Saanich's 'Footprint' and what we can do about it

Saanich Talks

May 7th, 2018

Presented by:
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Overview

1. Background ~ Types of Inventories
2. Saanich’s “Consumption-Based Emissions”
3. How to Tackle These Emissions

Background

Complementary Inventories

Territorial GHG Emissions
(CO_2e)

Consumption-Based GHG Emissions
(CO_2e)

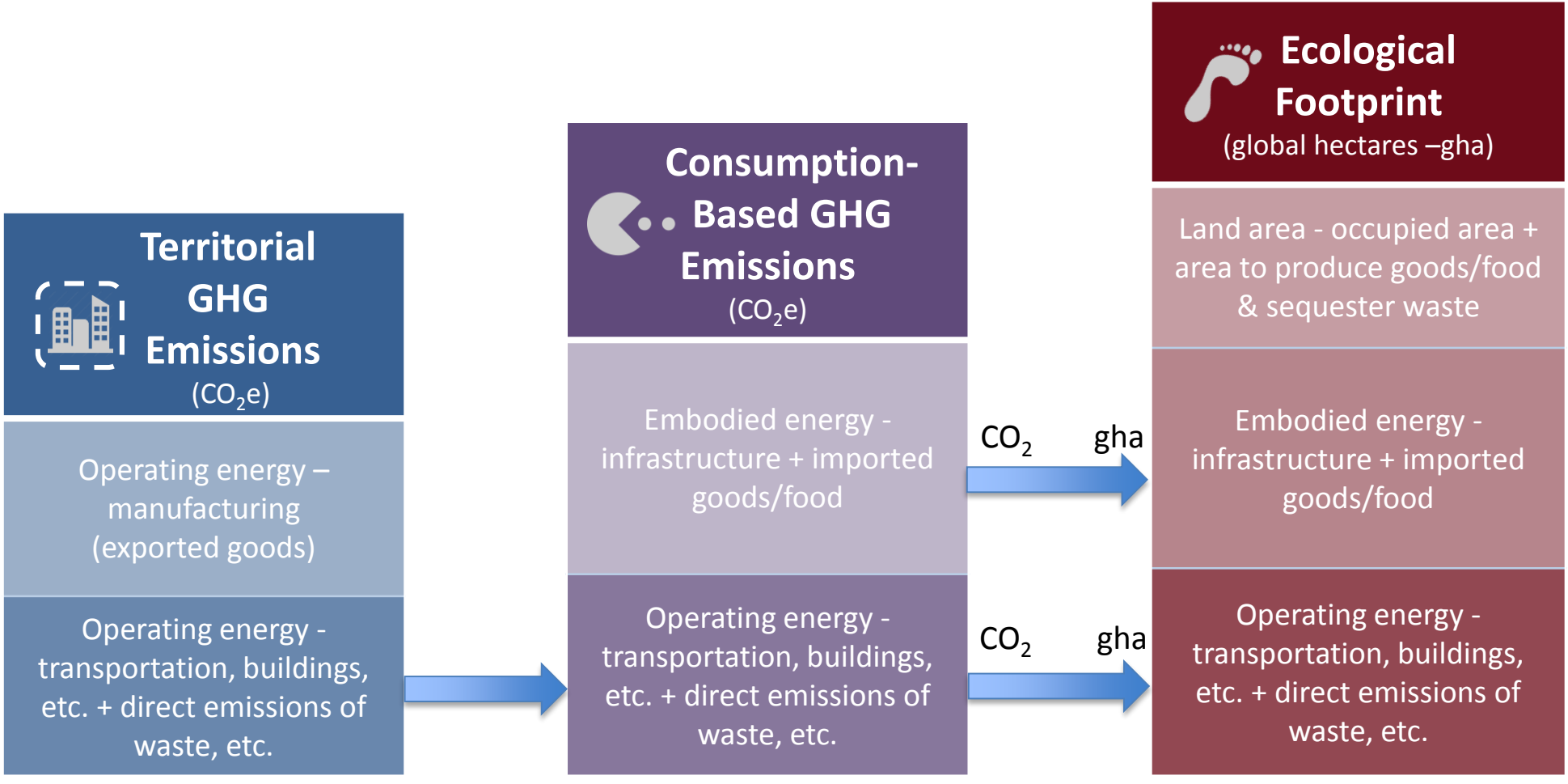
Ecological Footprint
(global hectares –gha)

- Saanich now has these complementary inventories
- Pilot project co-led by BCIT and Cora Hallsworth Consulting

Cora Hallsworth Consulting

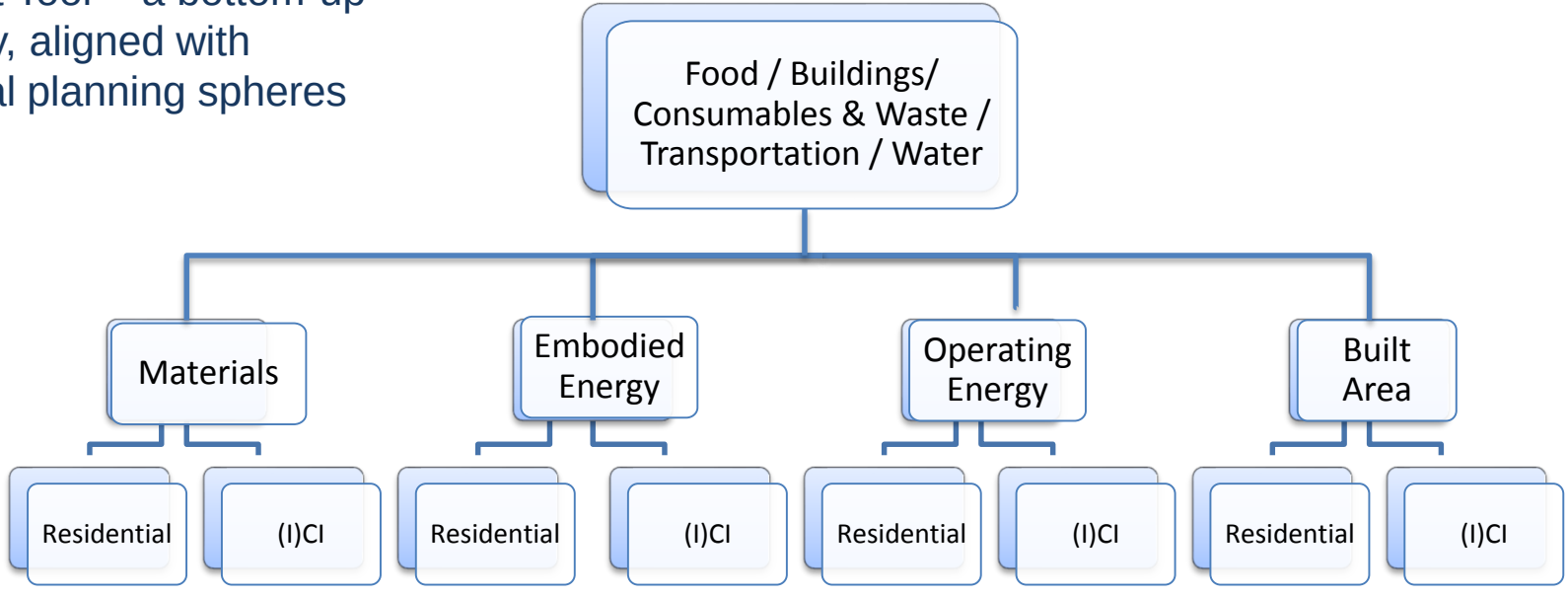
BCIT

Complementary Inventories



How the Inventory is Built

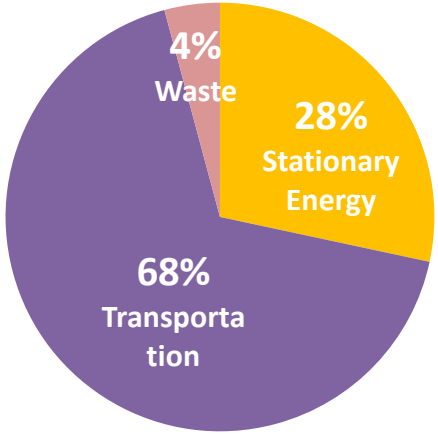
We used the ecoCity Footprint Tool - a bottom-up inventory, aligned with municipal planning spheres



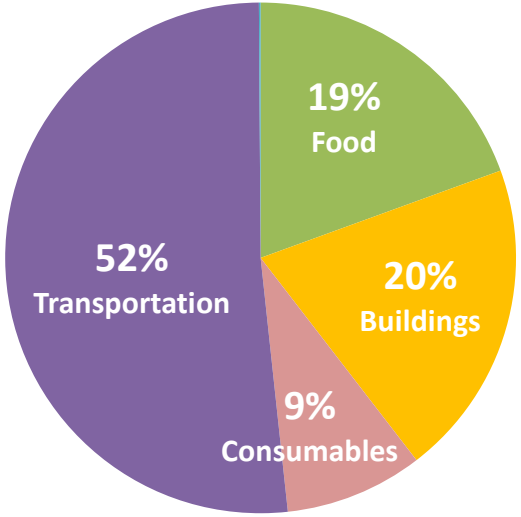
Saanich’s ‘Footprint’

Results - Overview

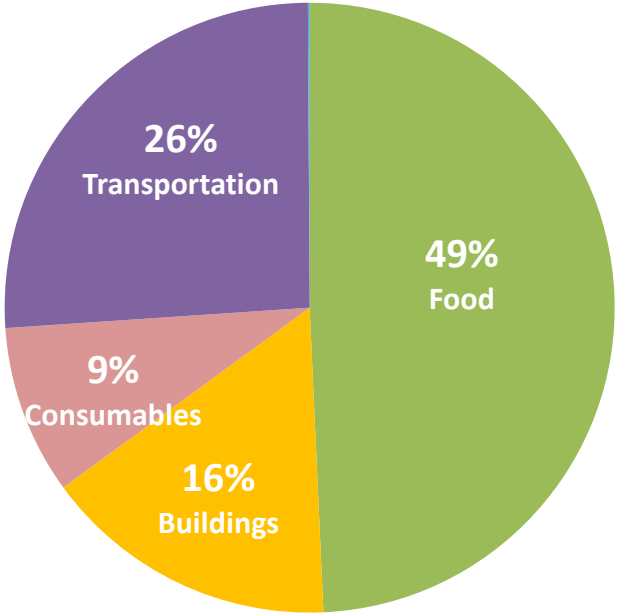
Territorial Inventory ("Traditional")



Consumption-Based Emissions Inventory (CBEI)



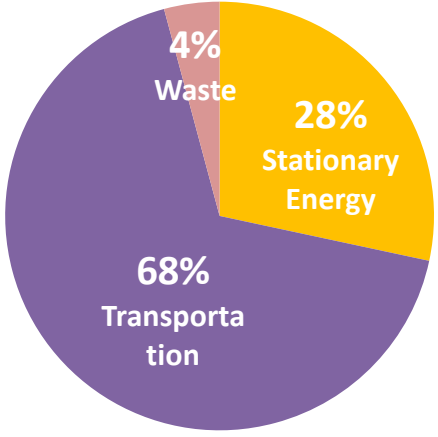
Ecological Footprint



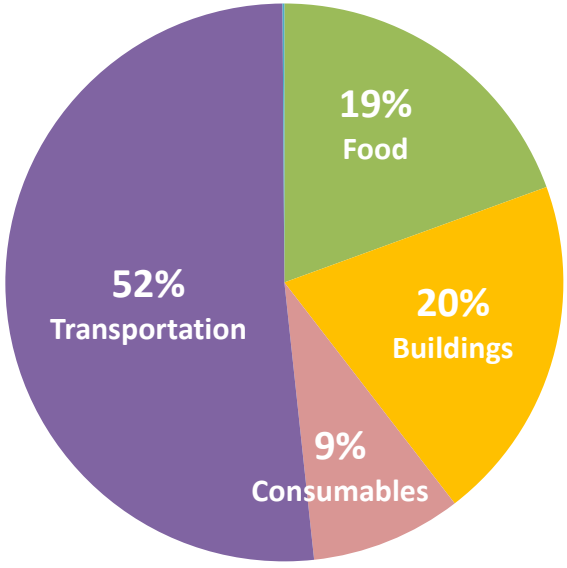
- *Waste/Consumables is a much lower component of the Territorial inventory*
- *In the CBEI the largest impact is transportation (52%)*
- *Food has a much greater impact in the EF*

Results - Overview

Territorial Inventory ("Traditional")

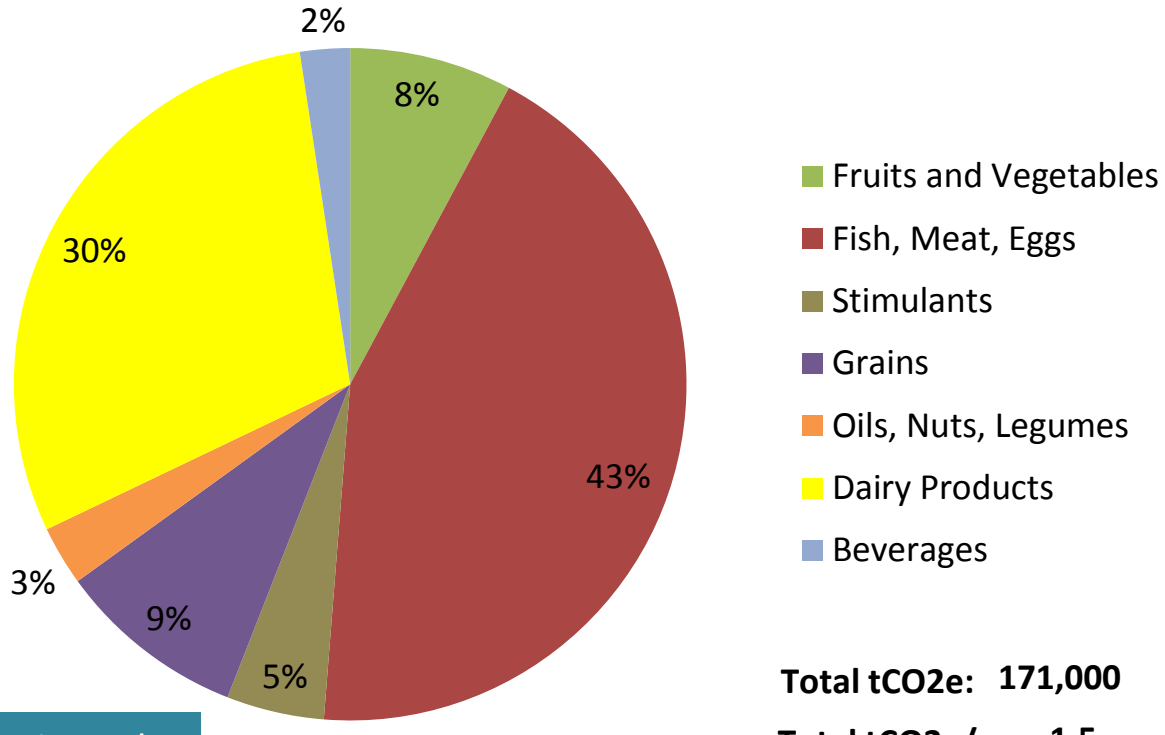


Consumption-Based Emissions Inventory (CBEI)



Saanich's CBEI is approximately double that of its 'territorial' inventory

Food CBEI



Total tCO2e: 171,000

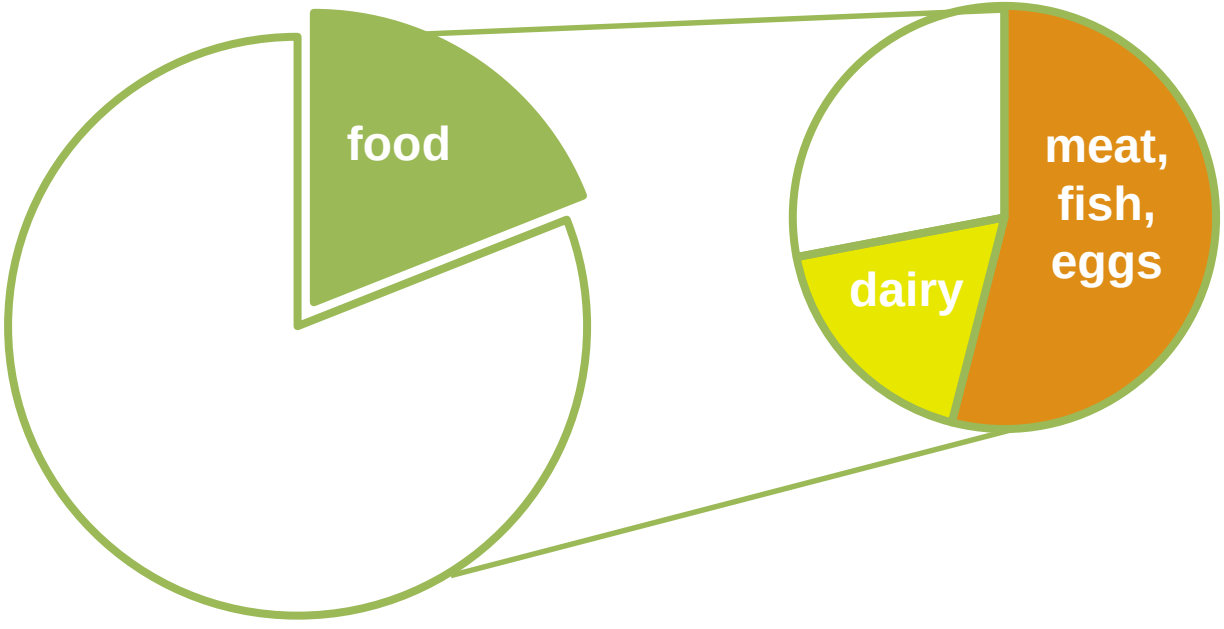
Total tCO2e/ca: 1.5

The CBEI of Food is dominated by animal products and dairy

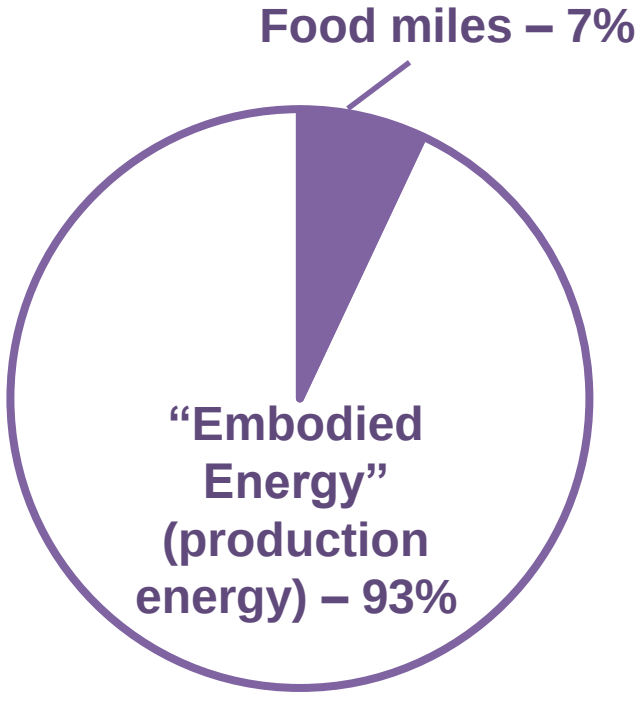
Food CBEI

Food

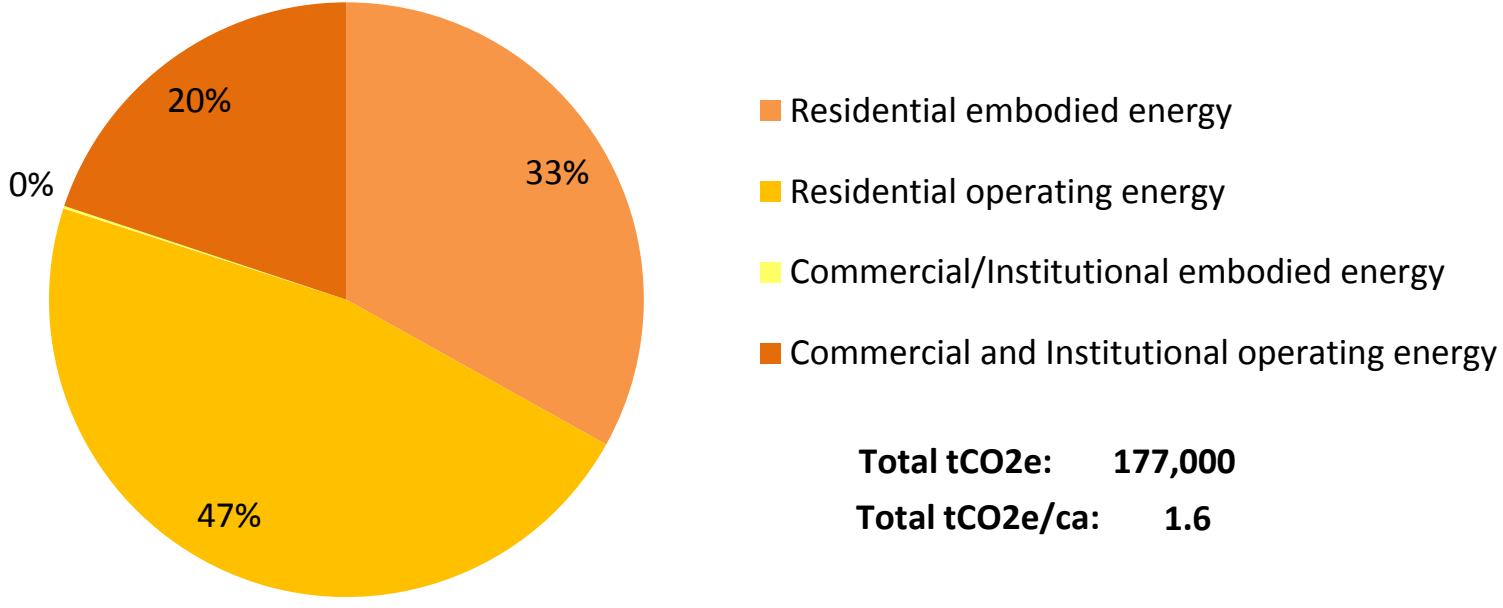
Animal proteins are the biggest factor in the food portion of the CBEI



Food Miles



Buildings CBEI

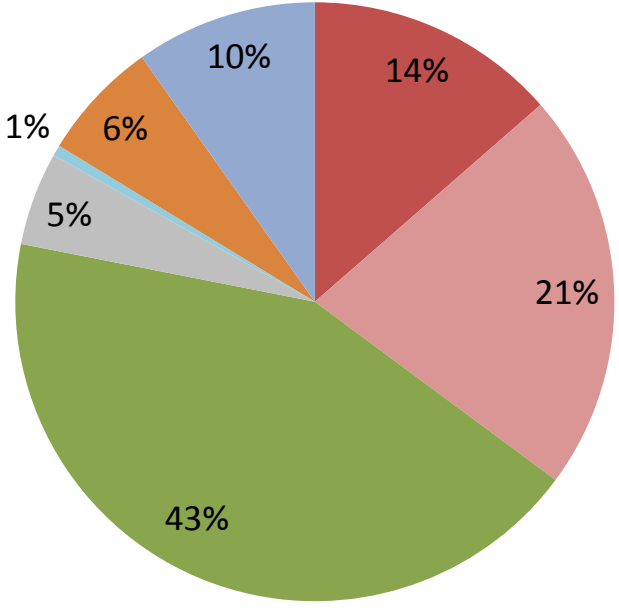


Total tCO2e: 177,000

Total tCO2e/ca: 1.6

The CBEI of Buildings is dominated by operating energy

Consumables CBEI



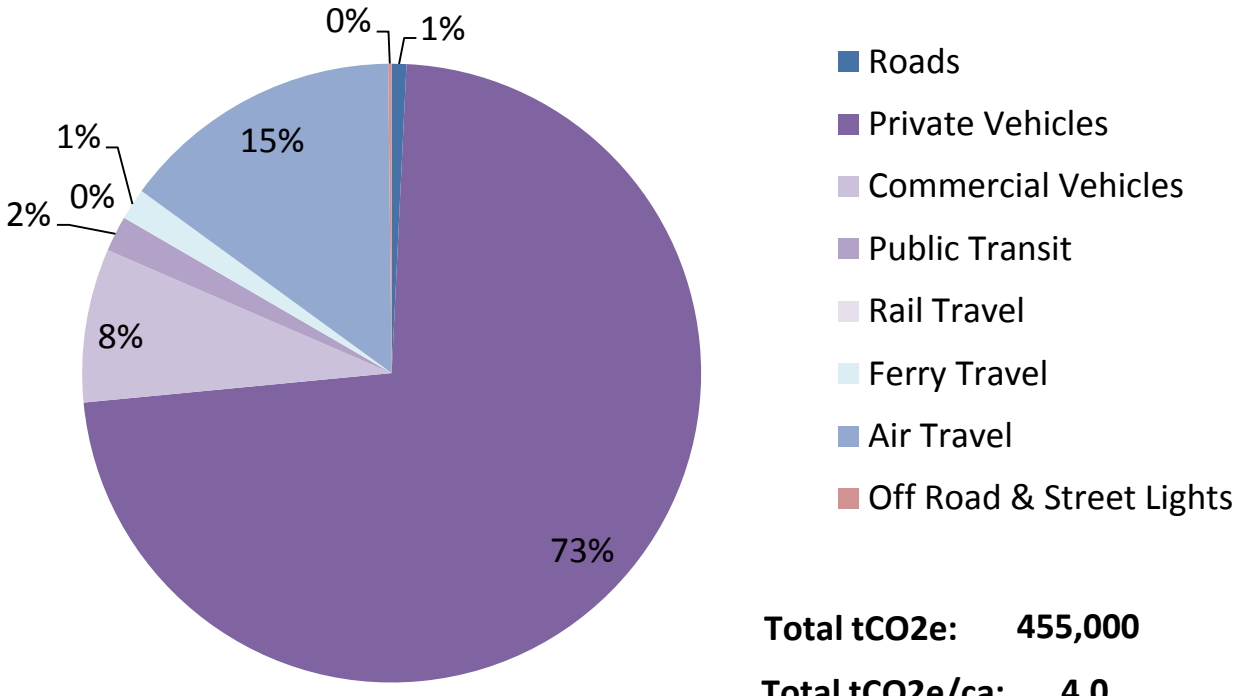
- Paper
- Plastics
- Wood Waste, Textiles, & Rubber
- Metals
- Glass
- Household Hygiene
- Hazerdous Material Container

Total tCO2e: 55,000

Total tCO2e/ca: 0.48

The CBEI of Consumables is dominated by textiles, followed by plastics and paper

Transportation CBEI



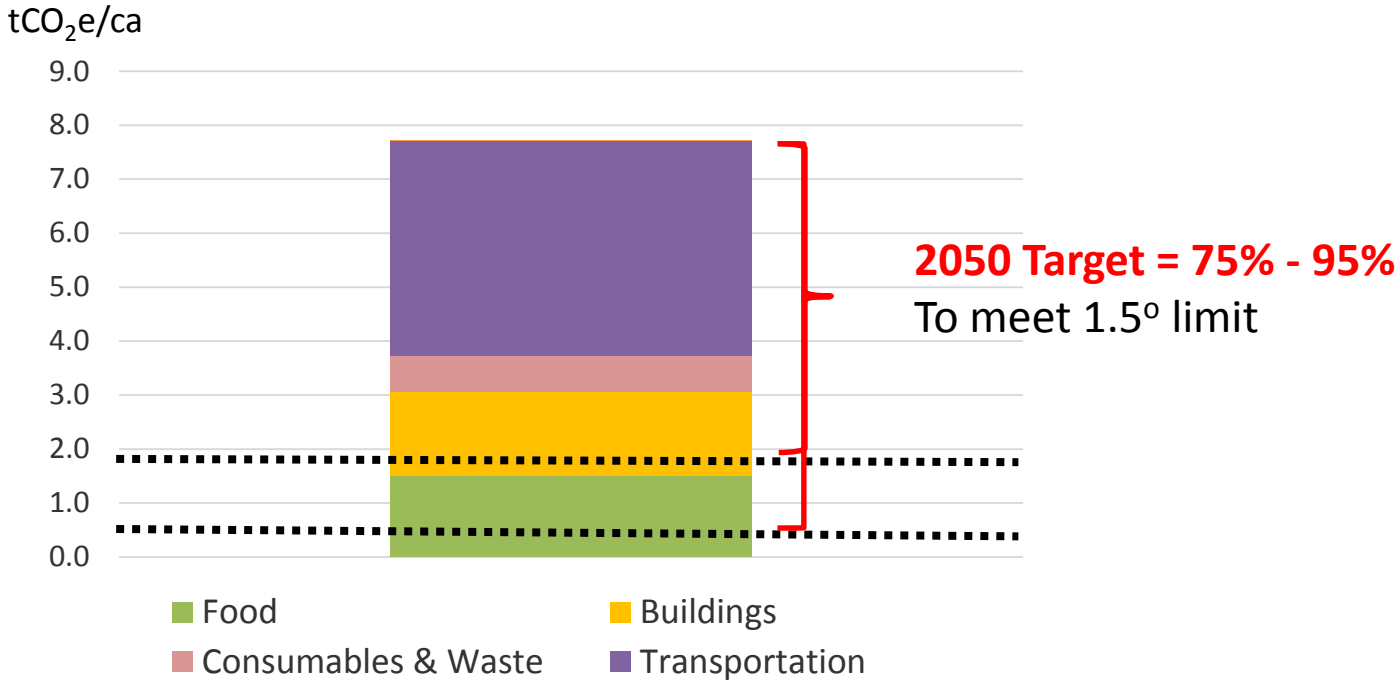
Total tCO2e: **455,000**

Total tCO2e/ca: **4.0**

The CBEI of Transportation is dominated by private vehicles

Emissions Gap

Saanich's Emissions Gap (Consumption-Based Emissions)



What can Saanich do with this information?

One Planet Scenario: Saanich

MEASURE	EF reduction (gha/capita)	GHG reduction (tCO_2e/capita)
Reduce beef (and substitute with chicken) and dairy (without substitution) by 50%[11]	0.32	0.2
Reduce food waste post-purchase 25%	0.26	0.3
Eliminate heating oil	0.09	0.4
Reduce natural gas and propane consumption 66%	0.09	0.3
Improve electrical efficiency 40%	0.02	0.1
Reduce paper consumption 50%	0.03	0.02
Reduce textile consumption 40%	0.02	0.1
Reduce plastics consumption 30%	0.01	0.04
Reduce Municipal Solid Waste (MSW) 25%	0.04	0.11
Convert 50% of private vehicle fleet to electric	0.12	0.68
Reduce VkmT 25% in private vehicle fleet	0.08	0.5

Using the Results

- Inform Planning Processes: e.g., **Saanich Updated Climate Plan**; Official Community Plan
- Engage stakeholders

One-Planet Lifestyle?

- Repurpose, fix and share belongings
- Avoid consumption of paper, red meat and bottled beverages
- Roads, roofs, and walls used for urban agriculture
- Most trips (86%) are by walking, cycling and transit, vehicles are zero emissions
- Most people don’t fly and very few own cars
- Buildings are energy efficient and zero emissions

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ONE PLANET LIVING | A framework by Bioregional

- Saanich joined the Bioregional One Planet Cities initiative
- Four pilot communities will engage stakeholders to create sustainability action plans: **Saanich**, Oxfordshire (UK), Durban (South Africa) and Elsinore (Denmark)
- Initiative will align with and contribute to Saanich's updated Climate Plan: 100% Renewable and Resilient Saanich

ONE PLANET LIVING | A framework by Bioregional

Saanich One Planet District Initiative Objectives

- Undertake a sustainability gap analysis to identify district-wide priorities
- Work with stakeholder organizations to create their One Planet Action Plans (OPAPs) in support of district-wide objectives

The Team is now looking for 'Integrators' and Stakeholder organizations to join the project.

Thank you

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Planning Sphere	Key Objectives	Sample Instruments
FOOD	Reduce food waste Reduce meat and dairy consumption	· Resident food literacy and engagement programs (e.g., Love Food, Hate Waste campaign, 'Meatless Mondays' Oregon; Celebrate the Harvest campaigns) · Sharing economy opportunities (e.g., community gardens) · Advanced purchasing standards (e.g., Emeryville Good Food Purchasing Program, EPA West Coast Forum on Materials and Climate's Climate Friendly Purchasing Toolkit) · Waste minimization requirements in City catering contracts
BUILDINGS & INFRA-STRUCTURE	Increase efficiency (envelope 1st approach) Use building materials with lower embodied energy	· Government purchasing policies to favour recycled content/reused building materials · Incentives for smaller and more energy efficient homes; renewable technology incentives for homes and business · Building codes promoting energy and material efficiency · District energy systems · Advance development of smaller houses and co-housing
CONSUMABLES	Reduce the volume of individually owned goods Increase reuse	· Promote 'smart' buying practices – focus on durability /buying fewer clothes (e.g., Oregon DEQ's Make Every Thread Count) · Advance share use repair initiatives in the community
TRANSPORTATION	Reduce vehicle ownership Decrease vehicle travel Improve efficiency of vehicle fleet	· Increase electricification of fleet. · Support and promote bike-sharing and car-sharing programs. · Expand Active Transportation · Ensure neighbourhood plans contribute to compact urban development, smaller homes and walkable neighborhoods.