THE UNESCO
Courier
October-December 2025

Reconstruction: reconciling the past and the future

- A new lease of life for **Mosul** in **Iraq**
- **Christchurch, New Zealand**: healing from the inside out
- Where the spirits dwell: the Tombs of Buganda Kings in **Uganda**
- **China**: the return of Yongdingmen Gate

OUR GUEST

Kate Raworth, economist
"We need a new vision of progress"

ISSN 2220-2285 42025
9 772220 228014

unesco

Subscribe to the 100% free digital version.

https://courier.unesco.org/en/subscribe

Follow the latest news from the *Courier*

@unescocourier

Read and share

Promote *The UNESCO Courier* by sharing it with your network, in line with the Organization's Open Access publishing policy.

2025 • n° 4 • Published since 1948

The UNESCO Courier is published quarterly by the United Nations Educational, Scientific and Cultural Organization. It promotes the ideals of UNESCO by sharing ideas on issues of international concern relevant to its mandate.

Director: Matthieu Guével
Editor-in-Chief: Agnès Bardon
Editorial Coordinator: Chen Xiaorong

Associate Editor: Katerina Markelova
Associate Communication Officer: Laetitia Kaci
Associate Editor: Anuliina Savolainen

Editions:
- **Arabic:** Fathi Ben Haj Yahia
- **Chinese:** Chen Xiaorong and China Translation & Publishing House
- **English:** Anuliina Savolainen (Editor) and Gina Doubleday (proofreader)
- **French:** Agnès Bardon (Editor) and Jean-Marc Delugeau (proofreader)
- **Russian:** UNESCO
- **Spanish:** Laura Berdejo

Photo and illustration editor: Danica Bijeljac
Translation co-ordination: Hélène Menanteau
Administrative assistance: Peyla Marla Moussirou Bouanga

Production: Eric Frogé, Senior Production Assistant

Translation: Peter Coles, Cathy Nolan

Design: Jacqueline Gensollen-Bloch

Cover illustration: © Sylvie Serprix

Printing: UNESCO

Interns: Liang Xiaohan, Sun Yihao

Co-editions:
- **Catalan:** Jean-Michel Armengol
- **Esperanto:** Chen Ji

The UNESCO Courier is published thanks to the support of the People's Republic of China.

Information and reproduction rights:
courier@unesco.org
7, place de Fontenoy, 75352 Paris 07 SP, France

ISSN 2220-2285
e-ISSN 2220-2293

THE UNESCO Courier

Contents

4 WIDE ANGLE

Reconstruction: reconciling the past and the future

Why rebuild? ... 5
Franca Malservisi

A new lease of life for Mosul ... 8
Zaina Dufour

Christchurch: healing from the inside out ... 12
Charles Anderson

Where the spirits dwell: the Tombs of Buganda Kings in Uganda ... 15
An interview with Jonathan Nsubuga

The revival of AlUla's Old Town ... 18
Anuliina Savolainen

Warsaw: a twofold approach ... 20
Adrien Sarlat

A Mayan city in Guatemala, rescued from oblivion ... 22
Ana Lucía Mendizabal Ruíz

China: the return of the Yongdingmen Gate ... 24
Lyu Zhou

26 ZOOM

The rediscovered memory of Gerrit Rietveld's work ... 26

36 IDEAS

Artificial intelligence and art: a decisive moment? ... 36
Ahmed Elgammal

40 OUR GUEST

"We need a new vision of the shape of progress" ... 40
An interview with Kate Raworth

44 IN DEPTH

Greening AI: smarter, smaller, stronger ... 44

Editorial

A destroyed city is not just the disfigured buildings, looted museums, displaced inhabitants, and shattered daily life. It is also a city stripped of part of its identity, as was Mosul (Iraq), in the aftermath of the Daesh occupation between 2014 and 2017.

It quickly became clear that restoring the buildings, 80 per cent of which had been destroyed in the old city, was the only way to bring this *Al-Mawsil* — "linking point" in Arabic — back to life and restore its status as a symbol of intercultural dialogue.

UNESCO took up this challenge through the "Revive the Spirit of Mosul" initiative, an ambitious programme that enabled the city to be rebuilt, with the support of its inhabitants and international solidarity worth US$115 million.

For the first time in its history, the Organization has directly undertaken the reconstruction of iconic heritage sites: from the Al-Nouri Mosque to the Al-Hadba Minaret and the Al-Saa'a Convent, the famous "Our Lady of the Hour". At the same time, historic houses were rebuilt and hundreds of schools reopened.

To breathe new life into Mosul, it was also necessary to revive the cultural and intellectual life that had made the city a melting pot of millennia-old civilizations. UNESCO therefore supported the revival of literary and music festivals, open-air film screenings, and technical and vocational training for young people, benefiting more than 7,000 Mosul residents who were directly involved in these projects.

This colossal undertaking illustrates the power of international cooperation when it is translated into concrete projects that serve society. The expertise acquired — the so-called "Mosul method" — is now inspiring other initiatives: from Lebanon, where UNESCO has helped rehabilitate more than 280 educational establishments, to Ukraine, where we are protecting heritage and ensuring educational continuity despite the war.

The reconstruction of Mosul is a sign of hope. It shows that a city, even when it has been razed to the ground, is never doomed to remain so — it is always possible to bring it back to life.

Audrey Azoulay
Director-General of UNESCO

Franca Malservisi

Architectural consultant, lecturer and researcher at the École Nationale Supérieure d'Architecture de Versailles (France)

Why rebuild?

Reconstruction is, literally, the act of building again something that has been damaged or demolished. But the term covers very different situations depending on the context, extent and origin of the destruction. Above all, it says nothing about what motivates societies to restore or reconstruct certain elements of their built heritage.

The debate on the preservation of built heritage generally overlooks a fundamental question: why do societies seek to protect buildings or built complexes? Any designation of heritage — specific status to ensure transmission to future generations — should, however, make us pause for thought.

The major phases in the protection of buildings correspond to a growing awareness of the loss of elements perceived as constitutive of a culture, whether medieval churches or allotment gardens on the outskirts of cities, to name but a couple of examples. The designation of heritage is a response to powerful forces driving the deterioration, or even destruction, of built heritage. Cultures that had previously constructed their environment mainly by adding new layers (stratification), have undergone profound upheavals. Industrialization, rapid urbanization, and the abandonment of old living places have prompted proactive efforts at preservation. Designation as heritage is mainly invoked for buildings considered to be at risk. The concept of industrial heritage, for example, is directly linked in Europe to deindustrialization and therefore to the abandonment and demolition of old factories.

Confidence in the future

Following a similar logic, the major waves of reconstruction of monumental buildings have followed wars and natural disasters. The act of reconstructing a building is a fundamentally positive step, demonstrating confidence in the future, and stems from a desire to repair the traumatic effects of an event. But what do we mean when we talk about reconstructing a monument? The term covers a very wide range of actions that can be difficult to compare.

> **“The result will always be a new building with a life of its own in relation to the lost monument**

Its use is now very broad, and often inappropriate. The major construction site that followed the fire at Notre Dame cathedral in Paris in 2019 received wide coverage by the press, which referred to it as the “cathedral reconstruction project”. Fortunately for art history and for visitors as a whole, however, the major part of the edifice was not destroyed during the fire. The western section, for example, never left the Parisian landscape and continues to bear witness to centuries of accumulated interventions.

The first question that arises, therefore, concerns the extent of the destruction. If most of the building in question is in ruins, the operation is rather like the creation of a new edifice which, by necessity, can only reproduce certain aspects of the lost monument, such as the overall volume, the layout of openings and the general arrangement of the decorative elements.

The relationship between the new construction and the pre-existing one may vary depending on the quantity of reused materials and the reconstitution of finishes and decorations, which may be more or less painstaking and faithful to the original. The result will always be a new building which, intended to fulfil a significant cultural, urban, social or symbolic role, will have a life of its own in relation to the lost monument. It will have its own history of adaptation and ageing from the moment of its construction.

Time frames

It is essential to consider the timeframe. Can we compare the reconstruction of the Mostar Bridge (Bosnia and Herzegovina), destroyed by bombing in 1993 during the conflict in the former Yugoslavia, where work began a few years after the trauma, with the reconstruction of the →

◥ *Construction site of the Cathedral of Notre-Dame in Paris, damaged by fire in 2019.*

Reconstruction, restoration, rehabilitation: what are the differences?

Reconstruction:
Direct intervention on a damaged cultural property in order to return it to a previous historical state — or even its original state, if it is documented — respecting the construction methods of the period.

Restoration:
Returning a building to its original condition in order to preserve and pass on its heritage value. The original plans are retained, as are the materials, as far as possible. They are either restored or replaced with identical materials if they are too damaged.

Rehabilitation:
Transforming an existing building to adapt it to contemporary requirements, making it more comfortable, and modernizing it while respecting and preserving its architectural character. Rehabilitation allows a building to be adapted to new uses and new regulations in terms of accessibility and fire safety.

Frauenkirche in Dresden (Germany), inaugurated in 2005, 60 years after its collapse? The percentage of inhabitants who directly experienced the trauma is not at all comparable, and the demand for compensation for the loss is not of the same order.

Another, non-negligeable aspect of the relationship to time is the expected lifespan of each type of building, in relation to its period of construction, its programme of development, the techniques employed, and its uses. Can we compare the evolution over time of

> **If the skills are still available, reconstruction can resemble maintenance**

The Frauenkirche ("Church of Our Lady") in Dresden, Germany, was destroyed by bombing in 1945 during the Second World War. Picture taken in 1993.

© Jörg Schöner

a stone fortress built to last for centuries with a mud-brick dwelling that requires regular maintenance, or a building made of industrially manufactured components designed to last only a few decades? Depending on the periods, the techniques employed, and the intended use, the longevity of a building and its component parts will not be the same.

Reconstruction, in the event of a disaster or other sudden event, will be integrated into very different patterns of wear and replacement. The timeframes of the trades involved are also a significant factor. If, for example, the skills are still alive and available, provided by people who continue to produce comparable buildings, reconstruction can resemble maintenance. The situation is quite different when reconstruction involves materials, decorative elements or structural solutions that have not been used for centuries, such as slate roofing from quarries that are now closed.

In the latter case, the men and women who take on the reconstruction work have a different world view, with different aesthetics and technologies. Reconstructions almost systematically include solutions that are alien to the pre-existing structure, as was the case with the town hall in Arras in northern France. Destroyed during the First World War, it was rebuilt using a reinforced concrete structural framework.

Integration into the landscape

Reconstruction is also not an isolated operation. The monument or built complex is part of an urban landscape and a wider context. In fact, the reconstruction of a monument is part of a process involving political, strategic, social and cultural dynamics that sometimes conflict — urban regeneration, the development of tourism, the affirmation of identity, or territorial claims. These contexts, which can be extremely complex, should not obscure the inevitable difference between the reconstructed monument and the one that has disappeared, even when every effort has been made to reproduce it.

How can we position ourselves in relation to these "recreations", which have helped communities to overcome dramatic experiences? A good starting point seems to be to consider a reconstructed monument as a form of compensation for a loss and not a replacement of the lost building. Today, the dramatic effects on the climate of an extractive economy and the irreparable waste of resources are also important considerations. While praising the human and material resources deployed to rebuild a monument, it is important to emphasize that at least as much effort should be made to avoid having to rebuild, to prevent wars, to prevent disasters and to contain floods.

◥ *Rebuilt stone by stone, the Frauenkirche in Dresden was inaugurated in 2005. Its facades, made of new stones, also feature original blackened blocks.*

Zaina Dufour
UNESCO

A new lease of life for Mosul

As a model for urban renewal, UNESCO's "Revive the Spirit of Mosul" initiative went well beyond simply reconstructing the built environment. It also strove to revitalize the cultural life of the Iraqi city, devastated after three years of occupation by Daesh.

Life has returned to the narrow streets of Mosul. The scents of spices mix once more with the melodies of church bells and the call to prayer, a harmony of voices reclaiming their place in the city's ancient dialogue. Today, eight years after the end of the fighting, the city has become a symbol of restoration, resilience, and hope through its rich heritage.

In the heart of northern Iraq, where the Tigris River flows through the ancient region of Mesopotamia, Mosul is undergoing a complex process of post-conflict recovery. A symbol of coexistence, Mosul has embodied its Arabic name *Al-Mawsil*, the "linking point", serving as a crossroads connecting diverse cultures, religions and economic networks. Its churches, mosques and centuries-old homes stood as quiet witnesses to this delicate balance, this spirit of harmony that defined Mosul for generations.

But from 2014 to 2017, this harmony was shattered. The occupation by Daesh and military operations led to the devastation of 80 per cent of the Old City. The iconic Al-Hadba minaret collapsed, sacred sites were desecrated, and entire neighborhoods were depopulated, leaving the city with critical questions regarding the preservation of cultural identity and reconciliation.

Rediscovering the soul of the city

In response, UNESCO launched in February 2018 an ambitious campaign entitled "Revive the Spirit of Mosul". More than a reconstruction project, it is a strategic model for reconciliation, peacebuilding and cultural diplomacy. This campaign, which places heritage as a central axis in conflict recovery, is also designed to foster social cohesion, help fight violent extremism and reconstruct the city's symbolic identity.

"Rebuilding heritage in Mosul is rebuilding the soul of the city," UNESCO Director-General Audrey Azoulay said at the launch of the programme in 2018, framing the reconstruction not only as physical renewal, but as a critical act of cultural resilience and social healing.

> **"It's not just houses that the people of Mosul are rebuilding; they're rebuilding themselves**

For it's not just bricks that the people of Mosul are rebuilding from the rubble: they're rebuilding themselves, their history, and their place in the world. They show that a more inclusive and brighter future can rise from the ashes of destruction.

For Najat Abdel Aziz, returning to her restored house in the Old City was more than stepping back into a familiar place: "Returning to live in this house is like a dream. Every corner of this house holds precious memories. The restoration of these houses inspires people to return to the area and fosters a sense of hope among the residents," she emphasizes.

Her sentiments are echoed by Mustafa Khalid, who worked with UNESCO as Site Engineer at Al-Nouri Mosque: "In the revival of our city's spirit, we witness a rewriting of our narratives — not solely with bricks, but with the essence of unity and steadfast resilience, forging a future that honors our past."

By investing in both education and material conservation, UNESCO has expanded the concept of heritage far beyond the mere preservation of buildings. The participation of residents, a key element from the project's launch, is also a means of ensuring its sustainability.

The importance of this approach was highlighted by Harith Yaseen Abdulqader, co-founder of the Mosul Book Forum, who stated at UNESCO Headquarters in 2019: "Rebuilding monuments and infrastructure is one thing, but we must think about rebuilding minds and mentalities".

Iconic sites

The "Revive the Spirit of Mosul" initiative, supported by US$115 million from 15 international partners, namely the United Arab Emirates and the European Union, prioritized the reconstruction of emblematic sites such as Al-Nouri Mosque and its iconic leaning Al-Hadba minaret, the Convent of Our Lady of the Hour

Inaugurated by UNESCO in Mosul in 2022, the Community Information Centre organizes cultural and educational events.

(Al-Saa'a) and its House of Prayer, and the Syriac Catholic Church of Al-Tahera, as well as 124 heritage houses. Beyond financial support, the initiative underscored the vitality of international cultural diplomacy, exemplified by the recasting of the bells of Al-Saa'a in Normandy, France, and those for Al-Tahera Church in Italy.

> **"The emblematic leaning Al-Hadba minaret was reconstructed to its original design**

In addition to international cooperation, local involvement was a core part of the campaign. The local community was consulted in every state of rebuilding their city. Special attention was given to the iconic Al-Hadba minaret. The people of Mosul overwhelmingly expressed their desire to see it rebuilt "as it was", setting the stage for a unique architectural challenge: reconstructing the leaning minaret using traditional bricks and materials, a technique that had not been used for centuries.

©UNESCO / Luay Al Zrare

Reconstructing the leaning Al-Hadba minaret.

Over 7,000 jobs were created for local craftspeople, engineers and artisans, equipping communities with technical skills critical for sustainable heritage conservation.

New discoveries

The initiative also led to a discovery that had not been documented before. Excavations conducted in 2021 unearthed the remains of the 12th-century mosque beneath the Al-Nouri Mosque's Prayer Hall, revealing a total of four rooms built of stone and plaster. This discovery challenges linear narratives of destruction and highlights how layers of history coexist and inform present identities.

"Having this heritage, preserved for so many years underground, to escape the intentional destruction that the rest of the city endured, is a miracle. It is true that we lost a lot, but hopefully what is coming is better," exclaims Mohamed Salah, a Moslawi.

Al-Tahera, built between 1859 and 1862, suffered significant damage in 2017. Extensive research was carried out to

©UNESCO / Luay Al Zrare

The Our Lady of the Hour Convent (Al-Saa'a) after reconstruction.

determine the church's decorative phases, allowing for restoration using traditional methods. The meticulous restoration of the alabaster surfaces has brought back the original floral motifs. With the support of UNESCO, thirteen students from Mosul University, a third of whom are women, were trained in conservation.

The revitalization of educational spaces has also played a central role in shaping post-conflict recovery in Mosul. Thirty-one schools have been rehabilitated, reopening over 400 classrooms. In collaboration with local universities, specialized programmes on heritage conservation, including the training of Mosul University students, aim to foster a generation that perceives books and heritage as bridges for peace.

> **"Cultural life has re-emerged in Mosul as a powerful tool for reconciliation**

Similarly, cultural life has re-emerged in Mosul as a powerful tool for reconciliation, with book festivals, open-air screenings, and musical performances reclaiming public spaces for collective healing. "By bringing back music to Mosul, we are bringing back life," says violinist Ehsan Akram Al Habib. This cultural revival includes the establishment of a FilmLab at the Institute of Fine Arts, where twenty students were trained in all aspects of filmmaking and produced nine short films. In June 2021, a creative hub known as "The Station" also opened, offering a space for young people in the cultural sector to collaborate, learn, and host events from concerts to exhibitions.

Lessons for the future

Much has been accomplished, but the journey is not over. The challenges, technical, economic, emotional, are still there. But so too is the will to rise.

Mosul's experience offers valuable lessons for the future. It shows that heritage-led recovery is possible, even in contexts where conflict has not only shattered stones but also fractured the social fabric. It raises enduring questions about the ethics of reconstruction, the politics of memory, and the possibility of transforming scars of destruction into foundations for inclusive, pluralistic futures. Mosul illustrates how culture can drive both social cohesion and long-term development in post-conflict settings.

In the long history of UNESCO's reconstruction projects, the city of Mosul holds a unique place. The campaign to safeguard the Egyptian temples of Nubia in the 1960s remains a monumental feat of engineering and architecture, involving the meticulous dismantling and relocation of entire heritage sites, block by block. The preservation of Angkor Wat temples in Cambodia led to the creation of an international framework for cultural cooperation, uniting nations across continents. Most recently, the old city of Mosul became the setting for both an architectural and symbolic challenge — reconstructing iconic places of worship from multiple faiths, all in service of the local communities and their shared heritage.

Safeguarding heritage: UNESCO's landmark campaigns

The launch of the International Campaign to Save the Monuments of Nubia, in 1960, marked the beginning of UNESCO's large-scale safeguarding and reconstruction projects. This extraordinary archaeological area between Egypt and Sudan was at risk of being submerged by the Aswan Dam. Over 20 years, 40 technical missions from five continents helped successfully rescue and relocate 22 monuments and architectural complexes, including the famous Abu Simbel and Philae temples.

UNESCO's second major rescue effort was the International Safeguarding Campaign of the City of Venice, launched in response to the severe damage the Italian city's heritage suffered from a catastrophic flood in 1966. In 1972, another major fundraising campaign was launched for the conservation of Borobudur in Indonesia, a famous Buddhist temple dating from the 8th and 9th centuries and abandoned for centuries before its rediscovery in the 19th century. Its restoration was completed in 1983.

Since 1994, the Safeguarding the Bayon Temple of Angkor Thom project in Cambodia has contributed to restore, consolidate, and develop one of the most prominent structures of the Angkor World Heritage property. The reconstruction of the Old Bridge in Mostar, Bosnia and Herzegovina, destroyed during the conflict that tore apart former Yugoslavia, represents another landmark event in heritage protection. Its reconstruction, in line with the original 16th-century building methods, began in 1999 and continued until 2004.

More recent examples of safeguarding projects under the auspices of UNESCO include the reconstruction of the mausoleums of Timbuktu, a site inscribed on the World Heritage List in Mali. The work on the site, destroyed by armed groups in 2012, was completed in 2015. This was one of the first cases where destruction of heritage was prosecuted as a crime of war, recognizing cultural heritage protection as an integral part of peacekeeping efforts.

Charles Anderson

New Zealand writer and journalist

Christchurch: healing from the inside out

Following a devastating earthquake in 2011, new constructions in New Zealand's second-largest city have been built to resist tremors. Innovative construction techniques have since become a hallmark of the post-earthquake era. A burst of creativity, driven by local residents, has also emerged from the collective trauma.

On a calm, grey winter morning in southern New Zealand, Christchurch awakens peacefully, as if suspended in time. At first glance, nothing distinguishes this quiet city, crossed by the Avon River, from any other. But a closer look reveals the scars that Ōtautahi — as the city is known in Māori — bears from a trauma experienced fourteen years ago. Signs of this can be seen in the walled-up buildings, empty lots, and old facades restored with mixed results.

On 22 February 2011, an earthquake measuring 6.3 magnitude on the Richter scale shook the city and its 350,000 inhabitants. Due to the shallow depth of the quake's epicentre and its proximity to the city centre, it was devastating: 185 people lost their lives and the central business district, already weakened by a previous earthquake a few months earlier on 4 September 2010, was severely damaged.

Amanda Ohs, Senior Heritage Advisor to Christchurch City Council, remembers that day as if it were yesterday. Five months pregnant, she was in the basement of a department store when the lights suddenly went out. When she managed to get out of the building, the shock was immediate. "Our lovely heritage buildings, the parapets, the brickwork, all fallen."

Whole neighbourhoods bubbled with liquefied mud and silt that left them uninhabitable. Entire chapters of the city were cordoned off — or "red-zoned" — then slowly razed. The earthquakes were devastating for built heritage. According to a 2021 study by ICOMOS-ICCROM, the city lost 204 of its 588 listed buildings. In the city centre, 44 per cent of heritage buildings did not survive.

A broken dream

Christchurch was once a dream of England cast into the South Pacific — a grid of order and stone with the Avon River as its spine. Its architecture leaned into legacy, with gothic revival churches, masonry-fronted theatres, and brick-lined commercial blocks. However, its developers had not fully anticipated the seismic risk — unaware that the city lay along a hidden fault line.

"We had a list of earthquake-prone buildings," says Ohs. "But it all felt a bit hypothetical until you actually experience it and see what happens."

© Centuri Chan

Created by designer Pippin Wright-Stow and Gap Filler, a non-profit organization founded after the 2010 earthquake, these temporary structures in Rauora Park are part of the revitalization of Christchurch's public spaces.

◥ Flag Wall, *2014-2018. Detail of an installation by New Zealand artist Sara Hughes, commissioned by Christchurch City Council for the reopening of the Cathedral Square in the city center. The work evokes the roof tiles of the cathedral.*

There was no emergency plan for built heritage. Most of the buildings in the city centre did not survive. "At the beginning it was pretty devastating," Ohs says. "But you just have to be pragmatic. You wouldn't last long in heritage if you had a breakdown after losing every building." The day after the earthquake, officials asked heritage staff for a top 20 "must save" list of buildings, from a catalogue of over 1,000.

The government stepped in. Control was handed to a new authority, armed with sweeping powers and a centralized plan. In parallel, a local plan had been developed from 100,000 submissions from the community about what the future of the city should look like. Jessica Halliday, an architectural historian, says that the local plan sparked enthusiasm among citizens. "It highlighted the attachment residents have to buildings that have been part of their lives for as long as they can remember," she explains, although she regrets that the funds went first to "anchor projects", sometimes to the detriment of more modest heritage sites.

Hi-tech approach

Recovering from such a disaster takes time, not to mention the billions of dollars needed to finance such a huge endeavour. Inevitably multi-phased, the reconstruction was carried out using different approaches, sometimes on the same site. The Gothic Revival Knox Church, the Edwardian Isaac Theatre Royal, and the façades of McKenzie & Willis department store, all feature part-past, part-future elements. Some of these buildings were restored in their original styles while others are completely new — structurally ready for whatever comes next.

Lessons have been learned from the 2010 and 2011 disasters. Innovative building techniques have become a hallmark of the post-quake era. New buildings frequently incorporate base-isolation systems, giant shock absorbers that decouple a structure from ground movement, and devices that absorb seismic force. Lightweight, low-damage timber and steel framing systems, designed to flex rather than crack during strong shaking, are now widely used.

> **"Christchurch lost 204 of its 588 listed buildings**

Alternative spaces

But life cannot be restored simply by rebuilding walls. In this city undergoing →

transition, a creative momentum driven by non-profit organizations, residents, artists, and architects emerged to breathe new life into destroyed areas. Empty spaces between buildings became the focus of projects experimenting with new forms of urban living.

For instance, Greening the Rubble, founded in September 2010 in the aftermath of the first earthquake, created temporary parks and gardens inspired by urban ecology. Gap Filler, a non-profit that activates vacant spaces, began as a response, not a plan. It has launched a variety of projects to bring life back to empty lots, such as a cinema where viewers are invited to pedal to generate the energy needed to screen the film, mobile cafés, and a car park where all profits go directly into local community projects. The idea is not to launch large-scale initiatives, but rather to develop community-driven projects that will spread like wildfire.

"Gap Filler was always about creating spaces that embody an alternative set of values, so that people have a palpable experience of that and then grow a desire and demand for more things like that in the city," Ryan Reynolds, co-founder of Gap Filler, explains.

Traditional *poupou*

This dynamic has also resulted in greater consideration for Māori culture. The local Māori tribe, Ngāi Tūāhuriri (Ngāi Tahu) worked with planners to embed Māori design and stories into public spaces such as Victoria Square and The Avon River Precinct or *Te Papa* Ōtākaro. For example, a restored 6-metre tall traditional *poupou* or carved post, depicting themes of food gathering and ancestors of the Ngāi Tahu people, has been re-erected on the banks of the river in Victoria Square. The Whāriki is a series of 13 paving stone patterns around the Avon River Precinct, representing different moments in a traditional welcome ceremony, reflecting important cultural protocols and values. These are elements that were largely missing or hidden from the city before the earthquakes.

> **"The connection to heritage has become even more important because of all that we've lost**

Amanda Ohs says the trauma has clarified what matters. "The local community has come to realize how important heritage is to them. Our stories connect us to this place, connect us to each other. The heritage survivors that remain have become even more important because of all that we've lost."

In a similar vein, the co-founder of Gap Filler also sees a manifestation of collective resilience in this trauma. "You can lose almost everything," he says, "but if you keep imagination alive, you can start again."

© Sarah Rowlands

The poupou, *a six-metre-high Maori sculpture, was removed after the quake for conservation work, and reinstalled in Victoria Square following the rehabilitation of the area.*

Interview by
Anuliina Savolainen
UNESCO

Where the spirits dwell: the Tombs of Buganda Kings in Uganda

Ugandan architect Jonathan Nsubuga participated in the reconstruction of the Tombs of Buganda Kings after a devastating fire in 2010. The sacred site in central Uganda is built entirely from traditional materials. In addition to the architectural and technological challenges, the immaterial dimension of this site devoted to communication with spirits was a key consideration.

The Muzibu-Azaala-Mpanga structure offers an unparalleled insight into the precolonial building traditions of Uganda. What makes it an exceptional site?

The Tombs of Buganda Kings site consists of a series of buildings: the gatehouse, the roundhouse where the drums are kept, and the houses belonging to the wives of the deceased kings. The Muzibu-Azaala-Mpanga is the main building and the jewel of the ensemble.

Its scale, architecture, use of vegetable materials, and craftsmanship make it an endearing masterpiece. But to us locals, it is the spirituality of this place that really matters. The Muzibu-Azaala-Mpanga is where the four Kabakas (kings of Buganda) are buried. It is a place of communication with the world of the spirits.

A long-held tradition states that when a king is born, he takes his mother's clan. Because of this, the entire Buganda Kingdom shares a deep connection to the kingdom. Everybody owns the king because historically all clans share blood with the Kabakas. And that's the intangible culture here, a history that doesn't die.

Traditionally, the site is managed by the hereditary wives of the kings. After 6 p.m., no male person should enter. Women are the engine of the kingship, they represent continuity. They care for the decorated effigies of their kings, known as "the twins," which contain the umbilical cord of the deceased king.

> **"The tragic event sparked a desire among residents to rediscover the site's deep-rooted value**

To what extent was the site affected by the fire in 2010?

The graves were not affected, but the rest of the main building was destroyed by the fire. It was a total breakdown. The economic benefit from visiting tourists disappeared. A spiritual void was created, because people could not carry out the rituals or ceremonies anymore.

So, the fire caused significant damage, but it similarly reawakened the younger generation's interest in the Kabakas. In a way, that was the silver lining: the fire helped the community rediscover the site's deep-rooted value, which in turn led them to ask specific questions about the future, such as who should perform the rituals, who should be in charge of the decoration, and where the timber for the reconstruction should come from. And all these things really confirm that it's a living site, not a museum site.

The buildings are made of traditional materials such as wood, thatch, reed, wattle and daub. Was this a particular challenge in terms of resources and know-how?

Climate change has affected swamps, lakes and other water bodies where the vegetable materials used mostly came from. The grass for the roof thatch was originally from nearby fields, but most of them don't exist anymore, so we had to get the grass from other areas of Uganda. The reeds were brought from elsewhere →

as well. The timber materials posed challenges, too. Timber used for the roof is hardwood, which is a rare and protected resource, and the timber for the poles is a specific type of very strong wood that does not get eaten by ants.

All of this, however, sparked preservation efforts of the grasslands and the wetlands, so that we can get these materials and use them. Of course, there was also the challenge of finding the right skillset.

How does one approach the reconstruction of a site with such strong spiritual significance?

We rebuilt the structure based on historic photographs from all over the world. But reconstruction is also to recover the broken parts of the heritage to make sure that what you're building is complete. I see the building as a vessel. Rebuilding the physical means nothing if the spiritual dimension is not taken into account.

I myself got involved in the spirituality of the place. For instance, I was led to engage with a medium — a person considered to be the messenger from the buildings and the past kings — for directions about what should be done. The question of how many poles should support the main building was also debated, since each pole corresponds to a clan.

I think that understanding both the local culture and the requirements of international bodies and standards helped me handle such challenges. Before my studies in the United Kingdom, I used to visit the site on weekends. When it caught fire, I had considerable knowledge about the building. When disputes arose, I could understand the language.

> **"We rebuilt the structure based on historic photographs from all over the world**

To what extent were the local inhabitants involved in the process?

The local community held meetings on the site, shared information, and provided their views. They also came to inspect it. They own the project; I'm just a caretaker. The wives involved in the rituals have played an important role in psychological support.

We also trained young people to work on the site — the last renovation was in 1938, and a few men involved in it were still alive. They were able to guide the younger people. As part of a comprehensive firefighting system at the site, we're also training neighbours, as well as security guards and police officers to ensure they're fully prepared to respond in case of fire.

What is the situation like today?

Now, 15 years later, the tourists are back, and the site has been visited by presidents and kings. Our work continues, as we prepare for the formal opening of the main building in the coming months, so we're still correcting and finalizing a few details.

I'm driven by the awareness that the world is watching, counting on me to manage and save this heritage. Although the tension has sometimes been high, everyone was happy when the site was removed from the World Heritage Sites in Danger list in 2023.

Rebirth after 2010 fire

The Tombs of Buganda Kings were inscribed as a UNESCO World Heritage Site in 2001. The site covers nearly 30 hectares of Kasubi hillside within Kampala City in Uganda. Most of the site is agricultural, farmed by traditional methods. At its core on the hilltop is the former palace of the Kabakas of Buganda, built in 1882 and converted into the royal burial ground in 1884.

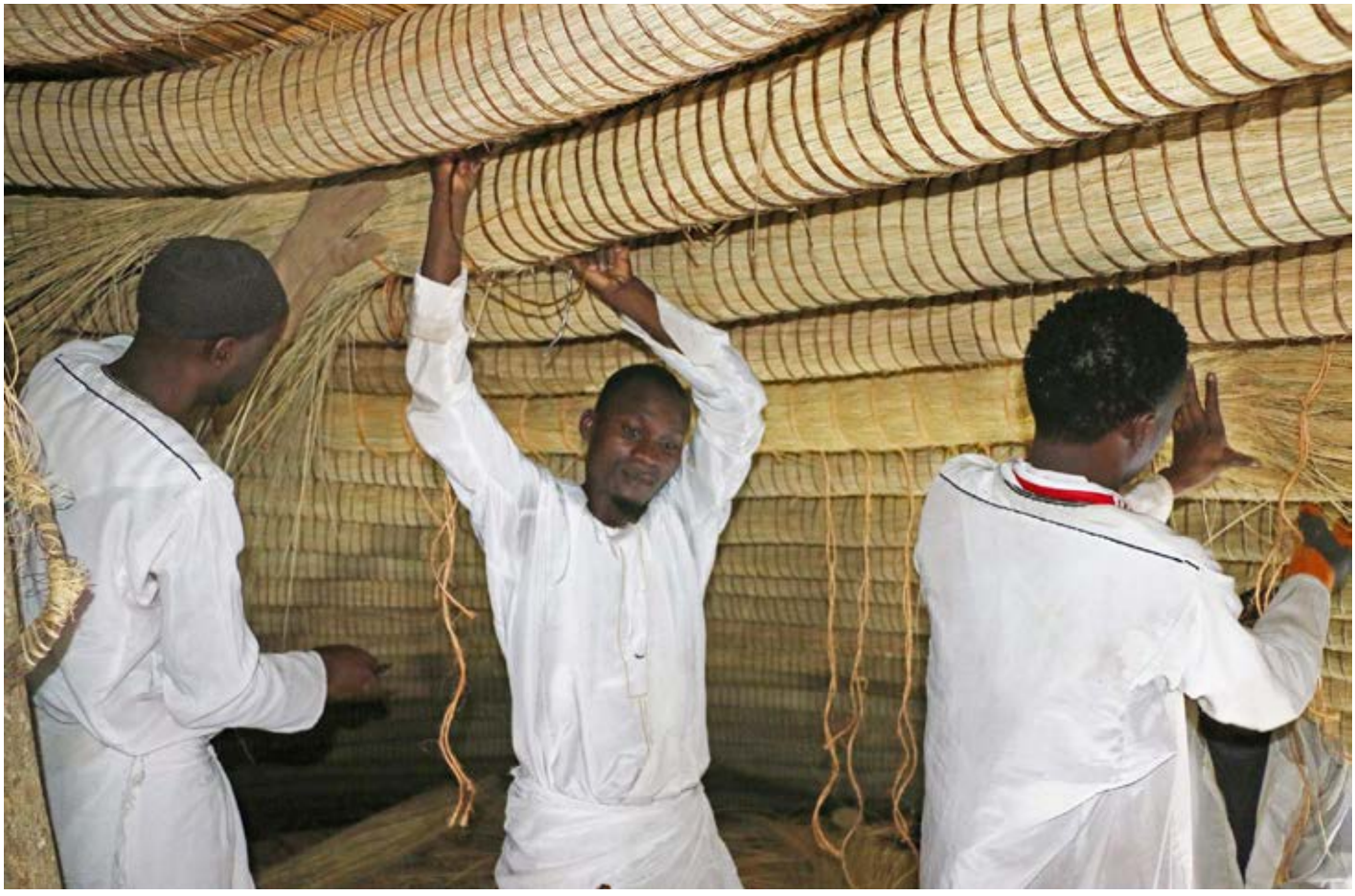
Four royal tombs now lie within the Muzibu Azaala Mpanga, the main building, which is circular and surmounted by a dome. This major example of architecture using organic materials — wood, thatch, and reeds in particular — also serves as a spiritual centre for the Baganda people, where ceremonies and rituals are still being practiced.

On March 16, 2010, a devastating fire destroyed part of the site. Following this disaster, the World Heritage Committee inscribed the Kasubi Tombs on its List of World Heritage in Danger that same year. This allowed for the development of a reconstruction programme led by the Ugandan authorities, in close collaboration with UNESCO and with the financial support of the international community. The efforts paid off, and in 2023, the site was removed from the "in danger" list.

© UNESCO / Thomas Mallard

Residents attend fire risk management training on the Tombs of the Kings of Buganda site, inscribed on the UNESCO World Heritage List.

© UNESCO / Thomas Mallard



Craftsmen install reed rings to support the thatched roof of one of the buildings on the site.

Anuliina Savolainen
UNESCO

The revival of AlUla's Old Town

Abandoned by its inhabitants in the 1980s, the mud brick houses of Al-Deira, the Old Town of AlUla in northwestern Saudi Arabia, began to succumb to environmental damage. A massive restoration effort, guided by ancient practices and using traditional materials, has breathed new life into this historic neighbourhood.

In the cool of the evening, when the intense heat begins to subside, visitors and locals flock to the narrow streets of Al-Deira, the Old Town of AlUla, situated in an oasis in the north-west of the country, some 400 kilometres from Medina. On the Market Street, opened to the public in 2021, the traditional *theyab* and *abayas* flow alongside the jeans and safari hats of tourists, whose travel to Saudi Arabia became easier with the introduction of new visas in 2019. The number of visitors to the area has since increased considerably, drawn in particular to its archaeological sites such as Hegra, located twenty kilometres from the Old Town.

This town, founded in the 12th century at the crossroads of trade and pilgrimage routes, grew into a bustling commercial centre that flourished for a long time. But in the early 1980s, its last inhabitants moved to a new settlement on the outskirts of the modern city: installing modern comforts in the labyrinth of narrow alleys and interconnected mud houses was too big a challenge.

The renaissance of the historic town began in 2017 with the launch of the Royal Commission of AlUla (RCU), established to implement a sustainable transformation of the region.

"When I first arrived in Alula, the Old Town was entirely ruinous and inaccessible. Now, the streets are full on Friday and Saturday evenings," says Cultural Heritage Director Kirk Roberts, who joined RCU in 2020.

The memory of the community

The initial programme focused on the stabilization and conservation of a set of homes, two mosques, and two main streets. To date, some 250 houses have been conserved, some of them adaptively reused into new living places, such as an eco-resort, dimly lit restaurants, art galleries, and pavilions selling local handicrafts.

Key to preserving the site's identity is the respect for traditional, sustainable practices, such as using tamarisk and palm tree trunks as structural support, restoring the woven palm ceilings, and making mud bricks with ancient methods to rebuild the walls. Architects also seek to use natural ventilation as much as possible to minimize the need for energy-intensive air conditioning.

Noura Ghabra, Saudi architect, educator and scholar specializing in environmental design, tapped into the memory of the community members to deepen her knowledge. "All vernacular architecture holds very deep lessons when it comes to climate resilience. In AlUla, the human factor is very important — the houses are made of mud, a living material that needs regular maintenance, sustained only by being occupied."

She took part in the UNESCO Kingdoms Institute Fellowship Programme that offers heritage experts the opportunity

Restored mud houses in AlUla Old Town.

© UNESCO / Anuliina Savolainen

Workers rebuilding walls of ancient oasis farms close to the old town, 2025.

to combine fieldwork with on-the-job training. "When I arrived in AlUla I contacted the elderly who had memories of how these places were sustained," she explains.

Their stories helped her gain a better understanding of their indigenous building practices. "Not only did they use local materials to build, but they also maintained and repaired the houses every year by using the mud from their farms."

Many of the Old Town's homes include a *tayara*, an aerial passageway connecting two houses. To Noura Ghabra, they exemplify an ingenious thermal control mechanism. "These structures bring shade to the street and catch air for natural ventilation."

Oral traditions

In the heart of the Old Town, Dar Tantora, where Egyptian architect Shahira Fahmy integrated 30 historic homes into a single eco-resort, has been praised as a hallmark of sustainable adaptive reuse. Local artists have decorated its rooms and walls in a traditional style, while its alleys are lit by candlelight in the evenings to prevent light pollution. Electricity use is kept deliberately low.

The past is also revealed by items discovered during archaeological investigation, from stones with inscriptions dating beyond two millennia to an old school notebook, a leather satchel, or a woven basket. These physical remnants are interwoven with AlUla's strong oral tradition, which helps to connect the threads. In fact, the revitalization efforts led by the RCU are not focused solely on the city's built heritage, but also aim to revive local intangible traditions.

"As a child, I often climbed up there," says Ahmed Alimam, a descendant of a historic family of tribal judges, pointing toward the mountain that protects the site, "to see my great-great-grandfather's inscription on the rock."

> **"All vernacular architecture holds deep lessons when it comes to climate resilience**

When he set up a tour operator business in AlUla fifteen years ago, he was among the first Rawis — an Arabic word for storytellers — who shape visitors' understanding of AlUla's cultural heritage. He shares fascinating details about life on the oasis farms next to the Old Town, where families would go to escape the summer heat and grow their food; he recounts how the departure of many young people in search of better education and job opportunities in larger cities in the late 20th century meant that many of the summer farms were eventually left without caretakers.

> **"The revitalization efforts are not focused solely on built heritage, but also aim to revive local intangible traditions**

Cultural ambassadors

Today, the oasis — a lush swathe of land formed by a *wadi*, a ravine that channels rainwater into the valley — is also being revitalized. Between its citrus trees, palm groves, and small parcels glowing in all shades of green, mud bricks are being used to reinforce the walls of ancient dwellings. Traditional farming and irrigation practices are being showcased through eco-gardening workshops. And more is to come: a new oasis campus focused on local, sustainable agriculture is being designed by Burkinabe architect and 2022 Pritzker Prize laureate Francis Kéré.

Today, dozens of young people, more than half of them women, have been trained to work as Rawis, seen as cultural ambassadors to share AlUla's cultural narratives with the growing number of visitors from far and near.

Since 2018, AlUla Old Town has hosted the annual Winter at Tantora festival, featuring performances, art installations, tours, and culinary experiences. During the 2025-2026 event, UNESCO, in partnership with the RCU, will launch a new on-site experience called Live Museum. On this occasion, the Rawis will revive local traditions by presenting artefacts and customs, while writing yet another chapter in the Old Town's history.

Adrien Sarlat

Journalist in Warsaw (Poland)

Warsaw: a twofold approach

Largely destroyed during the Second World War, the Polish capital underwent a unique reconstruction process, combining conservation and modernization. An architectural feat, its success and speed were due to the political situation but also the participation of its inhabitants.

A plain littered with rubble and debris stretching over dozens of square kilometers. Looking at the black-and-white aerial view of Warsaw displayed at the Warsaw Uprising Museum, it is impossible for visitors to imagine that "the Paris of the North", as it was known, once stood in the place of this pile of ruins. By the end of 1944, almost nothing was left of the city, which the Nazi troops had relentlessly destroyed in retaliation for the two-month uprising waged by its inhabitants. And when the Red Army entered the city on 17 January 1945, the capital was deserted.

"More than half of the city was in ruins and the historic centre was almost completely destroyed," explains Błażej Brzostek, historian and professor at the University of Warsaw. The Royal Castle, both the presidential residence and a symbol of national history, was also annihilated. But even while the city was still under German domination, certain architects were already concocting plans to rebuild it, anticipating its liberation. They would play a decisive role in the Polish capital's reconstruction.

"They continued to impart their knowledge to young apprentices in secret, knowing that they risked the death penalty," says Krzysztof Mordyński, historian and curator of the University of Warsaw Museum. The most famous of them, Jan Zachwatowicz, was appointed head of the historical architecture department of the Warsaw Reconstruction Office after Germany's defeat.

Created in 1945, this institution oversaw the reconstruction projects in the old town. The project was based on two principles: relying on credible archival documents where available, and reproducing the image of the city at the end of the eighteenth century, a period for which detailed iconography and numerous historical documents were available.

A citizens' piggy bank

The rebuilding of the historic district was a priority for the new authorities in the aftermath of the war. "It was a way of gaining legitimacy among citizens, especially intellectuals and artists," recalls Brzostek. Thanks to the Warsaw Reconstruction Office — the archives of which were included in UNESCO's Memory of the World Register in 2011 — the reconstruction of the old town was completed in just ten years. "Initially, some people suggested leaving it in ruins, as a reminder of the horrors of war. But Zachwatowicz opposed this," explains Mordyński.

The decision was quickly made to rebuild only the buildings erected between the fourteenth and eighteenth centuries and to preserve the layout of the medieval streets. The interiors of the buildings, however, were modernized to encourage residents, who had abandoned the neighbourhood after the war, to return. As for its iconic royal castle, reconstruction did not begin until 1971 and was completed in 1984, thanks to donations from all over Poland. The symbol of these citizens' contributions remains the famous glass piggy bank in the shape of a giant cube, into which residents deposited coins, banknotes or valuables to finance the reconstruction. The glass cube was adorned with a reproduction of the castle clock, showing 11:30 a.m. — the time the clock hands stopped on 17 September 1939 as flames engulfed the building.

> **"The reconstruction of the old town was completed in just ten years**

Brutalist facades

Overall, the restoration work on the historic city has remained a benchmark in Europe for its scale and speed, with results that earned it a place on the UNESCO World Heritage List in 1980 and continue to attract crowds of visitors. But Warsaw's historic reconstruction effort stops at the borders of the old town. The perspective is quite different in the rest of the capital. "For the new government, it was a question of building, not rebuilding,"

Reconstruction of Warsaw after the Second World War. Archive photo from 1948.

sums up Brzostek. The authorities saw the ravaged Polish capital as a blank canvas on which to build the ideal city of the future according to the codes of socialist modernism.

With the help of so-called "modernizer" architects, they imagined a capital city with large brutalist facades, crisscrossed by wide avenues that would make it easier for residents to move from one end of the city to the other. This transformation was made possible by new regulations governing private property. "Thanks to the Bierut Decree, which abolished the concept of land ownership in Warsaw in 1945, the state was able to reshape the street network without having to buy up all the plots of land one by one to build its new transport links," says Brzostek. The most famous legacy of Polish Brutalism to date is the Palace of Culture and Science and Parade Square, around which Warsaw's city centre is now organized.

The efficiency of the reconstruction process was widely publicized during the years of rebuilding. Although, unlike the historic district, the new city was mainly financed by public funds, the authorities were able to rally the Polish nation around the reconstruction effort, generating enthusiasm among citizens. "After their day's work, the people of Warsaw came to help sort the bricks from destroyed buildings for reuse. And over time, voluntary work became a compulsory contribution, and convoys were even organized from all over the country to enable all Poles to participate in the reconstruction," says Mordyński. By razing the capital to the ground, the Germans had attempted to destroy the idea of Polish nationhood; ironically, the reconstruction of Warsaw became one of the factors that cemented it.

> **"The restoration of the historic city has remained a benchmark in Europe for its scale, speed and results**

Ana Lucía
Mendizabal Ruíz

Journalist in Mixco (Guatemala)

A Mayan city in Guatemala, rescued from oblivion

Long buried beneath the tropical forest, the Mayan site of La Blanca, in the north of the country, has been the focus of a significant conservation effort that has helped raise the inhabitants' awareness of the value of this historic heritage.

Imagine a small town nestled in a green valley irrigated by the Mopan River, in the department of Petén, near the border with Mexico and Belize. In its heyday, between 600 and 900 BCE, La Blanca was a vibrant city, arranged around a palace perched above an acropolis, a large square, temples, and a reservoir. All that remains of this glorious Mayan past are ruins long hidden by the virgin forest. The very name of this city has been lost in the mists of time. As no trace of a Mayan name has been found, the site bears the name of the nearest village, two kilometres away.

It was not until 2004 that the first excavation campaign brought this buried past back to life, followed by others until

Locals work alongside archaeologists to preserve the Mayan site of La Blanca in northern Guatemala.

© Álvaro Töpke / Proyecto La Blanca 2007

The acropolis of La Blanca was invaded by vegetation.

2019. This research and conservation work is part of a larger field project aimed at documenting Mayan archaeology and architecture in Central America. At the La Blanca site, the excavations have uncovered the only Mayan mural known to date, created using the so-called "fresco" technique, which involves painting on wet plaster.

Mixed reception

The idea was not only to excavate remains to document the history of the powerful Mayan civilization. From the outset, the Spanish archaeologists in charge of the project, Cristina Vidal and Gaspar Muñoz, in consultation with the University of San Carlos in Guatemala, were keen to raise awareness among residents of the importance of this historical heritage and to involve them in local projects. Selvin Alexander Aceituno Berón, 41, is one of them. Born in La Blanca, he has followed the excavation of Mayan sites in the region with great interest.

When the La Blanca project began, he initially worked as a draughtsman for the Institute of Archaeology and History. Two years later, he realized his dream by participating in the project. "It was a real blessing," he says today. After training to become a tour guide and then a baker as part of the project, he is now able to support his family. Now a trainer himself, he is training other volunteers in the surrounding villages.

> **Significant efforts have been made to involve the local population**

But not all the inhabitants have shown the same enthusiasm. The archaeologists' initial efforts were met with indifference, if not hostility. "What surprised us most when we arrived was the lack of interest in the archaeological site," explain the two archaeologists. "It was not seen as part of the heritage worth preserving. Some buildings had been looted, tagged or damaged. The archaeological site was sometimes seen as an obstacle preventing them from cultivating the land or grazing their animals."

Involving the inhabitants

For Ramon Pinelo, consultant for the Balam association, one of the local partners in the project, this lack of interest can mainly be explained by historical reasons. Part of the population settled in the region in the mid-20th century, when land was made available by the country's authorities. "The people who live here have come from different parts of the country to work the land and raise livestock, which is undoubtedly one of the explanations," he says.

In fact, significant efforts have been made to involve the local population. Initially, men and women from the village were hired to clear and restore the site. In addition, workshops were set up for children and adults to raise awareness of the protection of cultural heritage. Training courses in tourism-related occupations were also introduced so that visitors could be welcomed to the site.

As the scientific aspect of the project progressed — it took over 15 years to showcase the Mayan ruins of La Blanca and nearby sites such as Chilonché — the local communities' view of these centuries-old remains evolved. A better understanding of the archaeologists' approach has also enabled a sense of ownership of this heritage to emerge over the years. At the same time, the arrival of the first visitors to the site has created a new economic impetus.

> **The arrival of the first visitors to the site has created a new economic impetus**

Before the project ended in 2019, Cristina Vidal and her team encouraged the inhabitants to organize themselves to ensure they reaped the benefits over the longer term. In 2022, an association for the community development of the village of La Blanca was created. They also set up a bakery.

"We are seeking to ensure that archaeological heritage is not seen as something isolated from the rest of society," explains Cristina Vidal, "but rather as a force capable of generating new economic, social and cultural opportunities for the community, while promoting the protection of heritage."

LYU Zhou

Director and professor of the National Heritage Center of Tsinghua University in Beijing (China), he is the president of the Architectural History Society of China and former Vice President of ICOMOS-CHINA.

China: the return of the Yongdingmen Gate

Demolished in 1957 to meet the new needs of Beijing's urban development, the Yongdingmen Gate Tower was rebuilt in 2004. Twenty years later, this iconic building was inscribed on the World Heritage List as a component of the Beijing Central Axis.

Running north to south through the heart of historical Beijing, the Central Axis consists of former imperial palaces and gardens, sacrificial structures, and ceremonial and public buildings. Since the 13th century, it has determined the development pattern of Beijing as the capital city of China. Among the fifteen components of this site stands the Yongdingmen Gate Tower, originally built in 1553 and demolished in 1957 for urban development. In 2004, the main tower was rebuilt at its original site, based on relevant surveying and mapping drawings, photographs, and other materials, following its original form.

> **"The Central Axis has determined the development pattern of Beijing since the 13th century**

The reconstructed component was accepted as an important part of the Beijing Central Axis, which was inscribed on the World Heritage List in 2024. Cultural heritage inevitably undergoes various historical or cultural events after its formation, endowing it with historical and cultural value. When this value attains global significance, the cultural heritage can qualify for World Heritage status. Restoration, modification, and even reconstruction can be part of this process, with the potential to support the outstanding universal value of the heritage. The key lies in the authenticity of cultural heritage.

Understanding how the Yongdingmen Gate contributes to the value of the entire Beijing Central Axis is crucial in demonstrating how a rebuilt structure can be authentic. From 1553 to 1912, Yongdingmen Gate served as the southern terminus of the Beijing Central Axis. The axis itself evolved over time, expanding from 3.8 kilometres in the 13th century to 7.8 kilometres by the 16th century.

A collective mindshift

The demolition of the Yongdingmen Gate in 1957 reflected the practical needs of urban development. This situation, where old buildings are demolished to meet the needs of urban infrastructure and economic development, is something that almost every city has experienced. Any city that continues to serve its functions is in a process of continuous change; only the degree of this change varies.

The reconstruction of Yongdingmen Gate Tower reflects the community's evolving understanding of heritage value. In the 1980s, interest in protecting urban historical heritage began to awaken in Beijing. People started to pay attention to the symbolic significance of the Central Axis, city gates, and city walls in the historical evolution of Beijing, sparking discussions on the possibility of reconstructing city gates and walls, including the Yongdingmen Gate.

Many people called for the restoration of these iconic buildings. Residents of the communities surrounding the original Yongdingmen Gate expressed that its demolition had altered the distinctive identity of their neighborhoods and the spirit of the place in their collective memory.

Contemporary urban planning

Following expressions of public opinion, Wang Canchi, a member of the Beijing Municipal Conference, submitted a proposal in 1999, called "Reconstructing Yongdingmen Gate and Improving the Cultural Relics Buildings along Beijing Central Axis". The proposal was well-received, prompting experts in architectural preservation and urban planning to discuss the reconstruction plan. The preparation of a technical plan for the gate's reconstruction was also initiated.

Although regulations on cultural relics protection in China at that time emphasized that completely damaged buildings should not be rebuilt, the reconstruction plan for Yongdingmen

Public domain / Charlie Fong

The Yongdingmen Gate in 2009.

Gate was based on the idea that the new building would serve as a symbol of the original Yongdingmen Gate location. Finally, in 2003, the Beijing Municipal Government approved the project.

While reconstructing the tower, the original barbican and arrow tower were not rebuilt. However, their original locations were marked on the ground in front of the tower, allowing for a complete presentation of the history of the demolition and reconstruction of the Yongdingmen Gate. It underscores the continuous influence of the Beijing Central Axis on contemporary urban planning, and confirms the expression of "living cultural tradition".

4,000 bricks

During the reconstruction, the residents' support was evident. They donated to the project over 4,000 ancient city bricks collected during the 1957 demolition. These bricks, now laid on the north platform of the Yongdingmen Gate Tower, serve as a material testament to the importance that Beijing's citizens place on the Beijing Central Axis. They also stand as a witness to the historical authenticity of the Yongdingmen Gate Tower itself.

> **"The reconstruction of Yongdingmen Gate Tower reflects the community's evolving understanding of heritage value**

The rebuilt Yongdingmen Gate Tower, along with the surrounding squares and parks, has become a beloved urban public space and an important place for daily life. This also led to active support and participation from the local community in the nomination of Beijing Central Axis for its inscription on the World Heritage List. Many residents, especially young students, have supported the project.

The reconstruction of Yongdingmen Gate Tower marks a significant event in Beijing's efforts to promote the protection of the historic city. It serves as an expression of the role that this heritage has on a living cultural tradition.

More globally, this case demonstrates that reconstruction is not a criterion for determining whether a heritage site holds significant value. Rather, the crucial aspect is how to authentically and clearly convey every event in the heritage's continuation, including the meaning expressed by the reconstruction itself and the value inherent in that meaning. For the Beijing Central Axis, the significance and value attributed to Yongdingmen Gate Tower underpin the outstanding universal value of the Beijing Central Axis. ■

The rediscovered memory of Gerrit

For those who are familiar with the building, the UNESCO Press Room has the aura of legend, one that is in the process of being revived after decades of obscurity. Designed by Gerrit Rietveld as a commission donated by the Dutch Government for UNESCO's headquarters in 1958, the Press Room was a functional workspace for journalists and also a living work of art.

By the time he was approached by UNESCO, which was seeking to decorate its headquarters with works by renowned artists, Rietveld was already a furniture designer, and architect of note. Initially associated with the de Stijl movement, later with New Objectivity, he had designed a number of buildings, including social housing and residences, and was already recognized as a pioneer of modernist design.

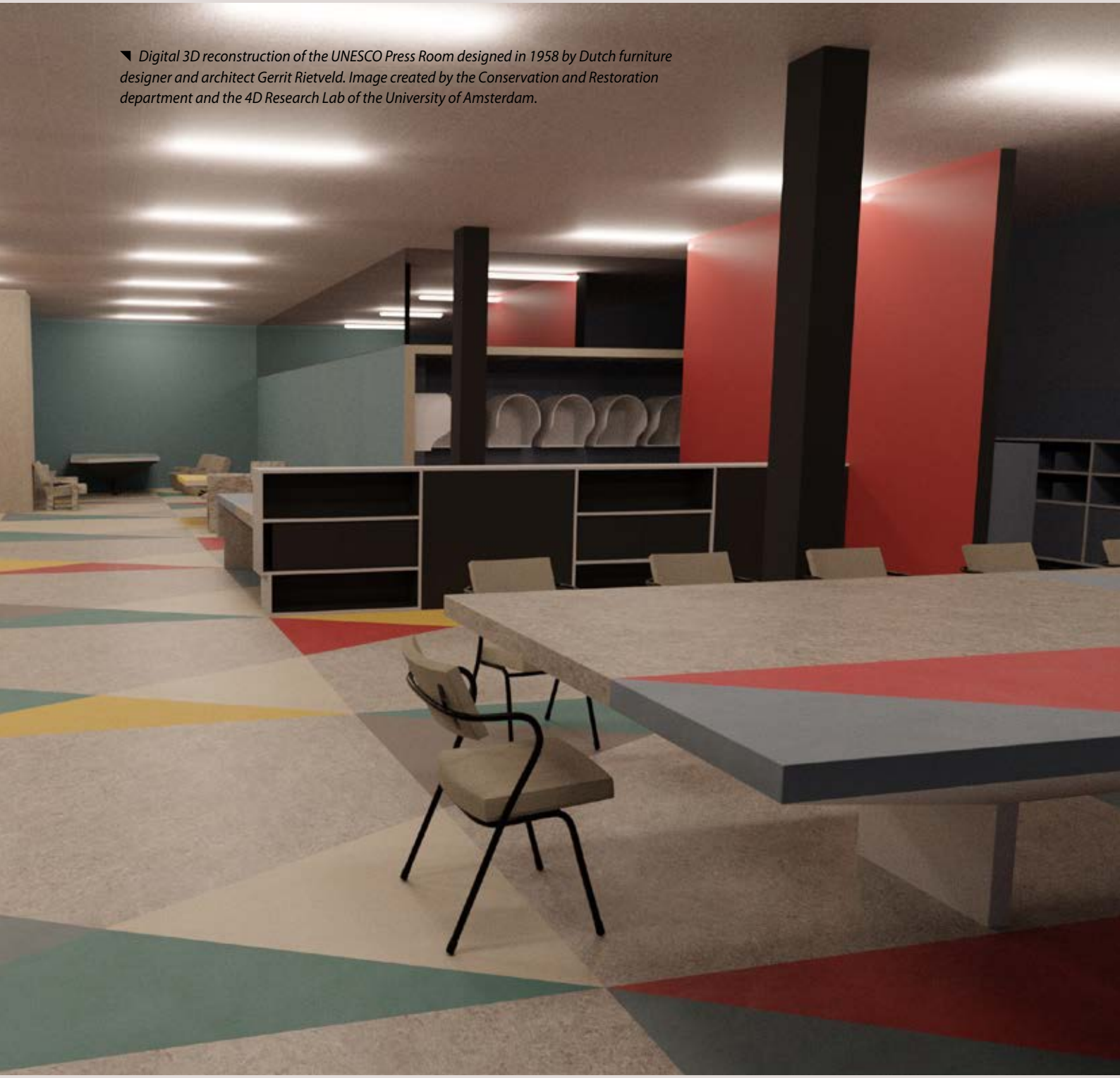
Rietveld faced many challenges in delivering the new space. The Press Room was consigned to one of the most awkward spaces in UNESCO's sprawling Y-shaped headquarters, situated in a passageway between two buildings.

The room itself was not a proper rectangle, but remarkable for its irregularity, described by Rietveld as a "random leftover in the basement". Instead of detracting from the design of the Press Room, in Rietveld's hands this unusual configuration was transformed into a total work of art. He applied colour, geometry, and modern materials to create a striking harmony present in every detail of the room, from its wall coverings and brightly geometric linoleum floor to its custom-designed matching furniture.

Yet its unceremonious dismantling in the early 1980s marked its subsequent disappearance from both popular memory and (visible) material existence. Decades later, thanks to the efforts of the Cultural Heritage Agency of the Netherlands, the Press Room is being revived not only through reconstruction efforts, but also in our imaginations. Today, an important part of its story is the archaeological rediscovery — including pieces of the original linoleum unearthed under a false floor — and meticulous efforts to reconstruct the Press Room, whether digitally, physically, or historically, based on archival research and scientific analysis of the extant materials. The publication of the images featured here reflects a desire to uncover the story of a disappeared room and its rebirth.

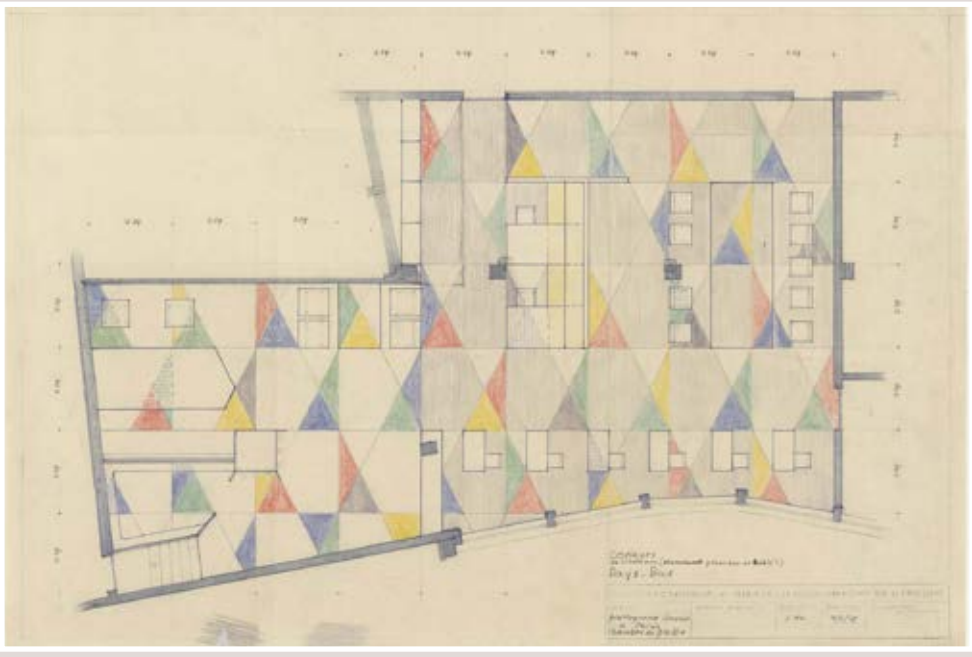
Eng Sengsavang
UNESCO

Rietveld's work



Digital 3D reconstruction of the UNESCO Press Room designed in 1958 by Dutch furniture designer and architect Gerrit Rietveld. Image created by the Conservation and Restoration department and the 4D Research Lab of the University of Amsterdam.

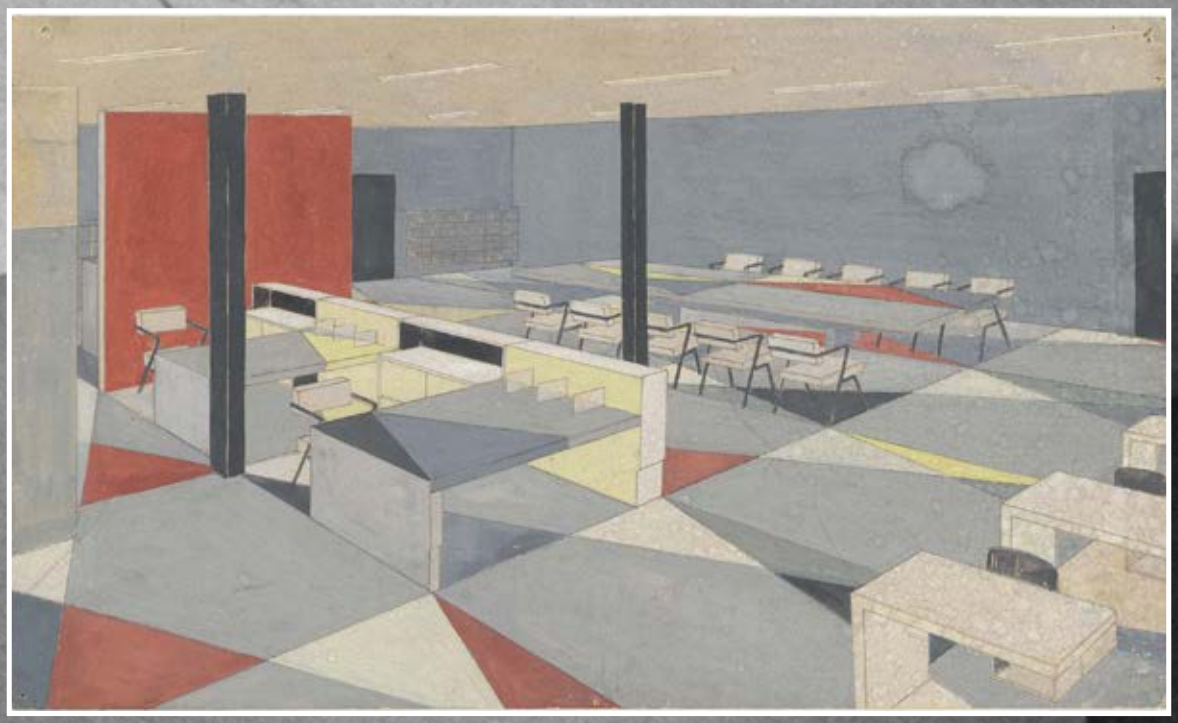
The UNESCO Press Room in 1958. In the foreground, tables finished with linoleum, specially designed for this project. On the right, six small worktables along the curving wall.



Floor plan, 1957. The space allocated for the future press room was located in a passage between two buildings and presented many particularities: a curved wall, irregularly placed columns, and almost no right angles. Gerrit Rietveld stressed that he had to "juggle with lines and colours" to harmonize the room.

Photo: © RCE / Mariël POLMAN / Adagp, Paris, 2025

◥ *Uncovering the original linoleum floor underneath the current raised floor by conservator and researcher Santje Pander in 2025, during an investigation undertaken at the request of the Cultural Heritage Agency of the Netherlands (RCE).*



Collection of Nieuwe Instituut / RIET, 534.4-02 © Adagp, Paris, 2025

UNESCO Archives collection / © Dominique Berretty / GAMMA RAPHO / Adagp, Paris, 2025

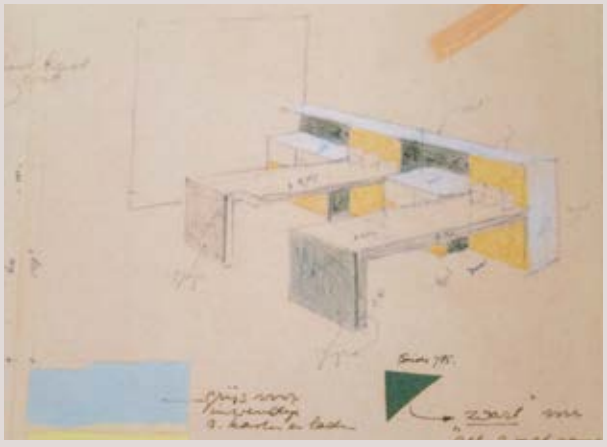
Gerrit Rietveld's drawing of the interior design of the Press Room. Linoleum was used on the floor and furniture, while a vinyl material layered on a woven textile backing was used on the walls and chairs.

View of the press room in 1958. Colour images of the room, which could shed light on the initial shades of the floor and furniture, are rare.

A table equipped with listening stations, allowing journalists to connect to UNESCO's various conference rooms and follow the debates in one of the Organization's official languages.

3D reconstruction of the Press Room created by the University of Amsterdam. The overhead view reveals Rietveld's use of partitions, colours, and shapes.

UNESCO Archives collection / © Dominique Berretty / GAMMA RAPHO / Adagp, Paris, 2025



Collection of Nieuwe Instituut / RIET, 534.2-03 (detail) © Adagp, Paris, 2025

◥ *A technical drawing by Gerrit Rietveld representing two tables attached to a cabinet with shelving, depicted in the photo on pages 30-31.*

Photo © RCE / Santje PANDER

Investigation of the original linoleum conducted by Luc Megens and Mariël Polman, experts from the Cultural Heritage Agency of the Netherlands, 2025.

Photo © RCE / Santje PANDER

Original flooring with linoleum fragments, contrasted with factory samples conserved in the archive of the original manufacturer, Forbo, in the Netherlands.

© UNESCO / Christelle ALIX

Samples of original finishes, collected by UNESCO between 2018 to 2025, and linoleum factory samples from the manufacturer's archive.

© UNESCO / Christelle ALIX

◥ *Santje Pander shows UNESCO staff the reproductions of floor plans and original linoleum samples, 2025.*

© RCE / Adagp, Paris, 2025

◥ *More than thirty pieces of furniture from the Press Room, arranged in their historical placement and in relation to one another, are preserved in the Collectie Centrum Nederland (2021).*

IDEAS

Artificial intelligence and art: a decisive moment?

© Maria Mavropoulou

Ahmed Elgammal

Professor at the Department of Computer Science at Rutgers University (United States), he is the founder and director of the Art and Artificial Intelligence Laboratory at Rutgers.

Now that generative AI can create everything from photorealistic portraits to imaginative landscapes, is the role of the artist — especially the photographer — about to become obsolete? Not necessarily. As professor Ahmed Elgammal points out, the advent of photography was similarly perceived as a threat to artistic expression in the 19th century. Yet it spurred new movements and gained recognition as an art form itself. In a similar fashion, AI could usher in a new creative era.

Is artificial intelligence a threat or an opportunity for artists? This question is, in reality, not equally relevant to painters, photographers, digital artists, illustrators, designers, visual effects artists, and game designers. Each of these fields interacts with technology differently. Among the disciplines, photography is arguably one of the most affected by this revolution. Observing the effects of AI on it is particularly interesting, given that photography itself once represented a point of rupture in art history.

Until the 19th century, artists used their eyes, hands, and imagination to represent the world. From cave paintings to Renaissance masterpieces, from oil on wood to charcoal on paper, their role was to capture life — or visions of life.

Everything changed with the invention of photography which introduced a mechanical way to capture reality. For the first time, light itself could "paint" an image on film. This technological leap sparked a heated debate: Would photography kill the traditional role of artists?

In some ways, it did. Cameras took over many of the social functions that artists had historically performed. For example, portrait painting — until then reserved for the wealthy — became democratized.

New ways of seeing the world

But the arrival of photography didn't destroy art. Instead, it transformed it. Artists responded by pushing the boundaries of their medium. Movements like Impressionism, Cubism, and Surrealism emerged partly as reactions to photography. Rather than competing with cameras to reproduce reality, artists began exploring new, expressive ways of seeing the world. They focused on mood, emotion, abstraction, and imagination.

Photography itself eventually became recognized as a form of fine art. What started as a mechanical process turned into a creative one, as photographers developed their own aesthetic visions.

Today, we are witnessing a similar moment of technological disruption — but this time, AI is at the centre of it. It is poised to reshape photography and image-making in ways that are just as profound as photography's impact on painting in the 19th century. AI can now generate images of people, places, and scenes that never existed. Companies can even create entire advertising campaigns using virtual models — no photo shoots required.

> **Impressionism, Cubism, and Surrealism emerged partly as reactions to photography**

Stock photography websites are already filled with AI-generated images. Landscapes, interiors, city streets, sunsets… many of these "photos" are no longer captured with a camera but conjured up by algorithms.

Is this replacing fine art photography? Not exactly. AI isn't producing the kind of conceptual or emotionally resonant work you'd see in art galleries or photography festivals. But it is now displacing some of the everyday functions of photography.

The AI lens: a collective camera

A traditional camera lens gathers light from a single scene at a specific moment in time. It records reality directly onto film or a digital sensor. AI, by contrast, gathers light from billions of images already captured by humans. Its "lens" is →

Image from the series A self-portrait of an algorithm *by Greek artist Maria Mavropoulou. Created with the aid of AI, the series illustrates how models resort to anthropomorphism to give form to the concept of an algorithm.*

made up of data. AI systems break these images into small pieces (visual tokens) and learn how they relate to words and descriptions (language tokens). The AI essentially learns the visual language of the world.

Thus, the artificial generation of images becomes a second-order derivative of reality. Cameras capture reality directly. AI reinterprets reality through the filter of billions of past images and human language. That's why AI-generated images often feel familiar yet otherworldly: they're stitched together from the collective memory of the internet.

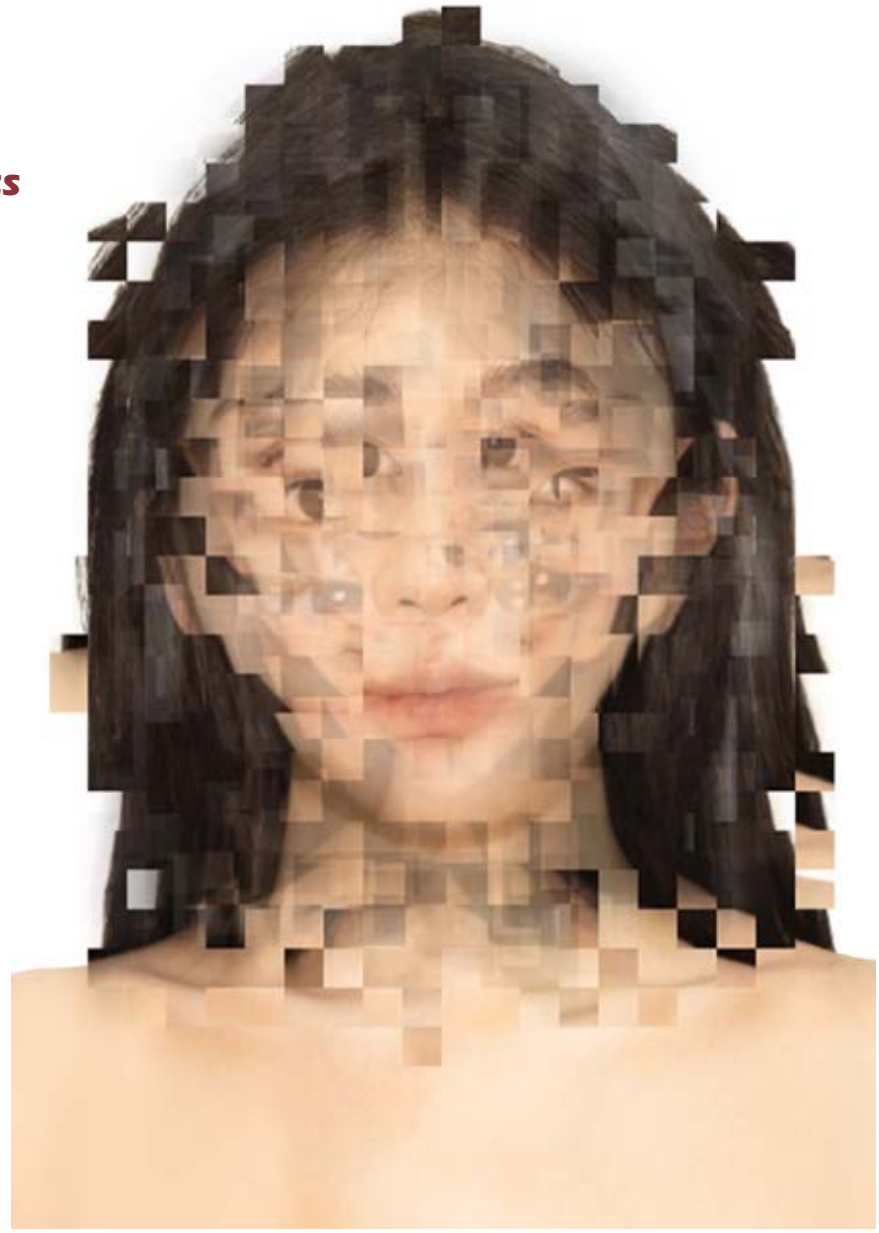
New powers and new limitations

These new technologies offer unprecedented possibilities. A camera is bound by the real world. It can only capture what physically exists in front of its lens. But AI is not tethered to reality in the same way. Instead, it mixes and matches elements from countless sources to produce entirely new scenes. It can create images of places that have never existed, people who were never born, and moments that never happened. This *combinatorial imagination* allows it to generate visuals beyond the limitations of the real world — a power that transforms image-making into a kind of synthetic dreamscape creation.

The other fundamental shift is how we control the process. With a camera, you shape an image by selecting a scene, adjusting your lens, and pressing the

◥ Alternative Facts: The Multi Faces of Truth, *Ahmed Elgammal - AICAN 2018. The image was created by AICAN, a program from the Art and Artificial Intelligence Laboratory at Rutgers University (United States), that is capable of autonomously generating innovative images from existing styles and aesthetics.*

> **Many artists see AI as a powerful tool**



© Nemo Chen (www.nemochenx.com)

Hyperplasia *(2024), by Chinese artist Nemo Chen, delves into the issue of identity in the digital era.*

shutter. With AI, the lens is replaced by language. Through text prompts, you can specify the composition of a scene, dictate the lighting, evoke a mood, or even simulate the properties of a specific lens. This process, sometimes referred to (somewhat misleadingly) as *prompt engineering*, has become a new creative skill.

Of course, this introduces new limitations. AI-generated art is constrained by language; it can only create what you can effectively describe. Words are powerful, but they're not always precise enough to capture the nuance of a visual idea.

Reinterpretations of reality

Photography is arguably the art form most vulnerable to AI disruption. Even before AI's rise, many photographers struggled with the oversupply of images in the digital age. Now AI threatens to automate much of the work that was once the domain of photographers — especially in commercial fields like stock photography, portraiture, and product imaging.

But at the same time, many digital artists see AI as a powerful new tool rather than a threat. These artists, comfortable working with digital technology, seize the new opportunities to speed up repetitive tasks or generate ideas they can refine and develop further.

Today's artificially generated images may not always meet the high standards of professional visual effects or game design. However, the technology is improving fast. It's easy to imagine a future where AI becomes an indispensable part of the creative toolkit for artists in these fields.

Just as photography freed painters from the obligation to reproduce reality, opening the door to new artistic movements, AI may free a new generation of artists from the constraints of the physical world.

Because ultimately, it's artists who make art. The difference lies in intention, meaning, and interpretation. It takes human creativity to turn AI outputs into something that resonates on an emotional or cultural level.

The role of the artist isn't disappearing, it's simply evolving. We are at the beginning of a new chapter in art history, where imagination, technology, and human creativity intersect in ways we're only beginning to understand.

OUR GUEST

Kate Raworth:

© Johannes Frandsen

Interview by
Katerina Markelova
UNESCO

"We need a new vision of the shape of progress"

What has a doughnut to do with the planet? At first glance, nothing. But British economist Kate Raworth uses this powerful image to lay out the conditions for a sustainable economy. In her 2017 bestseller, *Doughnut Economics: Seven ways to think like a 21st-century economist*, she presents a model that meets the needs of all people, while respecting the planet's limited resources.

You are one of the influential voices calling to rethink the economies for the 21st century. What put you on this path?

I studied economics at university in the 1990s, and right from the start, I felt frustrated. Nowhere in the theories could I find any mention of nature, life, or the environment. So, I stepped away from economics for many years.

It was only in 2010, when I returned to work from maternity leave, that someone showed me a diagram called the planetary boundaries. These nine critical life-supporting systems that make life possible on Earth include a stable climate, fertile soils, healthy oceans, abundant biodiversity, recharging freshwater, clean air, and a protective ozone layer. Earth system scientists have established that these nine processes are essential for keeping the planet in a stable, balanced, and thriving state for life. All human activity should remain within them.

When I saw that diagram, a rush of adrenaline hit me. I thought, this is the beginning of 21st-century economics. I was working for Oxfam at the time, campaigning for human rights, children's education, and universal access to healthcare. That made me think: if there is an outer limit to the pressure humanity can put on the planet, then there must also be an inner limit — the minimum resources that every person needs to live with dignity. So, I drew a circle inside their circle, and it looked like a doughnut.

> **"All human activity should remain within the planetary boundaries**

How does doughnut economics redefine traditional economic thinking?

The 20th-century idea of economics was that we succeed by growing our national income or GDP (gross domestic product). And it goes up forever. This is insanity. We need a new vision of the shape of progress. For this I offer you a doughnut.

Imagine humanity's use of Earth's resources radiating outward from the centre of a doughnut. The hole in the middle represents a space where people lack the essential resources that everyone has a right to, such as sufficient food and water, healthcare, education, housing, and income.

But at the same time as we seek to meet everybody's needs and everybody's wants, we risk putting pressure on this delicately balanced living planet. Putting so much pressure that we cause climate breakdown, we acidify the oceans, we create a hole in the ozone layer.

The goal of the doughnut is to meet the needs of all people within the means of the living planet. And that's a completely different goal for the economy.

How has our current economic model shaped the world we live in today?

The mindset taught to university students — who later become professors, lawyers, academics, politicians, business leaders, and journalists — is shaped by the current →

economic paradigm. This influence is both incredibly powerful and often damaging.

We tell ourselves that we are the rational "economic man". In my book *Doughnut Economics* I drew him standing alone, with money in his hand, ego in his heart, a calculator in his head and nature at his feet. He hates work, he loves luxury and he knows the price of everything. The more economics students learn about him, the more they say they value traits like self-interest and competition over altruism and collaboration.

When we study economics, the first diagram everyone remembers learning is supply and demand. We put the market at the centre of our vision on day one. It means that price immediately becomes the metric of concern. And anything that falls outside the price system, such as the living world, is called an externality. And then the goal that we give to economics is of endless growth. That goal is never even discussed.

> "Traits like self-interest and competition prevail over those of altruism and collaboration

What kind of transformation should we undertake to shift towards a more equitable society?

We've inherited divisive economies that are concentrating value in the hands of a few. According to an Oxfam report published in 2023, the richest 1 percent captured around half of all new wealth over the past decade. There is no way we can thrive in such an unequal world. We need to create distributive economies that share their value far more equitably with everybody who co-created.

Furthermore, the industrial systems of the 20th century and the use of fossil fuels are running down the living world. We need to transform our industrial and energy systems to make them regenerative — so that we use things in a circular, cyclical way.

Some people believe we can have green growth. I personally have seen no evidence that there are good grounds for believing that. It has not been achieved yet on the scale that's required by any country. Others say GDP must go down. I personally think we need to stop insisting that we know what the future direction of GDP is.

What we really need to do is take our dependency on growth out of the economy. Constant economic expansion was made possible by a hundred years of cheap energy from fossil fuels. But we've come to the end of that fossil fuels pulse. To me, this is the existential economic question of the century: how can our economies finally grow up and thrive, rather than grow endlessly?

How is the doughnut economics concept taking root in cities and regions around the world?

In April 2019, the city of Amsterdam decided to embed the concept of the doughnut at the heart of their very ambitious policy to become a circular city by 2050. And that pioneering move, six weeks later, inspired Copenhagen, then Brussels, then Barcelona. Today, the momentum has grown, with more than fifty cities, towns, and counties around the world exploring doughnut-inspired approaches.

The journey often begins by creating a portrait of their town, city or district through the lens of the doughnut. How much are they overshooting planetary boundaries? How much do they need to transform to get their location into the doughnut?

Crucially, the doughnut doesn't impose answers. Each locality develops its own approach, sets its own priorities, and chooses a way forward that is culturally appropriate.

How can the knowledge of indigenous communities guide us in rethinking our economies?

I tend to look at images drawn by indigenous cultures over millennia — how they depicted health, wellbeing, thriving and prosperity. Time and time again, I was blown away by how they represented these concepts as dynamic circles. Whether it's Taoist Yin-Yang, the Buddhist endless knot, the Turtle island medicine wheel, the Celtic double spiral, or the Zen ensō.

And what's been a true honour for me is that many indigenous wisdom keepers and scholars have approached us through the doughnut and said: "This makes sense. This actually resonates with our cultural values."

> "We need to transform our industrial and energy systems to use resources in a circular and cyclical way

What actions can individuals take to help accelerate the shift toward a regenerative and distributive economy?

We can ask ourselves, for example, how do we eat? Moving from a meat-based to a more plant-based diet helps humanity stay within the doughnut's safe space. We can also reflect on questions like: How far do I need to travel to feel I'm on a good holiday? How do I heat my home? To which bank do I give the privilege of investing my savings?"

There are many things that each one of us can do. But we must always remember that by doing so, we are demonstrating it's possible to live different lives. And that policies need to support this shift. We shouldn't have to pay more to travel from London to Paris by train than by plane. So, the price points have to switch, so that doing the right thing is also the affordable and easy choice.

© Sylvie Serprix for The UNESCO Courier

If doughnut economics was widely adopted, what would a successful global economy look like in 50 years?

At a conceptual level, we'd have an economy focused on ensuring that everyone can meet their essential needs, while staying within the limits of our living planet. There would be so much creativity and innovation driving that change. How do we grow food in ways that restore the soil? How do we build housing using existing materials, rather than constantly mining for more?

The sound "re" would be everywhere: refurbishing, reusing, recycling, repairing. Houses would look different in different countries, built from local materials. Food would taste different too — more seasonal, more local. We would enjoy being somewhere else while traveling, not encountering the same shops that pop up in every capital city.

We live on a phenomenally brilliant planet that has been creating the conditions for life to thrive for 3.8 billion years. We should always be asking what we can learn from nature, how it creates conditions conducive to life. Otherwise, we destroy our very foundations. ■

Laetitia Kaci
UNESCO

Greening AI:
smarter, smaller, stronger

Over the past decade, artificial intelligence has evolved from being used by only a few in specialized contexts to becoming a cornerstone of modern life. Among its most prominent tools are large language models (LLMs), advanced AI systems trained on vast amounts of text that can generate human-like language. These models now power many of the generative tools people use every day, from chatbots to translation services. A new report, *Smarter, Smaller, Stronger: Resource-Efficient Generative AI & the Future of Digital Transformation* (2025), published by UNESCO in collaboration with University College London (UCL), highlights that even though using AI can be energy-intensive, simple solutions exist to make it more sustainable.

AI's environmental impact

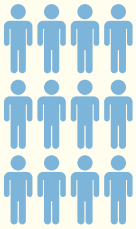
WATER USE

A single data centre can use many millions of litres/day
(mostly potable water)

By 2027, AI could consume 4.2–6.6 billion m^3/year (= three times more than today), **more than Denmark's total annual water use.**

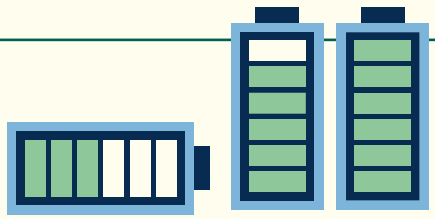
ELECTRICITY USE

Training just one LLM ≃ 50 GWh
Equivalent to one year of electricity for some developing countries.



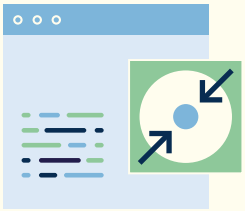
ChatGPT (as of June 2025):
1 billion daily queries and
0.34 Wh per query = 310 GWh per year
Comparable to energy used by 3 million people in Ethiopia.

Data centre electricity consumption has grown by around 12% per year since 2017
more than four times faster than the rate of total electricity consumption.



Proven solutions from the field

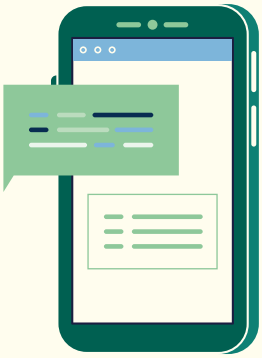
Based on real experiments and open-source data, three innovations show that we can dramatically cut AI energy use without sacrificing performance.



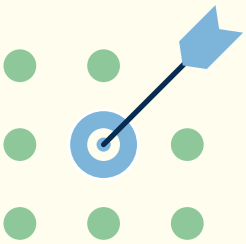
1 Make AI models smaller and simpler

Compression techniques like quantization make AI models smaller and faster by using simpler numbers, **saving up to 44%** in energy without losing accuracy.

2 Be brief



Shorter prompts can reduce energy use by **over 50%.**



3 Use the right model for the right job

While users currently rely on large language models (LLMs), switching to smaller models, tailored to specific tasks, can deliver equal or better performance while using **up to 90%** less energy.

These task-specific models are also:

- Faster
- Cheaper
- More accessible

Recommendations

"Clean by design" AI

- Invest in energy-efficient models
- Prioritize inference efficiency

Incentivize transparency

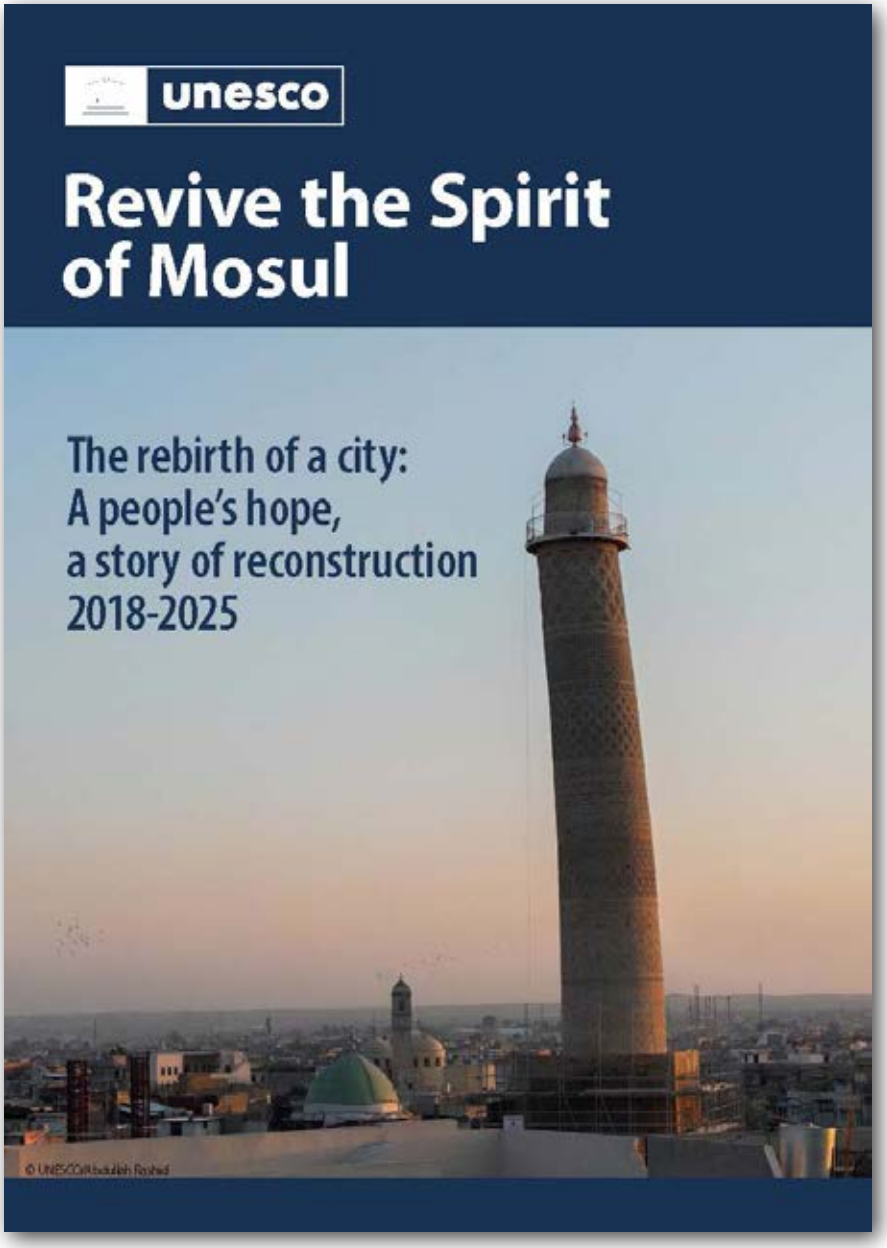
- Labels like energy efficiency scores
- Require reporting: electricity, emissions, water use

Build AI literacy

- Educate users on AI's energy costs
- Encourage eco-conscious usage

Revive the spirit of Mosul

The rebirth of a city: a people's hope, a story of reconstruction 2018-2025



In Mosul, reconstruction is not merely about rebuilding structures; it is an act of memory and a commitment to the future. This brochure delves into a unique undertaking initiated in 2018, aiming to restore iconic monuments such as the Al-Nouri Mosque and its Al-Hadba Minaret, while also rehabilitating homes, schools, and entire neighbourhoods.

Each wall restored, each community space revived, reflects the determination of the city's inhabitants to reclaim their heritage and identity. Through this collective reconstruction, driven by traditional craftsmanship, solidarity, and hope, an entire community is reborn. Where destruction sought to erase the past, today's builders are bringing the spirit of Mosul back to life.

UNESCO Publishing
32 pages, 210 x 297 mm, pdf

Read the brochure

Subscribe to the *Courier*

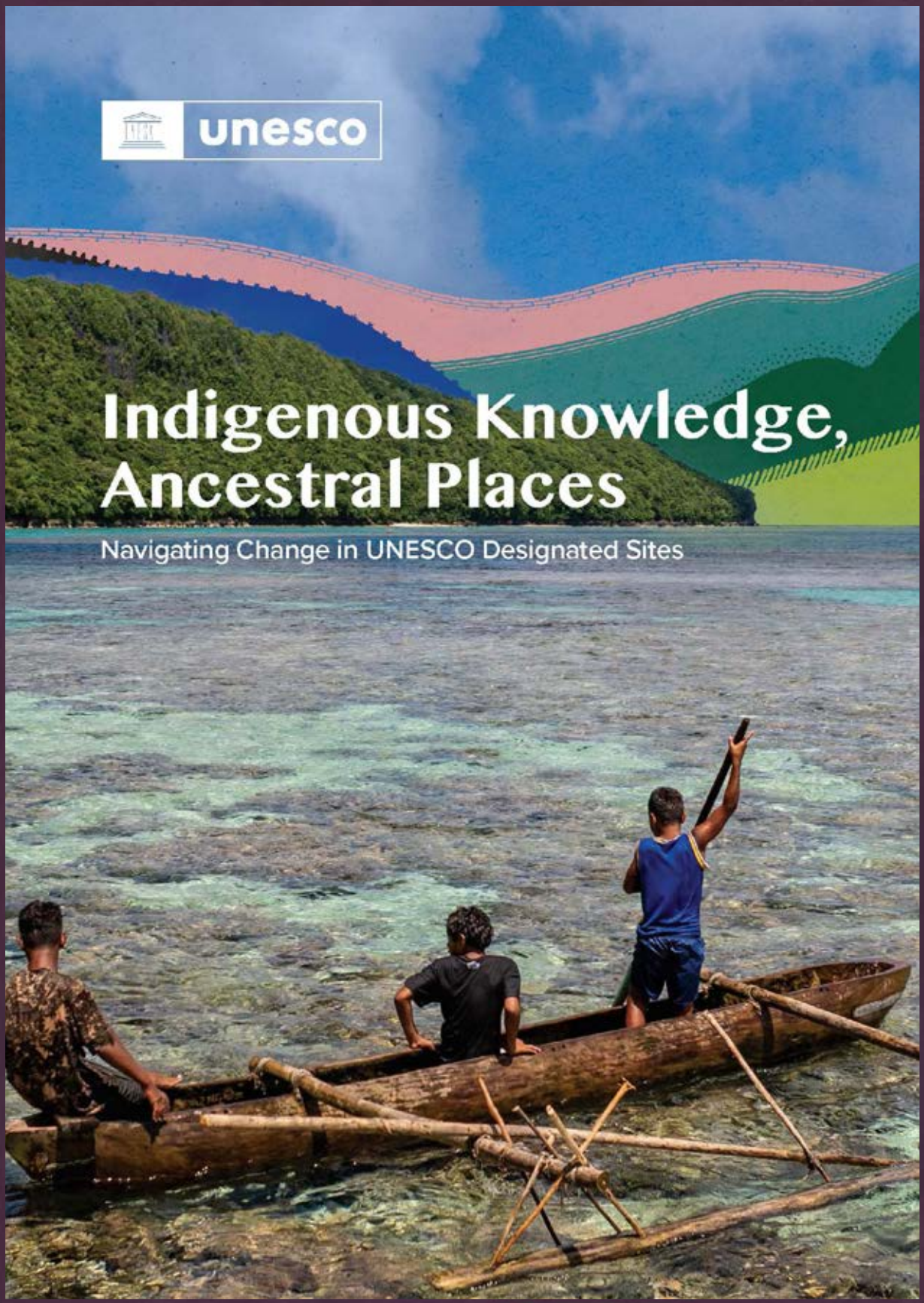
The UNESCO Courier is published in the six official languages of the Organization, and also in Catalan and Esperanto.

Subscribe to the 100% free digital version.

https://courier.unesco.org/en/subscribe

https://courier.unesco.org/en • https://courier.unesco.org/fr • https://courier.unesco.org/es
https://courier.unesco.org/ar • https://courier.unesco.org/ru • https://courier.unesco.org/zh

JUST PUBLISHED



Through their stories and ancestral knowledge, Indigenous peoples remind us that protecting the Earth means protecting life. They carry a wisdom shaped by generations of observation. This publication amplifies their voices, from the untouched forests of the Amazon to the glaciers of the Arctic — a vibrant call to preserve the life that unites us all.

ISBN 978-92-3-100777-4
73 pp, 210 x 297 mm