



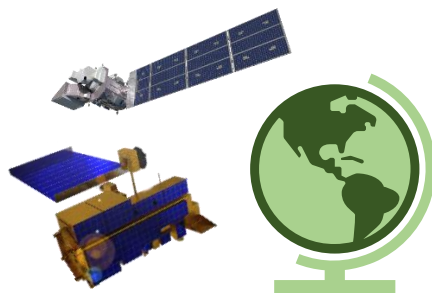
# Equity & Environmental Justice at NASA



We all share the same planet. And yet, as our climate changes we will experience those impacts differently. The communities facing the greatest risks to their health and wellbeing are often left out of policy discussions. How can we help ensure everyone has a voice? That's where NASA Earth Action's Equity & Environmental Justice (EEJ) program comes in. EEJ will engage disadvantaged communities across the United States to advance equitable solutions using Earth observations.

## Empowering Communities

NASA provides many tools, data sets and capacity building resources that can help protect the well-being of vulnerable communities. Through our partnerships, we can elucidate the injustices and inequities of disadvantaged communities. This understanding helps us address specific needs and challenges in communities. Together, we can ensure decision-makers have the information they need to advocate for equity.



## Creating Equitable Opportunities

Building a more equitable future in the face of climate change is no small feat. It will take a diverse group of people with the skills and resources necessary to advocate for change. The EEJ Program leverages training and opportunities across various NASA programs to advance community understanding and use of Earth Observations. These programs include:

<b>DEVELOP Projects</b>	<b>ARSET Trainings</b>	<b>Prizes &amp; Challenges</b>
<b>Research Opportunities in Space and Earth Sciences (ROSES)</b>	<b>Future Investigators in NASA Earth and Space Science and Technology (FINESST)</b>	
<b>And more!</b>		

**Our aim is to create opportunities for people to utilize Earth observations that can amplify their power with enhanced tools to inform and protect their community.**

## EEJ Opportunities at NASA

- *For Individuals:* Internships through OSTEM & NASA DEVELOP
- *For Organizations:* submit a project idea for a NASA DEVELOP feasibility project



## Getting Involved

For more information, and to subscribe to the NASA EEJ newsletter, head to our site linked below!

<https://appliedsciences.nasa.gov/what-we-do/capacity-building/environmental-justice>

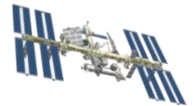




# Earth Observations for Environmental Justice

Check out these examples of how Earth Observations (EO) can help address different Equity and Environmental Justice. Satellite data can inform decision making and intervention strategies. We also use EO to better understand how communities are impacted by climate change and who is vulnerable to those effects.

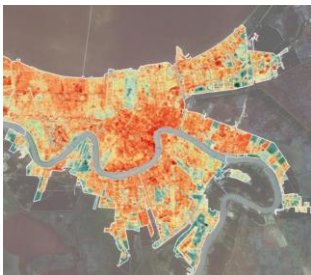
## Health and Air Quality



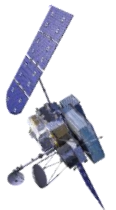
Poor air quality is an issue prevalent in areas with concentrated industry and transportation, which can be exacerbated by geographic features. Health risks associated with air pollution have also been linked to communities with low socioeconomic status and minority communities. EO and satellite data can provide consistent information about air quality conditions in both the present and the past over a large area. Additionally, this data can be useful in emergency situations where detection of extreme changes is needed.

Some limitations are present in terms of obtaining accurate data at an exact location. Remote sensing technology can only provide data about the distribution of air at regional, national, and global scales. This poses challenges for incoming EJ and decision-making in frontline communities and neighborhoods within pockets of cities and other precise locations.

## Urban Heat



Urban heat poses a significant risk/affect to public health – specifically for communities with an excess of structures such as large buildings, roads, and other structures. These structures absorb and re-emit the sun's heat, producing more heat than a more natural landscape. The effects of Urban Heat disproportionately affect communities of low socioeconomic status and urban/minority communities. These affects have led to health impacts such as mental illness, heat stroke, kidney disease, and even mortality.



EO and satellite data can offer consistent information about environmental conditions in specific communities, while also providing information that can drive planning and green space decisions on a wider scale. However, there are some limitations to EO and satellite data in relation to urban heat. Limitations include the difficulty of incorporating change into areas which are already built and urbanized. The data itself will not drive change, but findings can be integrated into policy and planning.



**Learn more about EO for Environmental Justice!**

**ARSET Trainings: Free online trainings on using NASA's satellite data**  
<https://appliedsciences.nasa.gov/what-we-do/capacity-building/arset>