ENVIRONMENTAL JUSTICE REPORT 2022

Understanding Data Needs and Gaps to Build a Better Community Engagement Process for EJ Screening Tools

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1. PROJECT OBJECTIVES

The U.S. Digital Service and Environmental Protection Agency developed data visualization tools to map socio-economic and environmental indicators to support policymakers' decision-making processes. These tools were developed to support the Justice40 Initiative, launched by the Biden Administration, to ensure that 40% of federal investments go to disadvantaged communities. The present challenge is to assess these two tools, find gaps in data representation, and explore how they complement or duplicate each other. This document aims to highlight the process by which the team approaches the challenges and defines the objectives and approaches. Our ultimate goal is to understand data needs/gaps and build a community engagement process for EJ Screening Tools.

Main Objectives

1. **How might we create a user-friendly feedback function embedded in the current tool?**
2. **How might we connect community members with the right resources?**

2. KEY STAKEHOLDERS

Government/policy-makers

- Have on-the-ground funding allocation experience in the EJ space, or
- Have experience using local EJ tools to define disadvantaged communities and inform fund allocation decisions, or
- Were involved in the development of local EJ tools, or
- Know their communities and what EJ problems they face well

Environmental organizations

- Have experience measuring environmental data and using them to inform EJ issues, track progress, etc.,or
- Have a good understanding of EJ-related issues, or
- Have good knowledge about environmental data, including the methodology, what they measure, and the relevant data integrity

Academic researchers

- Have good knowledge about data integrity of the EJ-related topics, mapping methodologies and the existing gaps, or
- Were involved in the development of local EJ tools, or
- Have expertise in which indicators of disadvantaged communities are overlooked and need to be prioritized

Disadvantaged Community

- Were or are currently residing in a disadvantaged community, or
- Have a good understanding of local EJ issues and place-specific insights, or
- Have experience or interests in getting involved in addressing EJ challenges, or
- (For NGOs) Have good connections with local residents and know the common concerns, or
- Have good relations with local governments and/or experience collaborating with government officials to address EJ challenges

3. USER RESEARCH GUIDE

Introduction

The federal government recently rolled out a beta version of its environmental justice (EJ) screening tool, CEJST, designed to guide federal funding decisions for lifting disadvantaged communities. Meanwhile, there are other tools currently in use by state and local governments. Our present challenge is to assess these current EJ screening tools and how they can advise the future development and utilization of CEJST. After the initial exploratory research, we believe there are three main areas of interest:

1. Data integrity (representativeness, quality, credibility)
2. Community engagement
3. EJ tool usability.

Goal

This user research aims to explore the following questions:

1. We want to understand the ways in which different stakeholders interact with and contribute to the currently available EJ tools. Getting feedback on usage cases will help our team better incorporate the best practices in the new CEJST tool.
2. We want to know if there are commonly-cited use or need gaps in the three areas of interest discussed above for different stakeholders. This will help us narrow down the scope, pinpoint the pain points more accurately, and improve the tool accordingly.
3. We want to learn if stakeholders have expectations for the new federal tool, and if so what they are.

The patterns surfaced in the user research will inform the gaps between the needs and CEJST's current state of adequacy, and help us develop a comprehensive strategy for using CEJST to direct federal funds to the neediest communities.

General guiding principles

- The interviewee pool should aim for a balanced mix of ethnicities and genders to ensure all voices are heard
- Interviewees within our team's network reach will be prioritized
- All interviewees should be at least 18 years of age
- Send consent form to interviewees and make sure they sign it prior to the interview

Selection process

The team reached out to 33 stakeholders composed of environmental and community organizations, and academic researchers. It should be noted that policymakers and local governments were included as key users, but due to timing and communication constraints we restricted ourselves to academic and local environmental and community organizations.

Interviewees	Number
Environmental/ Community Organizations	5
Academic Researchers	2

Interview logistics

Interview Mode: Zoom Meeting
Interview Duration: 30 min
Interview Roles: 1 interviewer, 2 note takers
Interview Date: 4/13/2022 -4/28/2022

3. USER RESEARCH GUIDE

INTERVIEW PROTOCAL

An interview protocol was created to ensure that the interviews had a clear goal, essential questions were answered, and ethical practices were followed. As a general rule, user interviews start out by explaining the goal and logistics as well as ensuring the anonymity of the interviewees (i.e., ensure we will not share personally identifiable information with those outside the student team). It is also good practice to ask a background question (i.e., questions that are easy for the interviewees to answer and provides context to interviewers) to warm up the interviewee.

The protocol has a plan for the overall interview structure (e.g., introduction, main questions, closure) but leaves space for interviewers (and note-takers) to jump in and ask questions. Extra questions were prepared in case we found those questions more relevant based on the interviewees' responses, and/or based on how much or little they were speaking.

The following is the final protocol with customized main question sections for each stakeholder group we interviewed. (There were a few additional questions that were asked to specific interviewees based on their expertise which has been removed to protect their anonymity.)

INTRODUCTION

"Hi, my name is [your name] and I'm a student at Carnegie Mellon University. Today I'd like to talk to you about [mapping environmental justice and identifying disadvantaged communities] and we're interested to hear your thoughts on [your experience with using/developing X EJ tool]. We're interested in talking to you specifically because [the person's experience]. I'm here with my colleague [other person's name] who will be taking notes. There aren't any wrong or right answers, and we won't be writing down any personal information. We'll also share a copy of the notes with you after the meeting if you like, and your participation is voluntary. You can stop the interview at any time. Do you have any questions or concerns so far?"

[pause - answer questions]

"Do you confirm receiving and signing the consent form?"

[pause - "Yes"]

"Ok, we'll go ahead and get started. First, we'd like to get to know you a little better."

4. USER RESEARCH GUIDE

BACKGROUND

- Please tell us a little bit about your background and how you came to be involved in [topic].
- To understand your work better, what specific role do/did you play in [topic]?

SAMPLE QUESTIONS

[ENVIRONMENTAL/COMMUNITY ORGANIZATIONS]

- Is your organization spontaneously organized by a group of like-minded citizens or was started by a knowledgeable expert?
- During your work, are you aware of any government tool, e.g. EJ Screen by the EPA, that could help you?
- Can you tell us more about the kinds of work you've been doing with the community outreach to fight [environmental justice issue]?
- Have you utilized any data from public sources to bolster community experience?
- From your experience, what has been the biggest challenge for participating in the public process?
- What kinds of resources do you wish to see to continue your agenda for environmental justice?

[ACADEMIC RESEARCHERS]

- Can you tell us about the process of obtaining data and funding to conduct the [Project/Research] ?
- During your work, what EJ issues are the most pressing for the communities? Who is left behind exactly?
- What tools helped you identify these burdened communities?
- How do you think local organizations and environmental agencies can work together to improve data?
- From you perspective, how can CEJST be improved so that community voices can be incorporated into the process of correctly identifying burdened communities?
- What kind of challenges might occur when we want to bring up the community engagement?

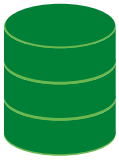
WRAP UP

"Thanks for taking the time to walk through our project / prototype with us today. We really appreciate your time. Do you have any other questions for me or for any members of our team?"
[pause]
"I'd also like to ask my other team members if they have any questions they'd like to ask."
[pause]
"Our next steps will be analyzing our notes on your feedback and thinking about how this will inform our overall approach. We'd be happy to keep you informed of our project's progress as we go if you would be interested. I'm also curious if there is anyone else you would recommend we talk to?"
[pause]
"If you have any other questions, thoughts or comments later you can always reach out to me. Thanks again for your time!"

5. USER RESEARCH INSIGHTS

EJ TOOL

- Knowledge and technology barriers: There are knowledge and technology barriers that prevent community members from engaging with the tool.
- Incomprehensible indices: Indices are often hard to understand.
- The tool will be most impactful when local communities utilize it to advocate for more funds and resources.
- The tool will be complementary to other existing state EJ tools as the initial screening point.



DATA

- Lack of impacts: There is already data about specific environmental issues. The question is whether the government validates and takes action based on it.
- Community-level data collection: Many communities have been able to get data by gathering grants to collect data.
- Psychological burden: Data of EJ issues adds a psychological burden to community members who are already struggling with their own life.

COMMUNITH ENGAGEMENT

- Two-way information flow: It's essential to include a transparent process of when feedback will happen, how the tool is being utilized, and how investments are located. When community members provide feedback, CEJST and governments need to tell them how the feedback is incorporated.
- Campaign with data: Campaign matters a great deal. Numbers and statistics are resources that validate identified problems. The most successful deployment is to have local activists know the data, understand the meaning, and identify whom they can raise the problem to.
- Multi-stakeholder engagement: Engagement of the tool will be most successful when the process brings experts, local government, and private and nonprofit actors to the table.
- Decentralized convening: It is more practical to have convening happens at the local level because problems discussed will be more contextualized, and participation will be more accessible to local community members. This points to the importance of the federal/state/local government accommodating this if it wants to have meaningful engagement.

6. PROTOTYPE

Looking into the current Climate and Economic Justice Screening Tool, we presume that the current developer team puts focus on a clean minimal design to ensure it's user-friendly. However, the current tool is not built with users like community members and organizations in mind. Thus, there is virtually no place for these users to engage in and/or contribute to the feedback.

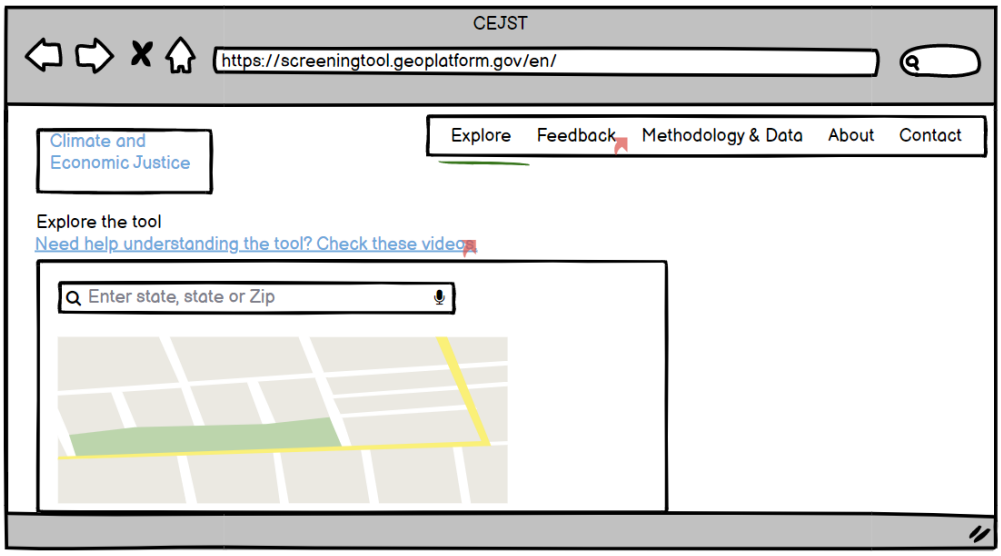
We would like to suggest several add-ons in the current CEJST, demonstrated in following mock-ups. Full interactive mock-up is here.

The tool will serve as one part of our comprehensive community engagement framework. We imagine the users who interact with the website will be the active members for our workshop and roundtable activities.

FRONT PAGE - EXPLORE THE TOOL

On the front page, there is an additional menu item - Feedback - which will allow user to submit their opinion. This section will be explained in more detailed later.

Prominently above the tool map, there is a link to the instruction and guidance on how to use the tool. Because users are unlikely to be familiar with the tool or have the technical capabilities to discover the tool by themselves.

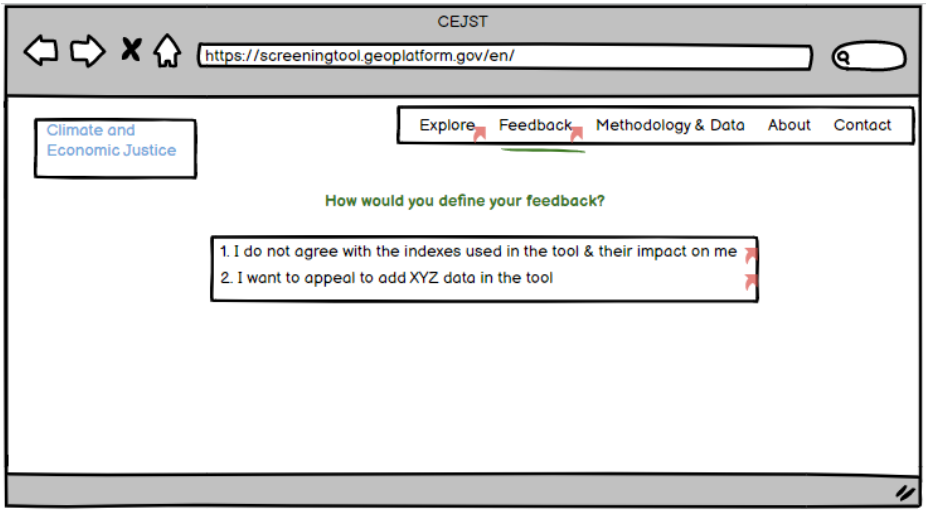


6. PROTOTYPE

FEEDBACK PAGE

In Feedback page, there will be two types of feedback that users can choose:

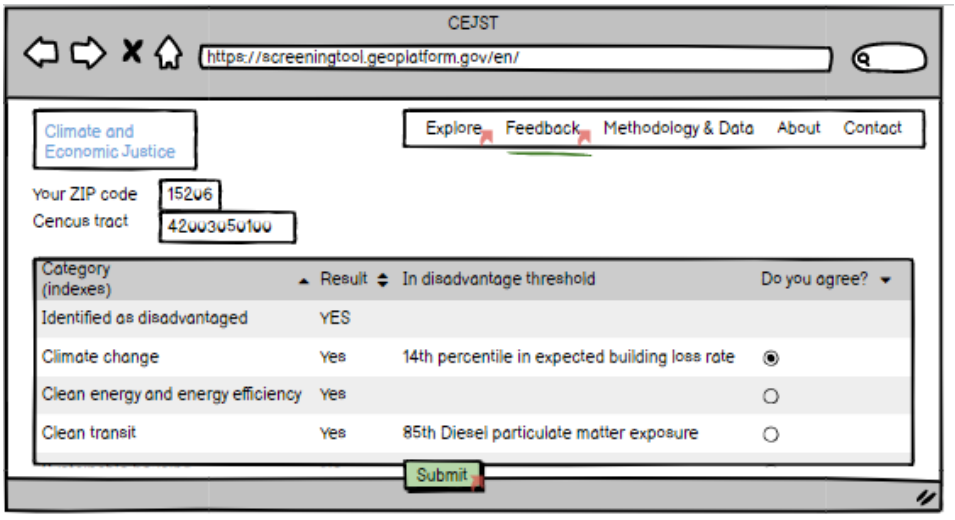
- Existing data: User doesn't agree with current indexes and the conclusion on whether their neighborhood is a disadvantage community or not
- New data: User wants to add more data on top of the exisiting data in the tool, in order to increase the accuracy of the tool



FEEDBACK PAGE - EXISTING DATA

For existing data, each index will be displayed together with the advantage/disadvantage threshold and user can click on the radio button to choose whether to agree with the result or not.

At final of this feedback page, user will click on submit.



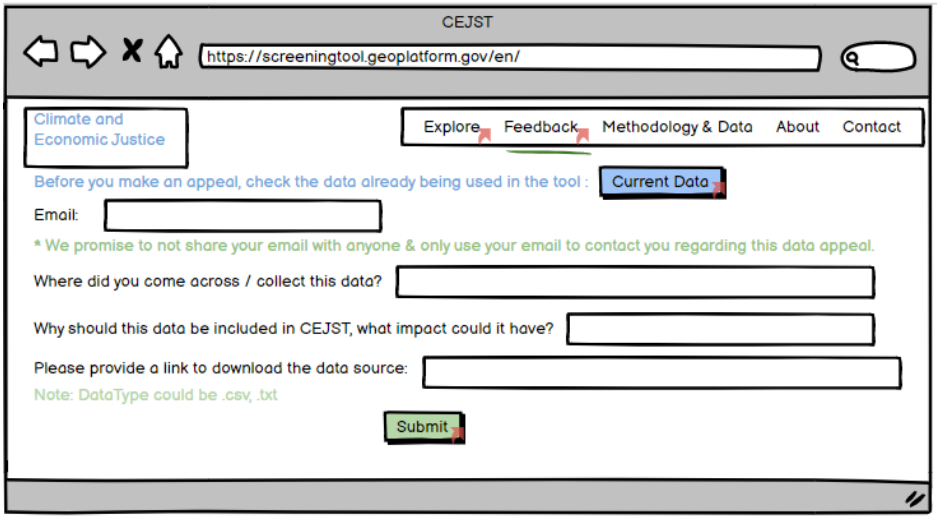
6. PROTOTYPE

FEEDBACK PAGE - ADD NEW DATA

User can check the datasets that are already used by the tool or in consideration before adding in any new data in the "Current Data" page.

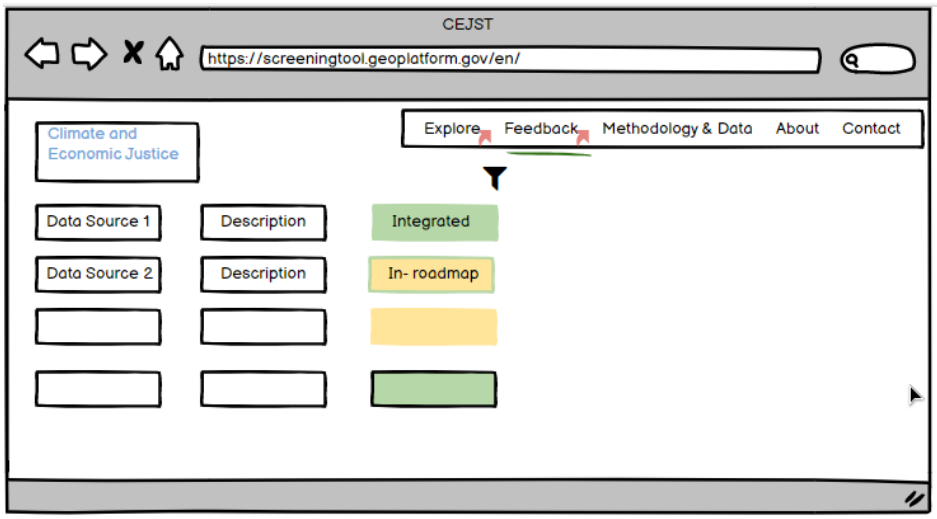
User will fill in their credential information and information about the dataset they want to add.

User will click submit to finish the flow.



FEEDBACK PAGE - DATASET ROADMAP

Before submitting data, users can navigate to the "Current Data" page to view the current datasets in the tool, as well as the datasets in the roadmap (which is considered to be integrated by the CEJST team). The purpose is to reduce the duplication.

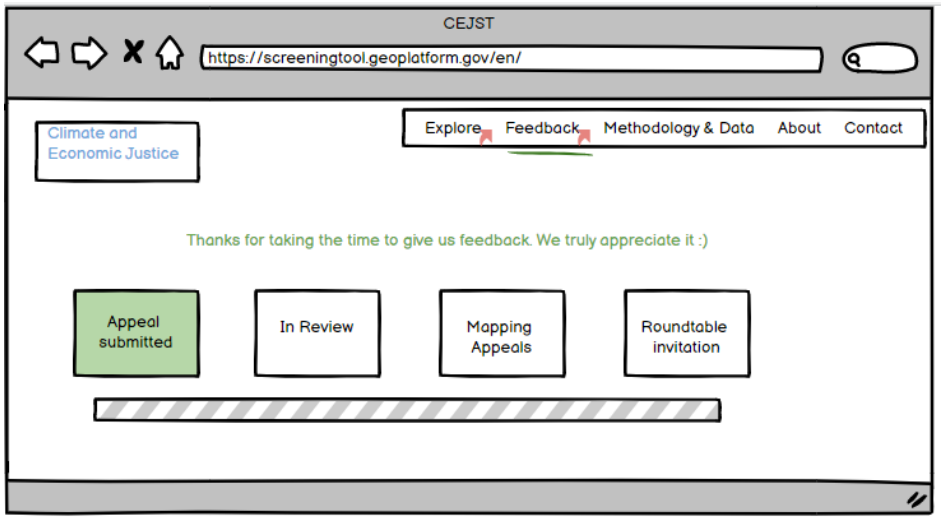


6. PROTOTYPE

FEEDBACK PAGE - SUBMISSION PROGRESS

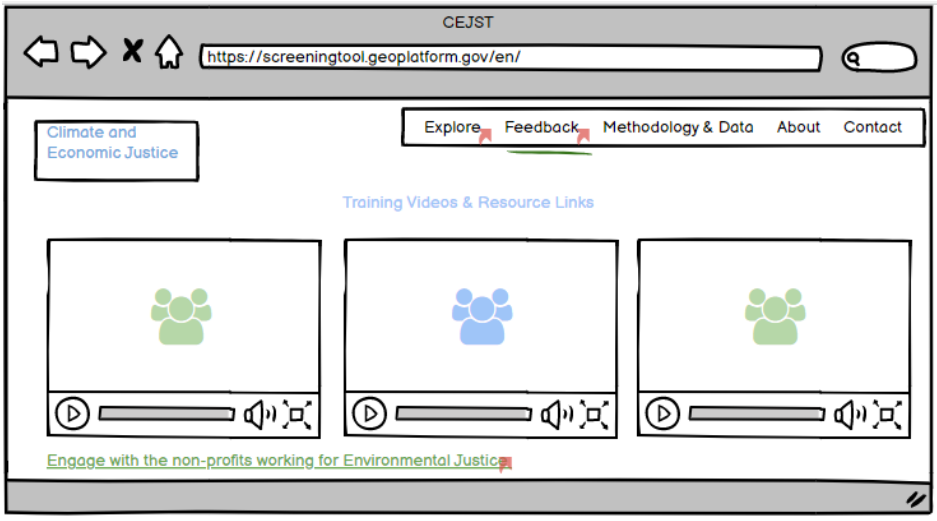
Once user clicks on "Submit," the page will show a progress bar and users can revisit anytime to check on the latest status.

By including this tracking screen, users can see that CEJST team is working and their feedback is not falling into silo.



TUTORIAL AND TRAINING PAGE

As mentioned above, computer literacy are one of the problems that prevents community users from engaging with the tool. In this page, users can find the training videos and resource links so as to start engage with the tool.

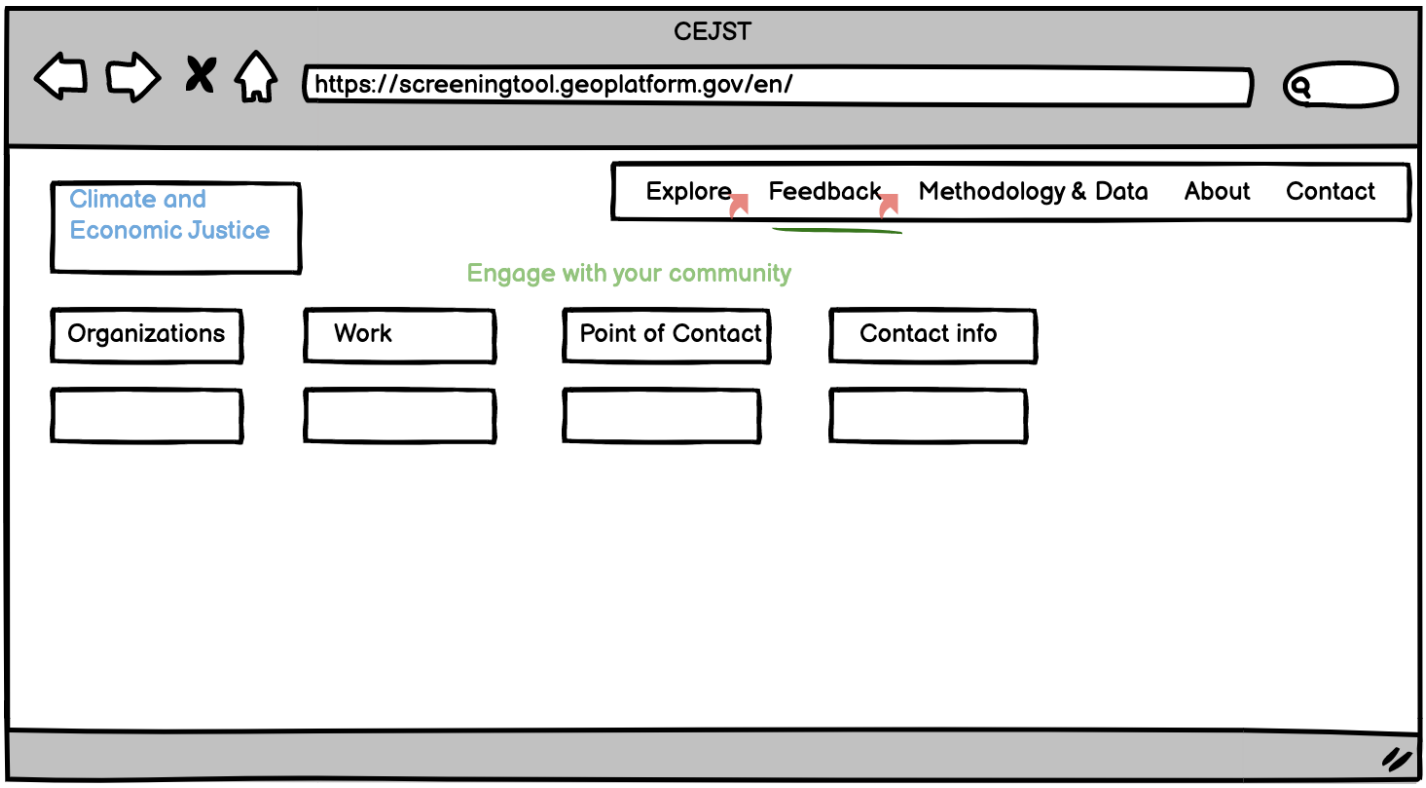


6. PROTOTYPE

COMMUNITY-BASED ORGANIZATIONS CONTACT INFO PAGE

For individual community member, it might be intimidating or infeasible to provide feedback on the data by themselves. They might want to reach out to a community organization to collect their observation.

When users click on "Engage with the non-profits working for Environmental Justice" on the tutorial page, there will be list of organizations that are actively working in environmental justice data in their local communities.



7. COMMUNITY WORKSHOP FRAMEWORK

WHAT IS COMMUNITY ENGAGEMENT?

> Community Engagement is the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people It is a powerful vehicle for bringing about environmental and behavioral changes that will improve the health of the community and its members It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices (CDC, 1997).

WHY IS COMMUNITY ENGAGEMENT IMPORTANT?

- Data utilized in CEJST tool will be used to determine federal funding to address environmental justice Issues
- Obtaining feedback from communities increases effectiveness of policies
- Data should include the input from burdened communities and represent their reality
- It's important to provide communities with resources to understand the tool and advocate for themselves

FRAMEWORK COMPONENTS

01. Determine main objectives

Why is community engagement important for my organization's goals?

02. Define stakeholder's strengths and weaknesses

What capacity, network, and resources does each stakeholder have available and/or lack of?

03. Determine timeline and resources

Do I have the capacity to perform tasks in a timely manner? How to increase effectiveness?

04. Determine communication channels

What are the different communication channels that stakeholders use ?

05. Determine type of engagement

Based on prior responses, choose a type of engagement

06. Evaluate engagement

Did a specific outcome or agreement came out of engagements?

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