Policy Applications of the Washington Environmental Health Disparities Map

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Key Points

- In Washington, state and local agencies are starting to use environmental impacts mapping for investments, policies, and program decisions.
- The new Washington Environmental Health Disparities Map is a science-based tool that combines data on pollution and vulnerability to pollution to compare the cumulative impacts for Washington communities statewide.
- The Map has many applications, including designating communities with cumulative impacts, prioritizing resources, hiring, and enforcement; and improving land use regulation, public participation and accountability, and data accuracy.
- States like California have used a similar cumulative impacts map to prioritize billions of dollars in environmental investments and to improve the effectiveness of their policies.

Background

Many communities live near multiple sources of pollution including industrial facilities, hazardous waste sites, and traffic-related pollutants. Communities with multiple sources of pollution are predominantly low-income and communities of color and also face increased vulnerability to pollution as a result of factors such as unemployment and low education. A combination of multiple pollution sources and increased vulnerability to pollution results in higher cumulative impacts.[1]

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The new Washington Environmental Health Disparities Map is made up of 19 indicators of pollution and vulnerability to pollution as developed by a cross-sector collaboration among researchers, government agencies and community-based organizations. Indicators include race/ethnicity, poverty, toxic releases from facilities, proximity to hazardous waste facilities, lead risk from housing, transportation expense, and low birth rate. Each Washington census tract is given a cumulative impact score, ranging from 0 to 10, based on the 19 indicators. Census tracts with high cumulative impact scores have high pollution and vulnerability to pollution. The map was developed to characterize impact from stressors that can affect health and is not a measure of health risk. For more information visit: www.deohs.washington.edu/washington-state-envmap

Policy Implications

Chemical-by-chemical and source-specific assessments of pollution is the traditional approach used to inform environmental and public health decision making by governmental agencies and policy makers. At present, consideration of cumulative impacts generally occurs at the discretion of the decision-maker. Although there may be recognition of and desire to incorporate cumulative impacts by decision-makers, this requires analysis methods and tools to be available. The Environmental Health Disparities Map enhances the ability of governmental agencies and policy makers to more systematically factor cumulative impacts into their decision-making. The use of a similar tool in California, known as CalEnviroScreen, was developed by the California Environmental Protection Agency and the Office of Environmental Health Hazard Assessment to identify communities with high pollution and vulnerable to pollution. Below we illustrate the benefits of integrating a cumulative impact tool into decision-making drawing from various applications and examples.

[1] http://www.ucc.org/environmental-ministries_toxic-waste-20

Applications and Examples

All Washington residents should have the opportunity for good health and to live in a healthy environment. The Washington Environmental Health Map creates the opportunity to inform environmental policy and direct resources to the communities facing the greatest cumulative impacts. The achievement of good health and a healthy environment is the result of factors and decisions taken by businesses, government, civil society and households. The State of Washington has a critical role in creating laws that govern those decisions and in allocating public resources. Some of the areas in which Washington State plays an active role and could employ this tool for targeted resources include:

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Designating Disadvantaged Communities

Agencies can elect to designate disadvantaged communities, above a certain threshold -- for example top twenty-five percent-- as areas for concentrated environmental and public health attention and action. By designating census tracts it may be easier for agencies and other actors to direct policy and investments to those areas and identify what interventions are taking place, where are the gaps and track progress over time.

- In California, Assembly Bill (AB) 1550 (Gomez, Statutes of 2016) requires twenty-five percent of the proceeds from the Greenhouse Gas Reduction Fund go to projects that provide a benefit to disadvantaged communities. For the purposes of AB 1550, the California Environmental Protection Agency, after a series of public workshop, designated areas representing the twenty-five percent highest scoring census tracts in CalEnviroScreen as "disadvantaged communities".[2] This designation has been widely used in policy, including Assembly Bill (AB) 2722 (Burke, Statutes of 2016). AB 2722 awards monies to neighborhood-scale projects that will reduce greenhouse gas emissions and provide local, environmental, economic, and health benefits to disadvantaged communities.

Resource & Funding Prioritization

The Washington Environmental Health Disparities Map can be used to ensure that resources are being invested in census tracts with high cumulative impacts. This can be done through specifying designated disadvantaged communities to receive a proportion or the entirety of a funding pool or resource, through scaling a resource investment proportional to the risk level, or through other strategies that direct investment. Environmental benefits can include energy conservation and renewables, affordable housing near transit, clean and efficient transportation options, and natural resources that lower pollution. By focusing on the highest scoring census tracts from the Washington Environmental Health Disparities map the state can allocate investments, programs, and other resources to ensure environmental and public health equity.

- In California, as of 2018, fifty-one percent of the 2.0 billion in cap-and-trade auction proceeds, are funding projects that provide benefits to *disadvantaged communities* identified by CalEnviroScreen[3]. This has included 60,000 projects installing efficiency measures in homes, over 330 transit agency projects funded, adding or expanding transit options, over 1,600 affordable housing units under

[2] https://oehha.ca.gov/calenviroscreen/sb535
[3] https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2018_cci_annual_report.pdf

contract, $267 million to collect neighborhood level air pollution from communities most burdened, and between 2016-2017 $500,000 in community capacity building and technical assistance.

Jobs & Hiring Prioritization

The Washington Environmental Health Disparities Map can also be used to get the most out of every investment as a reference for hiring criteria. Priority hire or 'local hire' is a policy that requires hiring organizations to hire from a certain area. While this is most often used to address economic distress, it can also be used to reduce environmental health distress by creating jobs and skills for workers in communities with high cumulative impacts.

- The City of Seattle passed a priority hire law in 2015 that sets contract requirements for the percentage of hours worked by residents of economically distressed ZIP codes on public projects through master community workforce agreements in collaboration with labor unions, contractors and community partners. After 13 projects the program has doubled the share of workers from economically distressed areas from twelve percent to twenty-six percent and worked 185 percent more hours on applicable projects equating to $7 million more in wages.

Enforcement and Inspection Prioritization

The Washington Environmental Health Disparities Map can help inspectors focus their time and efforts not just to those projects with the greatest potential for violations, but also to the areas that may be most impacted by these violations. Inspectors may also be able to better target their inspections by having information about which environmental hazards are ranked highest in the area that they are inspecting.

- As a result of resident concerns for lack of compliance and enforcement actions in their community, the California Environmental Protection Agency conducted two pilot initiatives to coordinate cross-media and multi-agency enforcement of environmental laws intended to protect public health and the environment. These pilot initiatives used CalEnviroScreen to identify which communities to prioritize efforts, including community consultations, inspections, and enforcement coupled with compliance assistance. The success of these two pilot initiatives led to a permanent state wide staffed unit known as the Environmental Justice Task Force dedicated to ensuring compliance and enforcement in disadvantaged communities identified by CalEnviroScreen[4]. Currently, there have been four successful cross-media multi-agency initiatives throughout California state. The most recent initiative inspected 150 facilities and 300 heavy-duty trucks over the course of 3 months. Of the 138 violations, 135 made corrections and were deemed compliant with support from a compliance assistance course.[5]

Land-use Planning & Permitting

The Washington Environmental Health Disparities Map can be used to avoid adding new environmental hazards to communities that have high cumulative impacts. Planning and permitting agencies can take into account the existing cumulative impacts to ensure a higher level of assessment when issuing permission for proposed facilities like incinerators. The tool can also be used for affirmative planning to boost environmental equity, by, for example, using the tool in comprehensive plans, community plans, or land use changes to mitigate risks where they're highest, or, to require planning for environmental justice efforts for jurisdictions that have census tracts with high cumulative impacts.

[4] https://calepa.ca.gov/enforcement/environmental-justice-compliance-and-enforcement-task-force/
[5] https://www.arcgis.com/apps/Cascade/index.html?appid=3c70b0d713b940b9b508e172996da95a

- In California, Senate Bill 1000 (Leyva, Statutes of 2016) requires jurisdictions (a city, a county, or a city and county) that have one or more disadvantaged communities to either adopt a standalone environmental justice element or integrate environmental justice goals, objectives, and policies into other elements of their General Plans. The bill also includes a process for communities to become meaningfully involved in the decision-making processes that govern land use planning in their neighborhoods.

Public Participation & Local Accountability

> *There is solid scientific evidence that community engagement reduces health disparities due to factors such as improved knowledge and self-efficiency .*

Communities burdened with high cumulative impacts are less likely to participate in public processes as a result of lack of outreach and information dissemination, lack of resources to attend such as child care and transportation, language barriers, health issues, and time. High cumulative impact communities systematically suffer from worse health outcomes than communities with low cumulative impacts resulting in health disparities. There is solid scientific evidence that community engagement reduces health disparities due to factors such as improved knowledge and self-efficiency. Therefore, another potential use of the Washington Environmental Health Disparities Map is targeting improved community engagement in census tracts with high cumulative impacts to improve public health. Additional benefits from increased community engagement include reciprocal knowledge translation, improved community-stakeholder relationships, and improvements in the Washington Environmental Health Disparities Map as new concerns are identified and data sources are developed to respond to those concerns.

- In California, disadvantaged communities, as designated by CalEnviroScreen, use CalEnviroScreen to identify environmental and public health initiatives. For example, a community organization reached out to the California Environmental Protection Agency to collaborate on collecting water quality data to improve the CalEnviroScreen data for their community.[6]
- In 2017, California had over 350 outreach events to better connect disadvantaged communities with funding opportunities.[7] As a result, community engagement efforts have risen 75 percent from 2016.

Precedent in Washington

There are efforts underway to use cumulative impacts assessment in Washington State, although they are relatively new and not as widely adopted. The Washington Environmental Health Disparities Map can be used as a source of comparison and complement existing cumulative impact tools.

At the state level, the Washington Tracking Network Information by Location (IBL) Tool, which hosts the Environmental Health Disparities Map, has several indexes that provide a cumulative rank of health and socio-economics factors. The Washington State Department of Ecology (Ecology) is using the IBL tool in various decision-making processes. For example, IBL is being used to assist in awarding Volkswagen settlement funds. Over $20 million in settlement funds were recently awarded to school districts and public transit fleets to buy electric or low-emission buses.

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[6] https://oehha.ca.gov/calenviroscreen/report/water-quality-assessment-rural-communities-imperial-county

[7] https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2018_cci_annual_report.pdf

The Washington Department of Natural Resources developed an index of cities in Washington state to triage areas that had higher populations with lower incomes and ethnic diversity and that were below national average for tree canopy, rapidly urbanizing, and had known storm water management issues. The index is used to prioritize resources in the Urban and Community Forestry Program, including local grants.

At the local level, King County has various mapping projects that collect local data for place-based, health, environment and equity outcomes. One mapping project is known as the King County's Climate & Equity Story Map which is a tool under development that measures projected climate impacts with socioeconomic equity layers to communicate disproportionate impacts and vulnerabilities of climate change. Another mapping project includes the King County Communities of Opportunity interactive data sets that help track measures of health, housing, economic opportunity and community connections to calculate quality of life and social well-being of residents.[8] Lastly, the King County Land Conservation Initiative Story Map measures access and availability of open space across King County and will be used to invest $160 million in communities that lack public open space. [9] The City of Tacoma has developed a mapping tool called the Tacoma Equity Index that layers social, economic, and environmental elements, like tree canopy and open space to create a score for each block group.[10] They have just completed the development phase and are exploring the best applications.

Conclusion

Understanding the cumulative impacts from the complex interaction between pollution and vulnerability can allow for informed decision-making to improve public health and the environment. The Washington Environmental Health Disparities Map is a science-based tool that allows for cumulative impact comparison between census tracts and allows diverse agencies, policymakers, and community based organizations to make informed decisions. For more information current state policy opportunities that are accounting for cumulative impacts contact Front and Centered (www.frontandcentered.org/about-us/

References

http://www.ucc.org/environmental-ministries_toxic-waste-20

https://oehha.ca.gov/calenviroscreen/sb535

https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2018_cci_annual_report.pdf

https://calepa.ca.gov/enforcement/environmental-justice-compliance-and-enforcement-task-force/

https://www.arcgis.com/apps/Cascade/index.html?appid=3c70b0d713b940b9b508e172996da95a

https://oehha.ca.gov/calenviroscreen/report/water-quality-assessment-rural-communities-imperial-county

https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2018_cci_annual_report.pdf

https://www.coopartnerships.org/work/

https://www.kingcounty.gov/services/environment/water-and-land/land-conservation/StoryMap.aspx

http://www.arcgis.com/home/webmap/viewer.html?webmap=4b7b855cff224df89c3f6633f1faa859&extent

[8] https://www.coopartnerships.org/work/
[9] https://www.kingcounty.gov/services/environment/water-and-land/land-conservation/StoryMap.aspx
[10] http://www.arcgis.com/home/webmap/viewer.html?webmap=4b7b855cff224df89c3f6633f1faa859&extent