

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

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Context is Key: Enhancing Data Access, Use, and Understanding
Tuesday, July 19 • 2:00pm - 3:30pm ET

More info on Sched Session Page: <https://sched.co/12esd>

Attendance & Check in

Add your Name / affiliation / pronouns / location / social media to a bullet

- Alejandro Paz / EDGI & MIT Libraries / he-him / Cambridge, MA
- Ruth Duerr / Ronin Institute / she-her / metro Denver, CO
- Ali Krzton / Auburn University / Auburn, AL
- H. K. “Rama” Ramapriyan / SSAI & NASA GSFC ESDIS/he-him / Camarillo, CA
- Sara Lafia / ESIP Fellow (Semantic Tech Committee) / University of Michigan
- Mackenzie Marti / USGS Central Midwest Water Science Center / she-her / Urbana, IL
- Ge Peng/ UA Huntsville & MSFC IMPACT/ Hunts
- Jenny Wood / University of Alabama in Huntsville / she-her / Huntsville, AL
- Lori Hager / NOAA NCEI / Asheville, NC
- Joan Damerow / Lawrence Berkeley National Laboratory
- Felimon Gayanilo / TAMUCC / Texas, Corpus Christi
- John Relph / NOAA/NESDIS/NCEI / he/him / Silver Spring, MD
- Jason Streit / Element 84 / he/him / Pittsburgh, PA
- Shelley Johnson / USGS / she/her / Seattle, WA
- .l
- Doug Newman / NASA ESDIS
- Aaron Kaulfus / NASA MSFC
- Hannah Collier / ORNL ARM Data Center / she/her / Knoxville, TN
- Karl Benedict / University of New Mexico / He, Him / Albuquerque, NM
- Sydney Neugebauer / NASA Capacity Building Program
- Peter Ibsen/ USGS Geosciences and Environmental Change Science Center/he/ Denver CO
- Mukul Sonwalkar/SSAI/NASA Applied Sciences.
- Xiaogang (Marshall) Ma / University of Idaho / Moscow, ID
- Jiyin Zhang / University of Idaho / Moscow, ID
- Chenhao Li/ University of Idaho / Moscow, ID
- Deborah Smith / NASA IMPACT / she-her / Santa Rosa, CA
- Ashley Heath / NASA GES DISC
- Danie Kinkade / she-her/ BCO-DMO / Woods Hole, MA
- Chris Slocum / NOAA/NESDIS/STAR / he-him / Fort Collins CO
- Mark Parsons, University of Alabama in Huntsville
- Michele Thornton / ORNL DAAC /she-her/Oak Ridge, TN

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

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- Chris MacDermaid Xentity/GeoPlatform
- Jeffrey Campbell, USDA, Maryland

Agenda

At session start:

- **Welcome**
 - Introduction to EDGI and the Website Governance Project
- **Key objectives of this session**
 - Broadly, explore the relationship between environmental data and its context (how it was collected, for what purpose, who uses it) and its effect on data use and understanding.
 - More specifically, we want to examine how synthesized information and underlying data can reach their potential by being truly available to the public.
 - Does there need to be clear links between the two, where data groundtruths information that in turn contextualizes data?
 - Help participants generate ideas on how to better manage data and the informational resources grounded on the same data.
 - For example: sediment data and a website about wildfire's effect on water supply based on reports using said data—how do we make these cross-discoverable and help users better understand what they can do with the original datasets?
 - Untangle and refine what we mean here at ESIP when we say we want “data for all people”
- **Community Participation Guidelines Reminder**
 - By participating in this session, you agree to adhere to the ESIP [Community Participation Guidelines](#)
 - Report an Issue: <https://www.integritycounts.ca/org/esip>
- **Schedule**
 - 2:00 - 2:20 - Introductory presentation
 - 2:20 - 2:25 - Participants break out into groups
 - 2:25 - 3:10 - Breakout session
 - 3:10 - 3:30 - Group share-back and reflection

Resources for this session (link supplementary docs or presentations here)

-  [EDGI_ESIP-July-2022_Slides](#)
- .

Breakout notes

Instructions:

Note: Virtual participants will be placed in breakout groups with other virtual participants.

- In your breakout group, please select a
 - 1) recorder who will write down the group's answers in this document
 - Alternatively, feel free to share this responsibility among yourselves, we just want to make sure you record your answers
 - 2) reporter who will share what the group discovered during the Discussion segment
- As you complete each section of the activity, try to keep all the webpages you visit open as separate tabs in your browser. You will want to be able to discuss how you arrived at various webpages and recount what you found there.

Activity:

Each group will

1. Evaluate the epa.gov/mats webpage using several questions as a framework for assessment
2. Search for datasets that were used to determine the Mercury and Air Toxics Standards (MATS)
3. Evaluate dataset landing pages / data tools / data portals EPA consulted when drafting MATS
4. Reflect on the connections and relationship between the information on the MATS website and the data used to draft the regulation

Group 1 (Ali, Lori, Rama, Ruth, Bob, Mackenzie, Megan, Becky)

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

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With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
The website has a confusing layout, making it difficult to actually find the rule, and navigating the site proves challenging as well, with the occasional dead end. While there is a link to the actual copy of the rule, it is not accessible (language is a barrier).
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
We were concerned that this website is no longer being updated and admittedly may suffer from link rot. The public comment period had passed on a specific aspect of the rules.
3. Does the website enable users to explore information about related topics and find relevant external webpages? You can find external information, but they are not always clear, and there isn't a unified user experience.
4. Is there anything the website does particularly well?
It links to current technical documents and fact sheets (official sources).
5. What, if anything, do you think could be changed about this website and its pages?
6. Are there any issues that seem beyond repair?

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. <https://www.govinfo.gov/content/pkg/FR-2012-02-16/pdf/2012-806.pdf> (the MATS rule itself)
 - b. <https://eelp.law.harvard.edu/2020/04/backgrounder-appropriate-necessary-finding-mercury-air-toxics-mats/> Found through Google as an attempt to get more background information on the issue, source seemed reliable
 - c. <https://pubmed.ncbi.nlm.nih.gov/19392676/> - paper used for health-related damages from coal-fired power plants

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- d. <https://www.govinfo.gov/content/pkg/FR-2012-02-16/pdf/2012-806.pdf> - Federal Register announcement

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for “mercury” in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#) - 99 records for the term mercury
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS?
2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled “4.4.3.1 Data Sources for Fish Tissue Concentrations”: [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)
 - d. Can you get to the database's landing page from this EPA webpage?
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the “Report” tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you’d see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn’t find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)

We could not get to any data from the EMMMA landing page, as all of the advertised tools appeared to be static images and nothing more.

7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?

How does one go from measurements of mercury in fish, lakes, land, etc. to an idea about whether MATS made a difference without reading all the papers and looking at the data. Perhaps some have before and after?

8. What can you learn from eGRID? - <https://www.epa.gov/egrid>

We found this on our own through the Environmental Dataset Gateway above. It has summary tables and a technical guide. The data and other documents are fairly large. There is background on how the data was collected which is mostly self-reporting by the power plants themselves.

9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?
 - i. Link: [TRI Data and Tools | US EPA](#)
10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule? A lot
2. How effective do you think the epa.gov/mats website is at leading users to this data? Poor
 - a. Does it matter if the data can or cannot be accessed from that website? yes
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets? everywhere

Our group had concerns about the high barriers to informed participation in public decision-making processes given how difficult it was to access even the most basic information about these issues, much less analyze it in any meaningful way.

Group 2

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
3. Does the website enable users to explore information about related topics and find relevant external webpages?
4. Is there anything the website does particularly well?
5. What, if anything, do you think could be changed about this website and its pages?
6. Are there any issues that seem beyond repair?

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. ...
 - b. ...

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for "mercury" in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled "4.4.3.1 Data Sources for Fish Tissue Concentrations": [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)
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 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

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5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the "Report" tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you'd see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn't find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
2. How effective do you think the [epa.gov/mats](https://www.epa.gov/mats) website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?

Group 3: Doug, Dave, Jonathan, Amanda

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the [epa.gov/mats](https://www.epa.gov/mats) website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
 - a. Good coverage of intro topics related to MATS
 - b. No direct access to data (that is easy to find)
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
 - a. No - this website is not being updated. No explanation, but a link to a new site. Seems to be related to changes in the 'MATS rule' and administration changes. The 'real' website should be at the end of this link, with the previous version a link to it. Not the other way around. The presentation of the 'note' makes me want to navigate away from it without even reading further.
 - b. Relevant facts included, but not much source information or citations
3. Does the website enable users to explore information about related topics and find relevant external webpages?
 - a. Yes. Goes to other EPA webpages, and subsections/pages within this website.
4. Is there anything the website does particularly well?
 - a. Seems to provide a good snapshot of MATS and related topics as an overview
5. What, if anything, do you think could be changed about this website and its pages?
 - a. Better explanation of why the website is not being updated/is moved;
6. Are there any issues that seem beyond repair?
 - a. It should never be two clicks to get to the primary information.

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. Web form on web page - asked what datasets were used. Email failed.
 - b. from google search 'MATS mercury dataset'
 - i. <https://www.nrdc.org/sites/default/files/mats-data-analysis-202108.pdf>

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- ii. https://www.researchgate.net/publication/51627331_MercNet_A_national_monitoring_network_to_assess_responses_to_changing_mercury_emissions_in_the_United_States

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 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
 - i. Date range
 - ii. "Data quality is false" seems wrong
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled "4.4.3.1 Data Sources for Fish Tissue Concentrations": [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)
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4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
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2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

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 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you’d see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
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 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn’t find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
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 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
 - a. It was difficult for us, so might take days or be impossible for someone without subject matter expertise.
 - b. You have to be aware of the EPA process and the way it releases information - process knowledge rather than subject matter expertise
2. How effective do you think the epa.gov/mats website is at leading users to this data?
 - i. Very ineffective - many clicks, and the warning on the home page discourages users from trying
 - b. Does it matter if the data can or cannot be accessed from that website?
 - i. Yes at least some data, data relevant to the audience
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?
 - a. Documentation (like metadata), direct links to the data, visualizations and web tools (with access to underlying data)
 - b. Considering audience and what information they need, how to display it, with links to more advanced information

Group 4

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
 - a. No, we can't find the original rule

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- b. It does have good information for the general audience, but if you are trying to understand the policy and regulations it does not provide the right information.
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
 - a. No, no explanation or no dates cited
3. Does the website enable users to explore information about related topics and find relevant external webpages?
 - a. yes
4. Is there anything the website does particularly well?
5. What, if anything, do you think could be changed about this website and its pages?
6. Are there any issues that seem beyond repair?

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. ...
 - b. ...

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for "mercury" in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled "4.4.3.1 Data Sources for Fish Tissue Concentrations": [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)
 - d. Can you get to the database's landing page from this EPA webpage?
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the "Report" tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you'd see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn't find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
 - a. It's endless. It could be a research project unto its own.
2. How effective do you think the [epa.gov/mats](https://www.epa.gov/mats) website is at leading users to this data?
 - a. Terrible
 - b. Does it matter if the data can or cannot be accessed from that website?
 - i. yes
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?
 - a. Data citation in the federal register

Group 5

Part 1

(7 minutes)

Instructions:

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

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Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
Yes, categorized based on theme is okay but no direct and obvious link to data holdings
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
 - Is currently up-to-date, but there is a red indicator on caution that it will no longer be updated. There does not appear to be any citations for the information.
3. Does the website enable users to explore information about related topics and find relevant external webpages?
 - Yes, the information is well organized and there is a variety of topics that it covers additional topics that can be explored via external websites
 -
4. Is there anything the website does particularly well?
 - Easy to read
 - Has a searchable map interface for data
 - Easier to find the updated date for the website
5. What, if anything, do you think could be changed about this website and its pages?
Maybe have the current standards visible on the front page.
The rule is not clear.

There are too much contents for the first button of **Environmental Topics**, and organized without logic.... Better prepare a series of themes like the last three topics as science topic and water topic.

On the other hand, the name of science topic might be too universal and confusing. Can be replaced by more particular terms.

In the middle part of the website, the text on the hyperlink isn't unified.

6. Are there any issues that seem beyond repair?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. <https://www.epa.gov/mats/epa-announces-mercury-and-air-toxics-standards-mats-power-plants-technical-information> - technical info (PDFs) that the EPA cites for it
 - b. [Clean Air Markets Program Data \(CAMPD\) | US EPA](#) - Google and Document Reference within the search
 - c. [Datasets - CKAN](#) - Data Catalog for Mercury related data
 - d. <https://downloads.regulations.gov/EPA-HQ-OAR-2020-0532-0047/content.pdf> - used for the Technical documentation

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for "mercury" in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)

Not directly, toxicity related and metadata
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS?

No

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?

- a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)

Users might have a hard time understanding the meaning of the ppm of the pollutant. And if the records only described the pollutant examples, the missing values, if any, might mislead the users to underestimate the pollution level of the lake.

- b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?

Yes, perhaps embedded data links within the XML that can be a direct link to the data or a programmatic way to read this xml and get to the data?

Keywords are irrelevant to the subject.

3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.

- a. Scroll down to page 4-13 of the document and skim the section titled "4.4.3.1 Data Sources for Fish Tissue Concentrations": [link](#)
- b. Can you find a citation for NLFA data elsewhere in the document?
- c. Here is the link to the database provided in the document: [link](#)
- d. Can you get to the database's landing page from this EPA webpage?

Yes, View the fish tissue data that served as the basis for state fish advisories. [Search State Fish Tissue Data](#)

4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?

- a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the “Report” tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
 - Information is filterable, downloadable, and seems to be able to be used for research
 - The map without filters could be slow with report generation and any clip tool by region
6. If you were to read the Regulatory Impacts Analysis, you’d see that the
7. (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn’t find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
8. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
9. What can you learn from eGRID? - <https://www.epa.gov/egrid>
10. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

11. Did you find any of these datasets when you looked for data in the previous section of this workshop?
12. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
 - A prohibitive amount of work
2. How effective do you think the [epa.gov/mats](#) website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
- Much of the data on the website is not for general public, but rather for lawmakers & justification.
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?
 - Organize the website to have specific pages made for each group of audience members (teachers, fishermen, general public, data scientists)

Group 6

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the [epa.gov/mats](#) website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
 - a. No
 - b. It's not clear what Standards are being addressed and the link to any standards is/are not clear
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
 - a. No
 - b. The website is too general making its purpose confusing.
3. Does the website enable users to explore information about related topics and find relevant external webpages?
 - a. Yes & No: Good to have links to additional information; but also too many
4. Is there anything the website does particularly well?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- a. Topic Grouping
5. What, if anything, do you think could be changed about this website and its pages?
 - a. Lack of info about standards, about page has info that would be beneficial on home page
6. Are there any issues that seem beyond repair?
 - a.

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. Clear Air Act - Google - "what sources are used to produce epa MATS"
 - b. Mercury Study Report -
<https://www.epa.gov/mercury/mercury-study-report-congress>
 - c. <https://www.epa.gov/stationary-sources-air-pollution/mercury-and-air-toxics-standards> - linked from the site no longer being supported
 - d. Googled: "Does EPA write regulations"

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

1. What do you find if you search for “mercury” in EPA’s Environmental Data Gateway?

a. Link: [Environmental Dataset Gateway](#)

99 records in search results, with first result: **Region 10 EPA data included in the manuscript: Timber harvest alters mercury bioaccumulation and food web structure in headwater streams**

b. Can you find any of the datasets which were utilized in the development / justification for MATS?

2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?

a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)

b. Take a look at [the database’s EDG catalog record](#). Can you think of any ways to enrich this record?

- i. Providing temporal information, what was used to collect the data
- ii. Pollutants available
- iii. File format of the data

3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.

a. Scroll down to page 4-13 of the document and skim the section titled “4.4.3.1 Data Sources for Fish Tissue Concentrations”: [link](#)

b. Can you find a citation for NLFA data elsewhere in the document?

c. Here is the link to the database provided in the document: [link](#)

d. Can you get to the database’s landing page from this EPA webpage?

4. Let’s look at the NLFA database itself. If you’re interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?

a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the “Report” tab). What might you need

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)

- a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you'd see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn't find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
 - a. A LOT !! I suspect that some/much of the data are not available. A start would be to direct link to the MATS standards.

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- b. How is the question defining what a “Subject Matter Expert” is? Is it scientific expertise in mercury and environmental/biological impacts? Is it expertise in environmental law?
 - c. How is the data able to be downloaded?
 2. How effective do you think the [epa.gov/mats](#) website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
 - i. It is crucial to access the data from the website.
 - ii. I think it does matter that the data can be accessed from that website. Expert users will want the data, passive users won't need it so won't matter.
 - iii. It is difficult for expert users to find the data! How can we expect a novice user, or a policymaker, to find this information -and- understand it?
 3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?
 - a. Use citations for the datasets
 - b. Directly lead user to data
 - c. Write concise bullet points to explain the regulations, in terms that a non-science person could understand.
 - d. Think about who the users are and what are the user needs
 - e. More frequent updates

Group 7 (Deborah, Aaron, Chris, Hannah)

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the [epa.gov/mats](#) website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?

No

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
 - a. Not sure a public viewer can tell or know if the website is accurate or up to date
 - b. There is a banner suggesting it is not and linking to another page
 - c. The new page is not as well organized or presented.
3. Does the website enable users to explore information about related topics and find relevant external webpages?
 - a. Should CCR rule be linked? All other federal regulations regarding coal plants?
4. Is there anything the website does particularly well?
 - a. Seems more inviting to exploration than the “newer” page. Has plain language
5. What, if anything, do you think could be changed about this website and its pages?
 - a. Could state or regional regulations be linked? Or at least comments added that state or regional standards may vary.
 - b.
6. Are there any issues that seem beyond repair?

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.

Final rule: <https://www.govinfo.gov/content/pkg/FR-2020-09-09/pdf/2020-15950.pdf>

National Emissions Inventory:

<https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-documentation>

<https://www.epa.gov/sites/default/files/2015-11/documents/20111216emissionsoverviewmemo.pdf> contains studies examined with some summary results. Assume data description and access behind the results mentioned are available.

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

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2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. <https://www.epa.gov/sites/default/files/2015-11/documents/20111216emissionsoverviewmemo.pdf> - from a google search “mats epa data”, found <https://www.epa.gov/mats/epa-announces-mercury-and-air-toxics-standards-mats-power-plants-rules-and-fact-sheets>, then selected, ‘more technical information’. Found in technical documentation.
 - i. From this document, data files are described in a footnote, and can be found here: <https://gaftp.epa.gov/air/emismod/2005/2005v4/>

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA’s website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for “mercury” in EPA’s Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS?
2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database’s EDG catalog record](#). Can you think of any ways to enrich this record?
 - i. The metadata could be more specific to match the information in the landing page or related documents, which are specific to fish tissue data.
 - ii. Provide links to the data resources in the metadata.
(<https://catalog.data.gov/dataset/national-listing-of-fish-and-wildlife-advisories-nlfa>)
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled “4.4.3.1 Data Sources for Fish Tissue Concentrations”: [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)
 - d. Can you get to the database’s landing page from this EPA webpage?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- i. Yes, through the 'Search State Fish Tissue Data' link.
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page
 - i. Falls Lake is not a listed water body for NC on the interactive map but can be found on the Report tab (search by location)

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the "Report" tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you'd see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn't find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

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- b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?

Impossible

2. How effective do you think the [epa.gov/mats](#) website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
 - b. On a 1-10 scale they score 0
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?

The EPA under the [Geospatial Data Act](#) is required to make these data accessible to the public. They are not meeting these requirements.

One single landing page perhaps.

Group 8

John Relph

Shelley Johnson

Felimon Gayanilo

1. No, no direct access to data
2. No, no longer updated

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
 - a. No, there is no link to data (for use by data scientists, for example)
 - b. No, it does a good job at addressing those without background knowledge, but does not have information for scientists or health care professionals - no links to studies which support the information/conclusions presented on the website
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
 - No, the information is no longer maintained. There is an informational banner that says THAT the site is no longer updated, but no explanation of WHY.
 - Yes, there are relevant facts, but no link to supporting data. No citations, that is.
3. Does the website enable users to explore information about related topics and find relevant external webpages?
 - Maybe, but not easy to navigate
 -
 -
4. Is there anything the website does particularly well?
 - Warning is clear that the site is no longer being updated
 - Reasonable summary of high level issues relevant to MATS
5. What, if anything, do you think could be changed about this website and its pages?
 - Direct access to data and better navigation
 -
 -
6. Are there any issues that seem beyond repair?
 - System may require re-architecting to make it accessible
 -

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. Google Search (Gulf of Mexico Air Quality):
<https://archive.epa.gov/emergency/bpspill/web/html/air-mon.html>
 - b. Utility Air Toxics Study - list of references at
<https://www.epa.gov/sites/default/files/2015-11/documents/eurtc1.pdf>, but no URL for data
 - c. Mercury emissions data: <https://cfpub.epa.gov/roe/indicator.cfm?i=14>
 - i. Googled “EPA mercury data”, was the first link
 - ii. Raw data available here, but only for certain agency employees with a password:
<https://www.epa.gov/air-emissions-inventories/emissions-inventory-system-eis-gateway>
 - iii. Raw data for prior years (linked to from the “data documentation” section):
<https://www.epa.gov/air-emissions-inventories/pollutant-emissions-summary-files-earlier-neis>
 - iv.

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for “mercury” in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- b. Can you find any of the datasets which were utilized in the development / justification for MATS?
 - i. No
- c. Found lots of irrelevant data. Even searching “mercury emissions” did not result in emissions data used for MATS
2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
 - i. Simple text will work better instead of XML output
 - ii. I would have expected to find the NLFA listing itself, but instead I found a metadata record describing the NLFA and then a link to the Fish Tissue Data Database
 - iii.
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled “4.4.3.1 Data Sources for Fish Tissue Concentrations”: [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - i. There is only one citation for the NLFA, in this section referenced above
 - c. Here is the link to the database provided in the document: [link](#)
 - d. Can you get to the database's landing page from this EPA webpage?
 - i. Yes, by clicking the “search state fish tissue database”
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

- I was able to find a very small dataset for a specific river in MD, but if I wanted to get all of the data for all bodies of water, it would be painful

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the “Report” tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you’d see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - i. I couldn’t find it.
 - b. Can you get to the data?
 - i. NO
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - i. NO
 - d. *Here is the link in case you couldn’t find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
 - a. It took time to refresh the page and I assumed that there were no data
 - b. I did find the eGRID2020 database - a big spreadsheet
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
 - A lot!
2. How effective do you think the epa.gov/mats website is at leading users to this data?
 - Not effective
 - Does it matter if the data can or cannot be accessed from that website?
 - i. Yes, level of trust on the site goes south
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?
 - Navigation or a data catalog will help
 - Start developing the website with the expectation that users will want to find data, that the data are accessible, the data are useful in an interoperable way, and that they are reusable (documented, etc.)

Group 9

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
3. Does the website enable users to explore information about related topics and find relevant external webpages?
4. Is there anything the website does particularly well?
5. What, if anything, do you think could be changed about this website and its pages?
6. Are there any issues that seem beyond repair?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. ...
 - b. ...

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for “mercury” in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS?
2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled “4.4.3.1 Data Sources for Fish Tissue Concentrations”: [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- d. Can you get to the database's landing page from this EPA webpage?
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the "Report" tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you'd see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn't find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

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10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
2. How effective do you think the epa.gov/mats website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?

Group 10

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
 - a. The information is translatable to a more lay summary of information.. But it does lack information need regarding how MATS is related to the topical navigation and naming conventions.
2. Is the information on the website accurate and up to date?
 - a. Maybe not, the website is no longer updated, but to does not describe when the last update was. If not, is there an explanation given as to why? No Does the website include relevant facts? Are those facts cited? The facts appear relevant and citations need some clicking

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

3. Does the website enable users to explore information about related topics and find relevant external webpages?
4. Is there anything the website does particularly well?
5. What, if anything, do you think could be changed about this website and its pages? **More obvious links desired items of importance. More direct explanation of the standard. A lay-summary of what Mercury is and why it is important enough for a rule.**
6. Are there any issues that seem beyond repair?

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. (KB) Google Search: "epa MATS data" - First result:
<https://www.epa.gov/airmarkets/summary-data>.
 - i. "Emission Controls & Monitoring: button (with no indicator of whether data are available)
https://www3.epa.gov/airmarkets/progress/reports/emission_controls_and_monitoring.html
 1. Select an option other than "Figure" in the menu towards the top of the page (e.g. Mercury Controls at MATS-Affected Sources).
 - a. Click on the non-obvious Excel spreadsheet data link:
https://www3.epa.gov/airmarkets/progress/reports/source/2020_emission_controls_and_monitoring_data.xlsx
 2. It isn't clear how the figures on the page relate to the figures
 - b. Follow the links on EPA.gov/MATS, found a really big report with many detailed datasets
 - i. 1997 Mercury Study Report to Congress
<https://www.epa.gov/mercury/mercury-study-report-congress>
 1. At the end of of each volume in this report there is a list of appendices giving details about the datasets used and the data analysis processes and results.

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

2. But no specific links to a data portal to download datasets used in this report

Section II - Evaluating the data (20 minutes)

EDGI analysts identified several datasets that were cited in the Regulatory Impact Analysis for the final MATS rule, which can be accessed from EPA's website here: [EPA Announces Mercury and Air Toxics Standards \(MATS\) for Power Plants - Technical Information](#)

In this part of the session, we will evaluate the content and accessibility of these datasets (as they are accessed online), and whether they can help users understand the issues behind the MATS rule.

1. What do you find if you search for "mercury" in EPA's Environmental Data Gateway?
 - a. Link: [Environmental Dataset Gateway](#)
 - b. Can you find any of the datasets which were utilized in the development / justification for MATS? **No. We are finding data but there is no information that relates data to MATS**
2. If you came across the National Listing of Fish and Wildlife Advisories (NLFA) database, what would you expect to find, based on the description?
 - a. Link: [National Listing of Fish and Wildlife Advisories \(NLFA\) record in the Environmental Data Gateway](#)
 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
3. Before we look at the NLFA database, it bears mentioning where and how it is referenced in the Regulatory Impact Analysis.
 - a. Scroll down to page 4-13 of the document and skim the section titled "4.4.3.1 Data Sources for Fish Tissue Concentrations": [link](#)
 - b. Can you find a citation for NLFA data elsewhere in the document?
 - c. Here is the link to the database provided in the document: [link](#)
 - d. Can you get to the database's landing page from this EPA webpage?
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
 - a. From the [NLFA database catalog record](#), click on the link to access the dataset landing page

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Metadata Reference Information	
Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the “Report” tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily? **Pretty easy actually, once on the interactive website we were able to download excel files**
6. If you were to read the Regulatory Impacts Analysis, you’d see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn’t find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/eGRID>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
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Link: [TRI Data and Tools | US EPA](#)

10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
2. How effective do you think the epa.gov/mats website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?

Group 11

Part 1

(7 minutes)

Instructions:

Your task will be to evaluate the epa.gov/mats website. How understandable is its content? How about the quality of its information? Does it help users find relevant resources? Don't forget to click on the links to the other webpages linked to from the main website.

With your group, answer the questions below:

1. Does the website meet user information needs at all levels, including those with and without background knowledge of the website's topic?
2. Is the information on the website accurate and up to date? If not, is there an explanation given as to why? Does the website include relevant facts? Are those facts cited?
3. Does the website enable users to explore information about related topics and find relevant external webpages?
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5. What, if anything, do you think could be changed about this website and its pages?
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2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

Part 2

Section I - Looking for data (10 minutes)

1. Using whichever method you would like, look for the datasets that EPA used when drafting the MATS rule. We mean the data the authors of the rule consulted when crafting the regulation.
 - a. **Note:** You might find datasets of emissions data reported by facilities to comply with the MATS rule. Make note of these also, but keep in mind the distinction between this data and data used for the scientific and legal basis of the rule.
2. Note the URL and/or web location of any datasets (or other data access points) you found. Briefly explain how you found the data:
 - a. ...
 - b. ...

Section II - Evaluating the data (20 minutes)

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 - b. Take a look at [the database's EDG catalog record](#). Can you think of any ways to enrich this record?
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2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

[Meeting Takeaways Doc](#)

Community Participation Guidelines & Reporting: Click [HERE](#)

- d. Can you get to the database's landing page from this EPA webpage?
4. Let's look at the NLFA database itself. If you're interested in learning about mercury concentrations in fish in a lake where you like to fish, say Falls Lake, NC, can you do that from the NLFA?
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Landing Page	https://fishadvisoryonline.epa.gov/FishTissue.aspx
Related Documents:	https://fishadvisoryonline.epa.gov/FishTissue.aspx

5. Could you run your own analyses on data obtained from NLFA? Try executing a search and downloading some of the resulting data (see the "Report" tab). What might you need to do in order to use the data (say, make an average Hg fish concentration across a watershed, or make a Hg fish concentration timeline for a given location?)
 - a. How effective are the search and navigation features? Are you able to find information easily?
6. If you were to read the Regulatory Impacts Analysis, you'd see that the Environmental Mercury Mapping, Modeling, and Analysis (EMMMA) project by the USGS was used in developing MATS. Can you find EMMMA data now?
 - a. What steps do you need to take to find it?
 - b. Can you get to the data?
 - c. Can you see where this data has been used by the federal government, e.g. for MATS?
 - d. *Here is the link in case you couldn't find it:* [Environmental Mercury Mapping, Modeling, and Analysis \(EMMMA\) | US Geological Survey](#)
7. If you search the Environmental Data Gateway (from question 1), can you find datasets where you might be able to observe the impacts of MATS?
8. What can you learn from eGRID? - <https://www.epa.gov/egrid>
9. What can you learn from TRI? - <https://www.epa.gov/toxics-release-inventory-tri-program>
 - a. From the TRI database, can you find Hg emissions in your state? Can you pull up data that would allow you to make a timeline of Hg emissions? Could such a timeline show the impact of MATS reporting requirements on the data in the TRI database?
 - b. What can you learn from this data portal about the data collection methods and limitations of the data?

Link: [TRI Data and Tools | US EPA](#)

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

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10. Did you find any of these datasets when you looked for data in the previous section of this workshop?
11. How would you describe your experience searching for the data, and then interacting with the different websites that provide access to it?

Section III - Reflecting on these resources (8 minutes)

Answer the following questions with your group members:

1. How much work do you think it would take for someone without subject matter expertise to find the data used to create the MATS rule?
2. How effective do you think the epa.gov/mats website is at leading users to this data?
 - a. Does it matter if the data can or cannot be accessed from that website?
3. Where are there opportunities to improve resources like the MATS website and mercury-related government datasets?

Discussion and Session Close

We might not get through all these questions during our discussion, but feel free to share your answer to a question even if we did not spend a lot of time on it.

1. What is something you learned in today's session?
 - a. Sli.do link: [Click here to access the poll](#)
2. The session presenter (Alejandro Paz) will go over what we discovered during the session:
 - a. Part 1
 - b. Part 2
 - c. Part 3
3. Should data always be readily accessible from informational resources?
4. How much contextualization is needed to make data truly accessible?
5. How can we ensure the public can interact with the data we create and manage in a meaningful manner?
6. Are there any changes you could see yourself implementing on publicly accessible data or websites you manage?
7. What kind of feedback can we provide to government institutions that manage environmental data?
8. What do you think of this ESIP meeting's theme, "Data for All People: From Generation to Use and Understanding," after this session? Has your perspective changed at all? Why or why not?

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

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5 ways to stay involved with ESIP

- Join the conversations on our [ESIPFed Slack Channel](#) and say hello on #general.
- Keep up with the latest from in and around ESIP by signing up for the [ESIP Update](#) or the mailing list of this group.
- Share your feedback, questions, and suggestions with our Twitter community [@esipfed](#) and [#esipfed](#).
- Hop on an [ESIP Telecon](#) that interests you - no need to RSVP!
- If you're in-person with us, be sure to check out the Research Showcase Poster and Demo Reception on Wednesday night!

Feedback

Please take a moment to share your thoughts on this session in Sched by going to the Sched session page linked at the top of this document.

Paste in Zoom Chat notes that you would like to save here