

Webinar Q&A

Climate change, addressing extreme heat impacts for workers

The questions below were asked by participants at the [ETI Insights webinar 'Climate change, addressing extreme heat impacts for workers'](#) on 21 November 2024.

Due to the limitations of time, we were unable to answer all the excellent questions asked during the webinar itself, so instead we are providing full answers here. Where appropriate we also provide links to websites and reports where you can read more about this critical topic.

In order to make this document more navigable we have grouped the questions under sub-headings, see contents table below.

You can find the slides and webinar recording at the link above.

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1. General Questions

Is there a clear definition of extreme heat?

- Good question! Extreme heat is not precisely defined as far as we are aware. Generally, four factors are at play in making heat 'extreme': 1 - temperature; 2 - humidity; 3 - level of physical exertion people are expected to undertake; and 4 - how the temperature compares to a normal or average range for that location and time of year.
- Often the 'Wet Bulb Globe Temperature' (WBGT) is used to assess workplace heat and the risk of 'heat stress'. [Pg. 6 of this publication from the ILO](#) explains WBGT.
- Sometimes, 'extreme heat' is used synonymously with 'heat wave'. However, again this term is not consistently defined. The World Meteorological Office has [further info here](#). The UK for example defines a heat wave as: three consecutive days above a threshold temperature. But these thresholds vary across the country: for example the threshold is 25 degrees Celsius in Wales and Scotland, but 28 degrees in London.
- This latter point illustrates how 'extreme' must be considered relative to 'normal' conditions. These of course vary around the globe and depending on the time of year. For many parts of the world 25 degrees or even 28 degrees would not be considered 'extreme'.

Is there a difference between heat stress and heat stroke?

- Answer provided by Dr Pratik Mishra during the session: *Heat stroke is a dangerous effect of heat stress. While we can take a 38-degree core temperature as heat stress, Heat stroke happens typically at 40-degree core temperature.*
- In addition: yes there is a difference: During heat stroke the body is no longer able to cool itself and experiences dangerously high temperatures which can be fatal. Alongside temperature, other factors also play a role, such as humidity and the duration and intensity of physical exertion. Early identification and action is essential.
- [This webpage](#) provides very useful information. [This first aid guidance from the Red Cross](#) is also excellent.

Does exposure to 40 degrees affect workers in Africa like in Europe?

- Yes, absolutely. We're seeing all continents (with the exception of Antarctica) experiencing temperatures of 40 degrees and above – including both Africa and Europe.
- [This report from the ILO](#) is highly informative. It states that 92.9% of the workforce in Africa is exposed to excessive heat. Africa is currently the most affected continent by extreme heat.
- This website is also very useful: <https://ghhin.org/>

2. Questions related to business responsibilities and responses

How can we from a brand perspective encourage heat stress awareness and its impact on worker productivity to suppliers?

- If you are an ETI member, please have a read of our [Extreme Heat briefing for members](#). This provides a lot of recommendations and expectations.
- If you are not an ETI member, [our Snapshot](#) also provides an overview. Feel free to share the [recording and slides from this webinar](#) too.
- Feel free to share these documents with your suppliers. We would encourage you to discuss with your suppliers what they are already doing and ask for honest feedback on how you can support them.
 - o [This blog provides some suggestions](#) how purchasing practices can worsen impacts for workers from climatic events such as extreme heat.
- As emphasised during the webinar, extreme heat impacts workers in different sectors differently, and impacts different roles within sectors differently. So unfortunately, there is no one-size-fits-all solution. However, the evidence from research (such as that of [Dr Parsons and Dr Mishra](#)) and experience (such as that of [Ethical Apparel Africa](#) and trade unions, as described by Steve) is very clear: freedom of association, collective bargaining and working collaboratively with workers is essential to mitigate the impacts of extreme heat. Do reach out to ETI if you would like to discuss this further.

We have sites that have worked with third parties in taking down the work environment temperature, cooling system, ventilation, etc. but still cannot get it, ALWAYS, lower than 32. Is 32 degree the ultimate goal?

- Legal requirements vary from country to country. These two ILO reports provide helpful summaries: [Global Report: Ensuring safety and health at work in a changing climate](#), see pages 23-27; [Heat at work: Implications for safety and health](#), see pages 31-49.
- However, many jurisdictions do not have legal maximum temperatures.
- In addition, as mentioned elsewhere, temperature needs to be considered in combination with humidity level and with levels of physical exertion. the 'Wet Bulb Globe Temperature' is used to assess workplace heat, see [pg. 6 of this ILO report](#) for an explanation of that measure.
- Two points emphasised by Dr Parsons and Dr Mishra are also key here. 1) workers have an accurate sense of when they are working at unsafe temperatures; 2) collective bargaining by trade unions is the most effective way of keeping workers safe. Therefore, workplace policies on temperature limits should be developed in collaboration with worker representatives, including trade union reps.
- As explained by Pauline, at Ethical Apparel Africa's factory in Ghana, they have managed this challenge by creating enclosed spaces within the larger factor in which temperatures can be further reduced with air conditioning units. Vulnerable workers (e.g. those with

health conditions, elderly or pregnant workers) can work there during the hottest times of the year, and workers can be rotated in to ensure a break from the hottest temperatures. [More info here.](#)

Can rest time in heat stress be excluded from working hours?

- Good question. At ETI our recommendation is that workers should be able and supported to take additional and longer breaks during higher temperatures. And they should face no financial disadvantage for doing so – i.e. they should not receive less pay.
- If you are an ETI member, please have a read of our [Extreme Heat briefing for members](#). This provides our recommendations and expectations.
- If you are not an ETI member, [our Snapshot](#) also provides an overview.

What are your thoughts on the potential link between hourly production targets and the impact of heat on workers? Over the years, hourly production rates have risen due to increasing pressure to produce more (at lower costs) and within shorter lead times which creates pressure to work continuously without breaks. Could reducing production targets or requirements be an effective way to mitigate health impacts, especially during hotter months?

- Great questions, we answered these partially during the session. Broadly speaking yes, increased production targets and shorter lead times create enormous pressure on workers – and these pressures bring risks which are heightened during times of extreme heat. At ETI we recommend suppliers and buyers work collaboratively to adjust schedules and deadlines so that workers are not under undue pressure at these times. [Responsible purchasing practices are key](#). This is covered in our [Briefing for members](#) and [Snapshot for non-members](#) on extreme heat and risks to workers.

Will heat stress indicators, due diligence etc be included in incoming legislation such as CSRD and CSDDD?

- As far as we are aware these pieces of legislation do not refer specifically to heat stress. However, the evidence presented in the webinar demonstrates that the saliency of extreme heat as a human rights risk for workers is rapidly growing. The frequency and severity of periods of extreme heat are increasing. The [ILO estimates that 2.4 billion workers globally](#) are exposed to excessive heat. Therefore, heat should be considered in all supply chain human rights due diligence risk assessments: in some supply chains and some contexts it will be more salient than in others.

Do you have case studies where ventilation conditions in workspaces have been improved while keeping a balance with the energy consumption that this may entail? Of course, the safety of people will always come before any circumstance, but it is true that we have to see how to improve the conditions for workers and maintain a balance between energy consumption and carbon footprint emissions.

- Ethical Apparel Africa's factory in Ghana provides a great example here. The factory site is, as Pauline explained, very green – and [we know that the presence of trees cools air temperatures locally](#). In addition, their air-conditioned spaces and the extraction fans in the main building all run off electricity generated by the solar panels they have installed on the building. You can [read more about this great example here](#).

To what extent brands will be shifting their orders to cooler regions because of climate change? Do we have any assumptions any measurable data in that sense?

- At this stage we have not seen evidence or measurable data on this. It is an important question. Please do share any further information or data if you have it.

When it comes to heat stress, particularly for workers in an enclosed space (factory): is figuring out what to do really such a complex task? From the outside, it seems companies who benefit from lower labor and production cost in climate-affected areas should just heavily invest in much better insulation (rather than tin sheds) and cooling. Why is so much discussion necessary?

- Interesting challenge, thank you! Totally agree that approaches to address this issue will be different in outdoor vs indoor environments: as you suggest, good building design and cooling technologies apply most in indoor environments.
- However, we would caution that many of the world's workers work both indoors and outdoors. For example, delivery drivers, or logistics workers who might be loading/unloading lorries at the entrances to buildings. So, we also need to consider these workers that don't fit neatly into the indoor/outdoor categories.
- At the same time, in our [Briefing for members](#) and [Snapshot for non-members](#) on extreme heat, we try to emphasize that even for workers working in indoor environments that are kept at consistent and safe temperatures, periods of extreme heat have an impact on their lives outside of work. Some of these impacts then impact their working lives and need to be considered by employers.
- For example, workers often have to commute from home to work, which can become dangerous during periods of extreme heat. Sometimes schools and childcare centres will close during heat waves, this creates added stress and work-burden for workers with young children. Many workers will not be able to cool their homes effectively during heat waves,

with big impacts on their ability to sleep – which in turn increases the risk of workplace accidents and has mental health impacts too. In addition, this can increase the likelihood of workplace confrontations or harsh treatment of workers by managers, for example. As mentioned in the session, many workers in global supply chains are women and subject to the double-burden of paid work and unpaid domestic/care work – extreme heat makes this double-burden even more exhausting.

- Your point still stands, for many indoor work environments improved building designed and the introduction of cooling technologies will make a huge difference. But we are keen for employers to also consider these wider impacts on the workforce and to work collaboratively with worker representatives to do what they can to mitigate impacts for workers.

3. Questions related to gender

Is this impact of heat on the body the same for male and female workers? Have studies reviewed these effects through a gender lens? Given the number of women in the global workforce it would be good to understand this.

- During the session, Dr Laurie Parsons emphasised that the data from the Oppressive Heat research in Cambodia can be disaggregated by sector and by job type/role. However, many of these roles are largely occupied by either women or men workers (rather than both). This makes direct comparisons of men and women doing the same job or role difficult: the key variables are the sectors and job type/role.
- However, we know that climate vulnerabilities intersect with other existing social inequalities. In many contexts, the double work burden that women are subject to (both paid employment and unpaid care work) increase vulnerabilities. In addition, women often have more limited access to information and support services; often their rights and priorities are overlooked and unrepresented. We tried to capture these dynamics in our Extreme Heat briefing for ETI members, [available here](#).
 - o [This publication](#) from UN Women is also useful.
- Answer provided by Dr Pratik Mishra during the session: *Yes, the impact of heat here on male and female workers is more or less similar in many processes. But there are many gendered effects of heat such as the increased risk of miscarriage. Heat risk is higher for pregnant women and women during menopause to a greater extent.*
- Answer provided by Svetlana Boincean, Intl Union of Farmworkers (IUF) during the session: *During physical work, women are 3.7 times more likely to be intolerant to heat than men. Women tend to sweat less than men and therefore have a lower capacity to release heat from the body. It is in the ILO report <https://www.ilo.org/publications/heat-work-implications-safety-and-health>*

On the gender lens: If it is the activity that impacts a person's level of heat stress, can there be a parallel drawn to the types of jobs men and women are doing? I.e., are women doing jobs that put them in a heat stress situation more than the jobs that are disproportionately carried out by men or the other way around?

- Great question, the simple answer is yes. Gender norms in different contexts dictate that some jobs are more likely to be carried out by women, some by men. And some of these jobs are more exposed to extreme heat than others.
- We know that high temperatures, high humidity and high levels of physical activity work together to compound the risk for workers. Jobs exposed to these factors, regardless of who does them, are higher risk of heat related illness.
- However, we also know that climate vulnerabilities intersect with other existing social inequalities, including gender inequalities – this is an important consideration. See above

for further response on this, including the response from Svetlana Boincean (IUF) citing ILO findings on how women are more at risk from heat than men.

What are your thoughts on the intersection of gender and gendered roles outside the workplace, such as caregiving duties and household chores, which often lead to a double burden on women? How do these roles affect women's overall well-being, beyond their capacity to be productive labourers?

- Great questions, answers included above in response to the first question.

Where can we find the research about heat impact on women garment workers in India?

- Given how large the Indian garment and textiles industry is, and given how highly vulnerable to extreme heat parts of India are, for example Delhi NCR, this is an important topic. [This research, from Global Labor Institute](#), mentioned in our introduction includes data on extreme heat for garment producing hubs such as Delhi and Tirupur. We highly recommend it.
- [Tamil Nadu Textile and Common Labor Union \(TTCU\)](#) have also been active on this topic.

4. Questions about the presentation from Dr Laurie Parsons and Dr Pratik Mishra on oppressive heat in Cambodia

Are these findings available in a published report? I would love to read in full. Thanks!

Has your research been published? Where can we find it?

- Yes, you'll find them here: <https://www.oppressive-heat.org/publications>

What examples are there of 'collective actions' that have been taken in a workplace?

- Answer from Dr Laurie Parsons: *These collective actions include, for example: advocating for provision of fans, longer breaks, providing information on when days will be especially hot, and information on how to manage heat.* You'll find further detail in Section 7 (pg.25) of the [Oppressive Heat report](#).

The relationship between union membership and reduced heat stress - could you elaborate on that? Was this applicable within the same factory?

- Answer from Dr Laurie Parsons: *The union situation in Cambodia is a little complex, as any given factory usually has multiple unions, but they don't compete as such, rather acting as more and less forceful voices in the factory union landscape.*
- See section 7.3 (pg. 29) and section 8.5 (pg.33) of the [Oppressive Heat report](#).
- The key finding is probably this one:
 - o *"Union membership was a significant predictor of unsafe core temperatures. Non-union members spent 3.5% of working minutes at unsafe core temperatures, compared with 1.7% of union members: a 51% difference."*

Has data been captured of the impact of CDKN in these workplaces? Have there been deaths linked to heat stress?

- Answer provided by Dr Laurie Parsons during the session: *Re kidney disease, we are working on this aspect in our next round of study*
- [La Isla have a wealth of expertise](#) on the relationship between exposure to heat and kidney disease in the sugar industry.
- [This ILO report](#) also includes useful information. The prevalence of kidney disease due to heat exposure is huge. According to this report: *"Globally, 26.2 million people are living with chronic kidney disease attributable to heat stress at work."*

5. Questions about Pauline Watine's presentation from Ethical Apparel Africa

Interested in the workers committee [Ethical Apparel Africa]. What is its legal basis? Strictly speaking, only a trade union can engage in collective bargaining.

Answer from Pauline:

- Legal Basis of Workers' Committees in Ghana:

The Labour Act, 2003 (Act 651) is the primary legislation governing labor relations in Ghana. This Act provides the framework for the establishment and operation of workers' committees. Here are some key points:

- *Formation and recognition: Workers' committees can be formed within enterprises to represent employees' interests. These committees are typically composed of elected representatives from the workforce.*
- *Functions and powers: The primary role of workers' committees is to facilitate communication between employees and management. They address workplace issues, represent workers in discussions with management, and ensure that employees' concerns are heard.*
- *Legal Framework: The Labour Act outlines the rights and responsibilities of workers' committees. It ensures that these committees operate within a legal framework that supports fair representation and participation in workplace decision-making.*

Collective Bargaining

- *As per the Ghana Labour Act and our own Freedom of Association and Collective Bargaining policy, we encourage our workers to form and join trade unions. To date, our workers have had presentations from the unions and have decided not to join at this point. To ensure the robustness and effectiveness of the Workers Committee (WC), we have taken the following measures:*

- *Enhance the role of the WC: we have strengthened the committee's role in representing workers' interests and ensure it operates transparently and democratically.*
- *Education and communication: we have educated workers about their rights and the benefits of union membership, addressing their concerns directly.*
- *Our workers have been able - through their Workers Committee Representatives - to negotiate their working conditions, benefits and salary after consultations, thus the reference to collective negotiation. That being said, it's correct to say that while workers' committees can represent employees and discuss issues with management, formal collective bargaining requires recognition as a trade union. This involves obtaining a collective bargaining certificate from the Chief Labour Officer (Sections 98-99 of the Labour Act) to legally appoint the trade union to represent the workers in negotiations with the employer.*

Do the hydration stations also offer rehydration salts and supplements? [Ethical Apparel Africa]

- Answer from Pauline: *We do not at the moment but we have provision for it at the sick bay and in each first aid kit. We also plan to train the Nurse who is working on site on heat stroke and heat impacted stress points and how to handle such a situation quickly.*

This is a question for Pauline: Could you please let us know if you are measuring the impact of your measures and if you are monitoring whether people comply with these, e.g. are workers actually taking breaks to drink water or cool down when overheated?

- Answer from Pauline: *As mentioned, we do not systematically monitor body temperature but we would like to pilot this and collaborate with Laurie and Pratik on a project in Ghana. Currently, workers' temperatures are checked at the sick bay when they visit. We continuously monitor the temperature at various locations within the factory. Based on this data, we advise workers to drink more water and take appropriate breaks. They can rest and cool down at the wellbeing center, which is equipped with air conditioning. We have noticed that workers sometimes need nudges, as we all do, but they do comply and appreciate it.*

6. Questions about Steve's Craig presentation on trade unions' heat work

I do agree that union and collective action is one the key ways to go, but many of the most vulnerable workers, especially marginalized women eg Dalits do not have access or ability to join a TU nor are they aware of their rights however many international or even national standards there are. How do we surmount this?

- 100% agree. The most at risk and marginalised workers face all kinds of barriers in being represented within collective structures. And we quite agree that in the South Asian context, caste is a hugely important vector of social exclusion.
- However, strong examples do exist. [This publication by ETI from 2020](#) documents some brilliant case-studies of where women workers have managed to either a) form their own collective organization, or b) reform existing organisations to better represent their interests and priorities.
- The other excellent example, which we're sure many participants are also familiar with, is [SEWA – the Self Employed Women's Association in India](#). They now have close to 3 million members. They recently started an [interesting initiative offering heat insurance to members](#).
- Answer from Dr Pratik Mishra during the session: *Thanks Meena for the link. Absolutely agree. It's more difficult as heat is strongly linked to social conditions such as caste, income, debt.*

Relevant linked shared: <https://x.com/idsnupdates/status/1818230451405754792?s=43>

According to the ILO C155 and C184, workers have the right to remove themselves from dangerous situations when there is an imminent and serious risk to their safety and health.

- Agree. Links here: [ILO C155](#) and [ILO C184](#).

Relevant links:

<https://www.bwint.org/cms/hot-topic-bwi-releases-heat-report-to-help-workers-secure-their-health-and-safety-3120>

<https://www.bwint.org/cms/call-to-action-heat-up-workers-rights-not-the-planet-2938#:~:text=It%20seeks%20to%20recognise%20the,time%20of%20a%20climate%20emergency.>