Methodology for mapping Intangible Cultural Heritage through webGIS integral platforms. La Fontanalla neighbourhood as a case study

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Abstract

The identification and cataloguing of intangible cultural heritage (ICH) was defined in Paris Convention by UNESCO (2003). However, it is difficult to identify and map this type of heritage in the territory due to the lack of consensus to establish a common representation methodology. Similar technological platforms identify and geolocate the stakeholders concerned about the safeguarding and transmission of this kind of heritage, with the aim of putting together memories from each heritage item, but not the direct relationship with the specific site. This research focuses on a methodology for mapping ICH through webGIS platforms on a local scale, taking into account the following issue: the intangible elements as an attribute related with other heritage categories. This is achieved by collecting the memories of each resource generated by agents involved —citizenship and associations— and its relationship with the physical environment — tangible cultural heritage: architecture, landscape...—. In this way, the sum of related items allows to identify the connection between ICH and territory. This method has been tested in La Fontanalla neighbourhood through Malaka_net webGIS: a comprehensive platform which shows data sheets about every cultural heritage item from Malaga city. This tool allows cultural heritage to be categorized into different material heritage types —architecture, landscape, archaeology, street furniture and urban pattern— and immaterial ones. The holistic meaning between these categories makes possible to link them through the same attribute: intangible value.

Keywords: immaterial cultural heritage, place-based memories, geographic information system, heritage values

1. Introduction

We refer to the mapping of Intangible Cultural Heritage (ICH) to the process of geolocation of a set of intangible assets in certain area, city or territory. The diversity of areas proposed for this type of heritage (UNESCO, 2017b) as well as its nature do not facilitate its identification, cataloguing and mapping on webGIS platforms. Although progress has been made in the geolocation of the ICH —based on the location of the agents and/or places related to the manifestation of the activity—, there is still no consensus on a common methodology for its representation. This research provides a new approach to the ICH identification and geolocation methodology for its inclusion in a comprehensive webGIS platform for Cultural Heritage. This research is structured into two phases: (1) identification and recognition of the ICH by the local community —through the creation of a mixed group and participatory actions—; and (2) its inclusion in the integral webGIS platform. The different identified intangible heritage assets are represented by the

geolocation of individuals, groups and organizations related to them, as well as the geolocation of physical signs of traditions and activities.

This methodology has been applied in order to map the traditional pottery trade in La Fontanalla neighbourhood from Malaga (Spain) as a case study. This process has allowed its registration in the *Malaka.net* digital platform, a comprehensive webGIS platform for Cultural Heritage, what contributes to its digital dissemination and protection.

2. State of the art

Previous experiences address different criteria for representation and inclusion of ICH in webGIS platforms. On the one hand, specific platforms on intangible assets focus on ways of transmission. On the other hand, comprehensive platforms contain records of tangible and intangible assets in the same website and show a full map of heritage.

2.1. Diversity of intangible heritage assets and emerging ICH specific platforms.

The holistic nature and the different areas of ICH —oral traditions and expressions, performing arts, social uses, rituals and festive events, knowledge and uses related to Nature and the Universe, and traditional craft techniques (UNESCO, 2017b)— have facilitated the creation of specific platforms based on each intangible heritage asset.

In this sense, the *Colombian Musical Information System* (Ministerio de Cultura de Colombia, 2018) is a platform which places music in the country of Colombia based on the location of its performing/practitioning agents —geolocation of the individuals or groups such as groups, musical entities and music schools—. The relationship of the ICH with the social agents involved in its safeguarding and transmission constitutes, in this way, one of the most used criteria for the mapping of this type of heritage.

The *Audiovisual Map of the Peruvian Intangible Cultural Heritage* (Ministerio de Cultura de Perú, 2015) is a specific ICH platform in Peru based on the location of their ways of transmission. For example, *Master craftsmen* —as practitioners/performers of any type of craft— can be found, as well as *Sound Records, Oral Stories* —any traditional music or voice recordings of the individuals who tell the stories and legends, respectively— and *Documentary records*—videos where the manifestation of the recognized activity is shown—.

2.2. Difficulty of geolocating ICH in comprehensive webGIS platforms.

The "comprehensive" term tries to unify all the cataloguing and protection tools which cover every heritage asset all over the municipality. This allows a global and whole vision of Cultural Heritage according to the concept of Historical Urban Landscape (HUL) recognized by (UNESCO, 2011).

In the scientific literature, comprehensive Cultural Heritage platforms collect information concerning the importance and manifestation of the ICH. However, these platforms do not usually include specific location of ICH in the territory because it does not depend on a single address due to its diversity unlike other kinds of heritage.

In this regard, the *Andalusian Historical Heritage Digital Guide* (IAPH & Consejería Cultura y Patrimonio Histórico, 2016) is an example of a comprehensive digital inventory which brings together the *Intangible Heritage, Movable Heritage, Immovable Heritage and Cultural Landscapes* of the region of Andalusia (Spain). Despite the fact that all the records are geolocated through a webGIS, the ICH assets do not have specific locations related to their manifestation in the territory — they are usually located in the centre of the municipality by default—.

The lack of debate on the methodology of cartographic representation of the ICH assets has generated different criteria for their geolocation, either by mapping the social agents involved or the physical places where they take place.

Faced with the lack of ICH into comprehensive webGIS platforms of Cultural Heritage, specific cultural platforms (Carrasco-Arroyo, 2013) have advanced in its online registration through webGIS. The cultural platforms identify and geolocate any manifestation, both cultural practices or events, which are related with the manifestation of ICH in the territory in a direct way, and tangible heritage assets such as monuments, archaeological zones or gardens.

Culture Gate – A Cultural Heritage Platform (Koukopoulos & Koukopoulos, 2019) is an international cultural platform which contains tangible assets —*Architecture, Archaeology and Visual Art*— and intangible ones —*Cultural Events, Music and Folklore,* among others—. This website geolocates the ICH according to the physical manifestation of the activity: the records registered in *Events and Folklore* have been geolocated by points where they take place.

SINCA Sistema de Información Cultural de Argentina (Ministerio de Cultura de Argentina, 2015) is another cultural platform which geolocates cultural heritage assets accordinnd to its location. Records such as *Material Heritage —Monuments and Sites, Cultural Routes or Libraries—* and *Intangible Heritage —mainly Crafts and Festivals and Festivals—* can be found.

The Fortaleza Cultural Map platform (Ayuntamiento de Fortaleza, 2015) geolocates all the cultural resources of the city of Fortaleza (Brazil) within two categories. On the one hand, it maps in *Agents* all the people, organizations or institutions involved in culture based on their address —musicians, artisans, researchers, writers…—. On the other hand, it locates the cultural spaces of the city.

In both cases the point is the geometry of represansation although it uses a colour differentiation.

Following the same criteria of geolocation and representation, *Cultural Map of Costa Rica* (Sistema de Información Cultural de Costa Rica, 2016) provides geolocated information of cultural data of Costa Rica into two categories: *Cultural Sectors* and *Cultural Infrastructure.* The former collects cultural agents, organizations or institutions are located —*Scenic Arts, Visual Arts, Crafts, Audio-visual, Design, Editorial, Music and Advertising*— related to the transmission of the ICH. The latter shows the geolocation of places —*Buildings or Public Spaces*— with a certain cultural relevance.

2.3. Main contributions

Despite the fact that the small number of comprehensive Cultural Heritage platforms which include both intangible and tangible heritage assets, and the lack of consensus on mapping methodologies for ICH, this research aims to develop a methodology for ICH registration and geolocation in comprehensive Cultural Heritage platforms.

Firtly, it shows the experience of a process which combines field work with participatory actions related to the traditional craft of ceramics in the Fontanalla neighbourhood in Malaga as a case study. Secondly, the registration of immaterial heritage assets is taken into consideration too. To do so, a Comprehensive webGIS platform for Cultural Heritage management serves as a local tool: *Malaka.net*. Several innovations are presented according to previous works: (1) participatory actions together with the local community for the recognition of the ICH. These actions have allowed its identification in the work area for its subsequent categorization and precise geolocation; (2) the representation of the intangible heritage asset through a specific registry in the platform *Malaka.net*, as well as

its associated elements: individuals, groups and organizations, and the related tangible elements.

3. Methodology

The methology is based on the identification and representation of ICH though local community in La Fontanalla neighbourhood as a case study. Thus, every heritage asset has been registered into *Malaka.net* platform (Ayuntamiento de Málaga & Universidad de Málaga, 2019). This tool is a comprehensive webGIS for Cultural Heritage management for the municipality of Malaga (Spain). It allows the geolocation, identification, dissemination, and management of economic investments on declared, protected, or recognized tangible and intangible heritage. The platform manages the heritage related to the public space, not incorporating private or bibliographic movable heritage.

The platform works with the Arches open source system (Myers et al., 2016) and organizes Heritage into six categories: one for *Intangible Heritage* and five for tangible heritage types: *Architecture, Landscape, Archaeology, Ensemble,* and *Urban Furniture.*

3.1. Phase 1: Identification and recognition of the ICH

Considering the lack of consensus in the representation of the ICH, and its heterogeneity, the identification and recognition of intangible heritage assets constitute an essential phase prior to their inclusion in any proposal for catalogues and inventories. Local communities are the ones and only who guarantee the safeguarding of traditions and knowledge over time (Frieri, 2014). There is a previous research of interest which shows the importance of participation processes in order to involve local communities in the recognition and management of their cultural heritage (Loza Ibarra, 2021; Rey-Pérez & Domínguez-Ruiz, 2020).Taking the local community into consideration constitutes a preliminary phase for the identification of the

ICH on a territory. The importance of this stage has been carried out through a set of participatory actions in La Fontanalla neighbourhood.

Action 1: *Creation of a mixed group.* Creation of a focus group of informant agents involving associations, entities, neighbours and other external actors who are experts in participatory methodologies, ICH management and specific knowledge about the neighbourhood.

Action 2: *Identification of the ICH through participatory actions.* Through different participatory actions, the elements and values which local community considers as identarian heritage assets have been identified. These actions include: semi-structured interviews, meetings between informant agents, guided tour with neighbours, and specific workshops related to the intangible assets such as pottery and glass workshops with local artisans and students there.

3.2. Phase 2: Inclusion of the ICH in the Comprehensive webGIS

Action 3: *Conceptual Registration of the ICH.* Each intangible value is registered on its own through the platform. This record does not have geolocation because it refers to the intangible concept of heritage.

Action 4: *Registration and geolocation of the elements associated with the Conceptual Registration of the ICH.* Elements related to the intangible heritage asset are added to the platform. These entries are geolocated and represented according to their heritage category according to (UNESCO, 2017a):

a) Individuals, Groups and Organizations. Each one linked to the ICH in the intangible category is mapped with a specific record. Geolocation is achieved through the address of the agent involved and it is represented by a point. Different roles/profiles can be distinguished depending on the element/activity: practitioner/performer, trustee transmitters and other participants.

b) The characteristics of the element. It referes to those ones which are associated with tangible heritage assets. The intangible condition is an added value for other assets of the tangible heritage from the municipality. To do this, a registry has been created in the corresponding heritage field —*Architecture, Landscape, Archaeology, Urban Furniture* or *Ensemble*— with the aim of linking physical elements or spaces to the intangible activity/tradition. In this way, the ICH is geolocated related to the footprint of the activity. The representation of each record depends on the criteria of each category.

Action 5: *Interconnection of all records with the original intangible asset.* All related entries are linked to each other through *Related Resources* with respect to Conceptual Registration of the ICH.

3.3. Case study: Traditional pottery craft in La Fontanalla neighbourhood

The described methodology has been tested in La Fontanalla neighbourhood for the inclusion of its ICH in *Malaka.net* platform. The work with the local community has allowed to identify different intangible heritage assets such as the crafts of ceramics and glass (PTVMalaga, 2019), which are traditional in the neighbourhood (Asociación Arrabal Fontanalla, 2017).

La Fontanalla neighborhood has its origin in the new population areas outside the walls of the city of Malaga in the eleventh century. It was characterized by the proliferation of kilns for the production of ceramics and pottery, as productive sectors inherited from the Muslim era. However, this activity was in decline throughout the eighteenth century. Currently, the neighborhood maintains traces of its productive background linked to the ceramics trade. This tradition is recognized by the local community nowadays. There are previous experiences which describe participatory actions for the identification and representation of the traditional craft of ceramics as an intangible asset of the neighborhood (Nebot-Gómez de Salazar et al., 2020).

4. Results and discussion

4.1. Recognition and identification of the traditional craft of ceramics as ICH in La Fontanalla neighbourhood

As a result of applying the proposed methodology, different participatory actions have been carried out for the recognition of ceramics craft as an intangible value of the neighbourhood:

a) *Ceramic workshop between the artisan community, neighbourhood and students.* Several sessions have been held on the decoration of ceramic pots in order to promote the intangible value of pottery in Malaga. This action is part of the strategies to raise awareness of the importance of the craft tradition as an intangible value in the environment of the educational institution there.

b) *Guided tour for students by informant agents.* Through an itinerary in La Fontanalla neighbourhood, the students were able to learn about the main heritage assets of the area, as well as its history.

c) *Form about traditional craft of ceramics.* The proposal for the elaboration of a catalogue —where the craft of ceramics is included as an identity element of the neighbourhood— is considered. The preparation of these forms, according to the criteria established by (UNESCO, 2017a), together with the informant agents, has allowed the local community to be involved in the recognition and dissemination of its ICH (Nebot-Gómez de Salazar et al., 2020).

4.2. Registration and mapping of the Ceramics Trade in Malaka.*net* platform

The information collected in the file is recorded in *Malaka.net* platform through the

different assets (Table 1) which show the traditional ceramics trade. In this sense, the methodology proposed for the spatial representation of the ICH covers the gap identified in other comprehensive heritage platforms, such as the *Andalusian Historical Heritage Digital Guide* (IAPH & Consejería Cultura y Patrimonio Histórico, 2016). To do so, the webGIS proposed includes geolocated records of the intangible assets linked to the territory.

In addition, the integral nature of the platform provides specific records of each heritage category, what facilitates the visualization of the intangible from other registered heritage assets. Thus, it differs from the review cultural platforms abovemetioned such as *SINCA* (Ministerio de Cultura de Argentina, 2015) or *El Mapa Cultural de Costa Rica* (Sistema de Información Cultural de Costa Rica, 2016). Both mainly geolocate monuments and places

as material heritage where culture manifests. Likewise, the *Culture Gate platform* (Koukopoulos & Koukopoulos, 2014) adds *Archaeology* and *Visual Art* records —street furniture of the city— to the previous ones, but it does not offer specific information on the records.

Malaka.net platform enables the relations of the different assets between their heritage categories. Through this characteristic, the ceramic craft, as an example of an intangible heritage record, has been linked to other tangible assets —*Architecture*: chimney of the Santa Inés ceramic factory; *Archaeology*: the archaeological remains of the ovens of ceramic production in La Fontanalla; *Ensemble*: Colonia de Santa Inés neighbourhood, due to the importance of the Ceramic Industry in this area; and *Landscape*: Laguna de Barrera, public space generated from the extraction of clay for the local Ceramic Industry—.

ICH records	Heritage categories on *Malaka.net*	Heritage records	Geometry	Case study. *Traditional craft of ceramic*
Concept	*Intangible*	Domains definided by (UNESCO, 2017b)	-	*Oficio artesanal de la cerámica | Elaboración de la maceta malagueña*
Location according to individuals, groups and organisations.	*Intangible*	Expert/performer	Point	*Escuela de Arte San Telmo | Facultad de Bellas Artes | Asociación Vecinal Arrabal de la Fontanalla*
		Transmitting depositaries	Point	*Museo Picasso | Museo Unicaja de Artes y Costumbres Populares | Museo de Málaga | Museo del Vidrio y Cristal | Taller del Vidrio VIARCA*
		Other transmitting participants	Point	*IES Vicente Espinel*
Location according to the characteristics of the heritage record.	*Architecture*	Cadastral delimitation of buildings	Area	*Chimenea cerámica Santa Inés*
	Landscape	Gardens, public spaces	Area	*Laguna de la Barrera María Eugenia Candau Rámila*
		Historic roads, scenic routes	Line	-
		Viewpoints	Point	-
	Archaeology	Zonas arqueológicas	Area	-
		Archaeological traces or conduits	Line	-
		Occasional archaeological excavations or remains	Point	*Hornos alfareros Arrabal de la Fontanalla | Enclaves Alfareros Dispersos Romanos*
	Urban Furniture	Urban sculptures and fountains	Point	-
	Ensemble	Historic areas, neighbourhoods and surroundings	Area	*Colonia Santa Inés*

Table 1. Traditional craft of ceramic like ICH on Malaka.net. (Source: authors).

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In addition, the specificity in the representation criteria in the mapping of each heritage category allows every heritage asset to be distinguished on the map. In this way, it advances with respect to other platforms which only distinguish by using different colours or symbology, but not different geometries.

The graph of *Related Resources* (Fig. 1) enables the visualization of the existing relationships between the ICH and the other heritage categories, which allows its identification and exploration based on the different urban elements of the city.
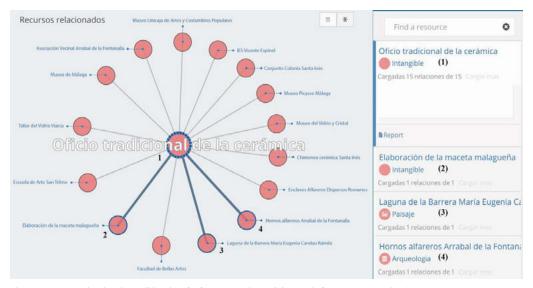

Fig. 1. Resources related to the traditional craft of pottery on the *Malaka.net* platform. (Source: authors).

5. Conclusions

The methodology proposed from the heritage management *Malaka.net* platform allows the inventory of the ICH together with the rest of the heritage assets in a city or territory.

In addition, this methodology provides a precise and complex geolocation of ICH manifestation in a specific area. On the one hand, it provides the mapping of the social agents involved in its safeguarding and transmission, due to its importance in the ICH protection processes. On the other hand, it connects the tangible elements associated with the physical manifestation of activity. The representation criteria of the platform —type of geometry and colour— allow each heritage category to be distinguished, which is of interest for locating areas of concentration or overlap of heritage elements.

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