



UNESCO Biosphere Reserves

FIVE PATHWAYS FOR IMPLEMENTING
AGENDA 2030 IN CANADIAN UNESCO
BIOSPHERE RESERVES

INTRODUCTION

Agenda 2030 is the UN global action plan to reduce poverty, increase prosperity and shift our trajectory towards a sustainable future for people and the planet. It emerged from a survey of 9.3 million people around the world to determine what issues are of utmost concern for sustaining human wellbeing, and resulted in a comprehensive set of 17 Sustainable Development Goals, 169 targets and over 230 indicators. All 17 SDG goals are interlinked, and when combined, have the potential to empower all countries and stakeholders to engage in collaborative partnerships to implement the Action Plan.

In September 2015, Canada and 192 UN member states adopted the 2030 Agenda for Sustainable Development, signaling our shared commitment to peace, prosperity and a world free of poverty and environmental degradation. In the Clayoquot Sound UNESCO Biosphere Region, our action began in 2016 with storytelling to make the invisible more visible.



Canadian
Biosphere
Reserves Association
Association
canadienne des
réserves de la
biosphère

Biosphere reserves are models of co-governance at a community level, facilitating dialogue, showcasing models of sustainable development, and coordinating projects that bridge environmental, economic, social, and cultural divides.



Figure 1. 17 Sustainable Development Goals Positioned in Relation to the Biosphere (Folke et al. 2016)

In 2018, the CBT *Vital Signs* report leveraged local data to tell the stories that aligned with specific SDG targets and to provide a baseline with which to measure local progress towards achieving Agenda 2030. In doing so, we also took bold steps to identify the feedback loops between the livelihood activities generated by the environment and the driving forces that perpetuate the poverty cycle in our region, based on the interactions between the three tiers of sustainability: biosphere, society, economy (see Figure 1 above).

UNESCO BIOSPHERE RESERVES AND THE SDGs

Biosphere reserves (BRs) are international learning places for sustainable development designated by UNESCO's Man and the Biosphere Programme in recognition of areas that model solutions to complex sustainability issues. While each BR has its own distinctly defined goals and objectives, all BRs throughout the world aim to conserve biological diversity by empowering people to co-operate, share knowledge, celebrate cultural diversity and increase human well-being while supporting the continued flow of ecosystem services.

Globally, 170 million people live within BRs, covering 701 regions in 124 countries. In Canada, there are 18 UNESCO BRs, each reflecting a unique and significant component of Canadian culture and geography, while also connecting communities within the World Network of UNESCO BRs.

The 4th World Congress for Biosphere Reserves in 2016 adopted the UN 2030 Agenda for Sustainable Development and 17 SDGs in the 10-year Lima Action Plan (UNESCO 2017). Flavia Schlegel, Assistant UNESCO Director-General for Natural Science, noted that BRs

provide the UN with “a unique model for the hands-on realization of sustainable development” and the SDGs bring together all actors involved in the management of BRs, including local government, Indigenous governance, youth and the private sector (UNESCO Press Release on 4th World Congress).

By integrating the SDGs within the universal action framework for BRs, these important sites are integral to achieving the global goals and the overarching aim of the SDGs to ‘leave no one behind’.

THE CLAYOQUOT BIOSPHERE TRUST: 5 PATHWAYS FOR CHANGE

The Clayoquot Biosphere Trust (CBT) is a registered charity located on the west coast of British Columbia. Established in 2000, CBT is the only organization in Canada that operates as both a Community Foundation and implements the UNESCO BR mandate. As a Community Foundation, CBT uses endowment funds to bring together people and resources to support meaningful action for positive community impact. Every year, through its annual granting cycle, CBT creates a virtuous circle that aligns community values and sustainability priorities with donor supported granting programs.

Sustainability is at the heart of everything we do. We pair our spirit of community with the power of a global presence to bring more people together for a shared understanding of sustainable development and biodiversity conservation.

Rebecca Hurwitz, CBT Executive Director

The CBT also oversees the Clayoquot Sound UNESCO BR designation. The BR is rural and remote and encompasses nine communities including two municipalities (Tofino, Ucluelet) and seven First Nation communities from five Nuu-chah-nulth nations (Hesquiaht First Nation, Ahousaht, Tla-o-qui-aht First Nations, Yuułuꞵilꞵathꞵ Government, and Toquaht Nation). The region includes 349 947 hectares of old-growth temperate rainforest ecosystems, characteristic of the Coastal Western Hemlock bio-geoclimatic zone, which are rich in biodiversity and vulnerable to changing climate conditions.



Socio-cultural relationships are equally vulnerable to shifting patterns in the atmosphere. For millennia, the Nuu-chah-nulth have had strong cultural connections with the coastal and terrestrial ecology in this region. Five different species of Pacific salmon, all originating from rivers in Clayoquot Sound, have long been a source of food, spiritual inspiration, cultural identity and sustainable livelihoods. However, decades of economic pressure on the salmon and old growth temperate rainforest ecosystems, taken together with changing climate conditions such as warmer water temperatures and lower annual rainfall, are cumulatively impacting the habitat conditions required for returning salmon and thereby threatening the economic, cultural and food security future of local communities.

While the intertwined social-ecological systems interplay in complex ways, across multiple scales (Berkes et al. 2016) the SDG framework provides both the lens and language to link the local level work of the CBT with the global UNESCO BR responsibilities. Grounded in the Nuu-chah-nulth (nuučaanuł) principle of hišukniš ćawaak, “everything is one”, CBT aims to understand the complex and changing social-ecological systems within the region and the necessary pathways to support sustainable communities. In so doing, the CBT is also learning to understand the importance of interdependent relationships and connections that contribute to the region’s social-ecological resilience and ability to steward the environment, particularly during times when adaptation is required (Chapin et al. 2010).

Since its BR designation in 2000, and becoming a member of the Community Foundations of Canada in 2013, the CBT has established several pathways for change, each of which aligns with the Agenda 2030 Action Plan:

Pathway 1: Vital Signs Reporting

In 2018, the CBT *Vital Signs* Report used local data to align with 14 of the 17 UN SDGs and highlighted several community economic trends contributing to wealth inequity in the BR. For example, growing economic sectors, such as tourism, and declining sectors, such as fisheries, contribute to declining median wages and result in a widening income-gap between communities with access to tourism-generated wealth and those without. In addition, the enormous seasonal growth in population, affiliated with the tourism economy, puts more and more pressure on limited local services, like water supply, medical, police and emergency services, including Covid-19 responses.



In 2020, during the early stages of the Covid-19 Pandemic, the 2018 CBT *Vital Signs* data on SDG 3- Human Health and Well-Being, supported baseline information for the economic recovery process and helped highlight the importance of monitoring emergency room visit rates, as well as mental health and substance abuse as proxy indicators for the systemic social challenges observed within the Clayoquot Sound UNESCO BR. Similarly, in an effort to protect the health of local residents and reduce the risk of spreading the Covid-19 virus to vulnerable populations, local leaders prioritized SDG 3 and delayed opening the tourism sector until protocols to prevent the spread of Covid-19 were in place and the rate of transmission had reduced significantly. This example illustrates the role that localized SDG data can play in helping understand feedback loops between complex social issues and interdependencies across communities.

Pathway 2: Living Wage Calculation

Living Wage is a valuable tool for understanding the multiple factors contributing to poverty and the high cost of living in our region. Since 2015, the CBT has calculated a regional Living Wage for the Clayoquot Sound BR which is the hourly rate of pay needed to support each parent in an average family of four with two young children. Working to achieve SDG 10- Reduced Inequalities, the Living Wage considers a bare-bones budget to provide housing, food, transportation, childcare, and healthcare based on local costs for an average year. The calculation of a Living Wage for the Clayoquot Sound UNESCO BR helps to understand the costs that drive health, security, and quality of life up or down. As evidence of the high cost of living in this region, in 2019 the Living Wage calculation for the Clayoquot Sound at \$19.63, was the highest in British Columbia, despite an increase in child benefit payments and child care supports.

Data collected for the Living Wage calculation also informs targets and indicators for SDG 1- No Poverty; SDG 2- Zero Hunger; SDG 8- Decent Work; and SDG 11- Sustainable Cities and Communities. When taken together as a cluster of SDG indicators, the Living Wage broadens our understanding of the patterns that reinforce the poverty trap in parks and protected areas, particularly under conditions in which tourism is the main source of employment.

These observations not only contribute to our understanding of how to avoid the poverty trap, but also highlight our collective interdependence on a healthy and resilient BR. Localized SDG data illustrates how the failure to protect the Clayoquot Sound salmon stocks for local livelihoods is having a cascading effect on local employment opportunities. Despite that, we still have an opportunity to protect the landscape values that support sustainable tourism.





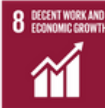

In addition, when adopted by employers as a community economic development policy, the Living Wage can be used to foster a dedicated, skilled and healthy workforce, and guide investment in the long-term prosperity of our local economy. Through better understanding of these interdependent factors, we are able to take action to create better policies to protect local ecosystems while reducing income inequality and leave no one behind.

Pathway 3: Vital Conversations

Hosting community dialogue and discussions is a key pathway for building partnerships and learning communities. The CBT has hosted several Vital Conversations on topics like Sustainable Tourism and Empowering Youth, whereby stakeholders use an SDG lens to interpret Vital Signs data. These conversations allow community members to explore how the pressures and stressors arising in our remote and rural communities are not easily resolved by looking at any one issue in isolation. Rather, when we discuss these key issues together, we each contribute some critical piece of information that broadens our awareness of what’s happening in the whole social-ecological system.

In 2019, CBT partnered with the District of Tofino to co-host a Vital Conversation on Sustainable Tourism to generate deeper inquiry into the underlying patterns of the tourism industry that contribute to stressors and vulnerabilities for regional residents. The conversations identified key tensions that arise from tourism, but also revealed areas of opportunity for further dialogue and investment in sustainable development. Table 1 shows 9 SDGs that emerged from the 2019 Vital Conversation as opportunities tourism operators could invest in for positive action and community resilience.

Table 1. Sustainable Development Goals for Positive Change in Tofino’s Tourism Industry

Biosphere	Society	Economy	Governance
SDGs 6, 14, 15	SDGs 3, 4, 11	SDGs 8,10,	SDG 17
  	  	 	

Pathway 4: Education

SDGs provide a coherent framework and platform for BR communities to engage with multiple levels of government around a common vision for sustainability, using a common language. Once individuals, communities, businesses, civic organizations and governments become more aware of local sustainability issues, collectively, the possibilities for collaboration also increases as more synergy is created for moving towards sustainable solutions (UNESCO 2013).

In June 2020, CBT partnered with the West Coast NEST and the BC Council for International Cooperation to co-host several SDG webinar workshops and regional engagement sessions to increase awareness of the SDG framework. Subsequently, two municipalities within the Clayoquot Sound BR have agreed to integrate the SDGs into their Official Community Plan monitoring and evaluation frameworks.

Pathway 5: Values-based Investment

Sustainability requires cross-scale planetary stewardship from the local to the global, and a rapid transformation away from fossil-fuel dependency. As a UNESCO BR and a Community Foundation working to achieve the UN's SDGs, we use endowment funds to bring together people and resources to create local solutions and global contributions.

The CBT currently manages nine endowments with a combined value of more than \$18M. For example, the Clayoquot Sound Wild Salmon Fund supports projects identified within the Clayoquot Sound Salmon Recovery Plan as prioritized by the Clayoquot Sound Salmon Roundtable. The fund was established collaboratively to ensure the local salmon ecosystem benefits from the support of donors, the expertise of the Roundtable, the actions of local organizations, and the stewardship of the CBT. These endowment funds are pooled and invested in partnership with Genus Capital Management, a pioneer in Canada's divest-invest movement. Genus Capital ensures our funds are not invested in the fossil fuel industry or other socially and environmentally harmful industries, aligning the CBT's investments with our long-standing commitment to living sustainably. The CBT leverages the endowment model to advance the SDGs in two ways:

- 1. by actively seeking to invest in products and companies that help achieve the global goals such as health care and renewable energy (Positive Impact); and**
- 2. by avoiding investment in companies and products that take us further from the SDGs such as tobacco and fossil fuels (Negative Impact)**

Ultimately, we're prioritizing our social and environmental values to ensure returns are not generated by activities that contribute to the issues globally we work to resolve locally.

Rebecca Hurwitz, CBT Executive Director

For more information on West Coast NEST, visit/
<https://www.westcoastnest.org/events/2020-07-08/agenda-2030-and-the-sdgs-for-clayoquot-sounds-region-governments>

For more info on BCCIC, visit <https://www.bccic.ca/public-engagement/>



In August 2020, the CBT participated in a public equity portfolio analysis by Genus Capital Management to understand the net impact of its investments. By participating in the net impact ranking project, the CBT will be able to quantify how our investments contribute to the SDGs, compare against benchmarks, and track over time. In the long term, we hope to inspire other foundations and institutions to join us in investing in the SDGs to make positive transformative impact at the global scale while supporting local sustainability (Sachs et al. 2019).

LESSONS FOR LEADERS GETTING STARTED ON THE SDGS IN CANADIAN BIOSPHERE RESERVES

Lesson #1: Learning Together: Study all 17 SDGs and discover together which goals and targets are closely coupled, in terms of specific constraints and opportunities, within the BR social-ecological system. Systems are generally complex and shared learning facilitates the ability to see the synergy of the whole system rather than the separate parts. Once key patterns driving the system are identified, and the SDG targets we need to achieve to alleviate social and ecological pressures are agreed upon, we can better see the opportunities to either reinforce or change whole system patterns.

The CBT enables cross-community learning and inter-cultural dialogue throughout the BR to invest in people and partnership strategies, to mitigate barriers, and identify shared opportunities to invest in SDG pathways. For example, local businesses struggling to secure affordable housing for summer staff recognized new possibilities after participating in a community conversation on sustainable tourism. By creating an affordable regional public transit system, local residents within the region who have housing, can better supply the labour market needs by accessing/sustaining employment in neighbouring communities. Learning together can motivate a collective goal such as

equitable and affordable public transit as outlined in SDG Target 11.2, “By 2030 provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons” (Statistics Canada).

Lesson #2: Story Telling: In BRs, we strive to better understand how to minimize ecological disturbance and increase the level of connectedness within our social-ecological systems. Indigenous and local people living in areas that have high biodiversity values are well positioned to observe and describe important trends in ecosystem and social system sustainability challenges. When we listen carefully to community stories about intergenerational system disturbance or disruption, we can better understand why ecological and social connectivity has either increased or decreased and what mechanisms are in place to control these processes, or conversely, where gaps in these controls may exist and why.

For example, in January 2017, CBT partnered with the Vancouver Foundation to offer a region-wide workshop on the Art of Hosting and Harvesting Conversations that Matter in order to share community stories, amplify what’s working well and identify areas of community vulnerability. Over 60 people participated in the training and throughout the process of storytelling and deep listening, key sources of vulnerability, deeply rooted in colonization, emerged in the conversations.

In response, in September 2017, CBT staff and a team of Nuu-chah-nulth cultural advisors, hosted a regional gathering in September 2017, called, hišinqwiil *, followed Nuu-chah-nulth protocols throughout the entire planning and hosting process. Over 600 Clayoquot Sound BR residents gathered to spend the day sharing stories, eating together and learning from one another. In the words of Ahousaht Chief Councillor Greg Louie, “Reconciliation begins with the self, starts with one: who I am”, as well as by “recognizing the people and society you’re amongst and whose territory you’re in. Us sitting together is a form of reconciliation. We can sit across from each other, be respectful, knowing that yes, we do have differences, but we respect them”.

Story telling is one way in which we can begin to undo the colonial impacts our European ancestors had on Indigenous peoples, by understanding the colonial narratives that underlie hidden belief systems and biases that perpetuate racism. In so doing, we can strengthen social connectivity and build a shared capacity to restore ecological disturbances

* hišinqwiil is the Nuu-chah-nulth name given by the elders for this event.



Lesson #3: Cultivate Knowledge Building & Data Gathering Networks: When we feel safe enough to share our stories and knowledge, we can begin to build community capacity to better understand complex social-ecological problems, and build community synergy to better coordinate responses to opportunities, challenges and change (Berkes and Ross 2013). We've learned that collaboration and knowledge networks are key for monitoring SDG targets and indicators. The 2018 CBT Vital Signs Report cites at least 60 local knowledge holders and community-based organizations who generously share their data for tracking key social-ecological indicators. When mapped across the SDGs, the Clayoquot Sound UNESCO BR is tracking 20 different SDG targets using localized indicator data.

Lesson #4: Facilitate Opportunities to Communicate & Collaborate: Once we've generated SDG data and information, the real challenge is how to convert this information into knowledge that has meaning for local community members and leaders. We address this challenge in two ways:

1. **by co-producing data in an artistic and creative manner so people choose to read and share our Vital Signs reports; and**
2. **by co-hosting vital conversations to raise awareness of social-ecological system constraints, build relationships across communities, target specific policy changes; and identify social innovations for SDG transformation.**

Unlike information, knowledge involves us and our deeper motivations and dynamics as human beings. We interact with something or someone in our environment and then use who we are – our history, our identity, our values, habits, beliefs – to decide what the information means.

Margaret Wheatley (2005)

The underlying lesson here is that information alone is not enough to mobilize pathways of change towards Agenda 2030. However, when we communicate data in ways that can be easily understood and shared, and we put this information into the context of our lived experience, we can generate meaningful knowledge (Adger 2003, Bouwen and Taillieu 2004, Westley et al. 2011, Westley et al. 2013).

Lesson #5: Develop Feedback Between Data Evaluation & Impact Investment: Every year, the CBT distributes grants to all areas of interest, from arts and culture to research, from education to the environment – aligning our endowments’ investment income with locally developed solutions and actions. Grant applications are reviewed and evaluated by local community members based on SDG-related criteria and Vital Signs indicators are used to measure community impact.

The Wild Salmon Fund is another example where the CBT has created an interdependence between its financial investments and local decision making using data aligned with the SDGs. In this way, feedback is self-generated between the constant exchange of information about what is going on around us, how our environment is changing and how various grant investments can most benefit our communities and the well-being of the entire UNESCO BR.

CONCLUSIONS

The strength of the CBT’s approach to the SDGs is the use of local research collaborations and partnerships for convening dialogue, raising awareness and investing in multiple organization-based action. This approach is consistent with what Charles et al. (2020) call ‘community science’, which is defined as “scientific research and monitoring, based on scientific modes of inquiry, which are (i) community-driven and community-controlled, (ii) characterized by place-based knowledge and social learning, collective action and empowerment, and (iii) with the normative aim to negotiate, improve and/or transform governance for stewardship and social-ecological sustainability” (p.77).

As a BR, the CBT aims to understand changes in the local social-ecological systems and how to build resilience through a wide range of collaborative research initiatives and monitoring partnerships. Understanding the holistic nature of the SDG framework, CBT also works to produce communication tools which have meaning for local communities and motivate policy changes such as the Living Wage calculation. CBT is uniquely positioned to lead new and innovative approaches, with deep roots in local communities, a global network through its world network and an unwavering commitment to sustainability. We are dedicated to the Nuu-chah-nulth concept of iisaak (living respectfully) and we strive for qwa’aakqin tiic mis (life in balance). We have a proud legacy of community leadership in Clayoquot Sound, a region known for its outstanding natural environment and rich cultural diversity. Finally, we actively help meet the most critical needs of our region with collaborative solutions and pathways for sustainability that lead towards the 2030 Agenda for Sustainable Development.



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RESOURCES

The High Level Political Forum on Sustainable Development 2020

<https://sustainabledevelopment.un.org/hlpf/2020>

Community Foundations of Canada SDG Guidebook and Toolkit

https://www.communityfoundations.ca/sdg-guidebook/mc_cid=7a8d1df85b&mc_eid=4c6d03cb14

IISD SDG Knowledge Hub (search Biosphere Reserves)

<http://sdg.iisd.org/search/biosphere-reserves/>

Statistics Canada SDG Data Hub

<https://www144.statcan.gc.ca/sdg-odd/index-eng.htm>

Transforming Our World: The 2030 Agenda for Sustainable Development

<https://sustainabledevelopment.un.org/post2015/transformingourworld>

BC Council for International Cooperation

<https://www.bccic.ca/sustainable-development-goals/>

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