AGENDA
RESILIENT SAANICH TECHNICAL COMMITTEE
September 28, 2023, 6:00– 8:30 PM
Held virtually via MS Teams

In light of the Saanich Communicable Disease Plan related safety measures, this meeting will be held virtually via MS Teams. Details on how to join the meeting can be found on the committee webpage – [Resilient Saanich Schedule, Minutes & Agendas.](#) Please note that individuals participating by phone are identified by their phone number, which can be viewed on screen by all attendees of the meeting.

1. **Territorial Acknowledgement**

2. **Approval of Agenda**

3. **Workshop with Technical Experts and Diamond Head Consulting on Biodiversity Conservation Strategy Draft Recommendations (120 min.)**
   - Leads: Mike Coulthard, Alison Kwan

4. **Adoption of Minutes**
   - August 17, 2023 meeting

5. **Receipt of Correspondence**

6. **Discussion of Environmental Policy Evaluation Matrix (10 min.)**
   - Lead: Tory Stevens

7. **Discussion of Draft 2 Gap Analysis (10 min.)**
   - Lead: Kevin Brown

8. **Environmental Policy Framework Staff Review (20 min.)**
   - Lead: Tory Stevens, Eva Riccius

* * Next Meeting: October 19, 2023

To ensure quorum, please email megan.macdonald@saanich.ca if you are not able to attend.

Agenda | Technical Expert Workshop

DATE: September 28, 2023

TIME: 6:00 PM – 8:00 PM

ATTENDEES:
District | Eva Riccius, Thomas Munson

DHC | Mike Coulthard, Alison Kwan

RSTC | Tory Stevens, Kevin Brown, Purnima Govindarajulu, Tim Ennis, Brian Wilkes, Chris Lowe, Stewart Guy, Jeremy Gye

Technical Experts | Brian Emmett, Patrick Lucey, Cori Barraclough, Del Meidinger, Dave Fraser, Eric Higgs, Nancy Shackelford, Cara Gibson, Claudia Copley, Mick Collins, Yogi Carolsfeld, Kyle Armstrong, Sarah Cook, Paige Erickson McGee, Peter Arcese, Shannon Berch, Jennifer Heron

PURPOSE:

- Present the draft recommendations for the Biodiversity Conservation Strategy.
- Discuss the list of recommendations to provide feedback and identify priority items

INTRO + PRESENTATION • Introductions to Saanich & DHC staff • Project Overview and Mapping	 2.5 minutes 10 minutes
WORKSHOP – POLICY DISCUSSION 1 | Habitat Network	 20 minutes
2 | Policy initiatives related to development	20 minutes
Break	5 minutes
3 | Review of Recommendation Objectives • Objective 4 – Enhancing biodiversity on public lands • Objective 2 – Acquiring and protecting a network of habitat areas • Objective 5 – Encouraging biodiversity initiatives on private lands outside of the development process • Objective 7 – Enhancing biodiversity on agricultural lands • Objective 6 – Improving public understanding of biodiversity • Objective 1 – Improve knowledge and mapping of features and functions	60 minutes
WRAP-UP + NEXT STEPS	2.5 minutes

MINUTES
RESILIENT SAANICH TECHNICAL COMMITTEE
Via Microsoft Teams
August 17, 2023 at 6:30 p.m.

Present: Tory Stevens (Chair); Councillor Zac de Vries; Kevin Brown; Stewart Guy; Chris Lowe; and Brian Wilkes

Regrets: Jeremy Gye; Purnima Govindarajulu and Tim Ennis

Guests: Mike Coulthard and Alison Kwan of Diamond Head Consulting (DHC); Judith Cullington, Secretariat

Staff: Eva Riccius, Senior Manager of Parks; Thomas Munson, Senior Environmental Planner; and Megan MacDonald, Senior Committee Clerk

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TERRITORIAL ACKNOWLEDGEMENT & DIVERSITY, EQUITY AND INCLUSION STATEMENT

Councillor Z. de Vries read the Territorial Acknowledgement and the Diversity, Equity and Inclusion Statement.

APPROVAL OF AGENDA

MOVED by B. Wilkes and Seconded by K. Brown: "That the Agenda for the August 17, 2023, Resilient Saanich Technical Committee meeting be approved."

It was noted that the next meeting date has been changed to September 28, 2023.

The Motion was then Put and CARRIED

ADOPTION OF MINUTES

MOVED by C. Lowe and Seconded by S. Guy: "That the minutes of the June 15, 2023 Resilient Saanich Technical Committee meeting be adopted."

CARRIED

DISCUSSION WITH DIAMOND HEAD CONSULTING ON BIODIVERSITY CONSERVATION STRATEGY (BCS) ACTIONS AND STRATEGIES

M. Coulthard and A. Kwan of Diamond Head Consulting (DHC) gave an overview of the Biodiversity Conservation Strategy (BCS) Actions and Strategies (document on file). The following was noted:
- The BCS is a living document which will be continually reviewed and updated.
- Feedback from Phase 1 of engagement has been included in the recommendations.
- The key points of the feedback received from the committee have been summarized.
- Some similar comments existed; these were highlighted as important aspects.
- The recommendations outline a plan to achieve the goals identified in the strategy.
- One priority of the strategy is making sure that items are aligned on the Urban Forestry Strategy, the Official Community Plan, the Environmental Policy Filter, and others.
- The high-level goals have been structured in an organized manner, not prioritized.

The following was noted during discussion on the organization of the Strategy Goals and Recommendations:
- The numbered list may be interpreted as prioritized; it was determined that this was not the intention. Priority could be determined using different metrics and indicators.
- Item 1 could be better characterized by stating "completing the inventory of Saanich".
- The use of the term "connectivity" in the document is challenging, many areas lack connectivity. The definition is unclear and can be confusing; there should be a better understanding of the science and definitions behind the term.
- Although the list is not prioritized, it was noted that numbers 4 & 6 may be better placed higher on the list as they are both important aspects.
- Prioritizing public understanding of biodiversity and encouraging the creation of biodiverse spaces on private lands go together, you cannot have one without the other.
- There is an opportunity for a more qualitative approach, including understanding where the data gaps exist. An example of condition assessments for aquatic ecosystems was given as there is a data condition assessment of the Colquitz River done in the late 1990's. Other lakes and streams have not been assessed, so we know that this important information is missing and monitoring progress is not possible.
- Biodiversity on agricultural lands needs to be considered, as the typical monoculture farming methods are harmful to biodiversity and pesticides destroy the environment.
- There isn't a retrospective analysis of how effective the pulling together program is. We need better data to monitor and evaluate programs within the District.
- Preventing loss of biodiversity needs to be a priority ahead of restoration. Preserving the land and environments that are rich in biodiversity is of utmost importance.
- Better promoting backyard biodiversity in the community would be beneficial.
- The ranking system is not ideal as those items identified as low priorities will likely never get done. While they may get bumped up to a higher priority when the strategy is updated or refreshed, there is a potential they could be forgotten.
- Highlighting some as items as critical may be favorable, defining ranking is problematic.
- "Opportunistic recommendations" may be a better description than low priority.
- When considering the cost of implementing actions, we also need to factor in the cost of not doing them. While the cost to complete an action may seem high, there are many implications and negative things that could happen or be made worse by not completing them. An example of climate change was given and considering how not protecting biodiversity now may increase extreme weather events and related costs long term.
- The timeline to complete the actions will vary, the BCS will be reviewed and updated by staff periodically, likely every 5 years. New goals or actions will be added as needed.

RATIFICATION OF STEWARDSHIP BRIEF

Committee member C. Lowe gave an overview of the recent updates to the Stewardship Brief. Members were invited to provide comments prior to ratification of the document. The following was noted during committee discussion:
- The committee has reviewed the updated document as it was attached with agenda.
- This document has been reviewed and supported previously; however a formal motion has not yet been made. Formalizing support for the document is necessary.
- Thorough review and subsequent updates have led to a robust document which committee members believe to be thorough and informational.

> **MOVED by B. Wilkes and Seconded by C. Lowe: "That the Resilient Saanich Technical Committee endorse the Stewardship Brief and addendum as presented and that the documents be forwarded to Diamond Head Consulting."**
> **CARRIED**

RATIFICATION OF COLLATED RESPONSE TO DHC BIODIVERSITY CONSERVATION STRATEGY DOCUMENT

The Chair gave an overview of the responses to the DHC BCS document. Members were invited to provide comments prior to ratification of the document. The following was noted during committee discussion:

- Committee members expressed interest in having this document and other documents available on the Saanich website.
- The document has already been sent to DHC and considered prior to the meeting, this motion formalizes the process and confirms that the document sent was what the committee wanted DHC to receive.

    MOVED by K. Brown and Seconded by C. Lowe: "That the Resilient Saanich Technical Committee endorse the Collated Response to the DHC Biodiversity Conservation Strategy Document as presented and that the document be forwarded to Diamond Head Consulting."

    The Motion was then Put and CARRIED

DISCUSSION OF RSTC MOTIONS (2020-2023)

The Chair gave an overview of the motions passed by the Resilient Saanich Technical Committee from the beginning of the process up until June 2023. The following was noted during committee discussion:
- There were several motions made, this document summarises them and outcomes.
- The document provides a fascinating journey through what has been done by the committee to date, committee members thanked the Chair for preparing it.
- In June of 2021 the committee made a motion to use conservation standards approach, it was the consensus of member that this approach should be used going forward; however, the request never materialised.
- This document will allow for future investigation and understanding of the process.

Committee members T. Stevens and B. Wilkes will work together to update the document and bring it back to the next committee meeting.

UPDATE TO ENVIRONMENTAL POLICY GAP ANALYSIS

Committee member K. Brown gave an overview of the Environmental Policy Gap Analysis. Members were invited to provide comments prior to ratification of the document. The following was noted during committee discussion:
- There are lots of policies at Saanich, there is a benefit in identifying where gaps in environmental protection and preservation measures exist.
- The gap analysis was created by staff early in the Resilient Saanich process. Many policies have been updated, and some new policies created. An update to the analysis may be beneficial to ensure it is current.
- Determining opportunities for new policies is one benefit of gathering data gaps.
- Including more marine and terrestrial targets in policies would be beneficial.
- The analysis is a good place to determine what aspects of the environment do not have policies, or few policies to support conservation goals.
- This process will be complex and time consuming, but it needs to be updated as the 2020 draft was obscure and the committee now has new policies in place.

ADJOURNMENT

On a motion from B. Wilkes, the meeting adjourned at 822 p.m.

NEXT MEETING

The next meeting is scheduled for September 28, 2023 at 6:30 p.m.

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Tory Stevens, Chair

I hereby certify these Minutes are accurate.

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Committee Secretary

Evaluation Matrix to promote adoption of Environmental Policy Framework principles

As part of the Resilient Saanich Program, Council requested a policy and program evaluation matrix for reviewing new and existing programs and policies against Goal 2 of the Environmental Policy Framework (EPF)

Goal 2. Develop and implement complimentary and coordinated policies, strategies, regulations, and incentives grounded in and consistent with the Environmental Policy Framework guiding principles.

This overarching goal is essential to promote the culture of environmental stewardship and resilience within Saanich staff and the public. The principles will assist in evaluating existing policy and provide guidance for the development of future policy.

Some of the actions that could result from this goal are:

- Assess existing regulatory, management and administrative tools to identify gaps and inconsistencies.
- Develop a strategic approach that encourages effective use of limited resources.

Increase community understanding of policies, plans, programs, bylaws and partnerships encompassed by the Resilient Saanich Environmental Policy Framework.

The Evaluation Matrix below is designed to serve as a thought or process tool to help development of policies, programs, regulations, strategies and incentives that adhere to the principles articulated in the Environmental Policy Framework. Adhering to the principles will promote the goals of the Environmental Policy Framework and environmental sustainability in the face of challenges such as climate change and habitat modification. The Evaluation Matrix can also be used post-hoc on existing policies, programs, regulations, strategies and incentives to ensure that they work in a coordinated way to achieve the goals of the Environmental Policy Framework.

The RSTC suggests two possible approaches to evaluation of adherence to each principle and the one chosen will depend on the nature of the policy or program. A qualitative approach is to use the proposed criteria in the table to determine if a policy has a high, medium or low adherence to each principle. A more numerical approach is the use of a scoring scale for adding numerical scores to the criteria in the table for each principle. For example, a high score would be equivalent to three points, a medium to two points etc. A neutral category is added for

policies or programs that have no relevance to a principle, which may be scored as NA or a numerical score of zero. There is also a category for evaluating if a policy or program works against a principle which would be assessed as "negative" or be given a negative numerical score.

The final evaluation of a policy or program would be to weigh the determinations for all the principles and to assess how close, overall, a policy or program comes to fulfilling the intent of the principles and achievement of Goal 2. A numerical approach may be useful when comparing policy or program alternatives. Policies and programs that score high could be submitted to council for adoption, with documentation from the Evaluation Matrix to demonstrate support for the goals of the Environmental Policy Framework and ultimately to a Resilient Saanich. The Evaluation Matrix not only helps with the process of policy/program/strategy/incentive development but also demonstrates to the public how the various policies work in coordination to support the Environment Policy Framework and Resilient Saanich overall. Policies and program initiatives that score in the mid-low range can be re-examined to see where they can be enhanced before adoption.

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
1	**Recognize the intrinsic value of nature**	Actively promotes, protects and enhances biodiversity conservation and the sustaining abiotic and biotic processes (nature) by awarding recognition and incentives.	Indirectly supports biodiversity conservation with strong mitigation measures	Implements some mitigation or offset measures	Neither promotes nor negates biodiversity	Actively leads to loss of habitat and biodiversity
2	*Apply the ÁTOL,NEUEL ("Respecting One Another") memorandum of understanding: respect and*	Relevant nations involved in policy development from start to finish	Relevant nations engaged and support in principle	Relevant nations contacted but active support unclear/not clearly articulated	No engagement	One or more nations actively against this policy

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
	consider Indigenous knowledge, worldviews and perspectives in environmental decisions and actions					
3	*Use evidence-based decision making; adopt the precautionary approach when the supporting science is absent or incomplete.*[1]	To score at this level policy should meet all <u>relevant</u> criteria below. 1. If it is a new policy, a literature review and effectiveness assessment of similar policies in other jurisdictions has been completed. If updating existing policy, previous policy effectiveness has been assessed and challenges identified prior to policy	To score at this level, policy meets at least criteria 1 <u>and</u> 2 and either criteria 3 or 4 in the high category.	To score at this level, policy meets criteria 1 <u>and</u> 2 in the high category but not criteria 3 or 4.	To score at this level, policy meets either 1 or 2	The policy does not review past policies, published literature, nor does it apply the precautionary principle or available evidence. The policy may pose risks to environmental values in the pursuit of achieving other values.

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[1] Evidence-based decision-making and being precautionary in the absence of evidence can both support good decisions. Adaptive management is the continuous evolution of practices based on careful observation. Learn from the past and plan for the future.

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
		redevelopment. (This is considered gathering evidence or baseline data to support policy development.) 2. The goals that the policy is intended to achieve are clearly articulated, and qualitative or quantitative metrics and timelines are identified to enable effectiveness assessment. 3. Capacity for monitoring and adaptively modifying policy built into the policy. 4. Areas where baseline data or outcomes are uncertain are clearly articulated in the policy, and the application of the "Precautionary Principle" is made				

EPGA revisions- continuation of discussion from 17 August 2023 RSTC meeting
Kevin Brown 21 September 2023 for 28 September 2023 meeting

Background:
- At the August meeting, I explained my proposed approach to revise the existing draft EPGA (EPGA2020) and better link components of the natural environment and existing Saanich policy.
- Approach involves (a) categorizing components of environment and threats, (b) assigning codes to environment components, (c) assigning those codes to each policy tool, and (d) sorting policies by environmental components they address.
- I presented a cursory figure summarizing how many policy tools address (in some way) each component of the natural environment and discussed some immediate next steps.
- Ultimate intent is to make the EPGA more transparent, functional, and updateable than the existing draft; and to make accessible.
- Didn't hear objection to revising the EPGA; some comment (but not objection) on the approach

Subsequently:
- Have further developed the rationale for revising (the what and why) in a format oriented to inclusion in RSTC's Environmental Policy Framework report.
- Attempted to clean up Tables 2a-2c, especially regarding stressor/threats
- Have begun summarizing Saanich policies- points that seem relevant to a assessing policies: for example: (a) what is the intent? (b) does it regulate, set well-defined targets, is it vague and aspirational (c) how restricted is it in its application (limited area versus Saanich-wide; very limited part of a broader issue)? This can be used for additional analysis.
- No new graphics to present- would like to do some additional analyses and generate some tentative conclusions from those in advance of the next version and meeting

Attached:
- Detailed rationale
- Appendix EPGA_1. Proposal and condensed recommendations circulated to EPF working group 7 June 2023; briefly discussed at June RSTC meeting but not in agenda package
- Refer also to 17 August 2023 RSTC agenda package- information discussed here builds on that report

Key questions to discuss:

- Are there any reasons why the RSTC would <u>not</u> endorse this approach as described in the rationale?
- What is missing from the rationale?
- How far can this be taken? What components should be included?
  (A revised EPGA will not be complete by 31 December 2023, but needs to be cleaned up and packaged appropriately as a stand-alone document for inclusion in the RSTC Environmental Policy Framework final report. Recommendations are essential; other?)

<u>**We will have time for only brief discussion at the meeting**</u>. I will circulate a request for detailed comments afterward and will hope to have responses two weeks prior to our next meeting so I can address and incorporate them in advance.

Proposed Revised Environmental Policy Gap Analysis (EPGA) 2.0

Kevin Brown   Resilient Saanich Technical Committee   Draft 21 September 2023

1.0 Introduction

The Environmental Policy Gap Analysis (EPGA) is central to the Environmental Policy Framework (EPF). It should clarify how Saanich's natural environment is protected (or impacted) by existing policies and identify components of the natural environment that might benefit from new or revised municipal policies. A well-structured EPGA should facilitate analysis and communication within the District and broader community. It should be a "living" document, updateable as policies change and as understanding of local environmental issues increases.

To accomplish these broad goals, the EPGA should:

1. define breadth of natural environment appropriate to the Saanich context; What comprises Saanich's natural environment?
2. document existing and emerging threats to Saanich's natural environment; What are potential threats and what are the sources of those threats?
3. identify (and assess) existing Saanich policies meant to protect the natural environment and other policies which may damage the natural environment;
4. identify aspects of Saanich's natural environment not currently addressed by policy;
5. link environment, stressor/threats, and policies to facilitate items 3 and 4

A well-constructed list of natural environment components and potential threats provides a checklist for facilitating environmental assessments of other ("non-environmental") proposed policies and projects.

The existing draft EPGA (September 2020; "EPGA2020") prepared by staff was briefly reviewed by the RSTC early in the Resilient Saanich process. It has not been revisited and has remained unchanged. While EPGA2020 provides a solid basis for an EPGA, updates to address weaknesses (Appendix EPGA_1) should be considered, given completion of the State of Biodiversity (SOB) and State of Urban Forest (SUF) reports, ongoing preparation of the Biodiversity Conservation and Urban Forest Strategies (BCS, UFS, respectively), and research done by RSTC since 2020.

Attached is a draft revised EPGA (EPGA2.0), which builds on EPGA2020. EPGA2.0 includes:

1. A sortable spreadsheet containing (a) suggested updated components of the Saanich "natural environment", (b) a catalogue of associated stressors/threats, and (c) a listing of Saanich policies and their potential connection to Saanich's natural environment.
2. This cover document which explains spreadsheet components and how they are linked; how the EPGA might be used in assessing "environmental" and other policies; and existing limitations.

This draft EPGA 2.0 is incomplete in current form.
1. Spreadsheet columns linking policies to environment or stressor/threats need to be fully populated and relationships among environment, stressor/threats and policy more fully documented.
   However, our spreadsheet and rationale provide a roadmap to a more complete EPGA useable by staff and the community. It is a "living document" and intended to be updatable. It can and should be modified and regularly updated.

2. The spreadsheet lists components of the natural environment, possible stressors/threats, and existing policies. It <u>does not</u> yet attempt to summarize the status or condition of the natural environmental components, the magnitude or severity of stressors/threats, or set priorities for action. Those assessments are essential but require appropriate data which may or may not exist.

2.0 Components of the EPGA spreadsheet

2.1 Worksheet 1. Natural environment and potential stressor/threats

2.1.1 Definition of "natural environment"
A necessary first step is to define and identify components of "natural environment" to facilitate linking environment, stressor/threats, and Saanich policies. What should be included in "natural environment" and how should it be represented?

The RSTC discussed (April 2023) but has not finalized what "natural environment" should include in the context of a Saanich EPGA.

"Natural environment" has been proposed to include: (1) abiotic factors necessary for life (2) physiography arising from planetary processes (3a) biota and ecosystems that occurred on southern Vancouver Island pre-European settlement and still could given adequate habitat; (3b) species which are introduced and which provide ecological goods and services (e.g., non-native trees) and which may become "naturalized"; (3c) species whose natural range may expand to southern Vancouver Island with climate change.

Non-native "invasive" species do not fit neatly into this definition. Invasives provide some ecological goods and services but are, by definition, a threat to native species and may also provide fewer and different ecological goods and services than do natives. We consider invasive species to be a stressor/threat to existing native ecosystems but recognize that their roles and potential benefits may differ in future "novel" urban environments.

Natural environment (1) contrasts with the modern built environment, i.e., infrastructure made from relatively permanent human-manufactured materials (now largely sourced and processed outside of the region) and (2) is outside of human structures. We note that human structures and activities may be well-integrated with the natural environment or relatively disconnected and with significant impacts on ecosystem processes and biodiversity.

2.1.2 Components of natural environment (Table 1; worksheet 1):
For the purposes of the EPGA, components of natural environment should cover the breadth of what makes up "natural environment". Components should be understandable and linkable to ecological processes and to policy. The number and specificity of components comprising the natural environment is arbitrary and a compromise between detail and useability. However, components can be modified as required.

We suggest specifically acknowledging abiotic components of the natural environment in addition to biodiversity and ecosystem-level components (Appendix EPGA_2) in the spreadsheet. EPGA2020 partially did this but did not explain why. Reasons to separate abiotic factors from biodiversity/ecosystems in the EPGA include:

(1) Inappropriate levels of abiotic factors <u>directly impact both</u> public health and biodiversity and ecosystem functions and may also <u>indirectly affect public health</u> through impacts on biodiversity and ecosystems. However, levels of abiotic factors suitable for humans may be unsuitable for other organisms and vice versa. These nuances can be better acknowledged when both abiotic factors and biodiversity/ecosystems are explicitly recognized.

(2) Historically, environmental protection focused on how the condition of the abiotic environment affects public health. That emphasis is still important, especially for community members with the greatest exposure to pollutants, noise, etc. Locally, some Saanich (and CRD) policies or bylaws address aspects of air and water quality, sound, light, and soil, but in the context of public health and wellness, not biodiversity.

That said, we recognize that the abiotic environment is part of ecosystems, not separate. Separation leads to some redundancy in the worksheets.

Ideally, ecosystem/biodiversity components in the EPGA should be consistent with those (target categories) in the SOB report and BCS. However, the EPGA has a somewhat different emphasis. The same general information may be better categorized differently.

To that end, the worksheet:
1. combines the SOB target categories of "Coastal Douglas-fir Forests" and "Garry Oak Ecosystems" into a single category of native terrestrial ecosystems.
2. separates agricultural ecosystems from the SOB "Backyard Biodiversity" target category, and
3. recognizes urban forests as a category distinct from native terrestrial ecosystems and backyard biodiversity.

These distinctions are arbitrary. However, protection and management of coastal Douglas-fir and Garry oak ecosystems share common high-level stressor/threats and are addressed by the same municipal policies. Other terrestrial groupings have unique combinations of disturbance and fragmentation, distribution, proportions and distribution of native and non-native vegetation, land ownership, and they differ in how they can be managed and regulated by the municipality.

Groups proposed here could be subdivided for more detailed thematic or policy area analyses. As a first cut, these categories seem appropriate for connecting environment, stressors/threats and policy at a high level but could be revised as needed.

Table 1 and worksheet 1 do not list indicators for components of the natural environment. These need to be determined and suitable supporting data collected. Appropriate indicators are required to assess policy effectiveness and for Saanich to properly assess its "natural assets" (see below). Data collected for the 2023 SOB and SUF reports should aid in selecting appropriate indicators.

This spreadsheet does not account for spatial variation. However, all components (and stressor/threats) can be represented spatially. The SOB and SUF process updated digital maps of ecosystem and urban forest distribution. Similarly, abiotic components of environment could be mapped (Appendix EPGA_2); this requires collection of appropriate data, along with resources to add and integrate the data into Saanich's GIS. Such data, shown spatially, aids in the understanding of biodiversity patterns and in planning to better protect and enhance Saanich's natural environment.

"Components" of natural environment referred to here are generally equivalent to "natural assets" of EPGA2020 and, for ecosystems and biodiversity specifically, to "biodiversity targets" used by the IUCN (e.g., Salafsky et al 2008) and suggested by the RSTC for use in the SOB.

From the District perspective, it is understandable to view components of the natural environment as "natural assets". This potentially allows ecological goods and services and related maintenance costs to be better- valued in the broader context of municipal infrastructure and operations. Saanich recognizes this and notes that an inventory of natural assets does not yet exist (District of Saanich Asset Management Strategy 2023). As suggested above, data collected for the SOB and SUF reports should provide some of that information.

While useful in a municipal operations context, the concept of "natural assets" may reinforce the perception that nature exists primarily to benefit humans through the (economic) goods and services it provides us. RSTC has recognized the intrinsic value of nature as a core principle of the EPF. However, we recognize that viewing nature as "municipal natural assets" may be valuable for strategic and budgetary decisions in the District.

2.1.3 Stressors/Threats (Tables 2a, 2b, 2c; worksheet 1)
Stressors/threats and the actions that produce them link municipal policies and components of the natural environment. Policies often aim to prevent or minimize <u>actions</u> that threaten the natural environment, although they could encourage actions that benefit the natural environment.

Classifying stressor/threats in a way which relates both to components of environment and to local government policy is inherently complicated. For example:

(1) the local natural environment can be impacted both by local actions that can be controlled locally and impacted by global stressor/threats that are not controllable locally.
(2) local stressor/threats vary in their proximity to the stress they cause and can be difficult to clearly separate from their sources (e.g., human actions) (for example, Tables 2b and 2c).
(3) actions which are sources of stressor/threats may also be beneficial to biodiversity/ecosystems.
(4) Our scientific understanding of what constitutes threats to biodiversity in urbanized landscapes is increasing dramatically

Additionally, some municipal policies may have little direct impact on Saanich's natural environment but may directly affect biodiversity and ecosystems elsewhere, as per the concept of the "ecological footprint (Wackernagel and Rees 1996). Examples could include policies to encourage salvage and reuse of building materials from deconstructed houses or to require concrete used in municipal infrastructure to contain recycled aggregate and other "waste" materials and thereby reduce impacts of extracting and processing virgin materials elsewhere.

EPGA2020 presents a single column of threats associated with "natural assets". We suggest refining the stressor/threats classification to focus on direct (proximate) threats and their sources that the municipality <u>can</u> largely control. "Global" threats that the municipality largely <u>cannot</u> control but which could have significant local impacts and that might be mitigated indirectly or adapted to can be acknowledged in the spreadsheet and explored more deeply elsewhere in the EPF (e.g., climate change), as can local policies which potentially impact biodiversity and ecosystems elsewhere. Acknowledging the

sources of different threats can clarify the potential role of the municipality in protecting Saanich's natural environment.

Examples of direct (proximate) threats include loss of tree cover, soil quantity and quality, permeable surfaces, introduction and spread of invasive non-native species, polluted stormwater runoff, air pollution from localized burning, and noise and inappropriate outdoor night-time lighting.

Examples of global threats with pronounced local impacts are (a) climate change, (b) regional population growth and its associated pressures of land and resource consumption and waste generation, (c) non-greenhouse gas air pollutants of non-local origin, (d) ubiquitous toxins such as microplastics and synthetic "forever" chemicals, and (e) geological events such as earthquakes and tsunamis. Global threats can influence the severity of proximate direct threats.

In the spreadsheet, we focus on local (proximate) threats that local policy can impact locally and on "sources of those threats". These may be difficult to separate – at the local level, is surface water pollution caused by an excess of a pollutant, the abundance of pavement which directs contaminated stormwater runoff to surface water, land-use approaches that encourage road building, automobile use, and stormwater runoff? All may be correct. We refer to threats as "stressors/threats" as they overlap (but see Saito et al. 2022). Stressors/threats may have either already been documented locally or are possible, based on studies in similar urban environments.

We recognize that "stressor/threats" and their "sources" are not always damaging to biodiversity and ecosystems. As with abiotic factors, the levels of the "stressor/threats" and magnitude and intensity of the sources determine whether an action is a threat or benefit to biodiversity and ecosystems. Fire can be good or bad for specific ecosystems depending on the ecosystem and the frequency and severity of the fires. Effective municipal environmental policy requires knowing how much of something is bad or good (or neutral) for the natural environment and weighing that against the health and safety of the municipality. That requires appropriate data. We suggest that "stressor/threats" are really "potential stressor/treats" until confirmed and that the sources of threats refer to actions that are inappropriate via their location, intensity, and/or magnitude.

The stressor/threats classification draws on but is not identical to that of IUCN-CMP (Salafsky et al. 2008; Master et al. 2012). They defined "direct threats" as proximate activities and processes that cause degradation; "contributing" or "underlying" factors" as those ultimate factors that affect the occurrence and persistence of direct threats; and "stresses" as attributes that are impaired directly or indirectly by human activity (e.g., poor water quality or terrestrial ecosystem condition). In the case of biodiversity, native species mortality would be a "stress" and invasive non-native vegetation or animals that caused the mortality would be "threats". Water quality would be a "stress", but pollutants would be a "threat". Saito et al. (2022) distinguished between **stressor and threat** as actual versus potential (or impending) *alterations of the ecosystem, caused directly or indirectly by humans, and which reduce the viability of an individual, population, species or its habitat.* These distinctions are likely not necessary in this EPGA.

We do not focus on global threats in the EPGA spreadsheet, but they are clearly important to Saanich's natural environment. Global threats influence the severity of more proximate threats and have important consequences for long-term planning. For example, climate change may exacerbate impacts of intensified land use and development on urban forest and freshwater ecosystem health and composition. Effects of climate change have been addressed in the Climate Plan, which will be included in the Environmental Policy Framework (EPF).

Population growth in Saanich and the CRD can also be considered a "global" threat to Saanich's biodiversity. Saanich is the largest municipality in the CRD and surrounded by other municipalities. Population growth in Saanich therefore means increased densification at a municipality-wide scale. While this could lead to decreased per capita emissions of greenhouse gases (Ribiero et al. 2019), the associated increase in the built environment <u>can</u> lead to a greater proportion of impervious land, reduced tree canopy, changes in stormwater runoff patterns, increased urban air temperatures and habitat fragmentation, and decreased soil quality and biodiversity. Population growth elsewhere in the Capital Region also implies increased impacts to Saanich's natural environment from transportation to and through the municipality.

Global threats may have interacting impacts on Saanich's natural environment. Over the longer-term, climate change may drive migration to and increase population growth in areas with milder climates, such as the Puget Sound region (Saperstein 2015; Binder and Jurjevich 2016) and Vancouver Island, exacerbating effects of each on local biodiversity and the natural environment.

2.1.4 Policies (worksheet 2)
A second worksheet lists the approximately 260 Saanich bylaws, council policies, and other strategic documents found on the District website. [==Need to compare and contrast definitions and practical implications of bylaws, council policies, other strategic documents==]

2.1.5 Linking environment, threats, and policies
An EPGA should clearly link policies to environment and/or to stressor/threats. EPGA2020 does not. We suggest sorting policies either by the component of environment they potentially impact or by stressor/threats they address. The relevance of policies to either environment or stressor/threats should then be assessed as begun in EPGA2020. Ultimately, these linkages would provide a snapshot of: (1) how existing municipal policies apply to the natural environment or to stressor/threats; (2) conversely, what aspects of the natural environment are <u>not</u> addressed by existing policy.

To facilitate sorting, we propose assigning numerical codes to components of natural environment, to stressor/direct threats, or to sources of threats, then determining which numerical codes are relevant in any policy document.

Components of environment are appropriate as an initial sorting factor for policies because (1) the environment is what Saanich seeks to protect (2) components are not likely to change over time (although one might wish to further split components) and (3) agreed-on indicators exist. Coding therefore seems relatively straight-forward and understandable.

An advantage of using stressor/threats or their sources as a sorting factor is that <u>policies typically target actions</u> that result in stressor/threats rather than directly regulate components of environment, even if environment is the ultimate reason for the policy. If stressor/threats are appropriately classified and linked to components of environment and to policies, it becomes possible to better identify policies (existing or not) with multiple environmental benefits. An obvious example would be policy to minimize the proportion of land as impervious surfaces; this could have beneficial effects for tree canopy cover, terrestrial biodiversity, stream hydrology, and urban air temperatures. Similarly, appropriate tree planting and mature tree retention can improve soil health and air quality, lessen temperature extremes, increase biodiversity, and ameliorate stormwater runoff.

Conversely, classifying and coding of stressor/threats for the EPGA is more complicated than is classifying environmental components as indicated previously (section 2.1.3). Such coding might require combining stressor/threats and their sources. Both approaches (sorting policies by environmental components and by stressor/threats) may be useful. As a first step, we have assigned numeric codes to components of the natural environment relevant to Saanich and used those as a basis for sorting and then assessing Saanich policies.

2.1.6. Summary of worksheets and steps taken
To explore the potential feasibility of this approach for the EPGA, we created three worksheets:
- Worksheet 1 - numeric codes were assigned to components of natural environment (e.g., Table 1).
- Worksheet 2- all Saanich policies (bylaws, council policies, and other strategic documents) available on the Saanich website were listed. In total, there were ca. 260 policies. To expedite the initial assessment for this draft, policies that were thought to have some connection (intended or not) to components of the natural environment were identified, highlighted and characterized further; this reduced the initial list of policies to analyze to ca. 110. Those policies were reviewed and "relevant" environment numeric codes were assigned.
- Worksheet 3 - combined policies and their relevant environmental codes were then structured to allow sorting in a third worksheet. This allowed for an initial assessment of how many existing Saanich policies might affect different components of the natural environment as well as what environmental components are not or are minimally addressed by existing policy.
- (In progress) Summary notes for individual policy documents were prepared, indicating what aspects of the natural environment were addressed (explicitly or implied) and how
- Worksheet 3 (continued and in-progress) – additional data were added to each document (row) to indicate intent (protecting the natural environment versus community safety, etc.); potential strength (if the document regulates, sets specific targets, etc.); and whether it applies to specific areas of Saanich or is District-wide.

For the purposes of this initial assessment, "relevant" simply means whether a component of environment or stressor/threat is specifically mentioned or strongly inferred in a policy. However, a cryptic description of how the policy address different components of the natural environment should be developed and incorporated into the spreadsheet.

2.1.7 Complexity and comprehensiveness, useability, and flexibility
The worksheets represent an updated approach to capture the breadth of "natural environment" in Saanich while allowing matching of environment, threats, and policy. It is a "first cut"; individual issues or policies, threats or components of environment can be revised and examined in more detail as needed.

The worksheets are not currently set up to summarize the effectiveness of municipal policies intended to protect the environment or the impacts of other policies (and major projects) on Saanich's natural environment. An appropriately detailed list of components of environment and stressors/threats can provide a useful guide for the former and a checklist and guide for the latter.

The worksheets could be expanded to contain additional information; for example, the availability of data for a given component or stressor/threat and appropriate indicators of status or condition could be noted on worksheet #1. As previously mentioned, the policy worksheet could contain additional detail on how environment is addressed by policy.

As indicated previously, the EPGA spreadsheet should be viewed as a living document subject to regular updating and to modification as needed. Ideally, it would ultimately reside on the District website as a sortable database accessible to the public.

Table 1. Components of natural environment. "Env Component 2" refers to sub-categories of "Env Component 1". Numeric codes are assigned to facilitate sorting of policies.

	Env. Component 1	Env. Component 2	Code
Abiotic	Air quality		1
	Air temperature		2
	Light		3
	Sound		4
	Water	Freshwater	5
		Groundwater	5
		Saltwater	5
	Soil	Native	6
		Urban	6
Ecosystems (biotic+abiotic)	Terrestrial	Native (categorize by ecosystems, species?)	7
		Agricultural	8
		Urban forest	9
		Urban "backyard", ROW	10
	Freshwater	Lakes, streams, permanent and ephemeral wetlands	11
	Saltwater/estuary	Coastal sand, marine shoreline, near-shore	12

Table 2a. Stressors and threats (to conditions appropriate for life), abiotic environment

Environment	Stressors/Threats	Source of threat
Air	Pollutants[1]	Combustion, traffic, soil disturbance
Air temperature	Extreme temperatures	increased pavement; dark surfaces, heat transfer from buildings; loss of tree cover
Light	ALAN[2]	stationary outdoor light; visible indoor lighting; mobile light (traffic)
Sound	Noise[3]	industry, traffic, human activity, increased hard surface, reduced rough surfaces (vegetation)
Water-fresh surface	Pollutants[4]	stormwater and fertilizer runoff, chemical spills, sewage and animal waste, soil erosion, trash and litter incl. microplastics
	Extreme temperature, low oxygen	Lack of riparian tree cover, nutrient excess, low flow
	Extreme variation in quantity	Increased Impermeable surfaces, below-ground construction
Groundwater	Pollutants[5]	chemical spills, landfill leachate, sewage, animal waste, chemical fertilizers
	Salinity	Excessive depletion, saltwater intrusion
	Disruption of flow, replenishment	Below-ground excavation and construction
Saltwater	Pollutants[6]	stormwater runoff, sewage outflow, non-point pollution sources
Soil (native and urban)	Reduced fertility, soil biodiversity, permeability, and altered hydrology	Loss of topsoil, organic matter; soil sealing and compaction; invasive non-native plants and soil biota
	Pollutants[7]	Intentional (e.g., biosolids; pesticides) and accidental (spills) application of chemical contaminants; localized domestic animal deposits

1/ includes particulate matter (PM), nano and microplastics; inorganic gases (e.g., O_3, NOx, SOx, CO, NH3), volatile organic compounds (VOCs), persistent organic pollutants, and heavy metals, e.g., mercury

2/ Artificial light at night

3/ human-made sound that alters the behaviour of animals and interferes with their functioning

4/ includes point (industrial or storm sewer outfalls; nano- and microplastics, metals) and non-point (leachate from septic fields, runoff of excess fertilizers including manure, pesticides; oil and hydrocarbon leaks from buried oil, gasoline tanks)

5/ includes point and non-point pollutants, e.g., fertilizer leachate (e.g., NO3), chemical and biological contamination from sewage or manures, hydrocarbon or other chemical leaks from storage tanks or pipelines

6/includes point and non-point pollutants as for fresh and groundwater

7/includes point and non-point pollutants as for groundwater; chemical contaminants (e.g., heavy metals, nano- and microplastics, other emerging chemicals of concern

Table 2b. Stressor/Threats, terrestrial ecosystems

Environment	Stressors/Threats	Possible sources of threats
Ecosystem- native terrestrial	Loss of area-different terrestrial ecosystem types	Land use conversion buildings, traffic infrastructure; change in pre-settlement fire regime
	Fragmentation	Land use conversion Placement of buildings, roads, trails
	Pollutants	Litter and trash; see also Table 2a
	Reduced soil quality	See Table 2a
	Disrupted moisture availability	Increased impermeable surfaces Excavation and below-ground construction
	ALAN, Noise	See Table 2a
	Invasive species	Intentional or accidental introduction; non-removal; Improper disposal of yard waste Accelerated dispersal via trails, roads
	Direct disturbance, humans and domestic (pet) animals	Trail access and use; management of pet animals; collisions with traffic
Agricultural	Reduced soil quantity	Increase in built environment;
	Reduced soil fertility, organic matter	Inappropriate cultivation, drainage, fertilization, pesticide application; addition of construction fill
	Loss of habitat for native birds, insects including pollinators	Increased cultivation of fields (removal of within-field trees; vegetation along streams and field borders (hedgerows)
Urban forest	Mature tree decline, mortality, removal	land use change - loss of pervious surface; poor microsite and soil management; introduction of pests; use of inappropriate tree species
	Inadequate tree replacement, regeneration	Increased impermeable surfaces
	Insufficient soil volume	Increased impermeable surfaces; topsoil removal
	Poor soil quality	See Table 2a
	Disrupted hydrology	See Table 2a
	Introduced disease, insects	Inappropriate transfer of infested soil, biological material
Urban backyard/ROW	Loss of area	increased impermeable surfaces, introduction of invasive species; application of chemical fertilizers, pesticides
	Loss of native vegetation	Landscaping- physical and chemical (pesticides, synthetic fertilizers); introduction of invasive species;
	ALAN, Noise	See Table 2a
	Reduced soil quality, quantity	See Table 2a
	Pollutants[7]	See Table 2a

Table 2c. Stressor/Threats, freshwater and saltwater ecosystems

Environment	Stressors/Threats	Possible sources of threats
Freshwater-surface	Disrupted surface, subsurface flow	Impervious surfaces, excavation and below-ground construction
	Disrupted channel morphology	
	Pollutants	See Table 2a
	Extreme temperature, low O2	See Table 2a
	Extreme flow variation	Impervious surfaces
	Excessive nutrient inputs	See Table 2a
	Cyanophyta blooms	Excess nutrients, temperature from low flows, sewage/septic/fertilizer runoff, loss of riparian shade
	Invasive plants and animals	
	Loss of riparian overstory	
Saltwater/estuary	Algal blooms	Excess nutrients from sewage/septic/fertilizer runoff
Near-shore	Pollutants; biological contaminants	
	Aquatic invasive species	Dispersal via watercraft
	Overharvesting	
Coastal Sand/Marine Shoreline	Altered sediment deposition	Shoreline hardening
	Pollutants; biological contaminants	

2.1.8 *Results to-date*
As per graph shown in 17 August 2023 RSTC agenda package. No new graphics generated

3.0 Next steps

1. Ongoing – summarizing key points from each policy, then capture additional aspects of each policy document for additional assessment. Iterative and likely not complete by December 2023.
2. Start developing recommendations for the who and what of additional analyses and how to make the EPGA accessible and useable
3. Updated version for October 2023 RSTC meeting, pending comments from members
4. ?????

4.0 *Literature Cited*

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Appendix EPGA 1.
Possible revisions to the draft Environmental Policy Gap Analysis (EPGA) Kevin Brown June 2023 and condensed recommendations (circulated among EPF working group, not to full RSTC)

The EPGA:
- is a key component of the Environmental Policy Framework (EPF)
- catalogues existing <u>and</u> emerging environmental concerns and related existing municipal policies.
- should provide a common understanding of the natural environment in Saanich's urbanized landscape and
- should be a useful tool for the community and District to develop appropriate and effective environmental policies

The EPGA should:
1. broadly define natural environment and divide it into components appropriate in a Saanich context
2. list existing and emerging threats to those components of natural environment
3. (a) Identify and assess existing Saanich policies meant to protect the natural environment and (b) identify aspects of Saanich's natural environment not currently addressed by policy.

The EPGA could also be used to guide environmental assessments of other ("non-environmental") Saanich policies.

Proposal: RSTC revisit the organization of Tables 1-5 in the draft EPGA and revise to increase functionality of the EPGA. Include the revised EPGA as an appendix in the RSTC's Environmental Policy Framework report.

Background

<u>Existing EPGA draft</u>
The existing draft EPGA was prepared by staff and first presented to RSTC in Sept 2020 for review. From the draft EPGA:

As part of Milestone One, taking stock of the existing policy framework and identifying gaps is an important first step in the [EPF] process. The Terms of Reference action item deliverable is to: "Draft a Resilient Saanich framework skeleton of existing policies, etc. Conduct a gap analysis. Identify options for filling gaps using the Green Bylaws Toolkit and other references".

The intent was to answer three questions largely as milestone 1 actions:

1. *What natural assets are there and what risks do they face?*
2. *How do we currently enhance and protect our natural assets?*
3. *What do we have the authority or opportunity to do?*

A complete EPGA would then be used to guide the setting of EPF goals and objectives and determine related actions necessary to completing the EPF.

The draft EPGA notes that "*this document will continually be revised throughout the process*", implying the EPF process.

The existing draft EPGA consists of several tables:
1. "Natural assets", their "benefits", and "threats"
2. Overview of Saanich bylaws, policies, strategies, procedures, and programs and partnerships (that contain provisions for environmental protection)
3. Related Saanich bylaws overview and "status" (e.g., "is there a gap or room for improvement?"). Assessments are summarized as a. "Significantly out-of-date or missing key elements" b. "Room for improvement or at least a review" c. "Complete and up-to-date" d. "Unknown or lack of data"
4. Stewardship approaches- list some current (2020) approaches by (a) the District and (b) community-based (non-governmental) organizations
5. Gap analysis summary and next steps – lists "natural assets" as per Table 1; summary status of plans and policies, stewardship status as in Table 3; and comments that appear to relate to analysis embedded in individual cells of the matrix.

Past review by RSTC
We briefly reviewed the draft EPGA in late 2020. We had difficulty refining the "natural assets" category, did not discuss specific "threats", and were not keen to pore over the many Saanich policy tools. At the time, RSTC was new and still resolving what it should be doing and how. RSTC did not answer two key questions: (a) is the draft EPGA adequate to do what is intended? (b) how can we improve the EPGA to make it more functional?

However, RSTC proposed creating thematic areas, each to presumably have its own gap analysis and resulting goals and objectives. The thematic areas and what they would include have not yet been resolved. It is not clear how individual thematic area gap analyses should proceed.

No additional work on the existing draft EPGA has been completed.

A functional higher level EPGA and individual thematic area gap analyses should complement each other. A functional EPGA could potentially better identify policies with multiple environmental benefits (or impacts) and confirm what components of natural environment are not addressed by existing policies. Individual thematic are gap analyses would be suited for a given policy area.

How can the existing draft EPGA be improved?

The September 2020 draft EPGA begins to address key questions posed in its introduction but could be more comprehensive, functional, and useful.

Key weaknesses include an incomplete list of natural environment components ("natural assets" in the draft EPGA) and a lack of clarity in how and how well natural environment relates to Saanich policies. The current draft doesn't show how components of Saanich's natural environment are or are not addressed by existing policies, nor does it identify policies with multiple environmental benefits (or impacts).

The staff report to Council (Jan 16 2023) regarding RSTC progress stated "RSTC to define if (EPGA) still desired", suggesting the EPGA wasn't needed; senior staff suggested (in answer to a question from council at that meeting) that the Sept 2020 draft EPGA was adequate in its current form. I disagree.

- RSTC still can and should improve the EPGA.
- Resilient Saanich is a complex process. It is important to periodically re-examine what was once considered adequate. Gaps can become more obvious as other component projects proceed.
- No one else is likely to improve the EPGA at this point.

What can RSTC do at this point? We <u>cannot</u> thoroughly assess how (and how well) current policy tools address and protect Saanich's natural environment. We <u>can</u> make improvements and suggest needed next steps as part of our EPF report.

Issues with the existing draft EPGA:
1. Table 1 presents an odd breakdown of natural environment or "natural assets". For example, habitat is separate from ecosystems; soil is separate from terrestrial ecosystems, but water isn't separate from freshwater ecosystems and watersheds. Urban forests are specified but not agroecosystems. (Note: the State of Biodiversity report refers to area of agricultural land)
2. Table 1 - What constitutes "Natural environment" seems incomplete. For example:

   (a) The draft EPGA doesn't include or obscures some abiotic components (light, sound, air quality, temperature, water quality) of the natural environment. Human activity, especially with urbanization, affects abiotic components. They should be explicitly included in Table 1: human activity affects those components; resulting changes may directly affect biodiversity and human health; the components are or can be monitored and mapped; and human impacts on abiotic components can be addressed by local bylaws or policies (see KBrown abiotic environment briefs to RSTC 2022).

   (b) The draft EPGA doesn't explicitly acknowledge that ecosystems in the urban landscape are fragmented, disturbed, and novel to varying degrees – for example, "backyard biodiversity"

3. Table 1- "Human benefits" is an odd category and inconsistently treated. It might suggest to some that <u>our</u> well-being is the primary reason that the well- being of the natural environment is important. That seems inconsistent with our principles, especially principle #1..

4. Table 1- "Threats" (= stressors) are a mixture that range from very proximate to the local environment (and controllable at the municipal level) to things that the municipality can't control but could (and should) adapt to. Distinguishing between proximate threats and those which are more global may be appropriate local policy development

5. Table 2- several policies are currently undergoing updating

6. Table 3 - It is unclear what the assessments of bylaws in Table 3 mean and how they were arrived at.

   For example, what does it mean <u>in terms of natural environment</u> to "be complete and up-to-date" or "could be reviewed"? Table 3 refers to 43 "enabling legislation tools" and associated

bylaws – of those 6 were "complete and up-to-date" 21 "could be reviewed" 8- "absent or missing" and remainder no assessment. The different bylaws are not connected to the different components of natural environment.

7. Table 4- there is some consistency with what we've been saying in our ongoing stewardship report- but also conflict

8. Table 5- Attempts to integrate 7 natural asset classes from Table 1 with the "assessed" policy approaches- but:
   (a) the natural asset classes may be inadequate as components of natural environment;

   (b) the information underlying the color-coded assessments is unclear; and

   (c) it's not clear what is included in each of the 28 (7 x 4) colored squares. Of those 28, 3 are said to be "complete and up-to-date" – 9 are "significantly out-of-date" or "missing key elements" 13 have "room for improvement or need review" (+3 vacant entries under community stewardship). The comments are based on what is not shown in the colored squares so the conclusions are questionable.

General thoughts:
1. The draft EPGA is a good start – it includes the main pieces necessary for a functional EPGA. It is also a good resource for other RSTC projects like the Stewardship report

2. To make the EPGA more functional, consider reassessing whether the existing "natural assets" category adequately covers "natural environment"; better identify what threats/stressors are potentially controllable locally or can be largely only adapted to; show clearer linkages between environment or stressors and policy and indicate what the policies actually are intended to do.

3. RSTC can do some, but not all needed revisions. We can make significant improvements and recommend others in the hopes that someone will complete the task of making the EPGA useful.

Possible improvements:
1. Table 1 - Delete "human benefits" column; recognize in EPGA introduction interrelationships among human impacts on (a) abiotic environment (b) biodiversity/natural ecosystems and (c) human health and wellness

2. Table 1- Revise "natural assets" classes to better reflect item #1, be more hierarchical, better align with the SOB report, and link via stressors to policies/regulations/etc. Add farmland and "backyard biodiversity" (SOB) to acknowledge that biodiversity and ecosystems occur and differ across a disturbance/urbanization gradient.

3. Table 1- Update the list of stressors potentially associated with different components of environment. Distinguish between those potentially controllable by the municipality versus not directly controllable. The latter require municipal policies that mitigate or adapt to stressors but can't prevent them. Similarly, Natureserve (2) distinguishes between "direct" and "indirect" threats, although the classes of stressors used by Natureserve and the IUCN (3) may not be ideal for linking environment, stressors and local policy in a Saanich-specific context.

4. Assign numeric codes to either classes of environment or to associated stressors and assign the same codes to policy tools.

- This could facilitate sorting and identifying (a) gaps in what aspects of environment or stressors are addressed (b) policy tools with multiple environmental benefits.
- An advantage of coding environment components is that they are understandable and key words may be easier to find in policies. An advantage of coding stressors is that stressors are what policy tools typically directly address. In other words, policy tools often address the action (causing the stress) not the environment (the outcome).
- Base the coding on 10 or so components of environment (or on the stressors) rather than on the ca. 200-300 policy tools that Saanich currently have (ca. 211 on the Saanich web page, 13 planning (OCP, LAP) documents, ca. 50 other strategic documents).

5. Table 3- Note the limitations inherent in the "assessments" of existing policies. Point out the uncertainty in knowing the intent (especially for regulations) and what "adequate" or "room for improvement" means with respect to protecting the specific aspect of environment.

6. Table 4. Align with stewardship WG findings.

7. Table 5. Amend to account for changes to Tables 1,3,4,5

Footnotes
1. Natural environment – refers to (1) abiotic factors necessary for life (2) physiography arising from planetary processes (3) biota and ecosystems that occurred on southern Vancouver Island pre-European settlement and still could occur given adequate habitat. Introduced and naturalized species might be considered as "natural environment" recognizing they may have deleterious effects. Natural environment (1) contrasts with the modern built environment, i.e., infrastructure made from relatively permanent human-manufactured materials[2] and (2) for our purposes, is predominantly outside of human structures.
2. Master, L. L., et al. 2012. NatureServe Conservation Status Assessments: Factors for Evaluating Species and Ecosystem Risk. NatureServe, Arlington, VA.
3. Salafsky et al. 2008. A Standard Lexicon for Biodiversity Conservation: Unified Classifications of Threats and Actions. Conserv. Biol. 22: 897

Draft Recommendations – Revisions to Environmental Policy Gap Analysis
Kevin Brown 6 June 2023. Circulated to EPF working group but not in June RSTC agenda package

Introduction
General goal of the EPGA:

Determine how Saanich policies address the components and processes of biodiversity and ecosystems in a Saanich landscape that ranges from rural and relatively natural to heavily urbanized.

For example, do existing policies adequately protect or do they impact the natural environment? Are there components of the natural environment not addressed by policy?

Specific goals:
- *Appropriately define the breadth and components of Saanich's natural environment*
- *Identify stressors or threats impacting those components of environment*
- *Link existing Saanich policies related to components of environment and / or to threats and stressors*

(Possible) **Revisions to the existing draft (September 2020) EPGA:**

8. Table 1 - Delete "human benefits" column; recognize in EPGA introduction interrelationships among human impacts on (a) abiotic environment (b) biodiversity/natural ecosystems and (c) human health and wellness

9. Table 1- Revise "natural assets" classes to better reflect item #1, be more hierarchical, better align with the SOB report, and link via stressors to policies/regulations/etc. Add farmland and "backyard biodiversity" (SOB) to acknowledge that biodiversity and ecosystems occur and differ across a disturbance/urbanization gradient.

10. Table 1- Update the list of stressors potentially associated with different components of environment. Distinguish between those potentially controllable by the municipality versus not directly controllable.

11. Assign numeric codes to components of environment or to associated stressors and assign the same codes to policy tools to facilitate sorting of policies by environmental component and / or stressors.

12. Table 3- Note (a) limitations inherent in the "assessments" of existing policies (b) uncertainty in knowing the intent (especially for regulations) and (c) what "adequate" or "room for improvement" means with respect to protecting the natural environment.

13. Table 4. Align with stewardship WG findings.

14. Table 5. Amend to account for changes to Tables 1,3,4,5

Appendix EPGA_2. Abiotic environmental factors in Saanich's natural environment: an exploratory review of potential effects on biodiversity and public health, availability of local data, mappability, and existing local policies

[***based on background briefs presented to RSTC in 2022 on abiotic components of environment – can be added***]

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
		transparent for public review.				
4	*District of Saanich leads by example through innovation and improving on best practices;*	Council leads or sets the example for Saanich. The outcomes that are to be achieved are clear. Timelines are clear. Staff fully engaged in developing innovative policy proposals. Promotes full interdepartmental coordinated action to achieve outcomes. Specific best practices are listed and committed to. Clear commitment to continuous improvement First time for this Policy or program.	Council indicates it wants to lead, but does not. Outcomes clear but timelines are vague, or vice versa; best practices vague. Staff only partially engaged in developing innovations. Departments and staff only partially coordinate. Policy or program has been done a few times before.	Council has an opportunity to lead, but does not. Outcomes and timelines vague. Best practices not specified. Staff not engaged in developing innovations. Poor interdepartmental coordination. Limited commitment to continuous improvement. Policy or program has been done frequently.	Council fails to lead. No outcomes or timelines. Best practices not specified. No staff engagement or interdepartmental coordination. No commitment to continuous improvement. Not an innovation if it's done routinely.	Not learning from and repeating past mistakes.
5	*Look beyond Saanich's borders to achieve results*	Policy has been discussed with neighbouring jurisdictions and has positive effect and	Policy may have an impact on other local jurisdiction and at a bioregional scale.	Policy may have impact on local jurisdictions but not at bioregional scale.	Policy has no relation to what adjacent jurisdiction are doing	Policy works against the direction other jurisdictions are going, or negates improvement on a bioregional scale

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
	at a bioregional scale.[2]	impact[3], or policy is adapted from other jurisdictions. Policy has positive impact on resilience at bioregional scale.				
6	*Address climate adaptation and mitigation in all that we do.*	Meets or exceeds full implementation of provisions of Saanich Climate Plan	Partly addresses adaptation and mitigation in Saanich Climate Plan	Addresses mitigation but not adaptation or vice versa.	Does not address the provisions of the Saanich Climate Plan	Will result in a net increase in GHG emissions
7	*Collaborate with diverse interests and backgrounds to develop more durable, fair and effective environmental policies and program*	Policy developed in collaboration with relevant community organizations, ENGOs, developers, service clubs, advisory committees, school districts, health authorities and special interest groups, etc. and policy outcome is welcoming to people of diverse backgrounds.	Consultation and collaboration has taken place with most of the appropriate and relevant groups and people of diverse backgrounds affected by the policy.	Consultation and collaboration has taken place with only a few groups or special interests and some of the outcomes are welcoming to people of diverse backgrounds.	Policy was developed without external consultation or collaboration and no particular effort was made to be welcoming to people of diverse backgrounds.	Policy was developed with values and benefits in conflict with, or ignoring all, input provided at the consultation stages OR Policy was developed solely with special interest groups directly affected by said policy No effort was made to ensure the outcomes were welcoming to people of diverse backgrounds.

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[2] Essentially, southern Vancouver Island and Gulf Islands.
[3] Neighbouring jurisdictions means local governments that share a border with Saanich, or the CRD

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
8	*Ensure open, accurate environmental information to encourage an informed citizenry that participates in building policies and programs for a more resilient Saanich* This principle has two aspects: Aspect 1) making environmental and policy development information (data, maps etc.) available to the public to create an informed citizenry and Aspect 2) soliciting information back from this informed citizenry to	To score on Aspect 1: 1. Accurate (vetted and assured by experts) baseline environmental data and information on criteria 1, 2 and 3 of Principle 3 above are clearly and openly communicated to the public in public forums and/or through online resources. 2. Data gaps and uncertainty is clearly articulated so that criteria 4 of Principle 3 above can be applied. To score on Aspect 2: 3. If relevant, input from the community is solicited, documented, and transparently incorporated into policy and if not	Policy includes sporadic outreach, education and some dedicated staff support. The outreach may be only targeted to some segments of the community and not towards harder to reach groups within the community (e.g., just online engagement or resources).	Public input not consistently sought, recorded or incorporated. No dedicated staff resources.	Policy developed by Saanich staff and approved by Council without public participation, but some outreach during the implementation phase.	Policy developed by Saanich staff and approved by Council without public participation, but no resources for communication at any phase of the project.

No.	Principle from EPF	Scoring Matrix for policies, strategies, regulations, and incentives. For brevity, "Policy" is used to denote all the initiatives in the table below				
		High (3)	Medium (2)	Low (1)	Neutral (0)	Opposes (negative 1 to 3)
	inform and improve policy. To score "high" all criteria on both Aspect 1 and 2 need to be met.	incorporated, documentation is available on reasons why. 4. Policy includes provisions for dedicated staff and ongoing outreach, education during the implementation phase.				

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