



## Technical Advisory Council

### Item 7: Vulnerable Communities Definition Subcommittee

May 16, 2025

#### Summary

The current Vulnerable Communities Definition reads:

Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts. Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, income inequality, and disability.

At the March 2025 Quarter 1 Technical Advisory Council (TAC) meeting, TAC members discussed adding "gender", "gender identity", "gender expression", and/or "sex" to the Vulnerable Communities Definition because climate change disproportionately impacts women and gender minorities (transgender, intersex, nonbinary, agender, and other gender diverse people), and women and gender minorities experience unique vulnerabilities in disasters. After discussion, the TAC voted to create a subcommittee to examine what language should be included and engage with subject matter experts.

Recommendation 1: The TAC Subcommittee recommends that the Vulnerable Communities Definition be amended to read:

Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts. Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, **gender**, sexual orientation and identification, national origin, income inequality, and disability. **People facing multiple forms of marginalization and inequality will experience climate change impacts more intensely and face more barriers to recovery.**

Recommendation 2: The TAC Subcommittee recommends LCI staff update the [Defining Vulnerable Communities in the Context of Climate Adaptation](#) resource guide in consultation with the TAC to reflect updated research, definitions, and tools.

## Language Considerations

### “Gender” and “Gender Identity”

The [Do No Harm Guide: Collecting, Analyzing, and Reporting Gender and Sexual Orientation Data](#), recommended by staff from the [Gender Health Equity Section](#) (GHES) of the California Department of Public Health (CDPH), defines “gender” and “gender identity” as follows:

1. Gender: “The social and cultural categorization of people, such as “man” or “woman,” based on their identity, behavior, self-expression, and interaction with others. Gender varies across societies and contexts and can change over time.”
2. Gender Identity: “A person’s internal psychological identification as a man, woman, another gender, or no gender. This identification may or may not align with the sex the individual was assigned at birth.”

CDPH GHES staff recommended including either “gender” or “gender identity” but not both to avoid confusion. Subcommittee members also shared that using both phrases could contribute to “othering” transgender and gender non-conforming people since some perceive “gender” and “gender identity” as including different people. Others expressed distrust of the term “gender” on its own given its traditionally binary association.

A representative from the [Transgender Health and Wellness Center](#) (Trans Health) recommended the use of “gender and/or identity,” stating that the phrase includes sex (including intersex individuals), gender expression, and agender individuals (people who do not have a gender) for the purposes of this definition.

[Gender Equity Policy Institute](#) (GEPI)’s representative stated that “gender” is used in international literature and “gender identity” is used in the social sciences in the acronym SOGI (sexual orientation and gender identity). They recommend including either “gender” by itself or both “gender” and “gender identity” because “gender identity” by itself would be out of sync internationally.

### “Sex”

The Do No Harm Guide defines “sex” as follows: “The classification of a person as male, female, or intersex as assigned at birth by doctors based on hormones, chromosomes, and the appearance of external anatomy. Sex, gender, and gender identity are not interchangeable, they are spectrums that have traditionally been divided into binary categories.”

The GEPI representative recommended not including the term “sex,” as the ongoing effort to substitute biological sex for gender in law and policy has emerged as a key strategy of the international anti-trans movement.

Trans Health staff recommended not including the term “sex,” as its inclusion would bring up historic harms to the Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ+) community. They stated that at minimum, if “sex” is present, “gender” must also be present.

According to the websites of several intersex advocacy groups, “gender (identity)” is not inclusive of intersex people on its own ([interACT](#), [Intersex Campaign for Equality](#), [Human Rights Campaign](#), [the Interface Project](#)). Intersex people can have many different genders and often face additional challenges specifically due to their sex/intersex status. Notably, intersex LGBTQ+ individuals experience significantly greater discrimination, financial hardship, and health impacts than their non-intersex LGBTQ+ peers ([Center for American Progress](#)).

However, the phrasing of the Vulnerable Communities Definition states that factors “include, but are not limited to” the factors listed. Therefore, adding “sex” may not be necessary, since intersex people, like many other marginalized identities, are implicitly included in the Definition. This would avoid the negative implications of adding the term “sex” as discussed above.

## **Intersectionality**

Subcommittee members and Trans Health staff recommended including a sentence on intersectionality. Intersectionality was coined by American legal scholar and civil rights activist Kimberlé Crenshaw in the 1980s to describe how different identities intersect and how systems of discrimination overlap to create unique marginalization that people face. GHES CDPH and GEPI staff also spoke about intersectionality and its importance to understanding the challenges that women and gender minorities of color, with low incomes, with disabilities, or affected by other challenges or discrimination face related to climate adaptation and resilience.

The United Nations states, “looking at climate change through the lens of intersectional feminism, the way in which various forms of inequality often operate together and exacerbate each other, it is clear that climate change risks are acute for indigenous and Afro-descendent women and girls, older women, LGBTIQ+ people, women and girls with disabilities, migrant women, and those living in rural, remote, conflict and disaster-prone areas” ([UN Women, 2022](#)). More research on these challenges is included in the “Concerns and Climate Impacts” section below.

Adding a sentence(s) on intersectionality seeks to uplift the fact that some groups face more or different challenges than others based on the way multiple types of discrimination interact. Awareness of this interaction is critical to increase the effectiveness of policies and practices.

Based on input from CDPH and GEPI, the following options for a sentence on intersectionality were put forward:

1. “Factors such as these do not exist in isolation; rather, they intersect to create unique and compounded vulnerabilities. As a result, individuals facing multiple forms of systemic disadvantage often experience climate impacts most severely and face the greatest barriers to resilience.”

2. “People facing multiple forms of marginalization and inequality will experience climate change impacts more intensely and face more barriers to recovery.”  
([Canadian Women’s Foundation](#))

Subcommittee members preferred the second option because its shorter length makes it more accessible. One member emphasized the importance of calling out barriers to recovery. While one member appreciated that the first statement goes into more detail on the meaning and importance of intersectionality, another noted that this can still be discussed in supplemental materials.

### **Striking “and identification”**

The phrase “sexual orientation and identification” is not in common use and can be shortened to “sexual orientation.”

### **Recommendation**

Given the input described above, the TAC Subcommittee recommends that the Vulnerable Communities Definition be amended to read:

Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts. Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, **gender**, sexual orientation and identification, national origin, income inequality, and disability. **People facing multiple forms of marginalization and inequality will experience climate change impacts more intensely and face more barriers to recovery.**

### **Vulnerable Communities Resource Guide**

While the Council’s definition of “vulnerable communities” provides clarity on the underlying factors of community vulnerability and how these are exacerbated by climate impacts, a definition alone may not provide the level of detail needed to take actionable steps within the context of climate adaptation plans and implementation actions. The California Governor’s Office of Land Use and Climate Innovation (LCI), with input from the ICARP TAC, developed a [Defining Vulnerable Communities in the Context of Climate Adaptation](#) in 2018 as a starting point for practitioners to use when first considering how to define vulnerable communities in an adaptation context.

LCI staff will be updating this resource guide alongside the TAC to reflect updated research and tools. This will include updated definitions and/or context for the different factors in the Vulnerable Communities Definition and other updates that the TAC identifies as a priority, including the meaning and importance of intersectionality. In the context of adding gender to the definition, the update will also make it clear that the definition includes transgender, nonbinary, gender non-conforming, agender, intersex, and other gender minorities.

## Concerns and Climate Impacts

GHES CDPH staff explained that people often do not understand how gender and climate impacts are related. This knowledge gap makes it difficult to address the disproportionate effects of climate impacts on women and gender minorities. For example, they reported that skepticism impedes CDPH's ability to collect data and create interventions. The following section explains some of the specific climate vulnerabilities that women and gender minorities face.

A representative from Trans Health described general concerns that transgender and gender nonconforming people face, including:

- Safety and fear (e.g. violence and physical safety)
- Healthcare and wellbeing (e.g. the importance of accessing medical services like hormones and therapy)
- Systemic issues (e.g. loss of federal funding and erosion of rights)
- Discrimination and hate
- Psychological impact (PTSD)
- Social and environmental factors (e.g. absence of safe spaces: lack of safety in the home and in public, targeting by law enforcement, inability to congregate)

All of these factors play a role in heightening vulnerability to climate change and climate events.

GEPI's representative described how women are disproportionality harmed by climate change because of heightened risk and sensitivity, lower access to resources due to gender inequality, oppressive social norms, and more. She presented two examples of this:

- During the January 2025 Los Angeles wildfires, school closures forced parents to find alternative childcare options. Mothers do twice as much housework as fathers on average, so the increased burden of childcare during emergencies falls primarily on women. This can compound with other factors such as ethnicity and race depending on cultural expectations, leading to even greater gender disparities among some groups.
- Green transition jobs disproportionality go to men – specifically white men. Women, LGBTQ+ individuals, and people of color have difficulty breaking into the trades, where most green transition jobs lie ([Plummer, 2025](#)).

GEPI's report, The Promise of Gender Inclusive Climate Action, which is specific to California, found that “women’s greater vulnerability to climate change stems from two primary dynamics – gendered economic inequality and women’s disproportionate responsibility for caregiving” ([2024](#)). Some key factors include:

- 1 in 3 women-led households are energy burdened and 2 in 3 are rent burdened
- Women spend twice as much time as men caring for children
- Women are paid just 66 cents for every dollar paid to White men

Academic literature expands on the above points. A brief, non-exhaustive list of key findings from the literature is provided below.

Women experience disproportionate and unique health impacts from climate disasters compared to men:

- Globally, natural disasters lower the life expectancy of women more than that of men ([Neumayer & Pluemper, 2008](#)). This effect is more pronounced in severe disasters and is explained in part by differences in socioeconomic status.
- Multiple studies have shown that women are more at risk of dying in extreme heat ([World Health Organization, 2014](#)); a study in California also found that women were more likely than men to visit the hospital for mental health issues during extreme heat ([Basu et al., 2017](#)).
- A study in the western US found that significantly more elderly women than elderly men were admitted to the hospital for smoke-related respiratory issues during wildfires ([Liu et al., 2017](#)).
- Domestic violence/intimate partner violence rates increase after exposure to natural disasters ([Gearhart et al., 2018](#); [Shumacher et al., 2010](#)); “women and girls are at higher risk of sexual violence, sexual exploitation and abuse, trafficking, and domestic violence in disasters” ([IFRC, 2007](#)).
- Women experience greater long-term mental health impacts from natural disasters such as Hurricane Katrina ([DeSalvo et al., 2007](#); [Picou & Hudson, 2010](#)).
- Women in the United States are less likely than men to report household preparedness for emergencies and 3-day emergency medication supplies, especially if divorced, widowed, and/or living with children ([Ekenga & Ziyu, 2019](#)).

People of all genders who give birth, as well as their children, face health impacts and adverse outcomes due to climate change:

- Higher temperatures are linked with adverse birth outcomes such as stillbirths (including specifically in California), preterm delivery, and low birth weight ([Basu et al., 2016](#)).
- Wildfire smoke exposure is similarly linked to preterm delivery (including specifically in California) and low birth weight ([Heft-Neal et al., 2022](#)).
- Hurricane exposure can lead to both higher rates of fetal distress ([Zahran et al., 2010](#)) and increase risk of postpartum depression for mothers, particularly Black mothers ([Harville et al., 2009](#)).

Gender minorities similarly experience disproportionate and unique health impacts from climate disasters ([Simmonds et al., 2021](#) on gender diverse (nonbinary) populations (reviewing 27 studies), [Kilpatrick et al., 2024](#) on LGBTQ+ populations (reviewing 14 studies)). These include:

- Being refused access to resources such as food, water, shelter, healthcare, hygiene supplies, and financial and legal support based on gender.

- For example, transgender people were turned away from emergency shelters and discriminated against at shelters during Hurricane Katrina ([D'Ooge, 2008](#)).
- Increased risks of gender-based violence such as “corrective rape”, arrests, and separation from partners while accessing emergency shelters; denial of insurance benefits.
- Adverse mental health impacts, especially among displaced individuals. This may be particularly pronounced for indigenous gender diverse people given systemic traumatization.
- Lack of acknowledgement in data collection efforts by healthcare and emergency response organizations, leading to mistrust among gender diverse individuals.
- Displacement can force people to come out or go back in the closet to receive help.
- Interrupted medical and social transitions for transgender individuals, including interrupted access to hormone replacement and to gender-affirming clothing.
- Recovery efforts assigning lower priority to LGBTQ+ communities.

There is a lack of research on how climate change impacts gender minorities outside of natural disasters, such as occupational and heat-related stress, vector-borne diseases, and respiratory, water-borne, or food-borne illnesses ([Simmonds et al., 2021](#)).

Key findings of other researchers include:

- The disproportionate effects of climate disasters on LGBTQ+ people are primarily driven by where LGBTQ+ populations live, skewing toward more highly impacted areas, and systemic inequities that worsen climate change impacts ([Mann et al., 2024](#)).
- Transgender people have much higher rates of being displaced from their home due to natural disaster than cisgender people ([Mann et al., 2024](#)).
- The 2015 U.S. Transgender Survey found that 70% of transgender people seeking shelter had been turned away, were physically or sexually assaulted, or faced some other form of abuse at an assistance shelter because of their gender ([James et al., 2016](#)).