

# Societies & Sustainability

Name: \_\_\_\_\_ Hour \_\_\_\_\_ Date: \_\_\_\_\_

Date Packet is due: \_\_\_\_\_ Why late? \_\_\_\_\_ Score: \_\_\_\_\_  
Day of Week Date If your project was late, describe why

**Overview:** in this unit, you will be working in teams on particular topics to determine the extent to which American societies are sustainable. Note: you will need access to a computer or digital device for this project.

## Main Questions

- What does it mean for an action or behavior to be sustainable?
- What makes an action or behavior unsustainable?
- What are the consequences of unsustainable behaviors?
- What are examples of sustainable behaviors and of unsustainable behaviors among Americans as a whole?
- How could American societies become more sustainable?

## Weekly Schedule

### **Monday:**

- Overview of Sustainability
- Introduction of the activity.
- Media Literacy Activity

### **Tuesday:**

- Finish the Media Literacy Activity
- Begin work time on presentation.

### **Wednesday:**

- Work time on presentation.

### **Thursday:**

- Prep time for presentation
- Delivery of team presentations
- Letters to Congress Activity

### **Friday:**

- Finish Letters to Congress Activity
- Weekly Reflection.
- Career Connections OR additional work time.

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## Semester Schedule

Week 1: Introduction & Lab Safety

### **Atoms to Ecosystems**

Week 2: Matter & Energy

Week 3: Cell Biology

Week 4: Biodiversity,

Ecosystem Services

Week 5: Biodiversity &

Habitats

Week 6: Midterm

Assessments

### **Causes of Extinction**

Week 7: Extinction

Week 8: Habitat Loss

Week 9: Invasive Species

Week 10: Land & Water

Pollution

Week 11: Atmospheric

Pollution

Week 12: Overharvesting

Week 13: Midterm

Assessments

### **Sustainable Societies**

Week 14: Natural Resources

Management

Week 15: Societies &

Sustainability

Week 16: Individual

Sustainability

Week 17: Personal

Campaigns

Week 18: Personal

Campaigns



# Day 1: What is Sustainability?

**Directions:** read the two short excerpts below. Then discuss the accompanying questions as a team. Be prepared to summarize your team’s ideas during a whole-class discussion.

**Excerpt 1:** Joe and his friend Nina each bought small parcels of adjacent land that ended in a small lake at the far end. Joe soon realized that this lake was excellent for fishing. A nearby restaurant offered Joe money for every fish he could catch for them. Joe began to fish every day, catching fish at a far greater rate than they could reproduce. Joe also began to worry that Nina would find out about his fishing, so he decided to build a fence along the lake where it met Nina’s property. However, Joe spent so much money on building this fence that he lost all of the money he made selling fish to the restaurant. After a short while, Joe lost all of his money. The lake became depleted of all of its fish. Joe and Nina no longer talk to each other and Nina is actively seeking ways to get Joe removed from his property.



Figure 1 source: Depositphotos

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**Excerpt 2:** Sustainability is a term that describes the likelihood that an action or behavior can continue to occur over a long period of time (e.g. over several generations). An action or behavior is sustainable if it can occur over a long period of time without any serious negative consequences.

There are three kinds of sustainability – ecological, social, and economic. Ecological sustainability refers to the use of natural resources. For example, sustainable forestry means harvesting timber and lumber in a manner that does not exceed the rate at which trees can replace themselves nor impairs the biodiversity and ecosystem services necessary to produce that lumber.

Social sustainability refers to how people interact with each other. An action or behavior is socially sustainable if it increases the likelihood that people will continue to productively work together without reinforcing social barriers and inequalities in that place or any other area. Economic sustainability refers to the ability of an action or behavior to be cost effective; in other words, an action or behavior is economically sustainable if the economic gains from it are greater than or equal to the costs and losses.

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## Questions

1. Summarize any actions or behaviors in Excerpt 1 that were ecologically, socially, or economically unsustainable.
2. In regards to your response for the first question, how do you know that these actions were unsustainable?
3. What is the problem with an unsustainable action or behavior? Why would it be a good idea to ensure that all our actions and behaviors are as sustainable as possible?
4. What are some real-life actions or behaviors that you are aware of that are unsustainable? Try to provide an example for each of the three kinds of sustainability. Explain how you know that these are unsustainable behaviors.



**Directions:** In this project, you will work in teams of 3-4 and use materials from this course as well as credible and reliable print and/or internet sources to develop a presentation on the extent to which Americans have sustainable behaviors for a particular topic. You should develop your findings into a presentation (such as PowerPoint). Each team will provide an oral presentation on these topics later in the week.

**Your presentation should address *one* of the following questions:**

1. For your particular area, what are some examples of unsustainable behaviors or practices that are widespread among Americans?
2. Why would you categorize these behaviors as unsustainable? What evidence suggests that these behaviors are not capable of occurring over an extended period of time?
3. How could these behaviors be changed so that they are more sustainable? (Keep in mind that sustainability is ecological, social, and economic. The general public has to be willing and able to adopt these new behaviors and still be able to go about their daily lives in order to be practical solutions).
4. If not changed, what would be the consequences of if these unsustainable behaviors continued?

**Sustainability Topic Areas:** Your team will choose or will be assigned one of the following categories:

- Energy – the amount of energy needed to support American lifestyles in comparison to energy consumption in other countries, where this energy originates from (and benefits/drawbacks of different energy sources), transportation energy, heat & cooling of homes, etc.
- Food – how American diets compare to other those of other countries; ecological, social, and economic impact of American diets; amount of food that is wasted on average; sustainability of different diets.
- Water – how average water consumption per American compares to other countries; different uses of water in the United States and percent use by sector; how water is protected, treated, and filtered.
- Biodiversity – how American lifestyles affect the rate at which biodiversity is lost (i.e. the rate at which extinctions occur); major causes of biodiversity losses in the United States and abroad due to American lifestyles/consumption and their effect on habitat loss, invasive species, pollution, and overharvesting.
- Pollution – how American lifestyles relate to the rate at which pollutants are generated and released; major forms of pollution from American lifestyles; impact of these pollutants on ecological services & biodiversity.
- Habitat & Ecosystem Function – how American lifestyles affect the rate at which habitat is lost, degraded, and fragmented; major causes of habitat loss within the United States; impact of habitat loss on ecological function, ecosystem services, and on human societies.
- Social & Economic Sustainability – to what extent to inequalities exist in regards to the social and economic well-being of different categories of Americans? To what extent do economic and social inequalities exist between Americans and the citizens of other countries? To what extent are some economic and/or social opportunities unavailable to some citizens regardless of changes to their location, abilities, investments, or education? To what extent are some groups of people are unfairly and prejudicially prevented from fully enjoying full participation in governance, economic prosperity, and personal well-being?



# Day 1: Media Literacy

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**Introduction:** Media literacy is the ability to access, analyze, evaluate and create different kinds of media such as websites, social media, and news articles. In other words, a person with strong media literacy skills is able to analyze and summarize a source of information to determine if it is relevant, credible, and useful for a particular need.

The internet and other technologies have rapidly and significantly expanded the amount of information available to the average person. While this is generally a good thing, it also increases the likelihood that a person will come across false or misleading information. This is especially true when it comes to contentious or controversial topics, including sustainability.

As you complete this project, you will likely need to utilize internet sources to obtain the information that you need. There will likely be conflicting claims among these resources, and in some cases two sites may make completely opposite claims about an issue. Determining which information to trust and which information to disregard requires training and practice.

**Assessing a Website:** when determining whether or not a website is credible enough to be used as part of a presentation, use the following acronym and questions: **Is it Bbiased? Is it Accurate? Is it Relevant? (**BAR**)**

1. **Bias:** who is the author or creator of this website?
  - a. Why did they go through the trouble of creating this source of this information? Why did they write this? Was it purely to inform, or are they trying to persuade the reader?
  - b. Do they gain anything personally if the reader agrees with their ideas or claims?
  - c. Did this person or this group of people have any motivation to view the issue in a particular way that might slant their perception of the issue?
2. **Accuracy:** what factual evidence is provided to support their claims?
  - a. Do they include the original source of this information, or is the original primary source of this information unclear? Are their claims supported by valid data and/or logical arguments?
  - b. What are the credentials of the author(s)? Do they have the necessary background and capabilities to speak accurately and thoroughly on this topic and understand all of its nuances and details? Are their qualifications clearly described, or is this left intentionally vague?
  - c. Is this a recent source of information? Is it possible that we now know more important details than we did when this was written?
  - d. What do other sources say? Does this agree with sites that are credible? If this does contradict with another source of information, do they explain why the contradiction exists? Or do they merely dismiss the other claims as being wrong?
3. **Relevance:** is this information valuable for my needs?
  - a. Does the topic of this site clearly relate to the work that I am doing for this project?
  - b. Does the level of detail in this site help or hurt my ability to get this work done in a timely fashion? Is this too detailed to spend time reading? Does it need more detail to be useful?

**Remember, when it comes to using media sources, we want to raise the BAR.**



**Website Rubric:** use this as a tool to help determine if you should use a website or not. Place a check mark for each set of criteria in the appropriate column. The more “yes’s”, the more likely it is that the site can be trusted.

Criteria	Yes	No	Kind of/ Unsure
<b>Bias</b>			
Is it clear and obvious who authored this site? (Could be a person or institution)?			
Does the author provide contact information? Do they provide an email, phone, or address?			
Is there an "About Us" section on their site? (or something similar)			
Is it clear that the author has nothing to gain personally from persuading a reader?			
Is this purely about informing the reader without promoting a particular agenda or political affiliation?			
Is the site free of any kind of opinion or ideological slant, presenting all information in an objective, neutral manner?			
Is the information on this site subject to peer-review or scrutiny from qualified individuals (such as a .edu or .gov)?			
Is this website free of ads?			
<b>Accuracy</b>			
Does this site provide information as to where the evidence came from? Are the primary sources cited (such as in a bibliography or using parenthetical citation)?			
Are the cited references objective, free from bias, and from credible peer-reviewed sources?			
Do other trusted, credible sources make similar arguments or claims?			
Was the site published recently?			
Is there clear evidence that this person or institution is qualified to speak about this topic?			
<b>Relevance</b>			
Does the main topic of this site/page relate to the work you are doing for this project?			
Is this site sufficiently detailed for your needs?			
Does this site avoid providing too much detail so that you can still make your deadline?			
Does this site provide information at the level appropriate for your abilities?			
Do you understand what the author is stating or suggesting?			

**Exercise:** As a team, find four websites that are relevant to your project topic. Use this rubric to assess the credibility of each site. Be prepared to discuss your findings as a class.



## Day 2: Media Literacy (cont.)

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**Introduction:** Social media has helped make it easier to connect to a diverse global audience in unprecedented ways. While many things that are shared on social media are enjoyable and nonthreatening (such as cat videos, memes, and pictures of food), some have used social media as a means to spread misinformation and hate. Knowing the strategies and tactics used by these kinds of people is helpful in spotting posts that are inaccurate or completely wrong. These tactics can be divided into six categories: impersonation, conspiracy theories, polarization, discrediting, emotion, and trolling.

- **Impersonation:** falsely pretending to be a person, agency, or authority, or using imagery and language that makes a site or source of information appear to be credible when it is not.
  - o E.g. ABCNews.com.co uses language and a site design to make it seem as if it is the same as the ABC Network News in order to convince more people to believe its misleading claims.
- **Conspiracy Theories:** making unsupported claims that a secret powerful group of elitist individuals is concealing their ability to control events or circumstances.
  - o E.g. some people claim that the Illuminati actually controls society and uses the government as “camouflage” to hide their complete control of society (without providing legitimate evidence).
- **Polarization:** driving people apart by making a story seem more important than it is and/or by decreasing the likelihood that two sides will reach agreement by increasing the hatred for the other side.
  - o E.g. when a site suggests that *anyone* who voted for a particular candidate cannot be trusted because they are clearly lacking a sufficient amount of intelligence and/or morality.
- **Discrediting:** when a user attacks or criticizes someone who points out their misleading content (instead of just removing that content).
  - o E.g. when a fact-checking site accurately demonstrates that a politician was not telling the truth, the politician does not apologize or correct their statement. Instead, they attack the fact-checking site and try to weaken its credibility.
- **Emotion:** stoking fear, anger, or compassion as a means to widen an audience for one’s content.
  - o E.g. instead of discussing the evidence for or against a particular policy, a user suggests that anyone in favor of a particular piece of legislation is threatening the lives of children.
- **Trolling:** anonymous use of offensive speech and/or disinformation to create distrust and chaos among a group of people.
  - o E.g. posting unrelated information on an online post or conversation in order to create an emotional response (humor, hate, fear, etc.).

### Directions:

1. Visit the following link: <https://www.getbadnews.com> and click “Play the game.”
2. Your goal is to get 10,000 or more followers before the end of the game using the six tactics described above. The program will provide you with options for each scenario. Click on the options that you think will get you the most followers.
3. Pay attention as you play the game to how each of the tactics is used to persuade social media users into believing false information.
4. Be prepared to discuss your experiences as a class.



# Day 4: Letters to Congress

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**Introduction:** writing a letter to your state and federal elected representatives can be an effective way to help influence the policies that affect the sustainability of your community, nation, and world. In this exercise, you will be drafting a letter to send to an elected representative at the state or federal level. If well done, your instructor may actually send your letter to your Senator or Congressperson.

**How to find your elected representatives:** the following website provides detailed information on how to find the contact information for state and federal representatives: <https://www.usa.gov/elected-officials>

**9 Essential Tips for Writing Your Congressperson:** Every letter to an elected official should be...

1. **Direct:** State your subject clearly in the email subject line or first sentence of the letter. Stick to just one issue in the letter.
2. **Informative:** Identify yourself as a constituent. State your views, support them with your expert knowledge and, when appropriate, cite the bill number of relevant legislation (e.g., H.R. 1234 or S.3456).
3. **Inquiring:** Ask for the policymaker's point of view and how he or she plans to vote on relevant legislation. Expect an answer to a letter, though it may be a form response. Replies to email vary by office; not all reply.
4. **Factual & Courteous:** Rely on the facts, but personalize the issue. Explain how the issue affects your life. Avoid personal attacks, threats of political influence or demands.
5. **Constructive:** Be positive about your issue and offer recommendations about how you want the member to address concerns.
6. **Specific:** Always explain the hometown relevance of the issue. Use "I" statements and cite specific times and examples.
7. **Helpful:** Offer to provide additional information if needed, and provide your contact information.
8. **Appreciative:** Remember to thank members for their attention. Follow the issue and thank them later if they vote your way.
9. **Concise:** Keep your letter to one page, or your email to 500 words or less.

*Taken from "How to Write a Letter or Email" by the American Psychological Association: <http://www.apa.org/advocacy/guide/letter-email.aspx>*

**Email, call, write, or visit?** Generally emails are the fastest way to reach an elected official, but tend to also be the least meaningful. Elected officials receive large volumes of emails and are unable to consider each one for very long (particularly for those at the federal level). Letters tend to have more impact than an email, but take longer to send. However, unless the issue pertains to a vote on a specific piece of legislation that would take place within a week or two, a letter can be an effective way to reach your elected officials.

Of all the options, a phone call or visit to your elected official's office tends to be the most effective. If you call, their staff essentially has to answer the phone if it rings (although you may be put on hold temporarily). This provides you with the opportunity to speak with someone who works directly with that elected official. Scheduling an in-person visit to your elected official's local or capitol office is even more effective, but requires you to take the time and spend the money to make a trip to that office. However, this can be very impactful.



*Sample letter:*

December 15<sup>th</sup>, 2019

The Honorable Senator (last name)  
United State Senate  
Washington, DC 20510

Dear Senator (last name):

The legislation addressing (*describe issue concisely, or use exact name of bill before legislature*) is of particular interest to me because I am a (*describe your background in relation to this issue*). This issue directly impacts (*describe how this issue specifically affects you and other Americans*).

I am primarily concerned about (*go into detail about a specific aspect of this issue that is particularly important to you*). This particular issue is especially important because (*provide evidence, numerical data, and/or personal anecdotes to demonstrate why this issue matters most*).

I am writing to you in part to ask for your specific stance on (*this issue*). (*Either follow up by requesting how they will vote on a specific bill, or if this is more general and not about a specific piece of legislation, ask them to clarify their stance on the topic at large*). As someone with a background in this issue as well as a personal connection to this topic, I would hope that (*summarize how you think they should vote and why*).

Thank you for your consideration of my letter and for your attentiveness to this issue. I would be particularly appreciative if you would consider my advice the next time you are asked to vote on (*the specific legislation or issue at large*). If you would like additional information on this topic, I would be happy to provide more information. You are welcome to contact me using the information below.

Thank you again, and thank you for your service to our (*country/state*).

Sincerely,

*Handwritten signature*

Your printed name,  
Address  
Phone Number  
Email Address



# Day 4: Self-Evaluations

**Directions:** Use this sheet to evaluate your work. Be honest about your individual and team performance. This will help to provide feedback to your instructor for determining your final grade for this project.

Team Member Names: \_\_\_\_\_

**Circle the box with the description for each item that you feel most applies to your team’s performance on this project.**

Item	Plus (100%)	Check (70-90%)	Redo (0%)
<b>Accuracy</b>	No errors were detected in this presentation	This presentation contained a few errors, but overall was very accurate.	This presentation contained considerable errors.
<b>Thoroughness</b>	No important information was omitted. All questions were thoroughly answered.	A few more details would have enhance this work OR a question was not thoroughly answered.	Major topics were omitted that should have been included.
<b>Professionalism</b>	This presentation could be effectively delivered to a group outside of the school.	This is acceptable work for high school students but room exists for improvement.	The professionalism of this group needs significant improvement.
<b>Group Involvement</b>	Every member was involved with the development of the presentation as well as its delivery.	At least one more group member could have been more involved than they were.	Multiple group members clearly could have been more involved.
<b>Effort</b>	Effort exceeds what would be expected of a high school student.	Effort is acceptable for a high school student but room exists for improvement.	Level of effort could have been much greater than what was presented.

Explanation or further justification (*optional*) – use this space to provide any additional information that might be helpful for determining your grade. E.g. if someone was absent or if some other obstacle affected your work, you might want to explain that here.



**Directions:** Use this page to evaluate the work of your team members as well as yourself. Keep in mind a 5/5 would be a 100% (exceptional effort and contribution), a 4/5 would be an 80% (acceptable effort and contribution), and a 3/5 would be a 60% (bare minimum effort and contribution).

You can place a circle between two numbers as a score; e.g. a circle between a 4 and a 5 would be a 4.5/5, or a 90%. Please also provide a brief justification for your score that summarizes why you gave them the score that you did. If you gave someone a score of 100%, you do not need to provide written justification.

**1. Group Member's Name:** \_\_\_\_\_ **Score: 1 2 3 4 5**

Reason: \_\_\_\_\_

\_\_\_\_\_

**2. Group Member's Name:** \_\_\_\_\_ **Score: 1 2 3 4 5**

Reason: \_\_\_\_\_

\_\_\_\_\_

**3. Group Member's Name:** \_\_\_\_\_ **Score: 1 2 3 4 5**

Reason: \_\_\_\_\_

\_\_\_\_\_

**4. Group Member's Name:** \_\_\_\_\_ **Score: 1 2 3 4 5**

Reason: \_\_\_\_\_

\_\_\_\_\_

**5. Your Name:** \_\_\_\_\_ **Score: 1 2 3 4 5**

Reason: \_\_\_\_\_

\_\_\_\_\_

*If your group had fewer than 5 members, skip one of the blanks.*

Please remove this sheet and turn it into your instructor after you have delivered your presentation.



# Appendix: Helpful Resources

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**Directions:** you are welcome to use these sites listed on this sheet to help guide your research for your topics. These sites should be credible and reliable sources of information. Keep in mind this does not guarantee that *everything* written on these sites is credible or fully accurate. Use your media literacy skills if you encounter claims that may not seem fully correct. If unsure, check other credible sources to see if they make similar claims. As always, please speak with your instructor if you need help.

## - All Topics

- Univ. of Michigan Full Sustainability Factsheet Data:  
[http://css.umich.edu/sites/default/files/css\\_doc/Bound\\_Factsheets\\_2017.pdf](http://css.umich.edu/sites/default/files/css_doc/Bound_Factsheets_2017.pdf)  
(note: each section contains additional credible resources with more data and information)
- EPA Recommendations for More Sustainable Living: <https://www.epa.gov/environmental-topics/greener-living>
- CDC Recommendations for More Sustainable Living:  
<https://www.cdc.gov/sustainability/lifestyle/index.htm>
- Impact of different lifestyles (academic paper):  
<http://web.mit.edu/ebm/www/Publications/ELSA%20IEEE%202008.pdf>

## - Energy

- EPA Report on Energy Use: [https://cfpub.epa.gov/roe/indicator\\_pdf.cfm?i=93](https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=93)
- Univ. of Michigan Energy Carbon Footprint Factsheets: <http://css.umich.edu/factsheets/carbon-footprint-factsheet>
- Univ. of Michigan Energy Factsheet: <http://css.umich.edu/factsheets/us-energy-system-factsheet>
- Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
- Pew Research Center: <http://www.pewresearch.org/fact-tank/2015/11/17/how-americans-are-and-arent-making-eco-friendly-lifestyle-changes/>
- Carbon pollution and oceans: <https://www.pmel.noaa.gov/pubs/PDF/feel2899/feel2899.pdf>
- USDA Report on Carbon Pollution and Ag:  
[https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1000&context=ge\\_at\\_reports](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1000&context=ge_at_reports)

## - Food

- Univ. of Michigan Energy Food Factsheets: <http://css.umich.edu/factsheets/food-footprints> and <http://css.umich.edu/factsheets/us-food-system-factsheet>
- Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
- National Geographic & Sustainable Food:  
<https://www.nationalgeographic.com/magazine/2017/09/holland-agriculture-sustainable-farming/>
- Carbon Neutral Ag: <https://www.icf.com/resources/presentations/2016/charting-a-path-to-carbon-neutral-agriculture>
- Diet Scenario Data: <http://www.elementascience.org/articles/10.12952/journal.elementa.000116/>
- USDA Report on Carbon Pollution and Ag:  
[https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1000&context=ge\\_at\\_reports](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1000&context=ge_at_reports)

## - Water



- Univ. of Michigan Energy Water Factsheets: <http://css.umich.edu/factsheets/us-wastewater-treatment-factsheet> and <http://css.umich.edu/factsheets/us-water-supply-and-distribution-factsheet>
- Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
- Pew Research Center: <http://www.pewresearch.org/fact-tank/2015/11/17/how-americans-are-and-arent-making-eco-friendly-lifestyle-changes/>
- **Biodiversity**
  - Univ. of Michigan Energy Biodiversity Factsheet: <http://css.umich.edu/factsheets/biodiversity-factsheet>
  - Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
  - Carbon pollution and oceans: <https://www.pmel.noaa.gov/pubs/PDF/feel2899/feel2899.pdf>
- **Pollution & Waste**
  - Univ. of Michigan Energy Waste Factsheets: <http://css.umich.edu/factsheets/municipal-solid-waste-factsheet>
  - Univ. of Michigan Energy Carbon Footprint Factsheets: <http://css.umich.edu/factsheets/carbon-footprint-factsheet>
  - Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
  - Pew Research Center: <http://www.pewresearch.org/fact-tank/2015/11/17/how-americans-are-and-arent-making-eco-friendly-lifestyle-changes/>
  - EPA Data on Waste Production: <https://archive.epa.gov/epawaste/nonhaz/municipal/web/html/>
  - Carbon pollution from waste: <https://www.epa.gov/warm>
  - Carbon pollution and oceans: <https://www.pmel.noaa.gov/pubs/PDF/feel2899/feel2899.pdf>
  - USDA Report on Carbon Pollution and Ag: [https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1000&context=ge\\_at\\_reports](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1000&context=ge_at_reports)
- **Habitat & Ecosystem Function**
  - UM Energy Biodiversity Factsheet: <http://css.umich.edu/factsheets/biodiversity-factsheet>
  - Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
  - Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
  - Carbon pollution and oceans: <https://www.pmel.noaa.gov/pubs/PDF/feel2899/feel2899.pdf>
- **Social & Economic Sustainability**
  - Univ. of Michigan Energy Environmental Justice Factsheet: <http://css.umich.edu/factsheets/environmental-justice-factsheet>
  - Univ. of Michigan Energy US Env. Footprint Factsheet: <http://css.umich.edu/factsheets/us-environmental-footprint-factsheet>
  - Univ. of Michigan Energy Social Development Factsheet: <http://css.umich.edu/factsheets/social-development-indicators-factsheet>