

Quantifying Sustainability in Puerto Rico – A Scientific Discussion

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Objectives

- Discuss issues pertinent to sustainability in PR
- Discover what researchers are currently studying in PR related to sustainability and how that can affect or help decision makers
- Learn how EPA ORD research goals above can be enhanced and applied in collaboration with research described in #2.
- Plan coordinated research program and implementation of activities to move Puerto Rico towards a more sustainable future

Sustainability without a name

- “EPA was not created to deal with the usual mix of social problems whether they be poverty, jobs, housing, education, crime In a real sense, EPA’s mission transcends all of these. That mission is the preservation of life itself.”

Administrator William D. Ruckelshaus
May 18th, 1983

Office of Research and Development

- We are a scientific research organization
- Our research may aid decisions or regulations
 - We provide the science and information to help inform credible decisions
- Our “customers” include
 - Regions
 - Program Offices
 - American public

The Path Forward, circa 2010

- “... important to move ahead with several key elements of the Transformation Initiative – integrated multidisciplinary research, focus on problems of broad national interest, and a closer interaction with our program and regional partners – this alone is not sufficient to elevate our work to the next level if we are to truly address the complex environmental problems of the 21st century.”

The True North

- “... the future of ORD includes a recognition that the goal of sustainability is our “true north,” that scientific and technological innovation is essential to the success of our mission, that we need to couple our excellence in problem assessment with an equal excellence in solving problems, and that we must act with a sense of urgency.”

Sustainability

- “Attaining a society that can meet its needs while preserving the ability of future generations to meet their needs is our primary goal. Our solution to a problem must not only solve the problem at hand, but it also must not create a new problem as a result. As stated earlier, sustainability must be our true north.”

Research Priorities

- Air, Climate, and Energy
- Chemical Safety for Sustainability
- Safe and Sustainable Water Resources
- Sustainable and Healthy Communities
- Homeland Security
- Human Health Risk Assessment

Sustainable and Healthy Communities

- EPA researchers and their partners and stakeholders are working together to form a deeper understanding of the balance between the three pillars of sustainability—environment, society, and economy.
- Their transdisciplinary work will provide the decision tools and data that communities need to make proactive, strategic decisions aimed at a prosperous, more environmentally sustainable future.

Sustainable and Healthy Communities

- Three Focus Areas
 1. Develop comprehensive approaches to help communities become more sustainable
 2. Develop decision support tools, models and metrics that can be used to improve sustainable community practices
 3. Meet EPA's regulatory requirements

Research in Puerto Rico

- ~40 team members
 - Coral reef management in the Guánica Bay watershed (Bill Fisher, Task lead)
 - Sustainability metrics research

Sustainability Metrics Goals

- Develop decision support tools and data for examining system sustainability
- Identify trends in moving toward or away from sustainability

Acknowledge Collaborators

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- USDA-FS, IITF
- USACE
- USGS
- NOAA
- ...