

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program  
Student Research Report

**Institutional Policy Report: UK Case Study**

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## Executive Summary

This report will outline the current biodiversity action plan frameworks of two universities located in the United Kingdom: University of Sheffield and Leeds University. I have chosen to focus on the UK because they have a progressive and comprehensive biodiversity policy. The two chosen frameworks can be used to help inform The University of British Columbia's (UBC) future biodiversity plans and direct the UBC campus towards a more sustainable future.

The first step of this research involved a review of the overarching biodiversity frameworks of the United Kingdom and European Union that have informed and guided the local level policy, followed by a review of the frameworks specific to the University of Sheffield and Leeds University. While institutions share many characteristics, each also has unique challenges that must be considered when developing its biodiversity plan and policy. The following comparison of the two chosen plans focuses on the contrasting approaches of these biodiversity action plans and their unique aspects and approaches, in the hopes that these frameworks can help inform the creation of a biodiversity policy at UBC that caters to the individual needs of UBC and its natural environment.

## Background and Outline of Current Report

This Institutional policy review will focus on the United Kingdom's current biodiversity framework and how it has influenced the creation of specific biodiversity plans, particularly for University campuses. The report will use two campus Biodiversity Action Plans as case studies to illustrate different approaches and to examine how they can be used to help inform policy on the UBC campus.

As universities are often large plots of land with expansive and diverse land covers, it is beneficial to have strategies in place to ensure that development and growth consider the ecosystems and species that are impacted. "Local action for biodiversity is essential to ensure better conservation status for biodiversity and maintain ecosystem services. In many places the rich biodiversity is still relatively untouched and represents an outstanding asset for local sustainable development." (Cil and Jones-Walters, 2011) This is crucial for UBC as there are ecosystems on campus have rich biodiversity that can still be preserved and enhanced.

This paper includes an outline of Canadian Biodiversity policy frameworks at both the national and regional level as well as a review of EU and UK frameworks in order to provide context and also to provide a broad comparison between the frameworks that are in place in Canada and the UK. The two chosen Universities in the UK have taken different approaches to the development and creation of a campus Biodiversity Action Plan (BAP). I have synthesized the format and content of these plans to provide a summary of what can be included in a BAP and the approaches that should be considered. The policies and frameworks are reviewed with the goal of informing UBC policy makers and planners of the options that are available when implementing a Biodiversity Action Plan on the UBC campus.

## Biodiversity Action Plans: An overview

A Biodiversity Action Plan (BAP) is an internationally recognized program addressing threatened species and habitats and is designed to protect and restore biological systems. The original impetus for these plans can be traced to the 1992 Convention on Biological Diversity (CBD). As of 2009, 191 countries have ratified the CBD, but only a fraction of these have developed substantive BAP documents (Convention on Biological Diversity, 2011).

The principal elements of a BAP typically include:

- preparing inventories of biological information for selected species or habitats
- assessing the conservation status of species within specified ecosystems;
- creation of targets for conservation and restoration
- establishing budgets, timelines and institutional partnerships for implementation.

(Convention on Biological Diversity, 2011)

## Canadian Context

In Canada there are five provinces (New Brunswick, Ontario, Quebec, Manitoba and Nova Scotia) and one territory (Northwest Territories) with specific biodiversity strategies. The Canadian Federal Biodiversity Strategy was created in 1995 in response to the signing of the CBD in 1992; the plan outlines four overarching biodiversity objectives:

1. To raise awareness of biodiversity on campus and the need to maintain and enhance it
2. To maintain and enhance biodiversity on campus through the implementation of the species and habitat action plans
3. To engage staff and students in biodiversity projects and initiatives that will enhance their University experience
4. To provide a new teaching resource through the incorporation of biodiversity survey and monitoring into the curriculum

(Environment Canada, Biodiversity Convention Office, 1995)

This federal strategy has been in existence for over 20 years but it is not mandatory for provinces, municipalities or public bodies to develop their own specific biodiversity strategies. Additionally, the plan has not been updated in over 20 years. Much development has occurred in the field of biodiversity since 1995 and the document has many objectives that are still valid today. However, the approaches and strategies must be brought up to date in order to achieve these federal biodiversity objectives.

## Vancouver Biodiversity Action Plan (2016)

The City of Vancouver's Biodiversity Strategy defines biodiversity as the richness of plant and animal species, their ecosystems and the ecological process that sustain them, including both marine and terrestrial ecosystems within the boundaries of the City. The Biodiversity Strategy

emphasizes the importance of native species and ecosystems, while also recognizing the value of urban habitats such as green roofs and constructed wetlands to help support biodiversity within the City. (City of Vancouver, 2016)

The plan incorporates broad based objectives with strategies and targets in place to achieve the goal of improved biodiversity. It does not draw influence from the typical habitat and species action plans, rather a more theme based approach, outlining more broadly approachable problem areas, is used. This strategy is motivated by Vancouver's Greenest City Action Plan (2010) and the Parks Board Strategic Plan (2012) as driving factors for the creation of a BAP in Vancouver. This is a locally developed policy and does not cite influence from the national or provincial level, as there are no shared objectives or strategies.

The Vancouver BAP is based on 5 broad objectives:

1. Restore habitats and species.
2. Support biodiversity within parks, streets, and other City-owned lands.
3. Protect and enhance biodiversity during development.
4. Celebrate biodiversity through education and stewardship.
5. Monitor biodiversity to track change and measure success.

(City of Vancouver, 2016)

The plan hopes to support dynamic parks and healthy neighborhoods in hopes of creating a sense of place and ecological stewardship. The plan hopes to provide a learning experience for youth and children that the classroom cannot provide, while also allowing adults to participate actively through activities such as invasive species removal or shoreline clean up. The strategy strives to strengthen opportunities to interact and support the local ecosystems across the city. (City of Vancouver, 2016)

## EU and UK Biodiversity frameworks

### The Convention on Biological Diversity (Strategic Plan 2011-2020)

The Convention on Biological Diversity (CBD) began as a biodiversity leader with its creation in December 1993, paving the way for future biodiversity plans. It has 3 main objectives: (1) the conservation of biological diversity; (2) the sustainable use of the components of biological diversity; and (3) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

A new strategic plan has been created to approach the timeline of 2011-2020 globally, with 5 strategic goals and 20 targets. "The rationale for the new plan is that biological diversity underpins ecosystem functioning and the provision of ecosystem services essential for human well-being. It provides for food security, human health, the provision of clean air and water; it contributes to local livelihoods, and economic development, and is essential for the

achievement of the Millennium Development Goals, including poverty reduction” (Convention on Biological Diversity)

The CBD has provided guidance to nations across the world to support and facilitate the creation of biodiversity policy. The support mechanisms include: capacity-building for effective national action, financial resources, partnerships and initiatives to enhance cooperation as well as support mechanisms for research, monitoring and assessment. These support mechanisms are crucial as they help to inform the national level policy, and these national levels plans inform the regional and municipal level plans. The influence of the CBD has helped to guide the UK biodiversity actions plan as they share many of the same strategies and targets.

### EU Biodiversity Strategy (2011-2020):

The strategy begins like most with a definition of what Biodiversity means in the context of this specific strategy. The specific threats to the EU region are also outlined, as different regions face different challenges in terms of biodiversity loss. “The 2020 Biodiversity strategy includes six mutually supportive and interdependent targets that respond to the objectives of the 2020 headline target” (European Union, 2011).

The European Union Biodiversity Strategy was put into place in 2011 with a goal of helping to end global biodiversity loss by 2020. The strategy sets out 6 targets that will help them in achieving their goals.

1. Protect species and habitats
2. Achieve more sustainable agriculture and forestry
3. Combat invasive alien species
4. Maintain and restore ecosystems
5. Make fishing more sustainable and seas healthier
6. Help stop the loss of global biodiversity

(European Union, 2011).

The Strategy was highly influential for the UK BAP and aided in the development of mutual targets for both the EU and the UK.

### UK biodiversity framework (2011-2020):

The *UK biodiversity Framework* covers the period from 2011 to 2020, and was developed in response to two main drivers: the Convention on Biological Diversity’s (CBD’s) *Strategic Plan for Biodiversity 2011-2020*, published in October 2010, and the EU Biodiversity Strategy, released in May 2011. The 20 targets of the Strategic Plan are divided amongst five strategic goals, which are comprehensive and cover nature conservation work as well as areas of biodiversity.

Every Objective is assisted by a corresponding goal; this helps to align collective efforts throughout the UK with international requirements.

- 1. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.**
  - This goal includes targets for public awareness, integrating biodiversity values, improving incentives and sustainable production and use.
- 2. Reduce the direct pressures on biodiversity and promote sustainable use.**
  - This goal includes targets on habitat loss, sustainable fisheries and land use, pollution, invasive alien species, and ecosystems particularly vulnerable to climate change.
- 3. To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.**
  - This goal includes targets for protected areas, and for conservation of wild and domesticated species.
- 4. Enhance the benefits to all from biodiversity and ecosystems.**
  - This goal includes targets for maintaining and restoring ecosystem services, and for benefit sharing.
- 5. Enhance implementation through participatory planning, knowledge management and capacity building.**
  - This goal includes targets for national strategies, participation of indigenous and local communities, improving knowledge, technologies, and mobilisation of financial resources.

(JNCC and Defra, 2012)

The UK Biodiversity Framework acknowledges the constant changes and development within the field of biodiversity. As new evidence and knowledge is created they have committed to reviewing the framework both individually and collectively to maintain a relevant and effective biodiversity plan.

Another crucial part of the Biodiversity Framework is that it encourages municipalities as well as public bodies including universities to develop their own specific action plans in order to contribute to the country's biodiversity goals. This is an important point as distributing the work of biodiversity protection and enhancement to smaller governing bodies can aid in the achievement of the overall strategy targets.

The national expansion of University BAP documents began with the *Natural Environment and Rural Communities Act 2006*, act 40, titled *Duty to conserve biodiversity*, requires that: "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat" (*Natural Environment and Rural Communities Act 2006*, 2006).

The *Natural Environment and Rural Communities Act 2006*, outlines that Act 40 is legally binding for every public body, including universities. Both of the University BAP's analyzed in this document reference Act 40 in being a driving factor in its documents creation in order to enhance and conserve biodiversity.

## Summary of University of Sheffield Biodiversity Action Plan

The University of Sheffield makes it clear that they have a unique ecosystem that requires a plan that is specific to their campus. While the legal compliance is not the main driver of Sheffield's plan it is important to note that universities have a legal obligation to respect biodiversity according to the *Natural Environment and Rural Communities Act*. The UK is the signatory of the international convention of biological diversity; as a signatory they are required to create and enforce national strategies that protect biological diversity. The following diagram from the BAP document is useful in visualizing many levels of policy that have helped influence the creation of the University of Sheffield BAP.



(University of Sheffield, 2012)

The University of Sheffield has approached the production of this document differently to contemporary models. Rather than focusing on the traditional format of Habitat Action Plans and Species Action Plans this document focuses on a range of themes through which biodiversity can be improved, for example, amenity planting and development projects. Objectives and targets have been developed for each theme, and corresponding actions and timescales to achieve these targets have been identified.

The University is committed to maximizing the ecological value of its green space to benefit the wide range of flora and fauna while retaining its functional value. Not only is the amount of green space important but also its biological value and its contributions to the local, regional and national biodiversity targets.

The plan set out objectives and for each objective the plan outlines both targets and actions. Importantly, the plan includes the lead department and corresponding deadlines for each action.

The University's specific objectives are:

- To ensure that a greater emphasis is placed on opportunities to increase and improve biodiversity in university developments
- To develop good quality, ecologically structured and diverse habitat in appropriate locations
- To break down the barriers between green and grey space on the existing estate
- To engage with and educate students, employees and other interested parties
- To provide opportunities for field work for students
- Ensure compliance with section 40 of the NERC Act

(University of Sheffield, 2012)

The plan begins with description and evaluation of the university's green spaces. The term "green space" refers to any part of the University where people can interact and have connection with nature. These include conservation areas, park-like areas and features such as seating with planters, planted trees and shrub beds. The current range of habitat types is limited to urban parkland habitats. The two main habitat types present are: (1) woodland, which is described as semi natural woodland containing planted specimens and non-native naturalized species; and (2) Amenity Grasslands. They identify these amenity grasslands to have very limited biodiversity value in their current state.

### **Amenity Space**

Almost all of the green-space found on campus can be described as amenity space, apart from the woodland and conservation areas. Nine of the university buildings have green roofs, providing nectar to insect pollinators throughout the growing season. The amenity space currently supports wildlife, however there are opportunities to improve their ecological areas while maintaining their primary functions. The objectives for amenity space are to improve the ecological value of amenity space and create a sense of place and uniqueness within the City.

The targets are to replace grassland areas with low level usage floristic grasslands; replace species in shrub and flowerbeds that have little ecological value with species that provide food and nectar; implement ecologically sympathetic ground maintenance regime; and replace trees as they decline with species that provide greater food and nectar services.

## **Employee and Student Engagement**

Engagement will help foster a sense of ownership, and promote of sense of community stewardship. The objectives are to integrate biodiversity into residency by increasing the appreciation of green-spaces and to develop designated areas as educational resources. The targets are to practically engage students into the conservations work and to increase awareness by integration of interpretive communication pieces. The plan designates the Landscape Services Department to develop a community engagement plan that provides for habitat improvement, such as nature trails to increase wider engagement and passive learning. The Department of Landscape is to develop education collateral and learning activities along with Landscape services on an ongoing basis.

## **Development**

The University hopes to foster development that is both functional and friendly to biodiversity. It is argued that this can only be achieved by thoughtful design that is considered from the first stages of planning. They have based the development policies on three vital principles - integral design, mitigation and adding value. These principles can aid in providing habitats for wildlife, allow for lower energy loads, produce less waste and improve the health and well being of the building users.

The development objectives are to ensure that biodiversity is an integral part of the design process in all developments. The targets are to increase net area of green space, ensure that the developments add value to the environment and to mitigate environmental damage. The actions set out are to produce a guidance document that outlines the biodiversity policies and requirements for design teams and contractors; this will be overseen by the Environmental Department.

## **Surveying and monitoring**

The final objective is to establish effective surveying and monitoring of the biodiversity plan. Initial surveys are essential to establishing baseline data, this allows for targets and actions to have the most ecological value. The monitoring is crucial as it allows the success or failure of a project to be reviewed. The first phase of surveys will establish classifications of habitats for the whole campus; the secondary surveys will be site specific where specific ecological aspects will be examined.

(University of Sheffield, 2012).

## Summary of Leeds University Biodiversity Action Plan

The University of Leeds follows a typical biodiversity plan formula that establishes and implements both species and habitat action plans. The biodiversity action plan seeks to fulfill the following objectives:

1. To raise awareness of biodiversity on campus and the need to maintain and enhance it
2. To maintain and enhance biodiversity on campus through the implementation of the species and habitat action plans
3. To engage staff and students in biodiversity projects and initiatives that will enhance their University experience
4. To provide a new teaching resource through the incorporation of biodiversity survey and monitoring into the curriculum

(Dixon et al., 2011)

For the purpose of this Biodiversity Action Plan, Leeds University defines biodiversity as: “Everything that contributes to variety in the living world. This includes habitats as well as diversity species” (Dixon et al., 2011).

The University of Leeds campus plan is comprised of a number of species action plans that cover key species groups and a habitat action plan that covers key habitats for which biodiversity action is recommended. The species and habitat action plans of Leeds University are highly specific to the campus and extremely detailed as to the baseline conditions and the plans objectives and targets. The species and habitats selected are those that are included in the overarching UK Biodiversity action plan.

### **The Birds Species Action Plan**

The plan seeks to improve the habitat for a wide range of birds that inhabit the university campus. Particular attention was paid to the following species:

1. Starling
2. House sparrow
3. Bullfinch
4. Swift
5. Song thrush
6. Dunnock

The objective of this plan is to preserve the existing population and to increase the species' numbers on campus and the surrounding landscape.

### **The mammal Species Action plan**

The plan seeks to enhance the habitat for mammals inhabiting the university campus. Particular attention is paid to two UK Biodiversity priority species: Pipistrelle bats and the European hedgehog. The objective is to preserve existing populations and to undertake measures to raise the numbers.

### **The Amphibian Species Action Plan**

The plan outline seeks to enhance the habitat provisions for amphibians and particular attention is paid to: the common frog, common toad and smooth newt. These species are identified as at risk in the regional biodiversity plan, while the common toad is identified as at risk by the UK biodiversity action plan. The objective is to undertake measure to encourage amphibians on campus and on other university properties.

### **The Invertebrate Species Action Plan**

The plan provides measure to enhance the habitat of a wide range of invertebrate species. It is stated that often invertebrates are underrepresented in biodiversity plans, thus none of these species correspond with the regional or UK biodiversity action plans. Invertebrates are crucial to a functioning and healthy eco-system; they perform a range of functions such as pollination and decomposition as well as prey for bird, mammal and amphibian species. The invertebrate can be encouraged by the creation of microhabitats including ponds, compost heaps, flower borders and shrubs. Although little is known of the population status of invertebrates surveys of butterflies and bees indicate they are experiencing declines.

### **Habitat Action Plan**

The habitat action plan seeks to enhance the management of existing habitats on campus and to encourage the creation of new habitats. Six broad habitats have been included in the action plan:

1. Hedgerows
2. Grassland
3. Woodland and trees
4. Wetland
5. Ornamental planting
6. Green roofs

### **Hedgerows:**

There are very few traditional linear hedgerows on the university campus; it is primarily made up of stands of mainly exotic shrubs. These hedgerows and shrubs provide cover flowers and fruits. The less managed hedgerows are attractive to bird, mammal, amphibian and invertebrate

species that frequently cut hedges. Species rich hedgerows are identified in the UK biodiversity action plan as great importance for biodiversity. The actions set in place include, the replacement of fences for hedgerows, planting of predominantly native species that provide flowers and berries, reduce the cutting and encourage tall herb and grass vegetation.

#### **Grassland:**

Grasslands on university campus tend to be dominated by amenity grassland, with some patches of rough grassland. The grasslands at Leeds University cover 60% of the available green space and tends to have low levels of biodiversity. The actions include: relaxation of management in appropriate areas to allow for taller grasses, the promotion of organic management and the reduction of chemical pesticide and fertilizer use.

#### **Woodland and Trees:**

The trees on the campus play an important role in attracting wildlife by providing nesting and roosting opportunities as well as food sources and routes for movement of across the campus. Trees also play a role in reducing atmospheric pollution and act as wind or shade. Actions include, improving the diversity of stand structure and age class of tree species, new tree planting, retain standing dead-wood for fungi and invertebrates and retaining mature trees.

#### **Wetland:**

On the Leeds campus the wetlands are the most under-represented habitat, the only open water being a concrete pool, which has no ecological value. The creation of ponds and other wetlands are outlined as the single action, which would see an increase in biodiversity. Rough grassland or ditches to encourage movement between the habitats should then link the wetlands. The actions include, identifying suitable locations for wetlands, cluster new wetlands together and maximize their connectivity and integrate biodiversity requirements.

#### **Ornamental planting:**

Currently on the Leeds campus aesthetic value is given priority over biodiversity considerations. The consideration of native species is important, while also establishing a range of canopy heights; it can be a balance of both aesthetic and biodiversity considerations. The actions include: structurally diverse planting, diversity of species, include plants with diversity of food sources, use climbing plants on walls and introduce edible fruiting species.

#### **Green roofs:**

Leeds University has recently realized the potential of green roofs for providing environmental benefits. In addition to the ecological value, they extend roof life and help cool buildings in the summer and insulate in the winter and reduce water run off. The considerable visual appeal is a benefit as it allows for a diversity of building types. The actions include: adding green roofs into all new developments where possible, considering retro-fitting existing flat roofs, prioritizing the planting of native species and incorporating a range of microhabitats.

(Dixon et al., 2012)

## Discussion and Conclusion

The creation of biodiversity policy usually begins at the international and national level. Commitments to improve biodiversity at the national level trigger the creation of local-based plans to combat the many issues facing biological diversity. Governments cannot successfully act alone to ensure the conservation of biodiversity and it is imperative that institutions are acting in support of international conventions and goals. The UBC campus has a unique opportunity as the primary governing body of the campus land to employ policy that is forward thinking and considers the impact of development on biodiversity. It is important to have clear definition of biodiversity as this creates the scope and boundaries of a BAP, a successful BAP also must set out methods to survey and monitor the impacts of the plan to ensure it's effectiveness.

While national targets are crucial, locally developed targets are equally important in order to help local government and policy makers implement approaches that are most relevant to protecting the species and environments that are unique to each region. The multijurisdictional coordination in the UK has allowed for a biodiversity framework that supports national and regional policy makers in the development of both broad and localized targets. The national level policy in Canada is not in the same position in terms of an updated national level framework. In the case of UBC it may be useful to align objectives and targets from the City of Vancouver's Biodiversity Strategy.

The University of Sheffield takes a more comprehensive approach than the University of Leeds Plan as it is broader in scope and less specifically geared towards habitat or species plans. The strength to a more comprehensive approach is that the targets are inclusive so that multiple problem areas are addressed with one target. For example, one target is to "replace species in shrub and flowerbeds that have little ecological value with species that provide food and nectar" (University of Sheffield, 2012); these targets ensures the objectives are met while still maintaining flexibility of replacement species and habitats. This broad based approach has flexibility built into the plan, with specific actions to ensure objectives are achieved. The University of Sheffield outlining of the department in charge of each target and action is an approach that will enhance the ability of the plan to be effectively implemented. As each department has expertise to effectively approach specific actions, this is as a crucial part of successful BAP.

The University of Leeds uses the species action plan and habitat action plan which are the most popular approaches for institutional plans as they address specific problem areas such as targeting specific amphibian species or a specific wetland habitats. The approach of the University of Leeds addresses known and studied problem areas of biodiversity on campus and is effective in addressing these specific areas. The downside of this approach is the rigidity as it

has a highly specific scope to address a select species or habitat. This is effective in addressing known problem areas, but has little ability to adjust to the inherently changing environment and needs of the campus.

Both university BAPs outline the many benefits we see as a result of improved biodiversity. They include health and well-being benefits, as well as educational opportunities for the campus to become an interactive learning environment for students. A University BAP is a great teaching resource to be used, for example, to help develop fieldwork skills in surveying and assessment techniques. By exploring two distinct BAP plans, we can begin to inform and guide the developments of UBC's biodiversity policy. A hybrid approach that straddles both approaches: 1) theme-based and 2) the traditional habitat and species action plan approach. Combining the theme based approach with an integration of specific species and habitat targets will frame the theme-based approach and ensure a focused scope while maintaining flexibility. Species plans can help address known problems, and areas that require specific actions.

It is equally important to have flexibility, as a plan is developed with initial knowledge but as knowledge evolves over time the plan must be able adapt to accommodate new and unforeseen challenges. A broadly based plan is more effective as it is adjustable to the environmental changes and knowledge base improvements. Effective targets require specific categories including species and habitats with directives of departmental responsibilities for the enactment of the plans actions and timelines.

A questionnaire was created as part of my research to understand UBC student's current knowledge and interest in biodiversity policy. This questionnaire results will inform UBC policy makers of the value that students place on biodiversity and their support of the creation of a BAP for UBC. This kind of engagement and consultation will foster a sense of ownership and community stewardship among the UBC student population.

Biodiversity strategies are regionally specific; this is precisely why it is imperative for institutions like UBC to develop strategies and policies to ensure a healthy and sustainable future for the campus. An independent BAP for UBC that compliments the City of Vancouver's objectives will ensure clear and attainable goals and the enhancement of the diversity of species and habitats threatened by development and densification. It is not enough for UBC to improve their environmental performance in areas of waste, energy and transportation, while not enacting a program to address biodiversity. In order to preserve the diversity of UBC's ecosystems we must provide policy development the support and resources required to create a UBC Biodiversity strategy.

## Strategic Suggestions for UBC

After reviewing the UK National framework and two university BAP's, the following items should be included in the process of developing a successful and inclusive BAP for UBC:

- Consultation process with students, faculty and staff (public meetings, questionnaire, focus groups and consult experts) to ensure all stakeholders are represented
- Complete a thorough assessment of current species and habitats
- Hybrid approach - combining theme based approach with specific species and habitats of interest to ensures maximum flexibility
- Communicate clear objectives, targets and actions
- Ensure departments are assigned specific actions that align with their knowledge and expertise
- Set deadlines for departments
- Align objectives with City of Vancouver's Biodiversity Strategy to ensure localized targets are met
- Ensure monitoring and surveying methods are established
- Annual review to ensure effective enactment of strategy and make changes as required

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