

Storyline simulation of pollen episodes

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Introduction

Pollen are tiny, airborne particles released by plants as part of their reproductive process, and they can trigger allergic reactions in sensitive individuals. These allergens are typically released by trees, grasses, and weeds during specific seasons, primarily in spring and early summer. During this time, pollen counts tend to be higher, which increases the likelihood of allergic reactions such as hay fever.

Climate change is lengthening and shifting the pollen season. This worsens allergy seasons, especially affecting vulnerable groups such as those with asthma and low-income or minority communities. Storyline simulations can help model the pollen seasons and events under both warmer and colder climate scenarios.

Research question

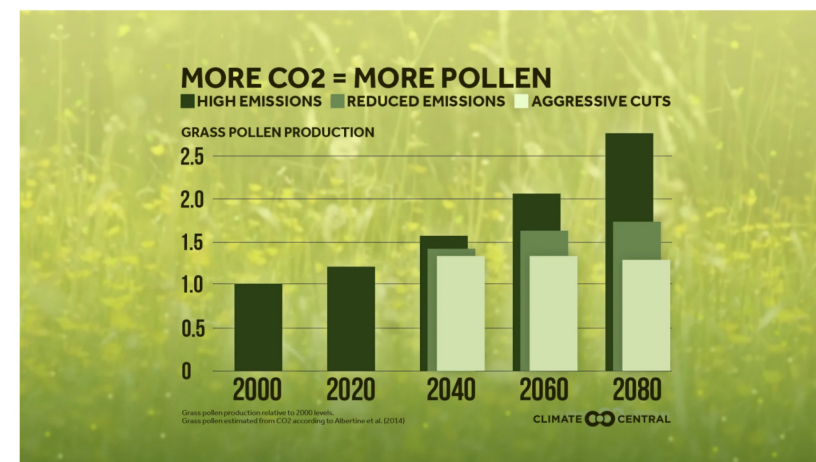
How will future pollen events be under varying climate scenarios?

Working plan

- Step 1: Literature review, learning ICON-ART & storyline simulation with ICON
- Step 2: Preparation and performing numerical experiments
- Step 3: Validation of the results, writing of thesis

Requirements

- Motivation, self-organization and team work
- Programming: Python (basic), shell & unix (basic)



<https://www.climatecentral.org/climate-matters/pollen-allergy-season>