

Mapping Resilience and Biodiversity in the UBC Botanical Gardens

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GEOB 472

12/12/2017

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Executive Summary

In this project, the UBC Botanical Gardens requested a thematic map mapping the resilience and biodiversity in the gardens. This project is part of the yearly themed self-guided tours the Botanical Gardens holds for all tourists and guests. The project began with a meeting with the community partner, Tara Moreau, Associate Director/Sustainability and Community Programs from the Botanical Gardens, and David Gill, Program and Policy Planner from the SEEDS program. In this meeting, the deliverables including the approach to the project, the general concept of what resilience and biodiversity means in terms of the gardens was discussed, and a working timeline was established. It was decided that Rachel would produce a static map for the brochure the marketing team at the Botanical Gardens would make, and Vivian would create an interactive version of that map. In the second meeting, Rachel and Vivian met with Douglas Justice, the UBC Botanical Garden Associate Director and Curator of Collections, along with Tara and learnt more about how the botanical gardens apply to the theme of resilience and biodiversity.

Acquire

Data for the maps were acquired manually by Rachel and Vivian. After doing individual research on what resilience and biodiversity is, they discussed ten to twenty potential stops around the gardens by walking around the Botanical Gardens and marking down any highlights on an existing paper map the gardens hands out to visitors. These stops were selected on how interesting they would be to visitors and how important they are according to the theme of

resilience and biodiversity. The basemap used in this project was provided as an ai file by Katie Teed, the Marketing Manager at the Botanical Gardens.

Parse, Mine, Filter

Rachel and Vivian gathered the data specifically for this project. There was not much extra data that needed to be mined and sorted out. They did have to filter out some stops. There was a list of almost twenty potential stops that were narrowed down to 13. The list of stops was managed by removing repetitive stops, combining similar stops close to one another, and from feedback from Tara and Douglas who have more expertise about the gardens and the theme.

Represent

The symbol used in the maps were created by Rachel with feedback from Tara, and taking inspiration from the City Resilience Framework from the Rockefeller Foundation (The Rockefeller Foundation; ARUP International Development, 2014). This symbol encompasses significantly what resilience and biodiversity is according to a respected source and corresponds to the international symbol for the theme. Rachel designed four symbols with two different iterations each differing in colour and orientation. In the design process, there were ideas to use rainbow colours in the symbol as they encompass diversity, however this was scrapped as it would be visually confusing to incorporate too many colours. Primary colours were chosen as they are the basis of other colours. The outer ring in the symbol consisting of red, blue and yellow are also vibrant colours, and do not contain green which would blend in with the

dominantly green basemap. In the inter ring, muted versions of the colours are used which represent fall-winter colours.

Descriptions for each stop were written by Rachel and Vivian. These stops would accompany the static map in the brochure made by the Botanical Garden's Marketing team, and would pop up next to each stop in the interactive map. These stops were written using information from the gardens.

To adhere to the Botanical Gardens master map and minimize changes to it, the resilience and biodiversity stops and text were added to the ai file as separate layers. The positioning of the stops were made to enhance accuracy and minimize covering of existing labelling. In cases where labelling of trails was inevitable, the trail label was moved to the front above the symbol. This decision was made so visitors would still be able to read their position on the map.

Refine

Prior to the creation of the finalized symbol, Rachel and Vivian had trouble contemplating on what symbol would be appropriate for a topic as broad and incorporating as resilience and biodiversity. They wanted the symbol for the maps to represent the theme as well as be recognizable and fun in the gardens alike the Botanical Garden's previous Canada's 150 Maples Tour which had eye catching physical maple symbols in the gardens for each stop. Therefore, the first symbol they chose was the flexing arm emoji which signifies strength, reflecting ecosystems

resisting damage and recovering quickly. The symbol itself is from an open source and does not infringe upon copyright.

The definition of resilience placed on the map to help guide visitors has also been refined through the mapping process. In the earlier versions, Rachel and Vivian defined resilience as “the proactive intelligent planning of ecosystems so they can respond to a perturbation or disturbance by resisting damage and recovering quickly” (Resilience Alliance, 2015). This definition was made after scanning through online definitions such as the Resilience Alliance. With feedback from Tara pointing to the City of Vancouver’s Resilient Cities and 100 Resilient Cities web pages, the definition used in this project was finalized. The final definition defines resilience as “the capacity to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience” (City of Vancouver, 2017; 2017 Resilient Cities, 2017).

The descriptions for the stops were also refined to meet the standards of the Botanical Gardens. They were corrected and approved by Tara and Douglas.

Interaction

The interactive map was made using Thinglink.com. Popups were added and displays a description and image of each stop when the respective symbol is hovered over. Clicking on the title opens a new tab showing a larger version of the image.

Limitations

Each stop was marked by hand while walking through the garden. This may lead to some error in the symbol placement but this map is of a fairly large scale. Images were also taken of each site to guide visitors to what we want them to see. The interactive map was made on Thinglink.com. There were not as many customizations as they would have liked, but it still created a great map. They were not able to use the university's font Whitney. They had to move the scale bar to the left side of the interactive map so that the Thinglink logo would not block the scale bar.

Appendix



Figure 1 Tour map of resilience and biodiversity at the UBC Botanical Gardens

Works Cited

- 2017 Resilient Cities. (2017). *What is Urban Resilience?* Retrieved November 22, 2017 from 100 Resilient Cities: <http://www.100resilientcities.org/resources/>
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