



# ANNUAL SUSTAINABILITY REPORT 2018



Campbell River Whale Watching Says "Thank You" to Nature



Completed in cooperation with  
**Wilderness International**

# Annual Sustainability Report 2018

## Campbell River Whale Watching Says "Thank You" to Nature

### Summary

Campbell River Whale Watching is a carbon neutral whale watching and Grizzly Bear Tour Company based on Vancouver Island, BC. The company has one small office/reception space at The Discovery Harbour Marina on Dock E in Campbell River, no company vehicles, and seven boats. 2018 marks the first year that Campbell River Whale Watching has measured, reported, and offset their carbon footprint. Total emissions in 2018 came to 464.74 t CO<sub>2</sub>e. As passenger numbers continue to grow, Campbell River Whale Watching's fuel usage also grows, which is by far the greatest contributor to the overall carbon footprint.

In 2018, Campbell River Whale Watching has protected 6 848 m<sup>2</sup> of pristine old-growth forest in British Columbia and at the same time taken action for the preservation of valuable habitat for biodiversity. The trees in this area have sequestered 717.6 t CO<sub>2</sub> in their biomass, which is 1.5 times the amount that would have been necessary to compensate Campbell River Whale Watching's carbon footprint entirely.

### Company Information

**Company Name** Campbell River Whale Watching

**Contact Information** Tyler Bruce: [tyler@crww.ca](mailto:tyler@crww.ca), 250-792-0185

Stephen Gabrysh: [stephen@crww.ca](mailto:stephen@crww.ca), 778-874-3353

**Description** one office/reception building, seven boats, no company vehicles

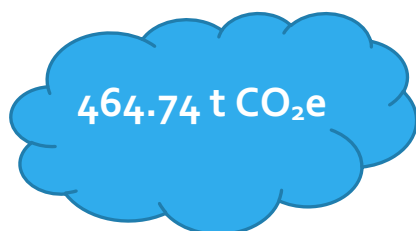
**Reporting Period** January 1<sup>st</sup>, 2018 – December 31<sup>st</sup>, 2018

**Primary Measurement** Carbon Dioxide Equivalent (CO<sub>2</sub>e)

**Reporting/Calculation Guidelines** Basis: data of 2018

**Compensation Approach** Protection of pristine primary forests and wildlife habitat in the Toba Valley, BC with Wilderness International

#### Total Emissions all Scopes:



#### Emissions per Passenger:



68.25kg CO<sub>2</sub>e

#### Total Compensation:



6 848 m<sup>2</sup> of ancient forest protected

→ 1.5x the area needed for CO<sub>2</sub> compensation



## About Wilderness International

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Wilderness International is a Canadian-German non-profit organization. Our passion is protecting unique and pristine wilderness areas all over the world. Right now, our focus is on the last old-growth forests of the West Coast of British Columbia. The protected areas are located in the Toba Valley, 160 km north of Vancouver City and 100 km east of Campbell River.

There, we have the chance to protect primary forests and wildlife habitat legally secure through purchase as property. The entry in the land registry marks Wilderness International as legal owner of the forest areas. We leave the areas as they are, as undisturbed unique ecosystems. The purchases are refinanced by donations.

Thereby, together with over 20.000 students in Germany and various partners like Air Canada, DIAMIR, SK Touristik and many more, we have been able to protect more than 3.91 million m<sup>2</sup> of temperate rainforest. Every donor receives a personalized certificate with the exact geo-coordinates of the area of forest protected. We strive to engage all kinds of different people in our projects to protect as much forest as possible.

Numerous scientific institutions support our research projects on CO<sub>2</sub>-absorption and biodiversity in the coastal rainforests.

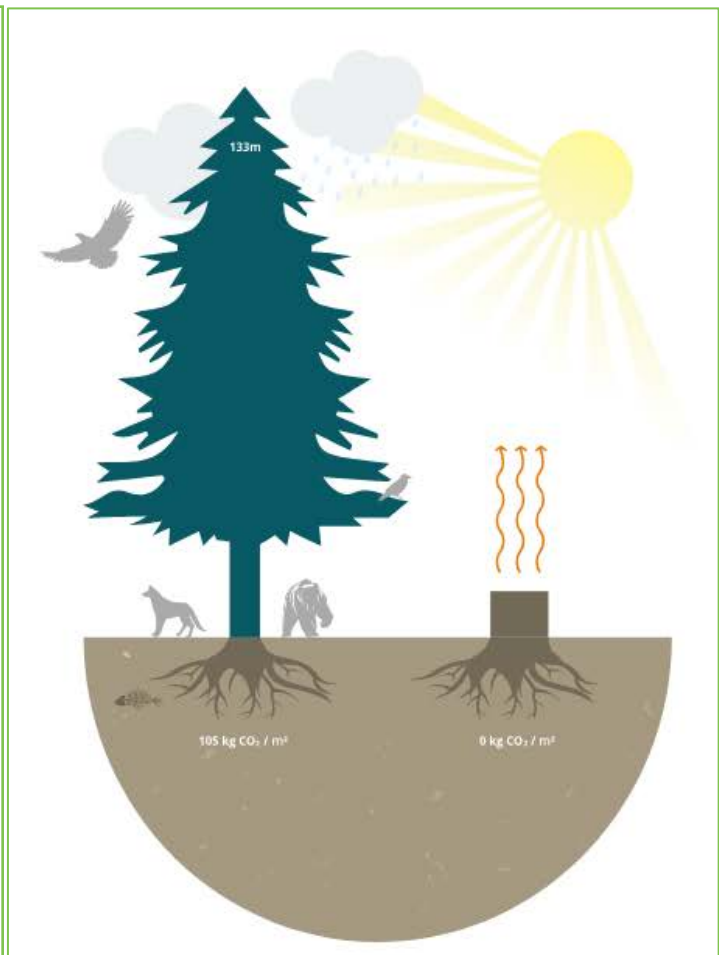
This rainforest is home to ancient tree giants, wild Grizzlies and crystal-clear rivers full of lively salmon. And yet, only 25% of this valuable ecosystem remain. The protection of the remaining ancient forests is essential, as we profit from their benefits all over the world.

Wilderness areas are expressions of nature in its most original form. They are our inspiration, and our ancient home. Only in these ecologically most diverse areas is everything connected in a natural balance. If this harmony is destroyed, the network of life is also torn.

## Wilderness International's CO<sub>2</sub> Research & Compensation

Led by our Forestry scientist Kai Andersch and our Geography scientist Hannes Holtermann in cooperation with Professor Andreas Huth, the leading German forest carbon data scientist from the Helmholtz-Centre of Environmental Research in Leipzig, we have established 24 permanent sample plots in the forest which we use for regular remeasurements of the biomass of trees. The trees in the Toba Valley sequester 28.55 kilograms of carbon per square meter each, equaling 104.79 kilograms of CO<sub>2</sub> per square meter of rainforest.

Over the centuries of its growth, a square meter in the temperate rainforest sequesters 104.79kg of CO<sub>2</sub> in their biomass. Even more carbon dioxide is sequestered while the trees continue to grow. Should the forest be logged, the sequestered CO<sub>2</sub>-storage is released when processing the wood. Biodiversity is lost, and without the natural cooling functions of the vegetation it gets drier and hotter.



By protecting forest, CO<sub>2</sub> remains sequestered in living biomass, and biodiversity and habitats are preserved for all times. This is the perfect way to say "Thank you" to nature. This balances out unavoidable emissions.

The advantage of our unique approach lies in the combination of the protection of forest and river habitat with CO<sub>2</sub> compensation projects. And Wilderness International guarantees the location and unique preservation of every square meter of land by certificate with geo-coordinates.



## Cooperation: Wilderness Protection and Carbon Neutrality

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In 2018, Campbell River Whale Watching protects 1m<sup>2</sup> of forest for every customer going on a Whale Watching tour or Grizzly Bear trip. This equals the size of the fin of an Orca whale for every customer.

For 2019, it is envisioned for every customer to get a postcard with a code on it after their whale watching tour. With this code, they will then be able to go online to create and receive their personalized certificate. That way, customers will take a tangible souvenir home with them, a little piece of Canada, a fond memory materialized. Additionally, every guest will be able to voluntarily donate more money if they choose to.

Every year, Campbell River Whale Watching gets a certificate showcasing the amount of forest that was protected.

Campbell River Whale Watching needs intact nature to operate the business. Protecting nature means protecting the very base of their business and saying "Thank you" to nature for the great experiences it provides us with during Whale Watching.

This way, while offsetting carbon emissions, Campbell River Whale Watching also protects prime salmon habitat, the very base of life of the whales, grizzlies and other animals customers come to see. They take action locally and directly connected to their customers' experience. The tangible conservation of rainforest in BC makes the engagement directly traceable for the customers and the public.



**Campbell River Whale Watching is saying "*Thank you*" to nature for the great experiences it provides us with during every Whale Watching and Grizzly Bear tour!**

# Wilderness

## ADOPTION CERTIFICATE



With this certificate

## CAMPBELL RIVER WHALE WATCHING

07. March 2019

has adopted **6848 qm** of Western Canadian Rainforest.

The title to this land is held by Wilderness International and sponsored by the above named student in perpetuity.

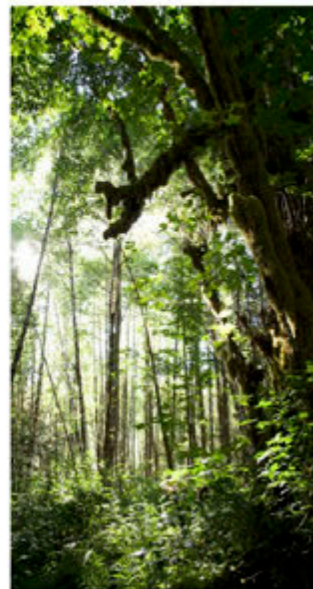
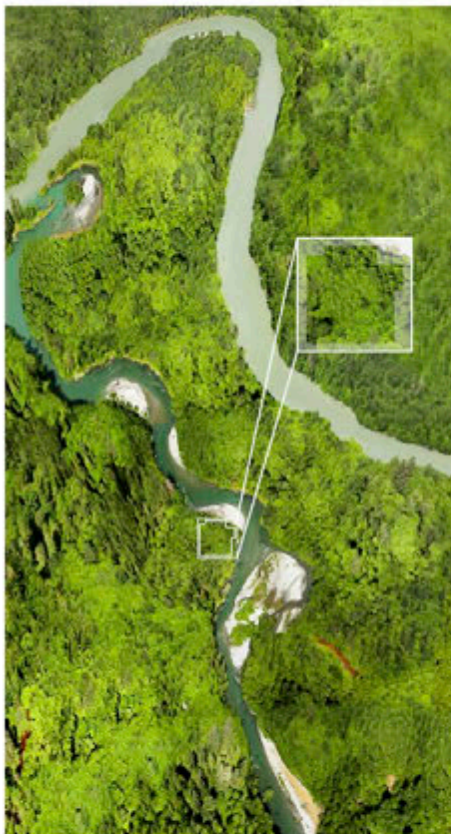
The coordinates of the top left corner of your sponsorship area:

**W124°11'45.286" N50°30'26.153"**

Sponsorship number:

**3/43959**

More information and impressions at: [www.facebook.com/wildernessinternational](https://www.facebook.com/wildernessinternational)



In adopting this precious piece of Canadian Coastal Rainforest you have helped to protect a threatened natural environment we call – »Land of the Grizzly«. For this we thank you! With your help we can further extend the conservation area, ultimately protecting vast areas of forest from deforestation. With your assigned sponsorship number you can locate your protected piece of land at our homepage.

[www.wilderness-international.org/land-of-the-grizzly](http://www.wilderness-international.org/land-of-the-grizzly)

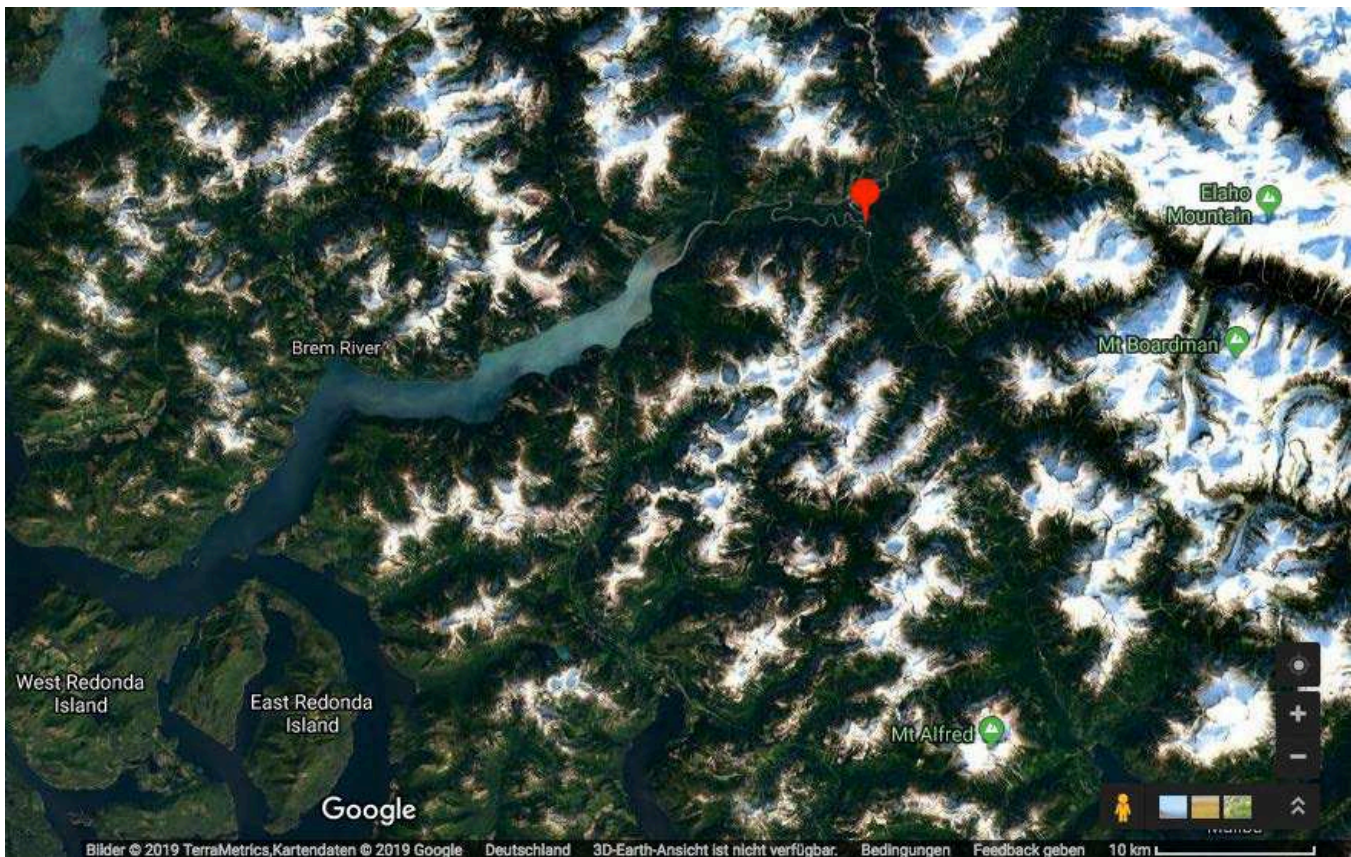
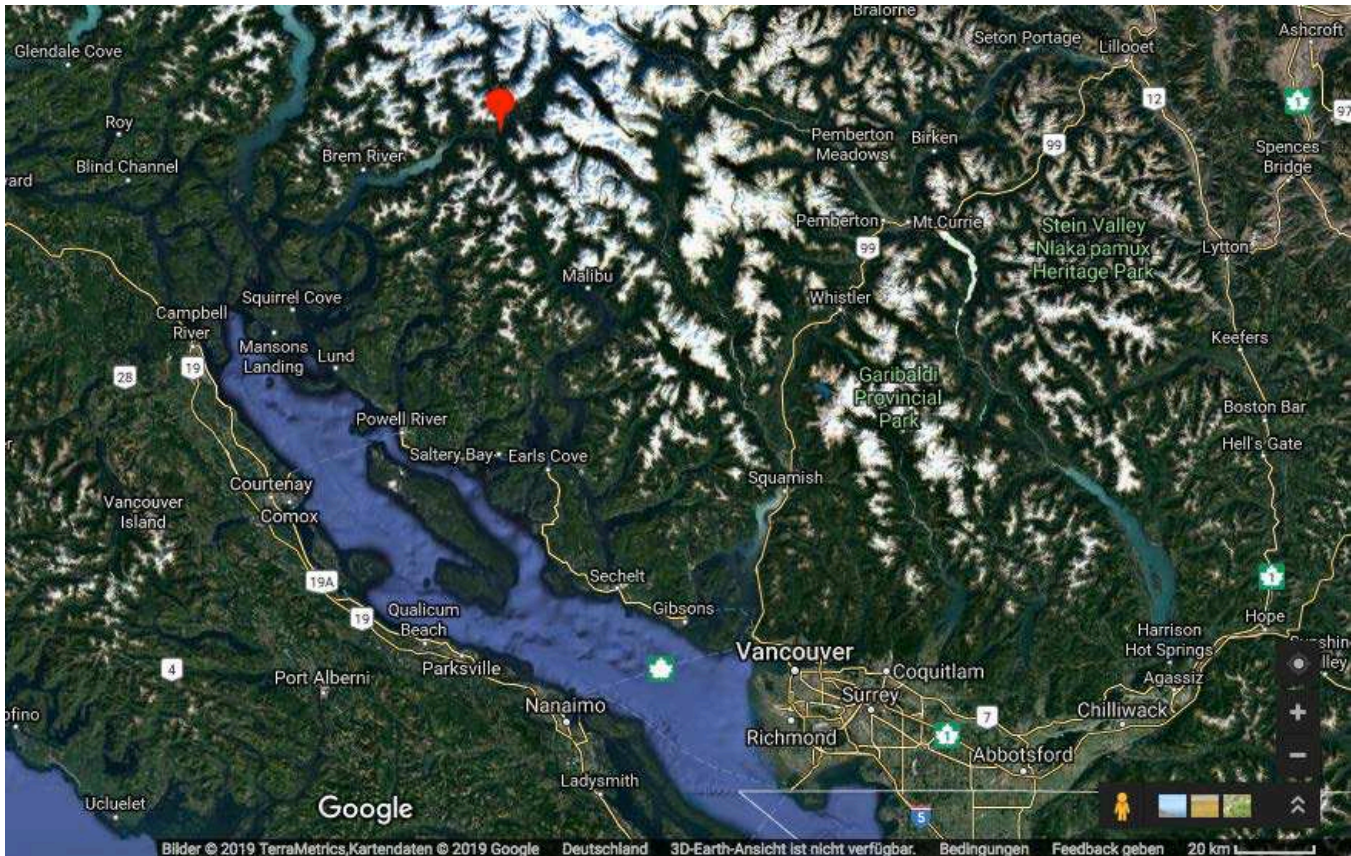
**Kai Andersch**  
CEO  
Wilderness International

**Hans Dierstein**  
CPO  
Wilderness International

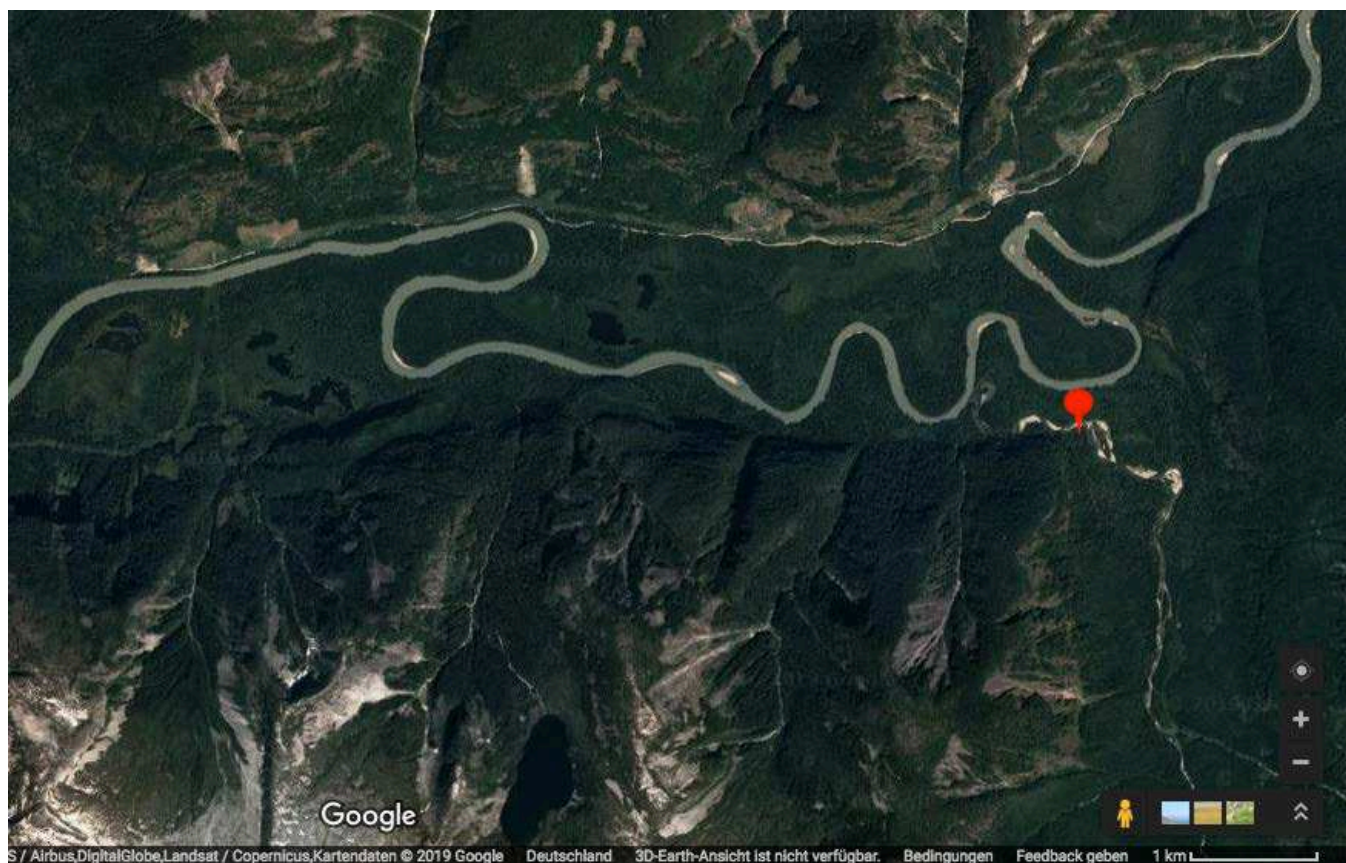
**Stephan Hürten**  
President of the Board  
Wilderness International

**David MacDonald**  
Director  
Wilderness International Canada











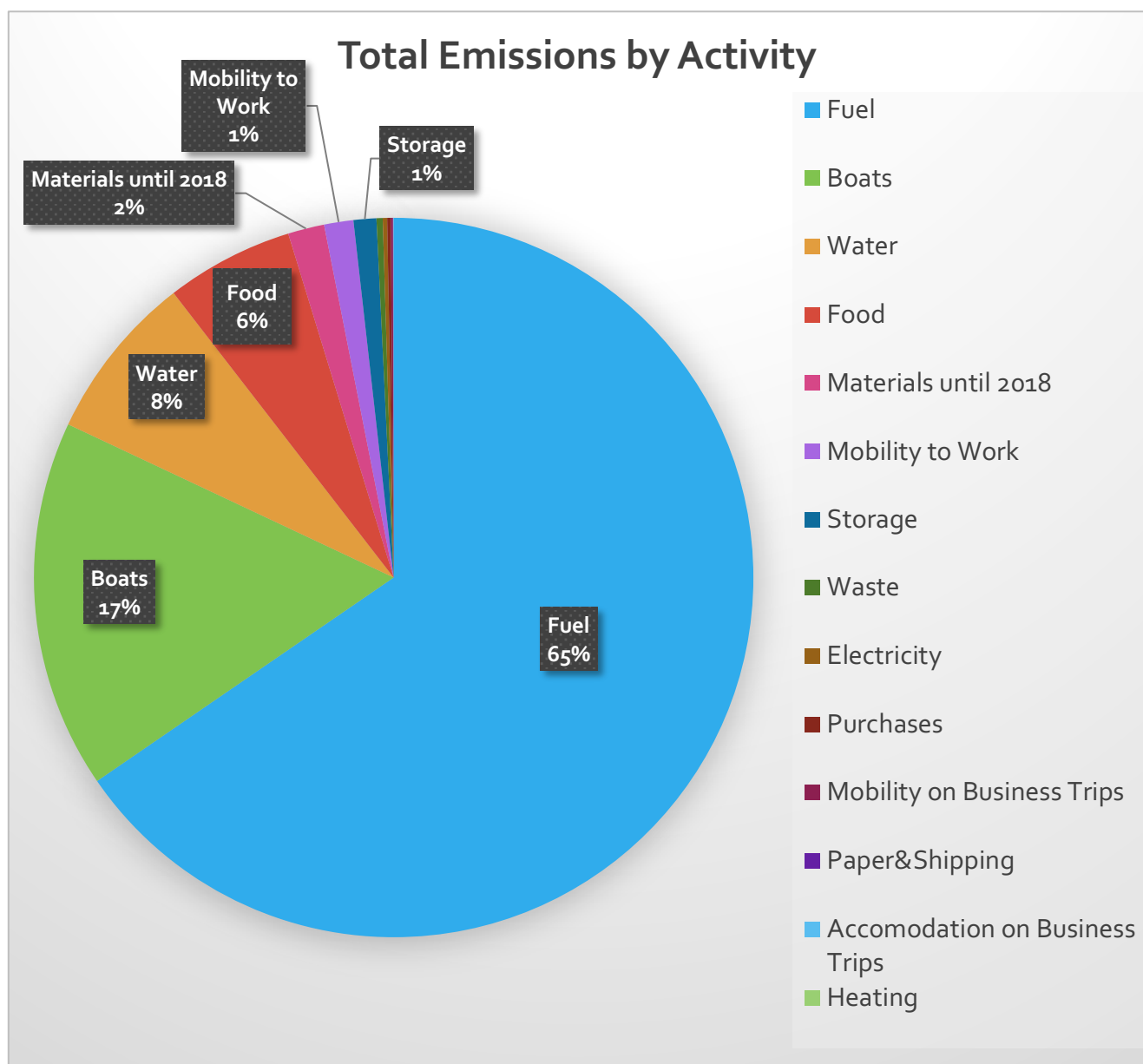


## Carbon Footprint

### Summary

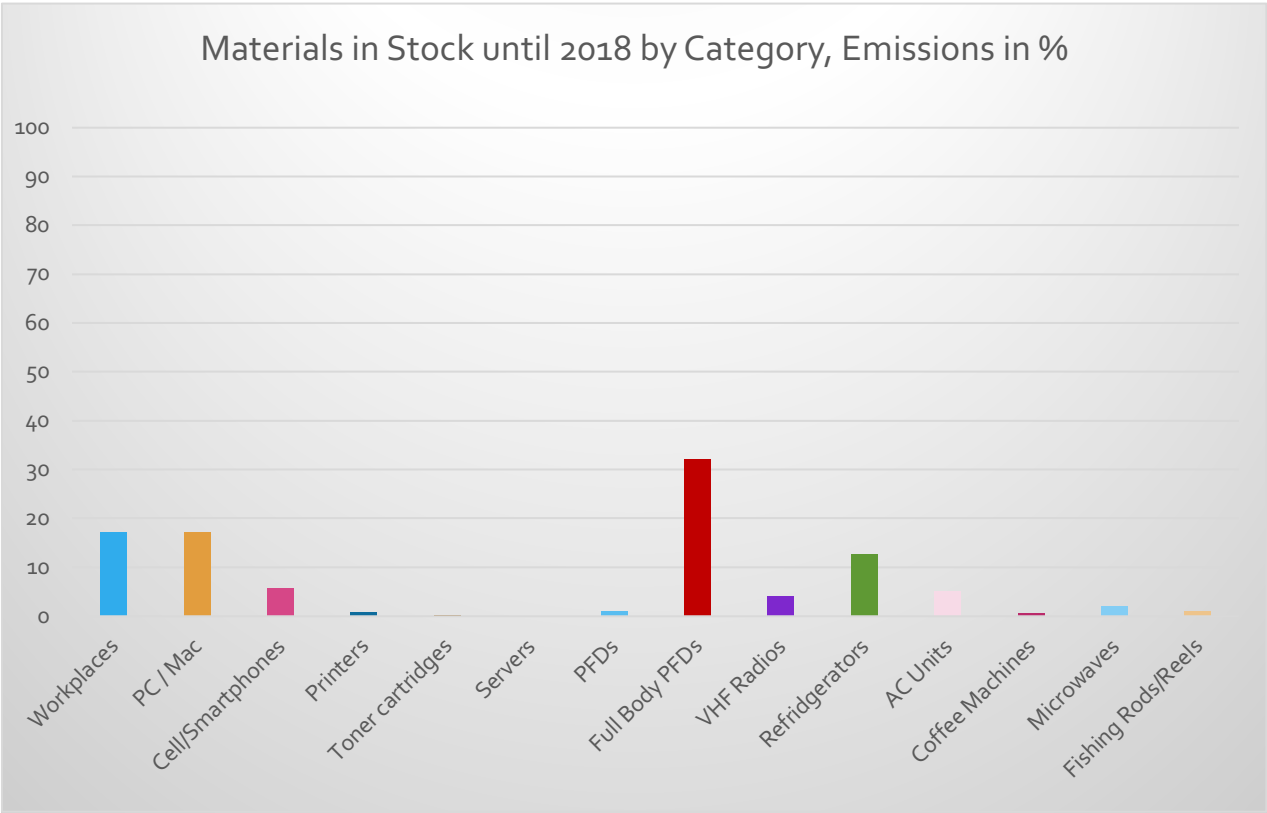
Total Emissions	Compensation Cost*
464.74 t	\$6 848 CAD

- 1m<sup>2</sup> of forest offsets 0.10479t of CO<sub>2</sub>, 1m<sup>2</sup> of forest at \$1





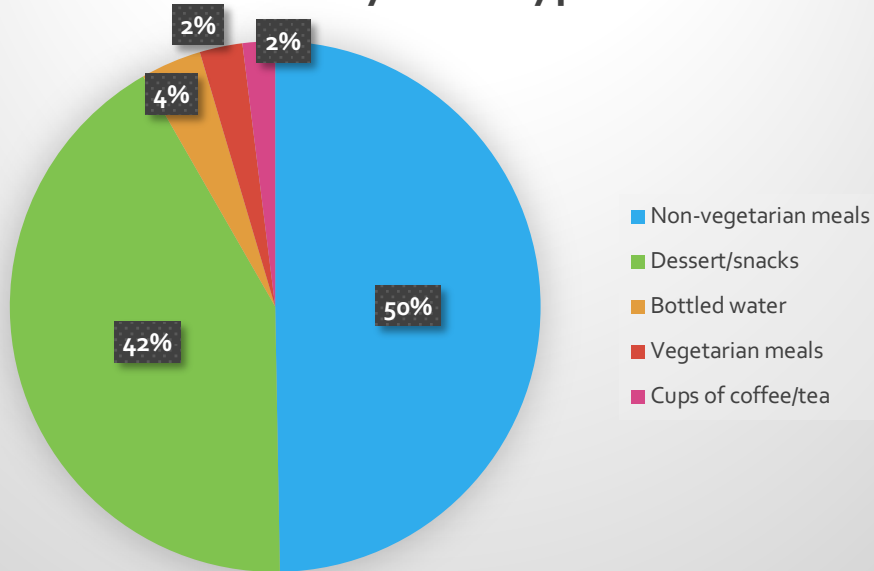
# Materials in Stock 2018



## Food

(Customers & Staff)

### Food by Meal Type

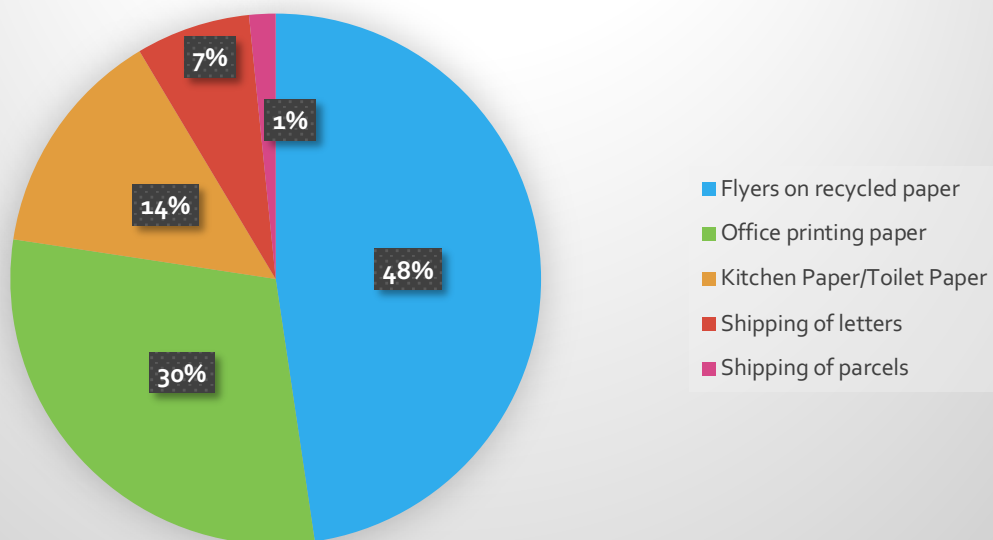


### Analysis

Non-vegetarian meals account for half of all emissions in this area. Continuing to serve more vegetarian meals will help to keep emissions low.

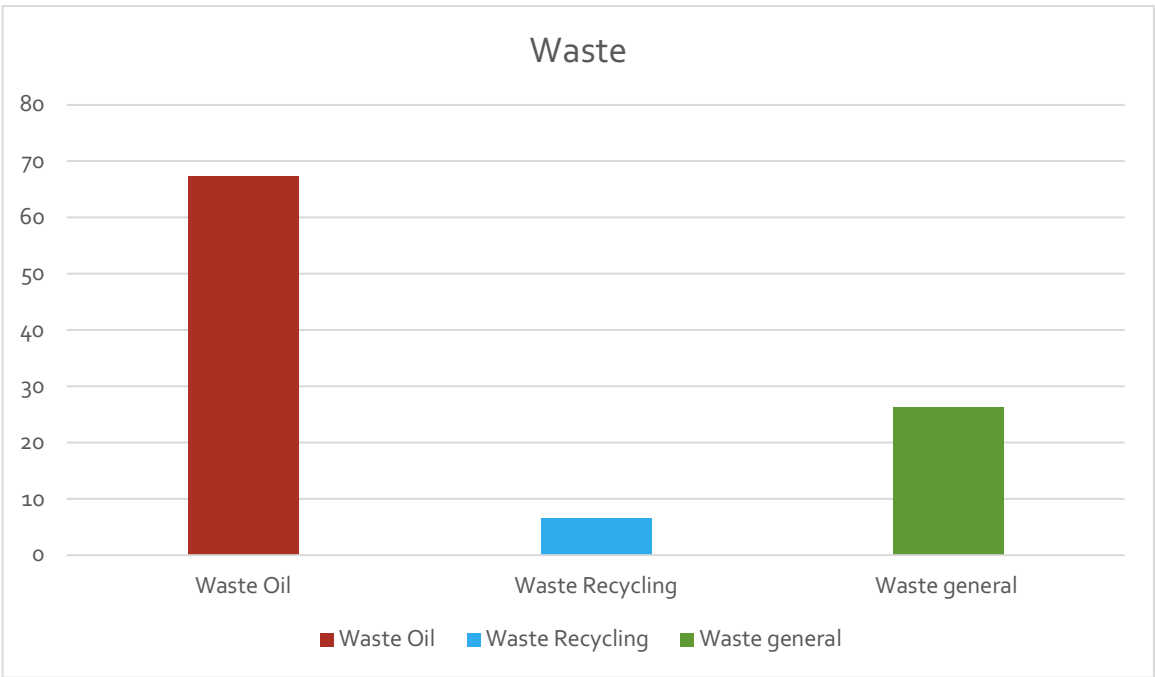
## Paper and Shipping

### Paper and Shipping by Type

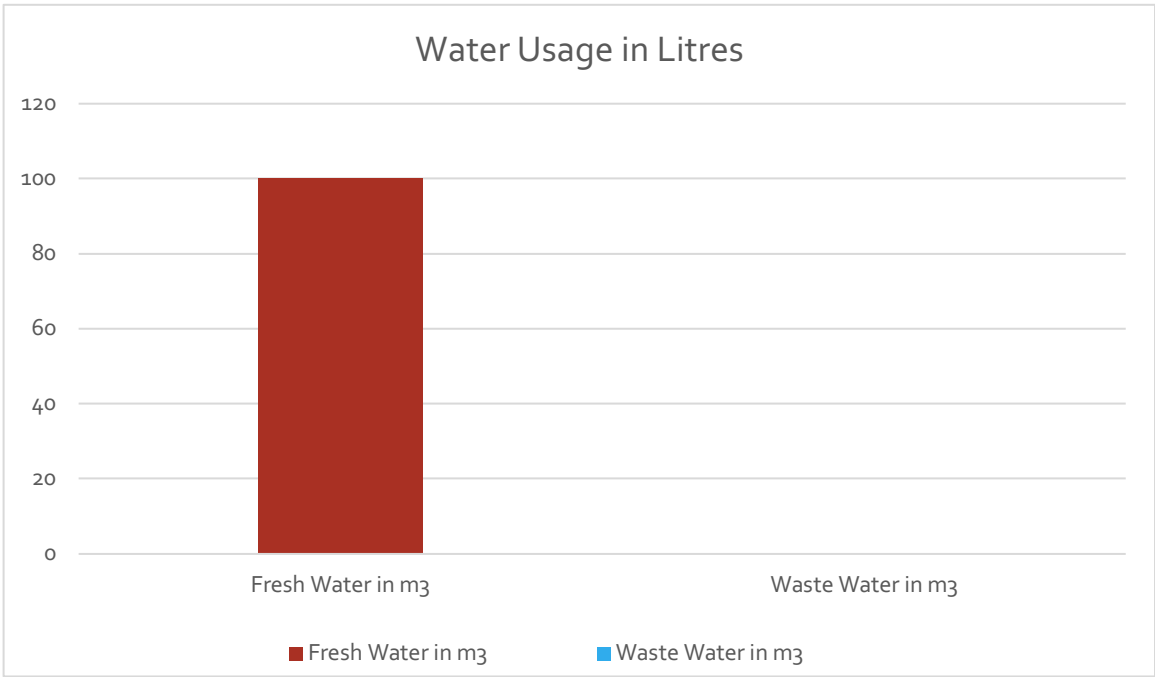




## Waste, Emissions in %

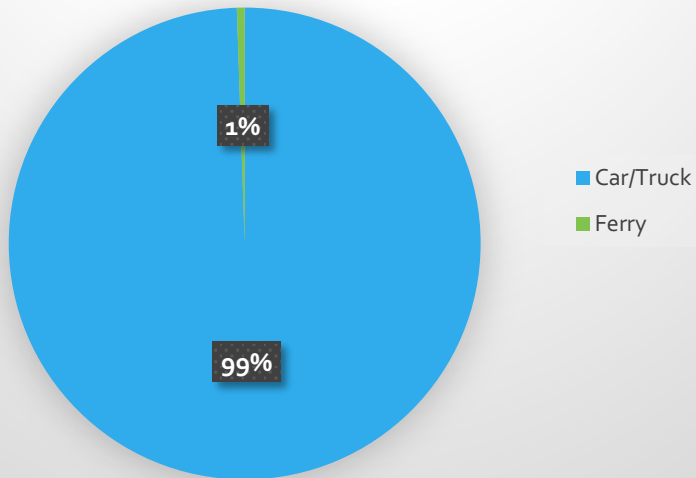


## Water Usage



## Mobility

### Business Trips by Mean of Transport



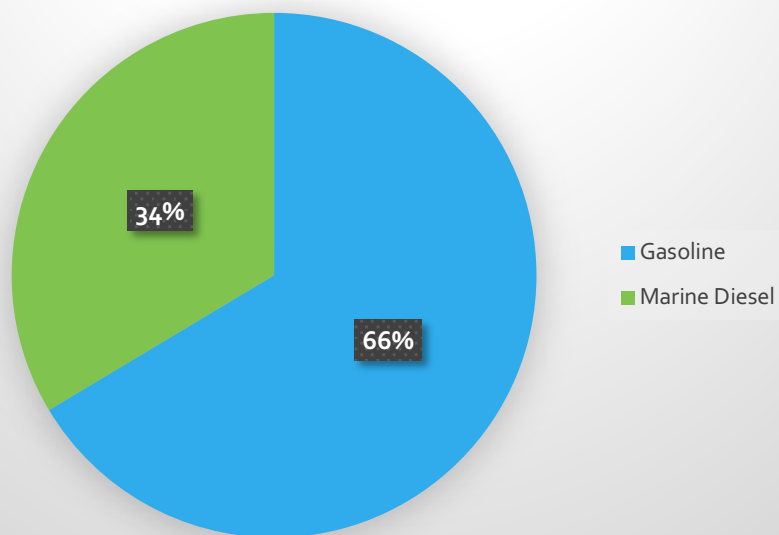
#### Analysis

As plane trips are avoided on Campbell River Whale Watching's business trips, business trips contribute only 2% to overall emissions.

Emissions of work-related mobility consist solely of trips made by car or truck. Although walking is already present as another way of getting work, relying more on bikes and

## Fuel

### Fuel





## Carbon Reduction Strategy

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With the start of the carbon compensation project, Campbell River Whale Watching has made a great effort to compensate their environmental impact while continuing to manage a profitable business. Campbell River Whale Watching is committed to operating as a carbon neutral business, offsetting 100% of their carbon footprint each year from now on. The overcompensation through the protection of an area 1.5 times as large as needed to balance out emissions further marks a generous assumption of responsibility for habitat and biodiversity protection, and therefore sustainability in general.

As Campbell River Whale Watching is moving towards the reduction of their environmental impact in all business activities, a special focus can be put on the purchase of sustainable products such as efficient motors, and on environmentally-friendly practices such as the serving of vegetarian meals and composting. Moreover, the company is going to ambitiously increase the amount of forest protected to at least 2 times the area needed for compensation by adding voluntary customer contributions to the basic donation of \$1 per customer.

## Achievements

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- Use of local hydro-energy
- Sourcing food locally and packaging staff lunches in reusable containers and thermoses
- Use of refillable toner cartridges
- At the start of the 2018 season, the office was switched over to an online booking platform as a major step towards making operations paper free
- Use of "Earth Choice" recycling paper
- Use of phosphate free cleaning products
- Use of low flow toilets
- Proper maintenance of boats with regular updates for fuel efficiency
- Establishment of a partnership with Green Way Trust aiming to eradicate Scottish Broom on the Campbell River Estuary
- Collection of \$1 from every guest who joins a tour towards the North Island Marine Mammal Stewardship Association) to support conservation and education in the area

## Moving Forward

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- Composting
- Use of hybrid motors on boats
- Use of muffling technologies for motors to reduce under water noise and vibrations in order to protect marine wildlife
- Bike to work
- Serving more vegetarian meals

## Compensation: Wilderness Protection

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*„When you listen to the silence in the rainforest, you learn to distinguish the important from the unimportant. It is important to me now that the children of our children will be able to experience this some day.“*

- Astrid, Environmental Ambassador



Since 2012, Wilderness International has been buying parcels of land in the Toba Valley, in the middle of the Coastal Mountains of western Canada, 160 kilometers north of the city of Vancouver. Thus, they are protected forever! Our vision in the Toba Valley is the creation of a great protected Grizzly bear corridor. It all began with the purchase of the "Land of the Grizzlies", more than 50 hectares in size. Until today, it has been followed by the "Land of the Ghost Flowers" and the "Land of the Wapitis", now totaling more than 200 ha of pristine wildlife habitat and biodiversity forever protected.

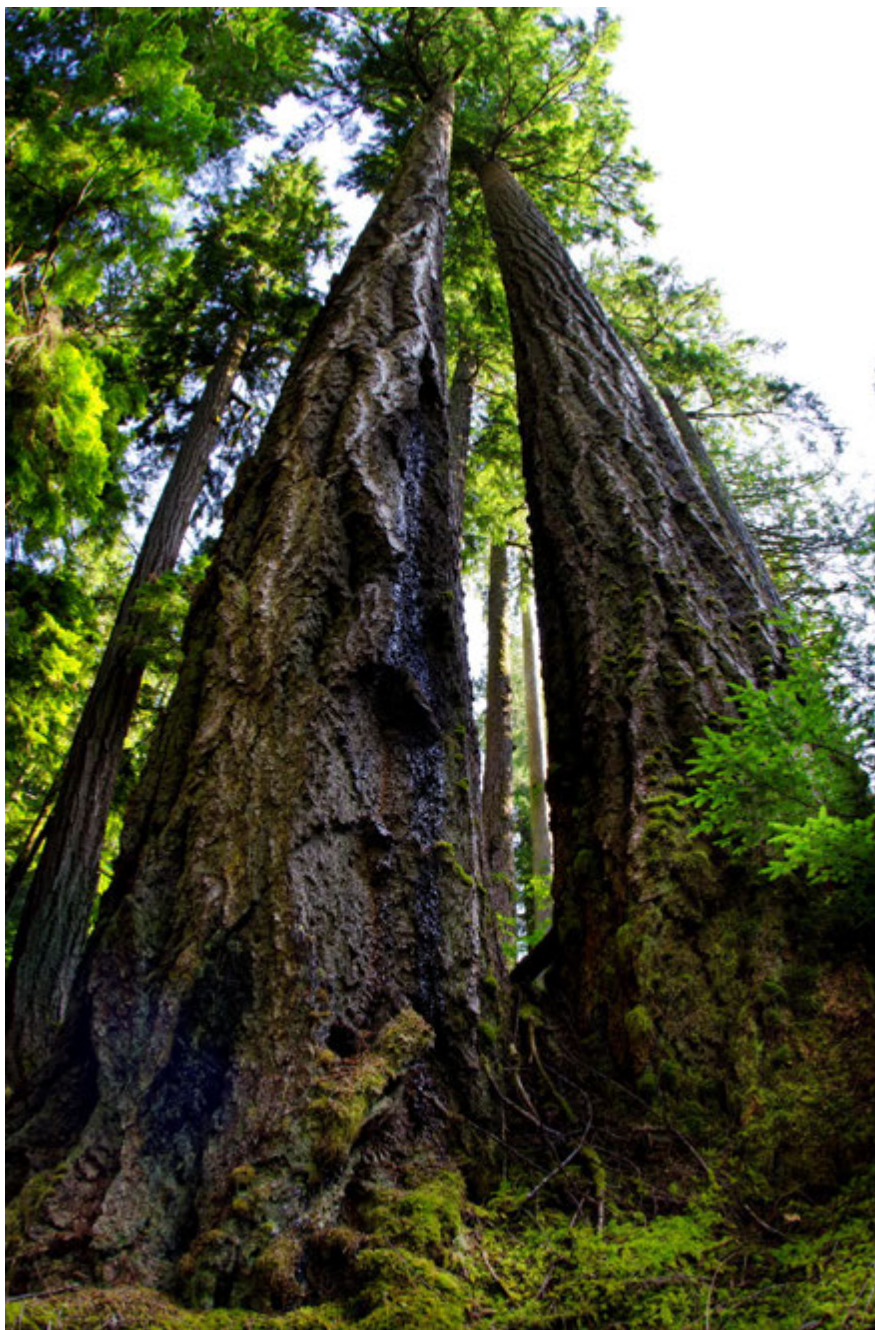




A healthy grizzly population still roams the vast wilderness of this valley. Since there is more than enough to eat, a mother can birth 3-4 cubs in one year. The diverse vegetation of the river valleys is on the menu, and in the late summer and early fall the bears can feast on thousands of salmon in order to build up the winter fat so essential for survival. For their six-month winter rest, they use the root caves of ancient giant trees, which can only be formed through undisturbed, natural processes.

*"Standing at the foot of a tree, whose height is not even fathomable, whose circumference is not even attainable with ten people, and whose age is hundreds of times one's own – only those who have experienced this can really comprehend what it feels like."*

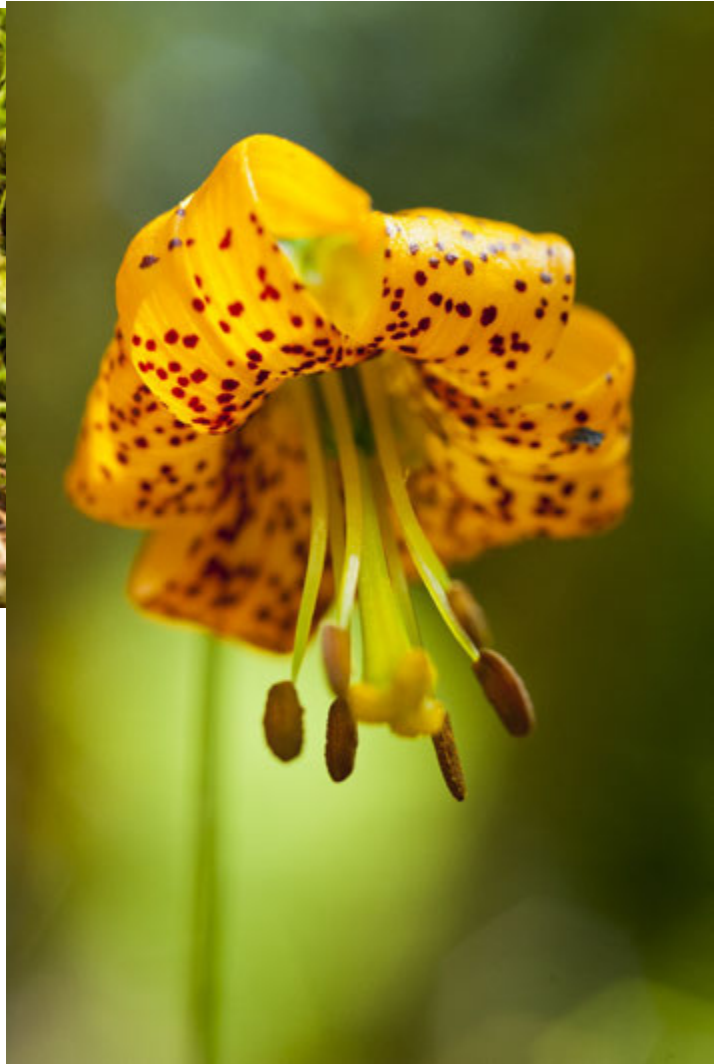
- Mareike, Environmental Ambassador







During one of our vegetation analyses in July 2016, we found 40 different plant species in the “Land of the Wapitis”. In addition, there are uncountable types of mosses and lichen. Most of these were used by the First Nations living on the west coast of Canada as food, healing remedies or for making many everyday items such as clothing and containers. Together with the University of Mainz we are looking into the efficacy of traditional healing plants in the treatment of cancer.





## End Notes

### Glossary

CO <sub>2</sub> Equivalent (CO <sub>2</sub> e)	Green House Gasses have different warming potentials, measured collectively as CO <sub>2</sub> equivalents ("e")
Greenhouse Gas (Emissions)	Atmospheric gasses contributing to the greenhouse effect, including Carbon Dioxide (CO <sub>2</sub> ), Methane (CH <sub>4</sub> ), Nitrous Oxide (N <sub>2</sub> O), etc.
m <sup>3</sup>	Cubic Meter: Unit of measurement equal to 1,000 Litres
PU	Polyurethane
m <sup>2</sup>	Square meters: unit of measurement for areas, 1m <sup>2</sup> equals an area of 100m (side 1) x 100m (side 2)

### Calculation Procedure

To calculate the ecological footprint, so-called emission factors are used. They are based on consumption data such as energy consumption or kilometers driven by car, the amount of emitted carbon dioxide can be calculated. Added to that, the emission factor takes into account all other greenhouse gases that are emitted with certain activities.

Methane for example has an effect on our climate that is 25 times stronger than that of CO<sub>2</sub>. Therefore, for every kilogram of methane emitted, 25kg of CO<sub>2</sub> equivalents are factored in.

### Uncertain Information

To calculate the emission of boat production, roughly 2 times the emission factor of cars was assumed.

To calculate the emission of whole-body PFDs, 5 times the emission factor of regular PFDs was assumed. Regular PFDs were calculated as weighing 650g and consisting of 470g PU soft foam and 180g Nylon.

For Servers, emissions during production are factored in.

For toilet paper, raw material extraction, production, distribution and drive to purchase of consumer as well as disposal were factored in at 10 rolls, 3-layered, fresh fiber, 1.35kg.

## Sources

Pendos Encyclopedia for CO<sub>2</sub>-Emissions:

Andreas Grabolle and Tanja Loitz. Pendos CO<sub>2</sub>-Zähler. Pendo, 2007.

Federal Environment Agency on Energy 2016

<https://www.umweltbundesamt.de/themen/klima-energie/energieversorgung/strom-waermeversorgung-in-zahlen#Strommix>

Society for Environmental Education Bremen

[http://www.umweltbildung-bremen.de/uploads/ff\\_thema4\\_1f6.pdf](http://www.umweltbildung-bremen.de/uploads/ff_thema4_1f6.pdf)

CO<sub>2</sub> List

<Http://www.co2list.org/files/carbon.htm>

VAUDE Sustainability Report

<http://nachhaltigkeitsbericht.vaude.com/gri-wAssets/pdf/de/Dokumente-2017-fuer-2016/VAUDE-Klimabilanz-2016.pdf>

University of Flensburg Research

<https://www.uni-flensburg.de/fileadmin/content/abteilungen/industrial/dokumente/downloads/veroeffentlichungen/forschungsergebnisse/klimaschutzkonzept-nordkirche.pdf>

Study for the Certification of Companies according to the „Stop Climate Change“ Standard in Göttingen

[https://www.stadtwerke-goettingen.de/fileadmin/user\\_upload/THG-Folgestudie\\_Stadtwerke\\_2018.final.pdf](https://www.stadtwerke-goettingen.de/fileadmin/user_upload/THG-Folgestudie_Stadtwerke_2018.final.pdf)

MyClimate Emissions Calculator

[https://co2.myclimate.org/de/offset\\_further\\_emissions](https://co2.myclimate.org/de/offset_further_emissions)

Apple: Product Environmental Reports

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<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2016>

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[www.wilderness-international.org](http://www.wilderness-international.org)  
<https://www.facebook.com/wildernessinternational>



