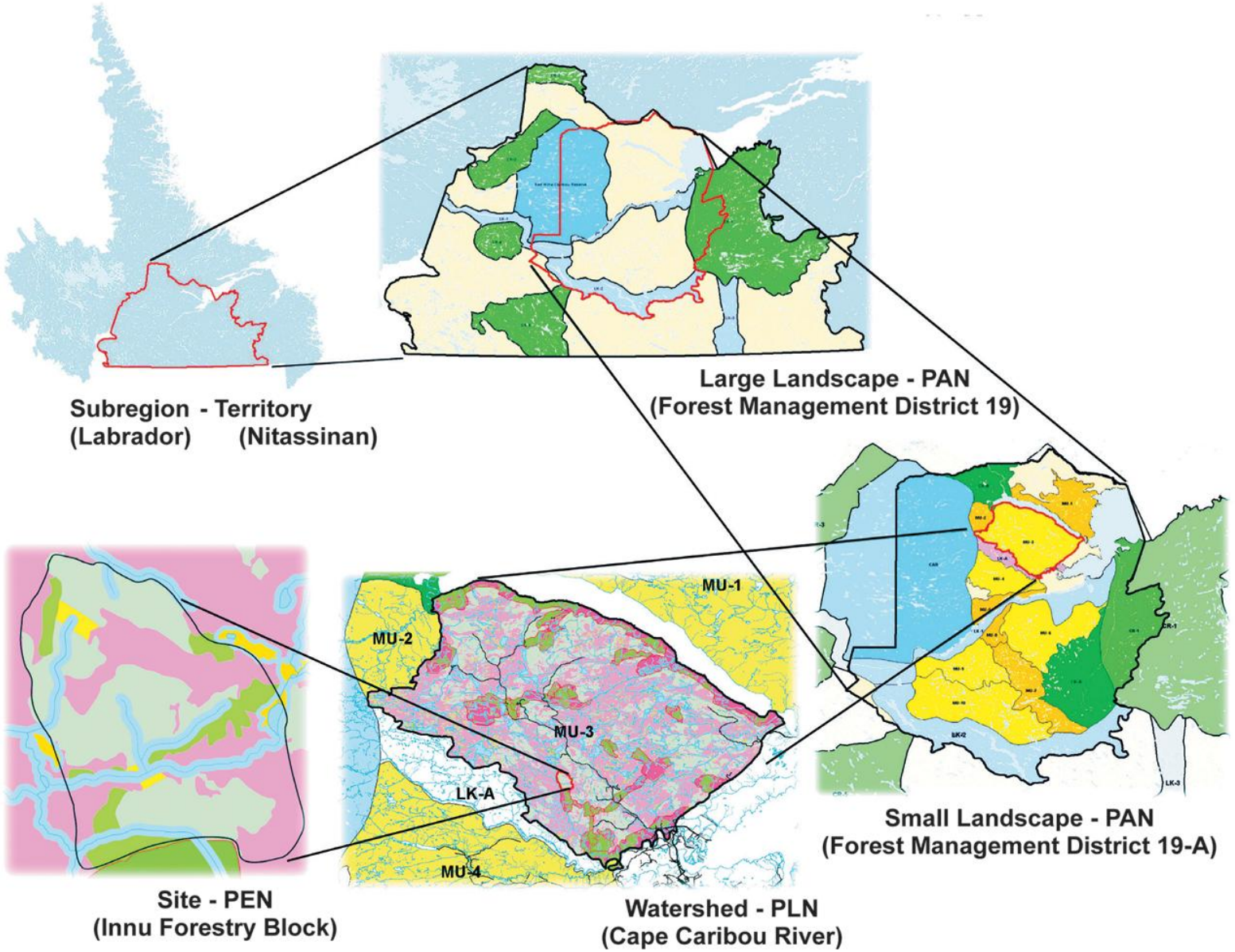
Identifying and respecting *ecological limits*

Changes in ecosystems <u>beyond</u> ecological limits/range of natural variability result in fundamental change, not in *natural* fluctuations to ecosystem function

Priorities of EBCP achieved through....

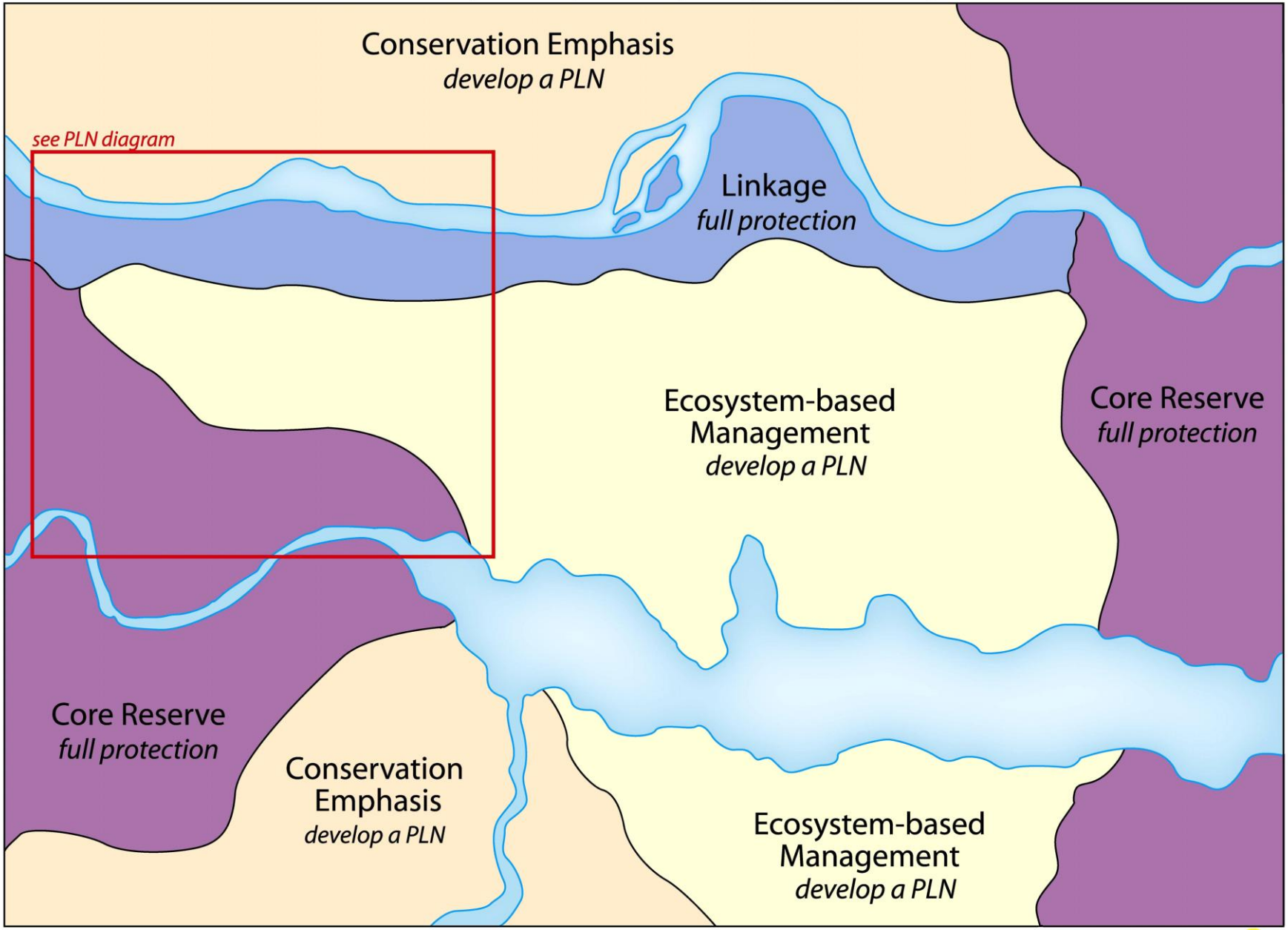
Networks of *ecological* reserves & *cultural* reserves at multiple spatial scales

EBCP--MULTIPLE SPATIAL SCALE ECOLOGICAL RESERVES
Innu Nation Example



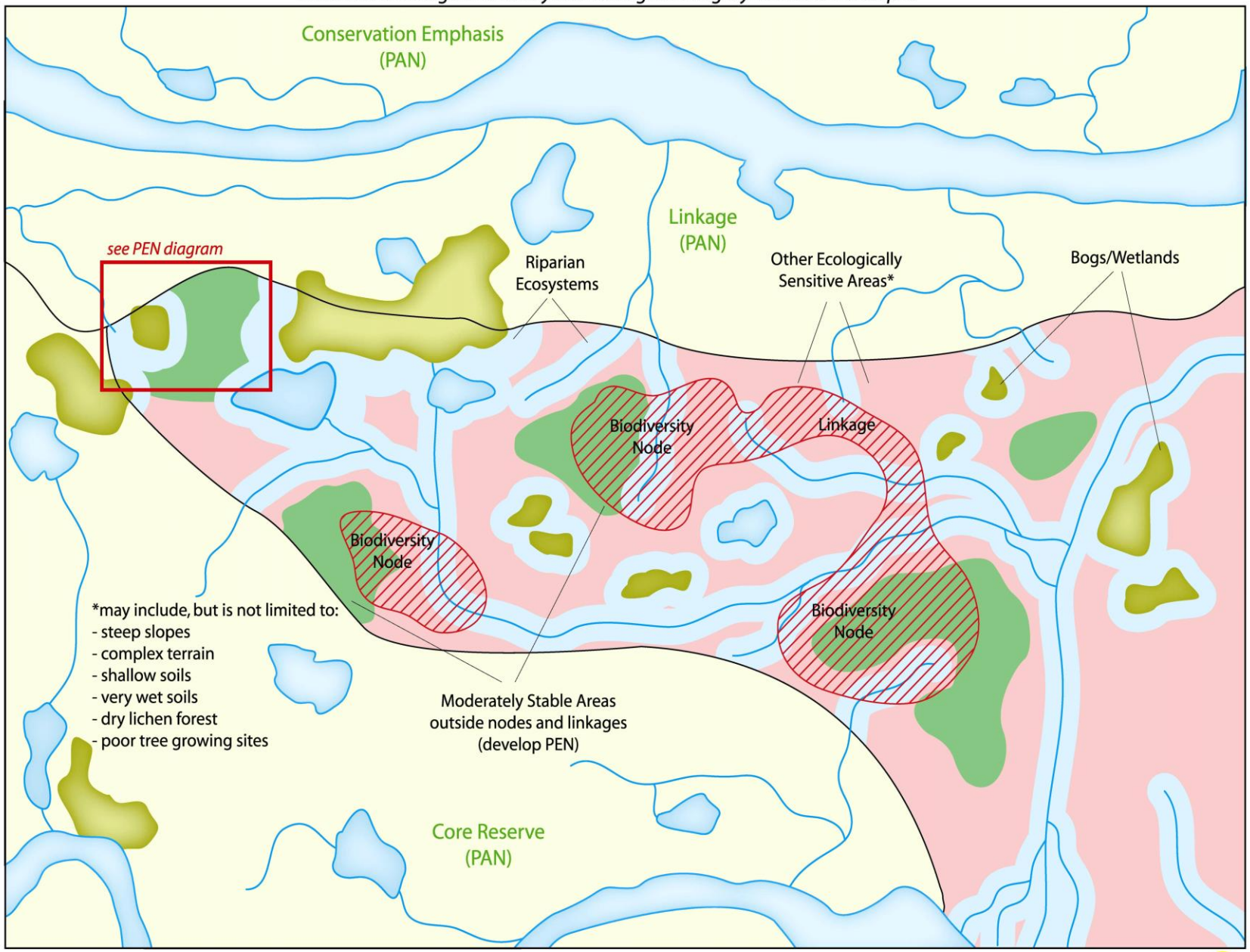
Protected Areas Network (PAN) ... Boreal

to maintain biological diversity and ecological integrity in large landscapes



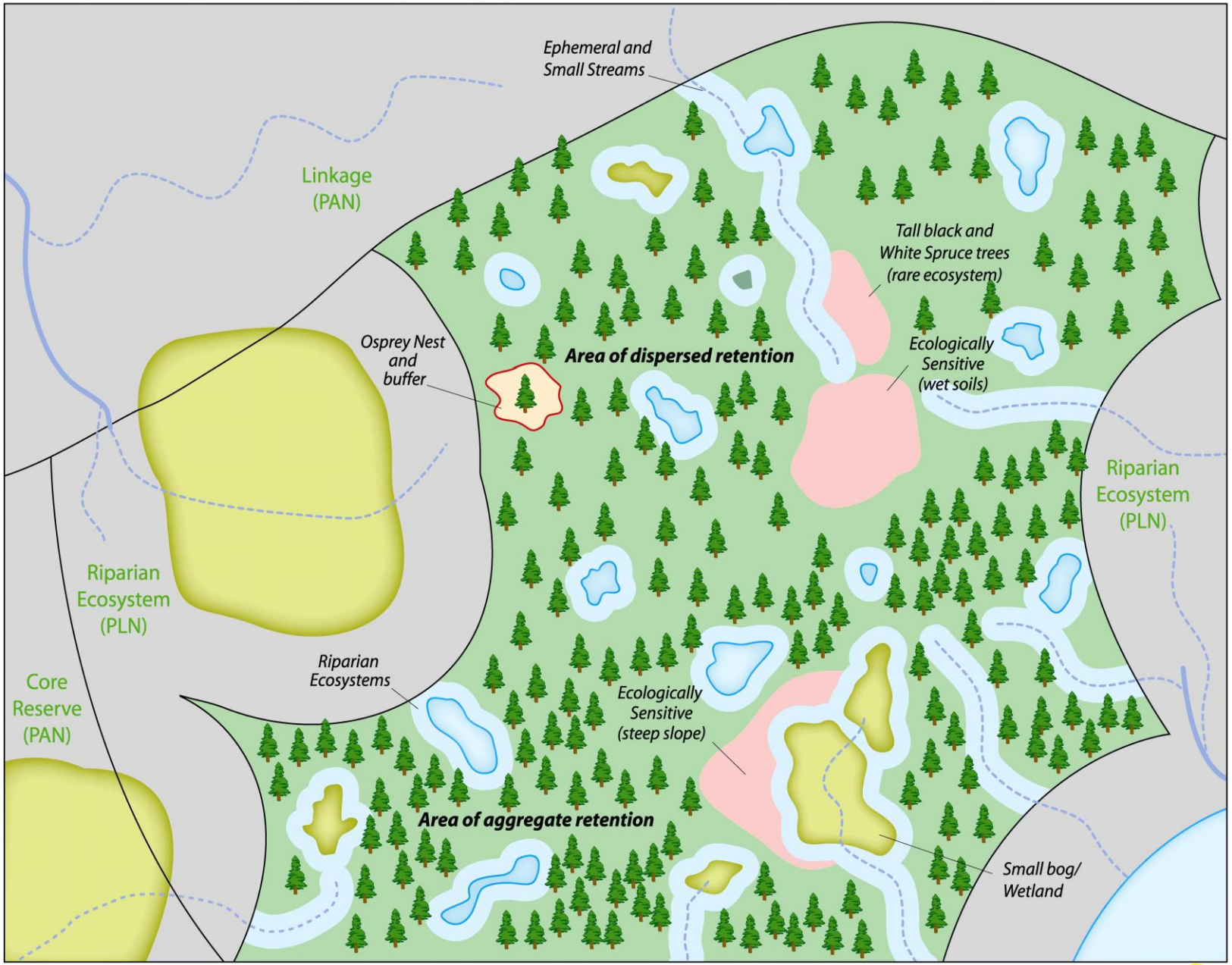
Protected Landscape Network (PLN) ... Boreal

to maintain biological diversity and ecological integrity in small landscapes



Protected Ecosystem Network (PEN) .... Boreal

to protect biological diversity and ecological integrity at the stand level and to develop sustainable community-based economies



Priorities of EBCP achieved through....

Designation of *human use areas*....the foundation for diverse, community-based economies

- Restoration areas
- Cultural reserves
- Biodiversity nodes
- Recreation & Tourism
- Wildcrafting
- Agriculture & Ranching
- Timber
- Others within ecological limits

Priorities of EBCP achieved through....

Combining *science* and *Indigenous knowledge* systems

Stewardship

Sacrificing in the present to protect the future

Wisdom....

the combination of *knowledge* and *intuition*

Connect  **to *brains* to solve problems**

-and-

<u>Quickly</u> learn to *cooperate with each other* to meet today's challenges


GAP

Think like a *Forest*—an *Ecosystem*

MAINTAINING WHOLE SYSTEMS ON EARTH'S CROWN

Ecosystem-Based Conservation Planning for the Boreal Forest

HERB HAMMOND
Silva Forest Foundation