

Climate Resilience Introduction

The International Panel on Climate Change (IPCC) defines resilience as “ The capacity of social, economic and environmental systems to cope with a hazardous event, trend or disturbance, responding or re-organizing in ways that maintain systems’ essential function, identity, and structure while also maintaining the capacity for adaptation, learning and transformation.” (IPCC, 2014b)

This definition of resilience to climate change is directly related to ASFPM’s policy statement on the *Priorities for Climate Change and Risk Reduction*, adopted by the Board at their meeting on June 8, 2020, which states that the organization “...strives to help communities understand how a changing climate is increasing flood risk, decreasing community resilience, and how to prepare for increasing flood risk.” Many of the impacts of climate change on flood risk are difficult to imagine, as they may not directly result from typical riverine flooding or flooding along a coastline due to sea level rise. We are familiar with those risks, and there are generally policies and planning in place to address these risks. However, flood risk due to a changing climate are unusual, and less predictable because of their geographic distribution.

Some of the more unpredictable flooding risks due to climate change include:

- Long duration-high intensity rainfall events that produce record amounts of rainfall and widespread flooding such as occurred in Houston from Hurricane Harvey;
- Atmospheric River (ARs) events that that slam into the western coastline carrying as much water as flows in the Mississippi River, the largest river in the US. Rainfall from an atmospheric river event can extend 100’s of miles inland resulting in widespread flooding. 40 ARs of various magnitude occurred on the west coast in the six month period from October 2019 to March 2020;
- Microbursts or rain bombs with high winds and high intensity short duration rainfall in an area as small as 2 miles in diameter, overwhelming stormwater management systems;
- Flooding due to the melting of permafrost; and
- Compound disasters such as post fire flood and debris flow events that occur on denuded slopes.

Planning for these kinds of flooding risks requires some knowledge of how climate change is producing these events, how susceptible a local jurisdiction might be to such risks, and steps that might be taken to avoid or adapt to such seemingly low probability/high impact events. Resilient communities have a greater capacity to avoid unpredictable events, thus a greater capacity to continue to provide goods and services that support quality of life.

The dynamic approach adopted by ASFPM to development of policies is focused on minimizing future damages by addressing the causes and cumulative future impacts of climate change. The ASFPM Policy Committees have a unique opportunity to develop policy that communities can utilize to develop more climate resilient flood adaptation / mitigation strategies. What is at least one effort/project/policy that you could explore undertaking in the next 12-24 months that will help ASFPM and it's members improve climate resilience?