



COMPARING SCREENING TOOLS FOR ASSESSMENT OF POTENTIAL ‘OTHER EFFECTIVE AREA-BASED CONSERVATION MEASURES’ IN ONTARIO, CANADA

Paul A. Gray^{1*}, Deanna Cheriton², Noah Gaetz², Paul Lehman³, Jocelyn Sherwood⁴, Thomas J. Beechey⁵, and Christopher J. Lemieux⁶

*Corresponding author: pgray250@gmail.com

¹ Nanaimo, British Columbia, Canada

² Toronto and Region Conservation Authority, Toronto, Ontario, Canada

³ Mississippi Valley Conservation Authority, Carleton Place, Ontario, Canada

⁴ Canadian Wildlife Service, Toronto, Ontario, Canada

⁵ Cambridge, Ontario, Canada

⁶ Department of Geography and Environmental Studies, Wilfrid Laurier University, Waterloo, Ontario, Canada

ABSTRACT

Biodiversity conservation in formally recognized protected areas is the primary intent of Aichi Target 11. In addition to traditional protected areas, Target 11 recognizes a new mechanism, ‘other effective area-based conservation measures’ (OECMs). Since its inclusion in the Aichi Target 11 objective, the OECM category has created considerable confusion and debate, and few examples have been described to date. In this paper, we explore the capacity of OECM screening tools developed by the International Union for Conservation of Nature (IUCN) and the Canadian Council on Ecological Areas (CCEA) to evaluate two potential OECMs located in highly developed urban areas in southern Ontario, Canada. Results reveal that the two sites may qualify as ‘candidate’ OECMs. In a comparative analysis of the two screening tools, we determined that the CCEA’s tool faithfully integrates IUCN guidance and provides additional detail to help practitioners address unique ‘in-country’ social and ecological conditions. In a bio-geo-politically diverse world, the successful translation of high-level guidance into tools designed for application at unique local-national levels of decision-making is critical to successful biodiversity conservation.

Key words: Aichi targets, biodiversity conservation, protected areas, other effective area-based conservation measures, OECMs, screening tool, conservation authorities, governance

INTRODUCTION

Designation of ‘*other effective area-based conservation measures*’¹ (OECMs) is an integral component of Aichi Target 11, but to date little guidance has been developed in support of their inclusion. In 2013, the CCEA² initiated work with federal, provincial and territorial agencies, non-government organizations (NGOs) and independent scientists to develop an ‘in-country’ screening tool to help practitioners evaluate and categorize lands and waters for their potential contribution to Canada’s Biodiversity Strategy Target 1³ and Aichi Target 11 commitments as ‘*protected areas*’

or OECMs (MacKinnon et al., 2015; CCEA, 2018). Concurrently, the World Commission on Protected Areas (WCPA) created a Task Force on Other Effective Area-based Conservation Measures in September 2015 that employed a collaborative process to develop global guidelines for practitioners (IUCN, 2018).

Ontario’s Conservation Authorities (CAs) own and/or manage lands and waters that may qualify as OECMs in some of the most densely populated and modified ecosystems in Canada. In recognition of this potential, the Canadian Wildlife Service – Ontario Region (CWS-

ON) and CAs evaluated 23 properties and property clusters with the CCEA screening tool. Two of the properties that may qualify as 'candidate' OECMs are reviewed in this paper. A comparative analysis of the two screening processes was also completed to determine whether or not the CCEA screening tool faithfully reflects IUCN guidance.

CASE STUDY AREAS

Established in 1946, CAs are mandated to provide, in the area over which they have jurisdiction, "...programs and services designed to further the conservation, restoration, development, and management of natural assets other than gas, oil, coal and minerals" (MNRF, 2017, p.13). Collectively, the CAs own and/or manage 250 conservation areas and other designated sites⁴ (comprised of more than 6,400 individual parcels) that encompass about 146,000 ha, most of which is compositionally and/or functionally important for biodiversity conservation. For example, many CA properties have high ecological integrity, protect species at risk, and are designated as Areas of Natural and Scientific Interest (ANSI),⁵ Provincially Significant Wetlands⁶ and/or Canadian Heritage Rivers.⁷

Although the combined CA holdings represent only 1/10th of 1 per cent of Canada's protected area estate, they are important to the Target 11 commitment because they are located in the Mixedwood Plains Ecozone,⁸ which encompasses many of the country's most significantly modified landscapes and waterscapes. Covering only 8 per cent of the province, it is Ontario's smallest ecozone, and home to about 35 per cent of Canadians and 92 per cent of Ontarians. And yet, despite the massive transformations resulting from human settlement, agriculture and industrial development, the ecozone remains Canada's most biologically diverse landscape-level ecosystem (OBC, 2011).

Morris Island Conservation Area

The Morris Island Conservation Area (MICA) encompasses two adjacent properties located along the Ottawa River shoreline that are managed by the Mississippi Valley Conservation Authority (MVCA) under one plan (Figure 1). One property (34 ha) is owned by the City of Ottawa and the other (43 ha) by Ontario Power Generation (OPG). The MVCA manages the City of Ottawa property under lease⁹ and the OPG property under a license of occupation.¹⁰

Morris Island is comprised of deciduous/coniferous forest and wetland ecosystems (Brunton, 1992; MVCA,

2006). Wildlife species on the property include provincially Threatened Species and Special Concern Species under the *Endangered Species Act* (Statutes of Ontario, 2007), and Federal Schedule 1 Threatened Species and Schedule 3 species of Special Concern under the *Species At Risk Act* (Statutes of Canada, 2002). The site is a provincial ANSI and the City of Ottawa meets its commitment of protecting '*natural urban and rural functions*' under the auspices of its Official Plan (City of Ottawa, 2003). Recreational and educational services include two hiking trails, a wheelchair accessible trail, fishing platforms, a canoe launch and a picnic area.

Colonel Samuel Smith Park

Located on the shoreline of Lake Ontario, Colonel Samuel Smith Park (CSSP) is owned by the Toronto and Region Conservation Authority (TRCA) and managed by the City of Toronto Parks, Forestry and Recreation Department (Figure 2).¹¹ The park is important because it is one of a number of shoreline and aquatic habitat restoration projects under the TRCA's Lake Ontario waterfront program (TRCA, 2003) and portions of it may qualify as an OECM because it is an urban park "...managed primarily for public recreation but which [is] large enough and sufficiently natural to also effectively achieve the in-situ conservation of biodiversity (e.g., wetlands)" and/or an area "...successfully restored from degraded or threatened ecosystems, to provide important ecosystem services but which also contribute to effective biodiversity conservation (e.g., freshwater and coastal wetlands restored for flood protection)" (IUCN, 2018, p.26).

The area was identified for establishment as a park in 1980 (MTRCA, 1980) and a lake-fill program was completed to increase the land area and provide shoreline access to the public. The 78-ha park encompasses 42 ha of Lake Ontario and 36 ha of land and wetland/pond. The Lake Ontario portion includes artificial shoals and reefs designed to enhance fish habitat and an embayment that shelters a marina (TRCA, 2008). Twenty three species of fish inhabit park waters (Buchanan, 1991) while terrestrial and wetland/pond habitats support 256 species of plants that comprise 39 natural and anthropogenic vegetation communities (TRCA, 2014a). Naturally occurring native flora are largely concentrated in coastal meadow and wetland communities. The park provides habitat for 48 breeding vertebrate species as well as staging habitat for thousands of migrating songbirds and waterfowl. Recreational and educational services include hiking trails, outdoor skating, beaches, picnic areas, marina services and fishing.

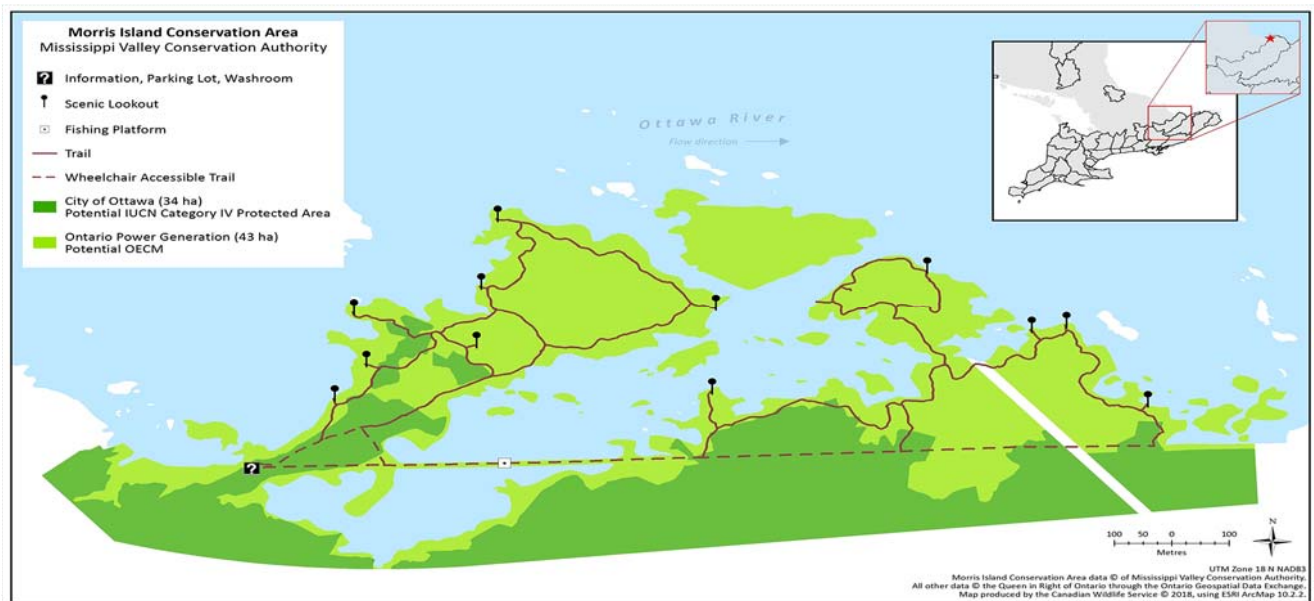


Figure 1. The Morris Island Conservation Area in Ottawa, Ontario, Canada, which may qualify as a 'candidate' protected area (IUCN Category IV) and a 'candidate' OECM.



Figure 2. Colonel Samuel Smith Park located in the western part of Toronto, Ontario, Canada, portions of which may qualify for designation as 'candidate' OECMs.

CCEA AND IUCN SCREENING TOOLS

The CCEA Screening Process

For the purpose of assessing conservation lands and waters as protected areas and/or OECMs, the CCEA developed a user-friendly screening template that serves as an evaluation platform and provides for a

descriptive and numeric record of an area's attributes (MacKinnon et al., 2015; CCEA, 2018). The mechanics of the CCEA screening tool are illustrated with OECM evaluations of the MICA and CSSP. The template has four parts that practitioners complete to describe an area's condition and apply a colour coded (green-yellow-

red) ranking system based on key word statements to identify biodiversity conservation thresholds for 13 criteria (Figure 3).

Beginning in 2015, the CWS-ON and a number of Ontario's 36 Conservation Authorities (CAs) collaboratively tested versions of the evolving CCEA screening tool on 14 CA properties in 2015-2016 (for protected areas only; see Gray et al., 2017) and nine properties and property clusters in 2016-2017 (for protected areas and OECMs; see Gray et al., 2018). The OECM screening tool results for the MICA and CSSP were generated using the following steps:

1. Compare area status and management regime against the descriptions in the screening tool.
2. If the assessed area satisfies all of the criteria (i.e. all 'green') for 'Conservation Effectiveness' (10 criteria) and 'Effectiveness of Protection from Subsurface Resource Activity' (3 criteria), then it is an Aichi Target 11 area.
3. If the area corresponds in a least one respect with a description in a 'red' cell, it is not a protected area or OECM and should not be reported as an Aichi Target 11 site.
4. If the area corresponds in at least one respect to a description in a 'yellow' cell, there is a gap in effectiveness, and it may not qualify as an Aichi Target 11 site. If all apparent gaps in effectiveness can be demonstrated as not real, the area can be qualified as an Aichi Target 11 site. If the responsible organization is not committed to addressing the apparent gaps within a reasonable time frame, the site should not be reported as an Aichi Target 11 site.

5. If the organization is committed to addressing all gaps within a reasonable time frame, the area can potentially be reported as an 'interim' or 'candidate' Aichi Target 11 site until all the gaps are addressed (MacKinnon et al., 2015; CCEA, 2018).

The first six criteria in the 'Conservation Effectiveness' portion of the screening template apply to both protected areas and OECMs (Table 1) while the following four criteria are also designed to help practitioners distinguish between protected areas and OECMs (Table 2). With respect to subsurface rights, properties are evaluated according to their effectiveness at preventing: 1) the granting of subsurface resource rights, 2) the exercise of subsurface resource rights, and 3) impacts on conservation values. Each of these categories is assessed and assigned a ranking as follows: 1) 'green' indicates a potential high level of effectiveness and low risk to conservation values over time, 2) 'yellow' denotes a potential medium level of effectiveness because of concern that improper implementation of the mechanism poses a risk to conservation values over time, and 3) 'red' indicates potential for a low level of effectiveness or high level of risk to conservation values over time.

Comparative Analysis of the IUCN and CCEA Screening Tools

A comparative analysis was employed to assess whether or not the 'in-country' CCEA screening tool (CCEA, 2018) faithfully applies IUCN guidance. The comparison was organized around the methodological 'steps' and 'criteria' described by the IUCN Task Force in IUCN (2018). Key words and phrases were used to identify similarities and differences in the 'steps' and 'criteria' used in the two screening processes.

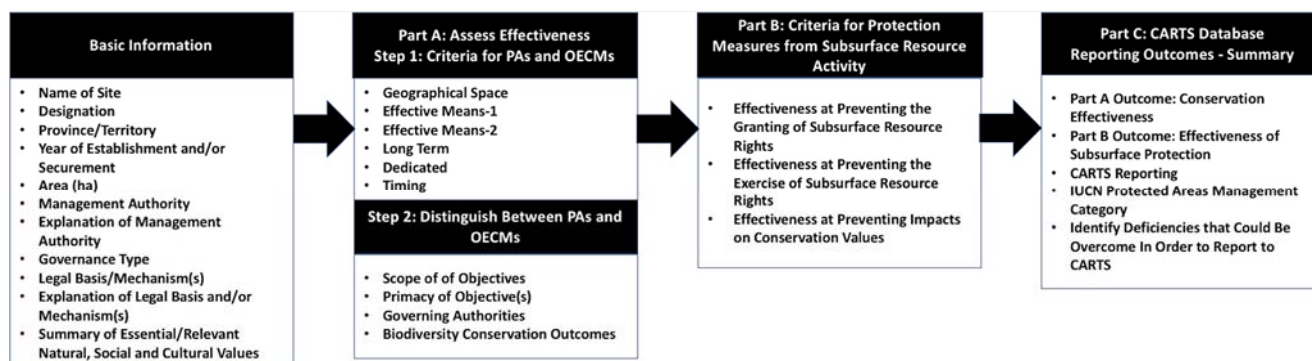


Figure 3. Components of the Canadian Council on Ecological Areas (CCEA) screening template used to document and rank known and potential Aichi Target 11 and Canadian Biodiversity Strategy Target 1 sites (Source: CCEA, 2018).

Table 1. CCAE decision screening tool for Aichi Target 11 protected areas and ‘other effective area-based conservation measures’ (OECMS). All criteria in this table are intended to help assess whether the mechanism should be reported against Target 11, and apply equally to both protected areas and OECMS (Source: CCEA, 2018).

Criteria	Ranking Scheme		
	(A) Sufficiently effective to report as a PA or OECM	(B) May or may not be sufficiently effective to report as a PA or OECM	(C) Not sufficiently effective to report as a PA or OECM
Geographical Space	The geographical space has clearly defined and agreed-upon borders	The geographical space is intended to be clearly defined but may not be easily or widely recognizable	The geographical space is not clearly defined
Effective Means-1	The mechanism(s) has the power to exclude, control, and manage all activities within the area that are likely to have impacts on biodiversity	The mechanism(s) has the power to exclude, control, and manage most activities within the area that are likely to have impacts on biodiversity	The mechanism(s) does not have sufficient power to exclude, control, and manage most activities within the area that are likely to have impacts on biodiversity
Effective Means-2	The mechanism(s) compels the authority (ies) to prohibit activities that are incompatible with the in-situ conservation of biodiversity	The mechanism(s) does not compel the authority (ies) to prohibit activities incompatible with the in-situ conservation of biodiversity but the authority is excluding those activities	The mechanism(s) does not compel the authority (ies) to prohibit activities incompatible with the in-situ conservation of biodiversity and/or incompatible activities are being allowed
Long-term	The mechanism is intended to be in effect for the long term (i.e., in perpetuity)	The mechanism is intended or expected to be in effect indefinitely	The mechanism is not intended or expected to be in effect for the long term
Dedicated	The mechanism can be reversed only with great difficulty	The mechanism can be reversed with moderate difficulty	The mechanism can be reversed without much difficulty
Timing	The mechanism is in effect year-round	-----	The mechanism is not in effect year-round

RESULTS AND DISCUSSION

Morris Island Conservation Area case study

The CCEA criteria rankings indicate that the City of Ottawa property may qualify as an IUCN Category IV¹² protected area and the OPG property as a ‘candidate’ OECM (Table 3). The OPG property may qualify as an OECM because it is a privately owned area managed with a specific conservation objective that is not recognized as a protected area under national legislation (IUCN, 2018). To date, the MICA has not been recorded as protected in the Conservation Areas Reporting and Tracking System (CARTS¹³). The rationale developed for the OPG property is as follows:

Geographical Space: ‘Green’ – The geographical space has clearly defined and agreed-upon boundaries. A metes and bounds survey has been completed and

boundaries are defined by features such as railway tracks, shoreline and fencing.

Effective Means-1: ‘Green’ – Under authority of the management plan, lease and license of occupation, the MVCA has the power to exclude, control and manage all activities within the MICA that are likely to impact biodiversity conservation. The area is part of an urban park managed for public recreation that provides *in-situ* conservation of terrestrial and aquatic biodiversity. Land use is strictly controlled and permitted uses are limited to day-use outdoor recreation and nature extension programs (MVCA, 1987; MVCA, 2006).

Effective Means-2: ‘Green’ – The protection mechanism used to manage the MICA compels the CA to prohibit activities that are incompatible with

Table 2. Decision Screening Tool for Aichi Target 11 Protected Areas and Other Effective Area-based Conservation Measures. All criteria are intended to help assess whether the mechanism should be reported against Target 11 and also help to distinguish between Protected Areas and OECMs (Source: CCEA, 2018).

Criteria	(A) Sufficiently effective to report as a PA	(B) May or may not be sufficiently effective to report as a PA	Ranking Scheme (C) Sufficiently effective to report as an OECM	(D) May or may not be sufficiently effective to report as an OECM	(E) Not sufficiently effective to report as a PA or OECM
Scope of Objectives	The objectives are for the in-situ conservation of biodiversity, or for conservation of a subset of biodiversity or Indigenous cultural values accomplished through the in-situ conservation of biodiversity	The objectives are for the in-situ conservation of a subset of biodiversity, such as a particular species or habitat	The area has objectives consistent with, whether intentionally or otherwise, the in-situ conservation of biodiversity	The area has objectives potentially consistent with, whether intentionally or otherwise, the in-situ conservation of biodiversity	The objectives are neither for, nor consistent with, the in-situ conservation of biodiversity; or objectives do not exist
Primacy of Objectives	Conservation objectives are stated as primary and overriding	Based on stated or implied conservation objectives, allowable and prohibited activities, and evident intent, conservation objectives are primary and overriding, or are given priority when there is conflict among objectives	The stated primary and overriding objectives are clearly consistent, and not in conflict, with in-situ conservation of biodiversity	Based on stated or implied objectives, allowable and prohibited activities, and evident intent, priority is given to objectives consistent, and not in conflict, with the in-situ conservation of biodiversity	Based on stated or implied objectives, allowable and prohibited activities, and evident intent, objectives for, or consistent with, the in-situ conservation of biodiversity may be compromised by conflicting objectives, or do not exist
Governing Authorities	All relevant governing authorities acknowledge and abide by the conservation objectives of the area	Most key, but not all, relevant governing authorities acknowledge and abide by the conservation objectives of the area	All relevant governing authorities acknowledge and abide by a management regime that results in the in-situ conservation of biodiversity	Most key, but not all, relevant governing authorities acknowledge and abide by a management regime that results in the in-situ conservation of biodiversity	Few or no relevant governing authorities acknowledge and abide by the conservation objectives (if any) of the area or by a management regime likely to result in the in-situ conservation of biodiversity
Biodiversity Conservation Outcomes	The area is managed effectively to achieve the long-term in-situ conservation of biodiversity (with associated ecosystem services and cultural values, as appropriate)	The area is managed with the intent of, and is likely achieving, the long-term in-situ conservation of biodiversity (with associated ecosystem services and cultural values, as appropriate), despite possible management shortcomings	Based on clear evidence of conservation outcomes, the long-term, in-situ conservation of biodiversity is being achieved	Based on at least some evidence of conservation outcomes, the traits of the mechanism(s), and allowable and prohibited activities, the long-term, in-situ conservation of biodiversity is likely being achieved	Deficiencies in conservation outcomes, and/or on the traits of the mechanism(s) and allowable and prohibited activities, area is not/not likely, being managed to achieve the long-term, in-situ conservation of biodiversity; or outcome evidence is entirely lacking

biodiversity conservation. The MVCA works with partners to ensure that the integrity of the site is retained and remains accessible to the public (MVCA, 2006). For example, integrated site planning must include permitted land uses and public safety programs, and account for ecological integrity. The area is an ANSI

and the City meets its commitment of protecting '*natural urban and rural functions*' and designated areas in its Official Plan (City of Ottawa, 2003) by carefully managing permitted land uses. The OPG supports the ANSI program and has a long-standing commitment to enhance quality of life in the areas of

Table 3. Application of the Canadian Council on Ecological Areas (CCEA) screening template to assess three properties owned and/or managed by Conservation Authorities in southern Ontario. Potential conservation effectiveness (see Tables 1 and 2) and protection from subsurface resource activity were assessed with evidence-based rationale using a green-yellow-red ranking system to distinguish thresholds of protection.

CCEA Screening Template Attribute		Morris Island Conservation Area (MICA) City of Ottawa Property	Ontario Power Generation Property (OPG)	Colonel Samuel Smith Park Toronto and Region Conservation Authority Property
Conservation Effectiveness	Geographical Space	The geographical space has clearly defined and agreed upon boundaries	The geographical space has clearly defined and agreed upon boundaries	The geographical space is intended to be clearly defined but may not be easily or widely recognizable
	Effective Means -1	The MICA has the power to exclude, control, and manage all activities within the area that are likely to have impacts on biodiversity	The MVCA has the power to exclude, control, and manage all activities within the area that are likely to have impacts on biodiversity	The management authority has the power to exclude, control, and manage all activities within the area that are likely to have impacts on biodiversity
	Effective Means -2	The protection mechanisms compel the CA to prohibit activities that are incompatible with the <i>in-situ</i> conservation of biodiversity	The protection mechanisms compel the CA to prohibit activities that are incompatible with the <i>in-situ</i> conservation of biodiversity	The mechanism(s) does not compel the authority (ies) to prohibit activities incompatible with the <i>in-situ</i> conservation of biodiversity but the authority is excluding those activities
	Long-term	The mechanism is intended or expected to be in effect in perpetuity	The mechanism is intended or expected to be in effect indefinitely	The mechanism is intended or expected to be in effect for the long-term (i.e., in perpetuity)
	Dedicated	A multi-partner approach to the maintenance and protection of the city's property, which is zoned as 'Parks and Open Space'	A multi-partner approach to the maintenance and protection of the property and the license of occupation suggest that the mechanism can be reversed with moderate difficulty	The mechanisms can be overturned or rescinded only great difficulty
Protected Area/OECM Distinguishing Criteria	Timing	The mechanism is in effect year-round	The mechanism is in effect year-round	The mechanism is in effect year-round
	Scope of Objectives	The objectives are for the <i>in-situ</i> conservation of biodiversity	The property has objectives consistent with, whether intentionally or otherwise, the <i>in-situ</i> conservation of biodiversity	The property has objectives consistent with, whether intentionally or otherwise, the <i>in-situ</i> conservation of biodiversity
	Primacy of Objectives	The first priority is to ensure that the site is planned and managed to protect and sustainably manage biodiversity	The first priority is to ensure that the site is planned and managed to protect and sustainably manage biodiversity	Based on stated or implied objectives, allowable and prohibited activities, and evident intent, priority is given to objectives consistent, and not in conflict, with the <i>in-situ</i> conservation of biodiversity
	Governing Authorities	All relevant governing authorities acknowledge and abide by the conservation objectives of the area	All relevant governing authorities acknowledge and abide by the conservation objectives of the area	All relevant governing authorities acknowledge and abide by the conservation objectives of the area
	Biodiversity Outcomes	The intended conservation outcome is likely to be sustained	The intended conservation outcome is likely to be sustained	Based on at least some evidence of conservation outcomes, the traits of the mechanism(s), and allowable and prohibited activities, the long-term, <i>in-situ</i> conservation of biodiversity is likely being achieved
Subsurface Rights	Effectiveness of Protection from Subsurface Resource Activity	Mining rights have been withdrawn from prospecting, staking, sale, and lease	Mining rights have been withdrawn from prospecting, staking, sale, and lease	Mining rights have been withdrawn from prospecting, staking, sale, and lease
Outcome		May qualify as a 'candidate protected area' (IUCN Category	May qualify as a 'candidate' OECM	May qualify as a 'candidate' OECM

operation where it helps to provide educational services for visitors.

Long-term: ‘Yellow’ – A long-term objective of the MVCA management plan is to provide visitors with examples of sustainable practices (e.g. demonstration sites of shoreline buffering techniques and wildlife habitat creation using brush piles and rotting logs) and to maintain the site in a condition that demonstrates a ‘practice what we preach’ philosophy (MVCA, 2006). A ‘green’ ranking requires that the protection “...*mechanism is intended to be in effect for the long term (i.e., in perpetuity)*” while a ‘yellow’ ranking states that the “...*mechanism is intended or expected to be in effect indefinitely*” (CCEA, 2018; emphasis added). Given that the long-term nature of the protection measure for the MICA is implied, a more explicit commitment to protection in perpetuity in the management plan would elevate the ranking for this criterion from ‘yellow’ to ‘green’.

Dedicated: ‘Yellow’ – A multi-partner approach to the maintenance and protection of the OPG property and the license of occupation suggest that the mechanism can be reversed with moderate difficulty. Although multiple partners are involved in the maintenance and

protection of the properties and the area is an ANSI, an explicit statement about the strength of the protection mechanism for the OPG property would help elevate this ranking from ‘yellow’ to ‘green’.

Timing: ‘Green’ – The management mechanism is in effect year-round.

Scope of Objectives: ‘Green’ – For the OPG property, the area has objectives consistent with, whether intentionally or otherwise, the *in-situ* conservation of biodiversity. A key *in-situ* management objective for the MICA is to “*develop and maintain opportunities to foster an appreciation of the natural environment and understanding of water management*”, and land use (e.g. trail establishment) must not jeopardize the ecological integrity of wetlands and other natural features (MVCA, 2006). For example, Best Management Practices¹⁴ guidelines are used to ensure protection of aquatic habitats and shoreline vegetation (MVCA, 2006).

Primacy of Objectives: ‘Green’ – The first priority is to ensure that the site is planned and managed to protect natural features and ensure they are used sustainably (MVCA, 2006). The CA requires that trail



View of the interior bays and shoreline of the Morris Island Conservation Area, Ottawa, Ontario, Canada © Mississippi Valley Conservation Authority

planning, placement and maintenance be approved and monitored as part of site planning processes that include application of Best Management Practices to ensure that sensitive natural areas such as erosion-susceptible steep slopes, shoreline ecosystems, wetlands and significant wildlife habitats are avoided. The CA guides visitor behaviour with safety-related signs (e.g. canoe launch safety sign), trail markers, interpretative signs, and signs that list prohibited activities (e.g. no overnight camping, no hunting, no power boats and no motorized vehicles).

Governing Authorities: ‘Green’ – A key characteristic of an OECM is that property owners are involved in the assessment and management of the site (IUCN, 2018). All relevant governing authorities acknowledge and abide by the conservation objectives developed for the area. The City of Ottawa, OPG and the MVCA work in partnership to ensure that the integrity of the site is retained and that it remains accessible to the public. The MICA provides an excellent example of collaborative conservation involving the public and private sectors to protect and manage a significant ecological area.

Biodiversity Conservation Outcomes: ‘Yellow’ – The intended conservation outcome is likely to be sustained because the property is managed to simultaneously provide low-impact recreation opportunities and long-term *in-situ* biodiversity conservation. Aspects of two issues require attention - long-term monitoring and enforcement of regulations. The MVCA has monitored and maintained the site since 1987. Biodiversity studies have been completed for the area (e.g. Brunton, 1992) and long-term monitoring studies have been recommended (MVCA, 2006). The conservation area has been open for almost 30 years and the CA has not detected any notable ecological degradation. As a safeguard the CA engages a group of volunteers to closely monitor activity and advise staff of potential problems. As per the management plan, results-based monitoring of the MICA’s biodiversity is recommended and requires implementation. Enforcement issues requiring attention include the elimination of unacceptable behaviour by a few visitors who damage trails with unauthorized use of motorized vehicles and vandalize the gates (MVCA, 2006). Key challenges include securement of funding for monitoring programs.

Effectiveness of Protection from Subsurface Resource Activity: ‘Green’ – The mining rights for the MICA have been withdrawn from prospecting, staking, sale and lease under the auspices of the *Mining Act* (Statutes of Ontario, 1990a).

Colonel Samuel Smith Park case study

The rankings generated with the CCEA template indicate that portions of the CSSP may qualify as ‘candidate’ OECMs (Table 3). To date, the property has not been recorded as protected in Canada’s CARTS. The rationale developed for CSSP is as follows:

Geographical Space: ‘Yellow’ – A metes and bounds survey with registered boundaries on title has been completed and the geographical space has clearly defined and agreed upon borders. About 58 per cent of the terrestrial portion of the park is devoted to biodiversity conservation and the rest to recreation. Given the extent of the recreational footprint, biodiversity conservation outcomes will not be achieved in the entire park. However, the CA could elect to strengthen the protection of the existing pond/wetland complex, the coastal meadow, and other key habitats by implementing the TRCA zoning classification system, which includes a Nature Reserve Zone (NRZ) designation. A NRZ encompasses “...significant or unique natural features, landforms, species or habitats that require careful management to ensure long-term protection” (TRCA, 2015, p.23).

Effective Means-1: ‘Green’ – The management authority has the power to exclude, control and manage all activities that are likely to impact biodiversity. CA planning policies provide for conservation, infrastructure and recreational use (TRCA, 2014b). The management authority complies with a number of provincial and federal statutes that provide for the protection of species populations and habitats, including the provincial *Fish and Wildlife Conservation Act* (Statutes of Ontario, 1997) and the federal *Fisheries Act* (Statutes of Canada, 1985). The property was created by active restoration of degraded ecosystems to provide important ecosystem services, and biodiversity has increased significantly in the last four decades. But given the size of the recreational footprint in the park, the long term management of people, their dogs, and wildlife will require ongoing application of a balanced suite of recreation-oriented rules and regulations that complement rules and regulations designed to protect biodiversity.

Effective Means-2: ‘Yellow’ – The protection mechanism used to manage CSSP compels the CA to prohibit activities that are incompatible with biodiversity conservation where biodiversity is a stated objective. Activities are managed under *The Living City Policies* (TRCA, 2014b), issued under the authority of Section 20 of the *Conservation Authorities Act* (Statutes of Ontario, 1990b), and endorsed by TRCA’s Board (28

November 2014). The CA could strengthen its commitment to biodiversity conservation by establishing NRZs around key habitats where public access is “....*limited to authorized trails for low impact activities such as walking, hiking, cycling, leashed dog walking, and cross country skiing. A complete ban on any public use is also possible in this zone, based on the need for natural or cultural heritage protection*” (TRCA, 2015, p.23).

Long-term: ‘Green’ – The mechanisms are intended to be in effect for the long term (i.e. in perpetuity).

Dedicated: ‘Green’ – The mechanisms can be overturned or rescinded only with great difficulty.

Timing: ‘Green’ – The mechanisms are in effect year-round.

Scope of Objectives: ‘Green’ – The area has objectives consistent with, whether intentionally or otherwise, the *in-situ* conservation of biodiversity. These objectives are the foundation of TRCA’s regulatory program, and their application in policy reflects the diversity of landscapes, land uses, and urbanizing nature of TRCA’s watersheds¹⁵ and the Lake Ontario shoreline. The administration of TRCA’s regulations is based on, but not limited to, the following objectives:

- Prevent development, interference, or alterations that negatively impact natural landform features, functions and systems.
- Protect, manage or restore lands within the watershed and Lake Ontario ecosystems for the purpose of maintaining or enhancing the natural features, natural system and hydrologic and ecological functions within valley and stream corridors, wetlands, watercourses, shorelines and hazardous lands, and the relationships among them.
- Prevent development, interference and alterations that affect the control of flooding, pollution, erosion, dynamic beaches or conservation of land within valley and stream corridors, wetlands, watercourses, hazardous lands and along the Lake Ontario shoreline (TRCA, 2014b).

Primacy of Objectives: ‘Yellow’ – The stated primary and overriding objectives are consistent, and not in conflict, with the *in-situ* conservation of biodiversity. A key strategic objective of *The Living City Policies* is the protection and restoration of natural areas that provide habitat for plant and animal species, improve air quality and provide opportunities for the

enjoyment of nature and outdoor recreation (TRCA, 2014b). Establishment of NRZs around key habitats to control human/dog access “...*based on the need for natural or cultural heritage protection*” would elevate this ranking to ‘green’ (TRCA, 2015, p.23).

Governing Authorities: ‘Green’ – All relevant governing authorities acknowledge and abide by management regimes that result in the *in-situ* conservation of biodiversity. Examples of governing legislation include the *Conservation Authorities Act* (Statutes of Ontario, 1990a), *Planning Act* (Statutes of Ontario, 1990b), *Fish and Wildlife Conservation Act* (Statutes of Ontario, 1997), *Fisheries Act* (Statutes of Canada, 1985) and the *Clean Water Act* (Statutes of Ontario, 2006). Important land use policies include the *Provincial Policy Statement* under the *Planning Act* (MMAH, 2014) and *The Living City Policies for Planning and Development* (TRCA, 2014b). The TRCA’s mission is to work with its partners to ensure that decisions about the allocation and use of natural assets are based on a foundation of healthy rivers and shorelines, greenspace, biodiversity and sustainable communities (TRCA, 2014b).

Biodiversity Conservation Outcomes: ‘Yellow’ – On the basis of some evidence collected to date (e.g. the multi-decadal increase in terrestrial and wetland species numbers) the intended conservation outcome is likely to be sustained in the long-term. Conservation effectiveness is being measured with watershed, groundwater, and natural heritage studies and monitoring programs (TRCA, 2014a). In addition, the TRCA promotes adaptive management through performance monitoring and evaluation of measures to avoid, mitigate and compensate for the effects of development and infrastructure on natural assets (TRCA, 2014b). Two consequential issues requiring attention result from hiker movement patterns and the behaviour of off-leash dogs (TRCA, 2014a). Off-trail hikers trample vegetation and disturb animals that may be feeding or protecting their young, which is exacerbated by off-leash dogs that can aggressively flush and harass animals (e.g. George & Crooks, 2006; Langston et al., 2007; Bowes et al., 2018). Remedial actions include protection of key habitats in NRZs, extension programs, signage, strategically placed plantings along trails and a requirement that all dogs be leashed, particularly during the spring, summer and fall seasons. Given the impact of free-ranging dogs on wildlife, it is unlikely that any part of the park would qualify for OECM status in the absence of on-leash regulations. Inclusion of the Lake Ontario portion of the park as a zone that may qualify as an OECM requires an



View of the wetland in Colonel Samuel Smith Park, Toronto, Ontario, Canada © Toronto and Region Conservation Authority

assessment of habitat condition, including the contribution of the shoal and reef habitats to biodiversity conservation.

Effectiveness of Protection from Subsurface Resource Activity: 'Green' – The mining rights for the CSSP have been withdrawn from prospecting, staking, sale and lease under the auspices of the *Mining Act* (Statutes of Ontario, 1990a).

Challenges and opportunities associated with effective in-situ biodiversity conservation in candidate OECMs in highly transformed terrestrial and inland water ecosystems

These case studies were prepared to inform discussions about the designation of OECMs in urban conservation areas and parks. Key questions about their suitability for protection status include their size and condition, and the management regime used to maintain or enhance that condition, including use by people. For example, general ecological principles suggest that larger connected areas are preferable to smaller isolated areas, properties with high ecological integrity contribute more to biodiversity conservation than highly modified or degraded sites, and areas in which visitor levels and related activities are strictly managed to avoid or minimize negative effects are preferred over

areas where management authorities do not or cannot control visitor numbers or their behaviour patterns.

Canadian jurisdictions protect a large number of small areas (i.e. less than 1,000 ha) (Woodley, 2015) and the Mixedwood Plain Ecozone in southern Ontario is no exception where the average size of formally protected areas such as provincial and national parks, conservation reserves and wilderness areas is 668 ha (MNR, 2011). Many types of urban parks, parkettes, public gardens, playgrounds, sports fields, fairgrounds and golf courses do not conserve biodiversity at levels that significantly contribute to ecological integrity at landscape and waterscape levels of planning. However, even though CA conservation areas and parks tend to be smaller in the Canadian context (e.g. the 23 CA properties and property clusters examined during this project ranged from 14 to 6000 ha), many encompass and protect important biological and geological features and contribute to biodiversity conservation in large urban areas where human populations continue to grow and recreational pressures are moderate to high and increasing. For example, the MICA and CSSP encompass habitats that support populations of local species, some rare or threatened species, and migratory species where thousands of birds visit in spring and fall to feed and/or rest.

The contribution of these properties to biodiversity conservation depends on the effectiveness of *in-situ* protection and maintenance of ecological integrity (condition) in the protected area and the external effects of the surrounding urban-scape. The case study properties are part of larger networks of conserved areas and/or ecosystems where other restoration or conservation initiatives are underway. The ecological integrity of the MICA properties has remained intact since the MVCA assumed responsibility for the area more than 40 years ago and continues to provide habitat for species inhabiting the wetland and forested ecosystems found there (MVCA, 2006). The MICA is connected to an aquatic network (e.g. the Ottawa River) and a terrestrial network of parks and greenspace areas owned and/or managed by the CA, City of Ottawa, OPG and the National Capital Commission. The CSSP resulted from an 'infill' project in the 1970s, is one of a number of rehabilitated sites along the significantly modified Lake Ontario shoreline, and now encompasses 42 ha of Lake Ontario with shoal and reef habitats, and 36 ha of terrestrial and wetland habitat of which 21.3 ha provide natural cover, including 10.8 ha of forest, 4.1 ha of coastal meadow, 3.2 ha of beach, 1.6 ha of successional habitat, 0.9 ha of aquatic (pond) and 0.7 ha of wetland (TRCA, 2003; TRCA, 2014a).

Many types of potential OECMs identified by the IUCN (2018) were initially established for an eclectic variety of land uses in jurisdictions around the world, including forest 'set-asides', urban parks, university research programs, military operations, restoration, fisheries management and sport hunting. Regardless of the primary objective(s), an OECM designation requires that the property be "...governed and managed over the long-term in ways that deliver the effective *in-situ* conservation of biodiversity" (IUCN, 2018, p.14). Although primary activities are not intended to negatively affect biodiversity, it is inevitable that some impacts will occur. For example, Jones et al. (2018) report that just 42 per cent of the global protected area estate is free from measureable human pressure. Accordingly, it is incumbent upon governing authorities to identify known and potential issues and factor them into the OECM evaluation process. For example, does the infrastructure footprint and/or permitted activities in the area militate against successful biodiversity conservation, or are techniques to mitigate these impacts available and practical? Issues resulting from recreational activities in the MICA and CSSP are likely mitigatable, and while the infrastructure footprint in CSSP is significant, the property does provide measureable wildlife habitat along the edge of Canada's largest city.

Jurisdictions committed to ecological integrity and the provision of optimal recreational opportunities work to ensure that human impacts do not reduce or even nullify the contribution of potential sites to effective *in-situ* biodiversity conservation. Our experience with assessing potential OECMs in highly populated and developed areas underscores the importance of understanding the baseline condition (ecological integrity) of these areas. The application of science-based thresholds for human impacts needs more research in a Canadian context to help practitioners working with both the IUCN and CCEA screening tools.

Commitment to biodiversity conservation assumes that participating jurisdictions will identify, designate and manage networks of high quality protected areas. In this regard, practitioners require reliable assessment tools to eliminate proposed sites with little or no biodiversity conservation value from further consideration, identify potential sites requiring remedial action, and formally add qualified protected areas/OECMs to the protected area estate. To this end, the CCEA tool helps practitioners identify or confirm effective policy and planning mechanisms, issues requiring attention, and new and emerging knowledge (i.e. scientific, traditional and/or local knowledge) needs and priorities. Our experience with these two case studies reinforces our belief that collaboration and access to all of the germane information about a site are key requirements for a fair and robust assessment. The importance of baseline data and information should not be underestimated because knowledge provides the foundation for a critical review of the policies and plans used to guide *in-situ* decision-making. In addition, we strongly recommend that agencies employ peer review as part of the screening process.

Similarities and differences between the IUCN and CCEA screening processes

There are more similarities than differences between the IUCN (2018) and CCEA (2018) screening processes, as follows:

IUCN Step 1: "*For cases in which a party other than the governing authority is managing the process, confirm the interest of the governing authority in having the area evaluated and potentially reported as an OECM.*" This is an important step in the Canadian system as well, which encourages involvement by the property owner(s) and/or governance authority(ies) (CCEA, 2018).

IUCN Step 2: "*Review and discuss the guidelines and the screening criteria, and assemble a review team of people familiar with the variety of approaches being*

taken locally to area-based conservation.” Like protected areas, candidate OCEMs in Canada are shaped by a unique mix of social, cultural, political and ecological qualities that more often than not require the scrutiny and assessment of an integrated review team with knowledge of the property’s condition and a sound understanding of the management regime employed to protect it. In this study, the two candidate OCEMs were assessed by a team of owners/managers, practitioners, academics and an outside expert who provided an insightful and substantive review of the project team’s initial assessments.

IUCN Step 3: “*Compile maps and information on potential OCEMs.*” The two candidate OCEMs were

assessed using data and information retrieved from the Conservation Authority Lands Database, baseline values maps, scientific and technical reports and publications, and policy statements and plans obtained from CA staff and through web-based literature searches.

IUCN Step 4: “*Apply the four screening criteria to each area being assessed as an OECM.*” The CCEA screening tool is comprised of 13 criteria that, with three exceptions, match the essential conservation criteria outlined in IUCN (2018) (Figure 4 and Supplementary Online Material):

Criterion 1: “*Ensure that the area is not already recorded as a protected area.*” The CCEA screening tool requires that assessors declare property status.

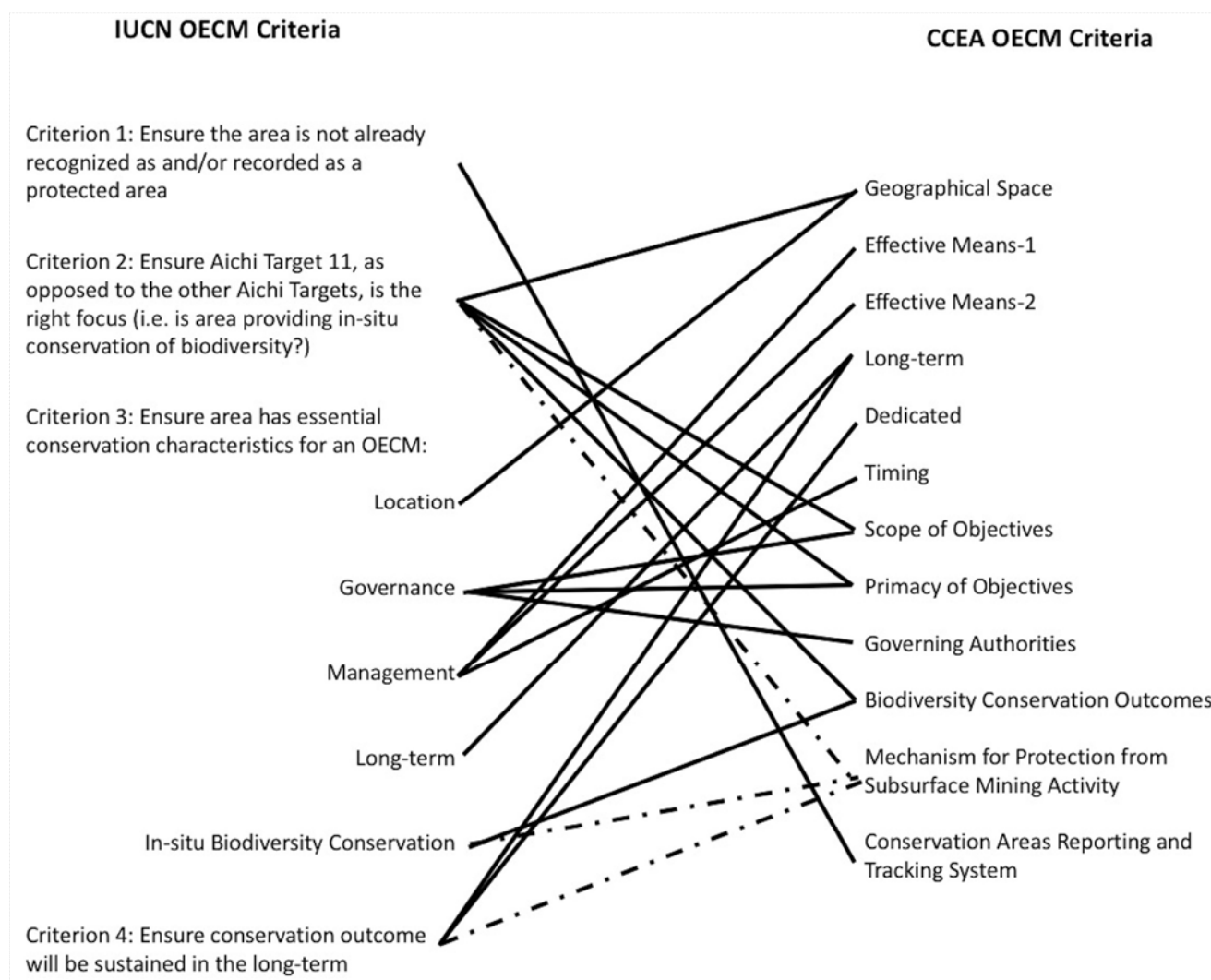


Figure 4. The relationship between IUCN and CCEA criteria used to evaluate areas that may qualify for OECM status. Note that IUCN Criterion 1 matches with Canada’s Conservation Areas Reporting and Tracking System (CARTS), which is a separate tool and not a CCEA criterion. While the IUCN process does not address subsurface resource use, we have flagged at least three IUCN criteria (dotted lines) that are relevant (and there are likely more).

Criterion 2: “*Ensure that Aichi Target 11, as opposed to other Aichi Targets, is the right focus.*” The CCEA evaluation tool requires a summary evaluation of the essential and relevant natural, social and cultural values of the candidate property, and ranks agency commitment to protect the ecological integrity of the property (CCEA, 2018). Additionally, CCEA guidance (CCEA, 2018, p.68 and Appendices 2 and 3) reiterates IUCN guidance (IUCN, 2018, p.23 and Appendices 2 and 3) to determine if Aichi Target 11 is the most relevant target against which to evaluate the conservation measure.

Criterion 3: “*Ensure that the area has the essential conservation characteristics of an OECM.*” Nine of the CCEA criteria match the essential conservation criteria outlined in IUCN (2018) for location (‘geographical space’), governance (‘scope of objectives’, ‘primacy of objectives’, and ‘governing authorities’), management (‘effective means-1’, ‘effective means-2’, and ‘timing’), long-term (‘long-term’), and *in-situ* biodiversity conservation (‘biodiversity conservation outcomes’).

Criterion 4. “*Ensure that the conservation outcome can be sustained.*” CCEA criteria (i.e. ‘long-term’, ‘dedicated’ and ‘subsurface resource activities or dispositions’) are intended to demonstrate an owner’s/manager’s commitment and capacity to sustain the candidate property as a protected area or an OECM. The IUCN OECM Task Force does not directly address subsurface activities such as mining while the CCEA tool is designed to recognize all areas that are effectively protected against the impacts of subsurface resource use, regardless of governance type, and to encourage the application of Best Management Practices that provide long-term security against such threats (CCEA, 2018). The CCEA approach responds to and supports a number of IUCN policies, including IUCN Recommendation 2.82 (protection and conservation of biological diversity of protected areas from the negative impacts of mining and exploration) (IUCN, 2000) and Recommendation WCC-2016-Rec-102-EN (protected areas and other areas important for biodiversity in relation to environmentally damaging industrial activities and infrastructure development) (IUCN, 2016).

IUCN Step 5: “*Identify areas that meet all four criteria as OECMs, subject to more detailed review involving empirical evidence. Report the areas that meet all the criteria, including consent from the governance authority, to the WDPA.*” The CCEA has developed a screening template (see CCEA, 2018, Appendix 6) that requires detailed explanation of responses to screening

questions, including consideration of available empirical evidence. Selected Canadian authorities (e.g. provincial/territorial governments) evaluate and report areas recommended for recognition as protected areas and OECMs in CARTS.

IUCN Step 6: “*For those areas that do not meet the criteria, record reasons for decisions against each criteria. This information may be helpful in identifying whether any changes to the governance or management might lead to the area qualifying as an OECM. Where desired, reapply Steps 1-5, as appropriate.*” One advantage of the CCEA’s colour coded key word ranking system is that it helps practitioners identify management thresholds with which to make and defend their decisions (see Tables 1 and 2). It also explicitly asks evaluators to identify any deficiencies that need to be overcome in order to report a site as a protected area or OECM (see CCEA, 2018, Appendix 6). Both the IUCN and CCEA task teams recognize that rationalizing the reasons for a decision provides an important learning tool for practitioners going forward.

The IUCN and CCEA OECM screening processes are based on the same foundation of CBD commitments and definitions, and assess effectiveness for the same outcome, *in-situ* biodiversity conservation. For example, the same key words are used by the CCEA and the IUCN to formulate screening tool criteria contained in their respective guidance documents. Given the extent of bio-geo-political diversity in the world, the IUCN’s support for development of country- and region-specific tools to help practitioners translate high-level global guidance to in-country assessment protocols that reflect the unique local-national conditions that shape biodiversity conservation is strategic and progressive.



Causeway entrance at the Morris Island Conservation Area during autumn © Mississippi Valley Conservation Authority

CONCLUSIONS

The CCEA's screening process includes a robust tool that practitioners can use to assess and rank potential OECMs in the Canadian conservation context. The case studies illustrate how detailed site assessments and/or the results of *in-situ* monitoring programs help practitioners determine the condition of and capacity for biodiversity conservation. They demonstrate the importance of a strong commitment to the process, collaborative teamwork, access to spatial and temporal data and information, and support for national and international reporting processes. The CCEA screening tool faithfully integrates IUCN guidance developed by the Task Force (IUCN, 2018) and beyond (e.g. subsurface resource activity). The case studies presented here highlight the importance of Parties developing or adopting a detailed country-level screening tool tailored to the unique geo-political and ecological conditions in which proposed OECMs are located. Finally, the case studies illustrate the potentially important contribution that relatively small areas can make to biodiversity conservation in urban settings, where pockets of remnant natural ecosystems and restored sites add to the ecological diversity of the urban-scape and the wider environmental matrix to enhance social connectivity with nature.

ENDNOTES

¹Other Effective Area-Based Conservation Measures (OECMs): An OECM is "A geographically defined space, not recognized as a protected area, which is governed and managed over the long-term in ways that deliver the effective and enduring in-situ conservation of biodiversity, with associated ecosystem services and cultural and spiritual values" (CCEA, 2018, p.12). A candidate OECM has been identified as a potential OECM by the governance authority and is being assessed against OECM criteria. This may also refer to a potential OECM that is being assessed, has not met the OECM criteria, and is being worked on with a view of being recognized and reported as an OECM (IUCN, 2018).

²The CCEA was established in 1982 as an independent national organization to facilitate and assist Canadians with the establishment and management of a comprehensive network of protected areas representative of Canada's ecological diversity.

³2020 Biodiversity Goals and Targets for Canada, Goal A, Target 1: "By 2020, at least 17 percent of terrestrial areas and inland water, and 10 percent of coastal and marine areas, are conserved through networks of protected areas and other effective area-based conservation measures" (Government of Canada, 2016, p.2).

⁴In 2015, CWS-ON compiled a database of 6,400 parcels of land owned and/or managed by Conservation Authorities (e.g. Fee Simple and Conservation Easements) that encompass about 146,000 ha. These parcels are managed/protected as 250 conservation areas and other designated sites.

⁵ANSI: An Area of Natural and Scientific Interest is an official designation used by the provincial Government of Ontario to recognize contiguous geographical regions within the province that have geological or ecological features that are significantly representative provincially, regionally or locally. See <https://www.ontario.ca/data/areas-natural-and-scientific-interest>.

⁶PSW: Provincially Significant Wetlands are areas identified by the Province as being the most valuable wetlands. They are determined with a science-based ranking system known as the Ontario Wetland Evaluation System. This Ministry of Natural Resources and Forestry framework provides a standardized method of assessing wetland functions and societal values that enables the Province to rank wetlands relative to one another. This information is provided to planning authorities to support the land use planning process. See <https://notl.civicweb.net/document/3911/Provincially%20Significant%20Wetlands.FAQ.Mar%2028%202013.pdf?handle=D3D6C35E814B487894D319E75F5B2355>.

⁷CHRS: Established in 1984, the Canadian Heritage Rivers System gives national recognition to Canada's outstanding rivers and encourages jurisdictions to employ management programs to conserve their natural, cultural and recreational values for the benefit and enjoyment of Canadians, now and in the future. See <http://chrs.ca/about/>.

⁸Canada is classified and mapped in many ways, including a hierarchical array of large to small ecosystems. The ecozone is the largest sub-continental zone that is characterized by representative biotic and abiotic features. The ecozone can be further subdivided into ecoregions and ecodistricts (Crins et al., 2009).

⁹Lease: The lease with the City of Ottawa is a legal contract between two parties, the lessor and the lessee. The lessor is the legal owner of the property while the lessee obtains the right to use the property in return for regular rental payments or other forms of consideration. The lessee also agrees to abide by various conditions regarding their use of the property.

¹⁰License of Occupation: This is a written permission by the owner that allows the licensee to occupy and use the property in accordance with the terms and conditions of the License.

¹¹"Leases and agreements, depending on their terms, can range from little more than a right to occupy to almost an equivalent of fee simple interest. The benefits and costs associated with the interests obtained vary accordingly." See https://trca.ca/wp-content/uploads/2016/04/GAP_2016.pdf.

¹²IUCN Category IV: Category IV protected areas help to protect, or restore: 1) flora species of international, national or local importance; 2) fauna species of international, national or local importance including resident or migratory fauna; and/or 3) habitats (Dudley, 2008).

¹³CARTS: The Conservation Area Reporting and Tracking System is a geodatabase that contains data from federal, provincial and territorial jurisdictions, which update their protected areas data to CARTS on an annual basis. The CARTS website provides access to summary reports, geospatial data, data visualization files and commonly requested maps in PDF format. See <http://www.ccea.org/carts/>.

¹⁴Best Management Practices: BMPs are effective and practical tools and techniques to achieve an objective (e.g. mitigating the effects of pollution or creating habitat) through optimal use of agency or organization resources.

¹⁵Watershed: A watershed or catchment basin includes all of the land that is drained by a watercourse and its tributaries.

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ABOUT THE AUTHORS

Paul A. Gray, based in Nanaimo, British Columbia, has worked on a variety of natural asset management projects in Canada (Ontario, Alberta and the Northwest Territories) and in Zimbabwe.

Deanna Cheriton is Supervisor, Greenspace Conservation at Toronto and Region Conservation Authority (TRCA). She has been working in TRCA's conservation parks and greenspace management streams since 1998, with a focus on the planning, monitoring and assessment of TRCA's lands and trails. She holds a Bachelor of Arts (Honours) in Geography from the University of Guelph and a Masters of Environmental Studies in Planning from the University of Waterloo.

Noah Gaetz received his Bachelor's degree from Brock University, majoring in biology and minoring in environmental policy. His early professional career was spent working for two rural Conservation Authorities as a resource technician and environmental planner. He has spent the last 16 years with the Toronto and Region Conservation Authority applying his ecological expertise to understanding and communicating the critical role biodiversity and nature can play in a sustainable Toronto region. He has led or contributed to initiatives focusing on urban forestry, green infrastructure, and several strategic planning initiatives related to natural system protection, restoration and management.

Paul Lehman, based in Carleton Place, Ontario, is a professional engineer and General Manager of the Mississippi Valley Conservation Authority.

Jocelyn Sherwood, based in Toronto, Ontario, works on multi-scale conservation planning with the Canadian Wildlife Service – Ontario Region.

Thomas J. Beechey, based in Cambridge, Ontario, is a retired Senior Conservation Biologist with Ontario

Parks and is now involved as a director of the CCEA and participates in a number of other conservation initiatives.

Christopher J. Lemieux, based in Waterloo, Ontario, is an Assistant Professor of Geography and Environmental Studies at Wilfrid Laurier University. His research focuses primarily on protected areas policy, planning and management. He is also a member of the IUCN-WCPA and is a Director of the Canadian Council on Ecological Areas (CCEA).

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RESUMEN

La intención primordial de la Meta 11 de Aichi es la conservación de la biodiversidad en áreas protegidas formalmente reconocidas. Además de las áreas protegidas tradicionales, la Meta 11 reconoce un nuevo mecanismo, "Otras medidas de conservación eficaces basadas en áreas" (OECM, por sus siglas en inglés). Desde su inclusión en la Meta 11 de Aichi, la categoría de OECM ha creado gran confusión y debate, y hasta la fecha son pocos los ejemplos que se han descrito. En este artículo, exploramos la capacidad de las herramientas para la identificación de OECM desarrolladas por la Unión Internacional para la Conservación de la Naturaleza (UICN) y el Consejo Canadiense de Áreas Ecológicas (CCEA, por sus siglas en inglés) para evaluar dos posibles OECM ubicadas en zonas urbanas altamente desarrolladas en Ontario, Canadá. Los resultados revelan que ambos sitios podrían calificar como "candidatos" a OECM. En un análisis comparativo de las dos herramientas de detección, determinamos que la herramienta del CCEA integra fielmente las directrices de la UICN y aporta detalles adicionales para ayudar a los profesionales a abordar las condiciones sociales y ecológicas únicas del país. En un mundo bio y geopolíticamente diverso, la traducción exitosa de una orientación de alto nivel en herramientas diseñadas para su aplicación a niveles locales y nacionales particulares de toma de decisiones es crítica para la conservación exitosa de la biodiversidad.

RÉSUMÉ

La conservation de la biodiversité dans les aires protégées officiellement reconnues est l'intention principale de l'Objectif 11 d'Aichi. Outre les aires protégées traditionnelles, l'Objectif 11 reconnaît un nouveau mécanisme: les «autres mesures de conservation efficaces par zone» (OECM). Depuis son incorporation dans l'Objectif 11 d'Aichi, la catégorie OECM a engendré de la confusion et de nombreux débats, et peu d'exemples ont vu le jour à date. Dans cet article, nous explorons la capacité des outils de dépistage des OECM développés par l'Union Internationale pour la Conservation de la Nature (UICN) et le Conseil Canadien des Aires Ecologiques (CCEA) à évaluer deux OECM potentiels situés dans des zones urbaines hautement développées en Ontario au Canada. Les résultats révèlent que ces deux sites peuvent être considérés comme des «candidats» OECM. Lors d'une analyse comparative des deux outils de dépistage, nous avons déterminé que l'outil du CCEA respecte fidèlement les lignes directrices de l'UICN et fournit des détails supplémentaires pour aider les évaluateurs à prendre en compte conditions sociales et écologiques uniques du pays. Dans un monde bio-géopolitiquement diversifié, la transposition réussie de directives de haut niveau en outils conçus pour une application à des niveaux de décision locaux et nationaux est essentielle à la réussite de la conservation de la biodiversité.