ESIP Energy and Agriculture Clusters

3rd workshop to develop Climate Resilience Toolkit Case Studies

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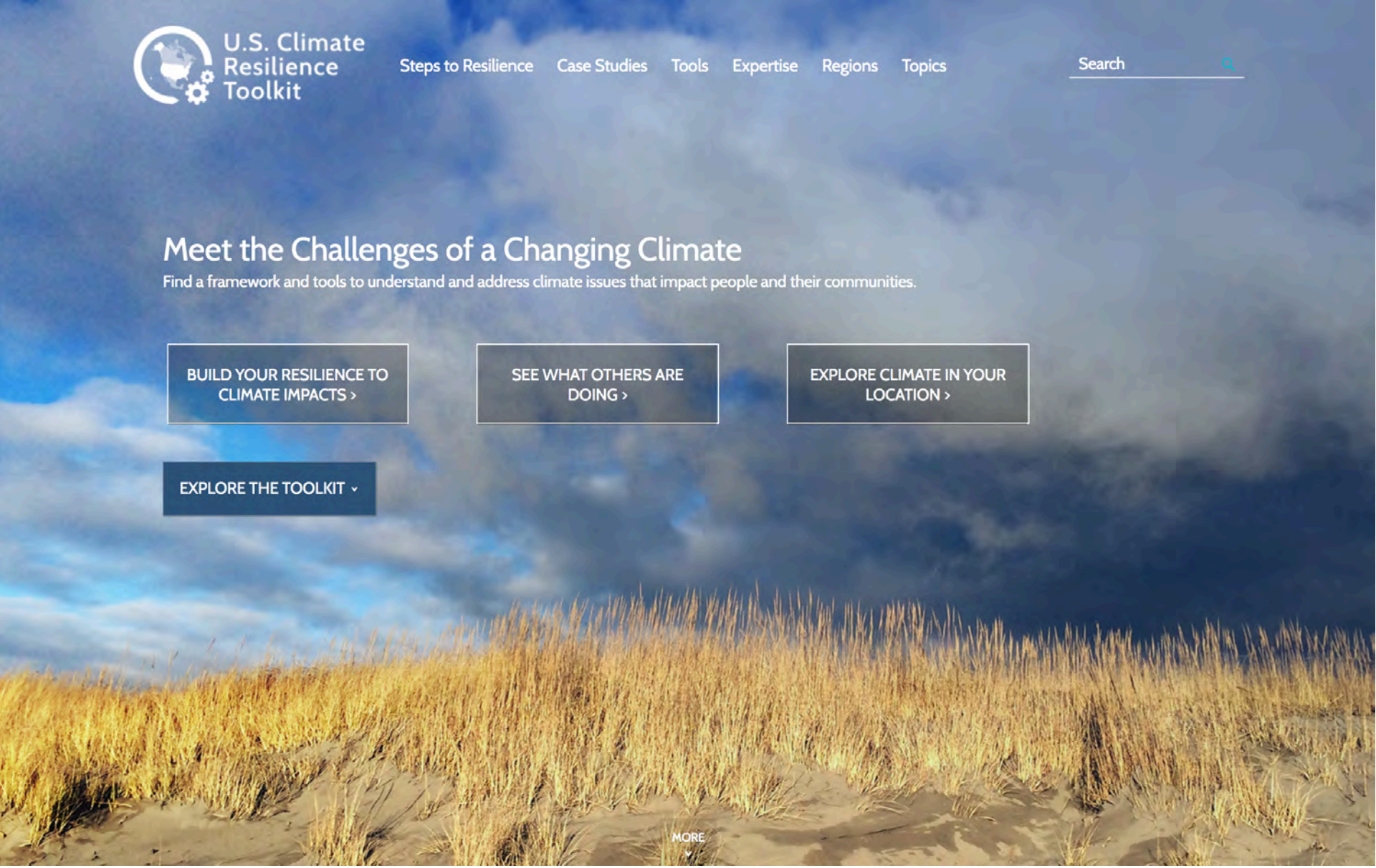
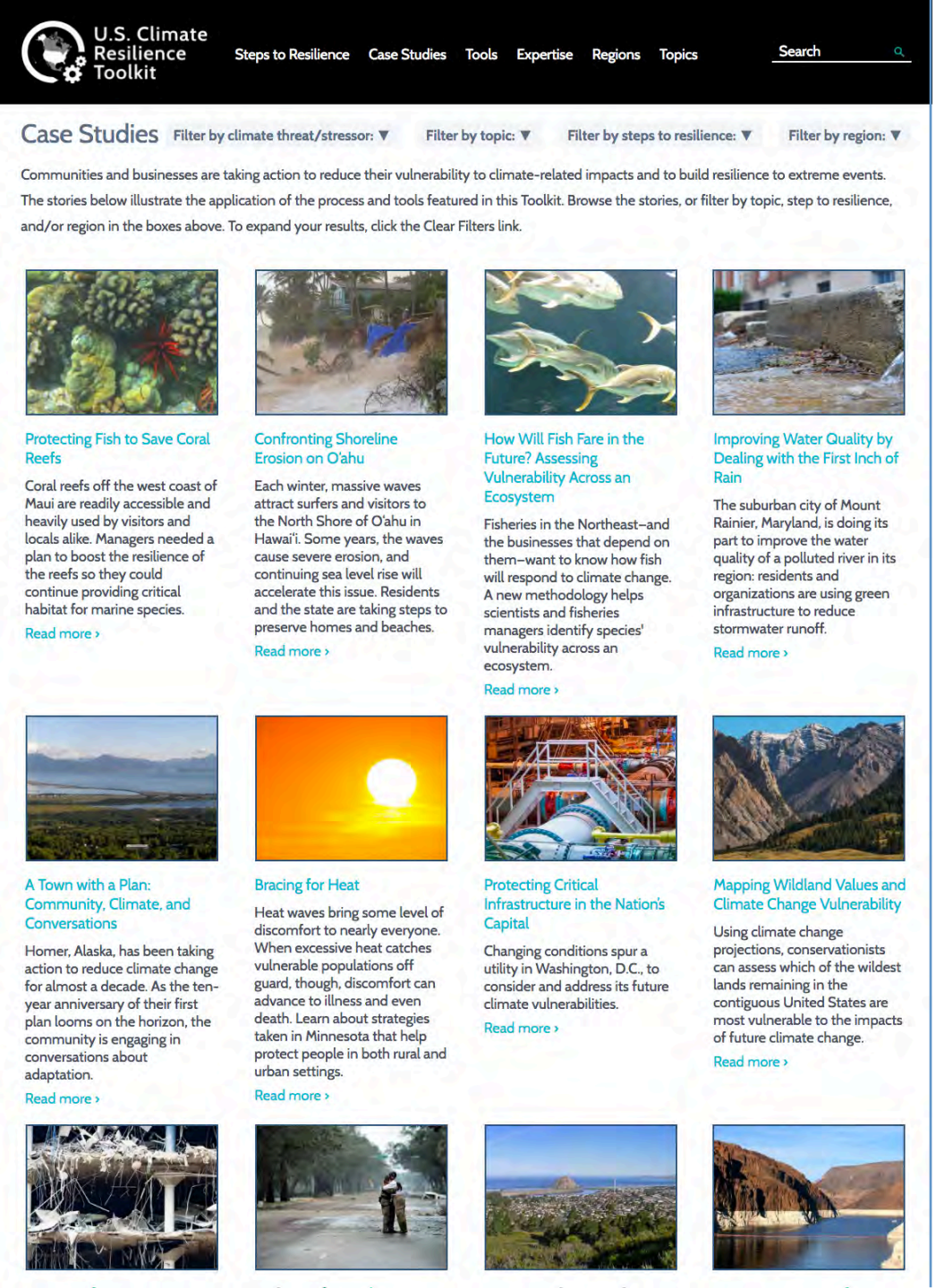


https://toolkit.climate.gov



The toolkit currently contains 111 Case Studies about building climate resilience

What are CRT Case Studies?

- Brief stories highlighting examples of real people or communities who recognize climate-related issues and take some action toward building resilience

What are CRT Case Studies?

Brief (400 – 800 words)

stories (ideally, with a struggling protagonist)

highlighting examples (that others can follow)

of real people or communities

who recognize climate-related issues and

take some action

toward building resilience

Precise Soil, Climate, and Weather Data Help Dairy Optimize Water Use

For irrigated crops, knowing when and how much water to apply has long been a matter of experience and guesswork. In a changing climate, new technology can reduce this uncertainty, enabling farmers to make every drop of water count.

Stressors and impacts

Utah dairyman Dee Waldron watches the weather like a hawk. He wants up-to-date weather and climate information now, in the field, and in a clear way that helps him make critical farming decisions, such as when to irrigate, plant, and harvest. Waldron operates a dairy and feed grain farm in Morgan County, Utah, just east of Salt Lake City, which is considered a high mountain desert and not very productive without mountain streamflows stored in irrigation reservoirs.

"Before, I used to take a shovel in the field, dig down, and guess by feeling how much moisture was available for my crops," said Waldron. "Now, I use my computer and smart phone to access the local weather forecast, the amount of soil moisture, the snow levels in the mountains, the amount of water in the river, and even the soil temperature. This really helps us as agricultural producers."

As climate warms and a higher proportion of precipitation falls as rain rather than snow, the amount of water available for Waldron's operations may decrease in some seasons. Knowing exactly how much water a crop needs and how much will be left for his dairy cattle can help Waldron set priorities on how he will use water.

SCAN system helps farmers know when and how much to water

In recent years, the U.S. Department of Agriculture has stepped up to make weather and climate data

Steps to Resilience:

- Step 1: Explore Climate Threats
- Step 2: Assess Vulnerability & Risks
- Step 3: Investigate Options
- Step 4: Prioritize Actions
- Step 5: Take Action

Tools:

Soil Climate Analysis Network (SCAN) Data Viewer ›

Topics:

Food › Food Production ›

Partners:

U.S. Department of Agriculture | Natural Resources Conservation Service ›

Houston, We Have a Narrative

WHY SCIENCE NEEDS STORY

RANDY OLSON

256 pages | 11 halftones, 9 line drawings | 6 x 9 | © 2015

Ask a scientist about Hollywood, and you'll probably get eye rolls. But ask someone in Hollywood about science, and they'll see dollar signs: moviemakers know that science can be the source of great stories, with all the drama and action that blockbusters require.

That's a huge mistake,... ***Read More***

Paraphrasing Randy Olsen:

A simple one-sentence, fill-in-the-blanks template can help you identify a story structure:

_____ and _____,

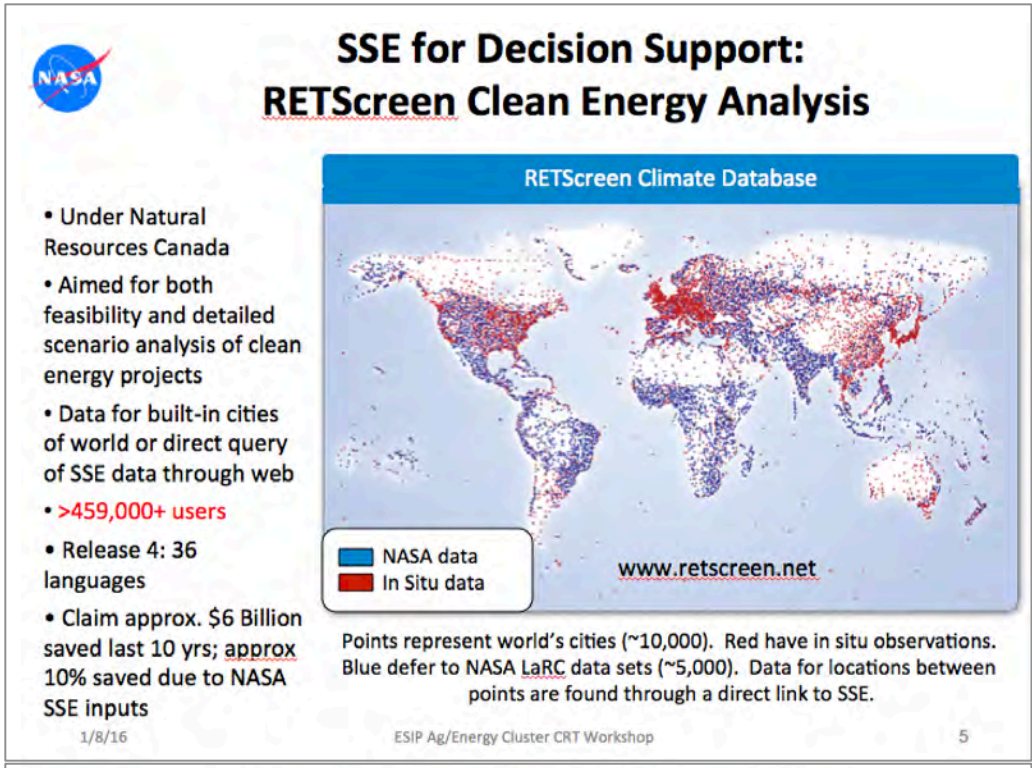
(protagonist) (goal)

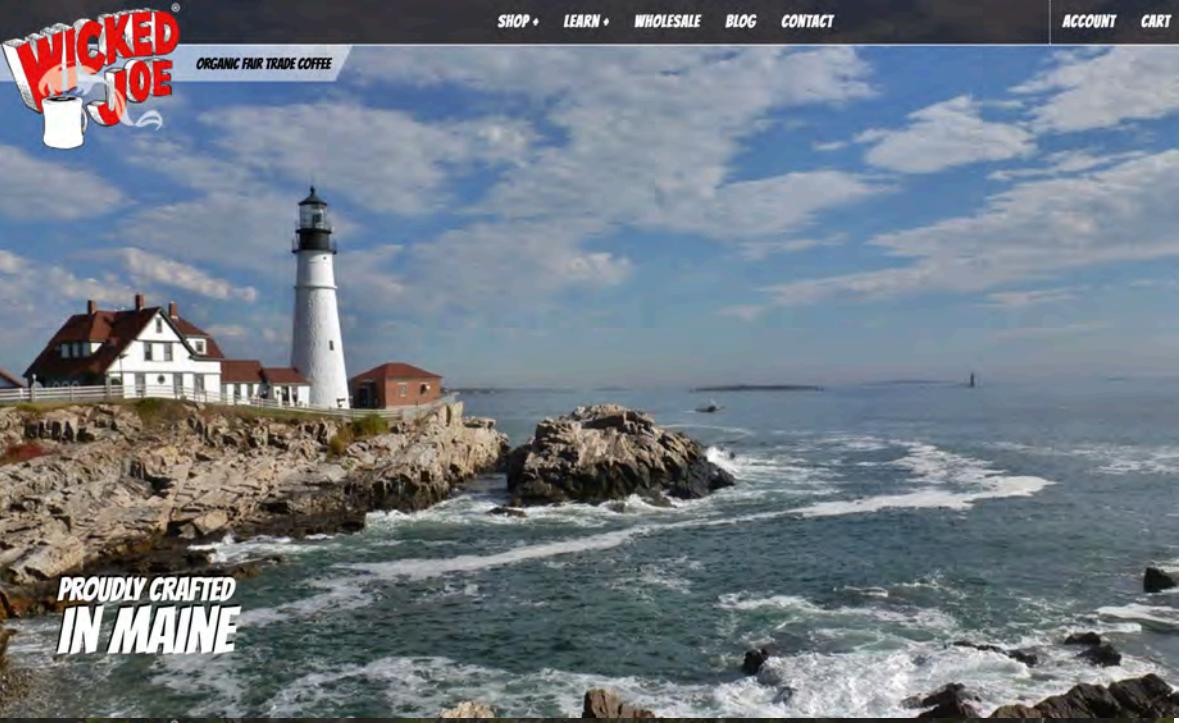
but _____, therefore _____.

(obstacle) (solution)

At the 2016 Winter meeting, Paul Stackhouse spoke about an energy tool called RETscreen. He also shared information about a handful of projects that had utilized the tool.

Workshop participants considered how to develop a case study.





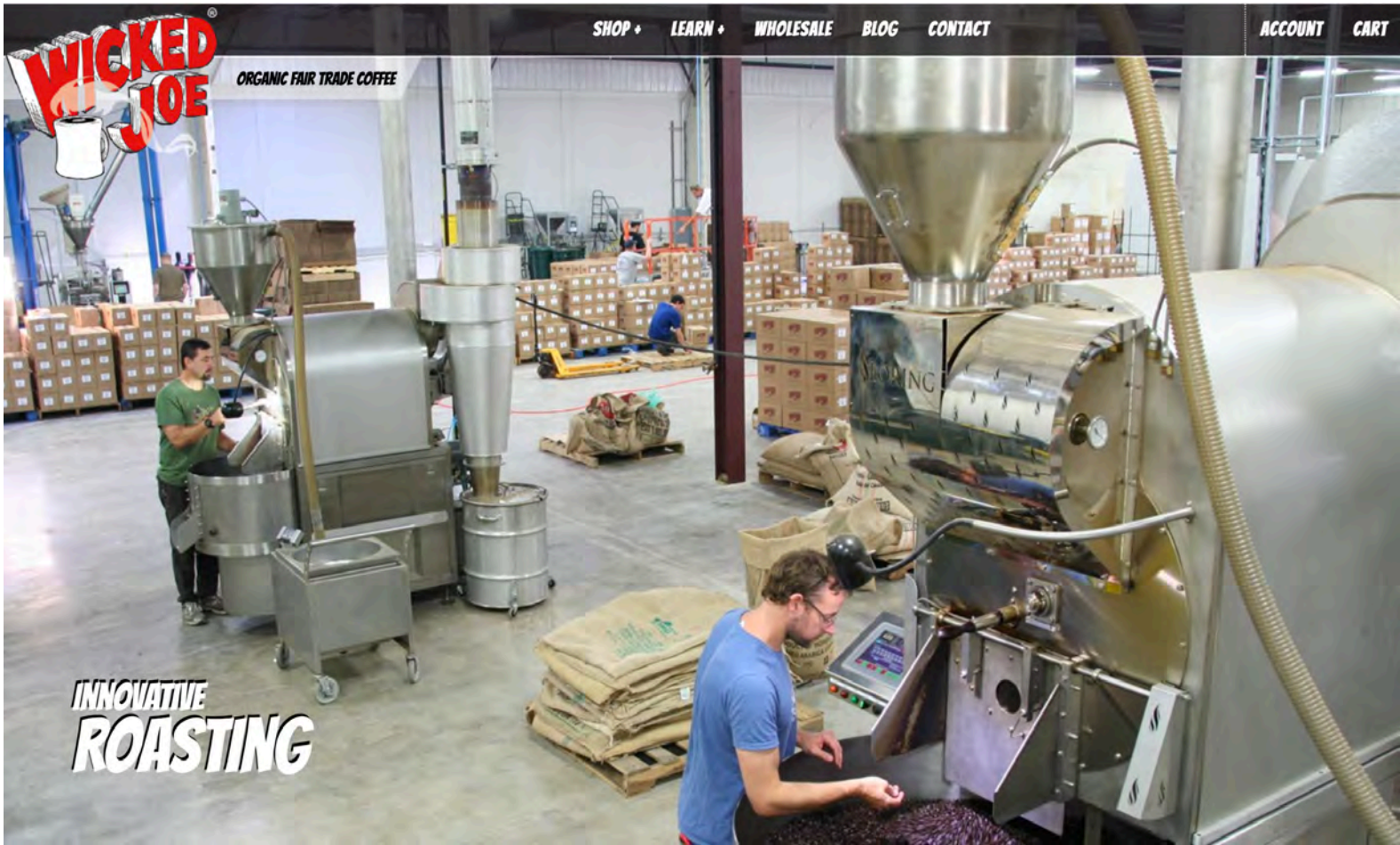
Protagonist

Wicked Joe

- A small business coffee roaster in Maine
- Committed to sustainability, from farm to cup

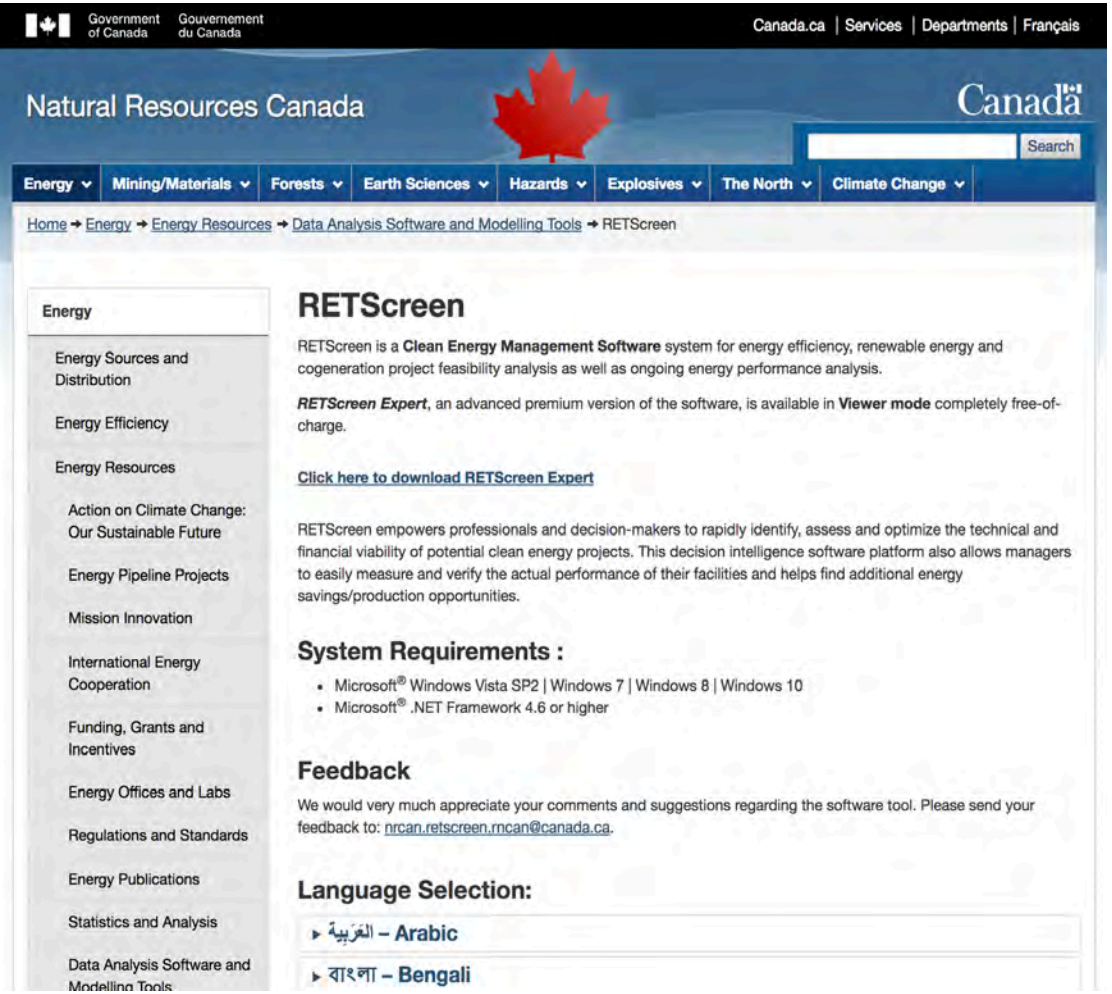
Goal

- Identify and implement a fiscally positive, renewable energy source



Obstacle

- We don’t know if our location in Maine can produce enough renewable energy to power our facility.



Solution

- RETscreen, a clean energy management system helps users analyze the feasibility and potential costs of proposed renewable energy projects.

- Wicked Joe's is more resilient as a business: its costs are reduced and it is not vulnerable to increases in energy prices.

Google Drive

Tips and templates available at

https://goo.gl/sLCjwI

luanndahlman@gmail.com

Add to Drive

CRT Templates 7 items

New Regions

New Topics

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Standards for Grap…

Tips for Developing…

Tool Template.pdf

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U.S. Climate Resilience Toolkit

Case Study Metadata Template

See published examples at https://toolkit.climate.gov/taking-action

Thank you for suggesting a case study for the U.S. Climate Resilience Toolkit. Case studies are brief narratives (suggested 400–800 words) highlighting examples of real people or communities who recognize climate-related issues and take action to build resilience.

Please provide the narrative as a separate Word document ***and*** also indicate selections or type responses in this template (required fields are indicated with an asterisk). Include optional information if you can. Once this form is complete, please save it as a separate, completed PDF (with a unique name). Completed stories (the narrative ***and*** this completed form) should be submitted via email to LuAnn Dahlman or Nina Hall.

*** Contributor's Name and Contact Information**	
*** Suggested Story Title**	
*** Narrative**	Please provide the narrative for this case study in a separate Word file. Consult the **Tips for Developing a Case Study** document for more information and guidance on developing the narrative.
*** Summary of Climate Stressor** *In one to three sentences, introduce the "protagonist" and the climate-related impact or impacts they face.*	
*** Summary of Asset Impacted** *In one to three sentences, describe the key asset or assets impacted.*	
*** Summary of Action and Outcome** *In two to four sentences, describe the action or actions taken and any results, benefits, and/or lessons learned.*	
*** Federal Tools and Services Used** *List key federal climate resources used in the action taken (described above), and how they were used.*	

Original Source

If this story was adapted or excerpted from a previously published report, article, document, or website, please complete the following information. We will provide appropriate attribution at the end of the story.

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Wicked Joe's Goes Solar

A coffee roaster in Maine wanted to demonstrate their commitment to sustainability–and secure a low cost energy source. A screening tool helped them calculate potential savings of installing a solar wall.

Bob and Carmen Garver, co-owners of Wicked Joe Coffee Roasting Company, are clearly committed to doing things right. Their organically grown Fair Trade coffee is a tasty and sustainable option for their consumers and ensures a living wage for the farmers who sell to them.

So it's no surprise that their new roasting facility in Topsham, Maine, features cutting-edge solar and energy-efficiency features. The Garvers teamed up with local energy experts to transform the former commissary at Topsham's Navy Annex into a model of sustainable design.

Michael Mayhew of Heliotropic Technologies in Boothbay Harbor worked with Conserval Engineering to modify the typically unglazed SolarWall® system design to create a glazed solar air heater that captures 40 percent more heat and meets the needs of the project and the local climate.

Based on initial assumptions and local weather conditions using the RETScreen model, he expected that the fully glazed SolarWall would operate about 30 percent of the time in September, 100 percent from October through May, and 50 percent in June. This scenario would have saved more than 4,240 therms of natural gas every year. Due to internal gains from the roasting equipment, however, the system wasn't operational in heating mode until the end of October.

Story Credit:
Original story, Wicked Good Solar in Maine, by Maureen McIntyre. Solar Today, http://solartoday.org/2015/01/wicked-good-solar-in-maine/.

Steps to Resilience:

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- Step 4: Prioritize Actions
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Regions:

Northeast ›

Topics:

Energy › Energy Consumption ›

Partners:

RETScreen ›