

Promoting Smart Development that Minimizes Future Climate Risk

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Southwest Florida is one of the fastest growing regions of Florida and the entire United States. As Southwest Florida's population grows and development increases, our community's exposure to the impacts of climate change, such as extreme heat and flooding, also increases. Smart development practices, which include stronger building codes, sustainable building design, and sustainable land development practices ("smart growth") have the potential to minimize Southwest Florida's climate risk and reduce carbon emissions.

The Built Environment: As it relates to the climate impacts, everything is connected. The built environment includes buildings and infrastructure such as our transportation networks and utility systems. Global reports from the last two years estimate about one third of carbon emissions are from buildings and construction. There are four primary aspects of the built environment that have an effect on climate change: What is built; where it's built; what it's built of; and the building process itself.

What is built: Different building uses have widely varied requirements, from residential to heavy industrial. Size. Solar and prevailing wind orientation. New construction or reuse.

Where it's built: Involves the principles of Smart Growth. Infill v. sprawl. New or previously occupied sites. Impacts or avoids important natural resources. Near practical public transportation, existing utilities, and services.

What it's built of: New or reused/reclaimed/recycled. Renewable products. Minimal amounts of embedded carbon from product manufacturing. Recoverable at the end of its lifespan.

The building process itself: Sort and recycle all possible waste. Water, air, and noise pollution control. Efficiency of deliveries and storage of materials.

Building energy codes exist in 90% of US states. Some are mandatory while others are voluntary. Their requirements, incentives, and enforcement also vary.

A critical component for success anywhere continues to be local buy-in. Action follows when people see and embrace the benefits.

What is smart growth? Some of the commonly accepted traits of smart growth include compact mixed-use development having a network of short connected walkable streets, preservation of open space, including important natural areas and farmlands, offers a range of housing choices, and is cost effective in the provision of infrastructure and services.

There are many ways in which smart growth helps reduce risks of climate change. As example, preservation of opens spaces, like wetlands and farmlands, helps with flood abatement, aquifer recharge, and food security. A network of short walkable blocks to goods and services means that there will be lower vehicle miles traveled by residents and workers, resulting in fewer greenhouse gas emissions than sprawling development plans. In addition, smart growth communities are located near existing infrastructure, thereby saving taxpayer dollars. This cost savings can be applied to adaptation projects, such as raising roads, purchasing conservation lands, planting trees and mangroves, relocating critical infrastructure, and upgrading stormwater systems.

What are the challenges to implementing smart development? Building codes in Florida are continuously accepting suggested changes, reviewed, amended annually, and officially updated on a three-year cycle. Opportunities are there, but suggested changes require research, forethought, and benefit for most citizens affected while not imposing undue hardship on any particular group, profession, or industry. The definition of “undue hardship” and its applications are open to interpretation and are where many proposed modifications, and innovations, stall.

The monetary implications of additional or more rigorous code requirements are also typically considered. This is not to say any recommendations coming from the Climate Summit should be cost neutral. However, we should keep in mind that financial impacts will be considered and discussed with the size of the red flags generally in direct proportion to the size of the perceived impact.

Improving rules for smart land development can also be challenging. If a local government proposes new policies that would place limits or restrictions on the

type, location, size, or uses of development there is often resistance by the development community. Likewise, policies that allow increases in density, or developers who request increased density for their projects, even if the increased density would be appropriate, often result in pushback from residents who live by the proposed development.

It can also be difficult to compel local governments to enforce *existing* comprehensive plan rules, even if those rules benefit the community. Most local governments already have lengthy comprehensive plans and land development codes that contain policies that encourage or require smart growth development and protection of natural resources. However, some of those policies are open to interpretation. If local officials and planning staff do not embrace or understand the benefits of smart growth and protection of natural resources then development projects may be approved even when they are inconsistent with the goals and objectives of the comprehensive plan that embrace smart growth.

Everyone here understands climate issues and challenges are global. We also understand that the most immediate and obtainable actions are primarily local and regional. The suggestion is to concentrate on local, do-able, straightforward recommendations with the hope that they have the best chance for implementation and continued success.

LINKS TO BACKGROUND MATERIALS:



Fundamentals_of_R Buildings-GSR-2021
Resilient_and_Climate_EXECUTIVE-SUMMA

<https://www.washingtonpost.com/climate-environment/interactive/2022/extreme-heat-risk-map-us/>

DISCUSSION QUESTIONS:

1. Local strategies are generally more impactful, relevant, and obvious to those most likely to take an active role in conservation and climate action. What types of local and regional strategies should be suggested? These should include short and long term, measurable pursuits that may be taken by individuals, as well as private or official groups.

2. Growth increases demand on infrastructure, services, and natural resources. However, in order to adapt to climate change, many of Florida's existing communities must dedicate substantial resources to upgrading existing infrastructure, relocating community assets, and providing for shoreline protections. How do we plan now for future growth so that impacts from new growth do not increase our communities' vulnerabilities and expenses?
3. How does planning for climate change affect groups and communities differently?

INITIAL LIST OF STRATEGIES:

- Require or incentivize increased energy efficiency in new buildings
- Update comprehensive plans and land development codes to promote adaptation and resiliency, including new design standards and incentives
- Reduce stormwater run-off by reducing parking ratios, increase use of permeable pavement, increase bioswales or other green infrastructure
- Reevaluate landscape ordinances, increase minimum native preserve requirements and open space requirements
- Understand what is needed and what are the costs to protect our communities through a vulnerability analysis.
- Review local taxpayer funded projects through a climate change lens – As example, Florida law which requires a SLIP (Sea Level Rise Impact Projection) study for every state funded project within the coastal building zone.
- Include or expand scope of fiscal impact assessments of development proposals to include economic, social, and environmental costs of the development on future populations. Example: fiscal impact analysis of development applications do not include long-term maintenance and finance costs.
- Require large developments in rural areas to build commercial areas in stages, as a certain number of homes are built, to reduce the need for residents to drive to existing urban areas for goods and services.
- Require disclosures of storm surge/ SLR vulnerability in real estate transactions
- Use Adaptation Action Area – comprehensive plan designation for areas vulnerable to flooding and sea level rise, for the purpose of prioritizing funding.
- Prioritize monitoring of water resources and supplies.
- Work with political water management entities to increase efficiency of project review processes.