



ROOTS OF RESILIENCE

A PARTICIPATORY APPROACH TO MAPPING, MEASURING AND MOBILISING CULTURAL HERITAGE IN BRAZIL'S IRON QUADRANGLE

Sustainable Development Goals (SDGs):



Roots Of Resilience is a project coordinated by People's Palace Projects (PPP) in partnership with Instituto Inhotim. It aims to contribute to the measurement of impacts of recent environmental disasters on cultural heritage and local communities in the *Quadrilátero Ferrífero* (Iron Quadrangle) region in the Brazilian state of Minas Gerais. The research is based on a collaborative methodology developed in partnership with five local cultural heritage organisations from Brumadinho, Itabira, Nova Lima and Mariana. It took place between 2020 and 2021 and is funded by the Arts and Humanities Research Council (AHRC) through the Global Challenges Research Fund (GCRF) and the Department for Digital, Culture, Media and Sport (DCMS).



GETTING TO KNOW THE IRON QUADRANGLE IN MINAS GERAIS, BRAZIL

Located in the central region of Brazil in the state of Minas Gerais – the fourth largest state in Brazil, the Iron Quadrangle is one of the country's main mineral provinces. The exploitation of mineral resources has been embroiled in the region's history since the 17th century, when Portuguese colonisation advanced beyond the coast in search of minerals, which led to the foundation of Brazil's first 'gold' towns and the exploitation of the region's iron ore, which continues today. Its richness is not, however, limited to minerals.

The region includes the 7000 km² Iron Quadrangle Geopark (*Quadrilátero Ferrífero Geoparque*), recognised by UNESCO for its environmental and cultural significance. It encompasses a series of twenty-six biodiversity conservation units known as the 'Conservation Mosaic of the Espinhaço'. It also is home, in whole or in part, to thirty-four municipalities, including Ouro Preto and Congonhas, two UNESCO World Heritage Sites and historic cities such as Mariana, Catas Altas, Ouro Branco and Santa Bárbara, which are each host to hundreds of historical buildings, monuments, archaeological sites, as well as other examples of tangible and intangible cultural heritage.

Amongst more than 4.3 million habitants are a range of different communities – from the *quilombola* and indigenous peoples to rural and metropolitan populations – together they demonstrate the cultural vibrancy of the region. The recreation of Banda São Sebastião¹ in Brumadinho and the great carnival figures in Nova Lima are expressions of memory and examples of how cultural heritage engages communities today. This can also be seen through the manifestations, practices and

cultural spaces of Passagem de Mariana, one of Mariana's city cultural districts, and the *griôs*² knowledge and care for others as well as the land, which is shared by the quilombola communities of Brumadinho. Also, it can be seen through the young local guides that lead tourists through the streets of Itabira – hometown to the great Brazilian poet Carlos Drummond de Andrade – and who remind people of the burden that weighs heavy on the souls of the communities in the region.

Due to its fragile ecosystem and the intensity of human activities, the region is ranked as a high environmental risk area, according to the regional environmental authorities. The main threats are linked to mining and the high risk of tailings dam failure. In November 2015, the Fundão Dam – owned by BHP Billiton and Vale S.A. – collapsed. The city of Mariana was directly affected and nineteen people died. More than 50 million m³ of mining waste reached the Doce river, causing social, economic and environmental impact in forty-one municipalities and three indigenous reserves, making it the biggest environmental disaster in Brazil to date. In January 2019, another dam failure happened in the region: Dam B1 – owned by Vale S.A. – collapsed in Brumadinho. Almost three years after the incident, at least 259 fatalities have been confirmed – eleven people are still missing – and reparations remain unfinished and inconclusive. Other dams in the regions are considered at high risk of failure: the current erosion of inspection mechanisms and the dismantlement of environmental laws at a national level continue to exacerbate the vulnerability of local communities and cultural heritage.

¹One of the most traditional music institutions in Brumadinho, founded in 1929.

²Related to the oral transmission of ancestral knowledge, especially in quilombolas, black and indigenous communities.



CULTURAL HERITAGE **PARTNER ORGANISATIONS**

01 BRUMADINHO INSTITUTO INHOTIM



A museum of contemporary art and botanical garden, Instituto Inhotim has one of the largest and most important artistic collections in Latin America, exhibiting works by renowned Brazilian and international artists. By integrating art, botany, landscaping, architecture and education, it provides a unique experience for visitors, and runs a programme of socio-educational projects with local communities.

02

BRUMADINHO

CORPORAÇÃO MUSICAL
BANDA SÃO SEBASTIÃO

Founded in 1929, this symphonic band is one of the most traditional music institutions in Brumadinho.

03

BRUMADINHO

CASA QUILOMBÊ



A cultural centre for descendants of the Afro-Brazilian enslaved population who work with arts, music and literature.

04

NOVA LIMA

GRUPO ATRÁS DO PANO



Education is the main pillar of this theatre company that works with local communities.

05

MARIANA

CLUBE OSQUINDÔ



Through books and games, this local cultural organisation works with children and young people, enabling them to access and produce culture.

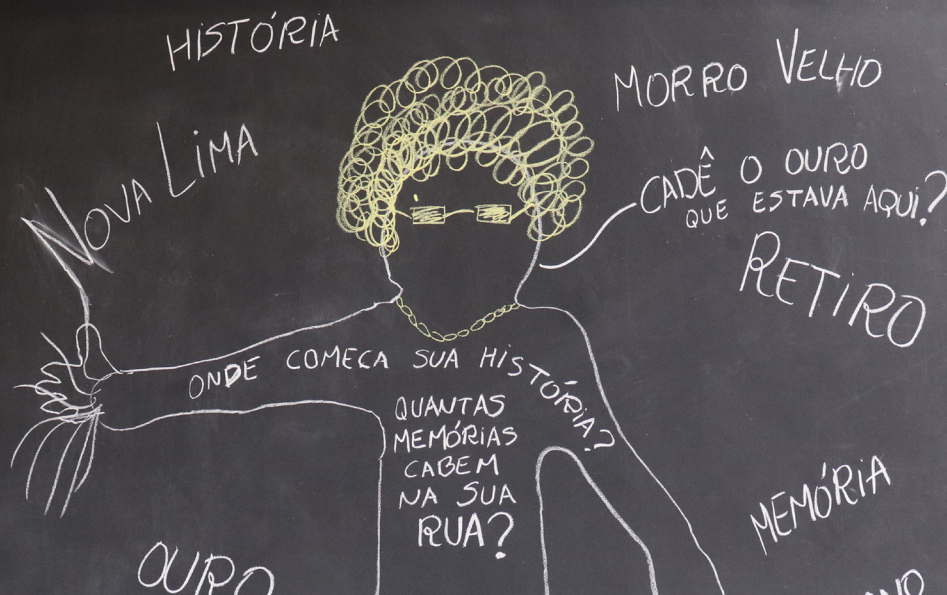
06

ITABIRA

FUNDAÇÃO CULTURAL CARLOS DRUMMOND DE ANDRADE (FCCDA)



The foundation keeps alive the work and memories of Carlos Drummond de Andrade, the Brazilian poet and writer who was born in Itabira.



KEY INSIGHTS

1.

CULTURAL HERITAGE IS A TOOL TO **BUILD CAPACITY** AND **RESILIENCE** IN LOCAL COMMUNITIES FACING ENVIRONMENTAL DISASTERS AND CLIMATE CHANGE

Heritage protection implies community protection. Whether in the form of traditional knowledge or as practices and living spaces, the tangible and intangible heritage of communities are also tools for strengthening the resilience of those communities, fostering the construction of partnerships, support networks, active participation and social inclusion. Cultural heritage organisations are the main facilitators building these capacities in the region.

2.

DISASTERS ARE NOT NATURAL: THE IMPORTANCE OF THE **PRECAUTIONARY PRINCIPLE**

The outcomes of adverse events, whether natural or manmade, are dependent on the vulnerabilities to which local communities are exposed and their capacity to adapt to threats and respond to those events. It is essential to strengthen a culture of risk reduction and disaster prevention, which includes cultural heritage as a dimension, through educating future generations and raising awareness amongst policymakers and economic stakeholders.

3.

CLIMATE CHANGE INCREASES THE **EXISTING RISKS** MINERAL EXPLOITATION PLACES ON COMMUNITIES, AS WELL AS **CULTURAL** AND **NATURAL HERITAGE** IN THE IRON QUADRANGLE

Ongoing climate changes, such as the forecast of an increase in extreme events and rainfall in the Iron Quadrangle, demonstrate the escalation of existing risks, which are predominantly a consequence of mining activities. In addition to the risks facing the most vulnerable populations, these changes threaten the region's cultural and natural heritage. Finding economic alternatives that help mitigate the hard consequences of mining and climate change – and that can also be a viable option for the population in the region – is essential. Cultural heritage can play a significant role as an economic alternative to mining.

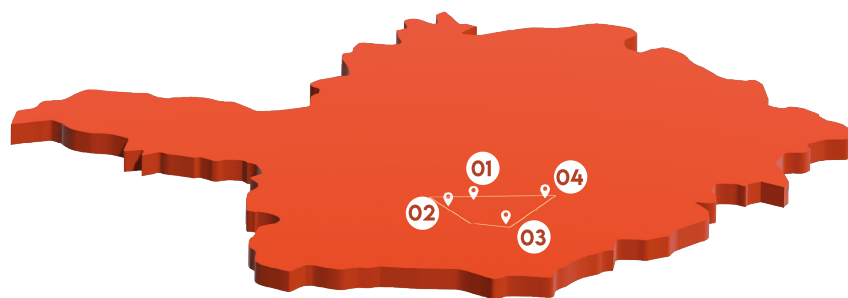


KEY FINDINGS

The findings presented here are derived from qualitative and quantitative data obtained in a collaborative process with partner organisations. Data collection was conducted in three different ways: (1) collaborative inventories were created to identify tangible and intangible heritage; (2) in-depth interviews were carried out with partner organisations' staff; (3) a survey was conducted by partner organisations with participants

and people associated with the organisations. From the inventories, we were able to build a cultural heritage map, whilst the other data allowed us to arrive at our findings, understand the challenges and develop recommendations. In the following sections, when referring to data from the in-depth interviews, the term 'interviewee' is used; when referring to data from the survey, the term 'survey respondent' is used.

COLLABORATIVE INVENTORY MAP



01 NOVA LIMA

- *Bloco As Grandes Figuras (bairro José de Almeida).*

02 BRUMADINHO

- *Fazenda dos Martins.*
- *Igreja de São José do Paraopeba.*
- *Comunidades quilombolas de Marinhos, Sapé, Rodrigues e Ribeirão (saberes griôs).*
- *Festa da Colheita.*
- *Casa Quilombê.*
- *Banda São Sebastião.*

03 MARIANA

- *Passagem de Mariana (distrito cultural).*
- *Mina da Passagem.*
- *Igreja Nossa Senhora da Glória.*
- *Estação Passagem de Mariana.*
- *Fonte da Glória.*

04 ITABIRA

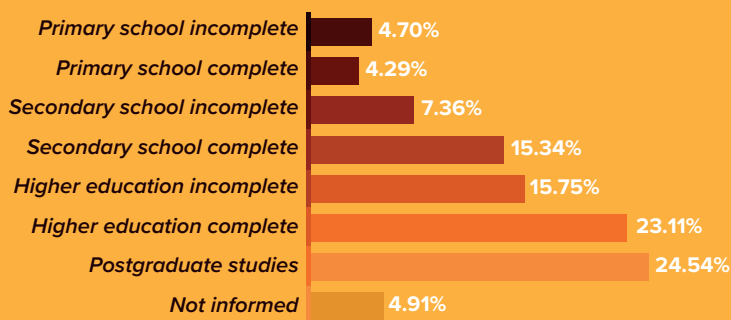
- *Caminhos Drummondianos.*
- *Drummonzinhos.*
- *Obra literária de Carlos Drummond de Andrade.*
- *Fundação Cultural Carlos Drummond de Andrade.*

WHAT IS THE **PROFILE** OF THE INTERVIEWEES AND SURVEY RESPONDENTS?

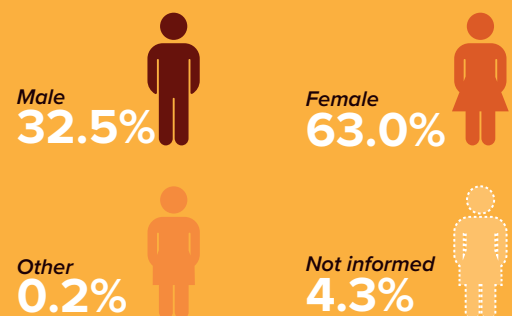
In-depth interviews were conducted, between July and August 2021, by PPP's research team with fifteen representatives from the cultural heritage partner organisations (three per organisation). The survey was co-created by PPP and the partner organisations through workshops and individual meetings. Data collection for the survey was undertaken by the partner organisations with people who participate and/or have participated in their activities.

Most survey respondents answered questions online between 14 June and 31 August 2021. The survey was applied to 541 participants, of which 90% (489) were considered valid and have been analysed in this report. Among the 489 respondents, there was greater participation from women (63% of survey respondents), people with higher education qualifications (42.54%), and young people aged eighteen to thirty-four (44%). It should also be noted that only 0.6% of the participants declared themselves as indigenous.

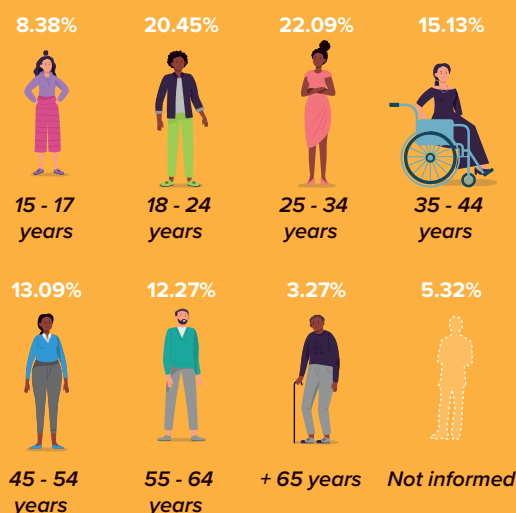
Education of survey respondents



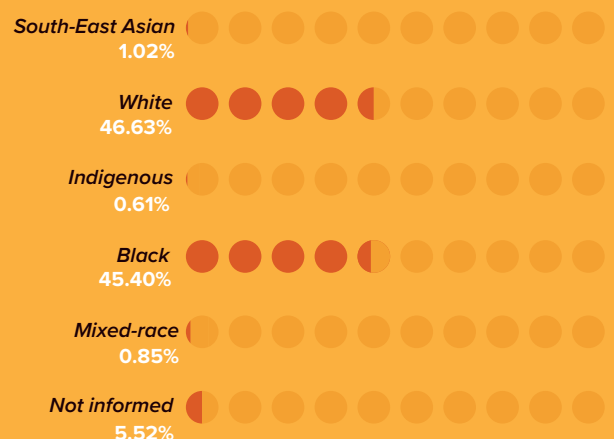
Gender of survey respondents



Age of survey respondents



Race/Ethnicity of survey respondents



Source: Roots Of Resilience survey data, 2021

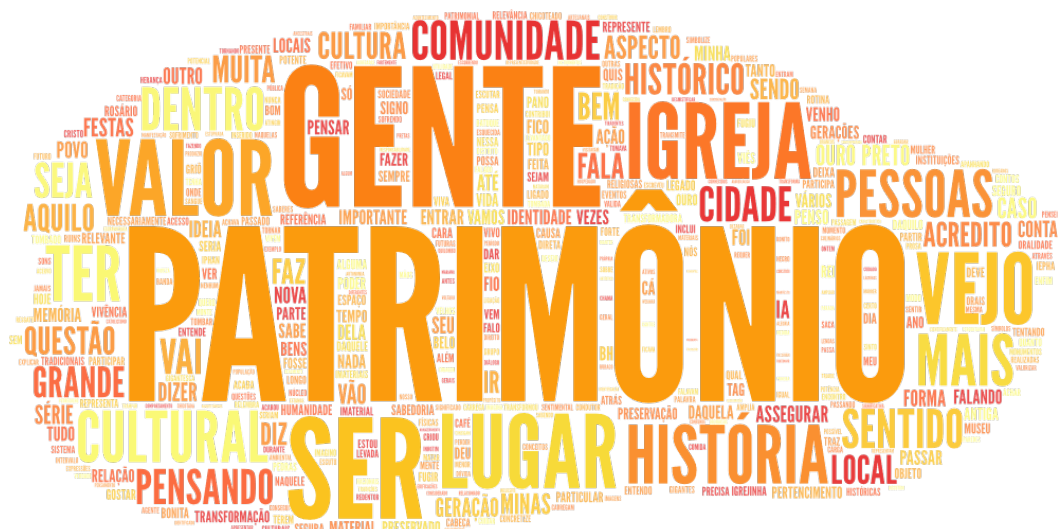


WHAT DOES **CULTURAL HERITAGE** MEAN TO THE INTERVIEWEES?

When asked what cultural heritage means to them, two concepts were central for the respondents: community and history. Cultural heritage in the Iron Quadrangle is alive: it is always in motion. It shapes the identity of people, populations and local communities, but it also depends on them for its survival in the face of climate change, natural and manmade disasters.

This connection is made clear in the one of the interviewee's accounts: 'A church [as a form of heritage] often is a certain group of people... so if those people are threatened, if something happens to them, the heritage is threatened as well, even more so by what is made by people' (interviewee nr. 12).

Word cloud – What does cultural heritage mean to you?



Source: Roots Of Resilience survey data, 2021

RELEVANCE AND IMPACT OF THE ORGANISATIONS ON THEIR PARTICIPANTS

For 61.3% of survey respondents, their organisation’s work has helped them cope with problems that have affected their mental health, such as environmental disasters and health crises. In addition, 94% point out that they sorely miss their organisation’s activities when they are interrupted for any reason, for example, during the COVID-19 pandemic.

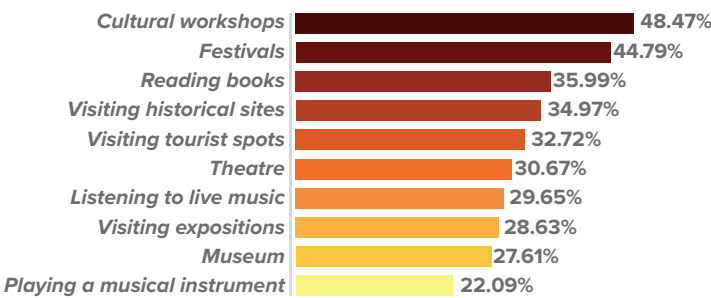
Participating in their organisation’s activities encouraged survey respondents to carry out more cultural activities in general.

The cultural organisations are also able to position culture as a viable economic profession to their participants: more than 80% of survey respondents confirmed that they have discovered areas of professional practice related to culture though their contact with the organisations. Finally, taking part in their organisation’s activities also has a positive impact with regard to survey respondents’ sense of belonging in the territory.

Level of agreement with the assertion that their organisation’s work has helped survey respondents cope with problems that affected their mental health.



Ten activities respondents mentioned having started to perform more frequently after their contact with the organizations



Source: Roots Of Resilience survey data, 2021

Level of agreement with the statement that, after getting involved in their organisation’s activities, survey respondents felt they belonged more to the territories where they live



THREAT PERCEPTION TO CULTURAL HERITAGE AND THE POWER OF INDIVIDUAL AGENCY

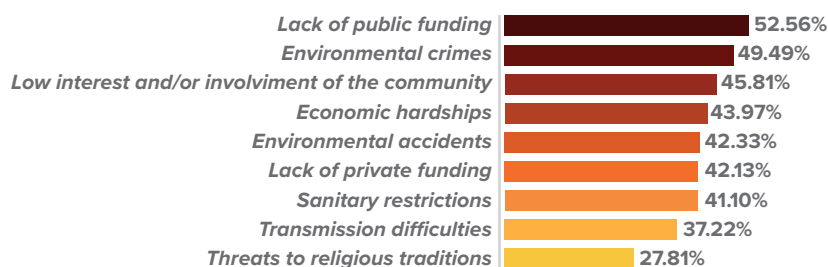
For the survey respondents, the main threats to cultural heritage in their territory are the following: (1) lack of public funding; (2) environmental crimes; (3) low interest and/or involvement on the part of the community; and (4) economic hardship facing communities. Analysis by age group demonstrates that, whilst the young respondents (aged fifteen to thirty-four) emphasise the low interest and/or involvement from the community and challenges of passing cultural traditions, the other age groups (aged thirty-four and above) place more emphasis on economic issues.

Both interviewees and survey respondents express a strong concern with issues relating to the exploitation of natural resources in the region. For them, the biggest current environmental concern is the threat and very real possibility of new dam failures, especially tailings dams.³ Other environmental threats that are highlighted include forest fires, air pollution and the chemical contamination of soil and groundwater, both by residues and pesticides. It is also worth noting the

identification of environmental issues related to urban infrastructure, such as the lack of basic sanitation, landslides and floods. As stated by one of the interviewees, 'although we recognise the importance of mining for the community ... we also recognise that any environmental disaster will destroy the city. So, there are two sides of the coin' (interviewee nr. 12).

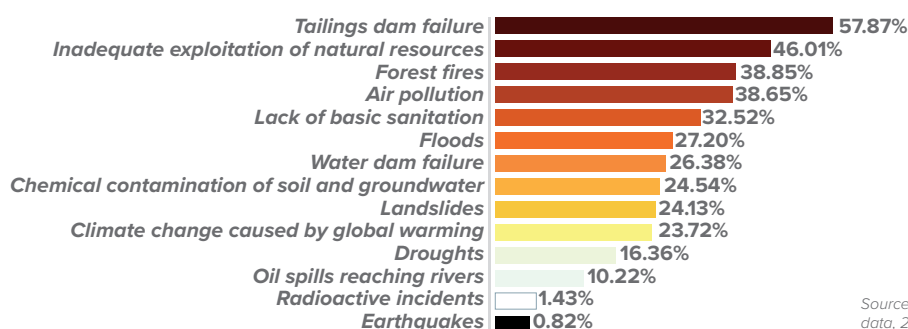
Although survey respondents and interviewees are confident about their own capacity to contribute to the preservation of the region's cultural and environmental heritage, there is less confidence in their ability to influence stakeholders. For the interviewees, the restrictions imposed due to the economic power of the mining companies are the main issue; while for survey respondents, there was the perception that those responsible for the preservation and maintenance of local and regional cultural heritage do not really understand what major crises the region is facing.

In your opinion, is the cultural heritage of your territory/region under threat from any of the following issues?



Source: Roots Of Resilience survey data, 2021

Do you consider that the cultural heritage of your territory/region is threatened by any of the following environmental problems?



Source: Roots Of Resilience survey data, 2021

³Dams used to store waste and water resulting from the mining processes.

Capacity to contribute to change vs capacity to influence stakeholders

Do you believe that you can influence the future and the preservation of cultural heritage of your community, neighbourhood or region?



Do you consider that those responsible for the preservation and maintenance of the cultural heritage of your community/region take into account what inhabitants like you say?



 Strongly agree

 Agree

 Neutral

 Disagree

 Strongly disagree

 Not informed

Source: Roots Of Resilience survey data, 2021

KEY CHALLENGES

- Bringing cultural heritage closer to communities, especially young people.
- Identifying, recognising and valuing both tangible and intangible cultural heritage consistently and systematically.
- Promoting creative economy at a local and regional level, to reinforce the viability of culture and heritage as a viable economic alternative.
- Strengthening risk management in the region so that it goes beyond direct environmental prevention and care for the local communities and includes a clearly defined cultural dimension.
- Expanding effective social participation in public forums and strengthening of collaborative social relationships amongst different organisations and policymakers.

RECOMMENDATIONS FOR RESEARCH, POLICY AND PRACTICE

1.

CULTURAL HERITAGE IS A TOOL TO BUILD **CAPACITY** AND **RESILIENCE** IN LOCAL COMMUNITIES FACING ENVIRONMENTAL DISASTERS AND CLIMATE CHANGE

- **Encourage research and the dissemination of information about local cultural heritage**, promoting its value and protection.
- **Recognise the importance of heritage and local cultural heritage organisations** in the construction and dissemination of information, as well as in mobilising communities and expanding their capacity for positive action.
- **Establish a reference centre for research** that can enhance the capacity of cultural heritage organisations to construct and disseminate information.
- **Mobilise local and regional stakeholders, organisations and the creative sector** in the definition of priorities and in the search for collaborative solutions to the current natural and manmade challenges.
- **Strengthen local cultural heritage organisations** through specific private and public funding initiatives, which enable them focus on institutional consolidation and development.
- **Ensure funding initiatives consider environmental issues** and make the connection between heritage preservation and environmental protection an explicit requirement, expanding the role of cultural heritage as a tool for preservation in the region.

2.

DISASTERS ARE NOT NATURAL: THE IMPORTANCE OF THE **PRECAUTIONARY PRINCIPLE**

- **Foster a culture of risk management to reduce the vulnerabilities facing communities as well as local and regional cultural heritage**, through promoting collaboration between the public and private sectors and civil society.
- **Strengthen local participatory bodies**, engaging local communities to support cultural management and governance in risk management.
- **Value the knowledge and cultural practices of local communities, especially traditional, quilombolas⁴ and indigenous peoples**, in the preservation of cultural and natural heritage

locally and around the world.

- **Include local cultural knowledge and practices in risk management planning and impact mitigation.**
- **Recognise culture as a human right, integrating a cultural dimension in planning for risk prevention and impact mitigation.**
- **Encourage the formation of collaborative networks and strengthen existing ones,** establishing important partnerships for risk management and joint action in cases of disaster.
- **Continue the mapping of cultural heritage and cultural heritage organisations to enable cooperation** and networking between stakeholders with different experiences.
- **Establish an educational programme for young people** that can help raise awareness about the importance of cultural heritage in the region and the impact of climate and environmental disasters on it.

3.

CLIMATE CHANGE INCREASES THE **EXISTING RISKS** MINERAL EXPLOITATION PLACES ON COMMUNITIES, AS WELL AS **CULTURAL AND NATURAL HERITAGE** IN THE IRON QUADRANGLE

- **Support and expand research around the impact of disasters and climate change on local and regional cultural heritage.** Specifically, it is important to actively include indigenous populations in heritage research. Indigenous peoples are greatly affected by climate change and, with their extensive traditional knowledge, have a huge role to play in developing solutions.
- **Create connections between existing research projects** to foster a better understanding of the impact of climate change on cultural heritage in the region and around the world.
- **Recognise the socio-economic importance of local cultural heritage in the Iron Quadrangle, including its potential for diversifying the local economy.**
- **Create local cultural hubs** to enable young people to explore different opportunities in the fields of arts and culture, and related professions.
- **Foster the region's creative economy through municipal and/or regional policy** capable of identifying, supporting and nurturing the local and regional creative sectors. The link between tourism and the economic viability of cultural heritage organisations should be a focus on those plans.

⁴Settlements set up by escaped formerly enslaved people of African descent

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