

# Setting Direction for Conserving British Columbia's Biodiversity

September 10, 2008

# What is Biodiversity?

...all living things and the elements and processes that sustain them...





# **Benefits of Biodiversity**



#### **ECOSYSTEM OUTPUTS & BENEFITS**

#### Goods:

- wood and fibers
- food
- fuel
- genetic resources

#### Services:

- climate regulation
- water purification
- waste treatment
- erosion control

- pest and disease control
- pollination
- soil formation

pharmaceuticals

drinking water

minerals

photosynthesis

### Context

Historical Overview 2004 – 2008
 BC Trust for Public Lands
 BBC Mandate
 Membership

Collaboration & Synergy
 unique partnership



# Vision

British Columbia is a spectacular place with healthy, natural and diverse ecosystems that sustain and enrich the lives of all.





#### **Goals of Biodiversity BC**

#### **1. Conserve the Elements of Biodiversity**

To maintain the diversity of genes, species and ecosystems, prevent elements of biodiversity from becoming at risk and contribute to global efforts for biodiversity conservation.



#### **Goals of Biodiversity BC**

2. Increase Awareness of the Importance of Biodiversity and Respect for the Natural Environment

To increase awareness and understanding about the importance and value of biodiversity and encourage British Columbians to take action on conserving biodiversity.



#### **Goals of Biodiversity BC**

3. Provide Tools and Incentives to Enable Biodiversity Conservation

To provide tools and incentives to enable governments (including First Nations), industry, conservation organizations and citizens to improve conservation of British Columbia's biodiversity.



# Achievements

Science Foundation
Ecological Principles
Atlas of Biodiversity
Background science reports
Status Report
Hectares BC

- Education and Stewardship
- Website www.biodiversitybc.org/

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# **Ecological Principles**

- Primer on biodiversity
- Informs the process of developing priorities for conservation



#### ECOLOGICAL CONCEPTS, PRINCIPLES AND APPLICATIONS TO CONSERVATION

2008





# **Biodiversity Atlas**

map-based
depiction of
British
Columbia's
biodiversity
companion to
the Status
Report (*Taking Nature's Pulse*)





# **Science Reports**

#### **Examples**

- First Nations and Biodiversity
- Geologic History
- Ecosystem Status
- Species Status
- Stewardship Responsibility
- Genetic Diversity
- Key and Special Elements
- Safety Net Gap Analysis
- Climate Change



Key Elements of Biodiversity in British Columbia: Some Examples from the Terrestrial and Freshwater Aquatic Realm

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#### Preliminary Analysis of BC Climate Trends for Biodiversity

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# **Status Report**

Taking Nature's Pulse: The Status of Biodiversity in British Columbia

"As a state of biodiversity report it is as good as any *I have seen around the world.*" Dr. Hugh Possingham, University of Queensland



#### TAKING NATURE'S PULSE THE STATUS OF BIODIVERSITY IN BRITISH COLUMBIA

2008





# **Status Report Major Findings**

B.C.'s biodiversity is globally significant because of its variety and integrity, but without immediate action it is vulnerable to rapid deterioration, especially in light of climate change





### Some Major Findings – Ecosystem Diversity

- 4 of 16 BEC zones of conservation concern
- 50% plus of 611 ecological communities of conservation concern
- Significant areas of wetlands converted or degraded
- Low elevation grassland communities are the rarest land cover type in B.C.







Bio Diversity

### Some Major Findings – Species Diversity

- 43% of species assessed are of conservation concern
- B.C. has a majority of the global range for 99 species







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### Some Major Findings – Genetic Diversity

 B.C. has high levels of genetic diversity within species which are critical for adaptation and resilience





### Some Major Findings – Key and Special Elements

- Water flow in lakes, wetlands and groundwater systems is being seriously affected
- The majority of B.C. has relatively intact predator-prey systems
- B.C. has significant seasonal concentrations of species vulnerable to human impact





### Some Major Findings – Threats to Biodiversity

- Climate change is the foremost threat to biodiversity
- Ecosystem conversion and degradation have seriously impacted biodiversity
- Alien species are seriously impacting biodiversity
- Ecosystem connectivity is being lost and will limit species distribution





# Potential shift in BEC Zones by 2085 due to climate change











### Path Forward

- increase awareness about the value of biodiversity
- assist with the development of the Conservation Framework
- extension of Taking Nature's Pulse
- further analysis to determine conservation priorities arising from *Taking Nature's Pulse*
- encourage action to address major findings in *Taking Nature's Pulse* by governments, First Nations, industry, ENGOs and public
- develop incentives and promote use of conservation tools



# The Challenge...

As an independent watchdog for sound forest practices in BC, what role does the FPB have in: building awareness about the value of biodiversity
addressing major findings in TNP
monitoring progress on biodiversity conservation
other...



