

# THE ABBOTSFORD FOOD ASSET MAP

www.tinyurl.com/abbotsford-food-map

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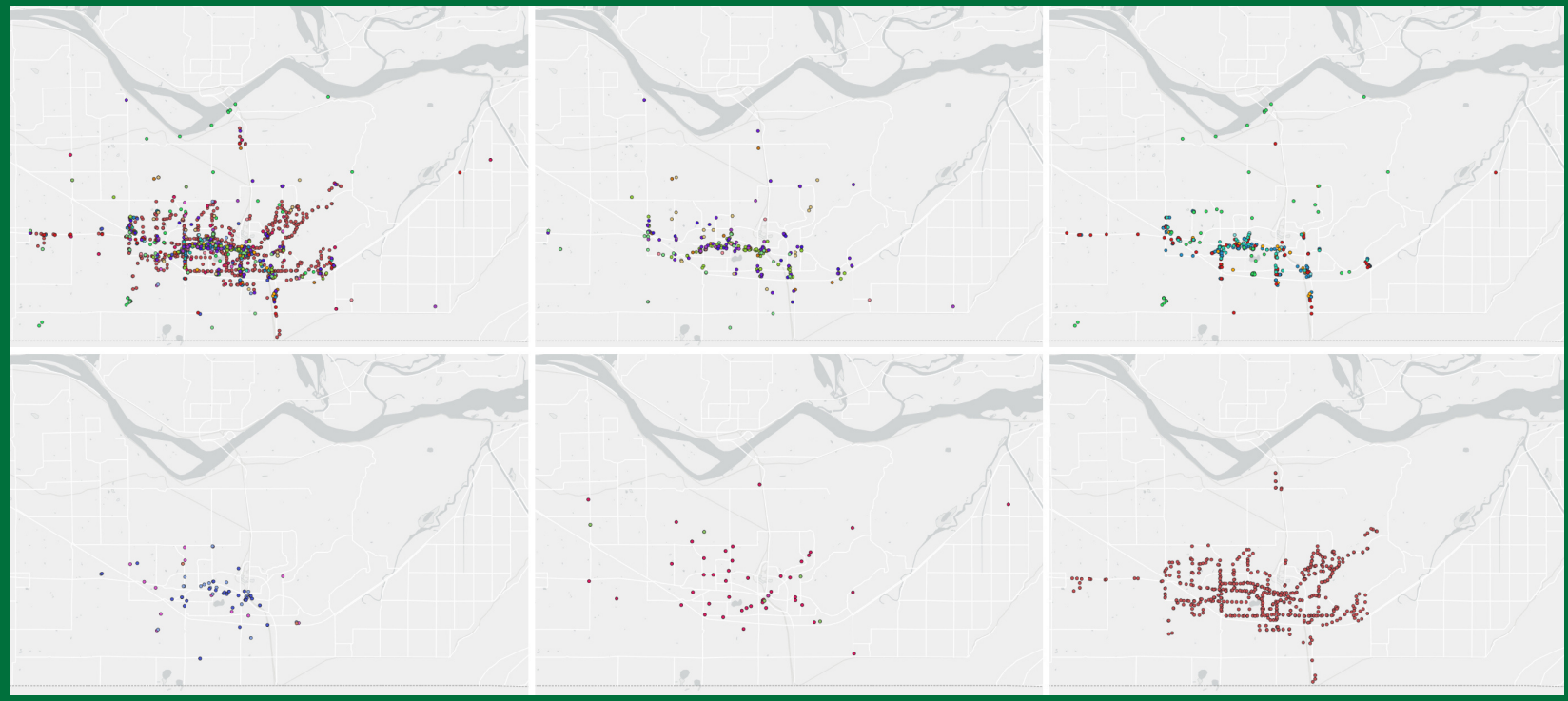
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## PROJECT BACKGROUND

The Abbotsford Food Asset Map project explored the use of maps as tools for improving food security and justice in Abbotsford.

The goal of food justice efforts is "to ensure that the benefits and risks of where what and how food is grown, produced, transported, distributed, accessed, and eaten are shared fairly. Food justice represents a transformation of the current food system, including but not limited to eliminating disparities and inequities." (Gottlieb and Joshi, 2010)

Food justice efforts aim to address food insecurity, which present significant sustainability issues to individuals and societies. Food insecurity exerts substantial health impacts on affected individuals and a burden on the health care system. Food insecurity often stems from poverty, and thus, it reflects the social and economic inequities and disparities experienced in communities.

A number of factors are involved in food security such as consumer autonomy, community relationships, food access and availability, and availability. Efforts toward food security and justice include those that build understanding and increase awareness around the relationships that exist between an individual's overall health and access to different food assets and services.

## WHAT WAS THE PURPOSE OF THIS PROJECT?

The project was led by the Food and Agriculture Institute at the University of the Fraser Valley, and it was done in collaboration with an advisory committee of representatives from the Fraser Health Authority, Archway Community Services, and i-Open Technologies Group. The aim was to create a visual tool to illuminate the locations of food assets in relation to individuals and families in Abbotsford to identify gaps and areas of low access to food assets and services. Vancouver Coastal Health's defines food assets as:

**"Food assets are places where people can grow, prepare, share, buy, receive, or learn about food."**

Based on a literature review, a draft food asset framework was created, which provided categories and examples for different types of food assets. Through discussion among the researchers and advisors, the framework was refined and finalized.

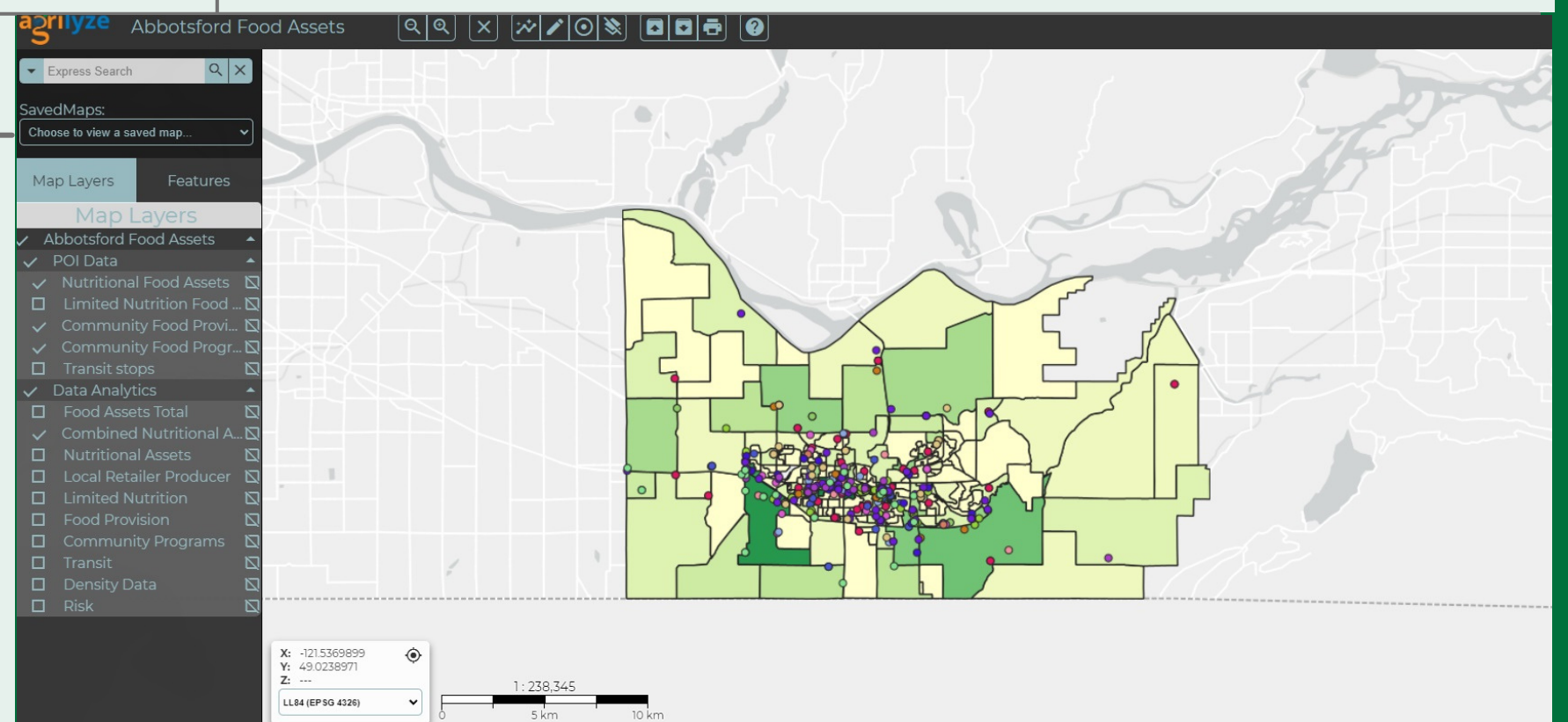
## HOW WAS THE MAP DEVELOPED?

A food asset dataset was created by first downloading available data on markets, restaurants, stores, etc. in Abbotsford from Open Street Maps. Categories of different types of food assets (as per the framework) were added to the dataset, and more data were collected through online searches and discussions with community organizations. The latter including contacting places of worship and community service agencies in Abbotsford to ask whether they run food programs and services, as well as businesses to confirm whether they were still in operation. Transit stops (data retrieved from BC Transit) were also added to the map due to their role in facilitating food access.

ArcGIS was used to display point data and create choropleth maps of food assets within different census tracts of Abbotsford. Map data were exported, and then imported into Google Maps and i-Open Technology's Agrilyze platform. The map can be used to identify areas of high and low food assets, and these area can be compared with the maps of housing and job insecurity in Abbotsford produced by Crooks et al. (2021) to determine whether there are overlaps in vulnerabilities.

## FOOD ASSET FRAMEWORK

Category	Descriptions of food assets
1. Local food producers and retailers	<ul style="list-style-type: none"> <li>Local growers with restaurants or farm stores</li> <li>Fresh produce, CSAs, and drive-in farmstands</li> <li>Farmers' markets and flea markets with food vendors</li> </ul>
2. Nutritional food	<ul style="list-style-type: none"> <li>Restaurants, not fast food</li> <li>Locally-owned retail food/produce stores</li> <li>Breweries/wineries with food menus</li> <li>Cafes with food menus</li> <li>Deli and butchers</li> <li>Cafeterias</li> <li>Food outlets</li> <li>Bakeries</li> </ul>
3. Limited nutrition	<ul style="list-style-type: none"> <li>Fast food restaurants</li> <li>Convenience stores, chocolatiers, ice cream, vending machines</li> </ul>
4. Community provision	<ul style="list-style-type: none"> <li>Emergency food assets</li> <li>Community meals programs</li> </ul>
5. Community programs	<ul style="list-style-type: none"> <li>Food-related school, nutrition, and community programs</li> <li>Food action groups</li> <li>Community gardens</li> </ul>
6. Transit	<ul style="list-style-type: none"> <li>Public transit stops</li> </ul>



## Zoom buttons

## Turn on/off layer

## Slider bar button

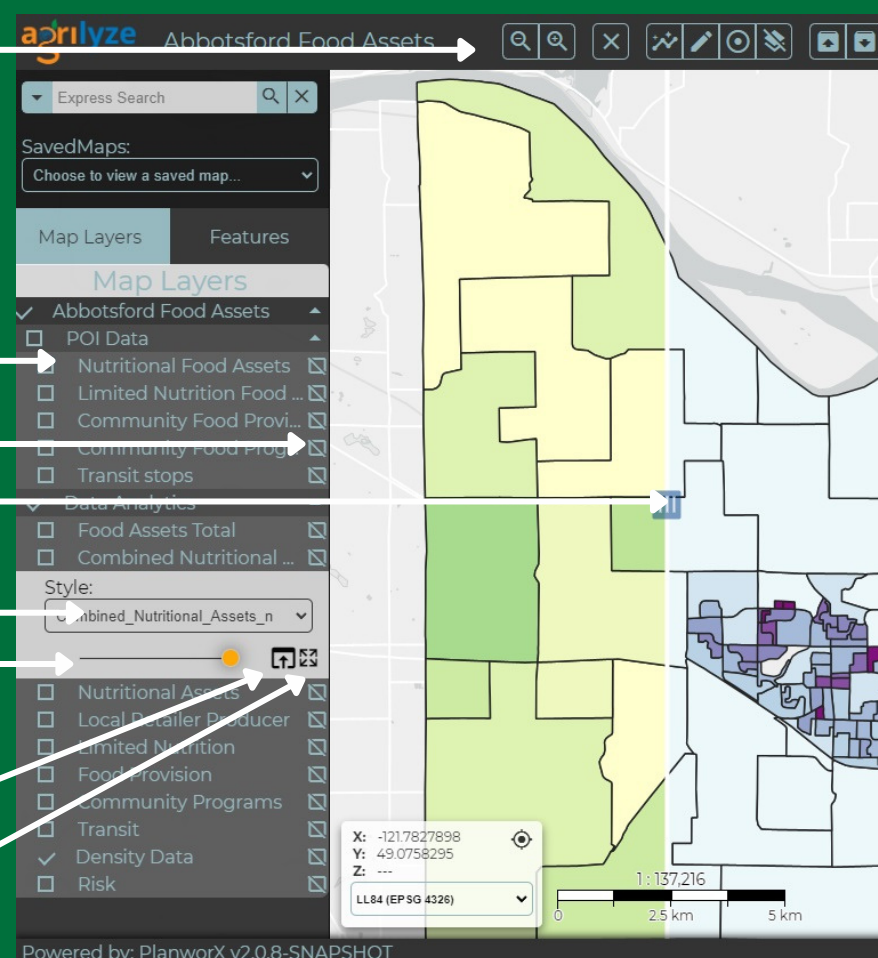
## Slider bar

## Change data dropdown box

## Opacity slider

## Data table button

## Zoom-to-layer button



## HOW DOES A USER NAVIGATE AND EXPLORE THE MAP?

The map has two sections:

- Point of interest (POI) data: Turn on these layers to see individual points for the different food assets.
- Data analytics: Turn on these layers to see choropleth maps that show concentrations of different types of food assets (the Combined Nutritional Asset layer combines Category 1, 2, and 5 from the table above). This section also contains demographic data map layers (i.e., Density Data) and housing and job security risk map layers (i.e., Risk) that can be displayed to compare with the food assets layers.

The Agrilyze platform has a number of features for exploring the maps:

- Zoom: Use the zoom buttons or mouse scroll wheel to zoom in and out.
- Turn on/off layer: Click the boxes next to the data layers to turn them on and off.
- Change data: Click on the name of a data layer to make a dropdown box appear, and use the dropdown box to change the data being displayed. Food asset layers can be displayed as total food assets, food assets per hectare, or food assets per person. Density can be displayed as population or dwelling density. Risks layers that can be displayed include housing and job security risks.
- Opacity: Drag the slider to change the opacity/transparency of data layers.
- Slider bar: Click the slider button to make a bar appear that hides/shows data when sliding back and forth.
- Data table: Click the data table button to see more information about the different data points and polygons. Click the points and polygons on the map to see data for the specific point/polygon.
- Zoom to layer: Click the zoom-to-layer button to move the map so that it focuses on that data layer.

## HOW CAN THE MAP BE USED FOR FOOD SECURITY AND FOOD JUSTICE?

The Abbotsford Food Asset Map can be used to enhance food security and food justice in Abbotsford by highlighting locations of the local food assets. Comparing this map with other data, such as the housing and job insecurity maps, is useful for understanding where there may be interactions among vulnerabilities within the community.

It is important to identify areas where individuals and families are more likely to experience food insecurity within Abbotsford to support efforts toward strategically establishing and developing new assets and services. The Abbotsford Food Asset Map is a community tool that can be updated with new data, as changes in the availability, locations, and accessibility of food assets occur within the city.

## REFERENCES

- Crooks, V., Schuurman, N., Giesbrecht, M., Rosenkrantz, L., Tate, J., Nicol, K., and Burgener, P. (2021). Mapping the COVID-19 pandemic's secondary health impacts: Exploring contributing factors across British Columbia's neighbourhoods. <https://storymaps.arcgis.com/stories/05ec1a9375684ecabd551e13714acefb>
- Gottlieb, R., & Anupama, J. (2010). Food Justice. MIT Press
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