

## Guillaume Mauger

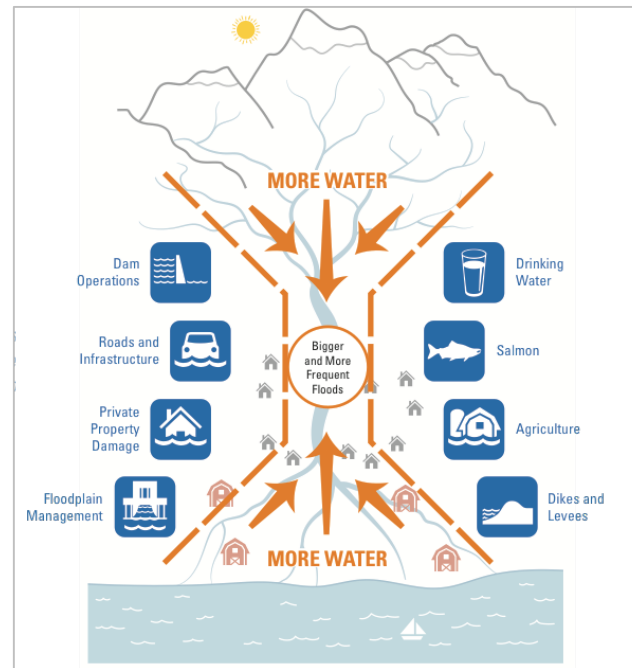
Climate Impacts Group, UW

### **My Career Goal:**

People and communities become more resilient to future changes in sea level rise, flooding, and stormwater.

### **The Problem:**

Floodplains are ground zero for climate change impacts. Declining snowpack, intensifying rain events, and rising sea level all combine to make flooding worse in the future. At the same time, these areas are already home to competing interests (development, farms, habitat) and impacted by a legacy of development that often exacerbates flood risk.



### **Game Ideas:**

- Players toy with the water cycle and see how it impacts streamflow. Players are presented with a streamflow pattern, or “hydrograph”, and have to match it by altering storm intensity, the balance between snow and rain, and other factors.
- Players try to find the best way to reduce the impacts of future flooding. This can be through habitat restoration, by building a reservoir, or by relocating infrastructure. The goal is to find the least costly way of reducing impacts.
- Players view land use decisions through the lens of different floodplain interests (e.g., farmer, tribal member, etc.), and have to navigate ways to achieve their goals in spite of climate change, resistance from other interests, and institutional barriers (e.g., lack of funding, authority, etc.).
- Players design a town to accommodate flooding, then test if it works with real flood events.
- Washington State is on the hook to replace up to \$3B in culverts. Players find ways to do this at a lower cost while also accounting for climate change.

### **Resources / visualizations:**

- <http://www.skagitclimatescience.org/flood-scenario-map/>
- <https://cig.uw.edu/resources/analysis-tools/how-will-heavy-rains-change-in-western-washington/>
- <http://maps.coastalresilience.org/washington/>
- <https://cig.uw.edu/our-work/decision-support/culvert-phase-2/>

