

Monitoring for Success

of the Invasive Species Strategy for British Columbia

Executive Summary Report
2018 – 2022





ACKNOWLEDGEMENTS

Thanks to the agencies, organizations, and individuals that contributed and provided input through the Monitoring for Success Provincial Survey distributed in early 2023. Additionally, thank you to those who provided ongoing input on the development of the Monitoring for Success Framework (2012-2017) and associated provincial survey, and have been involved since inception. Continued participation and contributions allow us to monitor and track trends over time, providing valuable information that will help shape future provincial invasive species strategies and the array of work undertaken in British Columbia.

Gail Wallin and Dr. Nick Wong of the Invasive Species Council of BC led the development of this report, with data analysis and writing by Stephanie Woods, founder of Woods Environmental and Conservation Services. Special thanks to Crystal Chadburn, Senior Invasive Plant Specialist with the Ministry of Forests, for supporting the development of this report.

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Cover photos:

Scotch broom - Tamara Slobogean

European green crab - Jeff Adams

Japanese knotweed - Megan Blackmore

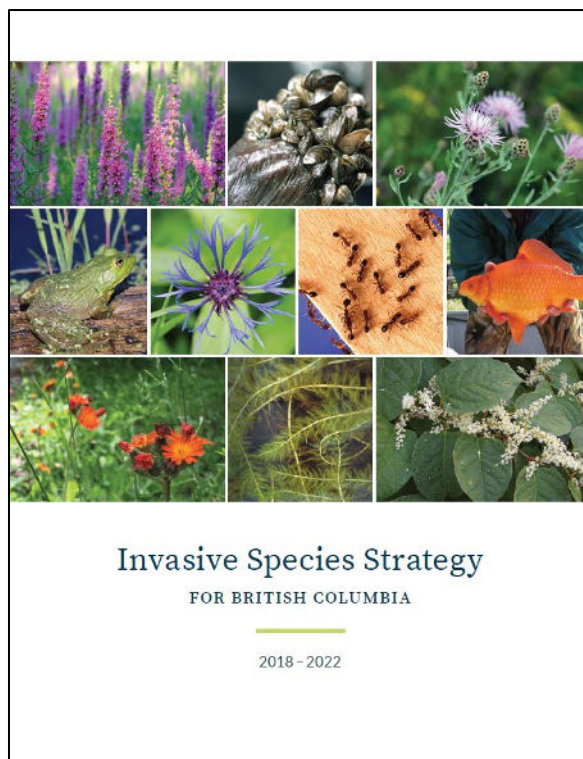
Japanese beetle - Steven Katovich

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Executive Summary

This Monitoring for Success Report reflects the input and progress against the [2018 - 2022 Invasive Species Strategy for BC](#). In 2017, the Invasive Species Strategy for British Columbia (the 'Strategy') for 2018 to 2022 was revised and updated through collaboration with partners across British Columbia. To assess the efforts and measure the success of commitments made in the Strategy, a Monitoring for Success (MFS) Framework was created, developed by members of the provincial Inter-Ministry Invasive Species Working Group, Invasive Species Council of BC, federal government, local government, regional invasive species organizations, industry and non-governmental organizations. In late 2022, the provincial survey was updated and widely distributed in 2023, coinciding with the end of the 2018 - 2022 strategy. The [full MFS report](#) summarizes input from seventy-one individual responses and

sixty responses from organizations, collected over four months through the 2023 survey. For the first time, this report also shows trends over time and where relevant, compares 2017 survey results (from the 2012 – 2016 Strategy) to the most recent 2023 survey results (from the 2018 – 2022 Strategy). These trends illustrate progress on invasive species management in BC from 2012-2022.



Knapweed Removal at Lake City Secondary School. Photo Credit: ISCBC

The MFS Framework is based on key components of the Strategy and provincial priorities that continue to evolve. While it is important to ask consistent questions to ensure comparable data is gathered over the years, some questions were updated to reflect advances in perspectives and approach.

The process of monitoring for the success of invasive species management in BC over ten years provides meaningful insights. The details of this report may spark discussion, support the creation of new policies, legislation or regulations, and guide the development of new strategies and workshops. Ultimately, it highlights progress and reveals gaps and areas for improvement in the future.

Monitoring for Success of the Strategy

Results Summary

The following information summarizes the Monitoring for Success findings of the 2018 to 2022 Invasive Species Strategy for BC, which is organized into seven Pillars, each with key areas of action. Survey results follow this format for ease of review. *Note: Not every question from the provincial survey is included in this summary.

PILLAR 1

Establish and Enforce Effective Regulatory Tools

Jurisdiction over invasive species and the regulatory tools used to manage them are enforced by federal, Indigenous, provincial and local governments. Progress towards the creation of a single piece of legislation, such as an Invasive Species Act, was established as an indicator for this pillar.



Proclaiming May 2018 as Invasive Species Action Month.

Left to right: Dr. Brian Hiese (Thompson Rivers University, ISCBC Board Chair), Honorable Doug Donaldson (Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Gail Wallin (Invasive Species Council of BC), Honorable George Heyman (Ministry of Environment and Climate Change Strategy), Dave Bennet (Fortis BC). Photo Credit: ISCBC

The BC provincial government is responsible for this regulatory tool and reported that it has not been completed at the time of the survey, but that there continues to be continued discussion about it and it remains a priority objective for the future. There were no significant updates to the Wildlife Act's Controlled Alien Species Regulation or the BC Weed Control Act and Regulation. However, updates were made during this period to the BC Inter-Ministry Invasive Species Working Group (IMISWG) priority invasive species lists to

maintain an Early Detection Rapid Response (EDRR) program. Survey results indicated that 71% of all respondents, including governments and others (up from 60% during 2012 - 2016), do monitor regulatory compliance, while 59% (up from 39%) also follow up with enforcement.

PILLAR
2

Strengthen Collaboration

Today, more organizations are involved in invasive species management than ever. This means that effective cooperation, coordination, and collaboration between governments, land management agencies, land users, invasive species organizations, Indigenous groups, researchers, industry organizations, community groups, and the public is critical. Recognizing that working together can take many forms, the MFS advisory committee introduced a collaboration continuum scale as an assessment tool for the 2012-2016 strategy period. Results showed most respondents work with other groups in some capacity.

Group Collaboration from 2012 to 2022

| | 2012–2016 | 2018–2022 | Trend |
|---------------|-----------|-----------|----------|
| Networking | 82% | 80% | Stable |
| Alliances | 67% | 43% | Decrease |
| Collaboration | 73% | 75% | Stable |
| Partnerships | 64% | 48% | Decrease |
| Other | N/A | 8% | N/A |

Sample sizes: $n=33$ in 2017 and $n=65$ in 2023; n indicates the number of responses.

Definitions:

Networking: Organizations have separate budgets, and they come together to discuss common issues and potential opportunities.

Alliances: Organizations come together to support an issue or policy change.

Collaboration: Organizations are actively engaged in a project and have a functioning relationship with some joint sharing of resources.

Partnerships: Organizations are actively engaged in a project together and share a common budget around an activity or initiative.

Results from 2018-2022 indicate encouraging levels of cooperation between groups, but as in 2012-2016, there is room for growth. If relationships evolve beyond networking to alliance and partnership, invasive species management issues may be more effectively addressed and resources more efficiently leveraged.

The Battle of 46 - Broombusters Scotch Broom Removal from Parksville Interchange



Photo Credit: Joanne Sales, Broombusters



Prevent the Introduction and Spread of Invasive Species

Prevention is the most effective tool for invasive species management. Reducing the number of invasive species in British Columbia requires closing pathways by eliminating avenues for introduction and spread. This can be achieved by promoting and implementing positive behaviour change, increasing best management practices, and increasing early detection and reporting. Although most respondents are not responsible for monitoring entry pathways, results show that some pathways are being targeted with encouraging results.

Over the past ten years, the provincial invasive species behavior change programs advocating simple, responsible practices everyone can adopt to prevent the spread of invasive species have established, expanded and are being promoted by respondents.

Promotion of Behaviour Change Programs from 2012 to 2022

| | 2012–2016 | 2018–2022 | Trend |
|-----------------------|-----------|-----------|----------|
| Clean Drain Dry | 46% | 34% | Decrease |
| PlantWise | 38% | 39% | Stable |
| Don't Let it Loose | 27% | 28% | Stable |
| Buy Local, Burn Local | 11% | 17% | Increase |
| PlayCleanGo | 24% | 41% | Increase |
| Squeal on Pigs! | N/A | 3% | N/A |
| None of the above | N/A | 8% | N/A |

Sample sizes: $n=37$ in 2017 and $n=64$ in 2023; n indicates the number of responses.



Active communication through technology and social media is now commonplace. Most of those surveyed use a website to promote programs and provide information on invasive species (72%). The number of social media channels and audience growth for some channels is on the rise. Most

respondents also used personal communications and events (77%), news releases and media interviews (63%), signage (56%), electronic newsletters (54%), webinars and podcasts (21%) and paid advertising (19%) as communication channels (n=57).

The use of mobile apps as a form of invasive species education, monitoring and reporting is steadily increasing in popularity. Half of respondents reported using the Report-Invasives mobile app, almost half say they use iNaturalist (45%), while 27% said they used none (n=56).

PILLAR
4

Implement Effective Control, Restoration and Monitoring Programs

The control and eradication of invasive species is most successful when addressed early on, including through EDRR, and followed by restoration and long-term monitoring. Restoration activities ensure ecosystem functions and services are reinstated and prevent future invasive species establishment. The Invasive Species Early Detection and Rapid Response Plan for British Columbia is important in eliminating new invasive species introductions, by increasing the likelihood that new priority invasions will be addressed successfully while populations are still localized and small. In addition to the public survey, the provincial government’s Inter-Ministry Invasive Species Working Group (IMISWG) also reported on new invasive species occurrences. While the IMISWG’s monitoring and reporting period doesn’t cover the exact same time frame, from 2015-2020, 100% of EDRR invasive plants and 30% of EDRR animals have provincial response plans. A total of 91% of these response plans are being successfully implemented. Beyond EDRR species, the majority of respondents conduct invasive species treatment.

Invasive Species Treatment from 2012 to 2022

| | 2012–2016 | 2018–2022 |
|--------------|-----------|-----------|
| Treatment | 76% | 73% |
| No treatment | 24% | 25% |

Sample sizes: n=37 in 2017 and n=52 in 2023; n indicates the number of responses; remaining 2% in 2018 – 2022 was “Don’t know if treatments are occurring”.

Knotweed Treatment Success by the Sea to Sky Invasive Species Council – Eight years of treatment and monitoring



Photo credit: Clare Greenberg, SSISC

A new question was added to the 2023 survey asking how many sites are treated per year. Answers ranged from treatment of two sites/year to more than 4,800 sites per year. The average of all responses was 617 sites per year, $n=31$. The average percentage of treated sites that are monitored is 64% ($n=32$) and the average percentage of treated sites that are restored is 36% ($n=25$).

PILLAR 5

Support and Extend Relevant and Applicable Research

Research efforts that expand on existing knowledge and consider the needs of resource managers require adequate investment. Sound policy development depends on the transparent availability and transfer of knowledge. Increased collaboration between research and practitioners needs support and coordination to ensure improved on-the-ground management and delivery. The strategy's key actions included a [research road map](#) identifying shared needs and priorities, to improve connection with practitioners and support research initiatives, as well as web-based invasive species [research hub](#), profiling research in BC and beyond, new funding opportunities, and research gaps.

The 2023 survey found one-third (33%; $n=49$) conduct research on invasive species compared to the slight majority in 2017 (56%; $n=36$ in 2017). Research included peer-reviewed papers (25%), field trials (63%), developing new treatment methods (50%), literature reviews (75%), interviews with experts (63%) and other (25%; e.g., community surveys on cultural methods of management, long-term monitoring) ($n=16$).

PILLAR 6

Provide Stable Long-term Funding

Obtaining stable, long-term funding for invasive species management is essential. 2023 survey results found three-quarters (75%) of respondents receive funding from external sources: Municipal: 46%, Provincial: 69%, Federal: 51%, Private: 34%, Grants 69%, Donations: 31%, Other: 23% ($n=35$). Additional funding sources included: fee for service, First Nations, program partnerships, NGOs, utility companies, Regional Districts, memberships, events, and programs. The average annual budget for 2022 for invasive species was \$419,267 (ranging from \$0 to \$4.19 million; $n=27$). From 2018 to 2022, 63% of the respondents indicated that their budgets had increased ($n=35$).

Priority Invasive Species Research Gaps Identified by Survey Respondents:

- | | |
|--|---|
| » Treatment efficacy | » Restoration |
| » Specific species | » Pathways of spread |
| » Knowledge and Best management practices | » Funding |
| » Implementation of research to on-the-ground action | » Prioritization |
| » Environmental DNA markers | » Bylaws |
| » Disposal Economic and overall impacts | » Climate change impacts |
| | » Using volunteers for effective monitoring |

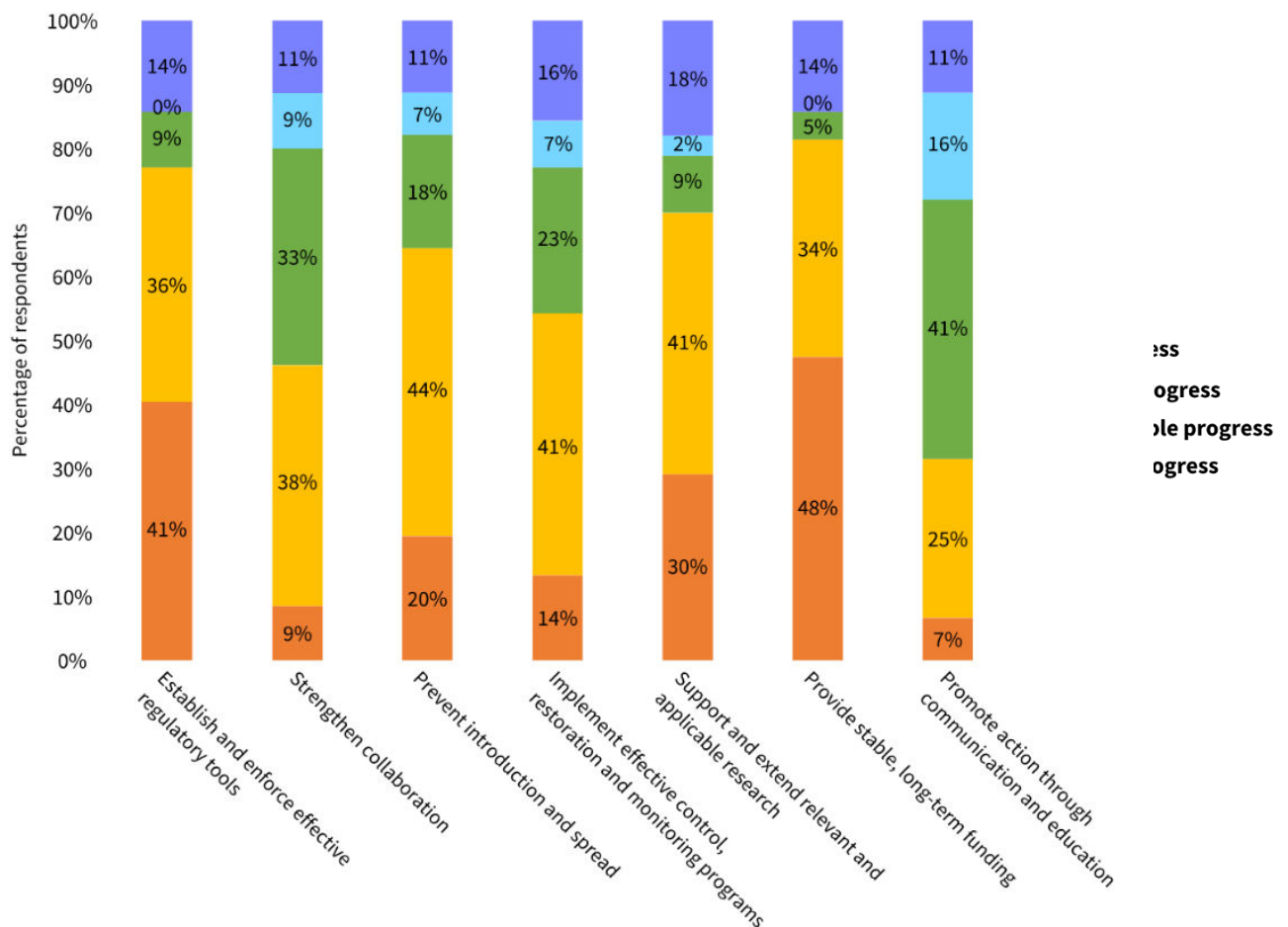


Promote Action Through Communication and Education

This pillar, newly added to the provincial strategy in 2018, aspires for everyone living in BC to be empowered to take action by adopting simple, responsible practices to prevent the introduction and spread of invasive species. Most respondents engage volunteers who assist their organizations (Yes: 59%, No: 39%, $n=49$). From 2018 to 2022, most report an increase in the number of volunteers (62%; $n=29$). Most collaborate with Indigenous groups (Yes: 78%, No: 10%, $n=49$) and over half say collaboration with Indigenous groups has increased (Increased: 55%, Decreased: 8%, Stayed the same: 21%, Don't know: 16%, $n=38$).

Reflections on Progress

The 2023 survey concluded by asking the participants to rate how they thought we have collectively done from 2018 to 2022 in addressing the identified priorities and key actions of the seven pillars of the strategy. Pillars which respondents said showed the most positive progress were Promoting Action Through Communication and Education, Strengthening Collaboration, whereas the pillars which remain a challenge included Establishing and Enforcing Effective Regulatory Tools and Providing Stable and Long-term funding.



Moving Forward

The findings of the MFS Framework and the Provincial Survey can be used by organizations and individuals across B.C. and beyond in work plans, reports, and funding applications. For continued success, we must keep working together, coordinating efforts, sharing our successes, our knowledge and the lessons learned, increasing public awareness of invasive species, and emphasizing the need for stable and long-term funding. The ability to compare how we've collectively done from the 2012-2016, 2018-2022 and 2024-2028 strategies will offer meaningful insight, reveal trends across the province over time, and identify where we must improve, prioritize and focus our efforts moving forward.

