

## Heritage Science Networks: Contribution to the Sustainable Development Agenda

Yacy-Ara FRONER<sup>1</sup>, Luiz A.C. SOUZA<sup>2</sup>, Henry MCGHIE<sup>3</sup>, Willi DE BARROS GONÇALVES<sup>4</sup>, Guilherme Antônio MICHELIN<sup>5</sup>

<sup>1</sup>Full Professor, Coordinator of Graduate Program on Built Environment and Sustainable Heritage-UFMG, ANTECIPA, ABENDI, WGS-ICOM, WGCCCH-ICOMOS, Brazil

<sup>2</sup>Full Professor, Coordinator LACICOR-UFMG, ANTECIPA President, ABENDI, WGS-ICOM, Brazil

<sup>3</sup>Director/Principal of Curating Tomorrow, WGS-ICOM, United Kingdom

<sup>4</sup>Associated Professor, LACICOR-UFMG, ANTECIPA, ABENDI, WGCCCH-ICOMOS, Brazil

<sup>5</sup>Professor, MACKENZIE, ABENDI, Brazil

### Résumé

Cet article aborde la notion de « sciences du patrimoine » et les contributions de la discipline aux Objectifs de Développement Durable des Nations Unies (ODD). En ce sens, cet article présente les institutions nationales et internationales ANTECIPA, ABENDI, WGS-ICOM et WGCCCH-ICOMOS qui fonctionnent comme réseau intégré. Ces réseaux d'infrastructures et de professionnels sont essentiels pour la consolidation du rôle des sciences du patrimoine pour la préservation du patrimoine naturel et culturel et permettent, ensemble, de contribuer aux ODD et de faire face aux problèmes sociétaux émergents.

**Mots-clés:** technologies habilitantes, exécution intégrée de projets, gouvernance, politique, coopération scientifique, patrimoine culturel

**Keywords:** enabling technologies, integrated project delivery, governance, policy, scientific cooperation, cultural heritage

There is a considerable concern related to the ability of our current scientific, intellectual, and governmental infrastructure to respond to the emergency issues generated by climate change associated with the demand for sustainable development through a policy of international, national, and local cooperation. Social justice, cultural identity, and environmental protection are interwoven units.

Today, in a highly interlocked political and economic system, it is no longer possible to believe that the ruin of one society - political, economic, or environmental - does not impact another society. Over the past sixty years, the global challenges to sustainable development have been driven by a broad set of institutions, reflected in an international debate<sup>1</sup>. In this way, the trinomial preservation of culture, protection of the environment, and economic balance determine the quality of the reflection generated by these institutions. To achieve them, science, education, and government commitment are indispensable.

What is heritage science's role in the Sustainable Development Goals (SDGs) Agenda<sup>2</sup>? Recent advances in applied sciences show that transdisciplinary areas are more capable to face today's issues, mainly in the field of sustainability matters. Several discussions related to the introduction of new parameters of evaluation and management of museums, monuments and sites; the expansion of scientific support for the conservation science; the informational system revolution and big data analytics; the changes in the global geopolitical frame; and the process of rethink the cities as an integrated organism which involves economic, cultural, and social planning promoted a profound transformation in the international debate regarding the cultural heritage role.

To understand how the networks operate, it is essential to note that the notion of 'engaging' is a way of conceiving relations that enhance the idea of shared knowledge for the common benefit. According to Sewell<sup>3</sup>: 'Engaging means becoming involved or more involved in a continuing relationship'. Therefore, the considerations made in this article aim to discuss heritage science networks as qualified environments for sharing ideas, technologies, methodologies, human resources, and infrastructure to achieve the SDGs.

### **Cultural Heritage Contribution to the SDGs' Agenda**

Numerous efforts have been undertaken to share the responsibility of culture in sustainable development with the international community. After 2010 was raised a stronger international agenda aimed at discussing the idea of cultural policies for sustainable development. Several resolutions have also reaffirmed the role of culture in achieving sustainable development in its three dimensions – economic, social, and environmental.

How could heritage science contribute to the SDGs? Numerous initiatives have sought to demonstrate the links between culture and environment and provide practical resources to support actions. Capacity building in sustainable heritage preservation enabled through a global system of scientific cooperation is one of the missions of the global heritage science research infrastructure. Its main objective is to develop cutting-edge knowledge. By following this strategy, it should be able to share knowledge with communities where sustainable development principles must be promoted and where heritage can be found.

## **Brazilian Networks and International Institutions**

The Brazilian National Association of Research in Technology and Heritage Science (ANTECIPA) was established in Belo Horizonte, Brazil, in December 2015, during the First Meeting of Associated Laboratories for Heritage Science Research promoted by IPERION-BR. Its aims are a) to contribute to the promotion of research and preservation of cultural heritage, b) to foster academic exchange, technical cooperation and professional training, c) to support transdisciplinary research and a scientific approach in the field of heritage science, d) to represent the Brazilian scientific community involved with research and preservation of cultural heritage.

The Technical Committee on Cultural Heritage of the Brazilian Society for Non-Destructive Testing and Inspection (ABENDI-CTPC) aims to encourage discussion on protocols, methods and technologies aimed at the diagnosis and monitoring of cultural heritage. It was created in May 2020 and brought together researchers with relevant scientific expertise linked to universities and cutting-edge research centres. It is also an environment for integration among universities, industries, and governments, contributing to the improvement of the level of preservation of cultural heritage in Brazil and fostering the development of technical skills in research, innovation, and technologies for cultural heritage. In this way, the Committee defined thematic axes that guide its work: terminology; scientific documentation by image; investigation of materials, systems, and techniques; intervention, conservation, restoration and management of cultural heritage.

In 2017, the International Council of Museums (ICOM) created the Working Group on Sustainability (WGS) with the mission to discuss climate emergencies and the role of museums. Museums provide an existing global infrastructure; they can facilitate

collective action, build networks, raise public awareness, support research, and improve sustainability and climate change education. In 2019, at the thirty-fourth General Assembly of ICOM held in Kyoto, the resolution 'On sustainability and the implementation of Agenda 2030, Transforming our World'<sup>4</sup> was adopted.

At the nineteenth General Assembly of the International Council on Museums and Sites (ICOMOS) held in New Delhi (2017), the Working Group on Climate Change and Heritage (WGCCH) was created with a vision to mobilise the cultural heritage community for climate action. In 2019 'The Future of Our Pasts: Engaging Cultural Heritage in Climate Action' was published, outlining the vision of the WGCCH<sup>5</sup>. Together, these associations make up an invaluable force of researchers, museum professionals, heritage agents, professors, and students capable of triggering, at a global level, necessary political actions and discussions in the fields of culture preservation, environment, social justice and sustainability.

Networks of infrastructures and professionals are vital for the consolidation of heritage science as an essential area of study in the realm of preservation of natural and cultural heritage. Brazilian and international networks can establish intellectual, scientific, and political cooperation links capable of facing emerging problems and contributing to the SDGs. Today, the lessons learned from institutions of intellectual cooperation for protecting cultural and natural heritage are still relevant: a local, national and international network is the best tool for shaping forces in a synergistic field. The idea of a common heritage for all humanity and a sustainable legacy for each community amplifies its meaning and promotes new evaluation criteria, management parameters, and protection tools. Heritage science must be integrated into the SDGs Agenda to achieve the quality of life for mankind.

- 
- <sup>1</sup>. FRONER, Yacy-Ara, International policies for sustainable development from cultural empowerment, *Journal of Cultural Heritage Management and Sustainable Development*, Vol. 7, Issue: 2, 2017, p.208-223, <https://doi.org/10.1108/JCHMSD-10-2016-0056>
  - <sup>2</sup>. United Nations. *The Sustainable Development Agenda*, 2017. <https://www.un.org/sustainabledevelopment/development-agenda/>.
  - <sup>3</sup>. SEWELL, James Patrick, UNESCO, and World Politics: engaging in international Relations, London: Princeton University Press, EUA, 1975.
  - <sup>4</sup>. ICOM. Resolutions adopted by ICOM's 34th General Assembly, 2019. [https://icom.museum/wp-content/uploads/2019/09/Resolutions\\_2019\\_EN.pdf](https://icom.museum/wp-content/uploads/2019/09/Resolutions_2019_EN.pdf).
  - <sup>5</sup>. ICOMOS. *The Future of Our Pasts: Engaging Cultural Heritage in Climate Action*. 2019. <https://indd.adobe.com/view/a9a551e3-3b23-4127-99fd-a7a80d91a29e>