

Biodiversity

COMPONENT GOALS

01

UBC will develop highly functioning landscapes at the building and site scale to contribute to biodiversity and natural ecosystem processes.

02

UBC will engage campus teaching and research opportunities to enhance biodiversity management capacity.



Above-Left: Biosciences Building

PHOTOGRAPHER:
PHILIP BERTOGG

Above-Right: Nest Garden

PHOTOGRAPHER:
PHILIP BERTOGG



CONTEXT

Biodiversity is the richness of plant and animal species, their ecosystems, and the ecological processes that sustain them.

Enhancing biodiversity by nurturing natural systems provides for a range of ecological services: local and global climate regulation, water supply retention, erosion and sediment control, hazard mitigation, pollination, habitat functions, waste decomposition and treatment, human health and wellbeing, food and

renewable non-food products, and cultural benefits. The natural systems of UBC are a critical component of the University's identity and support community health and wellbeing. Ecological processes cross scales, beyond the boundary of a building site.

Pathway to Net Positive

A net positive approach involves nurturing UBC's natural systems that provide for a range of important ecological services, which are typically undervalued. Biodiversity is an emergent component of the GBAP. Through the Campus Biodiversity Initiative: Research and Demonstration (CBIRD), UBC will conduct research and develop partnerships with regional organizations and will take essential steps to understanding biodiversity on a regional scale and UBC's potential role in the region.

Natural systems are a critical component of the University's identity and support the place and experience component area. The biodiversity that these systems support is part of community health and wellbeing and helps to sustain mental and physical health. The ability of natural systems to help UBC adapt to climate change is an additional co-benefit.

Key Directions

Priority actions for biodiversity focus on developing principals and providing guidance for landscapes and green roofs that consider the ability for the planted installations to support regional biodiversity priorities and provide other co-benefits. Building and landscape projects will need to address ecological assets identified in campus-scale site assessments, bird-friendly design guidelines will require improvement, and linkages to research initiatives will need to be strengthened.

FIVE-YEAR IMPLEMENTATION PLAN - SHORT-TERM PRIORITY ACTIONS

- Review and research national and international best practices, incorporate findings into guidance for current development projects, and use findings to provide background for policy development that guides metrics at a building and landscape scale. (Include a review of Canada's goals based on the Convention on Biological Diversity, Sustainable Sites Initiative (SSI) and Strategic Directions for Biodiversity Conservation in the Metro Vancouver Region¹⁴).
- Engage a consultant(s) to conduct site assessments to identify and assess the ecological assets, endangered and vulnerable species, and environmentally sensitive areas on a campus or neighbourhood scale. Site assessment reports will be used to inform individual project designs.
- Establish partnerships between research and operations through participation in CBIRD and related Level 1 and 2 SEEDS projects.
- Identify and monitor key biodiversity metrics at the site and building scale to determine baseline conditions and rates of change based on research studies and crowd-sourcing (e.g., YardMap, eBird, BirdVis, iTree, etc.).
- Develop a set of principles for landscapes and green roofs that consider the following: 1) ability to adapt to climate change, 2) ability to attract pollinators, 3) reduction of invasive species, 4) microclimate suitability (sun, shade, etc.), 5) ability to support passive solar strategies (e.g., provide shade, reduce wind), 6) campus character zones and irrigation zones (green or brown areas), and 7) regional biodiversity priorities.
- Determine site-specific biodiversity requirements for each development project based on the neighbourhood-wide site assessments and principles identified above.
- Reflect the CBIRD vision and values in policy development.
- Based on review of the Library Gardens SSI pilot project, investigate the adoption of the Sustainable Sites Initiative as the required rating system for significant landscape projects.

TARGETS AND INDICATORS

Target: Require 100% compliance to UBC Bird Friendly Design Guidelines for Buildings for new institutional buildings by 2020.

Indicator: Increase opportunities to provide habitat for birds, pollinators and other species.

Note that, based on foundational studies and data gathering identified in the GBAP actions, further targets and indicators will be integrated into future updates of the GBAP.

¹⁴ Working Together for the Georgia Basin. Strategic Directions for Biodiversity Conservation in the Metro Vancouver Region (2008).