

A gender and intersectionality responsive climate adaptation plan for London

From Zack Polanski AM and Researchers from University College London

Park drought at Greenwich Park

Key information

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Contents

[Foreword](#)

[Summary](#)

[Background](#)

[Why is a gender and intersectional perspective important?](#)

[Gender and floods](#)

[Gender and heatwaves](#)

[Gender and intersectionality sensitive planning](#)

[Including affected communities](#)

[Financing a climate adaptation plan](#)

[Recommendations for London](#)

[References](#)

[Further reading](#)

1. Foreword

As soon as I was elected as a London Assembly Member, at my first ever public meeting with the Mayor, I urged him to consider Citizens Assemblies on the climate crisis. My argument was then, and continues to be, that no one knows their communities better than people from within those communities.

At the time of writing, the UK Covid-19 Inquiry is well underway. It has emerged loud and clear that one cause of the disastrous handling of the pandemic was the role of a small group of men at the centre of decision making.

It is a clarifying example of how a lack of diversity in decision-making spaces, right up to the highest level of government, weakens our ability to respond effectively to the problems we face – especially in emergency scenarios and cross-cutting crises.

The Mayor has a goal of reaching net zero by 2030. It's vital for our health and wellbeing that we reach that goal – and there can be no environmental justice without social, racial and economic justice too. Unfortunately, as my colleagues on the London Assembly have repeatedly shown – most notably in Caroline Russell AM's report, *Climate Change Risks for London* – too much heating is already locked in. From our buildings to our infrastructure to our work environments, London needs to adapt. The ongoing London Climate Resilience Review is a positive step in that direction.

In reaching the goal of a climate-safe London, we know that to get there we need diverse and marginalised communities around the table. The gender of the people making the decisions matters – as the case studies in this report show from around the world – and we must make sure that communities are represented, no matter where they live, or how wealthy their cities are.

I am grateful to have worked alongside colleagues from University College London on this report, and delighted to have benefited from the global expertise of the Gender Responsive Resilience and Intersectionality in Policy and Practice (GRRIPP) project.

I hope it will add to a growing body of work that creates a difference in how vital decisions are made.

Zack Polanski AM

December 2023

2. Summary

This report summarises key findings from discussions in autumn 2023 held between the UCL Gender Responsive Resilience and Intersectionality in Policy and in Practice (GRRIPP) project, and the City Hall Greens London Assembly Members – Zack Polanski, Siân Berry and Caroline Russell.

It presents methods and actions to design a gender and intersectionality responsive climate adaptation plan for London, in order to address the different climate-related hazards and minimise the level of risk for its very diverse population. It draws on successful case studies and recommendations from cities located in different parts of the world: the Philippines, Nepal, India, Argentina and Sri Lanka. All have experienced similar or higher levels of vulnerability and implemented innovative solutions, all of which we can learn from in London.

The Mayor of London, Sadiq Khan, has commissioned a London Climate Resilience Review to guide the city's preparations for more extreme weather in the future, led by Emma Howard Boyd CBE, and due to report in December 2023. We hope that our report will help inform the work of this Commission, and of future Mayors to come.

Our recommendations are set out across five different areas:

1. Revise climate assessments through an intersectional gender lens
2. Deliver genuine and inclusive public participation
3. Set gender-sensitive targets and monitor against delivery
4. Define organisational responsibilities
5. Deliver adequate funding

3. Background

London has a total population of 8.8 million, which makes it the largest city in Europe. It is also the most ethnically diverse region of England, and an important proportion of Londoners (41%) were born outside of the UK.ⁱ Just over a quarter of the London population is living in poverty (calculated after housing cost), or approximately 2 million people, with important variations by borough. While this proportion goes up to 39% in Tower Hamlets, in Richmond, it goes down to 19%. In addition, London has high rates of child poverty, with 47.5% of children living in poverty in Tower Hamlets alone.ⁱⁱ Overall, 16% of Londoners are in low-paid jobs. A large part of London's population is disabled (1.2 million) and experiences different forms of deprivation; 5.9% reported that their day-to-day activities are "limited a lot", and 7.8% that they are "limited a little".

There are almost as many women (4.49 million) as there are men (4.51 million), however, 1% of the population reported that they have a gender identity different from their sex registered at birth, which amounts to about 88,000 people. Those different categories intersect with each other, creating important disparities depending on gender and race/ethnicity factors. For instance, 18.6% of women compared to 15% of men, and about a third of Black and Mixed-race compared to 18.7% of white Londoners, are in low-paid jobs.

This diversity is essential to consider when addressing climate change and designing a resilience plan. Different groups will be affected differently by climate hazards, and will have unequal access to resources to face the consequences of climate change.

The Mayor of London conducted a climate risk mapping in 2022, factoring-in different levels of vulnerability and climate hazards Londoners are exposed to.ⁱⁱⁱ The climate risks map shows a high level of exposure to heatwaves and floods across the city, with some boroughs being significantly more at risk. Other risks have also been identified in a report published by Future of London in 2016, such as droughts, wildfires, storms, air pollution or food contamination.^{iv} However, we found that there is a need to include more systematically a gender and intersectional perspective in debates on climate change and climate adaptation, to ensure that a more comprehensive resilience plan can be designed.

4. Why is a gender and intersectional perspective important?

People have different capacities to adapt to climate risks depending on a series of factors, gender being one of them. Because gender inequalities are so entrenched in our societies, they already form part of the 'normal', before a disaster happens.

Therefore, when a crisis or external shock takes place, it amplifies those pre-existing imbalances and increases the level of risks for certain groups. If social inequalities are not taken into consideration when preparing an intervention, it is likely to be ineffective, or worse, to perpetuate the very conditions that created vulnerabilities and exclusions in the first place.

Globally, many studies show the higher level of vulnerability experienced by women, for instance in events of floods, droughts or extreme temperatures, often due to their responsibilities with reproductive tasks, lower levels of income, lower access to resources and restricted opportunities to be part of decision making processes.^v Similarly, the LGBTQI+ population tends to be disadvantaged in accessing housing, medical treatment and shelter or other infrastructures, and are often excluded from participating in emergency preparation and

It is unclear whether the Mayor and GLA's planning to date has considered this in any way. The main report informing the adaptation element of the Mayor's 1.5°C compatible plan, a detailed analysis published by management and engineering consultants Mott McDonald in 2018, focuses on economic sectors and gives no meaningful consideration to gender, ethnicity, age or sexuality.vii

Thus, the first step to build a climate adaptation plan is to have a gender and intersectional diagnosis of the different factors of vulnerability and assess how those might affect the level of risk experienced by the population.

Key questions to ask include:

- What are the different hazards?
- Who is more at risk?
- Have those groups been consulted or involved in the decision-making process?
- What available data are there and where are the gaps?
- Who are the key stakeholders in the field and how can we collaborate with them?

Case Study: LGBTIQ+ people's experiences after a disaster (Philippines and Nepal)

In post-disaster contexts, the majority of disaster relief efforts are designed to aid heterosexual and homogenous groups. Groups that do not fall within the binary 'man and woman' are often overlooked and this is reflected in the experiences of LGBTIQ+ communities world-wide.

During and after the 2015 earthquake in Nepal, LGBTIQ+ people were already excluded from 'mainstream' society, which exacerbated the exclusion they received at evacuation centres and when accessing sanitation and healthcare, all of which were binary in their delivery. viii Procedures such as dividing evacuation centres and access to basic human rights by 'men' and 'women' excluded a significant number of LGBTIQ+ members who are non-binary or transgender as neither were welcome. Members of the transgender community also experienced increased rates of violence and harassment when seeking shelter and accessing public toilets and sanitary products. After the earthquake, transgender people were forced to leave their rented properties by the home owners and rent was also raised.

Similar experiences were shared after Typhoon Mangkhut in the Philippines in 2018. Due to exclusions from mainstream relief and recovery efforts and in the face of increased risk of violence and harassments, LGBTIQ+ populations took it upon themselves to organise and deliver their own inclusive and intersectional disaster relief, and to set up their own evacuation centres in partnership with the Philippines Red Cross. In both cases, LGBTIQ+ people and allies emphasised the urgent need for humanitarian organisations to develop inclusive, gender-responsive action plans which are not blanket in approach but consider the intersectional and differing needs within the LGBTIQ+ community.

5. Gender and floods

With 15 per cent of the city on a flood plain, London has experienced many floods in the past and the risks are increasing with climate change.ix After a tidal surge killed 300 people in 1953, the Thames Barrier was commissioned by the Greater London Council and eventually opened in 1984. It was built to withstand severe

surges, up to a once in 1,000 year event, and expected to be used two to three times per year, but since the 2000s has been used six to seven times per year on average. Earlier this year, the Environment Agency announced plans to raise defences upstream of the Thames Barrier by 2050, 15 years earlier than planned, due to heightened climate risks.x

We know from large evidence-based research that flooding can only mean greater impacts on women, among other marginalised or disadvantaged groupsxi. As the majority of research on gender and floods is related to the category ‘women’ this section focuses on this narrower gender category. These manifest through unequal gendered divisions of labour where the burden of managing the home and dependent family members falls primarily on women. In the pressures of flood crisis response, children’s feelings can be overlooked with psychological and behavioural impacts which can impact on women as the major care givers.

Evacuations from the home, to shelters or alternative accommodation, bring extra (usually unrecognised) burdens when support systems are disrupted and women have to find new ways of coping with longer, more difficult or costly commutes or extra journeys for themselves, their children or others who may be dependent upon them. Increases in domestic violence (or increases in its visibility) that emerge during disasters are poorly prepared for and can result, for example, in women in refuges or shelters being sent to the same evacuation centres as their abusersxii, and in a lack of priority for such refuges as they do not feature as ‘critical infrastructure’ that must be protected.

Although women are faced with some specific impacts (and only a few have been highlighted here), they typically form a minority of decision makers and a minority voice in public engagement activities, thus, they are denied the opportunity to contribute to improving policies and practices in gender responsive ways.

6. Gender and heatwaves

The occurrence and intensity of heatwaves is expected to rise in the coming years. Heat waves affect a large population in a short span of time and create health issues, often results in physiological stress in people even triggering mortality; while also resulting in cascading socio-economic impacts such as work loss and a decrease in labour productivity. Cities are particularly vulnerable as the buildings, especially high-rise ones, can create heat islands. xiii Many cities are already facing this phenomenon and facing the adverse effects.

There are significant gender differences in heat related mortality and morbidity. Women’s risk of heat-related illnesses is intensified due to social norms and gender discrimination embedded in society. Women are vulnerable to heat stress as their ability to thermoregulate is compromised. In sectors such as adult social care, where 81 per cent of the workforce is female, there is likely to be a knock-on impact of this physical disparity during a heatwave event, with both female workers and care recipients more likely to be adversely impacted than their male counterparts.xiv A recent investigation by the London Assembly’s Fire, Resilience, Emergency Planning Committee of the London Fire Brigade found that a large majority of the Control Room staff were women, highlighting that even more administrative workplaces could see differentiated impacts under a severe heat wave, in this case carrying quite practical considerations in a crisis response scenario.

The Mayor's work should investigate such disparities further and understand what roles and working environments are most at risk, with a particular view to gender imbalance and physical disparity in how severe events are experienced.

In the UK, data for the 2022 heat waves show there were more excess deaths in females (2,159) compared with males (1,115) across heat-periods. This was a reversal of the trend between 2016 and 2021 which identified excess deaths to be generally higher in males during heat periods. xv This is understood to be partly related to more men working outside and engaging more in outside activities. Across Europe, an estimated 56 per cent more heat-related deaths occur in women than men, and these findings differed according to age. xvi The authors of this study also noted that despite the UK being one of a small number of European countries with the highest mortality numbers (other countries were Italy, Spain, Germany, France, and Greece), data on the numbers and rates for women and men were unavailable for the United Kingdom. The authors concluded that there was an urgent need to coordinate national agencies to provide statistics across sex and age to improve the data availability for research, translation and policymaking.

Despite this urgent need and the first principle of the UK Health Security Agency (UKSHA) being a focus on people, there is no gender breakdown in the UKHSA 2023 Adverse Weather and Health Plan Protecting health from weather related harm 2023 to 2024 and it is often hard to find the supporting evidence.xvii

In the context of London, research has noted that for the 2003 heatwave, London was one of the worst affected European cities in terms of mortality numbers.xviii However, in examining the evidence for gendered heatwave outcomes in London, it is clear that there are major data and policy gaps. There is still some uncertainty regarding the 2022 heat eventsxix and so we have to put together what we know from often unconnected data sources in order to identify some concerning vulnerabilities, for instance, for elderly women in care homes throughout London and the UK. For example: a) the gendered nature of heatwave mortality and morbidity; b) the data on the female gendered profile of the older age groups; c) and related to that, the skewed gender data on those in residential care (i.e. female care home residents aged 65 years and over outnumber men, with 23 female residents to every 10 male residentsxx; plus d) the poor construction of care institutions to cope with heat extremes. xxi

From this we can speculate that there is an excess of elderly females, especially those in residential facilities, that are at greater risk in heatwaves and yet, the solution is far from simple. For example, adapting to more regular excess heat events by increasing the availability of air conditioning will “exacerbate the urban heat island and further increase the risks of overheating”.xxii Clearly, we lack data in many areas but we also lack the integration of these different data strands to provide a robust evidence base for action.

Case study: gendered practices and exposure to heat in India

Gendered roles and expectations are important factors that contribute to making a disaster worst for women and vulnerable groups. In India, many women who work as manual laborers wear tight t-shirts over their saris (traditional Indian clothing), hindering the cooling effect of sweat evaporation. In some occupations that are primarily carried out by women, such as incense and kite-making, women sit for hours in small, unventilated structures without using fans or any cooling measures. In addition, there is increasing evidence of stillbirths during periods of extreme heat. Women's household responsibilities e.g., water and firewood collection, further contributes to heat strain and exhaustion. Lack of timely access to information on heat alerts increases their risk of heat stress. Also pregnant and lactating women are more prone to dehydration. These groups need special attention and hence the plans need to be specific about the measures and interventions.

Children and infants are physiologically more vulnerable than adults to heat-related illnesses. Children's vulnerability is heightened by their physical activity, production of more metabolic heat/kg, in comparison to body weight, dehydration and lower cardiac output. Strict vigilance is required during a heat wave to avoid exposure to children. Infants are particularly sensitive to heat due to high metabolism rates and poor ability to adjust to changes in temperatures. Infants sweat less which considerably decreases their ability to cool their

bodies, and they are unable to remove sheets or clothing during heat stress. As a result they are more susceptible to heat-related deaths. The elderly are another high risk category during heat waves. Age compounds these problems reducing the body's ability to dissipate heat.

In Ahmedabad (India), certain groups within the city have been found to be more at-risk to heat-related health impacts, including children, the elderly, slum communities, and outdoor workers. The analysis shows that women within these groups face unique climate-related challenges.^{xxiii} Vulnerability to extreme heat is high among residents of informal settlements (housing on land to which residents have no legal claim). In these slum communities, women are responsible for household chores including cooking and preparing meals on open fires indoors, regardless of the weather, which exacerbates exposure to high heat during scorching weather. Access to safe drinking water and facilities such as toilets or fans during the heat season can also be a struggle for women living in slum.

7. Gender and intersectionality sensitive planning

Once the diagnosis is done, highlighting the key areas of vulnerability and levels of risks for each group, adequate targets and indicators can be defined to reduce risks. Those have to be adapted and specific, responding directly to the risks identified.

General guidelines:

- Revise the already existing climate-adaption plans for the city or municipality and identify the gaps in terms of gender disaggregated data and gender analysis;
- Take into account already existing good practices from the communities, especially if they have traditional ways of dealing with specific events,
- Make gender and intersectionality a central criteria of: the risk assessment, the planning of actions for mitigation or adaptation, and the evaluation. For instance, assess if minority groups could be affected differently (risk assessment), or set gender specific criteria for the evaluation, such as a minimum percentage of women or minority group involved in the decision-making.
- Consult and include the affected communities to identify the risks and design the plan in a participative way with them,
- Build capacity for the officials in charge of designing and implementing the adaptation plan to ensure that gender and intersectionality are mainstreamed across the different areas, for instance, across different departments or fields of action (housing, education, transport).

Case study: Neuquén (Argentina): Innovative Actions to Face Floods and Guarantee Accessibility

In the city of Neuquén, heavy rain and flooding can turn streets into temporary rivers, which not only affects vehicle movement, but also represents a significant obstacle for those who rely on public transport. In response to this climate threat, the latest transportation service company contract considered the incorporation of a series of measures to address these challenges and guarantee accessibility to different groups, especially pregnant women, people with reduced mobility and people with disabilities. xxiv This framework incorporated measures to allow bus drivers to stop even at non-specific bus stopping points, when they see passengers in need due to unfavourable physical condition. Likewise, in the event of climate emergencies, this measure allows everyone to use public transport regardless of their condition. This translates into greater flexibility and adaptability in the public transport service, allowing people with special needs to access buses more easily and in a timely manner, even in the midst of floods that previously made their mobility extremely difficult.

On top of allowing additional stops in emergency situations, special attention has been paid to the need to make buses themselves more accessible. Public transport vehicles are now equipped with ramp systems and simplified access for people with reduced mobility. These ramps incline and lower to curb level, facilitating entry and exit for people with disabilities. This measure not only addresses immediate concerns related to floods, but also sets a higher standard for accessibility on the city's public transportation. Furthermore, it demonstrates that innovative responses to climate challenges can go hand in hand with inclusion and equity. People with reduced mobility and other special needs will no longer face barriers to accessing public transportation services, promoting greater equality in the community.

Case study: The Heat Action Plan Review for South Asia

The Heat Action Plan Review published by Integrated Research and Action for Development (IRADe) in 2021xxv, proposes the following key phases to develop a climate-adaptative heat plan:

- Climatological variations, historical Climatology Assessment & Climate Projections;
- Records of heat related Mortality and Morbidity;
- Development of Thermal Hotspot maps;
- Identification of ward-level vulnerability to Heat Stress (using the comprehensive index, comprising 10 sectors - Sanitation, Water, Electricity, Health, Transportation, Housing, Cooking, Awareness and Heat symptoms and their respective sub sectors);
- Green- cover and open space;
- Generation of Vulnerability Hotspot maps (based on thermal hotspots and vulnerability);
- Development of climate and gender sensitive Heat adaptation and mitigation strategies;

- Drafting of Climate Adaptive Heat Action Plan with stakeholder engagement and community participation;
- Final Climate Adaptive Heat Action Plan that prioritizes the most vulnerable, prescribing heat adaptation and mitigation strategies that are gender sensitive;
- Capacity Building and Sensitization of the community through proper dissemination and outreach activities.

8. Including affected communities

Communities that are more exposed or directly affected by the consequences of climate change should be involved in decision-making processes. Including these communities from the start will ensure that their agency, capabilities, coping strategies and methods developed due to a high exposure to risks are heard and used to inform future plans.^{xxvi} Inclusivity will also develop a greater sense of ownership over the process and increase the chances of implementing measures locally. If communities disagree with the plan being proposed or feel that they have not been included, they might reject measures that are perceived as being imposed. ^{xxvii} In addition, in the event of a disaster, local communities are often the first responders and the first aiders, therefore, it is important to assess and strengthen their capacities.

At the regional level, coordination and collective gathering are essential to scale up national issues at regional and international platforms, as well as to advance policy change and policy implementation. This can be done via alliances such as the Pan African Climate Justice Network, Movement of the Movement and many more. However, it is important to note gender issues are still not rising above a generic point of discussion on many of these agendas.

To enable meaningful participation by as wide an audience as possible, it is important to first examine the reasons people may be inhibited from participating:

- Date/Time: think about women as mothers with (child)care obligations, workers with limited free time, shift workers etc.
- Confidence: e.g. Are all groups likely to feel comfortable to speak up? Who tends to take up space in discussions? Is this inhibiting others? Would people feel more confident if the session is facilitated by someone who they can identify with?
- Location: Accessibility of location and building, e.g. Would it be more inclusive to hold an online/hybrid session to include those with physical/mobility limitations or care responsibilities? What about BSL or other languages interpretation? Would it be necessary to offer travel compensation??An alternative can also to use pre-existing local groups, participants are likely to feel more confident speaking in front of people they know from their own community or neighbourhood for instance.

In London, the existence of Citizens' Assemblies represents an opportunity to involve communities in decision-making. "A Citizens' Assembly is a representative group of citizens who are selected at random from the population to learn about, deliberate upon, and make recommendations in relation to a particular issue or set of issues."xxviii Even though it is up to the elected politicians to follow or not their recommendations, this deliberative space can provide a strong basis in the design and implementation of a Climate Adaptation Plan, by involving diverse and representative groups of Londoners and listening to their recommendations. Financial compensation and/or access to inclusive infrastructures (for instance child care, food or transport compensation) should further be considered in order to ensure the participation of a diverse body of citizens and make the Assemblies more effective.

General guidelines:

- Identify the groups already working on the specific hazard/risk needing to be addressed and value their expertise,
- Create linkages between grassroots groups and institutional actors,
- Assess potential barriers to participation and create a space that is as inclusive and accessible as possible,
- Include and consult diverse groups to have a range of experiences and perspectives,
- Establish clear and transparent mechanisms for decision-making and ensure there are processes in place to represent the voices of the community,
- Create a dedicated project on climate change that a Citizens' Assembly can deliberate on.

Case study: Resilience management committees in Sri Lanka

In order to have a stronger, more resilient disaster management systems, the need for active community engagement, rather than treating communities as mere recipients of service delivery, was established post 2004 Indian Ocean tsunami in Sri Lanka. It was re-emphasized following the floods and landslides of 2016/2017, which affected 20 out of the 25 administrative districts of the country. Some of the key features for enhancing community engagement include: the establishment of village disaster management committees, preparation of community disaster preparedness plans, and forming and/or strengthening interactions between the communities (community organizations/committees) and the relevant local government officials. The key to empowering communities for effective DRM lies in organized communities becoming an integral part of the local level disaster preparedness governance mechanism. This was attempted through regular meetings between the relevant officials of the Divisional Secretariat, CBOs and the village (local authority) disaster management committees, that is, through existing governance structures and personnel. Further, recovery plans had strong emphasis on the engagement of the local governance and community institutions.xxix

The Sri Lanka Comprehensive Disaster Management Programme (SLCDMP 2014-2018)xxx attempted to implement this in all disaster-prone Districts and included an output to develop village development programmes that are resilient to multiple disasters. This was built on the premise that opportunity exists to add value to the

development efforts and interventions by increasing the resilience to hazard, vulnerability, risk and coping capacity of the people. SLCDMP was able to implement its ambitious programme only in part, due to financial constraints, and the Post Disaster Needs Assessments of the 2016, 2017 floods and landslides that affected over 20 districts of the country showed that village level disaster management committees have not been maintained as expected, in most places they were not functional. The affected communities observed that the absence of the village committees was the main reason for the lack of preparedness in this instance.

In the current circumstances of compound and complex disasters that can create more vulnerabilities, while also exacerbating long term impacts on poor people, it is necessary to revisit these mechanisms and repurpose them to deal with the compound disasters. Village organizational structures need to be assessed and strengthened in terms of the interface between local government institutions, CSOs and communities. A project carried out by Duryog Nivaran^{xxxix} did just that in 3 local authority areas in the Eastern Province to build capacities and to empower all parties to take responsibilities for their area/community, to revitalise the social contract and strengthen participation, accountability and transparency. Here the community level Disaster Management Committees were revitalised, risk reduction plans drawn up, and their representatives sat in the Disaster Management/Resilience Committees at the local authority level, which was a multi-sectoral committee with community representation. The plans developed at each community level were presented at these meetings to be approved. Once approved, funds were allocated and implementation began, while fundraising for the rest of the plan began. Any development measure in that community by other interested entities would then need to align itself with these plans.

9. Financing a climate adaptation plan

Funding the climate adaptation plan is a crucial element; without adequate resources, the measures cannot be implemented or monitored. To be able to estimate more precisely the cost of plan, the municipality needs to first have determined the actions necessary to reach the different targets, and then estimate the required budget for each of them. Because a strong plan should be multisectoral, and include all the dimensions that affect people's lives (transport, housing, education, employment, etc.), most actions will overlap across sectors. Therefore, the climate part of the budget can be combined and mainstreamed within the city budget for more efficiency.

The current Mayor has directed a number of GLA funding streams towards climate adaptation measures for London. Grow Back Greener Programmes provided £1.8 million to projects tackling surface-water risk, and a £3.1 million Trees for London programme was launched in 2022.^{xxxix} An additional £3 million has been made available to respond to the recommendations of the London Climate Resilience Review.^{xxxix} However, the scale of investment required goes well beyond these programmes and what the GLA is capable of through the overall Mayor's budget. For example, it has been estimated that for Sustainable Urban Drainage Systems (SuDS) alone, London needs £1 billion of investment in new infrastructure.^{xxxix} The Mayor's Green Finance Fund is an important step towards leveraging further private sector finance to support adaptation. However, it is critical that the profit motives of investors do not distort the planning and delivery of measures that serve and protect Londoners. Emphasising the revenue-returning nature of some projects will facilitate access to finance, but will not necessarily improve those projects' impact on London's infrastructure or community resilience. As the pipeline of eligible projects across the GLA expands, this fact should not be overlooked.

Case study: ALPA programme in Argentina

The ALPA Carbon Footprint Stamp is a service offered by the RAMCC, accompanying private companies and organizations in the transition towards carbon neutrality towards the year 2050. xxxv The service consists of knowing the impact generated by the organization on climate, with the aim of mitigating it. In measuring the footprint, the project addresses both the organization's own emissions and those of its value chain. A software programme allows the measurement and procedure to be approached remotely, using graphs and indicators of interest. In addition, accurate results are ensured by using updated emission factors, based on international standards and protocols such as the GHG Protocol and the IPCC. The ALPA Carbon Footprint Seal allows three levels of commitment or three stages to be distinguished:

- Stamp 1: Measuring: indicates that the entity has the calculation and analysis report of its footprint carbon.
- Stamp 2: Reducing: awarded when the client has managed to reduce its GHG emissions after having implemented the reduction actions that were recommended in the first stage, reducing the company's impact on the planet.
- Stamp 3: Carbon Neutral: this stage recognizes and provides visibility to those companies and organizations that have achieved carbon neutrality.

To begin the work, two fundamental aspects are defined: the limits considered for measurement and the year of the report. The next steps consist of collecting activity data, processing organizational information, results presentation, and Carbon Footprint Deliverables. Support is provided through constant contact, to discuss various aspects of the process and clarify doubts. To carry out the calculation, the following are considered:

Direct GHG emissions:

- Fuel consumption from fixed and mobile sources, recharging of refrigerant gases for air conditioning or refrigeration,
- Disposal and/or treatment of waste and/or effluents.

Indirect GHG emissions:

- Transportation of personnel to and from work, business trips,
- Transportation and distribution of merchandise,
- Transportation of third party raw materials,
- Products used by the organization.

By measuring its carbon footprint, the ALPA programme also promotes the re-investment of 20 per cent of what has been paid for the service in a “triple impact project”. This innovative model makes it possible for these projects to be carried out in one of the 275 municipalities that make up the RAMCC network, benefiting the Argentine community and strengthening the organization's social responsibility policies. Examples of those project include: investment in eco-transports, reforestation, installation of sustainable energies in schools, activities of waste collection and recycling.^{xxxvi} Thus, the companies paying for this service can also have a direct positive impact on local climate-related project and increase their contribution to climate adaptation beyond their organisation.

10. Recommendations for London

After considering those different case studies, and the existing literature on gender and disaster, we recommend a number of steps for the city of London. Recognising that the Climate Resilience Review is due to be published soon, most recommendations are directed at the Mayor and GLA’s future climate adaption work.

Revise climate assessments through an intersectional gender lens

- The Climate Resilience Review should consider the gender and intersectional lens, at least to identify gaps in existing assessments and action plans;
- To inform future adaptation work, the Mayor and GLA should collect gender sensitive data to run a robust diagnosis, as well as qualitative data to better understand the meaning of quantitative evidence and carry out a more in-depth intersectional gender analysis;
- The Mayor and GLA should ensure risk assessments are sensitive to gender and intersectional disparities, covering different hazards, risks and forms of vulnerability.

Deliver genuine public participation

- The Climate Resilience Review should identify and demonstrate engagement with civil society and key stakeholders in the field;
- The Mayor’s future adaptation work – including gender responsive planning – should be guided by a Citizens Assembly to ensure the meaningful ongoing participation of affected communities;
- Participatory engagement must enable Londoners’ involvement through material provision (for example, covering costs and paying for time) and proper engagement with GLA officials and decision-makers.

Set targets and monitor against delivery

- The Climate Resilience Review should include an assessment of whether existing targets and indicators consider gender and intersectionality and, if not, recommend new ones;
- The Mayor's future adaptation work should be guided by transparent target-setting and monitoring, with public participation informing the selection of gender-sensitive priority targets and indicators.

Define organisational responsibilities

- The Climate Resilience Review should consider whether different parts of the GLA Group (such as the Planning team, Transport for London and the London Fire Brigade) are aware of their climate adaptation responsibilities and considering gender and intersectionality in their planning;
- The Mayor should ensure responsibilities for delivery are clearly defined and that all teams are aware of and have access to training in gender and intersectionality approaches.

Deliver adequate funding

- The Mayor should fund an ambitious programme of adaptation measures, identifying both short- and long-term co-benefits, and if required, make a case to Government to ensure adequate funding is available to deliver these.
- The Mayor should ensure that the profit motives of investors do not distort and reduce the effectiveness of climate adaptation measures, nor undermine public participation in the overall planning and delivery of the Mayor and GLA's climate adaptation programme.

11. References

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12. Further reading

Implementation and monitoring

IFRC. (2020). “Protection, Gender and Inclusion in Emergencies Toolkit (Pilot Version).” International Federation of Red Cross and Red Crescent Societies: Geneva, Switzerland.
https://www.ifrc.org/sites/default/files/2021-09/Tool1-0PGI_iE_Toolkit_...;

This toolkit accompanies the IFRC Minimum standards on protection, gender, and inclusions (PGI) in emergencies 2018 (“Minimum Standards”). It provides additional guidance to implement and monitor those standards during times of crisis, as well as assembling practical tools and good practices to support the integration of PGI analysis into emergency action plans. The audience for the toolkit is PGI deployed personnel, including delegates, regional advisors and lead staff.

Dwyer, Emily. 2022. "The only way is up: A tool for evaluating diverse SOGIESC (aka LGBTIQ+) inclusion." *The Australian Journal of Emergency Management* 37, no. 1: 33-35. Available *online[
https://www.edgeeffect.org/wp-content/uploads/2021/03/TheOnlyWayIsUp_Web.pdf].

Targeting international humanitarian practitioners and domestic emergency organizations, this report draws on 5 years of research exploring the inclusion of LGBTIQ+ communities in rapid-onset disaster and conflict displacement. Using examples across Asia and the Pacific, the report highlights the frequent failures in humanitarian and DRR systems in acknowledging or addressing the discrimination and violence often experienced by LGBTIQ+ communities. The report concludes with 22 recommendations on effectively developing inclusive practices.

LGBT-specific

Seglah, H A and Blanchard, K (2021) *LGBTQIA+ People and Disasters*. This paper highlights the challenges faced by LGBTQIA+ individuals in crisis, such as discrimination, exclusion, and inadequate aid services.

The paper emphasises the blind spot in the disaster and humanitarian sectors, created by the overlooking of the vulnerabilities, needs, and strengths of LGBTQIA+ individuals in disaster policy. The authors argue that the existing literature reveals the harassment and marginalisation experienced by LGBTQIA+ individuals, and the neglect and discrimination within official responses. The authors identify the publication as a call to action for a greater level of engagement and consideration when developing policy in the field of disaster risk reduction.

NACCHO (2019) *How to Include the LGBT Community in Disaster Preparedness*.

This article, designed to aid preparedness planners, focuses on the challenges that the LGBT community face in emergency response. The article sends a reminder that disaster shelters are a microcosm of community life; issues that are faced by LGBT individuals in non-disaster community life need to be considered to provide for them in disaster situations. Policy recommendations are given, starting with recruiting LGBT community members to join disaster response volunteer groups. The article concludes that there is a severe lack of conversation on this topic at national level which must be addressed to raise awareness for more inclusive governance.

Parkinson, D., Duncan, A., Leonard, W. and Archer, F., (2021). *Lesbian and bisexual women's experience of emergency management*. *Gender issues*, pp.1-24.

This article is concerned with the experiences of lesbian and bisexual women in accessing emergency services as recipients and volunteers in Australia. The article aims to provide a better understanding of the needs of these women in the emergency sector, which is characterised by damaging homogenic male cultures, and how practices can become more inclusive. The article highlights the need to challenge discriminatory behaviours especially from those in leadership positions, who have the power to create positive change and foster diversity. Mandatory LGBT training is vital in creating emergency services that genuinely carry out their duty to protect everyone equally

Knight, K. and Sollom, R. (2012). *Making disaster risk reduction and relief programmes LGBTInclusive: examples from Nepal*.

This article uses Nepal as a case study for LGBTI-inclusive DRR programs and policies. The authors begin by using examples from different global disasters to evidence the type of discrimination LGBTI people may face. They outline reasons gender and sexuality is often side-lined and review major organisations' lack of protocol. The article highlights several considerations for ensuring inclusion, detailing how these were applied in the context of Nepal, and arguing that Nepal's experience is indicative of how to improve DRR around the world. They stress the need for engagement with local organisations to understand local political landscapes, concerns and terminology.

Leonard, W., Parkinson, D., Duncan, A., Archer, F. and Weiss, C.O., (2022). Under pressure: Developing lesbian, gay, bisexual, transgender and intersex (LGBTI) inclusive emergency services. *The Australian Journal of Emergency Management*, 37(1), pp.52-58.

This article highlights that there is a lack of awareness of specific needs for LGBTI people among emergency service personnel in Australia. This is evidenced by their neutral/indifferent attitudes towards them which contributes to the invisibility of the LGBTI community. The article calls for further research into emergency personnel understanding of LGBTI persons needs should be conducted. Recommendations from the article include implementing guidelines to encourage more LGBTI inclusion and changing damaging cultures in the work

Sexual and reproductive health

Nasreen, M., Hossain, K.M., Azad, M.A.K., and Hasan, M.K. 2017. "Sexual and Reproductive Health During Emergencies: Situation Analysis of Disaster Prone Areas of Bangladesh. Institute of Disaster Management and Vulnerability Studies, University of Dhaka: Bangladesh.

https://www.academia.edu/42972346/Sexual_and_Reproductive_Health_during...;

This study provides a rapid overview of emergency responses in Bangladesh by identifying the SRH needs of marginalized populations and the gaps in existing response systems to target for improvement. The role and coordination mechanisms between key stakeholders in the SRH field are also examined, particularly during times of humanitarian crisis.

Carballo, M., Hernandez, M., Schneider, K. and Welle, E., 2005. "Impact of the tsunami on reproductive health." *Journal of the Royal Society of Medicine*, 98: 400-403.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1199634/>;

This short article examines the impact on sexual and reproductive health following the 2004 Indian Ocean tsunami. Addressing concepts such as pregnancy and motherhood, adolescent reproductive health, gynecological care, and gender-based violence to name a few, the article concludes that relief organizations often fail to adequately prioritize reproductive health services during times of crisis. As a result, women, girls and midwives face new threats and higher mortality rates.

Krishnan, S. and Twigg, J., 2016. "Menstrual hygiene: a 'silent' need during disaster recovery." *Waterlines*. 35(3): 265-276.

https://www.researchgate.net/publication/305644815_Menstrual_hygiene_A_'silent'_need_during_disaster_recovery

Using two case studies from India, this article explores menstrual hygiene management (MHM) and practices in a post-disaster context. Findings suggest that menstrual hygiene is overlooked at the household level during the recovery stages, with many women and girls facing isolation, increasing security concerns. Many humanitarian agencies are not prepared with MHM products and do not have the contextual awareness, gender-sensitivity and inclusivity training to establish positive change.

Disability-specific

Gautam, D. and Sharma, M.S., 2018. Disability Inclusive Disaster Risk Reduction in Nepal Situation, Gaps, Challenges and Way Forward. *PROSPECTS AND SITUATION OF ACCESSIBILITY IN NEPAL*: 44-52.

Available *online[<https://nfdn.org.np/article/disability-inclusion-disaster-risk-reductio...>;

This article analyses the inclusion of disability in DRR, the gaps between policy and practices, and puts forth suggestions on how to build resilient capacity. Despite its importance, findings suggest that very few agencies address disability in and the specific challenges persons with disabilities during times of disaster. Instead, persons with disabilities are treated as recipients rather than active participants in the disaster management cycle.

Hazard-specific case studies

Luft, R. E. (2016). Racialized Disaster Patriarchy: An Intersectional Model for Understanding Disaster Ten Years after Hurricane Katrina, *Feminist Formations*, Vol 28 (2): 1-26.

Peek, Lori and Alice Fothergill. (2009). "Parenting in the Wake of Disaster: Mothers and Fathers Respond to Hurricane Katrina." *Women, Gender, and Disaster: Global Issues and Initiatives*, edited by E. Enarson and D. Chakrabarti, pp. 112-130. New Delhi: Sage.

Yumarni, T & Amaratunga, D. (2018). Gender Mainstreaming as a Strategy to Achieve Sustainable Post-Disaster Reconstruction. *Built Environment Project and Asset Management*. pp. 544-556.

Enarson, E. & Fordham, M. (2000) Lines that Divide, Ties that bind: Race, Class, and Gender in Women's Flood recovery in the US and UK. *Australian Journal of Emergency Management*. Vol 15, I 4 pp. 43-52.

Eriksen, C. (2013). *Gender and Wildfire: Landscapes of Uncertainty*. Routledge, New York. pp. 1-208.

Parkinson, D. & Duncan, A. (2018). What's so hard about writing a fire plan? The central role of gendered expectations in bushfire planning. *Australian Journal of Emergency Management Monograph No. 3*: 69. pp. 1-88.

Zabaniotou, A., Pritsa, A. and Kyriakou, E.A., (2021). Observational Evidence of the Need for GenderSensitive Approaches to Wildfires Locally and Globally: Case Study of 2018 Wildfire in Mati, Greece. *Sustainability*, 13(3), p.1556

Mozaffarieh, M. Gasio, P. F. Schotzau, A. Orgul, S. Flammer, J. & Krauchi, K. (2010). Thermal Discomfort with Cold extremities in relation to age, gender, body mass index in a random sample of a Swiss urban population. *Population Health Metrics* 8:17. pp. 1-5.

Buckingham, S. & Le Masson, V. (2017). *Understanding Climate Change Through Gender Relations*. Routledge, New York. pp. 1-224.

Mavisakalyan, A. Tarverdi, Y. (2019). Gender and Climate Change: Do Female Parliamentarians Make a difference? *European Journal of Political Economy* 56. pp. 151-164

[Back to table of contents](#)