European Bank
for Reconstruction and Development

BN17
Climate hazards and natural disasters

EBRD briefing note

November 2026

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Introduction

The climate is changing the risk profile of work. Heatwaves are longer, more frequent and more intense; storms, floods and wildfires are affecting regions with little history of them; and outdoor and industrial workers are on the front line. The International Labour Organization estimates that more than 2.4 billion workers, more than 70 per cent of the global workforce, are exposed to excessive heat at some point each year, causing tens of millions of injuries and many thousands of deaths, alongside kidney disease and other chronic harm. Natural disasters add a further layer of risk: workers caught by floodwater, struck in storms, trapped in damaged structures or exposed to wildfire smoke.

EBRD Environmental and Social Requirement 4 (ESR 4): Health, safety and security expects clients to identify and manage risks to workers and communities, including those arising from the environment in which work takes place, and to establish emergency preparedness and response arrangements. Climate hazards must now be treated as core occupational risks: assessed, controlled and planned for, not endured.

Risk assessment

The risk assessment should consider the site's exposure over the life of the project, using climate projections as well as historical records, and the following hazards:

Extreme heat: heat exhaustion and heat stroke, which can be fatal within hours; reduced concentration causing accidents; dehydration and long-term kidney damage. Risk rises with humidity, radiant heat, physical workload, personal protective equipment (PPE) that limits sweating and lack of acclimatisation. New workers and those returning from absence are at greatest risk in their first days.

Ultraviolet radiation: outdoor workers receive high cumulative UV doses, causing skin cancer and eye damage.

Extreme cold: hypothermia, frostbite and loss of dexterity leading to accidents; risks compounded by wind and wet clothing.

Storms and high winds: falling trees, structures and materials; overturning cranes, scaffolds and hoardings; lightning strike, especially for workers at height, in open ground or near tall conductive structures. Sand and dust storms can cause respiratory exposure and severely reduce visibility, while tornadoes can cause structural collapse and impact injuries from windborne debris.

Flooding: drowning and vehicles swept away; sudden inundation of excavations, basements and confined spaces; electrocution from flooded installations; contaminated floodwater; waterborne diseases; and blocked escape routes.

Wildfire and smoke: direct fire risk to sites and camps; fine-particulate smoke harming workers far from the fire itself, especially those with respiratory and cardiac conditions.

Seismic events and landslides: building and structure collapse; slope failures affecting excavations, quarries, roads and camps, often triggered by heavy rain.

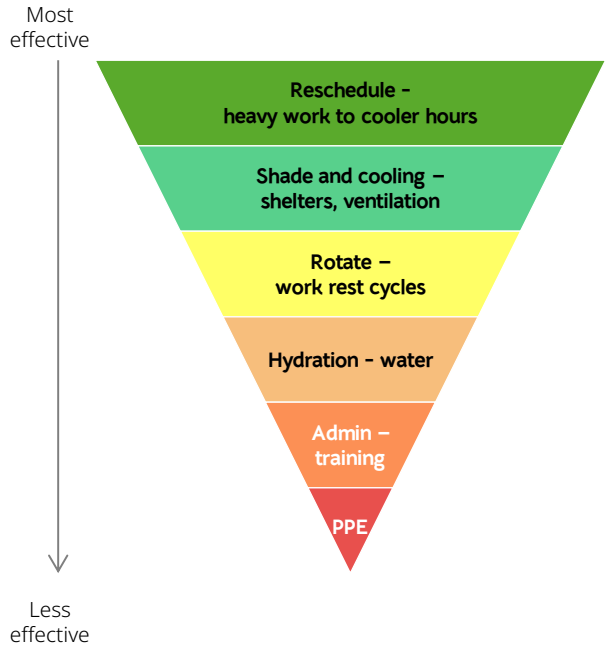
Compound effects: disasters damage power, water, communications and medical services, so workplaces may need to be self-sufficient in the first hours of a response. Worker accommodation and camps must be included in all assessments; workers are exposed 24 hours a day, not only during shifts.

Controlling climate hazards

Heat: apply layered controls (Figure 1). Plan heavy work for cooler hours and monitor forecasts and heat indices that combine temperature and humidity, with pre-agreed trigger points at which work is modified or stopped. Provide shade, ventilation or cooled rest areas, cool drinking water close to the work, paced work-rest cycles, and lighter, breathable clothing

compatible with required PPE. Acclimatise new and returning workers gradually over one to two weeks. Train workers and supervisors to recognise heat illness in themselves and colleagues – signs include confusion, cramps, nausea and cessation of sweating – and to treat heat stroke as a medical emergency: move to shade, cool aggressively, call for help.

Figure 1. Managing heat stress: layers of control for hot work environments



Sun: provide shade, long-sleeved clothing, wide-brim attachments for helmets, sunscreen and eye protection; encourage skin checks.

Cold: provide heated welfare facilities, suitable layered clothing, warm-up breaks, and adjust work when wind chill is severe; never allow lone working in extreme cold.

Wind and lightning: set wind-speed limits for crane, scaffold, roof and lifting operations and enforce them with site anemometers. Secure materials, hoardings and temporary structures ahead of forecast storms. Establish a lightning protocol: stop work at height and in open ground, move workers to substantial buildings or vehicles, and wait a defined period after the last strike before resuming.

Flood: know the site's flood risk, monitor warnings, keep drainage clear, plan evacuation routes and refuges above flood levels, isolate electrical supplies in floodable areas, prohibit driving or wading through floodwater, and treat inundated excavations and confined spaces as prohibited until made safe.

Smoke: monitor air quality during wildfire periods; reduce outdoor exertion, move work indoors with filtered air where possible, and provide fit-tested respiratory protection where exposure cannot be avoided.

Emergency preparedness and response

Figure 2. The emergency preparedness cycle for natural hazards



For each credible natural hazard, the site should have a written emergency plan setting out: how warnings are received and communicated to every worker, in languages they understand and by means that reach those with hearing or sight impairments; the actions to take, including safe shutdown of plant and processes; evacuation routes, assembly points and refuges; roles, responsibilities and deputies; emergency supplies (water, first aid, lighting, communications) sufficient for the initial hours; arrangements for worker accommodation and night shifts; how workers are accounted for; and coordination with local authorities, emergency services and neighbouring communities. Plans must be tested through drills, and reviewed after every drill, warning and real event. Mutual support with the local community, sharing warnings, refuges and resources, strengthens resilience for both.

Set clear, pre-agreed trigger points – temperature and humidity indices, wind speeds, flood and fire warnings – at which work changes or stops. Decisions made in advance protect workers; decisions improvised under pressure come too late.

Summary

To protect the workforce from climate hazards and natural disasters, confirm whether:

- climate and natural hazards have been risk assessed for the site, including worker accommodation, using current projections
- heat controls are in place: planning, shade, water, work-rest cycles and acclimatisation
- workers and supervisors know how to recognise and treat heat illness
- there are pre-agreed trigger points for modifying or stopping work
- wind limits are set and enforced for cranes, scaffolds and work at height
- there is a lightning protocol
- flood evacuation routes, refuges and electrical isolation arrangements are in place
- respiratory protection is available in the event of wildfire smoke
- there is a tested emergency plan for each credible hazard, with warnings that reach every worker
- drills are held and plans reviewed after every event.

References

EBRD (2024), Environmental and Social Policy, London. Available at: https://www.ebrd.com/home/news-and-events/publications/institutional-documents/environmental-and-social-policy-2024.html.

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NIOSH (2016), *Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments*, Cincinnati. Available at: https://www.cdc.gov/niosh/publications/numbered/2016-106.html.

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World Health Organization/World Meteorological Organization (2025), *Climate change and workplace heat stress: technical report and guidance*, Geneva. Available at: https://iris.who.int/server/api/core/bitstreams/5334aba1-063d-4163-94ae-a1154bb48e83/content.

See also:

- BN12: Workplace risk assessment
- BN14: Protecting the public

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Annex A: climate hazards and natural disasters checklist

This checklist helps to assess how well the workplace protects workers from climate hazards and natural disasters, including extreme heat and cold, storms and lightning, flooding, wildfire smoke, and seismic and landslide risk. It covers both day-to-day exposure and emergency preparedness, and includes worker accommodation and camps, where workers are exposed around the clock. It accompanies EBRD briefing note BN11 and supports Environmental and Social Requirement 4 (ESR 4).

How to use this checklist

Complete this checklist with a competent person and involve the workers (and, where relevant, community members) affected. It supports, but does not replace, the full risk assessment described in the briefing note.

Mark each item Yes, No or N/A. Every "No" is a gap: record the action needed, an owner and a target date in the action column and carry it over to the site action plan. Review the checklist periodically and whenever the work, site or conditions change.

Assessment details

Project/client	**Site/location**
Activity or phase assessed	**Date of assessment**
Assessor (name, position)	**Workers/representative consulted**

1. Risk assessment and planning

No.	Assessment item	Yes	No	N/A	Action required/notes
1	Climate and natural hazards relevant to the site have been identified and risk assessed, using climate projections as well as historical records.	☐	☐	☐	
2	The assessment covers the whole life of the project and includes worker accommodation and camps, not only the active work area.	☐	☐	☐	
3	Workers at greater risk have been considered (new and returning workers, older workers, pregnant workers and those with relevant health conditions).	☐	☐	☐	
4	Clear, pre-agreed trigger points are defined at which work is modified or stopped (for example, heat index, wind speed, flood or fire warnings).	☐	☐	☐	
5	Weather and hazard forecasts and official warnings are monitored, and there is a defined route for communicating them to all workers.	☐	☐	☐	
6	Local authorities, emergency services and neighbouring communities are engaged, and mutual-support arrangements are considered.	☐	☐	☐	

2. Extreme heat and sun

No.	Assessment item	Yes	No	N/A	Action required/notes
7	Heavy or strenuous work is planned for cooler parts of the day, where practicable.	☐	☐	☐	

No.	Assessment item	Yes	No	N/A	Action required/notes
8	Heat exposure is monitored using an index that combines temperature and humidity (not temperature alone).	☐	☐	☐	
9	Shade, ventilation or cooled rest areas are provided close to the work.	☐	☐	☐	
10	Cool drinking water is available close to the work and workers are encouraged to drink frequently.	☐	☐	☐	
11	Paced work-rest cycles, job rotation and reduced workloads are applied as conditions worsen.	☐	☐	☐	
12	New and returning workers are acclimatised gradually over one to two weeks.	☐	☐	☐	
13	Clothing and PPE are as light and breathable as the task allows, without compromising other protection.	☐	☐	☐	
14	Workers and supervisors are trained to recognise heat illness (cramps, nausea, confusion, stopping sweating) and to treat heat stroke as a medical emergency.	☐	☐	☐	
15	Outdoor workers are protected from UV: shade, suitable clothing, helmet brim attachments, sunscreen and eye protection.	☐	☐	☐	

3. Extreme cold

No.	Assessment item	Yes	No	N/A	Action required/notes
16	Heated welfare facilities and warm-up breaks are provided in cold conditions.	☐	☐	☐	
17	Suitable layered, weatherproof clothing is available, and wet clothing can be dried or changed.	☐	☐	☐	
18	Work is adjusted or stopped when wind chill is severe, and lone working in extreme cold is avoided.	☐	☐	☐	
19	Workers are trained to recognise hypothermia and frostbite and to respond.	☐	☐	☐	

4. Storms, high winds and lightning

No.	Assessment item	Yes	No	N/A	Action required/notes
20	Wind-speed limits are set and enforced for crane, lifting, scaffold, roof and work-at-height operations, using site anemometers.	☐	☐	☐	
21	Materials, hoardings, temporary structures and lightweight items are secured ahead of forecast storms.	☐	☐	☐	
22	A lightning protocol is in place: work at height and in open ground stops, workers move to substantial buildings or vehicles, and a defined wait follows the last strike before resuming.	☐	☐	☐	
23	Temporary structures, cranes and accommodation are designed and anchored for the wind loads credible at the site.	☐	☐	☐	
24	Post-event checks and arrangements are in place for safe clean-up and debris removal, including confirmation that the site is safe before work recommences.	☐	☐	☐	

5. Flooding

No.	Assessment item	Yes	No	N/A	Action required/notes
25	The site's flood risk is understood (including flash flooding) and flood warnings are monitored.	☐	☐	☐	
26	Drainage is kept clear, and evacuation routes and refuges above credible flood levels are identified.	☐	☐	☐	
27	Electrical supplies in floodable areas can be isolated safely.	☐	☐	☐	
28	Driving or wading through floodwater is prohibited, and vehicles are kept clear of watercourses in flood conditions.	☐	☐	☐	
29	Excavations, basements and confined spaces liable to sudden inundation are treated as prohibited until confirmed safe.	☐	☐	☐	
30	Adequate supplies of potable water are available in identified locations and all workers are aware of how to access them.	☐	☐	☐	

6. Wildfire and smoke

No.	Assessment item	Yes	No	N/A	Action required/notes
31	Wildfire risk to the site, camps and access routes is assessed, with escape routes and defensible space considered.	☐	☐	☐	
32	Air quality is monitored during wildfire periods.	☐	☐	☐	
33	Outdoor exertion is reduced and work is moved indoors, with filtered air where possible, during smoke events.	☐	☐	☐	
34	Fit-tested respiratory protection is available where smoke exposure cannot be avoided, with attention to workers with respiratory or cardiac conditions.	☐	☐	☐	

7. Seismic events and landslides

No.	Assessment item	Yes	No	N/A	Action required/notes
35	Seismic and landslide/slope-failure risks to structures, excavations, quarries, roads, camps and accommodation are assessed.	☐	☐	☐	
36	Buildings, temporary works and accommodation are designed for the credible seismic hazard.	☐	☐	☐	
37	Slopes and excavations are monitored, particularly after heavy rain, and "stop and move back" triggers are defined.	☐	☐	☐	

8. Emergency preparedness and response

No.	Assessment item	Yes	No	N/A	Action required/notes
38	A written emergency plan exists for each credible natural hazard.	☐	☐	☐	
39	Warnings reach every worker in languages they understand and by means that reach those with hearing or sight impairments.	☐	☐	☐	
40	The plan sets out required actions, including safe shutdown of plant and processes.	☐	☐	☐	

41	Evacuation routes, assembly points and refuges are identified and signed.	☐	☐	☐
42	Roles, responsibilities and deputies are defined and understood.	☐	☐	☐
43	Emergency supplies (water, first aid, lighting, communications) are sufficient for the initial hours when external services may be unavailable.	☐	☐	☐
44	Arrangements cover worker accommodation, camps and night shifts, and a means to account for all workers.	☐	☐	☐
45	The plan is coordinated with local authorities, emergency services and neighbouring communities.	☐	☐	☐
46	Emergency arrangements are tested through drills and reviewed after every drill, warning and real event.	☐	☐	☐

Assessment sign-off

Assessment completed by (name)	Position
Signature	Date
Reviewed/approved by (name)	Position
Signature	Date
Number of actions raised	Target close-out date
Next review date	Related risk assessment ref.

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