

Researching Topic #7 -- SOCIETAL IMPACTS – ECONOMIC IMPACTS at the level of the NATION (focused on the U.S.) [last revised 3/11/2021]

This prompt offers two kinds of help:

- A brief overview of the kinds of questions you might wish to explore as you study how climate change is likely to affect the food supply;
- A suggested strategy for how to search the literature as you prepare to write your paper.

OVERVIEW – CLIMATE AND ECONOMIC IMPACTS at the level of the NATION

Climate change is predicted to have significant impacts on nations' overall economic health. Your research task is to identify the major ways that climate change would have adverse impacts on, say, the U.S. economy IF nothing substantial is done and CO₂ emissions continue to rise. Some types of costs to consider:

- the costs of major “natural” disasters, hurricanes, floods, fire
- the costs associated with protecting coastal cities and/or abandoning coastal cities, relocating whole cities further inland
- losses in certain sectors of the economy (for example: falling agricultural production; losses in the recreation and tourist economy)
- costs of poorer public health

That's just a partial list; the economic impacts of climate change are huge and complex. You should think about other ways climate change can damage a nation's economy, then search the literature for estimated costs for each of those items, assuming the path of “business as usual.” You might wish to start with estimates of total cost (economic impacts summed up over all potential ways climate will have consequences), then focus on a few select issues; for example: costs of protecting or relocating coastal cities in the U.S.; costs of natural disasters, to citizens, to communities, to the insurance industry.

SUGGESTED STRATEGY FOR SEARCHING THE LITERATURE

I recommend the following sequence for searching the literature:

- 1 Start with a search of the most recent **reports from top scientific bodies and government agencies**;
- 2 Search **academic articles** using Google Scholar (scholar.google.com);
- 3 Do a **more general search** using Google or another search engine;
- 4 Search the **best newspapers** and **reputable climate websites**.
(NOTE that I do not suggest using Wikipedia.)

1 Search the most recent **reports from top scientific bodies and government agencies**

(NOTE: There are many excellent reports one can consult. You will find a lot of repetition, so you do not need to consult every source. Here I start with a handful of the most recent reports, followed by a more complete list.)

These publications should, in most cases, supply you with all you need:

IPCC's most recent full set of reports:

<https://www.ipcc.ch/report/ar5/>

EPA: https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-society_.html

U.S. Global Change Research Program:

<https://science2017.globalchange.gov/> (the science)

<https://nca2018.globalchange.gov/> (the impacts)

American Meteorological Society:

www.ametsoc.net/sotc2017/StateoftheClimate2017_lowres.pdf

A more complete list of best scientific and governmental sources:

International

Intergovernmental Panel on Climate Change
United Nations Environmental Programme (UNEP)
World Meteorological Organization

Agencies of the U.S. federal government

Environmental Protection Agency (EPA)
National Oceanographic and Atmospheric Administration (NOAA)
National Aeronautics and Space Administration (NASA)
U.S. Global Change Research Program

Scientific bodies – U.S.

National Academic of Sciences
Climate Change at the National Academies (climatechange@nas.edu)
National Science Foundation

Other professional bodies – American Meteorological Society

2 Search **academic articles** using Google Scholar (scholar.google.com)

(NOTE: Narrow and focus your search by using several phrases in quotes – such as “climate change”. For example, if you are searching for how climate change will increase the frequency of extreme weather events, don’t just enter “climate change,” search, instead for” “climate change” AND “extreme weather events”)

Search terms to use (you may certainly choose others):

“climate change” AND x, where x can be:

GDP (gross domestic product)

“economic impacts”

“economic costs”

“economic costs” AND sea level rise

“economic costs” AND increasing temperatures

“economic costs” AND insurance industry

“economic costs” AND natural disasters OR extreme weather

“economic costs” AND coastal cities

(NOTE: For some citations you find on Google Scholar, you can directly download the PDF. For other citations, you may be able to find and download PDFs if your University library offers on line access to academic journals.)

3 Do a **more general search** using Google or another search engine

Use the same search terms to do a general search on Google or another search engine. This will bring up information more recent than you find on scholar.google.com (it takes several years for research to be published in academic journals).

4 Search the **best newspapers** and **reputable climate websites**

New York Times, Washington Post, The Guardian

On line sources

Climate Central

GRIST

Society of Environmental Journalists

The Daily Climate

Climate Nexus

InsideClimate News

DeSmogBlog

Skepticalscience.com

Yale 350

(NOTE about on line sources: You will run into a lot of denialist disinformation on the internet, on websites, on blogs, on youtube. FYI, skepticalscience.com has a comprehensive list of denialist talking points (and refutations of those talking points).

See, for example: <https://www.skepticalscience.com/argument.php>)

And here are some references that will help you get started:

“Hidden Costs of Climate Change Running Hundreds of Billions a Year,”

<http://news.nationalgeographic.com/2017/09/climate-change-costs-us-economy-billions-report.html>

National Report: The Economic Risks of Climate Change in the United States

<http://riskybusiness.org/report/national/>

Estimating economic damage from climate change in the United States

science.sciencemag.org/content/356/6345/1362

Climate change is going to be very bad for the global economy

<https://www.businessinsider.com/climate-change-effects-global-economy-gdp-2016-12>

The Economic Case for Climate Action in the United States,

<https://feu-us.org/case-for-climate-action-us/>

New articles, late 2018:

Economic impacts for the US – Volume II of the 4th national climate assessment – 2018
(Vol I, on the physical basis, was issued last year)

<https://nca2018.globalchange.gov/>

globally: <http://news.trust.org/item/20181010101500-7h983>

cities:

<https://www.bloomberg.com/news/articles/2018-11-05/facing-climate-change-states-and-cities-look-to-borrow-billions>

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<https://www.wired.com/story/los-angeles-sea-level-rise/?fbclid=IwAR1xu7FxHES2gmy59zj7mgsKsiNp24LSw51nDEJFUNNoRX4xAE7YHGqrD>
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New good sources, March 2021 revision of the website:

The rising cost of climate disasters

<https://www.reuters.com/article/us-climate-disaster-losses/last-decade-most-expensive-for-natural-disasters-report-idUSKBN1ZL00H>

Warning about threat to commodity futures markets

<https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf>

New estimates of likely long term financial impacts

<https://www.bloomberg.com/news/articles/2020-02-21/jpmorgan-warns-of-climate-threat-to-human-life-as-we-know-it?srnd=green>

<https://www.reuters.com/article/us-finance-industry-climate-change/worlds-financial-firms-risk-1-trillion-in-losses-if-slow-to-act-on-climate-change-report-idUSKBN20F2FH>

Warning of financial havoc

<https://www.nytimes.com/2020/09/08/climate/climate-change-financial-markets.html>

McKinsey reports on the economic impacts of climate change

<https://www.mckinsey.com/featured-insights/climate-change#>

<https://www.mckinsey.com/~media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/McKinsey%20on%20Climate%20Change/McKinsey-on-Climate%20Change-Report.pdf>