So, hi everyone, welcome to join us and thank you for your patience and welcome to the Yeltsin town country to the house seminar, I'm today's moderator, Kai Chen, Assistant Professor at the Yale School of Public Health. If you have any questions during the presentation, please use the chat box and the speaker will answer them at the end of the seminar. So today, we're very pleased to have Dr. Michael Mendez join us who will talk about the vulnerabilities of Latino communities during the Thomas Fire in California. Dr. Mendez is an Assistant Professor at the School of Social Ecology of the University of California, Irvine. He has more than a decade experience in the public and private sectors and he was recently appointed by the National Academy of Science, Engineering and Medicine to the board on Environmental Change and Society. He recently has a new book published by the Yale press.
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 and today I'm gonna be talking about some research I actually started at the Yale School of the Environment, looking at the "Disparate Impacts of Wildfires on Undocumented Immigrants" and specifically looking at "Lessons on Inclusive Disaster 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. 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. 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 stepped up 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. And 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.

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 was recently published by Geoforum, which is the leading human geography journal in the field. Oh, my God, this is the older version. So I just wanna show you some issues and we call it "the Invisible Victims of Disaster". and I chose a community based on research project and giving the migrant rights group and environmental justice groups 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.
146 00:05:58.580 --> 00:06:00.010 and Sylmar, California
147 00:06:00.010 --> 00:06:02.690 is the working class immigrant community
148 00:06:02.690 --> 00:06:04.280 but it’s important to note here
149 00:06:04.280 --> 00:06:08.750 when you go for disaster assistance of funds,
150 00:06:08.750 --> 00:06:10.590 you need to have a social security number
151 00:06:10.590 --> 00:06:12.000 and you need to have a bank account
152 00:06:12.000 --> 00:06:14.370 to receive federal disaster relief funds.
153 00:06:14.370 --> 00:06:18.130 Undocumented immigrants are not eligible to
154 00:06:18.130 --> 00:06:21.540 my parents, luckily are now US citizens
155 00:06:21.540 --> 00:06:22.510 they are homeowners.
156 00:06:22.510 --> 00:06:25.450 So their vulnerability is very different
157 00:06:25.450 --> 00:06:29.060 on the other Latino migrant communities.
158 00:06:29.060 --> 00:06:33.940 So oftentimes in disaster relief funding and
159 00:06:33.940 --> 00:06:36.470 these ideas of Latinos
160 00:06:36.470 --> 00:06:39.430 being homogenous is integrated into policies
161 00:06:39.430 --> 00:06:42.680 and it does not effectively address
162 00:06:42.680 --> 00:06:44.510 all the issues that are happening
163 00:06:44.510 --> 00:06:45.800 to these communities.
164 00:06:45.800 --> 00:06:48.310 For example, these are some headlines
165 00:06:48.310 --> 00:06:49.960 that have happened over the year
166 00:06:49.960 --> 00:06:50.910 the Kincade Fire,
167 00:06:50.910 --> 00:06:52.420 which is in Northern California,
168 00:06:52.420 --> 00:06:54.160 Sonoma and Napa area,
169 00:06:54.160 --> 00:06:56.470 it talks about how farm workers had to flee
170 00:06:56.470 --> 00:06:58.810 from their houses, from the worker camps
171 00:06:58.810 --> 00:07:00.490 that they lived without gas
172 00:07:00.490 --> 00:07:03.182 and had to make shift shelters
173 00:07:03.182 --> 00:07:06.560 on nearby beaches and other parks
174 00:07:06.560 --> 00:07:08.270 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, climate 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 wildfires 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 it 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
263 00:10:39.560 --> 00:10:41.340 to disaster preparedness, knowledge
264 00:10:41.340 --> 00:10:43.830 and resources, contrasts and legacies
265 00:10:43.830 --> 00:10:45.740 of forest management practices,
266 00:10:45.740 --> 00:10:48.110 an expansion of residential development
267 00:10:48.110 --> 00:10:49.253 into the wildland.
268 00:10:50.310 --> 00:10:52.430 Researchers at the University of Washington
269 00:10:52.430 --> 00:10:53.900 recently analyzed
270 00:10:53.900 --> 00:10:56.052 the unequal vulnerability of wildfires
271 00:10:56.052 --> 00:10:57.860 for communities of color,
272 00:10:57.860 --> 00:11:00.330 they use the social ecological approach
273 00:11:00.330 --> 00:11:02.410 to determine wildfire vulnerability
274 00:11:02.410 --> 00:11:06.910 across 70,000 census tracts in the United
275 00:11:06.910 --> 00:11:09.390 States. This map here shows wildfire potential,
276 00:11:09.390 --> 00:11:11.410 as determined by the US Forest Service
277 00:11:11.410 --> 00:11:12.610 by census tract
278 00:11:12.610 --> 00:11:15.830 and they’re by and there’s 29 million people
279 00:11:15.830 --> 00:11:18.410 that are vulnerable to a wildfire
280 00:11:18.410 --> 00:11:19.700 throughout the United States
281 00:11:19.700 --> 00:11:22.780 and this again, it’s only based on landscape risk,
282 00:11:22.780 --> 00:11:25.420 that means how close you live next to a forest
283 00:11:25.420 --> 00:11:27.060 or some type of landscape
284 00:11:27.060 --> 00:11:28.320 that can catch on fire
285 00:11:28.320 --> 00:11:30.970 and does not look at social demographics
286 00:11:30.970 --> 00:11:32.820 or what we call social vulnerability.
287 00:11:34.290 --> 00:11:35.350 The second map,
288 00:11:35.350 --> 00:11:36.390 however, takes into account
289 00:11:36.390 --> 00:11:38.170 both landscape wildfire risk
290 00:11:38.170 --> 00:11:40.100 and socio-economic factors
291 00:11:40.100 --> 00:11:43.230 to determine how likely an area’s to adapt to
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, 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 are 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 that 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 based on social vulnerability. 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 the level of social vulnerability. doesn’t have that a contextual, 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, it 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 and impacts to wealthy farm owners and homeowners. 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, the lack of evacuation information in their native language, 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
The Thomas Fire 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, and undocumented immigrants are also unable to access Disaster Relief Services because of language barriers and prohibition from assessing federal disaster relief assistant 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 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 PPE 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 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 from southern Mexico 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.
intersect with wildfire disaster. 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 and 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 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 to wildfire 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 but in the interim, MICOP and CAUSE the two communities organizations had to do all the 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 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 her employer threat fled the home because it was a mandatory evacuation zone, 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 pressure to stay in mandatory fire evacuation zone. 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 close to the homes I worked at were destroyed. One of my good friends was lost during the most mudflow. 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 cufon 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.

on almost 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 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 because even though a mixed family is a family that has a US resident or US citizen but there’s also undocumented migrants within that household living in the same household and so they’re eligible but by being residents or US citizens but 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 on 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 had to borrow money from friends and family to feed my kids.

Our food went bad due to the power outage

adding to our expenses.

I am grateful for the DOC UFA,

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,
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 highway. So this is the major arterial highway connecting Ventura County.
to Santa Barbara County, as I mentioned before the oceans on one side and you have large mountains on the other side. So this is one of the most efficient, affordable ways to reach Santa Barbara and Ventura counties. But at the fire and the mudslides blocked access so workers could not get to work. So if you didn’t have funds to find alternative forms of transportation, then you were really very out of luck and it was a situation where you would lose more income. So people with higher incomes were able to rent boats, they actually rented boats to get around the highway. Other people bought expensive Amtrak tickets and then finally other people drove all the way around the mountains. Which took a lot much longer, a lot more gas to get around. But many undocumented immigrants don’t have that extra cash to do these alternative transportation modes. Now I wanna jump 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 who lives within the fire risk zone 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 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 that happened was three years ago that happened 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 and state 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 that we must draw on migrant community knowledge, embrace migrant communities 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 the Thomas wildfire California 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. 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 that 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. 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 how this is enforced and 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
1043 00:41:06.350 --> 00:41:08.080 and compliance with this.
1044 00:41:08.080 --> 00:41:08.913 As far as I know,
1045 00:41:08.913 --> 00:41:09.746 they don’t have anyone
1046 00:41:09.746 --> 00:41:11.100 that speaks indigenous languages,
1047 00:41:11.100 --> 00:41:12.620 so there’s only about 12
1048 00:41:12.620 --> 00:41:16.450 or so people in the entire state of California,
1049 00:41:16.450 --> 00:41:19.440 there’s a state of 40 million people,
1050 00:41:19.440 --> 00:41:21.200 only about 12 of them speak Spanish
1051 00:41:21.200 --> 00:41:22.110 that work in the field.
1052 00:41:22.110 --> 00:41:25.000 So there’s a course on even implementation
1053 00:41:25.000 --> 00:41:27.390 of the role on the air quality index
1054 00:41:27.390 --> 00:41:29.503 that I mentioned about the wildfire smoke,
1055 00:41:31.209 --> 00:41:34.520 there’s uncertainty about how this is being achieved.
1056 00:41:34.520 --> 00:41:37.510 Oftentimes, these air quality monitoring stations,
1057 00:41:37.510 --> 00:41:39.440 our government monitoring stations
1058 00:41:39.440 --> 00:41:41.100 are often miles away
1059 00:41:41.100 --> 00:41:43.210 from the actual farm worker site.
1060 00:41:43.210 --> 00:41:46.330 So you may have a 151 index
1061 00:41:46.330 --> 00:41:49.360 about five miles away at air quality station
1062 00:41:49.360 --> 00:41:51.890 but that index could be much higher
1063 00:41:51.890 --> 00:41:53.060 at the field next,
1064 00:41:53.060 --> 00:41:55.670 that’s happening near closer to the fire.
1065 00:41:55.670 --> 00:41:57.480 So there needs to be opportunities
1066 00:41:57.480 --> 00:42:00.360 to have real time handheld
1067 00:42:00.360 --> 00:42:02.670 GPS type of air quality monitoring
1068 00:42:02.670 --> 00:42:04.190 that these individuals
1069 00:42:04.190 --> 00:42:06.610 and employers should be using
1070 00:42:06.610 --> 00:42:08.900 instead of having for a wait up there
1071 00:42:08.900 --> 00:42:10.600 monitoring stations.

37
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. I believe was issued by the Sonoma County Agricultural Commissioner. 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 I look forward to hearing your questions and comments. This is just a quick slide 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 on Migration 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 of these disasters 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 about this research.

- Thank you, Michael, so, wonderful presentation. I know we do have a lot of questions coming in the chat box.

The first question is from Rebecca Hoffler, she’s asking, are there any translation technologies available to help overcome these niche language barriers for migrants? I had no idea many were not Spanish speaking that is so crucial to them might be a quote, tech or high education punishing app that tech. I know you mentioned about the Google translator but any others? Yeah, there’s a couple that are there again, the owner should not be put on the individual, the individual resident worker.
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 systemic racism and cultural norms of around immigration determines who’s the worthy disaster victim. 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 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 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 and working closely 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 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, and 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 and 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.

There is a question from the students,
I'm glad you mentioned that COVID-19 situation and listeners are wondering, 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 this summer, the governor put $50 million in a temporary Disaster Relief Fund and $75 million that went for one type tax evasion to households, anywhere between $400 and $700, but that money’s already gone 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 other types of (indistinct) they meet.
because sending 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 to have accessible primary care because these committees can have access to mobile technologies are the prepare handling, have these Wi-Fi have these Wi-Fi and mobile technologies available? and mobile technologies available? MICOP, the Mixtecal Indiana community organizing project they did have a very high social media presence and particularly WhatsApp and particularly WhatsApp as from what I learned from the recent and what I’ve been told, is very popular in migrant communities, particularly Mexican migrant communities. So they decimate information through WhatsApp, through their Instagram, their Facebook and I think they have another social media and then of course, the radio, 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.

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.
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 for putting these workers in this dangerous places? - I think it’s contingent advocacy and then 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 and 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 and as we have these workers working in these dangerous zones. - Thank you so much Michael for sharing all this kind of justice experience for joining us today and I think we’ll end now, so bye everyone. Thank you, Michael. - Thank you, bye-bye.