



## **CC-Visages Canada: Nanaimo, British Columbia**

Within the context of the CC-VISAGES project (Climate Change Inferred through Social Analysis, Geography and Environmental Systems) the CC-Visages Canada project will focus on Nanaimo, British Columbia, and examine policymakers' perceptions of climate change impacts. The goal is to investigate climate change policy and coherence across multi-level governance. The final result will take the form of a 60 page master's thesis to be completed by the summer 2016.

Climate change is framed in a wide variety of ways at the international, national, regional and local scales. On the international level some frames include climate change as an ecological, development, migration, and security issue (Vlassopoulos, 2012). In Canada, climate change has often been framed as a policymaking issue, with a focus on government policy responses and political debate (Stoddart, Haluza-Delay, & Tindall, 2015). However across the country there are different perceptions between national, provincial and municipal governmental bodies and communities, and different demands from different communities, which must be considered in the policy making process. Failure to acknowledge the different demands from the various stakeholders in multi-level policy-making processes can prevent successful climate change governance.

### Nanaimo, British Columbia

Nanaimo was chosen as the case study based on the Climatological Environmental Justice Index (CEJI) and its classification as the third most vulnerable community in Canada according to the German Canadian FFU research collaboration "CC-Visages". The CC-Visages project developed a comparable human stress index (HSI) on the community level in Brazil, Canada, and Germany. Using six (6) social vulnerabilities (income, education, age, gender, migration, population density) and the Temperature Humidity Index (THI), a Climatological Environmental Justice Index (CEJI) was developed. By the HIS, THI, and CEJI three geographical representations of climate change vulnerabilities for each of the three countries were created through a geographical information system (GIS). The comparable result is a list of vulnerable communities in each country. As Nanaimo was identified as one of the most vulnerable communities it will be analysed at local with help of a comparable, mixed-method approach called Q Oracle (see below). The findings will be displayed in community based Public Participation Geographic Information System (PPGIS) that complement to the macro GIS models.

## **The Q Oracle**

The Q Oracle method was developed for the purpose of the CC-VISAGES project. The goal is to create a fuller picture of perceptions regarding climate change and policy approaches at the municipal level. The research will demonstrate the consensus or lack thereof regarding climate adaptation policies and the perceived vulnerabilities to climate change impacts in Nanaimo.

The Q Oracle combines two established methods, Q Methodology and Delphi Techniques. It allows for transforming qualitative information from the involved stakeholders into measurable data.

The method is capable of revealing discourse differences within the field (e.g. policy network) and testing the possibility of consensus. Moreover, the method is able to provide a possible consensus or reveal the unresolved controversial aspects of a dispute. Q Oracle analyses ideal-typical discourse differences in the field by statistical means and then tests the possibility of consensus.

## **Steps of the Q Oracle**

Around 20-30 statements will be chosen from analysis of relevant newspapers, academic journals, speeches, films and interviews with experts in the field. Then, approximately 8-12 will be chosen asked to sort these statements in order of agreeance. These rankings will be statistically analysed and then summarized into a questionnaire. There will be up to three rounds of questionnaires, which the experts will complete to see whether consensus can be reached across differing opinions. Throughout the study the answers remain anonymous, even amongst the participants as the research focus is the opinion and not the person itself that provides the information.