

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

**How Healthy are the Beverages at UBC?**

**Mapping the Healthy Beverage Initiative of UBC Vancouver Campus**

**Sima Nuri & Tovi Sanhedrai**

**University of British Columbia**

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## Executive Summary

The University of British Columbia (UBC) Vancouver campus has published an action plan to create a nutritionally sound campus. This action plan attempts to make a positive contribution to the health and wellbeing of the community and the environment. In January of 2017, UBC Wellbeing published the *UBC Action Framework for a Nationally Sound Campus*, which outlined the priorities to reshape the food and drink landscape of the campus.

This project was done in collaboration with UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program, on a healthy beverage initiative (HBI). The HBI ultimately aims to raise awareness about the negative impacts of excess sugar consumption on health. This is done by illustrating the magnitude of unhealthy beverages sold on UBC campus, in hopes of consequently only selling zero-calorie or non-sweetened beverages, such as milk, 100% fruit juice, while phasing out the sale of sugary drinks that offer no nutritional value (titled tier 6 beverages). These beverages include, but are not limited to: sweetened water (vitamin water), soda (not sugar-free), fruit drinks, sweetened iced tea, sports drinks, energy drinks and coffee/tea with added sugars. These beverages include, but are limited to sweetened water (vitamin water), soda (not sugar-free), fruit drinks, sweetened iced tea, sports drinks, energy drinks and coffee/tea with added sugars.

The method for conducting this project was firstly using Phebe Ferrer's HBI project with UBC SEEDS and the data that she collected in the summer of 2017. Through her own collaboration with SEEDS, she created a Google MyMap of her data, done by taking photos of the beverages, vending machines and/or menus at different locations on campus. Due to the limitations of summertime, she was unable to access to several buildings, as a result we collected the data for the remaining buildings in the fall of 2017. Once all of the photos were collected, we counted the total number of each beverage brand, the total of tier 6 beverages, and then calculated the ratio of tier 6 beverages to the total sold in each location.

Both an interactive and static map were created. The interactive map was made in CARTO (cloud computing platform that provides GIS and web mapping tools for a web browser) using shapefiles created from ArcGIS (desktop application used to create, analyze maps and manage geographic information in databases) and firstly obtained on the UBC Geography Department drive. The percentage tier 6 beverage data are divided into five classes: 0, 20, 50, 70, 90 with a diverging blue to red color scheme (where white indicates an equal supply at 50%). The static map is a symbol map composed of the same data and classification method as the interactive map and divided into five classes: very low, low, neutral, high and very high with the same diverging blue to red color scheme.

There are quite a few limitations to this study. First of all, the time of year that the data was collected in is significant, as due to the nature of varying beverage supply and stocks in each session means the data might not be accurately representative of the actual supply. As well as that, the supply changes by the day and hour meaning when

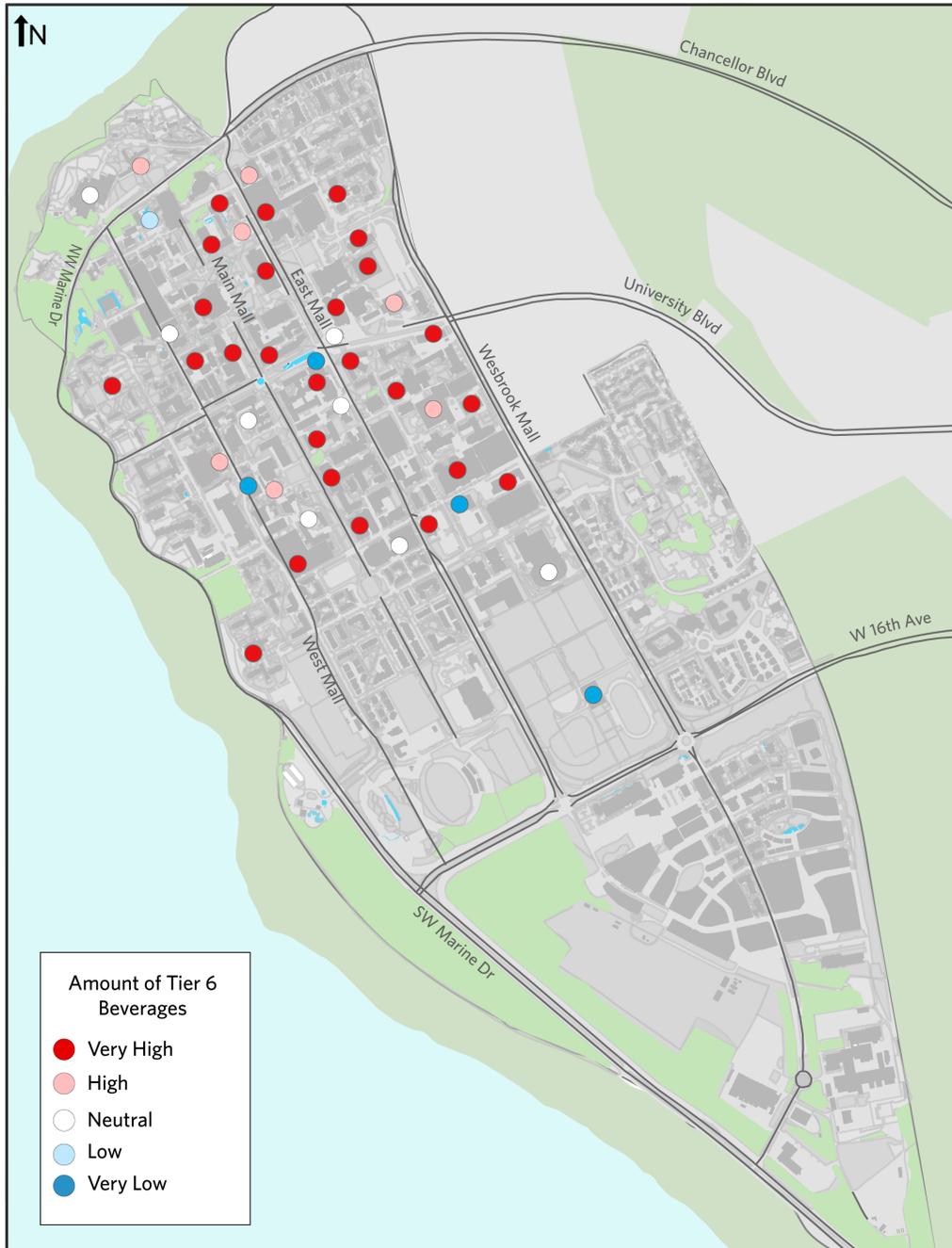
we took the photos affects the results too. In regards to the technical aspects of the project, to add the shapefiles of the UBC basemap in ArcGIS, three different layers were needed to show all of the current buildings at UBC as the most updated data was only from 2013 and certain buildings like the NEST, Alumni Centre, Ponderosa and the new Aquatic Centre were either under construction or future buildings. As a result this creates further uncertainty as not all buildings that were “planned” or “under construction” indeed did get built. Furthermore, we found that Carto was not as user-friendly as we would have hoped, and did not present us the flexibility to customize some things such as adding manual breaks for our classification, so we choose equal interval which resulted in our middle value being the mean (37%) rather than 50%. Carto also did not allow us to add supplementary information, such as the description of tier 6 beverages, to our legend. Which would have been a useful feature to make things more clearly for our map-readers.

Fundamentally, the results of both maps are very conclusive: the majority of the beverages sold on campus are tier 6, unhealthy and high in sugar beverages. The average percentage of tier 6 beverages in the whole campus was 62% (we believe this would have been even higher if we were able to get the data from all buildings, such as Sage Bistro and Mahoney & Sons which did not have a drinks menu). Thus, UBC’s beverage landscape is evidently greatly and disproportionately composed of mostly tier 6 beverages. We hope this map serves as a tool to raise awareness of this issue, as well as an instrument to help promote action taking to reduce the amount of non-nutritional sugary beverages on campus.

## Appendix 1

Map illustrating the percentage of unhealthy beverages sold in each building on UBC Vancouver's campus.

### How Healthy are the Beverages at UBC?



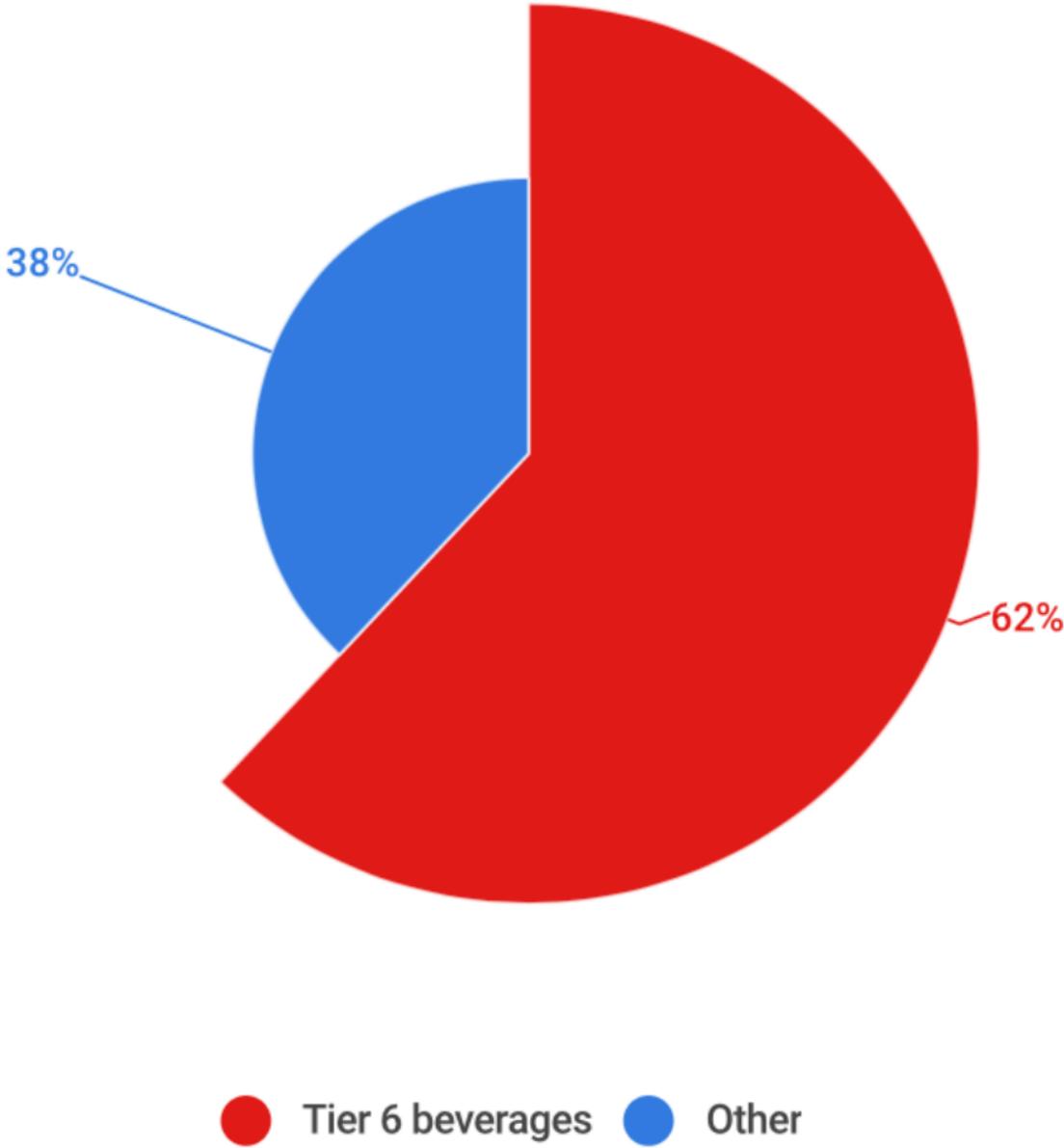
Sima Nuri & Tovi Sanhedrai | GEOB 472 | December 12, 2017 | Source: UBC Geography, SEEDS UBC | Projection: BC Albers, NAD 83 UTM 10

Tier 6 Beverage: Any liquids that are sweetened with various forms of sugars including but not limited to soda (not sugar-free), sweetened water, fruit drinks, sports/energy drinks and coffee/tea with added sugars

Kilometers 0 0.1 0.2 0.4 0.6 0.8

## Appendix 2

Pie chart depicting the percentage of Tier 6 beverages compared to all other beverages.



### Appendix 3

Bar graph depicting percentage of Tier 6 beverages per building surveyed.

