1 00:00:01.300 --> 00:00:02.420 - So, hi everyone,
2 00:00:02.420 --> 00:00:03.460 welcome to join us
3 00:00:03.460 --> 00:00:05.080 and thank you for your patience
4 00:00:05.080 --> 00:00:08.530 and welcome to the Yeltsin town country
5 00:00:08.530 --> 00:00:09.850 to the house seminar,
6 00:00:09.850 --> 00:00:12.850 I'm today's moderator, Kai Chen,
7 00:00:12.850 --> 00:00:14.100 Assistant Professor
8 00:00:14.100 --> 00:00:16.420 at the Yale School of Public Health.
9 00:00:16.420 --> 00:00:19.180 If you have any questions during the presentation,
10 00:00:19.180 --> 00:00:21.550 please use the chat box
11 00:00:21.550 --> 00:00:24.380 and the speaker will answer them
12 00:00:24.380 --> 00:00:26.490 at the end of the seminar.
13 00:00:26.490 --> 00:00:28.370 So today, we're very pleased
14 00:00:28.370 --> 00:00:32.260 to have Dr. Michael Mendez join us
15 00:00:32.260 --> 00:00:34.750 who will talk about the vulnerabilities
16 00:00:34.750 --> 00:00:36.520 of Latino communities
17 00:00:36.520 --> 00:00:40.430 during the Thomas Fire in California.
18 00:00:40.430 --> 00:00:44.280 So Dr. Mendez is an Assistant Professor
19 00:00:44.260 --> 00:00:47.210 at the School of Social Ecology
20 00:00:47.210 --> 00:00:50.740 of the University of California, Irvine.
21 00:00:50.740 --> 00:00:53.840 So he has more than a decade experience
22 00:00:54.860 --> 00:00:57.360 in the public and private sectors
23 00:00:57.360 --> 00:00:59.710 and he was recently appointed
24 00:00:59.710 --> 00:01:02.300 by the National Academy of Science,
25 00:01:02.300 --> 00:01:04.350 Engineering and Medicine
26 00:01:04.350 --> 00:01:06.940 to the board on Environmental Change
27 00:01:06.940 --> 00:01:07.893 and Society.
28 00:01:08.980 --> 00:01:11.010 He recently has a new book published
29 00:01:11.010 --> 00:01:14.280 by the Yale press
named "Climate Change from the Streets", which provides an urgent and timely analysis of the continuous policies of incorporating environmental justice into global climate change process. So without further ado, I'm handing over to Dr. Michael Mendez and looking forward to his talk. Great, good morning. Thank you, such a pleasure to be back at Yale at least through Zoom. So thank you to Robert and everyone with the Climate and Health Center at the Yale School of Public Health. I got mixed up with the time so but I’m happy. It’s online when I got the email. So today I’m gonna be talking about some research I actually started at the Yale School of the Environment, I’m looking at the "Disparate Impacts and Climate Adaptation Planning" of Wildfires on Undocumented Immigrants" and specifically looking at "Lessons on Inclusive Disaster and Climate Adaptation Planning", so as many of you know, in California, over the last four or five months, we have been experiencing major climate change crises and in the last two months alone,
millions of people have been impacted by fires, blackouts, heat waves, worsening air quality and of course, the ever present COVID-19 pandemic
and of course, loss of life and property. These are all major life events
the five of the 10 largest wildfires by acreage ever recorded in California
occurred within the last three months. These compounds of disaster have a corresponding health,
social and economic impacts to people, especially people of color
and these individuals have suffered multiple weeks
of unhealthy air,
and that has been worsening throughout California.
So today, I’m gonna be speaking about some of the research that I did,
I co-authored it with community based organizations
on immigrant rights group,
a migrant rights group as well as an environmental justice group
that were on the front lines during the 2018 Thomas wildfire,
so our presentation is gonna talk about how these individuals
on these community groups stepped up when there was no official government response
for undocumented immigrant communities.
So these individuals were rendered invisible, not because they live in the shadows, not because people didn’t know they were there but they’re rendered invisible because of systemic racism and cultural norms of who’s considered a worthy disaster victim. Oftentimes, undocumented immigrants are not considered worthy disaster victims, therefore, they’re rendered invisible and important resources, government resources, disaster relief, therefore is withheld from them, which makes them more vulnerable to disasters such as wildfires. So it’s important to understand that Disaster Risk Reduction starts first and foremost with social integration of migrants. I just mentioned that how these migrants were undocumented immigrants were rendered invisible because of systemic racism and cultural norms. Of who they were they disaster victim, so if you bring in undocumented immigrant, if you really wanna address Disaster Risk Reduction before disaster you have to acknowledge the existing inequalities that undocumented immigrants experience.
Their pre-disaster marginalized status and try to integrate and reduce those inequalities before disaster happens because when a disaster happens, that compounds in exasperates existing inequality so the point is to understand their pre-disaster marginalized status, as I mentioned before, this is some research that, first that was recently published by Geoforum, which is the leading human geography journal in the field and we call it "the Invisible Victims of Disaster" and I chose a community based on research project and giving the migrant rights group authorship of this research and we worked jointly and collaboratively on the research questions, the data and of course, the analysis and throughout the publication. Oh, my God, this is the older version. So I just wanna show you some issues about disaster recovery resources here, this is an outline, that minus one of the assembly members where my parents live in Sylmar, California which is in the northeast part of Los Angeles
and Sylmar, California is the working class immigrant community but it’s important to note here when you go for disaster assistance of funds, you need to have a social security number and you need to have a bank account to receive federal disaster relief funds. Undocumented immigrants are not eligible to that, my parents, luckily are now US citizens they are homeowners. So their vulnerability is very different on the other Latino migrant communities. So oftentimes in disaster relief funding and practices, these ideas of Latinos being homogenous is integrated into policies and it does not effectively address all the issues that are happening to these communities. For example, these are some headlines that have happened over the year the Kincade Fire, which is in Northern California, Sonoma and Napa area, it talks about how farm workers had to flee from their houses, from the worker camps that they lived without gas and had to make shift shelters on nearby beaches and other parks because they were afraid to go to
on the designated shelters that the county and local governments did for fear of deportation of ICE, the Homeland Security coming in and taking them as well.

There’s also issues with language access. Oftentimes, when you talk about undocumented immigrants that are coming from Latin America, you think they’re all Latino or Hispanic but a lot of them are indigenous, there were indigenous Mexicans or indigenous individuals from other countries and many of them are illiterate and many of them don’t speak Spanish, let alone English.

So to be able to communicate to them is quite important in their own languages, particularly in an oral fashion and then on the right hand side shows about domestic workers. Also domestic workers are also along with an undocumented farm workers are often asked to enter mandatory evacuation zones, when the rest of the general public is asked to leave and flee for public health and safety issues. These individuals are asked to go into evacuation zones either if there’s a domestic worker trying
to get some of the goods and services,
the goods that are in that house
or undocumented workers
that have to go into the fields
to harvest the crops to protect them
from smoking ash that are coming down.
So it’s a lot of inequalities
about individual
and oftentimes, these undocumented workers
cannot file restitution or claims for,
again, fear of deportation.
So quick roadmap of what I’ll be covering
today
is understanding well fire and inequality,
an overview of the Thomas wildfire
and its impact on undocumented immigrants
and then broader policy implications
and recommendations based on the research
that we did as a community based project again.
According to a recent Proceedings
of the National Academies,
iclimate change is making wildfire season longer
and more severe.
On average wildfires
in the western United States burn six times
the acreage they did 45 years ago,
in California, Sierra Nevada,
the frequency of wildfires since 1970,
has increased by 256%,
as the mountain snowpack melts earlier
and the fire season extends year around, here it shows that 50 of the 20 largest wildfire by acreage in California has incurred since 2000 and then you see here in this graphic that was done earlier in the year on the Thomas wildfire, which happened in December 2017 and ended 40 days later in January 2018. It was the second largest wildfire until July of this year but then all the wildfires happen in California and got knocked down to six in this graph and there’s a new updated table that has a Thomas Fire number Seven as the seventh largest wildfire by acreage, so in just three months five other wildfires overtook the Thomas wildfire as being the largest, so the intensity and severity of wildfires are happening more and more here in California. While climate scientists expect wildfires to become more frequent and severe, it is important to explore how some people and communities are more affected by these events and others. Differences in human vulnerability to wildfire stem from a range of social, economic, historical and political factors. These factors include unequal access.
to disaster preparedness, knowledge and resources, contrasts and legacies of forest management practices, an expansion of residential development into the wildland. Researchers at the University of Washington recently analyzed the unequal vulnerability of wildfires for communities of color, they use the social ecological approach to determine wildfire vulnerability across 70,000 census tracts in the United States. This map here shows wildfire potential, as determined by the US Forest Service by census tract and there’s 29 million people that are vulnerable to a wildfire throughout the United States. This again, it’s only based on landscape risk, that means how close you live next to a forest or some type of landscape that can catch on fire and does not look at social demographics or what we call social vulnerability. The second map, however, takes into account both landscape wildfire risk and socio-economic factors to determine how likely an area’s to adapt to
and recover from a wildfire. They measure it by using data from the 2014 census on race, income, language, education, housing, and several other factors. The research has found that communities of color specifically those census tracts within majority black, Latino, majority black, Latino, or Native American, are 50% more vulnerable to wildfires compared to other census tracts. This research shows that the 29 million Americans who live in areas with significant chance of extreme wildfires are white and socially economically secure. Traditional analysis often obscure the fact that black Latino and Native American people have worse prospects for recovery from wildfire. In California, while many of these fire prone places are largely populated by higher income groups, they also include hundreds of thousands of low income individuals who lack the resources to prepare or recover from the wildfire. These numbers will likely surge according to the California fourth Climate Assessment Report, which projects the state’s wildfire burn area will increase by 77% by the end of the century.
The State of California recently just updated their own maps to include social vulnerability but until recently, they did not have any wildfire maps. Understanding social vulnerability, particularly for undocumented immigrants is important because even existing social border building maps such as the one we see here by the University of Washington are still inadequate. If we zero in on the communities and counties of Santa Barbara and Ventura County, it shows that it has a low level of social vulnerability to wildfire. That’s because there’s a high level of high income individuals in Santa Barbara Ventura and moreover, because undocumented immigrants are often undercounted in the US Census, so it doesn’t accurately show that the level of social vulnerability doesn’t have that a contextual analysis, what they call contextual vulnerability analysis, identifying those that are most socially vulnerable, it’s important because in California Rural low income
and immigrant communities, residents often do not have the required resources to pay for insurance, rebuild or to invest in fire safety, which increases their vulnerability to wildfire. Such outcomes occurring during and after wildfires have major environmental justice implications and that certain populations due to their socio-economic status, must live with the disproportionate share of environmental impacts and suffer the related public health and quality of life burdens.

In a few moments, I’m gonna jump into the case study and look at the disaster impacts from the Thomas wildfire, but first, I would like to provide some background on the fire and some demographics on undocumented immigrants in the region. On December 4th, 2017, the Thomas Fire started north of the city of Santa Paula and Ventura County, grew quickly to nearly 31,000 acres or 50 square miles in less than 12 hours, its explosive growth was driven by a combination of climactic events and the Thomas wildfire started north of the city of Santa Paula and Ventura County, grew quickly to nearly 31,000 acres or 50 square miles in less than 12 hours, its explosive growth was driven by a combination of climactic events.
including dry foliage, low humidity and intense Santa Ana winds that gusted up to 60 miles per hour. At the time of final containment on January 20th, 2018, 40 days later, the Thomas Fire would be classified as a second largest wildfire in California’s history. The firestorm affected hundreds of thousands of residents in the counties of Ventura and Santa Barbara, resulting in massive blackouts, destruction of over 1000 buildings and the fatality of one firefighter, media outlets across the country focus on news reports and loss of coastal and hillside mansions. The Thomas Fire however, not only destroyed expensive property and crops but it also endanger the health and livelihood of thousands of undocumented immigrants. California is home to an estimated 2.5 million undocumented immigrants, many of whom are foreign workers or employed in service jobs such as housekeeping and landscaping.
In Ventura and Santa Barbara Counties, undocumented immigrants are estimated to account for more than 9% of the total population or 111,000 people. So Ventura and Santa Barbara counties are heavily fire prone and drought impacted area, the landscape and between mountains and oceans creates vulnerabilities and housing, transportation and the infrastructure in the region. It’s a major agricultural and tourism industries with low rates immigrant workforce and there’s a high level racial and economic inequality and a lack of political and economic inclusion.

While relief efforts in the Thomas Fire have largely been praised as effective, immigrant workers were especially impacted from the fire due to the loss of employment, confusion about eligibility for Disaster Relief Services and port infrastructure and housing in immigrant communities, undocumented immigrants socio-economic situation is usually precarious. However, that wildfire disaster intensified
they’re already difficult situation. The Thomas Fire reviewed revealed how undocumented immigrants and those with seasonal work via visas require special consideration and disaster planning. These individuals are often afraid to seek help and restitution during and after a wildfire disaster for fear of deportation, undocumented immigrants are also unable to access Disaster Relief Services because of language barriers and prohibition from assessing federal disaster relief assistance programs. On this picture shows the two community research partners that I work with on this co-authored the Mixteco Indigina Community Organizing Project or MICOP and that’s a picture of Genevieve Flores-Haro, one of the co-authors, she’s holding in her hands a couple boxes of N95 masks that they were distributing to farm workers because employers and supervisors were not providing PPEE on even though there was a toxic smoke circulated.
In air as these workers laboured into the fields. Also on the right hand side is the other committee to co-author on the Central Coast Alliance United for a Sustainable Economy, that's Lucas Zucker and you see he's on top of empty boxes of thousands of N95 masks that were distributed because the county, the government, the federal government, as well as supervisors and farm owners did not pass these out. Governments in the region overlook the needs of low income farmers, Spanish and indigenous Mixtecal speakers and immigrant families. Ventura and Santa Barbara counties are both home to a growing indigenous Mexican population. It is estimated that over 25,000 indigenous Oaxacan people live and work in Ventura County. Well, Santa Barbara County is home to a population estimated at 29,000, concentrated in labour intensive sectors such as row crops and cut flowers, indigenous migrants performing an increasing amount of the arduous labour
which contributes to the profitability and affordability of fresh fruits and vegetables. In particular, Mixtec people in Ventura County are culturally and linguistically isolated. Many are illiterate and most speak neither Spanish nor English but only their native language Mixtecal which is only oral. It is important to note that Mixtec people are not Hispanic or Latino but are indigenous. They’re often homogenized with the general Latino population. The fact that they often cannot communicate beyond their own indigenous communities and pizza building, obtain appropriate health care, housing, education, negotiate with their employers to improve their work situation and exercise their basic civil rights, with these variables in mind, our research adopts the work in the field of public health that examines issues of intersectionality, such as gender, class, race, indigeneity, immigration status and other class aspects of human identity.
The concept of intersectionality has been used to highlight how these categories of culture and identity overlap hiding in the effects of discrimination, exclusion, social inequality and systemic injustice in the lives of specific individuals. An intersectional approach to wildfire disaster, it emphasizes how certain people and groups suffer worse effects because of overlapping factors that are often measured separately. In this respect, we define social vulnerability to welfare as comprised of the risk of exposure, the likelihood that people will be affected, sensitivity, the degree to which people will be affected and adaptive capacity, the ability of people to prepare and, or recover from a wildfire based on available resources. Moreover, we ask the question of what does adaptive capacity mean for migrant communities? Most of the literature on adapting communities focuses on redesigning communities focus on homeowners.
how can we design our homes and buildings through land use and building codes but what does this mean to migrant undocumented communities on terms of language access, worker health and safety rights, immigration status and access to disaster relief and housing and transportation impacts. So now I’m finally gonna jump into some of the impacts that were present through the Thomas wildfire.

There was an equity in terms of language access to Emergency Information, while this area has a large proportion of Latino and Hispanic individuals that speak Spanish in the area and have been living here for generations. The counties of interest Santa Barbara counties did not have anyone in their emergency services to do live translations, so that the fire raged on for nearly 10 days and there was no translation of Emergency Information that included advisory alerts about poor air quality, about sheltering about emergency evacuations about boiler or alerts.
What they did on the fourth day is put a Google Translate tool on top in their websites as well as on top of Emergency Information and it had one sentence in Spanish that read that if you don’t speak English, please take this Emergency Information note to somebody that can translate it for you and then the Google Translate at the time this was about three years ago was not as refined as it is today and when you would type in a wildfire, it would be translated as hairbrush so there was a lot of inequities that occurred, it took about 10 days for the state of California to land somebody from the Governor’s Office of Emergency services to help do light translations in their social media platforms. They have a low power radio station, that they’re able to translate in Spanish and a couple other other commonly spoken languages in the area and as you can see, these are some of the air quality advisories.
in the wildfire in Ventura,
the maroon and dark purple areas is where a lot of the farms are working
and these are mandatory evacuation zones
but oftentimes, still, farm workers are still entering
into these mandatory evacuation zones
to work in and protect some of the crops
from smoke and ash.
As you see from here, there's a safe drinking water access.
So none of this was translated for nearly two weeks
and MICOP through the radio station and other social communication platforms was able
to translate that and get it to about 30,000 people in the region.
The community, as I mentioned before, had to step up
because there was no official government response.
Even though these individuals have been living here for four generations.
As the counties there Santa Barbara, Ventura and even the state decided not to invest
any resources ahead of disasters
and protecting the socially vulnerable community.
So they had a lot of hazard
and mitigation plans in effect,
but none of them talked about social vulnerability

and specifically undocumented immigrants and farm workers

and one of the major impacts was worker health

and safety impacts

as I showed in the previous slides,

MICOP and CAUSE had to distribute PP equipment

because this was not provided by the state county governments,

let alone their employers.

So they got some funds donated from private and other government sources

to go and purchase some of these N95 masks, goggles and gloves as well

and here are some of the interviews that we did from our research.

Some of the farm workers, a farm worker from Oxford told us

during the fire I worked three days without a mask.

It caused me headaches and watery eyes as well as a cough.

We were scared because we were very near

where the fire was occurring.

The masks were not handed out until the city came to regulate.

Another farm worker told us, we all got sick our throats closed
in from breathing too much smoke and our kids couldn’t go to school. We had to buy mask and medicine for our throats and some goggles because my eyes were irritated when I worked. There was also economic and health impacts on workers, in particular, some of these farms did burn down or it was just too hazardous to go work so they were shut down. So a lot of people lost income and a waste to support their family as well. There was black and there was mudslides after the fires that occurred finished in mid January, there was a torrential rains that came and created mudslides, major mudslides that were caused from the fire debris as well and that also killed additional people that will we’ll be speaking about come shortly. A domestic worker service workers also were impacted. Some of these mansions in the states were burned down to the ground and he did not have any sources of income as as undocumented migrants there during eligible for unemployment relief funds as well as a federal disaster relief funds.
One of our informants, one of the people we interviewed, also told us about the neck Woody's that were happening. For instance, one of the domestic workers told us as well as the Los Angeles Times that while her employer threatened to flee the home, she asked a domestic worker to stay and safeguard the house and to be able to get a couple items if the fire would get too close to the house. So these individuals were asked, not forced but asked and pressured, to stay in mandatory fire evacuation zones.

Here's some additional quotes from one landscaper in Santa Barbara. I could not get to the homes where I work because the streets were closed. One of my good friends was lost. He had only been living in Montecito for three weeks before he died. I myself a cancer survivor and the only one who provides for the family. Another worker told us the day of the fire started the sky was covered with smoke and we were sent home. The next day we didn't work.
because it was dangerous due to the fire. We lost power because it was cut off by the fire and we lost food and melt for our kids. During the mudslides. We couldn’t get to work and we’re told to stay home for two days. As I mentioned before immigration status and disaster aid really limits people’s in adaptive capacity, how they’re going to bounce back from the disaster and recover, so that they’re not provided with government resources even though they’re contributing to the economy in our society. As a result, migrant rights groups and other social justice and nonprofit groups in the region create the 805 undock this was modelled off of the original undocumented Sonoma and Napa County for the fires that happen on about six months earlier on and so this was modelled after Napa Sonoma and as you can see from here on total relief was provided to nearly 2000 families to nearly 4000 undocumented people and over 7000 mixed status individuals and over $2 million has been raised.
on their continued to raise as these fires and other COVID-19 persists and but often there’s a waiting list because there’s not enough funding on to support all undocumented families that want to be supported through the spine. It’s important to note that these mix families should not have to go to a private disaster relief fund like this but many are for fear of on deportation even though a mixed family is a family that has a US resident or US citizen within that household living in the same household and so they’re eligible but by being residents or US citizens under the Trump administration as you fill out, these FEMA forms, there is a disclosure there that states that this information may or may be shared with ice, which is immigration and customs, Customs and Immigration Services. So that really scares some families that are eligible for federal disaster relief from accessing it. So that that sense of fear and sharing of information with ice is intentional and really continue contributes
to the rendering on this population invisible.
Here's another quote regarding the undocumented. My husband was deported, just before the fire, I was really struggling to find work in the fields.
I finally got hired the first week in December 2017 but was let go once the fire and smoke grew too big and in the fruit spoil as the only breadwinner, I had to borrow money from friends.
I am grateful for the DOC UF A, Funding Assistance, I am still in need to help and continue coming to MICOP for other services.
There was also a loss of regional housing stock.
So it wasn’t just manage mega mansions and wealthy individuals.
There was also housing stock lost and some parts of Santa Barbara that were multi family housing.
but any California as you may know, like San Francisco, on the Central Coast, Santa Barbara,
in particular has an affordable housing crunch. So any loss of housing has an impact throughout the region, as people have to move to other housing, to replace their homes. So that increases the price as a rental market and price gouging. So there was instances in some of these communities in East Santa Barbara where many of the workers live, you had one large landowner, increasing rent by at least $300. So there’s a lot in equity in terms of housing stock, the protests essentially happened after that price gouging but this is an occurrence that happens particularly a lot in undocumented, migrant communities. The land owners know that they’re often these individuals are not going to tell the government and so they feel that they can get away with this. There was also loss of transportation infrastructure. This is a picture of the one on one freeway one one highway. So this is the major arterial highway connecting Ventura County.
839 00:28:28.552 --> 00:28:33.552 to Santa Barbara County,
840 00:28:34.010 --> 00:28:34.843 as I mentioned before the oceans on one side
841 00:28:34.843 --> 00:28:37.126 and then you have large mountains
842 00:28:37.126 --> 00:28:37.959 on the other side.
843 00:28:37.959 --> 00:28:42.959 So this is one of the most efficient,
844 00:28:52.792 --> 00:28:57.792 affordable ways to to reach Santa Barbara
845 00:29:05.550 --> 00:29:10.550 and Ventura counties
846 00:29:12.633 --> 00:29:14.841 but at the fire and the mudslides
847 00:29:14.841 --> 00:29:15.674 on blocked access
848 00:29:15.674 --> 00:29:19.757 to this area so workers could not get to work.
849 00:29:19.757 --> 00:29:20.590 So if you didn’t have funds
850 00:29:20.590 --> 00:29:25.590 to find alternative forms of transportation,
851 00:33:31.548 --> 00:33:33.020 then you were really very out of luck
852 00:33:33.020 --> 00:33:35.700 and it was a situation
853 00:33:35.700 --> 00:33:38.030 where you would lose more income.
854 00:33:38.030 --> 00:33:40.400 So people with higher incomes were able
855 00:33:40.400 --> 00:33:42.430 to rent boats,
856 00:33:42.430 --> 00:33:43.390 they actually rented boats
857 00:33:43.390 --> 00:33:45.050 to get around the highway,
858 00:33:45.050 --> 00:33:48.770 other people bought expensive Amtrak tickets
859 00:33:48.770 --> 00:33:50.970 and then finally other people drove
860 00:33:50.970 --> 00:33:52.300 all the way around the mountains
861 00:33:52.300 --> 00:33:53.530 which took a lot much longer,
862 00:33:53.530 --> 00:33:55.700 a lot more gas to to get around
863 00:33:55.700 --> 00:33:57.880 but many undocumented immigrants don’t have
864 00:33:57.880 --> 00:33:58.870 that extra cash
865 00:33:58.870 --> 00:34:01.710 to do these alternative transportation modes
866 00:34:02.740 --> 00:34:05.900 and then, looking at the limitations,
867 00:34:05.900 --> 00:34:06.733 now I wanna jump
868 00:34:06.733 --> 00:34:08.380 into sort of the policy implications
of some of our research and particularly the limits of vulnerability mapping, current social vulnerability mapping renders many minority and poor communities of color invisible. For example, the University of Washington map shows Santa Barbara and Ventura counties as having low levels of social vulnerability due to the large proportion of economically secure households in the region, however as we’ve shown in our research, Latino and indigenous migrant communities were among the most impacted during the Thomas Fire. Moreover, immigration status has received little attention and disaster vulnerability mapping. Though a large proportion of disaster studies have considered race and ethnicity as the vulnerability factor, impacts experienced by migrants require an intersectional research approach. Current vulnerability mapping approach also fails to account for the complex web of impacts caused by disasters far beyond destruction of property within the perimeter of the fire itself. Toxic smoke flows down from burning mountainside,
settling in densely populated valleys below threatening outdoor workers,
lavish hillside mansions are destroyed or evacuated, leaving low income migrant gardeners,
housekeepers and caregivers unemployed. Tourism throughout the region shuts down putting thousands of hotel employees out of work.
From the loss of housing and infrastructure to the closure of schools and job sites, multiple regions are impacted beyond the census tracts identified in mapping models of buyer landscape risk zones.
For example, a low income migrant family living outside of Bern area whose loses several weeks of wages without eligibility for federal and state assistance may be more negatively impacted than a higher income homeowner whose property is replaced by their homeowners insurance policy, which also pays for hotel commendations for them to stay in the interim. The policy implication here is that I wanna drive home really is that existing inequalities are exacerbated during the disasters.
because there is no existing social safety net before a disaster to protect these individuals. So Disaster Risk Reduction must start with social integration of migrants before a disaster. So the COVID-19 pandemic, I could talk a little bit more about this in the Q&A, has really decimated some of these communities but this Thomas Fire happened was three years ago that happened three years ago in Northern California, Sonoma, Napa County happened about three years ago as well and is since those fires that continue to happen these regions have become a little bit more proactive in disaster planning, particularly groups like MICOP and other migrant rights groups have really asserted their rights to speak as disaster experts and really have demanded to be in some of these county government meetings as stakeholders and disaster planning. So infrastructure through protests and advocacy has expanded to be able to provide more adequate resources to individuals during disasters and pandemics
and as I talked to some of these migrant
groups, they all tell me that while the COVID-19 pandemic has decimated those communities had it not been for the planning after the wildfires, disasters and these farm worker communities, the COVID-19 pandemic would have been far worse because they had at least three years to become experts and demand resources from the state and local governments. So the broader policy implication of this research is to ensure inclusive disaster planning and disaster planning, response and recovery and bolster a lot of next indigenous civil society organizations capacity in disaster relief and planning efforts. Some outcomes that happened since a Thomas wildfire California has adopted some very culturally and linguistically inclusive disaster planning resources requiring county and state governments to provide language access to Emergency Information and that’s also contingent disaster relief aid.
So if you want state disaster relief aid, you have to update your protocols on disaster planning and your language access and there's also been funding tied to cultural competency and disaster planning and climate resilient planning. So these local governments have to show how they're proactively working with socially vulnerable communities ahead of disaster and to their mitigation that hazard mitigation plans.

Some of the recommendations, we end our research with that there should be a state wide Disaster Relief Fund for all regardless of immigration status. It's inequitable that civil society, particularly migrant organizations have little resources have to extend so much of their capital and fundraising efforts to safeguard these communities when this should be the role of the state government.

There should also be emergency funding for CBOs on the ground working with these communities. Again, they have little resources, state and local governments need to develop new methods to map socially vulnerable communities.
as I showed from the University of Washington on social vulnerability mapping, which is a great tool, but it still renders some communities invisible such as undocumented immigrants and into codified into law protections from wildfire smoke right now, advocates was able to work with the State Board of Occupational Health and Safety to do an emergency regulation for wildfire smoke. So when the air quality reaches 151 index, employers are required to provide a PPE N95 respirator masks but that’s temporary and it’s really been uneven up this should be codified into law. So, I also had spoken to some individuals in Sonoma throughout the Central Coast that experienced fires on this past summer and they also account that there’s an uneven N95 mass implementation throughout the state and in fact, the State Office of Occupational Health and Safety only has about a dozen Spanish speaking individuals that go out in the field to do investigations on complaints.
and compliance with this. As far as I know, they don’t have anyone that speaks indigenous languages, so there’s only about 12 or so people in the entire state of California, there’s a state of 40 million people, only about 12 of them speak Spanish that work in the field. So there’s a course on even implementation of the role on the air quality index that I mentioned about the wildfire smoke, there’s uncertainty about how this is being achieved. Oftentimes, these air quality monitoring stations, our government monitoring stations are often miles away from the actual farm worker site. So you may have a 151 index about five miles away at air quality station but that index could be much higher at the field next, that’s happening near closer to the fire. So there needs to be opportunities to have real time handheld GPS type of air quality monitoring that these individuals and employers should be using instead of having for a wait up there monitoring stations.
There’s no state guidance on implementation of worker health and safety. There’s little guidance on that, and one issue that’s happening now, particularly in Sonoma, is these access verification permits that allows farm workers to enter into mandatory evacuation zones over 400, I believe was issued by the Sonoma County Agricultural Commissioner and this essentially allows foreign workers to enter these mandatory evacuation zones when everyone else is required to leave. And moreover, there’s no health test for these workers. So if the fire gets close to the farm worker site, or more toxic smoke overtakes the entire farm, how are they gonna evacuate the farm workers in a swift and safe fashion? And moreover, there’s no health test for these workers. So we don’t know, what is the risk of working in this wildfire smoke itself as you know, is hazardous to human health but it’s not only just the smoke itself.
is the other types of toxins that are missing from the burden buildings that are in individuals.
So there’s no follow up on workers testing to find out calm how they’re doing after entering these mandatory evacuation zones.
Cal/OSHA has limited staff, as I mentioned before.
and there I’ll be able to open up to questions and I look forward to hearing your questions and comments.
This is just a quick slide that we recently did in October that we recently did in October.
with the governor’s office and the United Nations.
So the United Nations Intergovernmental Panel,
excuse me, the United Nations International Organization.
hosted a panel with ourselves as well as the California governor’s office on Emergency Services to talk about what the rest of the world could learn from the migrant experience in California because these disasters because of climate change is making the severity more frequent and severe.
it’s happening in Australia, it’s happening in Latin America,
it's happening in Greece
and migrant communities are all these places. So the idea was to understand
what can the rest of the world learn from the migrant wildfire disaster
experienced in California?
With that, I thank you for this opportunity and look forward to speaking with you.
Thank you, Michael, wonderful presentation. I know we do have a lot of questions coming
in the chat box.
So the first question is from Rebecca Hoffler, she's asking,
are there any translation technologies available to help overcome these niche language barriers?
I had no idea many were not Spanish speaking that is so crucial to them might be a quote,
techn or high education punishing to do app that tech.
I know you mentioned about the Google translator but any others?
Yeah, there's a couple that are there but again, the owner should not be put
on the individual,
or community based organization, the owners needs to be on local and state government and federal government to provide the resources to safeguard all community residents, regardless of immigration status. So these individuals are important contributors to our society, they make fresh fruits and vegetables available for us and do some of the important work as essential workers, but yet, we don’t value them enough to safeguard. So that’s why I had mentioned that systemic racism and cultural norms of around immigration determines who’s the worthy disaster victim. So yes, that’s great in terms of the interim, but local governments that have this type of workforce in their area needs to dedicate resources for live translation in three in California, everyone think California is so progressive but here’s a situation where a population, two populations are overlooked Spanish and indigenous speaking individuals are entirely rendered invisible. - Well, thanks, we also actually have a lot
of questions pre-collected from the students and they are quite interested in are there any quantitative evidence showing the vulnerability of these undocumented Latino from the research? So right now, there’s social vulnerability mapping. There’s some great models with the work the University of Washington did, it is great but right now, there’s, that I’m aware of, there’s no new models that takes into account undocumented immigrants and right now that would take a very well thought out a research designed and human subjects protocol process to do what you call ground truth and working with hand in hand with these migrant organizations to identify individuals or where they may be in general. ’Cause you don’t obviously don’t want it to be too specific because of ice and Immigration Services but enough where it is, you can identify it broadly in a region because right now, as you saw in Ventura, Santa Barbara
and other places in California too.
I’m guessing in the United States
as well as the current indices,
basically whitewash these communities.
- Okay, I think so.

Another question from the audience is from Joseph
and I guess he’s asking,
has research investigated the possibility
of training community health advocates
within the indigenous communities
so as to improve utilization
and access to social services,
health care, and disaster relief information?
Yeah, so that’s I mentioned a very briefly
about the COVID-19 pandemic,
it’s been three years since Thomas wildfire
and about three years and a half years,
since the first major recent fire
in Northern California
and those far more regions
these advocates have become disaster experts
in their own, not by choice,
they were forced to become this
because this is the constituency
that they advocate and protect
and you see migrant rights
whose immigration rights group are working
on climate change now working
because there’s a strong sort of the cyclical process.
A lot of these individuals are leaving their countries to some extent climate refugees with a drought soil erosion in their ancestral homeland, particularly for people (indistinct) that come to United States and then they come over here and it’s a different types of climate change impacts that are happening to them. So you see these groups be more active in non-traditional immigration priority topics such as the environment and now disaster. So these individuals are part of what’s Vlad, what’s enough, volunteers organized for assistance and disaster or something and so the several other roundtables around disaster particularly the Red Cross and Salvation Army, they also have their own private, mainstream disaster relief systems. So these individuals are now brought in to those discussions that these disaster relief organizations have, as well as state and local government.
I’m glad you mentioned that COVID-19 situation and listeners are wondering, that does the COVID-19 disaster relief assistance for immigrants help make the case that the states really need to put funding for health care coverage for this and also rights, workers? Yeah, so two things happen in California first important to know about COVID-19, about language information that happens and the language we stick on. There’s no word for virus, so they had to come up with different types of both oral and pictorial on messaging that talked about it and not COVID-19 but an unknown illness and disease in that region, to be able to convey that. So that’s one thing is having culturally sensitive and culturally appropriate messaging on Emergency Information is important and they have built up somewhat of a capacity to be able to do that now and work in partnership with the state government and because of the advocacy these groups have done,
as well as the importance of the California Latino Legislative Caucus, so that the Latino Legislative Caucus, it is a caucus of Latinos, a lot of next legislators, that work in the California State Legislature and there are a big number now and they have put a lot of pressure along with advocates on the governor to be more responsive to migrant communities, particularly undocumented migrant communities, and this summer, the governor put $50 million in a temporary Disaster Relief Fund and I believe the philanthropic community did another 25, so a total of 75 million that went for one type tax evasion to households, undocumented immigrant households, anywhere between 400 and $700, I believe but that money’s already gone and $75 million sounds like a lot but that has been exhausted and it will go one time cash visa. - Thanks for the insights. From the audience there’s also some question regarding the the other types of (indistinct) they meet.
because sending the these communities,
from Leon Wesley, from Virginia is asking
is there any data info regarding the safety
of drinking water supplies
for their factory workers
and their living areas from this post fire
your mom took us in?
Yeah, I’m a little bit aware of that,
so the toxins, as I mentioned,
mixing in the air,
it’s just not regular trees burning down
but it’s also all the materials
that build our houses and our infrastructure
that are quite toxic.
So that not only goes into the air
but that also goes into the water
in terms of what they call the fire debris
and the State Water Resources Control Board
is currently looking at that
in terms of maximum contaminant levels
and sort of what regions
and how these regions are being exposed
to this fire debris
in their community drinking water systems.
So that’s something
that’s currently being looked at.
Yes, but I don’t know
how strong it’s being regulated.
- Thank you.
So another question
from the audience is kind of related
to our earlier discussion regarding the tours for these committees, there is,

Marcus from Andrea is asking your experience is having a digital healthcare a PP for these communities by lingo would that be helpful because these committees can have access to mobile technologies are the prepare handling.

have these Wi-Fi have these Wi-Fi have these Wi-Fi have these Wi-Fi

and mobile technologies available? and mobile technologies available? and mobile technologies available? and mobile technologies available? - I'm not sure entirely I understand that but the MICOP;

the Mixtecal Indiana community organizing project the Mixtecal Indiana community organizing project the Mixtecal Indiana community organizing project the Mixtecal Indiana community organizing project

they did have a very high social media presence they did have a very high social media presence they did have a very high social media presence they did have a very high social media presence

and particularly WhatsApp and particularly WhatsApp and particularly WhatsApp and particularly WhatsApp

as from what I learned as from what I learned as from what I learned as from what I learned

from the recent and what I’ve been told, from the recent and what I’ve been told, from the recent and what I’ve been told, from the recent and what I’ve been told, is very popular in migrant communities, is very popular in migrant communities, is very popular in migrant communities, is very popular in migrant communities, particularly Mexican migrant communities.

So they decimate information So they decimate information So they decimate information So they decimate information

through WhatsApp, through their Instagram, through WhatsApp, through their Instagram, through WhatsApp, through their Instagram,

their Facebook their Facebook their Facebook their Facebook

and I think they have another social media and I think they have another social media and I think they have another social media and I think they have another social media

and then of course, the radio, and then of course, the radio, and then of course, the radio, and then of course, the radio,

the radio is a very simple one the radio is a very simple one the radio is a very simple one the radio is a very simple one
that individuals get a lot of their information from.

- Thank you.

I think given the time, we'll have the final last question, do we stop living later?

The question combining from both the students asking and one of the audiences kinda asking about you have shown very powerful images, both in the paper and the presentation and telling the story of these workers were required to stay behind all gathering belong from the employers home despite this evacuation points.

So some, like insights regarding how to help make these local employers accountable for putting workers in these dangerous situations.

- Sure.

I didn’t get a chance to download this audio file because of the mix up in time but I want to talk first play this audio file real quick of what the Mixtec language sounds like.

I’m sure there’s many people that have never heard it before.

(speaking foreign language)
So as you can hear it,
the language resembles nothing like Spanish.
So that’s a major issue on the daily
with how to create connections
and trust within these communities
and deliver culturally appropriate language
and the Emergency Information
and I forgot what was the question again?
So the question is like,
how the local organizations can help
to hold the employers accountable
to put these workers
in this dangerous places?
I think it’s contingent advocacy
and the passage
of some of these occupational health
and safety rules,
there obviously needs to be more done on
as I mentioned before
these access verification permits
and it’s sort of a black box
about how the county agricultural Commissioner
is issuing these permits to employers.
So does any employer that request one gets one,
are they looking at land fire risk zones
and how close the proximity the fire
is to the farm itself
again, the air quality issues
and making sure that PP
is being distributed properly and effectively because we saw instances in our own research that even at the time, this was three years ago, even at the time when people were donating these N95 mass some employers wouldn’t give them out and there was other instances where my co-authors saw that they were giving it out only to men and not women. So there’s a very uneven implementation of some of even the existing health and safety rules. So more needs to be done and there needs to be more transparency and accountability as we have these workers working in these dangerous zones. - Thank you so much Michael for sharing all this kind of justice experience and thank you all the audience for joining us today and I think we’ll end now, so bye everyone. Thank you, Michael. - Thank you, bye-bye.