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British Columbia Salmon Restoration and Innovation Fund:

Annual Results Summary (2022-23) Year 4 Report

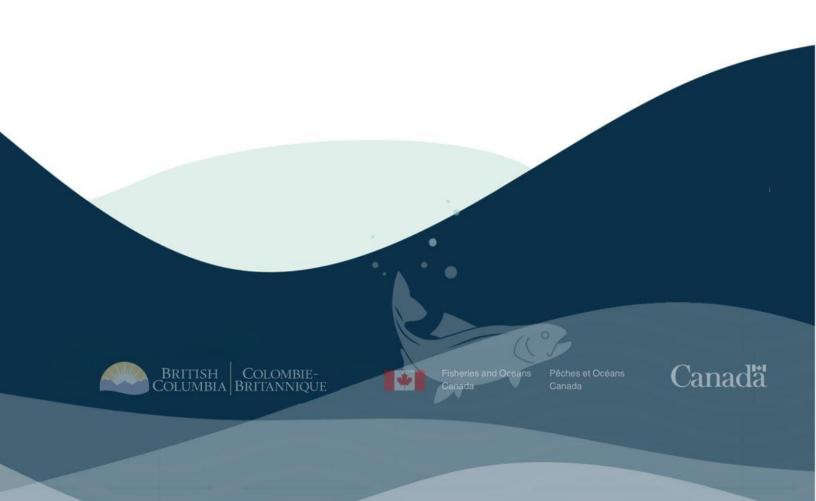


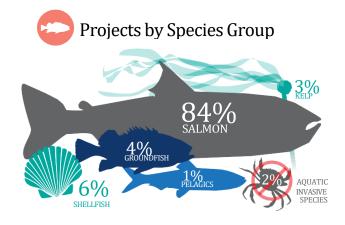
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Executive Summary

The <u>British Columbia Salmon Restoration and Innovation Fund</u> (BCSRIF) is a contribution program funded jointly by the federal and provincial governments, with 70% of the funding provided by the Government of Canada and 30% by the Province of British Columbia (B.C.). At its outset, the program was funded through the Integrated Fish and Seafood Sector Contribution Management Framework (IFSSCMF) program.



All recipients have commenced work and reported on-the-ground results. These results are compiled and reported in the <u>Annual Results Report</u>. Information for this report was obtained through BCSRIF's internal analysis of its year 4 project results and outcomes, supplemented by information obtained through project - based annual recipient reporting on project achievements, socioeconomic and ecological benefits and outcomes, which are collected by the program on an annual basis.

The quantitative and qualitative metrics and report narratives provided by recipients contribute to performance measurement at a program level, and more broadly to the results of <u>Canada's Fisheries Funds</u> at a national level. This report will help ensure that governments and the Canadian public are informed of how public monies are being spent, and of the significant benefits the BCSRIF contribution program provides.

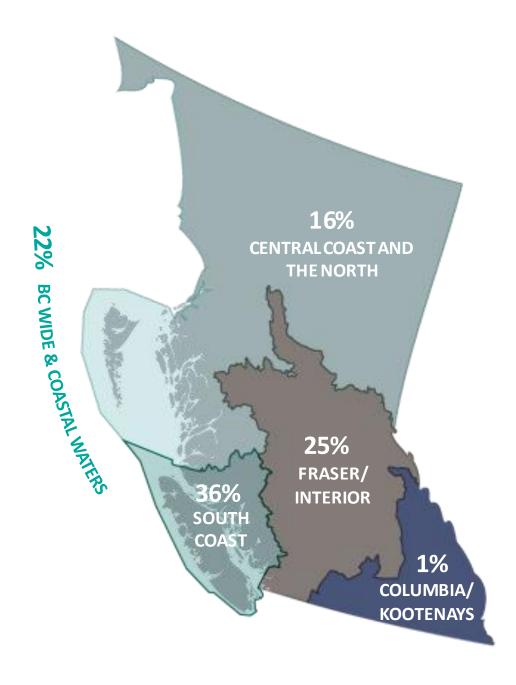
The report will focus on the program operations and has a tri-fold objective:

- to inform Canadians of the accomplishments of the BCSRIF Program in improving the sustainability
 of Pacific region fisheries and B.C.'s fish and seafood sector, and contributing to the recovery of
 wild Pacific salmon through project funding;
- to highlight how BCSRIF supports the mandates and priorities of the Department of Fisheries and Oceans (DFO)and Province of British Columbia, and contributes to the annual <u>Department Results Report</u>, and
- to provide the cumulative results stemmed from BCSRIF projects in year 4, including measures that reflect key socio-economic and ecological outcomes resulting from program investments.

Additionally in 2022–23, BCSRIF was relaunched into an overlapping second phase, representing a doubling of the program and the grants & contributions funding available. The 70% share of Government of Canada funding for BCSRIF Phase 2 was provided as part of the Pacific Salmon Strategy Initiative (PSSI), the federal government's long-term strategy to stop serious declines in key Pacific salmon populations through a series of science-based approaches, achieved through collaboration across governments, partners, stakeholders and interested parties to protect and rebuild stocks. This report will briefly cover the relaunch of BCSRIF and major activities that occurred under Phase 2 prior to March 31, 2023.



 $Additional\ information\ on\ the\ full\ suite\ of\ projects\ is\ available\ at\ {\color{red}www.bcsrif.ca}$



Linkages to DFO Mandate and Departmental Framework

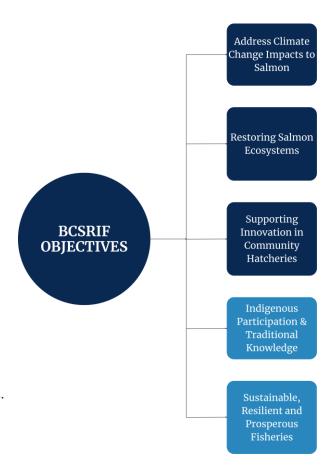
BCSRIF provides broad-based contributions in support of the Government of Canada's and Province of B.C.'s priorities, both Minister's mandate commitments, the Department's core responsibilities and planned results, commitments to Canadians and top issues. The program funds external organizations, such as Indigenous organizations, non-government organizations, commercial enterprises and industry associations, and scientific and academic communities to undertake projects in support of protection and restoration activities for Pacific salmon and other priority wild fish stocks, and projects that will ensure the fish and seafood sector in B.C. is positioned for long-term environmental and economic sustainability.

Operating under the Integrated Fish and Seafood Sector Contribution Management Framework Terms and Conditions, BCSRIF's objectives are aligned with DFO's core responsibility of fisheries, as highlighted in the Departmental Results. Framework and contributes to the following departmental results:

- 1.1 Canadian fisheries are sustainably managed
- 1.2 Canadian aquaculture is sustainably managed

The <u>Departmental Plan</u> describes the key initiatives the Department continued to advance in 2022–23.

BCSRIF investments also contribute to meeting the Department's national and regional objectives under the Canada's Oceans Agenda and Wild Salmon Policy. BCSRIF is aligned with Government of Canada's priorities and departmental mandate commitments, including using science and Indigenous Knowledge to make decisions that affect fish stocks and ecosystem management. BCSRIF's scope of funding will continue to advance the Blue Economy Strategy. This will provide a framework for the sustainable use of Canada's ocean resources and a system that seeks to create opportunities for coastal communities while advancing reconciliation and conservation objectives.



Project categories/types within BCSRIF's scope of funding



Linkages to B.C. Mandate and Government Objectives

The Government of B.C. understands the value of our natural environment for the ecosystem services, cultural significance, and the wealth of economic opportunities it can provide when managed sustainably and responsibly. B.C. government priorities support these values, including building a sustainable and secure economy that works for everyone, and will achieve these objectives through a rights-based partnership approach to decisions respecting land, water and resource stewardship. Through the government's approach to reconciliation with Indigenous Peoples, we are committed to results that balance environmental restoration and resource development and support Indigenous Self-Determination, Inherent Right of Self-Government, and the social, cultural and economic well-being of First Nations. A key part of this work is supporting the efforts of the many First Nations, communities, stakeholder and stewardship groups, industry, and others in recovering the iconic wild salmon in this Province. BCSRIF is a key component of B.C.'s Wild Salmon Strategy in Action and is the main funding delivery tool to third parties to help achieve shared objectives for wild salmon recovery, sustainable fisheries and aquaculture, and habitat restoration.

BCSRIF is aligned with the B.C. Ministry of Water, Land and Resource Stewardship's mandate commitment to the ongoing implementation of the Declaration on the Rights of Indigenous Peoples Act (DRIPA). Specifically, through BCSRIF we are working towards DRIPA Action 2.9:

Develop new strategies to protect and revitalize wild salmon populations in B.C. with First Nations and the federal government, including the development and implementation of a cohesive B.C. Wild Pacific Salmon Strategy.

In addition to our DRIPA commitments, WLRS has priorities and mandate commitments that BCSRIF is contributing towards. This program is a core element of our ongoing Wild Salmon Strategy work and a part of fulfilling key aspects of the Wild Salmon Advisory Council's recommendations. B.C. is enacting a transformation of the management and stewardship of our waters, lands and resources, together with First Nations, to build a co-managed land and resource management regime. BCSRIF contributes towards this transformation through the restoration and monitoring of vitally important areas of the Province. BCSRIF's objectives are aligned with the provincial mandate, such as the commitments to:

- Creating opportunities for Indigenous peoples to be full partners in our economy and providing a clear and sustainable path for everyone to work towards lasting reconciliation.
- Lead work with the federal government to protect and revitalize B.C.'s wild salmon populations, building on past successes such as protection of fish habitat and innovation in fish hatcheries.
- In collaboration with federal, First Nations, and local governments, as well as industry, support the work to develop and implement a responsible plan, including technology-based solutions, to transition from open-net finfish aquaculture.

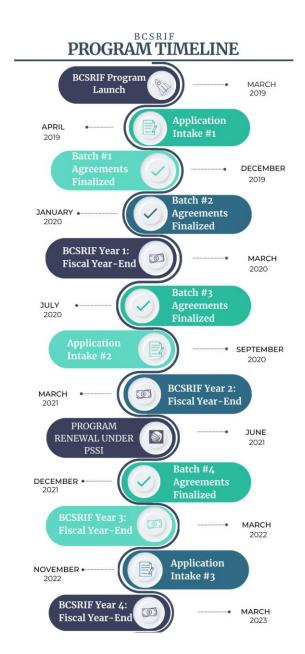
The continued investment through BCSRIF has enabled the Province to support employment opportunities and innovation in rural and coastal communities, to advance reconciliation, and to protect salmon and aquatic habitat. The partnerships that have been developed through BCSRIF and the projects that have been supported are key to the successes we have seen and will be essential to our joint goals of saving salmon, and supporting First Nations, coastal communities and sustainable fisheries.

Program Operations at a glance

In 2019, BCSRIF completed the program's first proposal intake and received 192 Expressions of Interest (EOIs) requesting more than \$327M. Ministerial approval of an initial 42 projects resulted in a total investment of \$71.3M.

In September 2020, under the program's second intake, BCSRIF received 126 expressions of interest requesting over \$197M, which represented over 343% of the program's available funds. Full proposals were reviewed during the winter and spring of 2020–21 and culminated in Ministerial approval of an additional 57 projects in the spring of 2021. Concurrently, BCSRIF program staff continued to work with the recipient organizations that received funding under the first intake to manage the full suite of requirements of Contribution Agreement funding.

The 2022-2023 year marked an important milestone for BCSRIF, when the Government of Canada and Province of British Columbia's joint announcement on BCSRIF Program Renewal under PSSI came into effect, to double BCSRIF funding and extend to 2026. This extension provided the opportunity for organizations to engage with the BCSRIF for funding in support of program priorities. In November of 2022, under the program's third intake, BCSRIF received 139 proposal applications requesting \$327M in total funding. Proposals were reviewed and joint funding recommendations developed during winter 2022. Further details about BCSRIF Phase 2 recipients and their projects will be available in the 2023-24 Annual Results Report.



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3 Engagement

Engagement is a critical tool that strengthens all stages of the BCSRIF process, from development of strategic funding priorities to project management and program reviews. Even before a funding application is received, BCSRIF staff meet with potential recipients, subject matter experts, and program partners to ensure awareness regarding the opportunity to apply to the fund throughout the province. Applications undergo a rigorous review, including referrals to relevant subject matter experts to ensure funded projects align with program priorities. Unsuccessful applicants are provided feedback on how their application could be improved upon for future intakes. Once funding decisions are made, BCSRIF program staff have ongoing engagement with recipient organizations to provide support over the project timeframe, including regular check-in meetings built into project monitoring schedules. These regular check-ins support the long term success of funded projects, covering important topics such as project implementation updates, budget status, workplan adjustments, and project deliverables.

Ongoing engagement with recipients allows BCSRIF program staff to assist recipients with project challenges and help identify solutions early on. Check-ins can occur virtually or on site, depending on the project. In addition to direct engagement between BCSRIF and funded recipients, recipient organizations are also often provided significant guidance and expertise from internal (DFO/B.C.) and external subject matter experts, governments, indigenous organizations, other ENGOs and key public stakeholders through formalized project management committees. These committees are strongly supported by BCSRIF as they support relationship building and capacity building through knowledge transfer and collaboration. For the launch of BCSRIF Phase 2, engagement was tracked as part of the DFO regional Jambo pilot project: 178 engagement sessions were held from February to November 2022 where 33% of sessions were with Indigenous organizations, 13% with environmental non-governmental organizations and 10% for each of academia and industry, respectively



Infrastructure, Science Partnerships and Innovation are the three program pillars and investment categories under BCSRIF. These pillars support the management, protection and restoration activities that will safeguard the future of Pacific salmon and other priority wild fish stocks, ultimately ensuring that there is a thriving and sustainable fish and seafood sector in B.C. for the future.

Many projects selected for funding align with multiple pillars. The majority of funded projects support innovation in some capacity, either as a direct linkage through the development of new products or technology, or more indirectly with novel or innovative processes, or partner collaboration in the pursuit of common objectives.

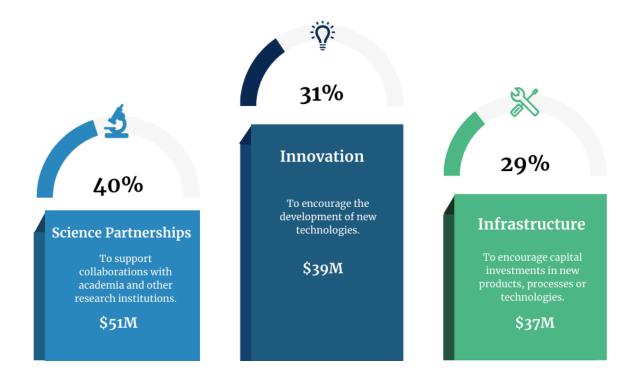


Image 1: The SpotON Flow Cell unit used for MinION Mk1B nanopore-sequencing.



Image 2: Dr. Ahmed Siah collecting an eDNA swab of biofilm from sweeper in hatchery pond.



SCIENCE PARTNERSHIPS

Investing in science partnerships supports scientific activities and research in the development of sustainable harvesting, processing and aquaculture technologies, as well as other science activities that protect wild fish stocks in BC. With a focus on wild Pacific salmon species, BCSRIF has made investments in projects that develop frameworks or other processes that will enable future evidence-based decision making

For example, through their application of Nanopore technology for the rapid detection and characterization of pathogenic organisms in enhancement hatcheries, the B.C. Centre for Aquatic Health Sciences (BC CAHS) is investigating accurate detection and identification of infectious agents essential for informed health management and treatment decisions. Nextgeneration sequencing technologies are being rapidly adopted as tools of choice for diagnostic and outbreak investigation in human and veterinary medicine. This project aims to validate Nanopore technology as a rapid and broadrange tool for the detection of salmon pathogens from biological and environmental samples from hatcheries.

INNOVATION

BCSRIF supports the research and development of new products and technologies that increase productivity, and advance methodologies that support Canada's fish and seafood sector markets to meet conservation and sustainability objectives, create partnerships, and support the protection and restoration of wild fish stocks.

Exemplifying innovation, The Nature Trust of British Columbia, is undertaking a monitoring program, using the Marsh Resiliency to Sea Level Rise (MARS) tool, to assess estuary resilience to sea level rise and other climate change impacts in 15 estuaries along the BC Coast. The monitoring will provide baseline data that may be used to enhance the long-term sustainability of estuarine health and wild BC fish stocks and habitat. Monitoring will inform the identification and prioritization of estuary restoration projects along the BC Coast.

Image 3: Cowichan Estuary (Cowichan Bay, B.C.)



Image 4: Salmon River Estuary (Sayward, B.C.)



Image 5: Victor Creek Sockeye Hatchery (Klemtu, B.C.)



Image 6: McLoughlin Hatchery (Bella Bella, B.C.)



INFRASTRUCTURE

Investments in infrastructure encourages the development of new products, technologies and processes that improve the effectiveness, quality and sustainability of the fish and seafood sector and support the advancement of sustainable fishing practices.

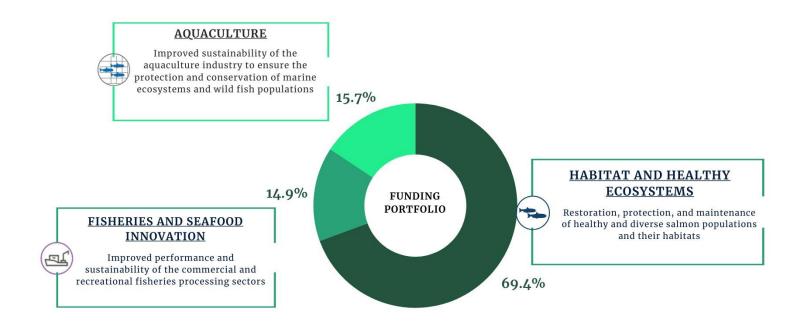


As an example, Great Bear Initiative Society's - Coastal First Nations Salmon Enhancement and Restoration Initiative, which focused on upgrading infrastructure at six community hatcheries to incorporate more sustainable technology and enable restoration of wild BC stocks that are of red-listed concern in the region. The key elements of the work include repair, replacement, or acquisition of additional incubation or rearing spaces or equipment storage areas, electrical upgrades and improvements to water supplies.. The uniqueness of this project is that four Nations will work collaboratively with each other and DFO-SEP and share technical expertise to make needed repairs and improvements, while best utilizing resources.

Phase 1: Themes and Priorities

To further refine the basic criteria outlined in the program's terms and conditions, provide scope to the application process, and guide BCSRIF's strategic investments under each Program Pillar, B.C. and DFO identified several joint priority investment areas for project funding under each proposal intake. These priorities were informed by engagement with Indigenous organizations, regional stakeholders, government experts (e.g. DFO fisheries managers) and academia. The joint priority investment areas reflect key provincial and federal areas of interest, including mandate commitments and current policy initiatives. In advance of the program's second project intake in 2020, BCSRIF updated these priority investment areas to include three broad themes and six program priorities that focus on revised strategic government priorities, including addressing significant declines in some salmon stocks.

Under the three broad themes of Aquaculture, Habitat and Healthy Salmon, and Fisheries and Seafood Innovation, BCSRIF's funded projects align with numerous program priorities. These priorities are collaboratively developed by DFO and B.C. and reflect a joint government response to concerns and issues of importance in B.C.



Aquaculture and the changing
Environment/ Mariculture
(marine based aquaculture)

For example, British Columbia Shellfish Growers Association is creating the Shellfish Aquaculture Strategic Renewal Program to improve traceability of shellfish products; apply innovative handling and processing technology in the BC shellfish industry and traceability education and awareness for the shellfish industry growers.

Priority funding for aquaculture focuses on new aquaculture technologies to improve environmental performance and increase supply chain transparency, including strategies for reduction in the use of chemicals, alternative fish culture technology or infrastructure, improved fish health management practices, boat-to- plate traceability of seafood products, improvements within the aquaculture industry (e.g. improved seed production for shellfish), and alternative species production (e.g. kelp).T o d a t e BCSRIF's investments in aquaculture sustainability total \$19.5M.

2 Species of concern rebuilding through Scientific Research

For example, Nuu-chah-nulth Tribal Council's project "Partnership for a novel framework for assessing and managing Pacific Herring fisheries on the West Coast of Vancouver Island" has created shared ownership of the Herring Renewal science process. Through analytical model investigations, a team of Indigenous, Academic, and DFO experts are exploring West Coast Vancouver Island Herring life histories and fisheries impacts, to inform management approaches to this important stock.

Priority funding for species of concern through scientific research focuses on projects that improve the scientific understanding of at-risk and other wild Pacific salmon species, and the rebuilding of fish stocks in B.C. Factors also considered under this priority include scientific collaborations and the incorporation of Indigenous Knowledge, watershed-scale projects, and projects that aim to address limiting factors of productivity, critical habitats, and causes of, or reductions in, fish mortality such as pathogens, disease, or aquatic invasive species impacts. Under the science partnership pillar. Up until March 2023 BCSRIF has invested \$51M.

Species of concern rebuilding through Selective Fishing

For example, Lower Fraser Fisheries Alliance (LFFA) aims to demonstrate the effectiveness of community-led selective fishing to support the modernization of Fraser River salmon fisheries in the face of declining salmon populations. LFFA has piloted selective fishing gear in the Fraser River and its tributaries through applying traditional First Nations methods in modern ways to achieve economically sustainable and culturally sensitive outcomes.

Priority funding for species of concern rebuilding through selective fishing focuses on projects that aim to minimize bycatch of species of concern, or that aim to improve selective fishing practices and projects that focus on least harm for Fraser River chinook, steelhead and coho, and/or other wild Pacific salmon species. BCSRIF invested \$3.3M under species of concern rebuilding through selective fishing activities. Factors considered include innovation in commercial, recreational or food, social, ceremonial fishing gear types, e.g. selective fishing using modified fish wheel or fish traps).

Species of concern rebuilding through Habitat Restoration

For example, the K'omoks First Nation, City of Courtenay, and the Comox Valley Project Watershed Society (CVPWS) are working together to re-naturalize a former industrial sawmill site in the heart of the salmon migration corridor for the watersheds of two major rivers, the Puntledge and the Tsolum. Through baseline monitoring, restoration planning, and a long-term vision, Kus Kus Sum represents reconciliation in action.

Priority funding for species of concern rebuilding through habitat restoration focuses on projects that are part of a watershed-scale restoration plan or restoration prioritization efforts as well as projects that build on successful previous restoration efforts, or focus on critical habitat and/or the rehabilitation of natural ecosystem processes. BCSRIF's investments under the theme of habitat and healthy salmon total \$74M. Key factors considered include: salmon habitat connectivity including floodplain, estuary and major tributary restoration, collaborative management planning having tangible and long-term strategic objectives, and projects that are linked to endorsed strategies, policies or plans.



For example, the Great Bear Initiative – Coastal First Nation's project "Coastal First Nations Salmon Enhancement and Restoration Initiative" identified remote, First Nations community run hatcheries that need support for technical and operational upgrades. Approaching these upgrades through this partnership not only supported improvement of the facilities themselves, but allowed for sharing of technical expertise and established relationships to support future work.

Priority funding for species of concern rebuilding through community hatchery upgrades focuses on improvements or upgrades of existing hatchery infrastructure, in particular for coastal communities with a long history of hatchery operations tied to significant importance in the community. Investments by BCSRIF in community hatchery upgrades total \$4.4M. Key considerations include projects that incorporate innovative infrastructure or technology, and that demonstrate applicability for other facilities.



For example, Archipelago Marine Research (AMR) will develop an easy to use mobile application for fishermen to record their fishing logbook data and submit daily catch reports and hails. This new tool will improve the timeliness and accuracy of the data that is produced to support in season management of the fishery.

Priority funding for projects that increase innovation and support the sustainability and economic stability of B.C. fisheries focuses on innovative processes and technologies that increase the quality and value of B.C. fish and seafood products and that optimize fishing operations by including strategies that expand value – added fish processing and products to B.C. markets; contribute to stock assessments, management strategies, evaluations and management procedures; improved catch monitoring; and support precision fishing in B.C.'s coastal waters by minimizing by-catch and incidental mortality. Since 2019, a total of 49 (51%) of BCSRIF's recipient organizations report having adopted or adapted new innovative products, processes, technologies or equipment with important environmental implications.

In preparation for BCSRIF relaunch and Phase 2 under PSSI, BCSRIF formalized 3 Principles that have guided the fund since inception; these principles can be used to prioritize proposals and resultant projects that embody them.

• Climate change impacts to salmon

- Climate change adaptation measures focused on salmon stocks and aquatic ecosystems, including strategies to respond to, or mitigate future impacts of, extreme weather events
- New investments in coastal and ocean areas that have a high potential to absorb and store carbon, like tidal wetlands, seagrass meadows, kelp forests and riparian habitats

Priority salmon stocks

- BCSRIF will consider urgency and recovery likelihood for prioritizing salmon proposals.
- Implementing multi-species, place-based and threat-based approaches to advance species at risk recovery

Indigenous Participation and Knowledge

- Prioritizing Indigenous-led projects and/or Indigenous participation, including collaborative assessment and monitoring projects that will inform ongoing habitat and fisheries work
- Improving the availability of Indigenous Knowledge related to salmon or other species of cultural significance, with potential to inform planning and policy decisions

A harmonization exercise also occurred, including analysis of the BCSRIF Phase 1 funding profile against the Pacific Salmon Strategy Initiative. The \$647 million Pacific Salmon Strategy Initiative (PSSI) launched by the Minister of Fisheries, Oceans and the Canadian Coast Guard on June 8, 2021 is the largest, most transformative investment Canada has made in salmon. It aims to stem the devastating historic declines in key Pacific salmon stocks and rebuild these species to a sustainable level. The Initiative is built on four key pillars:

- Conservation and Stewardship;
 - Salmon Enhancement;
- Harvest Transformation; and
- Integrated Management and Collaboration.

While BCSRIF Phase 1 analysis demonstrated projects in alignment with all 4 PSSI pillars, projects aligned with Conservation & Stewardship and Harvest Transformation were most numerous and considered most positively impactful to wild Pacific salmon. As such, 3 new strategic funding priorities were designed for the third BCSRIF application intake.

1. Salmon ecosystems

 Research, monitoring and community-based stewardship initiatives to advance the scientific understanding and contribute to the recovery of salmon stocks and their freshwater, estuarine and high seas environments

2. Salmon habitat

• Integrated salmon habitat planning, monitoring and restoration projects to rehabilitate and build resilience in salmon habitats prone to multiple pressures

3. Sustainable fisheries

Increasing the value and quality of B.C. seafood products through sustainable fishing and processing
practices, including Indigenous, commercial and recreational fisheries, and environmental stewardship in
the aquaculture sector

Information on the BCSRIF Phase 2 funding profile as part of PSSI will be available in the 2023-24 BCSRIF Annual Results Report.



The extent to which projects generate tangible and sustainable environmental and economic benefits to the fish and seafood sector can, in part, be measured by several key performance indicators. The following sections provide a cumulative "snapshot" of BCSRIF's program performance as of March 31, 2023.

Recipient organizations provide BCSRIF with yearly and multi-year (i.e. fiscal year and cumulative) metrics and data on their project(s) to support BCSRIF in reporting annually to its government partners, funding recipients, and the public on individual project achievements and overall program outcomes. This data, collected through year-end reporting, compliments other information provided by recipients in their application documents, Contribution Agreement, deliverables, progress and claims documents, as well as project check-in's and site visits undertaken with BCSRIF.

Several key metrics highlight BCSRIF's contribution towards diversity and inclusion, economic and socio-economic prosperity, partnership engagement and collaboration, and ecological benefits of the projects. These metrics demonstrate the wide range of benefits generated through BCSRIF investments across various sectors.

Measuring Success: Employment, Training and Economic Outcomes

One indicator of BCSRIF's success is the economic benefit to individuals and communities provided by employment and training opportunities tied to funded projects. An understanding of the number of people paid directly through BCSRIF funds provides a measure of the employment opportunities generated by the program, and though not assessed, BCSRIF funding also contributes to many indirect economic benefits to related sectors, including materials and equipment manufacturers.

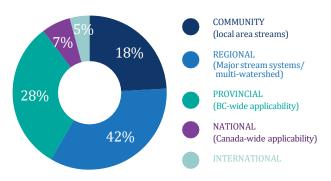
During the fiscal year 2022–23, BCSRIF recipients reported having directly employed 973 persons. Of these jobs, recipients reported that 286 positions are full-time with projected long-term employment. Just over 28% of the employment opportunities are based in rural or remote communities (i.e. with populations less than 1,000).

Training and skills development is a strong priority for BCSRIF's strategic outcomes. During the 2022–23 fiscal year, 62 of the recipient organizations implemented training as part of their project work activities. In year 4, BCSRIF recipient organizations report that 711 people received training, with over 38% of those identifying as Indigenous persons. Over the 4 years of program operations, BCSRIF recipient organizations report, that a cumulative total of 1126 individuals have received training as part of the project activities; overall 40% of those individuals identify as Indigenous. Areas of training and skills delivery include GIS, mapping, information and drone technology; fisheries assessment and fish habitat restoration; fish and fish habitat monitoring; facility operations; other licensing; or, health and safety.

Measuring Success: Geographic Scope and Scale

The scope and scale of a project's influence is a broad indicator of the program's support toward improved productivity and sustainability of regional fisheries, and signifies the increased knowledge being shared amongst BCSRIF's recipients, science researchers, academia and the public. Local area restoration efforts often have significant positive impacts on local fish populations, but many BCSRIF funded projects have far- reaching influence. The rebuilding of fish populations through scientific research, selective fishing, and habitat building are key priorities under BCSRIF.

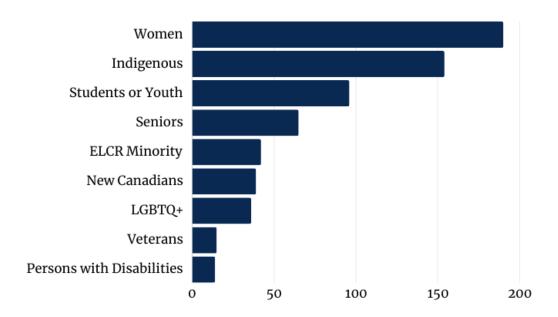
SCALE OF INFLUENCE



Measuring Success: Diversity and Inclusion through Gender-Based Analysis Plus (GBA+)

BCSRIF recipients report demographic metrics, which serve as analytical tools to support the development of responsive and inclusive initiatives. GBA+ is about how all elements of a person's lived reality – including ethnicity, age, geography and other factors – may intersect to create visible or invisible barriers to accessing a project or initiative.

GBA+ Demographics



In year 4, BCSRIF offered recipient organizations the opportunity to provide details on the demographic make-up of their project teams as well as other details on their organizations efforts towards ensuring a diverse and inclusive work environment. This information helps support the Government of Canada's efforts and commitment to promote diversity and inclusivity and foster programs that provide opportunity for all Canadians to participate in the fish and seafood, fish management and environmental sectors, including women, Indigenous Peoples, members of the LGBTQ2+ community, people of ethnic, linguistic, cultural or religious (ELCR)minority, seniors, veterans, students or youth, people with disabilities and new Canadian.

*Proponent-reported cumulative results; 2020-2023 *Projects reported in whole numbers

Measuring Success: Partnerships and Public Participation

Many BCSRIF recipient organizations report having partnerships with other organizations and receive financial or in-kind project support to enable their projects. Partnerships are often critical to the success of BCSRIF projects. They aid in the pooling and sharing of resources, help increase shared scientific knowledge, provide opportunity for education and development of expertise, and promote communications and awareness of the challenges and. Having strong partnership support also helps minimize the risk of project failure.

Collectively, three metrics are assessed as success indicators regarding the level of collaboration stemming from funded projects: the total number of partner organizations, the total number of Indigenous partner organizations and the total number of volunteers involved in projects. These indicators provide a valuable measure of the partnerships made possible through BCSRIF funded projects.

Over 90% of BCSRIF's recipient organizations report having secured support from partners for project delivery, with a reported 682 formed partnerships throughout the program since inception. Projects that do not have partnerships are predominantly scientific research studies or are web-application development oriented. Indigenous organizations are partners in over 38% of BCSRIF projects, accounting for 264 of these collaborative relationships.

Public participation is a powerful means of implementation which crosscuts most BCSRIF projects and without which outcomes could not be realized. Close to 4,855 people have dedicated their time as volunteers in the implementation of BCSRIF projects. The main volunteer activities reported by recipient organizations include citizen science, monitoring, habitat restoration and communications.

PARTNERSHIPS BEYOND EXPECTATIONS

Interconnections in Remote Salmon Stock Assessment & Indigenous Stewardship

Pacific salmon are vital to livelihoods, food security, and cultures of coastal communities in the Pacific Region, creating a need for reliable and timely monitoring to inform sustainable fishery management.

Currently, spawning salmon abundance is often monitored with in-river video or sonar cameras. However, reviewing video for estimates of salmon abundance from these programs requires thousands of hours of staff time, and data are typically not available until after the fishing season is completed. This data provides vital information that informs fisheries management decisions including conservation strategies.

Pacific Salmon Foundation's project: Innovation for community-run terminal fisheries – scientific foundations for adaptive management of salmon sought to partner with select Indigenous communities to explore and test breakthrough technology and computing tools that could bridge the fields of computer sciences, fisheries management and population monitoring. This involves Computer vision deep learning that can enable rapid and reliable processing of data, with potentially transformative applications in salmon population assessment and fishery management. This project developed, trained, and tested deep learning models to perform object detection and multiobject tracking for automated video enumeration of salmon passing a weir or through a fish fence.

Meanwhile two other BCSRIF projects were underway using video fish counting tools to support stock enumeration. When connections were made with the **Gitanyow Fisheries Authority:** Kitwanga River Sockeye Salmon Recovery Plan Implementation Project and **Skeena Fisheries Commission**: Bear River Autonomous Salmon Enumeration Project, collaborative achievements were realized.

Together these groups were able to **share information and resources** to gather and annotate more than 500,000 frames of video data, encompassing 12 species (including seven species of anadromous salmonids). They also trained models for multi-object tracking and species detection. These efforts will **advance in-season monitoring and decision making** to support adaptive management of sustainable wild salmon fisheries.

Collectively, these BCSRIF recipients found interconnections to leverage their common objectives toward improved stock assessments of remote salmon systems and Indigenous stewardship.

Measuring Success: Ecological outcomes

Recipient organizations are asked to provide information on project outcomes that support fisheries rebuilding, species at risk or other targeted wild salmon stocks, fish habitat restoration, and the limiting factors being addressed by their project. These are the metrics used to assess BCSRIF's ecological outcomes, and are considered indicators of program performance. When considering specific program results it should be recognized that recipients might not report metrics and data using the exact same standards or methodologies.

Taking the above into consideration, BCSRIF measures ecological program performance through recipient project outcomes that provide benefits to aquatic species, and BC's wild salmon stocks. BCSRIF habitat related projects are wide -ranging in scope - from landslide assessment potential, to watershed planning and assessment, to physical habitat restoration activities.

By the numbers: Sixty three recipients indicated their BCSRIF projects directly support the recovery and conservation of wild Pacific salmon, and 43 projects target benefits to species at risk (SAR) populations. BCSRIF has provided funds to 34 projects that focus on the recovery of threatened or endangered Southern BC Chinook salmon populations. A further 17 projects focus on Interior–Fraser coho; 16 on Fraser Sockeye; 10 on Thompson–Chilcotin Steelhead, and 12 projects on other SAR populations. Benefits to species at risk are mainly provided through fish habitat restoration and enhancement efforts, as well as projects considering selective fishing methodologies.

A key to rebuilding fish populations is the development of watershed or area recovery plans, coupled with the identification and prioritization of fish habitat restoration projects. To date, recipients report having developed 36 watershed recovery plans and undertaken 299 fish habitat restoration sub-projects at 114 locations.

Habitat restoration for salmon and aquatic species is a high priority under BCSRIF. Recipient organizations aim to address anthropogenic (human-caused) and natural alterations to the environment though restoration of the limiting factors in watersheds. Over 45% of funded projects address changes to the environment, ecosystem sustainability, or habitat recovery. Of those, 32% of the projects' target degraded stream channel, estuarine or floodplain habitats. In tandem, 28% are aimed at addressing hydrological (i.e. stream flow) issues that adversely affect fish and fish habitat. Over 23% aim to restore riparian areas, 19% restore floodplain connections, 18% address stream substrate erosion or sedimentation, 1% evaluate impacts on fish related to predation, competition, disease, and 1% address the proliferation of invasive species in BC through various control and eradication methods.

Seventeen recipients reported restoration to fish passage loss where there are migration barriers to fish. At the end of the program's fourth year, recipient organizations reported that a total of 4,197,255 m², including aquatic and riparian habitat, have been improved or opened for salmon access through BCSRIF funding.

Measuring Success: Scientific Research

Science and research are strong components of many of the projects that BCSRIF supports. 44 (45%) of BCSRIF's funded projects have project components oriented toward academic study and scientific research. In the fourth year of the program, BCSRIF recipients report that 17 scientific publications or datasets have been released this in fiscal year 2022–23, through published peer–reviewed papers, presentations at scientific conferences, or reports posted on their websites. Since 2019, a cumulative total of 649 publications or datasets have been produced.

BCSRIF also supports project recipients undertaking stock simulation modelling, scientific monitoring or other data collection activities that inform fisheries management approaches, systems or frameworks for assessment and management of fisheries resources. Over 50% of BCSRIF's projects support activities under these categories, including, for example, stock assessment and recovery planning, assessment of salmon fitness, eDNA/ DNA testing, and many other studies.



- $39_{\rm publications\,or}$ datasets produced
- $26 \ \text{projects enumerate salmon} \\ \text{stocks}$
- 42 projects provide innovative fish stock monitoring
- 18 projects address fish genetics, virology, and pathogens
- 37 projects address ecosystem shifts and climate change

Measuring Success: Indigenous Leadership and Involvement

BCSRIF encourages Indigenous engagement and continues to provide support for Indigenous – led projects and projects that have Indigenous involvement. BCSRIF strives to ensure that program policies and processes are designed to be inclusive and enable opportunities for Indigenous organizations and to build capacity. Projects that incorporate Indigenous Knowledge (IK) or are undertaken as collaborative projects with local Nations, are considered a funding priority. Over 47% of recipients are incorporating IK in the planning and implementation of their projects. Building on early program experience and feedback, BCSRIF has refined its process aimed at documenting how Indigenous Knowledge is being obtained and used in project implementation, ensuring that appropriate consent is received from knowledge providers.

Of the 97 funded projects, 33 are led by Indigenous organizations and recipients reported 188 collaborative partnerships with Indigenous organizations (i.e. at project outset). As a cumulative total, 264 Indigenous partners have provided leveraged support – either financial or in–kind – to BCSRIF funded projects. Project recipient organizations also report that almost 70% have Indigenous persons on their project implementation team. BCSRIF supports employment and capacity building opportunities for Indigenous communities. As of March 31, 2023, BCSRIF projects have employed 333 Indigenous persons (approximately 25% of the total BCSRIF–funded employment opportunities) and just over 276 Indigenous persons have received training as part of the project activities (representing 36% of the BCSRIF–funded training opportunities). Building capacity within Indigenous organizations will enable these organizations, and others, to lead projects and guide future initiatives that enhance the sustainability of BC's fish and seafood sector, improve the resiliency of Pacific salmon and other wild fish stocks, and support the modernization and improved sustainability of regional fisheries.



Image 7: The Gitanyow Fisheries Authority's project "Kitwanga River Sockeye Salmon Recovery Plan Implementation" is identifying limiting factors to Kitwanga Sockeye stocks. Factors like en-route migration mortality hot spots and environmental stressors are guiding recovery plan implementation. Pictured right is the Kitwanga Smolt Enumeration Facility.



Measuring Success: Recipient Public Outreach and Media Communications

Stakeholder engagement, outreach and public education are core components of 90% of BCSRIF projects. In year 4 (2022–23), recipients reported facilitating over 324 outreach events by way of scientific conference presentations, workshops, seminars and other public presentations, educational sessions, and stakeholder forums; which reached 4,280 participants. As a cumulative metric from program initiation, this equates to over 718 outreach events with 9,591 recorded participants.

BCSRIF recipients communicated project results through a reported 649 public media products in year 4 (i.e., journal article, report, web-based publication, newsletter, video, website, social media blog and other social media posts), and most have developed project-specific websites as their main mechanism for information dissemination and exchange.

Thus far, over 1962 communications products have been publicly released by recipient organizations to inform their broader membership and the public of their project activities.

PUBLIC OUTREACH: BEYOND EXPECTATIONS

Interconnections in Community Engagement

Many projects transcend the BCSRIF pillars. The interconnections between Innovation, Infrastructure and Science Partnerships are evident in the Enhancing rockfish recovery through citizen science, outreach & field experiments project, led by The University of Victoria, School of Environmental Science.

In the Pacific Region, several species of Rockfish such as Yelloweye, Quillback and Black are considered to be of conservation concern and have been in decline, threatened, or endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or the Species at Risk Act (SARA). Ensuring the protection of these species requires a multifaceted approach with collaboration between science, fisheries authorities and recreational anglers.

Rockfish are protected in Rockfish Conservation Areas (RCAs) in BC Waters, though compliance is often sighted as a challenge due to lack of awareness among recreational anglers. A primary goal of this project is to improve rockfish recovery and assessment through outreach and citizenscience.

Activities of the project have supported innovative improvements to the MyCatch app functionality to notify users when they enter an RCA. Assessment is implemented through the addition of an ID book feature, supporting harvesters in ensuring compliance with conservation regulations (ie. assessing size or species of catch). Community engagement is also evident in the development of notices to anglers, installed in key areas. By integrating messages through various communication tools, the project is reaching anglers and connecting them with critical infrastructure and tools to support the protection and conservation of rockfish in BC.

Project Impacts & Challenges

Over the course of the 2022-2023 fiscal year, British Columbians faced a multitude of challenges such as environmental disasters, a continuing pandemic, and staffing shortages. BCSRIF project proponents were not immune to the impacts of these events; When asked what challenging aspects of project completion entailed, project proponents responded overwhelmingly with the following feedback:

The most challenging aspects of completing a BCSRIF funded project in 2022-2023 include;

- Covid-19 Pandemic: Ongoing impacts from the pandemic continued to disrupt projects due to travel restrictions, increased expenses, and supply chain delays
- Employment shortages: Increased cost of living proved to be challenging for projects to maintain sufficient staffing levels and meet the competitive wages found in other environmental sectors
- Wildfires: During the summer of 2022, British Columbia battled numerous large-scale wildfires. These fires had adverse effects on wildlife, including fish and fish habitat. Some project proponents reported BCSRIF-funded riparian site damaged as a direct result
- Severe weather events: Atmospheric rivers throughout the province caused extreme flooding. Mass wasting events in the Lower Fraser River occurred resulting in fish and fish habitat loss

To support the projects through this challenging time, BCSRIF continued close communication with recipients and took measures such as reallocating resources, adapting project timelines, and connecting proponents with experts and resources as needed. The dedication of the on-the-ground project staff showed true resiliency and passion for shared goal of supporting and enhancing salmon populations. BCSRIF remains committed to supporting project partners for the entirety of each project's duration as we continue to navigate adverse conditions and unforeseen situations.



Image 7: Lower Skeena River, Northern B.C.

Appendix 1: List of BCSRIF Funded Projects

Ongoing Projects from 2019-2023

Project Title	Recipient Organization	Allocation
Electronic Application for Enhanced Selective Fishing and Bycatch Avoidance	Canadian Groundfish Research and Conservation Society	\$600,000
Enhancing rockfish recovery through citizen science, outreach & field experiments	University of Victoria	\$758,780
Innovative Habitat Restoration Demonstration	British Columbia Conservation Foundation	\$4,952,373
Rehabilitation of Critical Infrastructure to Improve Survival of Thompson Steelhead & Chinook	Scw'exmx Tribal Council	\$1,314,027
Enhancing Estuary Resiliency: An Innovative Approach to Sustaining Fish and Fish Habitat in a Changing Climate	Nature Trust of British Columbia (NTBC)	\$8,552,415
Enhancing Sustainability of capture & release marine recreational Pacific salmon fisheries using new tools/technology	University of British Columbia	\$1,938,002
Elephant Hill Fire Riparian Restoration Project	Secwepemcul'ecw Restoration & Stewardship Society	\$2,629,833
Plateau Fire Recovery – Riparian Plant Collection and Planting for Restoration of Chinook and Coho Salmon Habitat in the Nazko Area	Baker Creek Enhancement Society	\$750,000
Place-based Risk of Climate Change to Sustainability of BC Wild and Hatchery-origin Salmon	Pacific Climate Impacts Consortium	\$1,025,000
Broughton wild salmon restoration project	'Namgis First Nation	\$4,220,529
Implementation of the Broughton First Nations Indigenous Monitoring and Inspection Plan	'Namgis First Nation	\$7,349,000
Cowichan River Salmon Restoration program - Sustainable Water Supply - Engineering	Cowichan Valley Regional District	\$2,999,218
BC Fish Passage Joint Venture	Canadian Wildlife Federation	\$3,999,721
Promotion of Habitat Restoration and Stewardship on Agricultural Lands in the BC	BCCA Program Delivery Inc	\$550,000
IYS: International Pan-Pacific Salmon Expedition (2021)	North Pacific Anadromous Fish Commission	\$3,305,457
Vision 2021	Sport Fishing Institute of BC	\$700,879
Kitwanga River Sockeye Salmon Recovery Plan Implementation	Gitanyow Fisheries Authority	\$867,020
Determination of Bottlenecks Limiting Wild and Enhanced Juvenile Salmon and Steelhead Production in BC using PIT tags and Spatially Comprehensive Arrays	Pacific Salmon Foundation	\$4,619,877
Optimizing Recirculating Aquaculture Systems for Sustainable Salmon Production	University of British Columbia	\$1,829,490
Seymour Watershed Restoration Project	Seymour Salmonid Society	\$618,844
Upper Adams Salmon Restoration Program	Adams Lake Indian Band (ALIB)	\$2,521,181
Phase 2: Independent First Nations' Genomic Lab for BC	'Namgis First Nation	\$1,977,828
Lower Fraser Coho PIT Barge and Tagging Project	Lower Fraser Fisheries Alliance Society	\$679,690
Partnership for a novel framework for assessing and managing Pacific Herring fisheries on the West Coast of Vancouver Island	Nuu-chah-nulth Tribal Council	\$390,500
Bear River Autonomous Salmon Enumeration	Skeena Fisheries Commission	\$402,439
Shellfish aquaculture strategic renewal program	British Columbia Shellfish Growers Association	\$3,500,000
Evaluation of coastal kelp farms as novel habitat for migrating salmonids and their prey	Cascadia Seaweed Corp	\$1,886,046
Kingfisher Intake Restoration	Kingfisher Interpretive Centre Society	\$43,396
Seymour Hatchery Infrastructure Renewal	Seymour Salmonid Society	\$80,410
Modernizing catch reporting in Canada's Pacific Region Salmon Fisheries	Archipelago Marine Research Ltd	\$317,557
A-Tlegay Kelp Production and Restoration	A-Tlegay Fisheries Society	\$171,713
Mitigating impacts of the European Green Crab invasion on Haida Gwaii	Secretariat of the Haida Nation	\$2,796,887
Chemainus/Koksilah Twinned Watershed Sustainability Project	Cowichan Tribes	\$1,370,332
Developing a cumulative effects modelling framework for the recovery of aquatic salmonid populations	University of British Columbia	\$253,610
UAV Habitat Mapping to Inform wild Salmon Stewardship	First Nations Fisheries Legacy Fund Society	\$2,478,221
Skeena Estuary Habitat Management and Protection Planning	North Coast-Skeena First Nations Stewardship Society	\$2,334,024
Ecosystem Management of kelp forest	North Pacific Kelp Wild Foods Inc.	\$99,999

South Coast European Green Crab Control Selective Fishing Using a Salmon Trap Tsawwassen First Nation Highway 16 corridor fish stranding Babine Lake Creel Survey Lake Babine Nation Development and establishment of Vancouver Island Chinook Committee Landslide impact on the flow dynamics, fish migration and genetics of Fraser River Salmon Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon University of Victoria Climate Action Priorities for Salmon Clayoquot Wild Chinook Salmon Initiative First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$3,534,340 \$875,325 \$213,032 \$372,951 \$397,540 \$3,566,728 \$512,458 \$3,270,151 \$792,782 \$2,747,628
Highway 16 corridor fish stranding Babine Lake Creel Survey Lake Babine Nation Development and establishment of Vancouver Island Chinook Committee Island Marine Aquatic Working Group Landslide impact on the flow dynamics, fish migration and genetics of Fraser River Salmon Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon University of Victoria Climate Action Priorities for Salmon Pacific Salmon Foundation Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Kitselas First Nation Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM)	\$213,032 \$372,951 \$397,540 \$3,566,728 \$512,458 \$3,270,151 \$792,782
Babine Lake Creel Survey Lake Babine Nation Development and establishment of Vancouver Island Chinook Committee Island Marine Aquatic Working Group Landslide impact on the flow dynamics, fish migration and genetics of Fraser River Salmon Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon Climate Action Priorities for Salmon Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Kitselas First Nation Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$372,951 \$397,540 \$3,566,728 \$512,458 \$3,270,151 \$792,782
Development and establishment of Vancouver Island Chinook Committee Landslide impact on the flow dynamics, fish migration and genetics of Fraser River Salmon Simon Fraser University Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon Climate Action Priorities for Salmon Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$397,540 \$3,566,728 \$512,458 \$3,270,151 \$792,782
Landslide impact on the flow dynamics, fish migration and genetics of Fraser River Salmon Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon Climate Action Priorities for Salmon Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Kitselas First Nation Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Simon Fraser University Central Coast Kitselas First Nation Mariculture Limited Partnership Ha'oom Fisheries Society Understanding FIM in the BC Public Fishery Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Simon Fraser University University	\$3,566,728 \$512,458 \$3,270,151 \$792,782
Causes and consequences of vateritic otoliths in hatchery-reared Coho salmon Climate Action Priorities for Salmon Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$512,458 \$3,270,151 \$792,782
Climate Action Priorities for Salmon Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Kitselas First Nation Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$3,270,151 \$792,782
Clayoquot Wild Chinook Salmon Initiative Central Westcoast Forest Society First Nations-led Freshwater Salmon Habitat Assessment & Restoration Planning in the Central Coast Indigenous Resource Alliance Society (CCIRA) Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Kitselas First Nation Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$792,782
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Coast Kleanza Creek Salmon Habitat Enhancement and Restoration Project Kitselas First Nation Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$2,747,628
Kleanza Creek Salmon Habitat Enhancement and Restoration Project Applying Innovation and Collaboration to Improve Productivity, Economic Stability and Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Kitselas First Nation Mariculture Limited Partnership Ha'oom Fisheries Society Sport Fishing Institute of BC	
Environmental Performance of Oyster Culture Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC Sport Fishing Institute of BC	\$561,335
Exploring Spatial Management Opportunities for Rockfish using Indigenous Knowledge and Subtidal Surveys Understanding FIM in the BC Public Fishery Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC Sport Fishing Institute of BC	\$558,015
Understanding FIM in the BC Public Fishery Sport Fishing Institute of BC Recreational Release Mortality Studies and Fishing Related Incidental Mortality (FRIM) Sport Fishing Institute of BC	\$202,500
	\$205,916
D. D. G. H. H. GERREN D D	\$833,250
Fraser River Estuary Salmon Habitat (FRESH) Restoration Projects Ducks Unlimited Canada	\$4,781,409
Conservation Fishing - A First Nations Demonstration Selective Fishing in the Lower Fraser River Harrison Salmon Producers LLP	\$789,200
SFAB Vision - Phased Implementation Sport Fishing Institute of BC	\$453,324
Salmon River Collaborative Salmonid Habitat Enhancement and Restoration Initiative Yucwmenlucwu (Caretakers of the Land) Splatsin Developme Corporation	ent \$208,289
MakeWay - Resilient Waters Lower Fraser Valley Rehabilitation MakeWay Charitable Society	\$2,686,479
Wuikinuxv Assessment and Restoration of Rivers Inlet Salmon Wuikinuxv Nation	\$543,374
Supporting the Ongoing Use and Development of the Pacific Salmon Explorer Pacific Salmon Foundation	\$3,776,300
Selective Fishing Gear Pilot in the Fraser River Lower Fraser Fisheries Alliance Society	\$1,293,613
Technology for more sustainable fisheries in BC T Buck Suzuki Foundation	\$320,700
First Nations-led catch monitoring to inform sustainable mixed-stock fisheries management on the Central Coast Indigenous Resource Alliance Society (CCIRA) Central Coast	\$1,533,176
Collaborative Freshwater Research and Restoration Initiative in the Thompson Watershed Shuswap Nation Tribal Council Society	\$789,102
Nanaimo Hatchery Upgrades to Improve Hatchery Performance and Assessment and Monitoring Capabilities Nanaimo River Stewardship Society	\$1,030,431
Coastal First Nations Salmon Enhancement and Restoration Initiative Great Bear Initiative Society	\$2,826,811
Watershed Restoration Prioritization Tool/Solutions for Gold River Steelhead Nootka Sound Watershed Society	\$324,953
The application of nanopore technology for the rapid detection and characterization of pathogenic organisms in enhancement hatcheries	\$306,000
Deadman River Hatchery Upgrades Skeetchestn Indian Band	\$385,000
Rebuilding Wet'suwet'en Sockeye Salmon Abundance and Diversity Wet'suwet'en Treaty Office Society	\$848,160
Kus Kus Sum – Restoration of key habitat to re-establish ecosystem services that will support BC fisheries.	\$1,712,652
Fraser Salmon Management Program Fraser Salmon Management Council	
Kitwanga River Sockeye Salmon Enhancement Project Gitanyow Fisheries Authority	\$400,000
Total	\$400,000 \$950,000

Appendix 2: List of completed BCSRIF Funded Projects

Completed Projects as of March 2023

Project Title	Recipient Organization	Allocation
$Development of wet lab \ capacity \ to \ investigate \ wild/farmed \ interaction \ and \ stock \ restoration$	Centre for Aquatic Health Sciences Society	\$742,443
National Indigenous Fisheries Institute-BCSRIF Engagement Project	National Indigenous Fisheries Institute	\$355,095
Phase 1: Independent First Nations' Genomic Lab for BC	'Namgis First Nation	\$50,560
Field application and testing of tools for identifying, mapping and quantifying important forage fish populations and their habitats to support enhanced conservation of chinook salmon in coastal BC	Comox Valley Project Watershed Society	\$321,779
Resilient Waters: Phase 1	MakeWay Charitable Society	\$598,756
Salish Sea Salmon Action Plan	Pacific Salmon Foundation	\$1,083,498
BC Fishing App	Sport Fishing Institute of BC	\$910,500
Elaho River Chinook Salmon Restoration	Squamish River Watershed Society	\$522,486
Millstream Fishway Project	Peninsula Streams Society	\$300,000
Winter Salmon Survey in the Gulf of Alaska	Pacific Salmon Foundation	\$650,000
Creation of Salmon Conservation Facility	Juan de Fuca Salmon Restoration Society	\$216,349
In novation for community-run terminal fisheries - scientific foundations for adaptive management of salmon	Pacific Salmon Foundation	\$410,300
Improving Sustainability of British Columbia's Commercial Spot Prawn Fishery and Prawn Stocks	Pacific Prawn Fishermen's Association	\$117,996
Upper Fraser Chinook Strategic Enhancement Project	Spruce City Wildlife Association	\$240,362
Inkaneep Creek Restoration	Osoyoos Indian Band	\$360,283
Drivers of Inter-annual variability in Zooplankton Feeding in the Strait of Georgia: A combined model-observation approach	University of British Columbia	\$165,000
Percy Walkus Hatchery Upgrade	Pacific Salmon Foundation	\$336,895
The Fermentative production of Microalgae as food for juvenile bivalves in BC	Seed Science Ltd	\$475,492
Chapman Creek Hatchery water supply and capacity upgrades	Sunshine Coast Salmonid Enhancement Society	\$70,000
Supporting West Coast Oyster Industry	Nova Harvest Ltd	\$210,000
Gwabalis Aquaculture Opportunity & Sustainability Survey	Gwabalis Fisheries Society	\$107,167
Modernizing Recreational Catch Monitoring, Data Collection and Communication	Sport Fishing Institute of BC	\$343,750
Finfish Environmental Assessment - Sablefish Aquaculture	We Wai Kai First Nation	\$144,200
Monitoring lipid content of Fraser-bound Chinook at Albion	University of British Columbia	\$36,869
Assessment of sampling methodologies, March 2022 Gulf of Alaska	Pacific Salmon Foundation	\$308,000
	Total	\$9,077,780