VULNERABILITY ASSESSMENT TABLE

Interior objects or collections, murals, wallpaper and painted decoration

This table highlights some of the ways interior objects or collections, murals, wallpaper and painted decoration may be vulnerable to the effects of climate change. It is not intended to be comprehensive and the examples of possible management approaches will not be appropriate in all cases. Qualified and experienced heritage specialists should be consulted in undertaking any climate vulnerability or risk assessment of your place, object or collection.



EXPOSURE — GENERAL

| Climate | change |
|----------|--------|
| variable | S |

Key climate change impacts

Sensitivity of the place to climate change impacts

Examples of impacts on the place, object or collection and its values

Examples of possible management approaches



Change in seasonal rainfall (chronic)



Increase in mean temperature Increase in rainfall events and their intensity leading to increased frequency and intensity of flooding, erosion and soil degradation

Depends on the fabric and construction of the objects, murals and decoration and the local conditions in which they are stored or located

- o Types of material (e.g. wood, metal, stone, plant fibre, animal products, paint, glass, paper) will be affected differently
- Objects, murals and decoration may be affected as a consequence of impacts to the buildings in which they are stored or located
- o Changes in humidity may impact the fabric especially when stored or located in environments without artificial temperature control
- Variations in temperature and humidity may increase risk of insect or pest infestation

- Monitor structural integrity of building and increase maintenance and repair regime
- o Re-evaluate temperature control and ventilation







EXPOSURE — **GENERAL** continued

| Climate change variables | Key climate change impacts | Sensitivity of the place to climate change impacts | Examples of impacts on the place, object or collection and its values | Examples of possible management approaches |
|------------------------------------|---|--|--|---|
| continued from previous page | Increased frequency, duration and intensity of drought events | Cracking and instability of buildings in which the objects are stored or where the murals and decoration are located | Drying, cracking or movement of soils may affect the stability of buildings in which the objects are stored or where the murals and decoration are located Increased dryness will affect materials (e.g. wood, metal, stone, plant, fibre, animal products, paint, glass, paper) in different ways, and vary according to the environmental conditions in which the objects are stored or where the murals and decoration are located | Monitor structural integrity of building and increase maintenance and repair regime Consider potential thermal gain through windows – possible use of blinds or insulation of the place in which the object, collection, murals or decoration are located |
| More hotter days (>35°C and >40°C) | Increased frequency and intensity of bushfires | Directly related to proximity and/or connectively to bush | Damage to or destruction of internal objects, murals and decoration through smoke, fire and fire suppression substances; types of material will be affected differently Loss of vegetation cover, heating and cracking of soils, and increased erosion following a bushfire event may affect the stability of buildings in which objects are stored or murals and decoration located | Monitor fire index risk at the location Add defences where possible, such as sprinklers, gutter clearance or wrapping against ember attack Notify land managers that the building contains significant objects or interior decoration that require protection Relocate objects/collections permanently or temporarily during bushfire high-risk season Ensure damper controls on natural ventilation to eliminate potential of smoke getting into the building Retreat: plan for site recording and accept loss or relocation of site where feasible, in consultation with local community |





EXPOSURE — **GENERAL** continued

| Climate change variables | Key climate change impacts | Sensitivity of the place to climate change impacts | Examples of impacts on the place, object or collection and its values | Examples of possible management approaches |
|--------------------------------------|------------------------------------|---|---|---|
| continued from previous page | Heatwaves and extreme temperatures | Soils susceptible to drying and cracking | Impacts will vary for different types of material (e.g. wood, metal, stone, plant fibre, animal products, paint, glass, paper) and the environmental conditions in which they are stored or located | Consider temperature control measures within building |
| | | | Drying, cracking and movement of soils may affect the stability of buildings in which objects are stored or mural and decoration located | |
| More extreme rainfall events (acute) | Flooding, erosion and landslips | Depends on structures and local conditions in which the objects and collections are stored and the murals and decorations located | Changes in humidity may impact the fabric, especially when stored or located in environments without artificial temperature control Variations in temperature and humidity may increase risk of insect or pest infestation | Consider humidity control measures within building Ensure rainwater management system and drainage is adequate for managing extreme events |





EXPOSURE — COASTAL

| Climat variab | e change les | Key climate change impacts | Sensitivity of the place to climate change impacts | Examples of impacts on the place, object or collection and its values | Examples of possible management approaches |
|------------------|---|---|--|--|--|
| | Sea-level rise | Worsened coastal flooding, storm surge and coastal erosion that over time can result in permanent inundation of low-lying areas | Depends on terrain and potential defences (e.g. sea wall) – refer to local information | Potential for inundation and flooding of the buildings in which the objects and collections are stored and the murals and decorations located; this may be intermittent during high tide and storm surge events (acute) and eventually permanent | Monitor inundation risk at the location Relocate permanently if risk increases and if appropriate |
| | More intense or more frequent storms | Coastal erosion impacts | Depends on terrain and potential defences (e.g. sea wall) – refer to local information | Potential for storm damage or destruction of the buildings in which the objects and collections are stored and the murals and decorations located | Monitor inundation risk at the location Relocate permanently if risk increases and if appropriate Proactive maintenance or refitting of roofs, rainwater and drainage infrastructure |



${\tt EXPOSURE}-{\tt URBAN}$

| Climate change variables | Key climate change impacts | Sensitivity of the place to climate change impacts | Examples of impacts on the place, object or collection and its values | Examples of possible management approaches |
|-----------------------------|--|--|--|---|
| More hotter days | Heat island effect in urban areas can increase local temperatures by several degrees compared to nearby rural areas | Local 'urban heat island' mapping determines specific micro-climate risks | Heat stress: types of material will be affected differently according to the environmental conditions in which the objects and collections are stored and the murals and decorations located | Consider temperature control measures within buildingEnsure adequate ventilation |





EXPOSURE — ALPINE

| Climate change | |
|-----------------------|--|
| variables | |

Key climate change impacts

Sensitivity of the place to climate change impacts

Examples of impacts on the place, object or collection and its values

Examples of possible management approaches



Higher daily minimum temperatures and changes in precipitation Changed freeze-thaw cycles, reduced snow cover and fewer cold days Water run-off from new thaw and changing drainage systems o Impacts will vary for different types of materials (e.g wood, metal, stone, plant fibre, animal products, paint, glass, paper) and will vary depending on the environmental conditions in which the objects and collections are stored and the murals and decorations located

- Monitor inundation risk at the location
- Consider temperature and humidity control measures

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