Geoscience BC

STRATEGIC PLAN 2018 – 2022

Forging opportunities through earth science partnerships

Foreword

In our rapidly changing world, natural resources remain essential to a modern industrial revolution that is bringing new technologies into our everyday lives faster than ever before. In British Columbia, we have abundant mineral, metallurgical (steelmaking) coal, energy, and water resources – for which world demand is forecast to grow as we adapt to climate change and evolve towards a more integrated economy and a greener and cleaner industrial future. We also have a highly skilled and educated workforce and have become a leading business, academic and technology hub for thousands of interconnected and innovative companies serving the natural resource sectors.

For B.C. to compete and thrive in the long-term, there is an ongoing need for new, unbiased public geoscience data, relevant information and innovative research that solves challenges, attracts investment, informs decisions and supports the responsible development of our natural resources.

About Geoscience BC

Through the power of partnerships, Geoscience BC has been delivering high-quality, innovative geoscience research since 2005. We have collaborated with over 75 partners on more than 160 projects. Our research is publicly accessible and has been welcomed by diverse groups including the resource sectors, academia, communities, Indigenous groups and governments.

Geoscience BC is a not for profit society incorporated under the B.C. *Societies Act* for promoting, funding and supporting public geoscience research in B.C. The society had its genesis in a $25 million funding commitment announced by the Government of British Columbia in January 2005. Geoscience BC functions to complement the efforts of pre-existing provincial and federal geological survey agencies but operates on an arms-length basis from the governments of both British Columbia and Canada.

Core funding for Geoscience BC is primarily received from the Government of British Columbia and this funding leverages further funding from other partners. Since inception, Geoscience BC has invested approximately $53 million and attracted matching partner funding of over $27 million, for a total investment in provincial geoscience research of almost $80 million. For every $1 expended by Geoscience BC, $1.52 has been invested in public geoscience research projects in B.C.

Geoscience BC is led by a volunteer Board of Directors consisting of up to 13 members representing a variety of backgrounds. The Board is responsible for the overall governance and strategic direction of the organization, including the constitution and bylaws, annual administrative budgets, committee membership and research project budgets based on recommendations from the Board's Technical Advisory Committees (TACs). The TACs consist of Board-appointed volunteers from the resource sector, academia, government and Indigenous groups who have specific technical expertise to identify, plan, develop and review earth science research projects.

Geoscience BC's management is responsible for the day-to-day operation of the organization and implementing the Annual Management Plan, Scientific Project Plan and administrative budget.

Strategic Plan Purpose

The purpose of Geoscience BC's Strategic Plan 2018-2022 is to proactively guide the organization to achieve its vision and accomplish its mission. It will be aligned with and supported by a Scientific Project Plan and an Annual Management Plan. To build the Strategic Plan, we listened to more than 400 people from a wide range of partners and interest groups and heard that publicly-accessible geoscience has never been more important. This Plan describes who we are as an organization and sets out the priority areas of work that will be our focus over the next five years.

Vision

To be a leading partner and provider of credible and relevant earth science research and data in B.C.

Mission

To generate and publicly share high quality and unbiased earth science research and data that:

- Improves our collective level of geoscience knowledge
- Informs responsible natural resource development and investment decisions
- Catalyzes socio-economic opportunities, and
- Stimulates innovation and geoscience technologies

Core Values

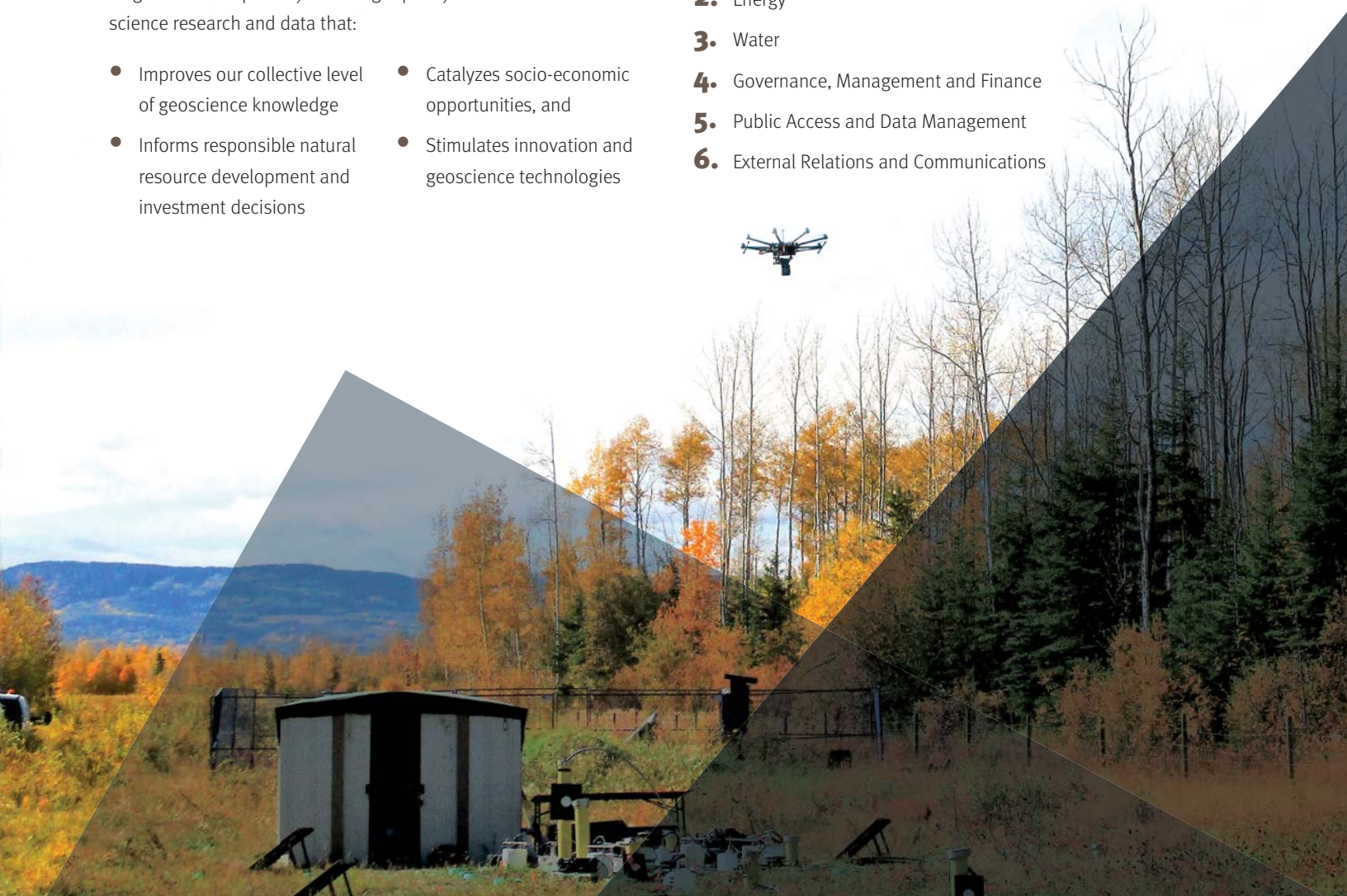
To uphold our vision and be productive, we will consistently live our core values and regularly engage and collaborate with our partners and interest groups to determine the focus and scope of our earth science research so that it is useful, complementary and accessible. The following words reflect our core values as we work to be:

- Credible
- Independent
- Collaborative
- Unbiased
- Relevant
- Innovative
- Transparent
- Non-partisan

Strategic Focus Areas

To effectively and efficiently accomplish our mission, we will organize and integrate our work across six strategic focus areas.

1. Minerals
2. Energy
3. Water
4. Governance, Management and Finance
5. Public Access and Data Management
6. External Relations and Communications



1. Minerals

B.C. has significant deposits of minerals and metals such as copper, zinc, gold, silver and molybdenum – critical materials required for a greener and cleaner future. The province also has major deposits of steelmaking coal and industrial minerals that are important to our modern world. Exploration and mine development occur widely across B.C. and they are a cornerstone of both regional and provincial economies, with a major portion of the sector's revenue generated from the sale and export of mineral and steelmaking coal production to international markets. Exploration projects and mining operations benefit nearby communities, provide thousands of direct and indirect jobs and contribute billions of dollars in economic activity each year. More than half of Canada's exploration and mining companies are based in B.C., which has the largest concentration of exploration companies and geoscience professionals anywhere in the world.

The following Minerals strategic objectives and goals will guide Geoscience BC's delivery of new earth science research and baseline data for prospectors, explorers, mine developers, governments, community leaders and Indigenous groups to make informed, evidence-based decisions about mineral resources, as well as helping to identify and mitigate risks, answer specific environmental and social questions and stimulate investment, jobs and socio-economic development in our province.

a. Strategic Objective: Identifying New Natural Resource Opportunities

Goals:

i. Continue regional-scale surveys that deliver large data sets in support of identifying prospective targets and increasing discovery rates of deposits

ii. Undertake research that adds value to existing or ongoing data sets through ground-truthing studies, data interpretation and mining camp compilations

b. Strategic Objective: Advancing Science & Innovative Geoscience Technologies

Goals:

i. Increase research and development of innovative exploration and mining methods, tools, approaches and geoscience technologies

ii. Support the preservation and curation of significant geological rock suites, core samples, archived government and museum samples, data and other important materials that form reference or historical records to complement efforts of other organizations

iii. Partner on bioscience and genomic research projects that assist with understanding mineral and coal deposit formation, resource development and impacts

iv. Explore partnerships and research opportunities that use geomatics and geospatial technologies for exploration purposes, resource management and overseeing surface changes in real time

c. Strategic Objective: Facilitating Responsible Natural Resource Development

Goals:

i. Partner on geoscience research projects that improve the understanding of the impacts of coal or mineral resource development activities

ii. Commence collaborative geoscience research that improves the effectiveness of coal or mineral site planning, monitoring, remediation and reclamation methods, approaches and tools

2. Energy

The oil and gas sector plays a vital role in B.C.'s economy, providing essential energy products to global markets, supporting thousands of jobs and contributing billions of dollars in revenue, with the potential to grow in coming years. Collecting, interpreting and sharing new scientific data relating to this sector helps to guide clean, responsible energy development, identify and mitigate risks, help answer specific environmental and social questions, and attract investment to B.C.

Geothermal resources may play a significant role in the long-term energy strategy for B.C. as we transition to alternative sources of energy for electricity and heat. The concept of adding geothermal to the energy mix has been discussed for many years but its economic challenges have stifled development. Geoscience BC's geothermal research focuses on projects and sites with high potential to provide communities and decision-makers with unbiased data and information that may assist in de-risking the economic development of geothermal resources.

The following Energy focus area outlines the strategic objectives and goals necessary to ensure Geoscience BC delivers new earth science research and baseline data that is beneficial and useful to the energy sector, governments, community leaders and Indigenous groups to make informed, evidence-based decisions about oil, gas and geothermal resources in our province.

a. Strategic Objective: Identifying New Natural Resource Opportunities

Goal:

i. Delineate new economic energy opportunities throughout B.C. through joint research and partnerships

b. Strategic Objective: Advancing Science & Innovative Geoscience Technologies

Goal:

i. Improve economic competitiveness of the Montney Play through advanced science and innovative geoscience technologies

c. Strategic Objective: Facilitating Responsible Natural Resource Development

Goals:

i. Continue to support development of the Montney Play through technical studies aiding hydrogen-sulfide prediction and safe fluid and acid gas disposal

ii. Maintain joint research with partners examining seismicity induced by hydraulic fracturing in northeastern B.C. to provide new science to better understand induced seismicity, mitigate risks and further improve regulation and industry practices

d. Strategic Objective: Enabling Clean Energy

Goals:

i. Increase research into innovative and practical ways to detect and implement cost-effective methane reduction techniques associated with natural gas development that assists energy companies and the Province to meet their regulatory obligations

ii. Continue geothermal resource mapping and research focussing on economically viable projects and sites with high geothermal energy potential

3. Water

With thousands of lakes, rivers, streams and aquifers in B.C., fresh water is one of the province's most essential and important natural resources, supporting our environment, economy and quality of life. In specific regions of the province, Geoscience BC has undertaken focussed water-related research related to aquifers and surface water. More earth science is needed to inform our understanding of water and to drive evidence-based decisions about water resources across B.C. The following Water focus area outlines Geoscience BC's strategic objectives and goals for ongoing and potential research related to water resources in B.C.

a. Strategic Objective: Understanding Water

Goals:

i. Expand the collection of baseline groundwater data and research on groundwater in the Peace Region to guide informed management of natural gas resources

ii. Partner on water quality and quantity studies that are regional or provincial in scope and related to exploration and mining activities

iii. Establish a strategic task force on water resources to provide advice to Geoscience BC on potential future water-related research

4. Governance, Management & Finance

The following Governance, Management and Finance focus area outlines the strategic objectives and goals necessary to operate as a not for profit organization under the B.C. *Societies Act*, and to ensure transparency, accountability and the responsible stewardship of Geoscience BC's technical, financial and human resources.

a. Strategic Objective: Ensuring Transparency, Accountability & Responsibility

Goals:

i. Maintain an independent volunteer Board of Directors to provide overall governance and strategic direction and to ensure compliance with all laws and regulations applicable to an independent society and in keeping with our constitution and bylaws on an ongoing basis

ii. Ensure accountability through the Finance Committee's oversight of all financial matters and the sharing of financial information publicly and transparently on a quarterly and annual basis

iii. Maintain a low administrative overhead and manage a professional office that is a safe, fair, productive and respectful workplace for all staff, contractors, guests and volunteers

iv. Ensure transparency of our processes for selecting Board Directors, Technical Advisory Committee members, consultants and scientific research projects

b. Strategic Objective: Building Future Opportunities

Goals:

i. Develop a Funding Opportunities Plan to expand collaborative partnership opportunities, diversify ways to achieve stable funding and seek matching 1:1 funding partners wherever reasonable and practicable

ii. Identify, plan, develop and review earth science research projects through our staff and Technical Advisory Committees that are comprised of volunteer scientific experts from the resource sector, academia, government and Indigenous groups

iii. Build, maintain and implement a Scientific Project Plan that aligns, supports and integrates with the Strategic Plan and Annual Management Plan

5. Public Access & Data Management

The following Public Access and Data Management focus area outlines the strategic objectives and goals necessary to support Geoscience BC's data management system and public access to our research findings and data.

a. Strategic Objective: Providing Public Access to Data

Goals:

i. Provide reliable, simple and efficient public access to user-friendly, accurate scientific information and quality project data

at no cost to end users through online platforms, applications and data sharing agreements with partners

ii. Expand geographic information and data systems to include relevant ancillary third party geospatial and geomatics data layers that are useful, compatible, dependable and upgradeable

iii. Collaborate with partners to support a one-stop portal for public geoscience research data and information in B.C.

b. Strategic Objective: Maintaining Secure Digital Data

Goals:

i. Maintain safe and secure databases, digital data project libraries, information technology infrastructure and management controls to professional standards and practices

ii. Use proven, high-quality technology and ensure advanced hardware is seamlessly integrated with reliable software and adaptable to next generation systems as technology evolves

iii. Upgrade and regularly maintain our database system to ensure that extra storage capacity is always available

6. External Relations & Communications

The following External Relations and Communications focus area outlines the strategic objectives and goals necessary to support Geoscience BC's communication and relationships with the natural resource sector, community leaders, Indigenous groups, academia and governments. Our External Relations and Communications focus area ensures we operate and communicate in a transparent manner; make our work easy to interpret and share; listen and respond to the needs of our partners and interest groups; and attract new funding.

a. Strategic Objective: Increasing Awareness & Expanding Collaborative Network of Partners

Goals:

i. Build transparency and demonstrate progress against Strategic and Scientific Project Plans by publishing plans, financial information, an annual report and quarterly updates

ii. Coordinate and increase education and awareness of public geoscience through collaboration with local, provincial and federal government ministries and agencies

iii. Increase awareness, build partnership opportunities and maximize use of research data by an expanding network of business and natural resource sector associations and committees

b. Strategic Objective: Demonstrating Research Value & Building Broader Support

Goals:

i. Develop meaningful, simple and measurable indicators and metrics that illustrate the value of earth science research to governments, partners, interest groups and the public

ii. Increase collaboration with Indigenous groups and undertake relevant Geoscience BC research that fosters their socio-economic development, while also supporting our objectives

iii. Engage with communities and demonstrate the critical role of public earth science by hosting and participating in events, proactively connecting with media to distribute materials, and adopting new communication tools and innovative methods as technology evolves

c. Strategic Objective: Serving Technical & Academic Partners

Goals:

i. Disseminate user-friendly data to technical audiences through annual Summary of Activities volumes, and regular abstracts, presentations and posters at technical sessions and workshops

ii. Maintain relationships with academic groups to identify and attract the best researchers and ideas, and to collaborate and assist with communication and research funding

d. Strategic Objective: Increasing Geoscience Literacy & Capacity

Goals:

i. Build geoscience literacy and capacity through projects, workshops and educational tools to increase the understanding and use of geoscience

ii. Encourage prospector training and early-stage exploration activity and incentives to utilize public geoscience research data and information in B.C.

iii. Continue selecting scholarship recipients every year as part of our commitment to support post-graduate students and the next generation of geoscientists

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