

Cultural Routes as an Instrument for Resilience

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In 2021, we can assure that the climate crisis and the consequences of the pandemic have accelerated the deterioration of some World Heritage Sites. Cultural Itineraries have been especially affected; they occupy a large territory, and it isn't easy to monitor them entirely and comprehensively. Cultural Routes represent the interactive, dynamic, and evolutionary processes of human relations on a global scale. Their territorial transcendence has allowed cultural links between peoples, countries, regions, and continents. The exchange of ideas, goods, and beliefs over the centuries has generated important physical and territorial cohesion. Although they are currently in a situation of vulnerability, they can also offer information and knowledge to contribute to Climate Change RESILIENCE. The universal scope of Cultural Itineraries allows us to articulate cohesive responses and can become a fundamental asset for climate action. We will present a set of strategies and actions to deal with uncertainty and lack of information in the face of the changes occurring on our planet. It is a proposal to the Vice-President of the Americas for the Triennial Plan of the Scientific Committee of Cultural Itineraries. We will implement three projects: Training, Introduction to Risk Management, and Case Studies, where we will analyse some examples of "Traditional Ecological Knowledge".

Keywords: cultural routes, education, traditional ecological knowledge, sustainability

Les Itinéraires Culturels comme Instrument de Résilience

En 2021, nous pouvons affirmer que la crise climatique et les conséquences de la pandémie ont accéléré la détérioration de certains sites du patrimoine mondial. Les itinéraires culturels ont été particulièrement touchés ; ils occupent un vaste territoire, et il n'est pas facile de les surveiller dans leur entier et leur ensemble. Les itinéraires culturels représentent les processus interactifs, dynamiques et évolutifs des relations humaines à l'échelle mondiale. En transcendant les territoires, ils ont permis des liens culturels entre les peuples, les pays, les régions et les continents. L'échange d'idées, de biens et de croyances au fil des siècles a généré une importante cohésion physique et territoriale. Bien qu'ils soient actuellement en situation de vulnérabilité, ils peuvent également offrir des informations et des connaissances pour contribuer à la RÉSILIENCE au changement climatique. La portée universelle des itinéraires culturels nous permet d'articuler des réponses cohérentes et peut devenir un atout fondamental pour l'action climatique. Nous présenterons un ensemble de stratégies et d'actions pour faire face à l'incertitude et au manque d'information face aux changements qui se produisent sur notre planète. Il s'agit d'une proposition à la Vice-présidence des Amériques pour le Plan triennal du Comité scientifique des itinéraires culturels. Nous mettrons en œuvre trois projets : formation, introduction à la gestion des risques, et études de cas, où nous analyserons quelques exemples de « savoirs écologiques traditionnels ».

Mots-clés: itinéraires culturels, éducation, savoirs écologiques traditionnels, durabilité

Itinerarios Culturales como Instrumento para la Resiliencia

En el 2021 podemos asegurar que la crisis climática y las consecuencias de la pandemia han acelerado el deterioro de algunos Sitios Patrimonio de la Humanidad. Los Itinerarios Culturales han sido especialmente afectados, dado que ocupan un amplio territorio y es muy difícil monitorearlos de manera completa e integral. Los Itinerarios Culturales representan los procesos interactivos, dinámicos, y evolutivos de las relaciones humanas a escala global. Su trascendencia territorial ha permitido la vinculación cultural entre pueblos, países, regiones y continentes. El intercambio de ideas, mercancías y creencias a través de los siglos ha generado una importante cohesión física y territorial. Si bien en este momento están en situación de vulnerabilidad, también pueden ofrecer información y conocimiento para contribuir con la RESILIENCIA ante el Cambio Climático. El alcance universal de los Itinerarios Culturales nos permite articular respuestas cohesionadas que pueden convertirse en un activo fundamental para la acción climática. Presentaremos un conjunto de estrategias y acciones orientadas a lidiar con la incertidumbre y la falta de información frente a los cambios que están ocurriendo en nuestro planeta. Esta es la propuesta de la Vicepresidencia de América para el Plan Trienal del Comité Científico de Itinerarios Culturales. Aplicaremos 3 proyectos: formación, Introducción a la Gestión de riesgos, y el estudio de casos donde analizaremos algunos ejemplos del "Conocimientos ecológico tradicional".

Palabras clave: rutas culturales, educación, conocimiento ecológico tradicional, sostenibilidad

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Cultural Routes in the 21st Century

Cultural routes are made up of roads and the service infrastructure necessary to carry out their function, as well as cities and towns. Cultural routes comprise not only the physical communication routes that facilitate the flow but also the cultural goods and the material and immaterial values associated with their specific purpose and historical functionality, of which historical roads, serial and transnational goods covering vast territories are studied today. "Cultural Routes represent interactive, dynamic, and evolving processes of intercultural human relations that reflect the rich diversity of different peoples' contributions to cultural heritage." (ICOMOS, 2008, p. 1)



Image 1. Gods of America. Salisbury Art Centre, Salisbury, 2007 © Antonio Briceño

They are the result of cultural dynamics generated over time and that, at the time, were intentionally designed and used by people to perform a specific and well-defined function; over time, they shaped a new cultural expression. Consequently, they reveal the heritage content of a concrete phenomenon of human mobility and exchange that is very specific and unique, and which is extremely topical today due to the rapidity of globalisation. In this way, they promoted "... a multiple and reciprocal fertilization, in space and time, of the cultures concerned that is manifested in both their tangible and intangible heritage." (ICOMOS, 2008, p. 2)

As elements that define them, there are the intangible ones, which are witnesses of communication and dialogue processes between individuals that have an impact on

their routes and the tangible ones, related to their function, such as: "(...) posts, customs, places of storage, rest and provisioning, hospitals, markets, ports, defensive constructions, bridges, means of communication and transport, industrial, mining or other establishments, such as those linked to production and trade, reflecting the technical, scientific and social applications and advances of their different periods, urban centres, cultural landscapes, sacred places, places of worship and devotion, ..." (ICOMOS, 2008, p. 2)

Shared value as a whole:

- The concept of cultural routes constitutes a whole of value greater than the sum of the elements that make it up and that gives it its meaning.
- Within its global identity, the value of its parts lies in their common, plural and participatory interest.
- Its transcendence of scale allows a cultural link between peoples, countries, regions and continents.
- This amplitude is important from the territorial point of view and from the point of view of the integral treatment of the diverse heritage elements it includes, but, at the same time, the diversity of cultures it entails constitutes an alternative to the processes of cultural homogenization. (ICOMOS, 2008, p. 2)

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Cultural routes are also an expression of culture that combines and interweaves diverse customs and ways of life. Moreover, this concept is becoming a reality that follows humans through time and space. The more communication opportunities there are, the more new cultural traits emerge.

Post-Pandemic Society: Lessons and Opportunities

At the end of 2021, we began to assess some of the legacies of the "Global Crisis", a product of the COVID-19 pandemic. The entire planet was affected in one way or another, including the economy, energy, transportation, tourism, health, agriculture, food, and both large and small businesses. This paper presents a summary of some of the opportunities and lessons learnt from this crisis.

First, confirmation that humanity resides on a single planet and is part of "one interconnected system." Recent events confirm what most of us already know: if we wish to advance as a society, we must work in coordination and in a single direction.

Humanity has rediscovered the importance of nature and green spaces in our lives, and as a result, many families are moving to houses with gardens or returning to the countryside.

With the use of digital technologies, the need for communication resulted in a new set of options. We can observe the rapid acceleration of the digitization of society, particularly in the realms of government, economy, and social relations. This process involves risks and opportunities that each of us must analyse and evaluate.

Due to the time constraints of the advanced international transportation system, there is a reevaluation of local products. This situation is strengthening the new local and regional economies.

To conclude, we copy a paragraph from the ICOMOS Resolution on Climate Emergency, ratified in 2020:

Recognition of the current COVID-19 pandemic and the suffering it has caused has accelerated the response to climate change, but it has also revealed some essential lessons. The need to pay attention to science, for the consequences of a breakdown between humans and nature, the importance of focusing on the needs of the most vulnerable, and the fact that rapid and far-reaching social and economic change is possible when society wants it.
(ICOMOS, 2020, p. 2)

From Climate Change to Climate Action

It is essential to review these two concepts and consolidate the differences between them. The disease is not the same as the solution. Unfortunately, only the condition is mentioned in the media, generating uncertainty, fear, and mistrust.

We, therefore, copy verbatim the concept of 'Climate Change' defined by the IPCC in its glossary of the Special Report on the Impacts of the Global Warming published in 2018.

It is the variation in the state of the climate identifiable in variations in the mean value and the variability of its properties, persisting over long periods, usually decades or longer periods.
(IPCC, 2018)

The IPCC Special Report on the Impacts of the Global Warming demonstrates with figures and data that the changes and adverse climate events are due to an extraordinary

accumulation of greenhouse gases in the atmosphere. Therefore, they call on the international community to implement urgent measures. In the report, they mention the importance of taking simultaneous measures against poverty and social exclusion.

The term 'Climate Action' that we incorporate in our context is Goal 13 in the UN Sustainable Development Goals:

"The objective is to prepare ourselves to face the impacts of climate change, lay the foundations for an emission-neutral economy, and accompany the most vulnerable groups in the transition process. Involving all administrations and all actors of civil society and the academic and scientific world."

To conclude, we copy verbatim the paragraph where ICOMOS passed a resolution of 'Climate Emergency' approved at the 2020 Assembly:

"DECLARES a Climate and Ecological Emergency and calls on other culture and heritage organizations to do the same, and commits to redouble ICOMOS' efforts to realize the immense potential of cultural heritage to enable inclusive, transformative, and just climate action, including through increasing the ambition and capacity of communities to act, supporting climate adaptation and resilience, contributing to mitigation interventions to reduce greenhouse gas emissions, and addressing loss and damage from climate impacts."

CIIC: Proposed Triannual Plan: Vice-Presidency of the Americas

This programme was drafted at the beginning of 2021, incorporating some themes of the Climate Action for Cultural Itineraries, Historical Routes, and Serial and Transboundary Assets. It is based on the implementation of three projects to be executed in three years.

The rest of the Scientific Committee was proposed to be discussed and implemented in all the Vice Presidencies.

In line with the recommendations of the Resolution of the "ICOMOS Declaration of Climate Emergency" in 2020, we propose the implementation of the following projects that effectively contribute to climate action.

The project is based on three main themes: training, Introduction to risk management and analysis, and study of "Traditional Ecological Knowledge".

1. Training and professional updating on heritage and climate action issues.
2. Identification of risks and threats to which the Itineraries, Serial Assets, and Historic Routes on the World Heritage List may be subject to and determination of management indicators.
3. Research and promote valuable examples of traditional ecological knowledge in itineraries, roads, and serial properties sections.

Project 1: Conduct "Online" training and professional updating activities for ISC CIIC members, stakeholders, and related parties

Suggested topics:

1. Basic knowledge of climate change.
2. Approximation to risk management in cultural heritage.
3. Deepening on the document "The Future of Our Pasts" of the CCHWG of ICOMOS.

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Project 2: Approach to the concepts of risk management that may affect the Itineraries, Serial Assets, and Historic Routes on the World Heritage List

Risk management is a highly specialised subject that cannot be treated lightly, as is well known. At this stage, we will approximate the concepts and develop a preliminary understanding of the function of management indicators.

During the COVID-19 pandemic, we were unable to evaluate and compare the conditions of the pathways and their components due to the lack of indicators. Therefore, it is appropriate to conduct a general evaluation of the risk assessment indicators.

Consequently, this project includes two activities: first, an introduction to the subject of risk management and then a definition of the possible indicators, and second, designing and implementing a user-friendly INSTRUMENT for registering "Extreme Weather Events" by region that could affect corridors of roads and routes.

As we are redesigning our website, we have proposed making it accessible to all users on our website.

Project 3: "Traditional Ecological Knowledge" and its contribution to resilience in climate action

Throughout human history, many cultures have developed extensive capacities for adaptation and survival in hostile environments. In the literature, it is mentioned as "Traditional Ecological Knowledge" or "Indigenous Knowledge." (ICOMOS CCHWG, 2019)

The following sections will present some examples that demonstrate how "traditional ecological knowledge" of some of the cultural routes on the World Heritage List provides important references for resilience in climate action.

3.1. The Inca Road Qhapac Ñan Peru: Ritual of community conservation of the Quehue Bridge (Ambito, 2021)

The bridge is located on the mighty Apurimac River at an altitude of 3,700 metres above sea level and is 28 metres long. It is the only one that survives, thanks to the work of the four Quechua communities.



Image 2. Community restoration of the Inca bridge, Quehue. The bridge was constructed originally by the Empire 500 years ago. © Ambito, 2021

The Q'eswachaka hanging bridge dates back to the Inca Empire in Peru. It is a bridge built with vegetable fibres; consequently, its maintenance must be constant, and a completely new one is created once a year.

The work involves 1,000 men and women: the men assemble the structure suspended in the air, and the women weave and interweave the ropes on dry land; this process can take up to three days.

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Image 3. "Bridge of the Inca empire in Peru fell due to lack of maintenance because of the pandemic" © Ambito, 2021



Image 4. Zigzag bends and right angles were used in order to slow down the water velocity © Luis León Pizarro. Travelers Peru - Huaral: Facebook Group 30.01.2012

Traditionally, the renovation of the pedestrian bridge occurs every year between May and June. Still, the mandatory confinement due to the coronavirus pandemic in March 2020 prevented the work, which caused its deterioration and collapsed on 23 March, 2020.

In June 2021, the community gathered and rebuilt as it had traditionally done for several millennia.

This example contributes to resilience in climate action because it shows us how community commitment, community participation, community empowerment, and the transmission of ancestral techniques can overcome all difficulties over several centuries.

3.2. Pre-Inca and Inca-Peru Culture:

Construction of terraces, canalization systems, and water control in the mountains

The "*planting of water*" is an ancestral community practice that consists of the care of the headwaters of the rivers and the cleaning of ditches coordinated under a ritual in which the whole community participates.

The pre-Incas of Lima did it with excellent results, and the inhabitants of Tupicocha still practise it in Huarochiri, Lima.

There are countless testimonies of great works, such as terraces and irrigation canals, including hydraulic designs for flood control and water velocity control to prevent flooding.

This example contributes to resilience in climate action because it demonstrates with sophisticated examples the water management systems in the mountains of a pre-Hispanic society that did not know the wheel and did not have specialised tools.

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Image 5. Hydraulic canal systems allowed the irrigation of crops, an example of which are the canals of Cumbemayo in Cajamarca © Cultura 10.org



Image 6. “The terraces of Moray (Peru) XV and XVI © conlacabezaenlatierra, 2012

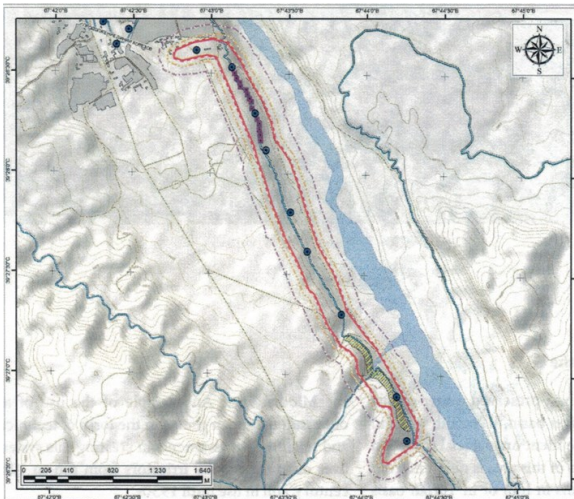


Image 7. Example of a water management system: Silk Road: Taksankoriz irrigation system, Tajikistan © Declaratory Dossier, 2021, p. 233

3.3. Silk Road: Taksankoriz Water Management System in Tajikistan

The system of irrigation and water supply was excavated in the stone for 40 km; the Karafhan River supplies its water. This irrigation system is located 12 kilometres from the city of Penjikent, was constructed in the 8th century, and was in operation until the 1930s.

This example contributes to resilience in climate action because it demonstrates the intelligent interaction between humans and their environment. A sophisticated water management system in hostile environments such as deserts and steppes in Central Asia.



Image 8. Chihuahua Aqueduct, Camino Real Tierra Adentro, México © Cecilia Calderón-Puente

3.4. Camino Real Tierra Adentro, México

It is a 2,600 kilometres route from Mexico City to Valle de Allende in Chihuahua, in the north of the country. This route had 55 components between service infrastructures and civil, religious, and military buildings. A special mention should be made of the extraordinary development of the region resulting from the exploitation of the Silver Mines.

This example contributes to resilience in climate action because it demonstrates how, over the centuries, human beings have managed to maintain and manage a hostile territory such as the XX desert and promote its development.

This is an *example of Resilience in Climate Action* because it demonstrates how traditional technologies used for water management in hostile environments still work and are effective in the 21st century.

Conclusion

Cultural routes are developed in large territories through which ideas, goods, technologies, and religions, among others, have passed.

They are not built or designed; they are shaped in time; they are lived and inherited, and in the 21st century, where climate action is paramount, they represent an opportunity for understanding between nations as well as an instrument of resilience.

In the examples of resilience located in the cultural routes sections, we can observe how ancient cultures developed innovative technologies in adverse environments. In the examples provided, we can observe a technology that was created millennia ago and is still in use today. Our ancestors utilised primitive instruments to survive in hostile environments, including deserts, steppes, mountains, and forests. We can learn a great deal from the applied technologies: water management, landslides, and floods; earthen or stone architecture. The most valuable skill to acquire is the ability to collaborate for the benefit of the community.

Heritage professionals, academics, educators, and civil society have a central role and an imperative responsibility in disseminating and preserving our ancestors' legacy and safeguarding the future.

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