

WHITEPAPER

CLIMATE ADAPTATION IN EVENT PLANNING

MAKING EVENTS MORE ENVIRONMENTAL
RESILIENT AND RELIABLE





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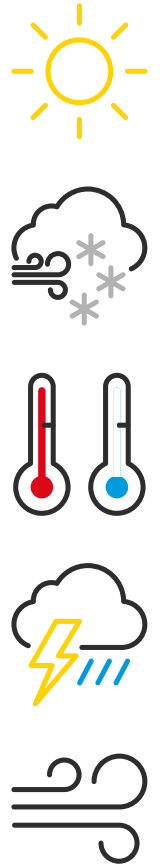
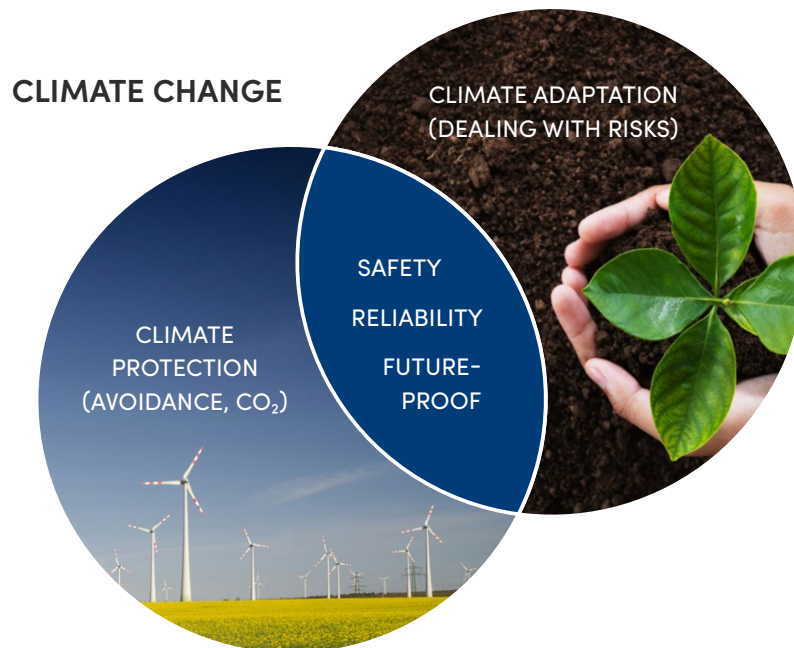
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THE TIME FOR CLIMATE ADAPTATION IS NOW



01



The impact of climate change is already reshaping the reality of B2B events. Heatwaves, heavy rain, storms, and low air quality are occurring more frequently and with greater intensity. They directly affect the production, safety, infrastructure, and economic viability of corporate events. At the same time, energy supply, mobility, and supply chains are coming under increasing pressure. This creates a new risk profile for companies that fundamentally reevaluate event strategies.

In recent years, the focus has primarily been on climate mitigation: reducing emissions, conserving resources, and using sustainable materials. This approach remains essential. However, it does not go far enough. The consequences of global warming that has already occurred are being felt today – regardless of current reduction measures. For companies, this means rising operational risks, potential liability issues, budget uncertainty, and reputational risks in the event of disruptions or safety problems. Climate adaptation therefore broadens the perspective from avoidance to active management. It integrates early risk detection, scenario planning, and robust decision-making structures into event strategy.

For the planning of B2B events, this fundamentally changes the logic. Climate risks must be embedded in objectives, budgeting, venue decisions, and contract design. Scenarios, thresholds, and emergency structures become fixed components of professional event architecture. At the same time, social resilience is gaining importance: protection concepts, duty of care and accessibility, safeguard not only participants but also trust. Economically, a clear environmental adaptation strategy strengthens the reliability of events and therefore the credibility of brands.

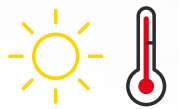
This white paper covers how companies can systematically integrate climate adaptation into their B2B event strategy. It translates resilience into governance structures, operational processes and decision-making logics – with the aim of ensuring that events remain plannable, safe and economically successful even under changing climatic conditions.



02

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CLIMATE- RESILIENT EVENTS

CONCEPTS FOR CLIMATE-RESILIENT EVENTS

While the annual average air temperature in Germany still ranges between 5°C in the north-east and 10°C in the south-west, depending on the region, between 1971 and 2000, climate simulations now project future values of between 10°C and 14°C. What sounds abstract becomes immediately tangible at events. Annual averages conceal the increase in extreme individual occurrences. Over the past 70 years, the number of hot days with temperatures above 30°C has tripled from three to nine days per year. These measurements are taken in the shade at a height of two meters, while on event sites the actual heat burden is often considerably higher.

Rising temperatures, high UV exposure, and extreme weather have a direct impact on the health, safety, and production of events. Medical teams report increasing deployments on hot days, while actual drinking water requirements are often underestimated. Shaded areas cannot be realized everywhere, and mobile canopies must provide protection while also meeting high safety requirements.

Alongside the physical burdens caused by storms, heavy rain or lightning strikes, indirect risks also arise from restricted logistics, additional staffing requirements, rising insurance costs, and greater demands for documentation and liability. Employees need to follow specific protection rules and regulations, defined by occupational insurance regulations with clear requirements for limiting heat exposure and workload. These requirements must also be considered for corporate events and trade fairs.

Large-scale outdoor events are considered particularly exposed, but B2B formats such as trade fairs, corporate events and roadshows are increasingly affected as well. In recent years, extreme weather has repeatedly led to interruptions or cancellations of events.

‘IN THE PAST, PEOPLE WAITED – TODAY,
ACTION IS TAKEN IMMEDIATELY.’

Sabine Funk, expert in event safety (IBIT), describing the shift.

Preventive measures such as storm-proofing, lightning protection or reinforced ground anchoring are now standard in many places. At the same time, extreme weather such as sudden heavy rainfall overwhelming drainage systems or wind gusts above 100 km/h remain difficult to calculate.

Temporary infrastructures are vulnerable to extreme weather conditions. Tents, stages, and grandstands must withstand increasing wind loads. Elevated weather monitoring and site-specific nowcasting systems – for example from the National Weather Services or specialized platforms – support decision-making. Nevertheless, predictability remains limited. Responsibility for interruption or cancellation ultimately lies with event management, under scrutiny from insurers and led by documentation obligations.

Legal frameworks do not yet adequately reflect this reality. There are specific recommended actions for storms, for example dismantling non-wind-resistant structures from Beaufort force 7, evacuating temporary structures at Beaufort force 8–9, and cancelling the event at Beaufort force 10. Comparable thresholds for heat or air quality are lacking. Occupational health and safety regulations provide guidance here: protective measures are recommended from as low as 26°C. For summer B2B events, this often means mandatory shade locations, drinking water provision and preventive protection measures.

Developments in recent years show clearly: **climate risks affect all event formats**. For B2B events, they fundamentally change planning, liability, budgeting and operational decision-making. Climate risks act systemically – and require systematic responses.



DISMANTLE



EVACUATE?



CANCEL

Example of a decision diagram based on the Beaufort scale



03



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EVENTS AND VENUES IN A CHANGING CLIMATE



Extreme heat, heavy rain, storms or flooding: the impacts of climate change are no longer abstract future scenarios. Weather extremes are also becoming more frequent in locations previously not affected – and they have a direct effect on events. Climate influences are therefore gaining significance wherever large numbers of people come together: **at trade fairs, congresses, corporate events or cultural events.**

This is not only about short-term responses to individual weather events, but also about long-term strategies that bring together safety, quality of stay and sustainability. For the event industry, this creates a new operating framework.

NEW CONDITIONS CREATED BY CLIMATE CHANGE

Climate change is altering the conditions under which events are planned and delivered. Heat-waves are particularly noticeable in cities with a high degree of sealed surfaces and dense development. Such urban spaces store heat and create so-called heat islands – zones with significantly higher temperatures than the surrounding area. This affects both visitors to large events and staff working in the event sector. If there is insufficient shade, drinking water provision or opportunities to cool down, health risks arise quickly. Vulnerable groups are particularly affected, such as older people, pregnant women or people with chronic illnesses. Other weather extremes also endanger events: heavy rain can overload drainage systems and disable technical installations, while storms threaten stage structures or tents. Prolonged periods of drought also increase the risk of vegetation fires, especially at events with outdoor areas.

Climate-adapted event planning integrates a systematic risk analysis as a fixed component. Event organisers address the specific climate risks of a venue at an early stage:

- Which natural hazards are relevant?
- Are there flood or heat risks?
- How are vulnerable groups affected?
- Is transport access secured even in extreme weather?

Climate-resilient venues are becoming a decisive factor for long-term planning reliability – particularly for trade fair grounds congress centres and corporate venues. Good thermal insulation not only protects against energy loss in winter but also ensures stable indoor temperatures in summer. Roof structures can fulfil several functions, such as integrating photovoltaics or collecting rainwater. Green roofs and façades improve the microclimate, store rainwater, and lower temperatures. Nature-based solutions enhance the quality of stay and support a climate-stable environment. In flood-prone locations, non-return valves, raised technical rooms or watertight basement windows are important protective measures. Sensitive equipment should be positioned to be as flood-safe as possible. Material choice also influences resilience. UV-resistant, heat- and moisture-resistant building materials increase service life and reduce maintenance requirements.

CLIMATE-ADAPTED OUTDOOR AREAS AND MICROCLIMATE

At events with outdoor areas, the microclimate plays a central role. Sealed surfaces intensify heat stress, while a lack of vegetation reduces the quality of stay. Shade-giving trees, landscaped rest areas or water features help cool spaces. Rainwater management – for example through permeable surfaces or retention areas – reduces flood risks and supports sustainable land use. Operators are increasingly reviewing their safety and emergency concepts with climate risks in mind. Functional back-up power systems, protection for technical infrastructure, and clearly defined emergency plans are part of this. Climate-risk emergency

plans cover scenarios such as heatwaves, storms or heavy rain and define clear responsibilities and communication routes.

Training for security teams, technical crews, and event management strengthens the ability to respond in emergencies. **Insurance cover is also becoming more important.** Many policies provide only limited cover for climate-related damages. Adapting insurance to changing risk profiles can reduce financial risks.



Climate change is increasingly affecting the timing and conceptual planning of events. Events taking place during high-summer periods are being reassessed, and formats are being planned more flexibly. Modular stages, temporary shading or hybrid elements increase adaptability. Digital additions can cushion weather-related restrictions and increase planning reliability. Alongside adaptation, reducing greenhouse gas emissions remains central in order to limit long-term risks. Event operators are therefore building integrated sustainability strategies that combine climate mitigation and climate adaptation. Environmental and energy management systems help to record and reduce resource consumption. Sustainable mobility concepts, circular procurement and adapted logistics all help to combine resilience with environmental responsibility. Only when climate mitigation and adaptation are considered together can truly resilient venues and future-ready B2B event structures emerge in the long term.

INFLUENCING FACTORS

OVERVIEW

	INFLUENCING FACTOR	PLANNING	SET-UP
	Temperature (heat/cold)	Selection of date and location with consideration of extreme conditions	Stress on the crew, material stress
	Precipitation & Extreme Precipitation (Rain, Hail, Snow)	Weatherproof Venues, Drainage, Alternative Scenarios, Liability, and Insurance	Delays, Hazards Due to Slippery Surfaces
	Wind & Storms	Structural Design, Safety Requirements	Risks Associated with Work at Height, Crane Operations
	Air quality (particulate matter, ozone, CO ₂ , allergens)	Choosing a location: Consider the seasons	Stress on the crew
	Urban Heat Islands	Identify urban areas with high levels of soil sealing; plan cooling strategies	High stress levels when working in heat spots
	Lightning & Electrical Activity	Consideration in Risk Planning, Evacuation Plans, plan cooling strategies	Hazards Associated with Metal Structures, Outdoor Work
	Cold/Snow/Icing	Scheduling, Checking infrastructure for winter readiness	Delays, risk of accidents on ice / snow
	Flooding/High Water	Assess site selection and flood and runoff risks	Areas are inaccessible; installation is impossible
	Drought/Water Scarcity	Planning for drinking water supply, sanitation, and cooling	Limited access to water sources
	Infrastructure issues (e.g., power outage)	Mitigation through redundancies, contracts with utility providers	Risks related to power supply during setup
	Supply Chain Risks (Transportation, Logistics)	Review of supply chains, alternative routes	Delayed material delivery
	Health risks from new vectors (e.g., mosquitoes, allergies)	Risk assessment seasonal / local	Exposure during construction in contaminated areas

SHOW

Heat stress / hypothermia among visitors, cooling or heating measures

Cancellations of outdoor programs, technical risks

Danger from falling debris, decisions to demolish

Risk to vulnerable groups; adjust length of stay

Additional heat stress for visitors; more shade and cooling are needed

Visitors are at risk; evacuation is necessary

Hazards due to icy conditions, reduced comfort, road closures, flight cancellations

Evacuation risks, program cancellations

Lack of drinking water/ cooling for visitors

Failure of critical systems (lighting, sound, cooling)

Supply shortages (food, supplies)

Visitors and crew are at greater risk; more medical precautions are needed

DISMANTLING

Strain on staff, longer procedures

Hazards posed by soggy or icy surfaces

Restrictions on work, risk of accidents

Strain during physical work

Increased nighttime stress, slower recovery

Risks associated with disassembly outdoors

Stress during mining, material damage

Damage to the site, difficult access

Supply for the crew disrupted

Power shortages during dismantling

Return transport is limited

Impact of mining

FOLLOW-UP

Material storage, transport damage due to extreme temperatures

Water damage, extensive cleanup required

Repair costs, insurance claims

Monitoring data for lessons learned

Take location selection and urban climate into account in the future

Safety Assessment for Future Events

Follow-up on damage and delays

Repairs, cost overruns

Document this experience for future locations

Lessons learned, Contract amendments

Adaptation Supply Chain Management

Experience will be taken into account when selecting the next location

FROM MINDSET TO ACTION



Resilient event planning begins with a clear strategic acknowledgement: uncertainty is part of reality. Instead of optimizing solely for efficiency or perfection, adaptability becomes the guiding principle. **In this context, planning means systematically factoring in change and creating structures that allow for different developments.** For events, this changes the architecture of planning. Programs remain modular; spaces can be used flexibly, and logistical processes have alternatives. Staffing structures, technical systems, and communication channels are designed with redundancy and resilience in mind.

This creates a robust framework that preserves the ability to act even when conditions deviate from the original assumptions.

Resilience thus becomes a strategic guiding principle: professional planning is demonstrated by the ability to deal with change in a prepared way. This mindset forms the basis for governance structures and management processes in which responsibilities, rules, and resources are firmly embedded.

GOVERNANCE & MANAGEMENT: ANCHOR IT TOP DOWN

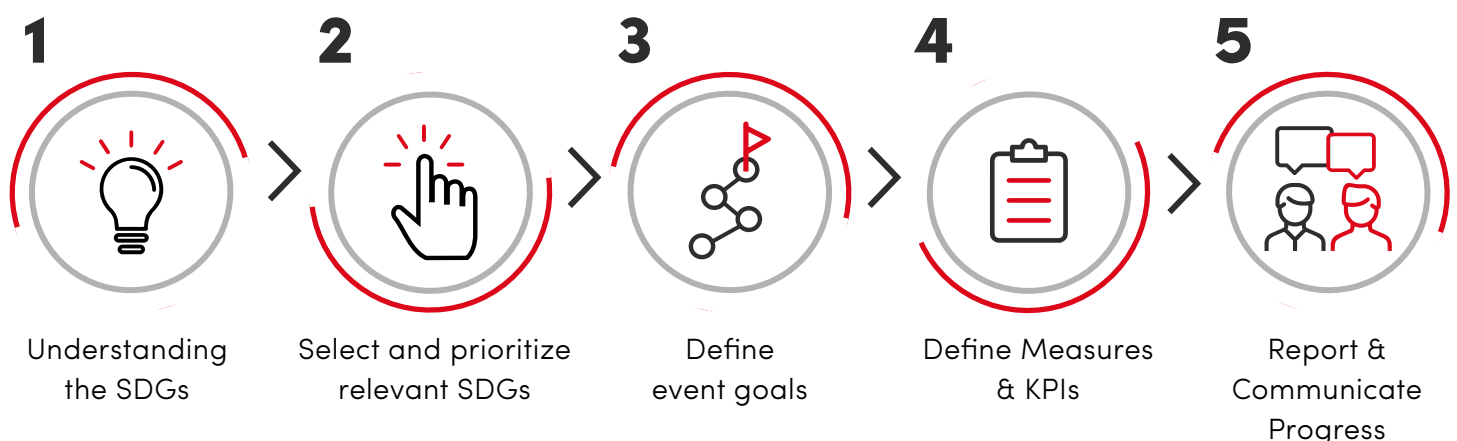
For resilience not to depend on individual decisions, it needs clear institutional anchoring. Governance defines responsibilities, decision-making routes and resources in such a way that they can take effect without delay in an emergency. A mandate at board or executive level signals relevance and creates commitment. Roles such as Risk Lead, Safety Lead or Sustainability Lead are given clear tasks, escalation paths and decision-making authority. This means decisions are not improvised but structurally safeguarded. At process level, defined guidelines and protocols provide transparency: climate-risk rules, set procedures for extreme weather situations, and binding review and approval processes strengthen operational capability.

Tenders and supply chains are also part of this governance logic. Adaptation requirements are written into procurement and contracts. Qualification and verification obligations relating to resilience and sustainability flow into the selection of service providers. Resilience thus becomes a clear decision-making criterion. Budgets and contract design create the financial framework. Flexible funds for safety and comfort measures, weather options or postponement clauses create room for adjustment. Governance and management thereby translate resilience into verifiable structures – as a prerequisite for effective risk management and scenario planning.

STRATEGIC FRAMEWORK: SDG EVENT COMPASS

The SDG Event Compass is a tool developed by VOK DAMS to support companies in systematically aligning events with the United Nations Sustainable Development Goals (SDGs). It translates the global sustainability goals into concrete areas for action in event practice and thus offers a strategic framework that integrates ecological, social, and economic aspects. **The Compass follows five steps** – from understanding the SDGs and prioritizing relevant goals to measures, KPIs and reporting.

THE SDG EVENT COMPASS: 5 STEPS TO A SUSTAINABLE EVENT STRATEGY





In the context of climate adaptation, the VOK DAMS SDG Compass shows how resilience can be embedded tangibly in events:



SDG 3

HEALTH & WELL-BEING:

Measures to protect participants include heat-protection concepts, air-quality monitoring, medical support, and crowd-safety protocols. The aim is to minimize physical and mental strain while at the same time ensuring safety.



SDG 9

INDUSTRY, INNOVATION & INFRASTRUCTURE:

Resilient event technology relies on robust systems with redundancies. These include modular space layouts, back-up power supply or hybrid formats that secure alternative access in the event of failures.



SDG 11

SUSTAINABLE CITIES & COMMUNITIES:

Integration into the urban environment takes into account the urban climate, mobility, and noise, as well as interfaces with emergency management and local authorities. In this way, the event becomes part of a resilient urban culture.



SDG 12

RESPONSIBLE CONSUMPTION AND PRODUCTION:

Supply chains, material use, and waste management are designed according to circular-economy principles. Re-use concepts, the selection of sustainable materials and clear requirements for service providers ensure environmental standards throughout the entire value chain.



SDG 13

CLIMATE ACTION MEASURES:

Prevention, continuous monitoring and measurement – for example tools such as TRACE – create transparency about emissions and enable targeted reduction. Flexible options for energy supply and mobility also make a measurable contribution to cutting emissions.

The SDG Event Compass therefore provides a practical structure with which companies can align their event planning with international sustainability goals while at the same time expanding their own room for maneuvering crisis and climate scenarios. Through the combination of mindset, governance and risk management, climate adaptation becomes an integrated component of professional event planning – and a measurable contribution to sustainable development.

06

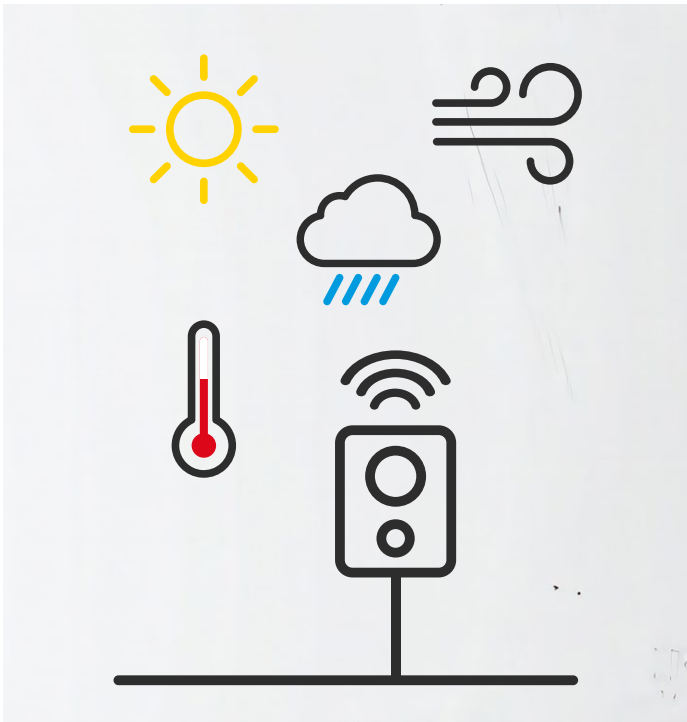
Technological innovations are expanding the possibilities for specifically safeguarding B2B events against climate risks. Where experience once dominated, data, sensors and AI now provide robust decision-making foundations. They support the choice of resilient destinations, increase the ability to steer operations during the event, and make impact measurable. Smart technologies thus connect analysis, real-time management and performance monitoring, translating climate adaptation into concrete operational processes.

INTEGRATING SMART TECHNOLOGIES FOR CLIMATE ADAPTATION



DATA & AI IN PLANNING

The choice of location and timing is one of the most strategically important decisions in event planning. AI-supported tools analyze extensive data points for this purpose: participants' departure points, travel times, costs, availability, emissions or climate risks. These parameters create transparent decision-making foundations that take into account not only economic but also resilience-related criteria. This makes it possible to reduce costs and emissions while at the same time identifying more robust locations.



In detailed planning, accurate weather forecasts are becoming increasingly important. Nowcasting systems update forecasts every minute and detect approaching thunderstorms or heavy rain at short notice. This provides event managers with clear decision-making indicators: securing the setup, postponing admission, expanding cooling zones, or activating communication measures. Decisions are made based on data rather than intuition. Medium-term forecast models also enable forward-looking scenario planning over several days. Weather and climate data are linked; uncertainties are made transparent and integrated into planning processes. Planning thus evolves from a static assumption into a dynamic control model.

OPERATIONS & MONITORING

The actual resilience of an event is determined during the event itself. Sensors, energy management, and safety technologies form the operational foundation.

SENSORS, ENERGY MANAGEMENT AND SAFETY COMMUNICATION TAKE CENTRE STAGE.

Indoor climate and air-quality sensors continuously record temperature, humidity, CO₂ and particulate matter levels. Automatic warning messages indicate critical stress levels at an early stage. Ventilation and cooling strategies can be adjusted in real time – through optimized HVAC control or mobile solutions. Comfort and safety are actively managed in this way.

Intelligent energy management additionally increases operational reliability. Real-time tracking makes peak loads visible, prioritizes critical systems and purposefully integrates renewable energy sources. Battery storage or mobile photovoltaic solutions create additional redundancy if external grids fail or become unstable. Security of supply and sustainability go hand in hand here. Communication and safety technologies finally secure the ability to act in relation to participants. Multi-channel systems provide information quickly and accessibly. Crowd-flow analyses identify critical crowding and enable targeted steering. Monitoring therefore becomes a continuous control center that recognizes risks early and actively stabilizes operations.



SUCCESS MEASUREMENT

Success measurement links climate mitigation with climate adaptation. In addition to emissions and resource indicators, resilience, safety and inclusion factors come into focus. What is evaluated is not only how sustainable an event was, but also how robustly it responded to climatic stresses. In this context, the effectiveness of heat-protection concepts, the stability of communication chains during extreme weather, or the maintenance of comfort and safety under strain can, for example, be assessed. Stakeholders thereby gain transparency that goes beyond CO₂ measurements: they can see how reliability, safety and sustainability were considered together. Success measurement thus becomes a strategic learning instrument. Individual events provide insights for the further development of future formats, and climate adaptation becomes established as a continuous improvement process across the entire event organization.



When discussing climate adaptation, it is also important to ask how health, safety and inclusion can be reliably ensured under changing climatic conditions. Resilience has a clear social dimension here: it ranges from protective measures against heat or poor air quality to medical preparedness and low-barrier structures, right through to fair working conditions for crews. Well-being thus becomes a central factor for safety, participation and the success of an event.

PARTICIPANT COMFORT AND SOCIAL RESILIENCE



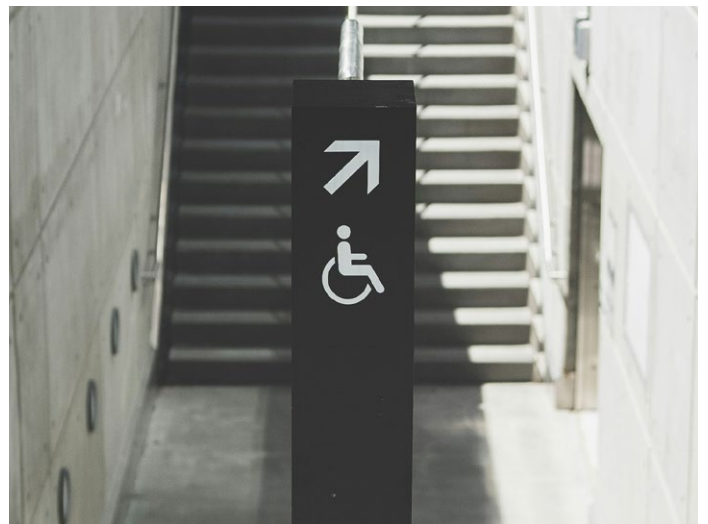


HEALTH AND SAFETY

Extreme weather conditions have long been relevant to the planning of corporate events and trade fairs. Health risks are therefore actively addressed, and preventive measures systematically integrated. Heat regulation is a central element: shaded spots in outdoor areas, mobile coverings or water-based cooling systems reduce strain on hot days. Cooling zones with ventilation or evaporative cooling offer retreat spaces well below the outdoor temperature. Free drinking-water stations that are easy to find are among the basic protective measures and strengthen the subjective sense of safety. Air quality is also becoming more important. Measurements of particulate matter, ozone or CO₂ enable early responses. Programs can be adjusted dynamically, lengths of stay reduced or additional breaks scheduled. Complementary medical preparedness structures secure the ability to act with equipped first-aid stations, clear protocols for heat-related incidents and designated emergency access routes. Visibility and training are crucial here – participants need to know where help is available, and crews must be prepared for climate-related emergencies.

INKLUSION UND BARRIEREFREIHEIT

Social resilience means that events remain accessible and safe even under climate stress. Certain groups react more sensitively to heat or poor air quality – for example older people, people with pre-existing conditions or pregnant women. Crews involved in set-up and dismantling are also particularly exposed because of physical strain. Protective measures such as prioritized access to cooling zones, adapted break arrangements, or medical advice points reflect this responsibility. Low-barrier infrastructure reduces additional strain. Short, clearly signposted routes to shaded areas, drinking water or sanitary facilities make orientation easier and reduce stress. Tactile and visual guidance systems also provide support under more difficult conditions. In communication, plain language, multilingual information or sign-language interpreting help to ensure participation.



Working conditions in the crew area are also part of this responsibility. Rest areas with cooling or shade, fixed break times, access to water and clear protocols for heat or storm events protect health and operational readiness.

Finally, the social dimension also includes interpersonal safety. Safe spaces, awareness teams, and transparent reporting channels create trust and strengthen the sense of safety for everyone involved. This creates a framework in which protection, participation and fairness become integral components of climate-adapted B2B events.

IN ADVANCE

Conduct a risk analysis for target groups (older adults, children, pregnant women, people with pre-existing conditions, staff).
 Define trigger thresholds: temperature, humidity, wind speed, precipitation, and air quality.
 Develop scenario and action plans (heat, storms, rain, poor air quality).
 Prepare an accessible communication strategy: simple language, multilingualism, sign language option.
 Review route planning: short, accessible routes to cooling zones, water stations, and restrooms.
 Supplement contracts and briefings with service providers to include resilience and inclusion requirements.



ON-SITE

Clearly mark cooling zones and keep them accessible at all times.
 Set up free drinking water stations that are easy to find and available in sufficient numbers.
 Continuously monitor air quality and temperature; take immediate action if limits are exceeded.
 Place first-aid stations in visible locations, staff them with trained personnel, and ensure emergency access for first responders.
 Equip crew areas with shade, cold drinks, sunscreen, and a fixed break schedule.
 Set up awareness teams and safe spaces; clearly communicate reporting procedures for incidents.
 Provide real-time updates via displays, apps or loudspeaker announcements.
 Monitor visitor flows and manage them with crowd flow systems to prevent overcrowding.



FOLLOW-UP

Incident-Reports and Health-Reports reports:
 Number of medical cases, type of incidents, utilization of cooling zones.
 Gather feedback from participants and crew members, particularly regarding safety and comfort.
 Compile lessons learned and integrate them into standard protocols.
 Adapt action plans and communication strategies for future events accordingly.
 Present results transparently in sustainability or resilience reports.



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