

Green Food Challenge

As Canadians, we often think of ourselves as surrounded by nature and thoughtful about the environment. Indeed, Vancouver has spearheaded the Greenest City Action Plan since 2011, with the goal of becoming the greenest city in the world by 2020.¹ Of the plan's 10 specific goals, and one of the goals is for a **lighter footprint**, reducing Vancouver's carbon footprint by 33% over 2006 levels.

What is a carbon footprint?

Greenhouse gases, measured in CO₂e (CO₂ equivalents), are known to directly contribute to climate change, and include carbon dioxide, methane, and nitrous oxide. In 2015, regional emissions in Metro Vancouver were projected to be 14.9 million tonnes of CO₂e, between 6-8 tonnes per capita. In other words, we can then say that our personal carbon footprint is about 6-8 tonnes of CO₂e. However, it is generally estimated that global emissions must be reduced to approximately 2 tonnes per capita by 2050.

What contributes to greenhouse gases?

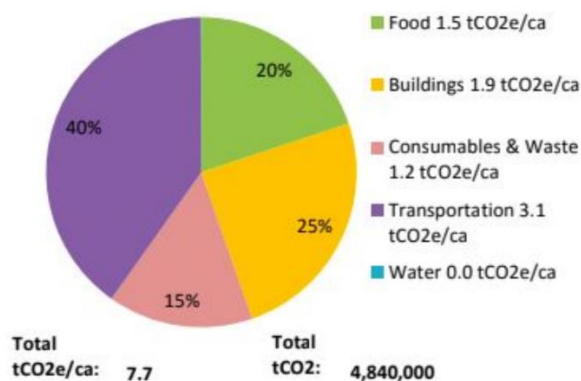
There are many CO₂e contributors to our carbon footprint, including transportation and buildings (commercial, residential)². Municipalities and businesses are currently undertaking measures to reduce their footprints. For example, Metro Vancouver transit can be promoted over cars, and buildings are changing their heating systems from natural gas to hydroelectric.

Despite these efforts at the governmental level, at the current pace of change, it is unlikely we will meet the 2020 target³. What else can we do to mitigate climate change? Aside from taking transit, is there anything else we can do as individuals?

The carbon impact of food

Food is generally under-reported as a source of CO₂e. For instance, in Europe, agriculture contributes to 10% of the carbon footprint. In particular, ruminants such as sheep and cows produce methane through enteric fermentation (i.e. they pass gas) and produce more CO₂e than other types of animals. According to the European Commission, the vast majority of methane emissions (85%) come from ruminants' digestion.

Consumption-Based GHG Emissions, 2015

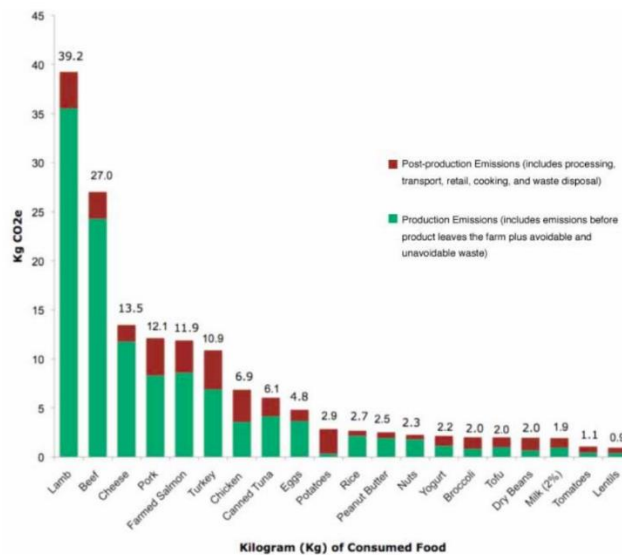


Green Food Challenge

Figure 1: Breakdown of Greenhouse Gas Emissions Per Capita in Vancouver. The chart shows the breakdown of GHG's per person in Vancouver. While efforts in waste management and recycling (15%) are the most visible actions for Vancouverites today, an even larger contributor to our greenhouse gas emissions is food (20%).

Source: Vancouver Eco City Footprint Tool.

Certain foods take more CO₂e to produce than others. The table below shows the relative CO₂e costs for various types of food.



A Low Carbon Diet

There are 2.46 million people living in the Metro Vancouver area, and about 90% of them eat food that are relatively high in CO₂e (i.e., are non-vegetarian). If each of those people, for instance, reduced beef/lamb from 35% to 10% and instead ate chicken, Vancouver could save 900,000 to 1 million tonnes of CO₂e per year.

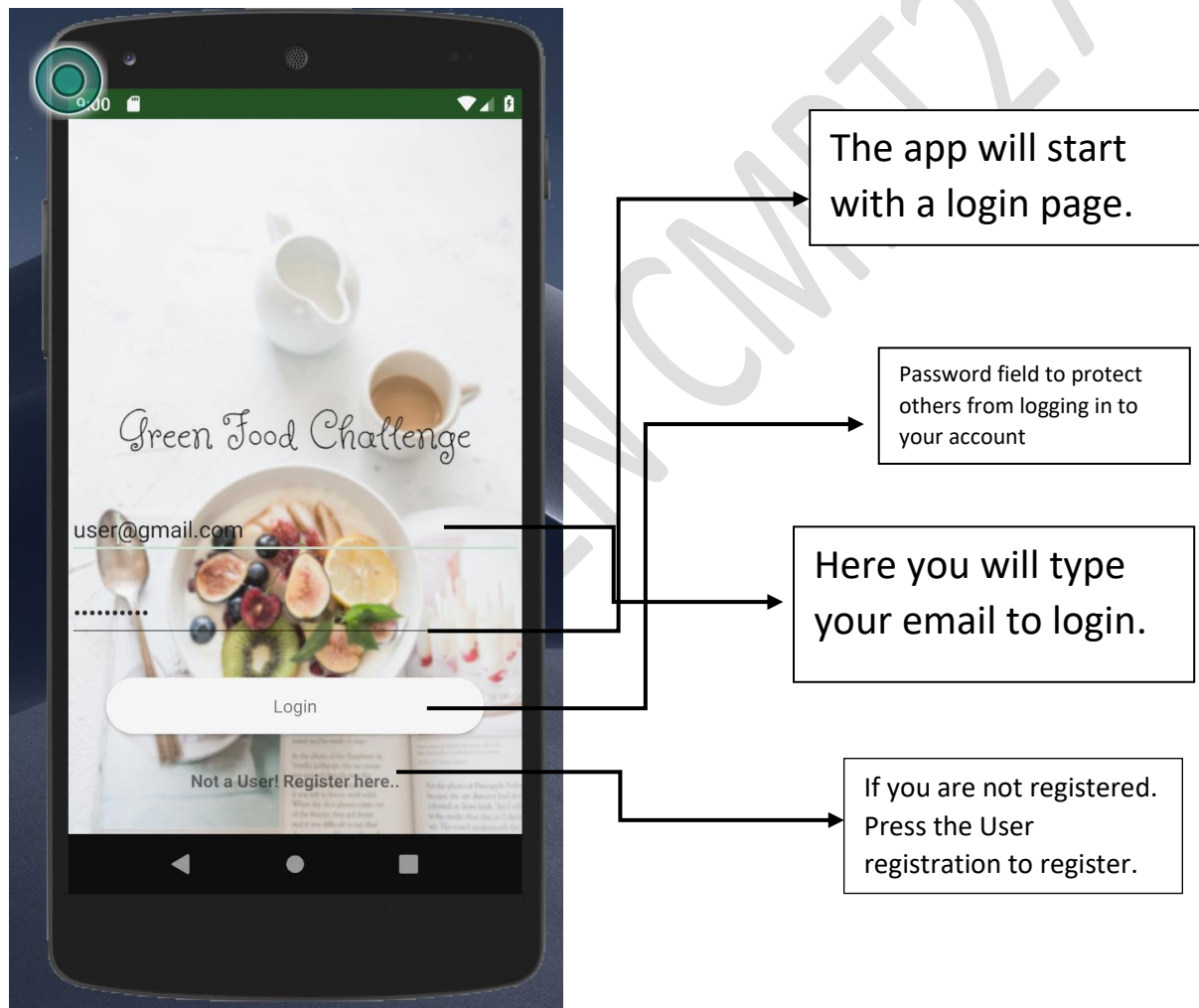
Green Food Challenge

In this project, we aim to raise awareness and promote behaviour change by running the Green Food Challenge. In this challenge, people install a mobile application to learn how much their diet produces in terms of CO₂e and discover how much CO₂e they (and their greater community) could save by making dietary adjustments.

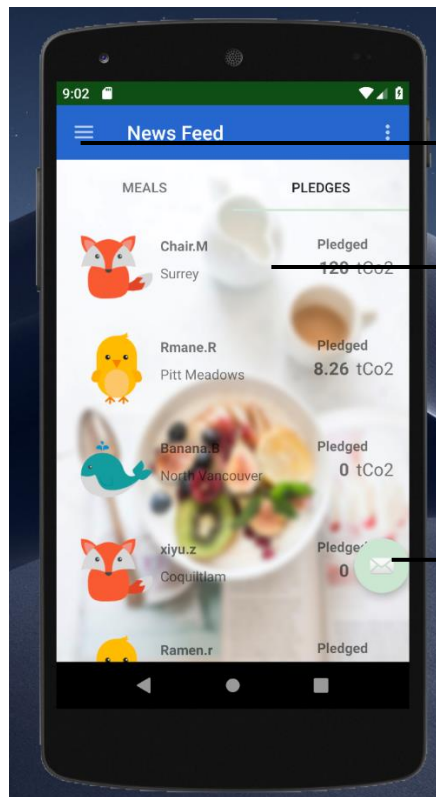
Over the course of the Green Food Challenge, participants track their "green meals", containing chicken, seafood or vegetable-based proteins. Participants would see how many tonnes of CO₂e they save together as a community, as well as share restaurants that offer delicious "low carbon" meals. By incentivizing these CO₂e-friendly meals, it is hoped that participants learn to sustainably change their eating habits towards a lighter footprint.

Green Food Challenge

A Complete Tour to Our Application!!



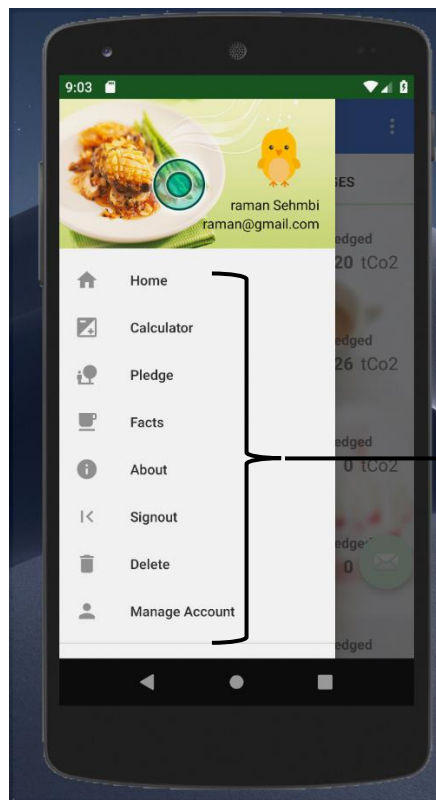
Green Food Challenge



After logging in. This is Home Screen.

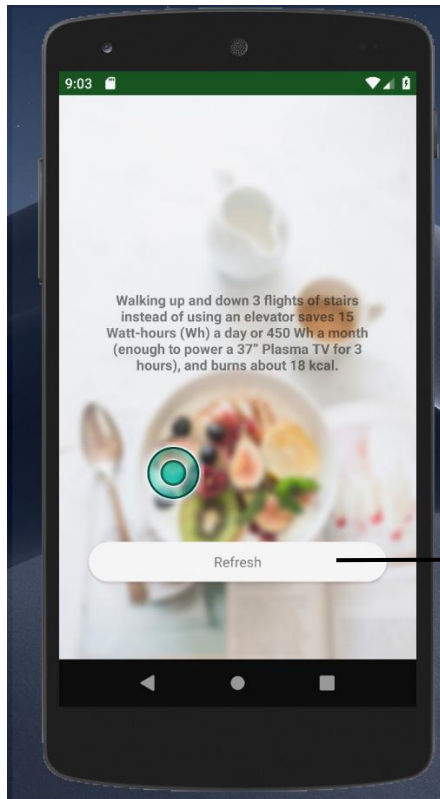
Side drawer for all the interesting features and functions of the app

Click here to post a new picture or location of your meal.

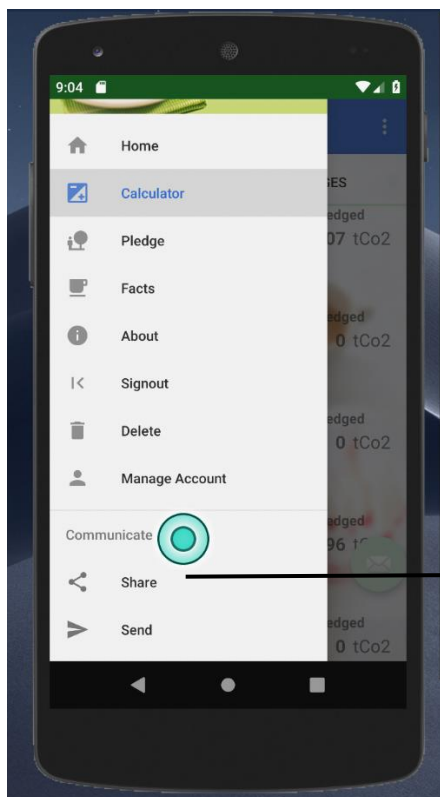


When you will press the burger button. Side navigation will open will all the functionalities of the app.
Click on different buttons to open new activity.

Green Food Challenge

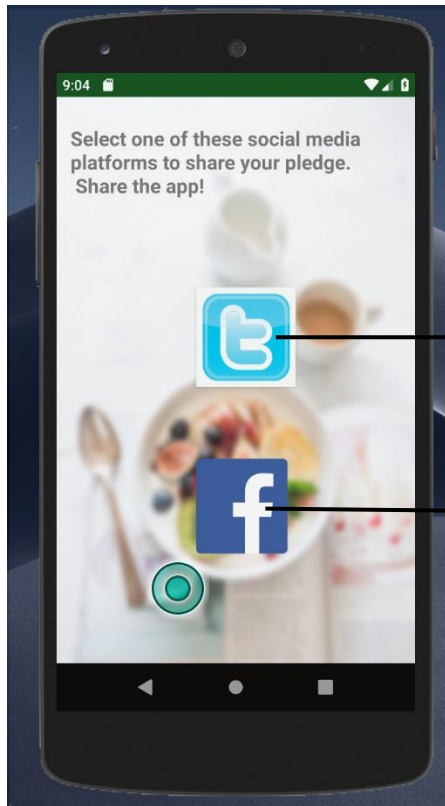


If you clicked on Facts button. Facts activity will open and you can read random facts to save the planet and save energy.



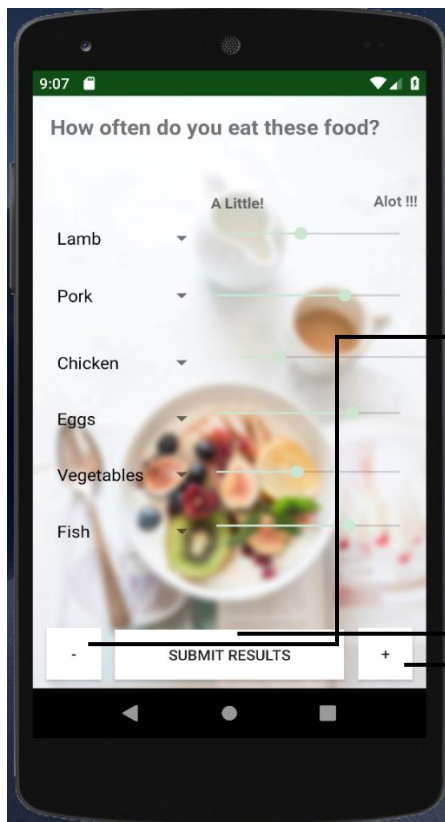
You also can connect to social media and share your saved percentage to either twitter or Facebook. Let's take a tour by clicking on the share button.

Green Food Challenge



Click on the twitter button to share you application on twitter. A pop-up will open where you will login into your account and share pledge.

Similarly, you can share you pledge o Facebook by just clicking on the facebook button.



Let's have a look on the calculator. The calculator is easy to use, and you enter the food you ate in amount with the help of slider.

Minus (-) button to delete a meal

Addition(+) button to add new meal and Submit Results button to see how you can reduce CO2e emissions and can choose other meal plans.

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This button shows the images and other related information about the meal as updated by the people of metro Vancouver.

Name of the meal and main protein it has.

Name of the person posting the image

Description of the meal person had "This is soooo cheesy"

Location of the restaurant where the person has his meal