

How can we rethink sustainable disaster management and reciprocal community partnerships?

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CONTEXT

1917– Jones–Shafroth Act permits **triple tax-exempt municipal bonds** designed to boost Puerto Rican economy but enables excessive accumulation of debt

1920– Jones Act requires goods shipped between US ports to be owned and operated by a US crew, increasing the cost of imported goods to the island

Mid-2000s- Governmental **budget cuts** leads to widespread closure of schools and government agencies

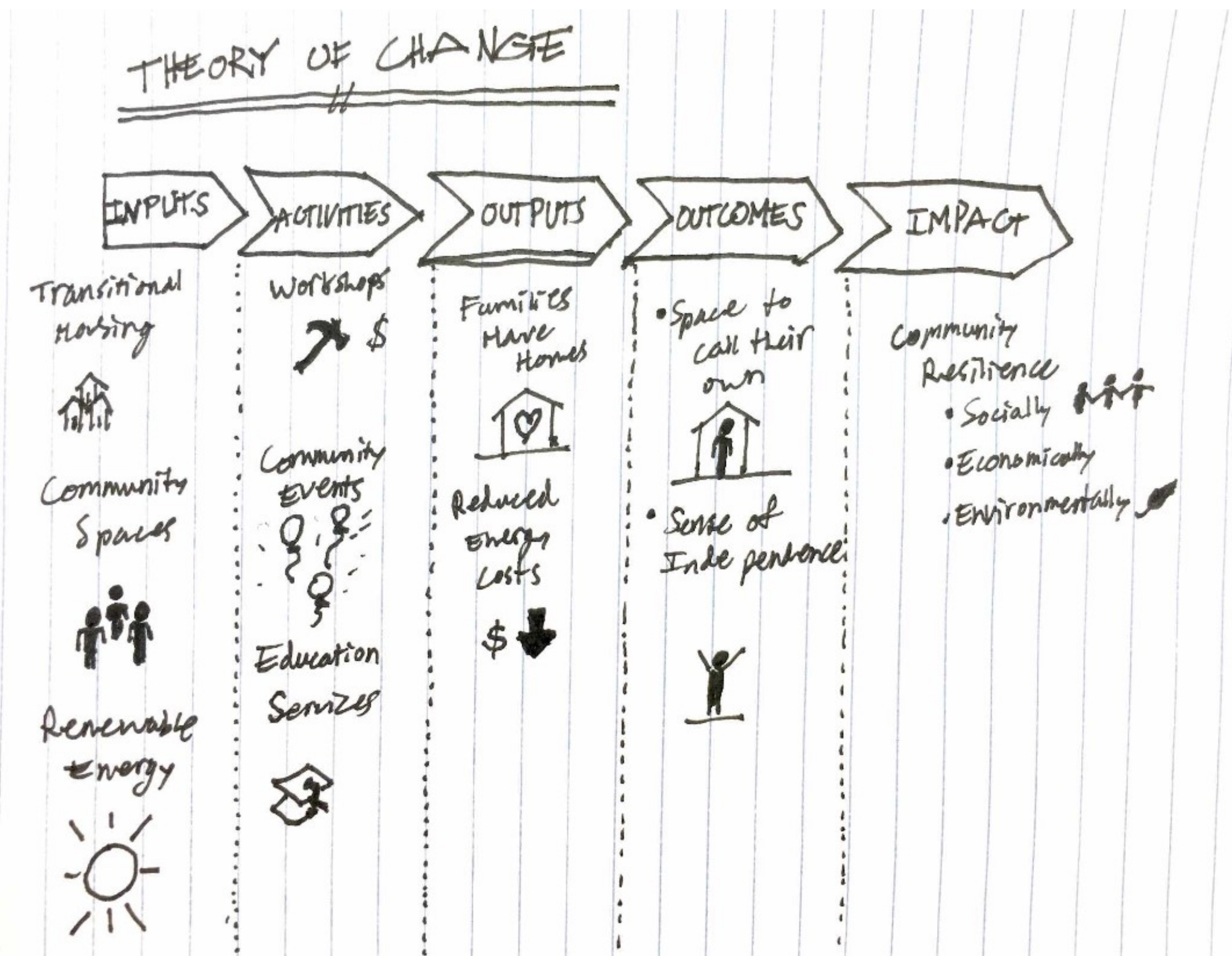
September 2017– Hurricane Maria makes landfall leading to longest blackout in US history — **3 billion consumer hours of lost electric service** (CHOLES); 2,478 failed miles of transmission and sub-transmission lines; **estimated 4,000 lives lost**

EXPERIENCE

- Interdisciplinary course on **energy transitions** and **community partnerships** in Puerto Rico
- Partners:** UMN College of Design, Acara, Humphrey School of Public Affairs, INESI, UPR Mayagüez,
- Trip Dates:** January 3-18th, 2019
- Locations traveled:** Mayagüez, Utuado, Ponce, San Juan, Aguadilla, Adjuntas, Vieques



STAKEHOLDERS



TAKEAWAYS

BENEFITS

Personal Growth:

- What is my purpose or impact?
- How can I share newly acquired knowledge to educate others and challenge my own former viewpoints and perceptions?

Career Growth: Currently work as a program coordinator to plan this coming year's graduate course, organize related workshops and events, and support external relationships between the University of Minnesota and Twin Cities Puerto Rican diaspora

CHALLENGES

Communication- Difficulty communicating across interdepartmental groups especially after course had concluded.

Contribution– Determining the role of mainland American student participating in a survey course on Puerto Rican energy transitions.

Continuation– Semester calendar not always conducive to continued learning and application of knowledge gained.

SINCE RETURNING HOME...

- Presented on course experience at department-wide seminar
- Debriefed with PR partners, faculty, and students after **Minnesota energy conference** in June
- Published research brief on impacts of **electric grid privatization** to class blog (umnconvergencepuertorico.org)
- Worked with colleagues to convene Minnesota and Puerto Rican partners to share knowledge around **rural community electric cooperatives**

REFLECTION JOURNAL EXCERPTS

January 3rd—An **energy transition** requires many key actors and our role as mainland American students in this process can be difficult to define.

January 4th– While Maria created extreme disruption to the [electric] system's core operation, [Jan and Juan Jose] noted that even more so, it revealed vulnerabilities in the island's energy system which has suffered from a **lack of funding** and **operational manpower** in recent decades.

January 6th (Three Kings Day)- Cecilio provoked deep discussion on the purpose of the RISE program and what it has meant for him...RISE is more than an academic organization but, rather, it serves as a dynamic space for **collaboration**, reflective of context and place.

January 7th- [Jonathan's] stories painted a startling picture of **negligence** and **mass inefficiencies** that led to the deaths of approximately 4,000 citizens in the months after the storm.

January 8th– [Puerto Rico] itself seems undecided on its position—more democratic agency in Congress is undoubtedly supported, but citizens are divided on whether they want to pursue a direct process for **statehood** or become an **independent sovereignty**.

January 11th– It is becoming clear that non-energy related institutions are very interested in renewable energy as part of their core operations. Energy touches on so many part of society that it's almost **inseparable** from any larger discussion.

January 15th– Vieques was one of the last places to restore electricity, suffering some **430 days without power**...Oscar noted that calls for liquefied natural gas (LNG) would be detrimental to the island due to a continued **reliance on imported fossil fuel**. Other transitional or “bridge” fuels also make little sense for the island since it is so vulnerable to catastrophic storms.

January 16th- **Sustaining momentum** at this moment is critical, which many are working tirelessly toward to give the Puerto Rican people greater agency in their day-to-day lives.

NEXT STEPS

This year's course will be more **project-based**. Proposed projects include...

- Working with **Cooperativa Hidroeléctrica de la Montaña**, a newly formed electric cooperative in Utuado, on topics such as energy governance and distributed generation.
- Reflecting on **principles of engaged scholarship** and developing guidelines for ethical and sustained community relationships.
- Designing buildings and community spaces considering accessibility, resiliency, and community connectivity

2019 UMN TEAM

