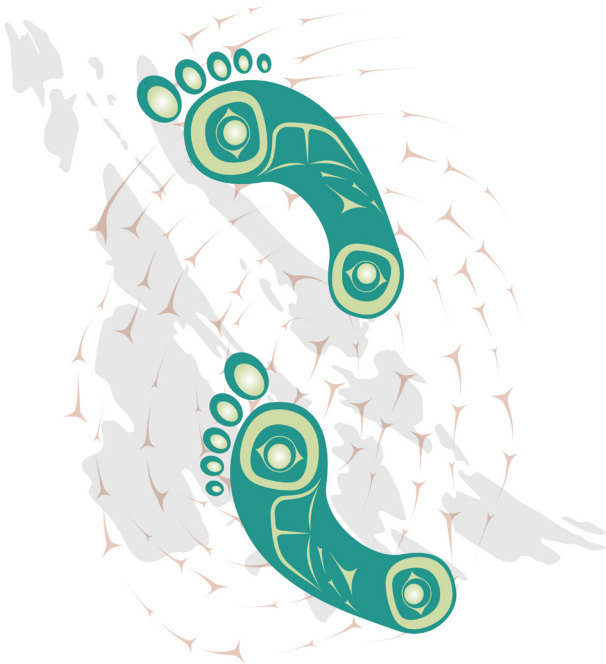




Galiano  
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# One Island, One Earth



## An Ecological Footprint and Fingerprint for Galiano Island

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Located on the unceded, shared, and asserted territory of the Penelakut, Lelum Sar Augh Naogh, Hwlitsum, Stz'uminus, other Hul'qumi'num speaking peoples, and the ceded territory of the Tsawwassen First Nation

# What is the One Island, One Earth project?

We set out to learn whether the Galiano Island community is living sustainably relative to the resources provided by the island, and how the community can address the **Climate Crisis**.

## Ecological Footprint

The **Ecological Footprint** is an estimate of how much biologically productive land and water area a population needs to produce all the resources it consumes and to absorb the wastes it generates.

It is measured in **Global Hectares (gha)**, which is a unit of measurement representing the productivity of an average bioproductive hectare on earth.

**Biocapacity** is a measure of the potential productivity of an area's biologically productive land and water surface, and is also measured in global hectares. It is an evaluation of net primary productivity, and therefore accounts only for resources which are renewably regenerated on an annual basis (i.e. vegetation, plankton), and does not include non-renewable resources.

When a population's Ecological Footprint exceed what local Biocapacity can provide, environmental degradation occurs. This is called **Overshoot**.

## Ecological Fingerprint

The **Ecological Fingerprint** is an evaluation of the particular attitude, self-image, and intrinsic values a community adopts with respect to global resource use.



# How did we do it?

## Community Data

We asked community members to help us collect data on local consumption patterns and attitudes towards sustainability by participating in four surveys throughout 2021.

Survey Type	Participation
Community Mail-Out Survey	135 Households (282 People)
Food Diary	43 Households (88 People)
Waste Tracker	41 Households (91 People)
Odometer Survey	62 Vehicles



## Land Use Mapping

We produced a new 2021 Land Use Map for Galiano Island, updating our 2004 “Landscape Classification for Galiano Island.”

The 2021 Land Use Map is based on ground-truthing and interpretation of 2017 and 2021 aerial imagery, LiDAR Data, ArcGIS World Imagery, and Islands Trust data layers.

## Other Data Sources

Data for the project was also assembled from government, private, and local databases. Government sources included Stats Canada, ICBC, BC Hydro, BC Ferries, and data from the CRD and Islands Trust. We also referred to reports produced locally on topics such as food, tourism, and water.

*Thanks to the local organizations, local businesses, and community members who supported this project and shared information with us!*

# What did we learn?

## The Ecological Footprint of the Galiano Island community in 2021:

Required the equivalent of **4.3 "Earths"** if scaled up to the planet's human population

- Canadians on average use 5.1 "Earths"
- The world population uses 1.7 "Earths"

Used **significantly more** of the Earth's resources than its "fair share"

- The Galiano Island community used about 6.8 global hectares per person (gha/ca)
- There are an estimated 1.6 gha/ca available for every person on the planet

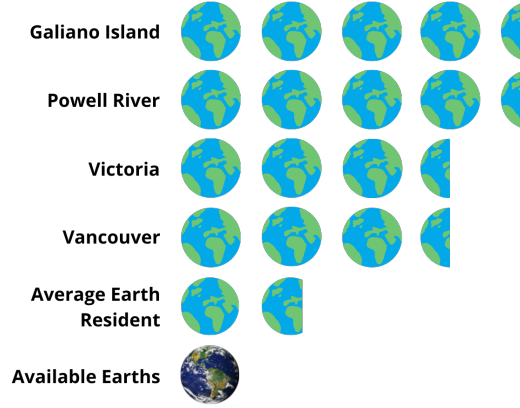
Used **29% more** of the Earth's resources than Galiano Island provides back to the biosphere

- Galiano Island's ecosystems contribute about 14,373 gha to the biosphere
- The Galiano Island community used about 18,600 gha in 2021

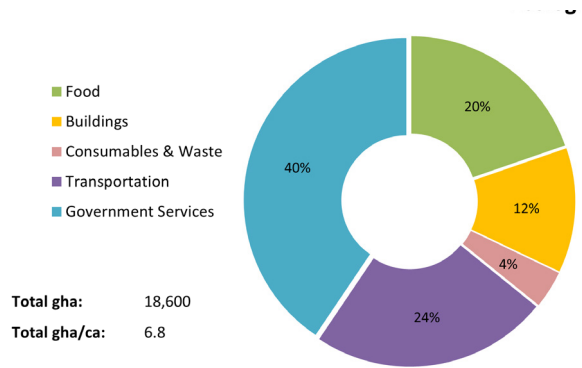
The Galiano Island **community has the ability to make reductions across 60%** of its footprint, or about 2.6 "Earths"

- A 62% footprint reduction would achieve "One Planet Living" at the community level
- Our **One Planet Scenario** calls for a 66% reduction in the community footprint

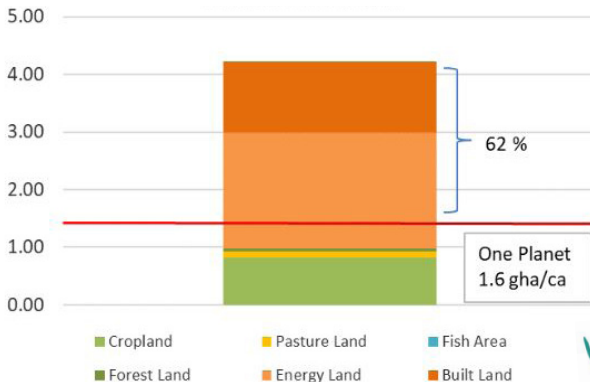
Number of "Earths" Required to Meet Different Community Lifestyles



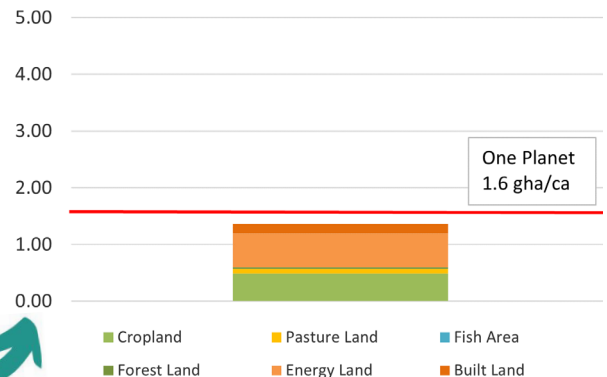
2021 Galiano Footprint, including national and provincial government services



2021 Galiano Footprint - 62% Sustainability Gap



Future Galiano Footprint? - One Planet Scenario



# One Island, One Earth

## One Island

This report considers the **Biocapacity**, the **Ecological Footprint**, and the **Ecological Fingerprint** of the Galiano Island community



## Two Questions

- 1) "Is the Galiano Island community **living sustainably** within and relative to the **resources provided** by Galiano Island?"

The answer to this question is **"No"**



The equivalent of **4.3 Earths** would be required to support everyone in the world if they lived like Galiano residents

This footprint is 29% larger than what the island provides, or the equivalent of about **1.3 Galiano Islands**



- 2) "What can the **Ecological Footprint** of a small island community tell us, and what are its **limitations**?"

We found that **2.6 Earths** of the total footprint can be addressed at the community level, and that a **66% reduction** of this footprint is required to achieve **"One Planet Living"**

We learned that **island communities are not "islands unto themselves."** We must seek connections through and across the Salish Sea to achieve this target

## Three Goals

- 1) Contribute at a local level to **less than 1.5°C** of warming globally
- 2) Contribute at a local level to **less than 1.5 global hectares** (gha) per capita globally
- 3) Advance **climate resilience, equity, and decolonization** at a community level

**<1.5** °C of warming  
gha per capita

## Five Takeaways

- 1) Galiano Island's ecosystems **make a disproportionately large contribution** to the biosphere

The island and its waters are **highly productive**, and contribute around 14,373 gha to the planet

- 2) The Galiano Island community's Ecological Footprint is **much larger than that of "One Planet Living"**

It is **less than the Canadian average, more than double the global average**, and **more than four times** a sustainable and equitable **"One Planet"** scenario



- 3) The large numbers of **part-time residents and tourists double Galiano Island's Ecological Footprint**, exceeding the island's Biocapacity

Galiano greets over 80 thousand tourists annually, and includes around 1.3 thousand part-time residents

- 4) About **40%** of the Ecological Footprint is **outside of community control**

This includes the community's share of the provincial and federal government's footprints



- 5) About **60%** of the Ecological Footprint is **responsive to community action**

We can do a surprising amount at the local level

## Ten Recommendations

- 1) **(Re)connect** across islands and shared territories through the waters of the Salish Sea

It is essential to **collaborate regionally**, following the lead of *hwulmuhw mustimuhw* (Indigenous peoples)

- 2) Protect, steward, and enhance island **ecosystems**

Only **33%** of the island's Biocapacity has some form of protection

- 3) **Support** existing island organizations, initiatives, and programs

Many **local institutions** already work to reduce our footprint

- 4) Activate, electrify, and share **transportation**

Transportation is the **largest single contributor to our footprint** and is the portion with the most potential and impactful change

- 5) Reduce the overall footprint of **human infrastructure**

Creative solutions can reduce the **spatial footprint of roads and settlements** and improve access to harvest areas

- 6) Make **improvements to existing infrastructure**

Currently, **electricity use** on Galiano Island is **higher** than the average for BC jurisdictions, but improvements are possible

- 7) **Invest in a circular economy** across the Southern Gulf Islands

**Re-localize** the production of essential goods and services

- 8) Adopt and normalize currently **underutilized technologies and practices**

Rainwater harvesting and composting toilets are two examples of technologies and practices that **suit the needs of island living**

- 9) Reorient and revive **traditional industries** and lifeways

Reviving a **sustainable local economy** for wood, marine, and other renewable resources for long-term island resilience

- 10) **Reconciliation, resurgence, and landback** should guide action and take precedence

Engaging in the ongoing process of **accounting for and addressing** the historical and present-day harms of colonization



# Want to learn more?

Visit our interactive website  
and read the full report:  
[galianoconservancy.ca/oneisland](http://galianoconservancy.ca/oneisland)



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## Acknowledgements

We wish to thank everyone that contributed to this project, from all of the Galiano households that completed our surveys, to the many people who provided us with insight and feedback. We hope you see yourselves reflected in the project.

Artwork is by Gitxsan artist Shar Wilson.  
To see more of her work, visit [finawear.ca](http://finawear.ca)

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