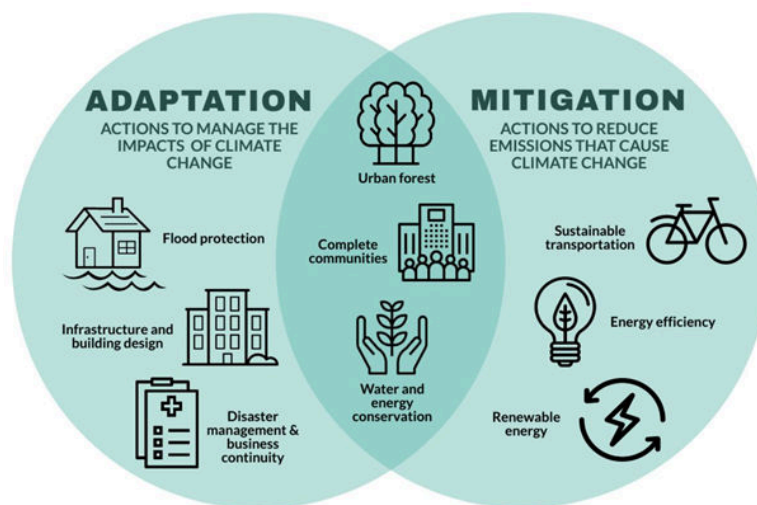


A Changing Climate in SWFL: Solutions

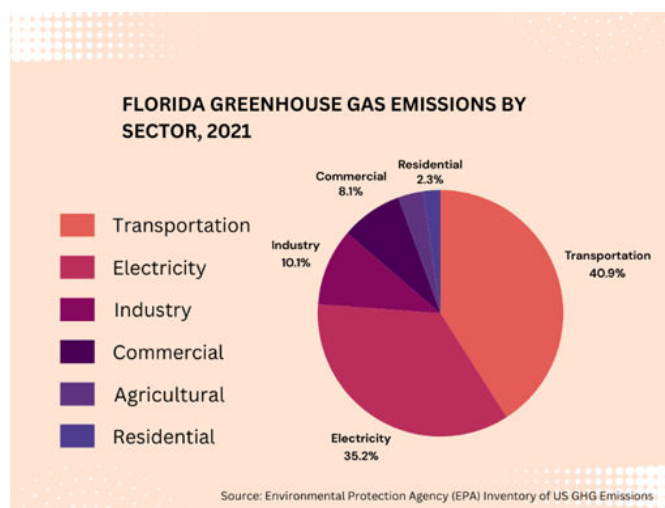
At the broadest level, there are two categories of potential responses to a changing climate: **mitigation** and **adaptation**. Mitigation focuses on reducing the severity of future climate impacts, largely by reducing emissions of greenhouse gases to the atmosphere. Regardless of how effective we are at mitigating these emissions in the future, we will not stop all increased warming. This is because there is a lag in the warming that results from emissions that have already been released. So, we are locked into some degree of impacts like hot days and rising seas. Adaptation refers to finding strategies that help us co-exist with or protect ourselves from these impacts. But the two are intimately connected. If we mitigate greenhouse gases and can reduce the severity of future conditions, we can more successfully adapt.



Examples of Adaptation and Mitigation Strategies. Some strategies fall under both categories. Image credit: ICLEI Canada, 2019

Strategies for Mitigation

Mitigation can happen across many different sectors that contribute to greenhouse gas emissions and at different scales. For instance, data from the Environmental Protection Agency (EPA) shows that for Florida, most emissions come from transportation and electricity generation. This means there is significant opportunity to reduce greenhouse gases (GHGs) across these sectors by improving both energy efficiency and availability of renewable energy to support how we get our power and how we get around. This can happen at the Federal and State level by planning and regulating entities.



But, there's also a lot you can do in your daily life! The following are some examples of various actions you can adopt as they make sense for you:

- Wash clothes and dishes with cold water when possible.
- [Compare different modes of travel](#) when you take trips to see which produce less emissions.
- Opt to switch some of your events to virtual attendance.
- Try and switch to reusable products rather than single-use options including plastics when possible. Emissions from plastic production are poised to become a leading GHG source in the future.
- Look into whether renewable energy options like solar panels or an electric vehicle might be right for you. The Inflation Reduction Act (IRA) includes [some associated incentives](#) you might be able to take advantage of.
- Look into improving your home's energy efficiency (efficient appliances, insulating your home), and being mindful of your energy use. This can also translate into saving money!

Strategies for Adaptation

Adaptation options can take many different forms and purposes. For instance, public policy, education campaigns, and building code changes are all possible solutions that build resilience in different ways to climate change. However, some adaptation strategies rely on physical structures or elements put in place to help protect communities from these stressors. While this can sometimes take the form of hardened (often called "grey") infrastructure like sea walls or flood gates that can result in significant environmental impact, the Conservancy especially advocates for working with nature and capitalizing on the protective advantages it provides us.

Terms like **nature-based solutions** and **green infrastructure** are commonly used to refer to strategies that leverage the protective benefits of nature. Nature-based solutions include using pre-existing natural systems or options constructed using living or natural elements to solve issues related to flooding, heat, degraded water quality, etc. Habitats like mangrove forest and beach dunes can help reduce incoming wind and wave energy while marshes can also provide extra water storage. Living shorelines can be constructed out of components like mangroves, marsh grasses, and oyster reefs to help provide shoreline protection. Establishing expansive tree canopy can provide shelter for people from blazing temperatures and reduce the amount of stormwater reaching the ground.



Sand Trapping



Coastal Wetlands



Coral Reefs



Stormwater Parks



Green Streets



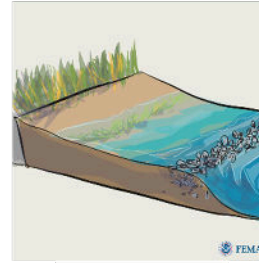
Living Shorelines



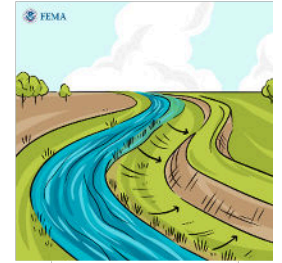
Tree Trenches



Land Conservation



Oyster Reefs



Setback Levee

Examples of types of nature-based solutions. Image credit: FEMA

These nature-based solutions often provide a whole range of benefits as compared to the narrow function of grey infrastructure. This includes services like providing habitat, improving water quality, and even sopping up carbon which often means they can be considered a solution for adaptation *and* mitigation. They sometimes also cost less to conserve, restore, construct, or maintain which provides more return on investment to the communities that implement them.