

EEE! It's Ethical Environmental Economics: A Review

Honors Thesis

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Introduction

The goal of this literature review is to determine the current state of ethical guidelines in environmental economics literature in three different subfields. Contingent valuation/non-market valuation, research incentive-based policy and environmental justice. The contingent valuation section focuses on the ethics of data collection and valuation from communities. The incentive-based policies section focuses on the ethics of policy implementation and its distributional outcomes. And the environmental justice section focuses on the ethics of research measurement and framing of socio-economic issues. There are varying levels of ethics related publications in each concentration, and this literature review pulls together the consensus of how researchers are guided by ethical guidelines and whether there is consistency across the field. The overall goal of this review is to determine the state of ethical research guidelines in key concentrations in environmental economics and recommendations for best research practices and policy implementation. This project is also intended to help understand why ethical guidelines help make economics research more rigorous and why those guidelines are sometimes not implemented.

Methods

There are three different categories of environmental economics research analyzed in this literature review. There is methodological crossover between the three categories of research, but they are also distinct within the field of environmental economics and have respective ethical concerns (Alderman, 2013; Cain, 2023). **The first category** is the study of **environmental justice**. Environmental justice research is about determining inequities in the effects of localized pollution. The ethical research methodologies are important because they impact the story that is told about environmental injustice. Different research and data analysis strategies can tell a

different injustice story from others. This section is about the potentially heterogeneous impacts of environmental justice research and application of its findings on the population. Different research methodologies may result in different distributional impacts. The choice of research method and economic modelling, thus, is inherently and implicitly also a choice about how differential impacts are valued.

The second category is about the treatment of affected populations in survey and participatory research, specifically the treatment of asymmetric information (Alderman, 2013). This category is about **contingent valuation studies** in the environmental economics field where respondents are the main source of data collection. Contingent valuation is also about assumptions about value in the research. It evaluates how goods are valued in environmental economics research, especially issues with measuring willingness to pay and the cultural differences that come along with valuation of non market goods (Alderman, 2013).

The third category, ethics in incentive-based policy design, examines the methodological step of translating non-market valuation research into real-world solutions. This is tied to contingent valuation because the policies' ethical standing is fundamentally linked to the equitable application of the values determined by surveys. The core ethical methodology in this section is the analysis of distributional outcomes, focusing on what kinds of policy instruments most equitably deliver benefits and avoid unintended negative impacts like 'hotspotting' or regressivity. Therefore, this section reviews the ethical research surrounding the design of the economic instrument itself. While the focus extends to implementation impacts, this review frames that analysis as a necessary methodological critique of applied economics research: assessing the rigor and ethical consequences of applying economic theory to affected communities.

The common themes section is a summary of the recommendations offered in each of the three categories and whether there is consensus on ethical research methodologies. The main literature review is divided into three sections, Contingent valuation studies (1), incentive-based policy (2) and environmental justice (3). The methods for collecting papers combined both traditional research in academic databases in addition to using AI as a tool for finding relevant academic sources. I was first introduced to Elicit AI for a literature review I was helping conduct on non-market valuation and it proved to be effective at finding papers. This tool served as a jumping off point for finding relevant papers to this literature review.

For contingent valuation, I designed a prompt for Elicit as follows: “Environmental economics papers that use participatory or survey-based methods (e.g., contingent valuation, choice experiments, field surveys) and involve human subjects or local communities. Focus on studies that address methodological challenges, researcher–participant relationships, or ethical considerations such as informed consent, valuation of non-market goods, or distributional impacts.” From this initial search, I found 25 papers that were relevant to this review and more relevant citations within each paper in the academic web. For the other two sections, I did not use Elicit AI to prompt and instead searched databases and looked through cited sources from other papers. The use of Elicit served as a starting point and led me to other sources that I could use in the second two sections of the paper. Supplementing these papers found in citations, I searched CSU libraries databases for more relevant papers. I also explore examples of a paper in each field to analyze how the authors implement or don’t implement the guidelines suggested. The results from this literature review show that community involvement and engagement in environmental economics research is essential for ethical research and improve the quality and

accuracy of the research. This looks different across each subfield, but it is a clear commonality of ethical methodology in environmental economics.

Ethics in Environmental Justice Research

The ethical consequences of environmental justice studies are determined by how economists frame, measure, and tell the story of injustice. Since there is widespread agreement that marginalized communities face higher rates of pollution, the ethical debate in this area shifts from what is happening to how economists measure, attribute causation, and present solutions for these inequities. As with all research, the story that gets told depends on the variables we focus on. For example, focusing on race compared to pollution variables without implementing controls for socioeconomic variables could lead to results that don't tell the full story of how race relates to pollution exposure (Banzhaf, 2019). However, we have to be careful when separating the variables of race and poverty when discussing environmental justice. When we control for socioeconomic status we might find that the largest indicator of being subjected to high levels of pollution isn't being a certain race, but being poor. But poverty and race are intertwined where people of color are impoverished at a higher rate and are therefore more likely to be subjected to pollution (Banzhaf, 2019). Distinguishing race from class misses a large part of the story where environmental injustices can be tied to class and through that to race (Banzhaf, 2019). Measuring spatial relationships in pollution can be difficult because census tracts or zip codes that are studied vary greatly in size and the pollution does not affect each area homogeneously. This method assumes that the only population affected by the pollution is located in the same unit as the polluter. This can lead to overestimation of environmental injustices in a large area and miss pollution effects across different zip codes or tracts (Banzhaf, 2019; Cain, 2023). There is evidence also that pollution is less monitored in hotspot locations which can lead to an

underestimation of how much some areas are being affected by pollution. In lower income areas, researchers should be wary of the possible underestimation of pollution levels in poorer areas due to less diligent and strategic air quality monitor placements (Grainger, 2019; Hausman, 2021). Even with new technologies that are more advanced at getting accurate pollution readings in hotspot areas, historical trends in previous data may be biased by the issue of poor monitor placement (Grainger, 2019; Cain, 2023). A better strategy is to measure populations affected by the distance from the polluter rather than zipcode (Banzhaf, 2019). Another factor that changes the story outcome in environmental justice research is how the data is aggregated. If it is aggregated across a large area, it might smooth out disparate effects of pollution across race and income groups (Banzhaf, 2019). Environmental inequities are more apparent at a smaller scale like census tract or block group where we can isolate race and income factors better than across a large area (Banzhaf, 2019; Baden, 2007). One of the key objectives for economists is to develop an understanding of the causal relationship between the variables of pollution, race and socioeconomic status (Banzhaf, 2019; Baden, 2007). There is also the issue of how to approach pollution mitigation as it can lead to environmental gentrification where housing prices rise as pollution rates decrease (Banzhaf, 2019; Cain, 2023; Gamper-Rabindran, 2013, Melstrom, 2021). Decisions about environmental justice are most often made by people who benefit from the decisions rather than those who feel the negative effects (Carrick, 2018). Therefore, researchers must consider the policy solutions they recommend and whom it benefits and whom it hurts. For example, a study on emissions trading in California showed that high income areas benefitted more from the program than low income areas (Grainger, 2018). This shows that environmental justice is a complicated issue that is rooted in poverty and the associated lack of voice in the policy process. Cleaning up the pollution is not a perfect solution because people in poverty may

have to relocate if they can't afford to live in a cleaner area (Melstrom, 2021). One suggested solution to the environmental justice issue is to set up a Coasean bargaining system where the community has the input to control pollution levels from local industry (Banzhaf, 2019). In this context, the people would have to have enough bargaining power to impact the industry and minimal transaction costs in legal fees. There are two sides to the ethics of researching environmental justice with an economic perspective, first the research must be designed with deliberate spatial relationships that reflect an accurate measure of the population affected and acknowledgement of gaps in data due to lack of reporting. Secondly, the researcher must be intentional about the recommendations they make based on their research keeping in mind that many EJ policies actually benefit wealthier populations more than impoverished ones. Overall, researchers need to consider how their research informs policy, and to collaborate with affected locals to understand what policies are best for the community that experiences the injustices. Environmental justice research should empower communities to make changes that benefit them with the collaboration of the researcher whose job it is to gather information to drive bargaining with polluters.

Example Environmental Justice Paper

The example I chose within this subfield is about racial disparities in air pollution (Gillingham, K. et. al, 2021). This paper looks at the health impacts of pollution near ports where ships dock and are a detriment to air quality. Here are some of the ways that this paper does follow the ethical guidelines recommended and some of the ways that it falls short of some considerations. This paper uses spatial aggregation of 25 mile distance from the polluter. This follows the ethical recommendation for spatial aggregation and is least likely to misrepresent data of the pollution affected population (Banzhaf, 2019). It also has a sophisticated interplay of race and

socioeconomic variables to understand what demographics are most likely to have health effects from the pollution. From the analysis, the researchers determine that race is the prominent factor in predicting health impacts of port pollution. This follows the guidelines suggested about considering multiple variables of causation in environmental justice in order to tell the whole story (Banzhaf, 2019; Baden, 2007). Another aspect of this paper considers both physical and mental impacts of pollution. This is not a specific part of the ethical recommendation for this subfield, but it does indicate that the researchers have done work and research to understand the full impact that pollution has, not only on the body, but on the mind. Lastly, the policy recommendations that the researchers make are founded in research about policies that already exist in other locations. This is an important consideration when recommending policy because many types of policies that attempt to address environmental injustice have been implemented and have data on how they impacted communities. These researchers used this data from another policy to provide evidence of the benefits of the policy they recommend, which is to regulate ships to turn off their engine when docking and use on shore power instead of the auxiliary engine. This shows that the researchers were careful about the policy they recommend and understood the impact that it could have. They did not however, explore the potential for environmental gentrification in this case, so this ethical guideline is missing from the paper. Overall, this paper is a good example of research done using thoughtful methodologies that consider the impact of their research. One recommendation that could improve this paper is some community engagement to understand how they would support or oppose this policy and how it could be improved to benefit health and reduce socioeconomic harm (Banzhaf, 2019).

Ethics in Contingent Valuation Studies

Contingent valuation studies are designed by researchers to gather information about how a certain population values an environmental service. They are good for understanding the value of goods that are not sold in the market, yet still bring value to people. Survey questions are designed to elicit a stated preference from the respondent gauging how much they are willing to pay for a certain environmental good or service. Key issues identified in contingent valuation studies are the lack of transparency about the goal of the valuation and understanding cultural differences when it comes to putting a monetary value on environmental services (Manero, 2024). These are key issues because there is an imbalance of power and benefit in participatory research between the respondent and the researcher and an imbalance of information. This imbalance of power in participatory research includes but is not limited to, differences in employment conditions, control of funding and capacity development (gaining research prestige and recognition for example) (Bradley, 2018). It is also important to consider the goal of the research and whether it is intended solely for knowledge's sake, or to inform decisions about the population it is researching (Manero, 2024). In contingent valuation it is important to consider whether local communities are consulted in the research and informed about what purpose the research will serve. An ethical concern is the goal of surveying if there is no drive to change policy as a result of the research (Quigley, 2019). Ways that researchers can address these concerns is to educate the communities involved in the research and give community members a role in the research and survey process (Quigley, 2019; Manero, 2024; Alderman, 2013). This community consultation can help drive the trust and effectiveness of the research because collaboration improves the rigor of the research (Davies, 2002). It can also drive better outcomes for the surveyed population if the community themselves are involved in the research process and have the power to advocate for their needs (Manero, 2024; Quigley, 2019). High levels of

community engagement in the survey design itself also improves the quality of the responses, and it reduces the chance that information gets lost in cultural translation (Duran-Morat, 2016). The goal of contingent valuation studies is of course to determine the economic value of environmental goods and services that cannot be determined in the market itself, yet there can be great disparity in how much a respondent is willing to pay based on their own income level (Manero, 2024; Burlile, 2024). This bias can be mitigated some by ensuring the sampled population spans more than one income level (Duran-Morat, 2016). The idea of WTP is difficult to explain to non-economists, especially when there is a language or cultural gap. Therefore, CV methods that are more ethical to use in such research conditions are open-ended questions, single-bounded dichotomous choice questions, and double-bounded dichotomous choice questions compared to stochastic payment card methods (Duran-Morat, 2016). This research on ethical research methodology in contingent valuation studies shows that there are important guidelines in the literature about how to conduct survey research in marginalized populations. First, we must ensure that the communities being surveyed are being both informed of the research being done and the purpose that it serves. Also, we must ensure that the communities are given an opportunity for input in the survey design and bridging cultural gaps in addition to input on how the information is used (Davies, 2002; Manero, 2024; Quigley, 2019; Duran-Morat, 2016). This can be done effectively by finding and training community members to carry out the survey research conducting in-person surveys (Duran-Morat, 2016, Hanneman, 1994). Secondly, we must understand that there are gaps in WTP across income levels and gaps in understanding of what WTP means (Rai, 2012; Manero, 2024). This can lead to underestimates of the value of goods and services in low income communities (Rai, 2012). Conversely, in order to fall in line with a respondent's self-image as a person who cares about the environment, the respondent is

likely to overstate their WTP for environmental goods or services that don't directly improve their lives (Schubert, 2016). Some explanations for why researchers are not consistently aligned with these ethical guidelines are generally due to lack of resources to either drive policy or to train local personnel in their research (Manero, 2024; Duran-Morat, 2016). Training local personnel to carry out survey research can be challenging at first because the researcher has to invest resources into finding qualified people and spending time collaborating with local communities. Ultimately, this investment in connection with local communities and open collaboration improves the quality of the research because the researcher understands the population they are researching better and the population understands the research better (Duran-Morat, 2016).

Contingent Valuation Example

The example I chose for contingent valuation studies is about indigenous valuation of water (Miller et al., 2015). This paper was a good example of how to design and implement a contingent valuation study. The main ethical strength of this study is the depth of community input and collaboration used in the methods. There was a focus group of Maori indigenous people to have input on the survey questions and how they would inform policy decisions. Maori input was especially important in the survey design because they have different indicators for environmental and water health than traditional quantitative methods. These indigenous indicators were more subjective and qualitative, and they were important to include in the survey because it is how the Maori culturally understand the quality of the water. Implementing this method of designing the survey made the responses more accurate and comprehensive of how Maori people value the water quality in their environment. These indigenous indicators contribute a more complex and ecosystem centered understanding of what ecosystem services

are impacted by water quality. This way Maori people were able to choose the survey attributes to ensure the survey data would capture the metrics that are most important to the indigenous population. Also, the focus group understood what would be most salient to the indigenous population and what the people would be likely to support in terms of policy.

Ethics in Incentive-Based Policies

Incentive-based policies are designed to achieve a societal optimal outcome that reduces the impact of externalities and reaches the highest aggregate efficiency. As a Pareto efficient outcome, where everyone is better off and no one is worse off, is nearly impossible to achieve, the literature review on incentive-based policies focuses on how and whether market-based policies, such as emissions trading programs and pollution taxes, exacerbate inequities (Banzhaf, 2019; Magnetti, 2023). Incentive-based policies, rather than just command-and-control policies, can cause an increase of pollution output in certain locations where firms are not subject to the same environmental taxes (Banzhaf, 2019). This issue is known as hotspotting and it is a well-known impact of incentive-based policies. High polluting firms are more likely to exist in low income areas and therefore are less likely to clean up their air and water pollution because it is more costly than paying the environmental tax (Banzhaf, 2019; Magnetti, 2023; Grainger, 2018). There is some evidence that in some cases, command-and-control policies improve pollution outcomes for lower income areas more than incentive-based policies (Banzhaf, 2019; Magnetti, 2023). Carbon taxes are also argued against because they can have a regressive impact as lower income households will spend a larger percentage of their income on higher fuel prices (Magnetti, 2023; Caney 2011). However, this can be mitigated if the tax revenues from carbon taxes are put back into these communities in ways that benefit them such as a reduction in other taxes that are regressive as well (Magnetti, 2023; Caney, 2011). In order to improve the ethics of

incentive-based policies and reduce the regressiveness of higher prices as a result, this money must go back. There are also concerns that there is little input from lower income communities when carbon taxing decisions are being made. This leads to unintended impacts and a loss of possible knowledge and collaboration with the communities that are affected most by incentive-based policies and by pollution (Magnetti, 2023; Pearse, 2014). Suggestions to improve community involvement include a bottom-up carbon taxing structure (Magnetti, 2023; Sayegh, 2019). Several papers explore the possible moral hazard side of carbon taxing where firms are essentially buying the right to pollute, however, other evidence shows that emissions taxes are an effective method of reducing total carbon output in a way that can maximize total surplus between the polluters and the people being polluted (Sayegh, 2019; Caney, 2011; Pearse, 2014). Overall, the consensus on what market-based policies are most ethical is ambiguous and varies between places, income levels and policies (Cain, 2023). Command-and-control policies like the Clean Air Act have shown to have a more equitable impact on pollution levels in low income areas and across racial groups (Cain, 2023; Currie, 2023). There are several studies about the ethics of incentive-based policies and literature review of those studies with different focuses. Some focus on the ethics of emissions trading, some focus on just carbon taxes and some take a more comprehensive route to understand the ethics of carbon pricing and incentive based policy as a whole (Magnetti, 2023). This area of environmental economics research has been extensively explored with an overall consensus that carbon taxes are the most ethical incentive-based policy so long as those tax revenues go back to the community in some way (Beck, 2015). Another consensus in the literature is that carbon offsetting is one of the least ethical incentive-based policies because the benefits are felt far from the population affected by the pollution (Klinsky, 2015). Therefore, carbon taxes are one of the least ethically criticized

tools of incentive-based policy, whereas carbon offsetting is highly criticized for being unethical (Magnetti, 2023). There are stipulations to both statements where the actual ways that tax revenues are used highly influence the ethical standing of carbon taxes, overall, the literature agrees that having carbon pricing is generally more ethical than having no incentive to reduce pollution. So, despite ethical and moral imperfections in all market incentive policies, any policy that reduces pollution anywhere, is ethically better than having no policy in place at all (Magnetti, 2023; Pearse, 2014). It is possible however, that command and control policies are the most equitable option to address pollution inequities and issues in environmental justice (Cains 2023; Currie, 2023).

Incentive-Based Policy Design Example

This paper was about the SO₂ trading program and how it impacted equity (Ringquist, 2011). It looked at whether the cap and trade program that was introduced contributed to hotspotting. It specifically studied and analyzed variables of race, income and education levels to understand where the SO₂ output was increased after the program implementation. From the research I did on incentive-based policies, hotspotting is one of the biggest concerns with incentive-based policies. This type of research is important to understand the impact of these policies and how they could be changed to reduce any negative impact of incentive-based policy. The spatial aggregation techniques used were both zip codes and 3 mile radius. This goes back to ethical methods in environmental justice research and how to aggregate over geography. This paper discussed whether this program was trading equity for efficiency. This is an important consideration with the design and implementation of incentive-based policies. Generally the policies are designed to have the most efficient outcome overall, but that can mean that some areas end up worse off than they started even though the total aggregate outcome is better.

Another aspect that this paper considered was the importance of timing studies about a policy to accurately measure the impact. Previous research on this topic showed no regressive outcomes with the SO₂ program, but the studies were done within the first year of the policy and therefore do not reflect the long term effects. Even this study, done in 2011, is still within the first couple years of the program and likely misses even more long term effects of this policy.

Barriers to Ethical Research Implementation

There are many driving factors for why researchers may not follow the recommendations and consensus that come from this research. We can speculate about the intent of the researchers and put them in a more malevolent light of caring only about the research, the process of publication, receiving academic accolades and praise and not about how it impacts the community involved in the research (Manero, 2024). There is also evidence that some researchers have purposefully hidden or misrepresented data to prevent the results from showing extreme inequities (Grainger, 2019; Cain, 2023; Hausman, 2021). Some even suggest that the field of economics incentivizes such research behavior by letting go of ethically rigorous storytelling to favor more epistemologically rigorous research (Manero, 2024; Porter, 2018). This means that researchers take shortcuts in their research process in order to prioritize data and academic rigor above all. Each category reviewed has its own ethical research challenges. In contingent valuation studies a lack of resources for training local personnel to conduct surveys leads to ethical and epistemological compromises. For example, researchers might use simpler survey methods that reduce the quality of the survey (Durand-Morat, 2016). In incentive-based policies the economic incentive to prioritize efficiency over distributional equity can be a major barrier in policy design. Sometimes the most efficient outcome is not the most equitable and it can harm the most vulnerable people the most. In environmental justice research the incentive to produce clean,

quantifiable links can lead researchers to exclude essential variables like race or to rely on biased spatial aggregation .

Common Themes Across Research Areas

A main theme of ethical environmental economics research in these three categories is that community input matters. It matters in the design and implementation of surveys in contingent valuation research, it matters in how carbon pricing revenues are redistributed and it matters in managing environmental injustices. Another common theme across each field is how the researcher can influence the policies that are chosen to address issues they find. The information revealed by environmental economics research has the power to drive policy which means the researcher has the power of making policy recommendations. The recommendations they make should not only be driven by efficiency, but by equity. Research is important, and it becomes better and more effective when researchers collaborate with the communities. Researchers bring their subject matter expertise, but they usually don't know what it is like to truly live in the economic conditions they are studying (Bradley, 2018). Life experience counts for a lot of knowledge and it makes community input extremely valuable. In western research culture we think of research as using systemic methods to generate new knowledge or understanding (Porter, 2018). This is a useful and accurate way to think about research. We can also think of it from the perspective of indigenous research scholar Shawn Wilson, "Research is a ceremony...the purpose of any ceremony is to build stronger relationships or bridge the distance between our cosmos and us" (Wilson, 2008, p. 137). That is exactly what this literature review on ethical research methods suggests, that the most important part of research is building relationships. These relationships are mutually beneficial, the researcher gets higher quality

research and results, and the community (or co-researchers) get to be heard and help make change in their community.

Reflections and Acknowledgments

Finding papers always leads to finding more papers from citations as academic literature interconnects. Researchers are always jumping off from the most recent information that exists and attempting to expand understanding from there. As I discussed with Dr. Kroll in our honors thesis meetings, not all research serves as an epiphany that will change the lives of many and shift our understanding of the world. Some research will serve as a stepping stone to get to those epiphanies and changes in thought and understanding that the world needs. We discussed a quote that has an eternal (as far as our lives go) place on our CSU campus. Isaac Newton's quote lives on a large statue stating "If I have seen further than others, it is only because I stood on the shoulders of giants." Literature reviews have an important place in academics because they evaluate where we stand and everything we have learned before attempting to grow that knowledge for the next researcher. They help us understand how far we have come and where we want to go next. It is amazing that so many things have been learned, and so many things have been researched, yet almost every paper identifies an imperfection or "research gap" that indicates we can always learn more and understand our world better than we do now. This literature review attempts to understand the current place of moral and ethical guidelines and explain why those are important in environmental economics, and it also highlights the places that are missing or lack consensus.

References

- Alderman, H., Das, J., & Rao, V. (2013). *Conducting ethical economic research: Complications from the field* (Policy Research Working Paper No. 6446). World Bank.
<http://hdl.handle.net/10986/15558>
- Baden, B., Noonan, D., & Mohana Turaga, R. (2007). Scales of justice: Is there a geographic bias in environmental equity analysis? *Journal of Environmental Planning and Management*, 50(2), 163–185.
- Banzhaf, S., Ma, L., & Timmins, C. (2019). Environmental justice: The economics of race, place, and pollution. *Journal of Economic Perspectives*, 33(1), 185–208.
<https://doi.org/10.1257/jep.33.1.185>
- Beck, M., Rivers, N., Wigle, R., & Yonezawa, H. (2015). Carbon tax and revenue recycling: Impacts on households in British Columbia. *Resource and Energy Economics*, 41, 40–69.
<https://doi.org/10.1016/j.reseneeco.2015.04.005>
- Bradley, K., Gregory, M. M., Armstrong, J., Arthur, M. L., & Porter, C. M. (2018). Graduate Students Bringing Emotional Rigor to the Heart of Community-University Relations in Food Dignity. *Journal of Agriculture, Food Systems, and Community Development*, 8(A), 221–236. <https://doi.org/10.5304/jafscd.2018.08A.003>
- Buckley, R. (2011). The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations. *Austral Ecology*, 36, e34–e35.
<https://doi.org/10.1111/j.1442-9993.2011.02253.x>
- Burlile, A., & Maniloff, P. (2024). Equity weighting increases valuations when using real-world data. *Journal of Environmental Economics and Management*, 128, 103067.
<https://doi.org/10.1016/j.jeem.2024.103067>

- Cain, L., Hernandez-Cortes, D., Timmins, C. D., & Weber, P. (2023). *Recent findings and methodologies in economics research in environmental justice* (CESifo Working Paper No. 10283). SSRN. <http://dx.doi.org/10.2139/ssrn.4368212>
- Caney, S., & Hepburn, C. (2011). Carbon trading: Unethical, unjust and ineffective? *Royal Institute of Philosophy Supplement*, 69, 201–234.
<https://doi.org/10.1017/S1358246111000282>
- Carrick, J., Bell, D., Fitzsimmons, C., Gray, T., & Stewart, G. (2022). Principles and practical criteria for effective participatory environmental planning and decision-making. *Journal of Environmental Planning and Management*, 66(1), 1–24.
<https://doi.org/10.1080/09640568.2022.2086857>
- Currie, J., Voorheis, J., & Walker, R. (2023). What caused racial disparities in particulate exposure to fall? New evidence from the Clean Air Act and satellite-based measures of air quality. *American Economic Review*, 113(1), 71–97.
<https://doi.org/10.1257/aer.20191957>
- Durand-Morat, A., Wailes, E. J., & Nayga, R. M., Jr. (2016). Challenges of conducting contingent valuation studies in developing countries. *American Journal of Agricultural Economics*, 98(2), 597–609. <https://doi.org/10.1093/ajae/aav068>
- Gamper-Rabindran, S., & Timmins, C. (2013). Does cleanup of hazardous waste sites raise housing values? Evidence of spatially localized benefits. *Journal of Environmental Economics and Management*, 65(3), 345–360. <https://doi.org/10.1016/j.jeem.2012.12.001>
- Gillingham, K., Huang, P., & National Bureau of Economic Research, issuing body. (2021). Racial disparities in the health effects from air pollution : evidence from ports. National Bureau of Economic Research.

- Grainger, C., & Ruangmas, T. (2018). Who wins from emissions trading? Evidence from California. *Environmental and Resource Economics*, 71, 703–727.
<https://doi.org/10.1007/s10640-017-0180-1>
- Grainger, C., & Schreiber, A. (2019). Discrimination in ambient air pollution monitoring? *AEA Papers and Proceedings*, 109, 277–282. <https://doi.org/10.1257/pandp.20191063>
- Hanemann, W. M. (1994). Valuing the environment through contingent valuation. *Journal of Economic Perspectives*, 8(4), 19–43. <https://doi.org/10.1257/jep.8.4.19>
- Hausman, C., & Stolper, S. (2021). Inequality, information failures, and air pollution. *Journal of Environmental Economics and Management*, 110, 102552.
<https://doi.org/10.1016/j.jeem.2021.102552>
- Klinsky, S. (2015). Justice and boundary setting in greenhouse gas cap and trade policy: A case study of the Western Climate Initiative. *Annals of the Association of American Geographers*, 105(1), 105–122. <https://doi.org/10.1080/00045608.2014.960043>
- Magnetti, J., Dominioni, G., & Gordijn, B. (2025). Ethics of carbon pricing – a review of the literature. *Climate Policy*, 25(5), 772–791.
<https://doi.org/10.1080/14693062.2024.2416493>
- Manero, A., Nikolakis, W., Woods, K., & Grafton, Q. R. (2024). Non-market valuation and Indigenous Peoples' values: Researcher constraints and policy impacts. *Environmental Science & Policy*, 153, 103679. <https://doi.org/10.1016/j.envsci.2024.103679>
- Melstrom, R., & Mohammadi, R. (2021). Residential mobility, brownfield remediation and environmental gentrification in Chicago. *Land Economics*, 98(1), 060520-0077R1.
<https://doi.org/10.3368/le.98.1.060520-0077R1>

- Miller, S. & Tait, Peter & Saunders, C. (2015). Estimating indigenous cultural values of freshwater: A choice experiment approach to Māori values in New Zealand. *Ecological Economics*, 118, 207-214. [10.1016/j.ecolecon.2015.07.031](https://doi.org/10.1016/j.ecolecon.2015.07.031).
- Pearse, R. (2014). Carbon trading for climate justice? *Asia Pacific Journal of Environmental Law*, 17, 111–130. <https://search.informit.org/doi/10.3316/informit.926366615212875>
- Porter, C. M. (2018). Triple-rigorous storytelling: A PI's reflections on devising case study methods with five community-based food justice organizations. *Journal of Agriculture, Food Systems, and Community Development*, 8(Suppl. 1), 37–61. <https://doi.org/10.5304/jafscd.2018.08A.008>
- Quigley, D., Levine, A., Sonnenfeld, D. A., et al. (2019). Survey on using ethical principles in environmental field research with place-based communities. *Science and Engineering Ethics*, 25, 477–517. <https://doi.org/10.1007/s11948-017-9981-4>
- Rai, R. K., & Scarborough, H. (2012). *Non-market valuation in developing countries: Estimating benefits of managing invasive plants using a choice experiment*.
- Ringquist, E.J. (2011), Trading Equity for Efficiency in Environmental Protection? Environmental Justice Effects from the SO2 Allowance Trading Program*. *Social Science Quarterly*, 92: 297-323. <https://doi.org/10.1111/j.1540-6237.2011.00769.x>
- Schubert, C. (2016, February 9). *Green nudges: Do they work? Are they ethical?* SSRN. <http://dx.doi.org/10.2139/ssrn.2729899>
- Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Fernwood Publishing.