# THE ÕMINGAÖ COMMUNITY PARTICIPATION FOR THE MAINTENANCE OF VERNACULAR HERITAGE BUILDINGS IN THE HISTORICAL CENTER OF CUENCA, ECUADOR

M. C. Achig-Balarezo<sup>1</sup>, A. Tenze<sup>1</sup>

<sup>1</sup>Universidad de Cuenca, Facultad de Arquitectura y Urbanismo, Av. 12 de abril y Agustín Cueva, Cuenca, Ecuador ó (cecilia.achig @ucuenca.edu.ec, aliciatenze@yahoo.es)

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### **ABSTRACT:**

The Latin-American cities declared by UNESCO World Heritage Sites display a problem of generalized deterioration of its vernacular or environmental architecture due to, among others, a lack of maintenance. This is aggravated by the existing legal vacuum in planning for its historical centers, resulting in irreversible losses in their heritage buildings. It is proposed to involve the community in the maintenance interventions to counteract the lack of maintenance and at the same time contribute to improve the level of livability and to create a collective awareness in the community about the care of its heritage. To achieve this goal, the university of Cuenca, has implemented the so-called õmaintenance campaignsö, through which the preventive conservation phases proposed by ICOMOS (2003) are supported methodologically from a perspective that combines varied techniques (quantitative, qualitative), giving priority to operational workshops and collective construction of knowledge and action. The experience in the traditional -Las Herreríasø street (case study), evidenced in a short period of time an improvement of the physical conditions of the buildings and of the quality of life of its residents, and furthermore motivated the long-term activation of comprehensive and inclusive conservation processes that lead to the valuation and preservation of heritage by all involved. The participation of the community in the whole process through a õmingaö of multiple actors guarantees a successful intervention. This initiative could be successfully adapted to other heritage sites of similar characteristics.

### 1. INTRODUCTION

There are about 40 Latin-American historical cities declared by UNESCO World Heritage Sites (UNESCO, 2018). The conservation of monumental heritage buildings such as churches, museums and in general public buildings belonging to the state, are normally considered within the planning of these cities, however, minor or vernacular architecture is often unprotected. In fact, the lack of maintenance of this type of architecture, also known as environmental, is one of the main causes of deterioration and its consequent poor state of conservation (Jácome, Newspaper: õEl Comercioö, 2018). The majority of these heritage buildings are built with earth or wood, which places them in a situation of high vulnerability, putting their integrity and heritage values at risk (Astudillo, et al, 2018).

In Europe, this predicament is being debated at a conceptual level and in some cases in a practical manner through preventive conservation (Van Balen & Vandesande, 2013) (Stulens, 2002). The phrase õprevention is better than cureö (Monumentenwacht Vlaanderen, 2018) is a statement coming from the world of medicine, which in the world of architecture and built heritage, emphasizes that the early identification of maintenance actions could reduce or prevent important interventions that put at risk the heritage and its integrity or that require in the future large sums of money (García, Cardoso & Van Balen, 2015) (Van Balen & Vandesande, 2013). This would especially affect minor or vernacular architecture, which without being of monumental character, constitutes a legacy that generates appropriation and identity in the communities.

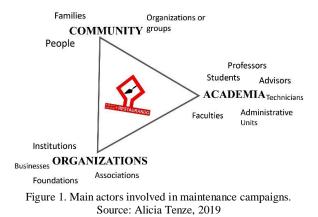
On this matter, to encourage discussion, there are organizations and institutions at an international level such as the UNESCO chair of Preventive Conservation, Maintenance and Monitoring of Monuments and Sites (PRECOM<sup>3</sup>OS), established in 2008, which promote conferences and debates around the concept of preventive conservation and sustainability (Van Balen & Vandesande, 2013). One should also mention the successful experience of "Monumentenwacht", a non-governmental organization established in the Netherlands in 1973 and in Flanders in 1991, which aims to support owners and managers of heritage buildings to prevent deterioration through systematic and thorough monitoring by means of maintenance work (Stulens, 2002). In Latin America, some countries are integrated into a network of heritage cities, which try to come to agreements to protect their tangible and intangible assets (UNESCO, 2005).

In Ecuador about 95% of the inventoried heritage buildings are in the hands of private or religious owners (Rohn, 2018), which complicates, in certain manner, their maintenance and conservation. An interesting initiative is the incentive program õget your house in orderö of the Metropolitan Heritage Institute of Quito (2008), through which micro credits are granted to owners with payment capacity, who are interested in the rehabilitation and improvement of their houses in heritage areas and buildings (Arias, 2016; Delgadillo, 2008). However, these organizations do not give a practical nor effective response to the deterioration and lack of maintenance experienced by historical cities in Latin America throughout their marginalized sectors, leaving minor heritage buildings vulnerable and in an unsustainable long-term state. For this reason it is necessary to find viable alternatives and at lower costs to support the owners, which in general are low-income families who do not have the economic nor technical capacity to invest in maintenance. Faced with this situation, the academia has remained on the sidelines

<sup>\*</sup> Corresponding author

and particularly the faculties of architecture of the universities have not included providing practical solutions as a priority.

The University of Cuenca, through the World Heritage City Project of the Faculty of Architecture, has been implementing Maintenance Campaigns for several years, based on the ICOMOS (1) preventive conservation methodology (ICOMOS, 2003) and guaranteeing the optimization of resources, by organizing the participation of various actors through a minga (2). Three main actors exist: the academia, who until now has assumed the role of leader and coordinator, the organizations and the community. This modality proposes to look for organizations as strategic allies (institutions, foundations, associations or companies) who together with the University give technical and financial support, in addition to seeking to achieve the greatest involvement of the community (Figure 1).



Two campaigns have been carried out in rural areas (Susudel houses in 2011 and Susudel cemetery in 2013) and one in the traditional neighborhood of San Roque, in the city of Cuenca in 2014. In these first three campaigns, the main objective was to realize maintenance actions of the physical parts of several heritage buildings (Cardoso, Achig-Balarezo & Barsallo, 2017). However, in these campaigns the social component was not addressed in depth, which could be an influential factor in future decisions about continuing with the maintenance of vernacular heritage buildings. The objective of the present research is to understand the conservation and maintenance of heritage not only from an aesthetic or physical aspect, but from a more complete analysis that includes the social aspect directly related with the intangible dimension of heritage. As case study is taken the maintenance campaign undertaken in the year 2018 in one of the areas with the greatest heritage value of the city of Cuenca: -Las Herreríasø street. This new intervention focused on the idea of conserving a building not only because it is heritage, but also to analyze other factors, which give it the character of a õdevelopment resourceö, directly benefiting the community and its quality of life (Achig-Balarezo, et al, 2017).

# 2. METHODOLOGY

The maintenance campaign carried out in 20 heritage buildings in the õLas Herreríasö street responds to a methodological process in which in each preventive conservation phase (ICOMOS, 2003): analysis, diagnosis, therapy and control, the approach of the participatory methodologies was integrated to emphasize the work with the network of actors (RedCIMAS, 2015), mainly the owners of the intervened buildings, in order to strengthen the trust between them, the internalization of the process and the awareness about the care and sustainability of heritage. In each of the phases, techniques of different research approaches were applied: quantitative (surveys, survey cards), to gather the countable aspects and to have a general idea of the issues; qualitative (interviews, tours, interactive workshops) to give prominence to people and groups and to collect their opinions in a more detailed manner; and participatory (reflection and collective construction workshops) to return the gathered information and to gain insight in the issues, supporting meetings between the participating actors. With regard to the actors, the academia refers to all of the people involved from the University of Cuenca, being 55 students (interns and volunteers), 4 thesis students, 6 professors, 15 professionals: architects, engineers and economists (9 specialists in heritage conservation) and administrative personnel. Within the organizations, the municipality of Cuenca was a strategic ally to complement the financing, the purchase of materials and the hiring of personnel, in addition it coordinated the participation of 17 organizations (institutions, associations, foundations, companies), who contributed with their competencies and resources to help develop the campaign. The participation of the community was important to complement the payment of the workers, the availability of toilets and the preparation of refreshments for the participants.

The maintenance of heritage buildings is a process that begins in the ANALYSIS phase, with the determination of the heritage values of the neighborhood and the buildings, as well as the manner in how the buildings to be intervened are going to be selected. In the DIAGNOSTIC phase, the state of conservation of the buildings is determined, through the use of damage registration cards, determining what actions and budgets are required to carry out their maintenance. These first two phases were carried out between March 2017 and April 2018 with students of the õHeritage Conservationö course of the faculty of Architecture and Urbanism of the University of Cuenca being in charge, supported by interns and thesis students, with the counsel and advice of professors and heritage conservation specialists. In the next phase, THERAPY, the activities of the execution of the campaign are recorded on a daily basis through a control book. This phase was carried out between May and August 2018 with all of the members of the World Heritage City project joining the intervention team. The CONTROL AND MONITORING phase started in September 2018, during which surveys with regard to the state of conservation were carried out.

Simultaneously, the evaluation of the process (before, during, after) and its impact on the social, cultural, economic and environmental dynamics of the intervened area was carried out.

<sup>(1)</sup> ICOMOS: International Council on Monuments and Sites

<sup>(2)</sup> The minga is defined as collective unpaid work for the common interest of the community. The minga (minka in the traditional Andes language Quechua) is a pre-Columbian tradition for purposes of social or reciprocal nature, currently being used in various Latin American countries, such as Colombia, Peru, Ecuador, Bolivia, Chile and Paraguay. In Europe exists an equivalent known as ôprocomunö. It can have different purposes, such as the building of a house or agricultural

activities. The minga does not need obligations nor incentives for its execution, since all of its participants are beneficiaries alike. It is a form of communal work, in which all work together for something beneficial to all participants, and where the participants contribute with their labor in exchange for collective benefits (Ferrari, 2004; Cachiguango, 2006; García et al., 2015; Wikipedia, 2018).

Several of the tools used during this process are explained next. During the first phases of the campaign (ANALYSIS and DIAGNOSIS), the objective was to find the ex-ante expectations (ex-ante) of the campaign. Three types of surveys were used: a) to the owners of the buildings to be intervened, b) to the residents and persons who own a business in the õLas Herreríasö street, c) to the passersby who circulate through the õLas Herreríasö street. During the execution phase of the campaign (THERAPY), a survey was designed in order to know the opinion of the various actors on issues related to the management, the process and the execution of the works. These surveys were conducted with the owners of the intervened buildings, tenants and residents of the õLas Herreríasö street, military personnel, workers, members of the World Heritage City project and participating students. Simultaneously, interviews were conducted with the various participating actors and several participatory evaluation workshops were held with the community to monitor the impact and the coherence of the objectives with respect to the functioning of the intervening teams. This process helped to give feedback to the activities and ensure compliance with the general objectives of the maintenance campaign. Having completed the maintenance work (start of the CONTROL phase), the same tools were applied to gather the ex-post assessments and to evaluate the social, economic, cultural and environmental impact of the campaign on the intervened area, and to emphasize the knowledge gathered, which will be used to improve future maintenance campaigns.

Table 1 summarizes the techniques and actors employed during the different phases of the õHerreríasö maintenance campaign. On the left are shown the employed techniques during the preventive conservation process, while on the right the techniques of the evaluation process are shown.

TECHNIQUES	ACTORS			
	ACIUNS	TECHNIQUES	ACTORS	
Socioeconomic records	Community			
Damage record	Community	Surveys **	Community	
Meetings with the	Academy	SWOT Matrix	Academy	
community and	Community			
organizations	Organizations			
Walks	Academy	Workshops	Community	
	Community			
Participatory	Academy			
workshops	Community			
Control book*	Academy	Surveys	Community	
	Community			
Technical coordination	Academy	Evaluation	Academy	
meetings		meeting		
Meetings with the	Academy	Surveys	Academy	
community and	Community		Organizations	
organizations	Organizations			
Maintenance booklets	Community	Surveys**	Community	
			Organization	
Damage record	Community	Interviews**	Community	
Monitoring record	Academy	Participatory	Academy	
	Organizations	workshop**		
Owner's report	Community	Diagram of	Academy	
owner s report	community	0	Community	
			community	
		•		
	Meetings with the community and organizations Walks Participatory workshops Control book* Technical coordination meetings Meetings with the community and organizations Maintenance booklets Damage record	Meetings with the community and organizations     Academy Community Organizations       Walks     Academy Community       Participatory     Academy Community       Control book*     Academy Community       Control book*     Academy Community       Meetings     Meetings       Meetings with the Academy community and community     Academy Community organizations       Maintenance booklets     Community       Damage record     Community Academy Organizations	Meetings with the community and organizations Academy Community Organizations SWOT Matrix   Walks Academy Organizations SWOT Matrix   Walks Academy Organizations Workshops   Participatory Academy Community Workshops   Control book* Academy Community Surveys   Control book* Academy Community Evaluation meeting   Meetings with the Academy community and organizations Organizations Surveys   Maintenance booklets Community Surveys**   Damage record Community Interviews**   Monitoring record Academy Organizations Participatory	

Table 1. Employed techniques during the preventive conservation phases. Source (Tenze, et al, 2019)

In grey are shown the results that have been analyzed and respond to the objectives of this research. Some of the objectives to be

(3) Enchancleado: a traditional ceiling made of earth and straw, and supported by a wooden structure. (Cardoso, Quizhpe & Achig, 2018)

achieved with the õHerreríasö maintenance campaign were a) to start a maintenance process of the vernacular heritage buildings (\*) and b) to analyze how the campaign could improve the quality of life, the social cohesion in the El Vergel neighborhood and awaken an interest within the community for the conservation of heritage, which was achieved through an evaluation of the process (\*\*)

## 3. RESULTS AND DISCUSSION

# 3.1 Items carried out and perception of the community about the impact of the campaign

In this section are presented the results of the components: maintenance implementation (\*) and process evaluation (\*\*) (Table 1). According to the records of the control book, of the 20 buildings intervened during the THERAPY phase, in 15 buildings comprehensive maintenance of facades, roofs and urgent works were carried out, and in the remaining 5 buildings minor maintenance of facades was done. Below are the results of the main items with their corresponding quantities (Table 2):

Items	Units	Total
Repaired roof structures	u.	17
Recovered tiled roofs	m2	1465
Maintenance of doors	m2	71
Maintenance of windows	m2	16
Maintenance of balconies	m2	3
Maintenance of stairs	m2	2
Painting of facades (maintenance)	m2	1056
Intervened ceilings	m2	315
Placing and replacement of channels and downspouts	m	289

Table 2. Total quantities of the main items carried out during the õHerreríasö Maintenance Campaign during May and Agosto of 2018.

Table 2 shows that the most significant interventions were on roofs and facades. These results confirm the fulfillment of the general objective of the campaign with regard to the undertaking of urgent maintenance actions of roofs and facades in heritage buildings. With regard to that, several clarifications that derive from the conducted interviews indicate that some traditional construction systems, such as the enchancelado (3), that were in a bad state, could not be rescued due to economic factors, since these required specialized labor. However, it is necessary to emphasize that in 5 intervened buildings, evidence of this constructive system was left in place. In relation to the contribution of the campaign to the improvement of the quality of life and social cohesion in the neighborhood, from participating professors and technicians there is a perception that this was fulfilled: oThrough the campaign it was possible to generate this cohesion between tenants, owners and the neighborhood in generalö (technician 1), õThe objective of social assistance to the community was metö (professor 1), õYes, because a heritage has been protected and at this moment the neighborhood has another appearance, another spritö (professor 2).

The results of the surveys with the owners of the intervened buildings allows to compare their perception before and after the campaign (Table 3). Regarding their expectations of the maintenance campaign, the most mentioned expectations were: improvement of the physical appearance of the buildings, improvement of the integration of the neighborhood, economic improvement and improvement of their quality of life. Some neighbors expressed their sentiments in different ways: õlf I would live a thousand years, a thousand years I would thank those who made it possible for my house to be so beautifulö (neighbor 1, Figure 2), õThis restauration initiative has not been seen in years. Honestly, I am happy with the resultö (University Agenda, August 2018, Figure 3).



Figure 2. Luz Naula on the day the maintenance campaign interventions finished. Source: Carolina Martinez, 2018.

The expectations of the Project team also materialized in two pedagogical objectives. On the one hand, to generate knowledge about heritage conservation through a practical exercise, which had a general assessment of fulfillment: õfrom a research point of view, all of the knowledge gathered through the campaign is also important; in terms of constructive systems, relations with people, either with the institutions, the owners or the team itselfö (technician 2). On the other hand, to create awareness among the owners about the value of the heritage building that they own. An objective, which according to the interviews was partially fulfilled. In fact, during the execution of the campaign, it was found that some owners proposed to eliminate elements of heritage value. This is confirmed by the testimony of a professor: õWe lacked trainingí everything that is heritage and that is maintenance.ö (Professor 3). This factor is related to the management of the requirements of the owners, where most comments point to better information with regard to the scope of the intervention, which would moderate the ownersø expectations. However, it seems that from the interaction and through the execution process it was possible to raise awareness about this issue: õThe owners, many of them with an extraordinary attitude, finally succeeded to understand what it is that we can do, what it is that we should doö (professor 4).

Considering the evaluation of the impacts in the community, the different tools were oriented to contrast before (ex-ante) expectation with after (ex-post) assessments in the four areas of development. Table 1 highlights the surveys that were subject of this analysis during the DIAGNOSIS (before) and CONTROL phase (after). Additionally, this component was enriched with the results of the interviews with the owners and the opinions of the academic team in a participatory evaluation workshop. Before and after the campaign a survey was conducted with respectively 13 and 15 owners out of a total of 20 owners. The reason that not all owners were surveyed is that not all owners live in the neighborhood or because some of the owners were not willing to participate in the surveys.

Table 3 shows the results in relation to the economic, social and cultural aspects. With regard to the economic aspect, to the question: õDo you think that during the campaign your business will be affected?ö, 31% of the owners before the campaign answered YES, while after the campaign this slightly reduced to 27%. This result allows us to infer that during the campaign the majority of the ownersø businesses were not affected by the campaign and probably received benefits due to the large number of participants.

õí created a benefit to the businesses, since on the one hand they could prevent damage to the rented properties and on the other hand refresh the image of their premisesö (student 1).



Figure 3. Etelvina Gallegos, neighbor. Source: University Agenda, August 2018

With regard to the social aspect, the relation between neighbors shows a significant difference before and after the campaign (54% before and 73% after), which indicates an improvement in the integration of the neighborhood.

õí the minga always awakens values... is a meeting place and in this case favored the meetings between neighbors, between institutions, between organizations and the neighborhood, etcí ö (technician 2).

With regard to the cultural aspect, to the question: õDo you know the ancestral traditions practiced in this neighborhood?ö, the majority answered YES, with the before and after results being very similar (above 69%). When asked: õDo you think that investing public money in conserving heritage is a waste?ö, the majority answered NO (above 80%).

õí surely the people that live in the õLas Herreríasö Street view their heritage in a different way, surely they also feel part of this heritageö (student 2). The responses regarding active participation in the campaign were very diverse, in relation to what was understood by "actively". Precisely, activities such as food preparation, availability of bathrooms (and its cleaning) or monetary contribution were considered as active participation in the Campaign.

With regard to the environmental aspect, it was possible to confirm that within the expectations the safety issue was not considered a priority. However, the owners at the end of the campaign expressed the improvements obtained at the neighborhood level, especially regarding accessibility, safety and cleanliness of the buildings.

õI think that in general the street is more accessible, safer and has a better environmentö (student 3).

The results of the surveys with people that live or that have a business in the õLas Herreríasö street, but who did not participate in the maintenance campaign, are very similar to the answers of the owners of the buildings who did participate in the campaign. In this case, the sample was 18 people before and 45 people after the campaign.

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QUESTION		BEFORE	
	n	%	
Do you live in the El Vergel neighborhood, Las			
Herrerías street?			
NO	5	389	
YES	8	629	
Noanswer			
EXPECTATIONS			
What do you expect from the campaign?			
Benefits to handicapped	2	6%	
Promote ancestral practices	2	6%	
Safer	3	9%	
Economic improvement	5	159	
Improvement in the physical aspect of the buildings	8	249	
Improvement in the integration of the neighborhood	4	129	
Improvement in the quality of life	6	189	
Preservation of traditional art	1	3%	
Safety	3	9%	
ECONOMIC ASPECTS			
Do you have any business other than rental in Las			
Herrerías street?			
NO	6	469	
YES	5	389	
Noanswer	2	159	
Do you think that during the campaign your business			
will be affected?	-		
NO	3	239	
YES	4	319	
No answer	6	469	
SOCIAL ASPECTS			
How was your relationship with your paighbors			
How was your relationship with your neighbors			
before the campaign?	7	E / 0	
before the campaign? Good	7		
before the campaign? Good Bad		0%	
before the campaign? Good Bad I did not know them	1	0% 8%	
before the campaign? Good Bad I did not know them I do not know them	1 1	0% 8% 8%	
before the campaign? Good Bad I did not know them I do not know them Regular	1 1 3	0% 8% 8% 23%	
before the campaign? Good Bad I did not know them I do not know them Regular No answer	1 1	0% 8% 8% 23%	
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#### Table 3.

Comparison of the ownersøperception in relation to the economic, social and cultural aspects. Sample size of 13 (before) and 15 (after) the maintenance campaign. Source: The authors.

QUESTION		AFTER	
	n		
Do you live in the El Vergel neighborhood, Las			
Herrerías street?			
NO	7	4	
YES	7	4	
Noanswer	1		
EXPECTATIONS			
The Campaign allowed:			
Benefits to handicapped		(	
Promote ancestral practices	4	g	
Safer	5	1	
Economic improvement	8	1	
Improvement in the physical aspect of the buildings	13	2	
Improvement in the integration of the neighborhood	7	1	
Improvement in the quality of life	9	2	
Preservation of traditional art		(	
Safety		(	
ECONOMIC ASPECTS			
Do you have any business other than rental in Las			
Herrerías street?			
NO	7	4	
YES	4	2	
No answer	4	2	
Was your business affected?		-	
NO		(	
YES	4	2	
Noanswer	11	7	
SOCIAL ASPECTS			
How is it now?			
Good	11	7	
Bad	1	7	
I did not know them		(	
		(	
I do not know them	3	2	
I do not know them	5		
l do not know them Regular	3	(	
l do not know them Regular No answer	3	(	
I do not know them Regular No answer CULTURAL ASPECTS	3	(	
I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in	3	(	
I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in conserving 'heritage' is a waste?	-		
I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in conserving 'heritage' is a waste? NO	12	8	
I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in conserving 'heritage' is a waste? NO YES	12 2	8	
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I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in conserving 'heritage' is a waste? NO YES No answer Do you know the ancestral traditions practiced in this neighborhood? NO	12 2 1 4	8	
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I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in conserving 'heritage' is a waste? NO YES No answer Do you know the ancestral traditions practiced in this neighborhood? NO YES No answer	12 2 1 4	( 8 1 7 ( 4	
I do not know them Regular No answer CULTURAL ASPECTS Do you think that investing public money in conserving 'heritage' is a waste? NO YES No answer Do you know the ancestral traditions practiced in this neighborhood? NO YES No answer Did you participate actively?	12 2 1 4 11	8 1 7 2 7 (	

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Figure 4. Before the Herrerías Maintenance Campaign Source: City Preservation Management project.

A similar campaign carried out in the San Roque neighborhood did not consider other actors of the neighborhood who could have enriched the proposal and unleashed a participatory process (Achig, et al, 2017). This situation improved in the õHerreríasö campaign. In fact, when measuring the impacts, the perception of several actors was considered, such as: residents of the õLas Herreríasö street who did not participate in the campaign, passersby, technicians, representatives of collaborating institutions and organizations as well as the team of the University of Cuenca. The processing and analysis of all this information, due to its extent and complexity, could be object of another research. Without a doubt, the enlargement of the network of actors who took part in the õHerreríasö campaign is important to ensure its sustainability.

# **3.2** Contributing to a collective leading role in the maintenance of vernacular heritage buildings

The õHerreríasö Campaign sought to influence the leading role, especially of the owners, considering that in previous campaigns, as for example in San Roque, they had a passive role, limited to observation and approval of the works of their particular building (Achig, et al, 2017) In the õHerreríasö campaign this was achieved by turning the owners into collaborators of the planning and execution processes: õWorking hand in hand with them, I believe is a very interesting learning experience for the people. To see that their contribution is important, from the refreshments, to giving permission to enterí ö (professor 5) (Figure 5)



Figure 5. Neighbor, Mrs. Zoila Naula, giving refreshments to the workers. The Herrerías Maintenance Campaign. Source: Maria Cecilia Achig, 2018



Figure 6. After the Herrerías Maintenance Campaign Source: City Preservation Management project.

This style of research identifies networks of actors to develop a listening process, mainly to give and receive feedback and produce collective reflection meetings (RedCIMAS, 2015). The space created by the maintenance campaign favored recognition among stakeholders, especially among neighbors themselves, who interacted in various programmed activities. As a result, in the process synergies were generated directed at strengthening the bonds of trust and collaboration between them.

õThe minga is always a learning experience, people can see what it is that the organizations do, how they do it, understand how they work, what it is that they can doö (professor 6)

Indeed, the meetings between the community and other involved stakeholders had the purpose of building this collective leading role, which at the same time allowed to move from õcampaign projectö to õmaintenance processö:

ol think that i they also helped to build this collective spirit. This willingness to participate in something that goes beyond their own personal interest. This willingness to transform the neighborhood is evident in meetingsí But yes, they help to build a collective condition of this processö (professor 7) (Figure 4 & 6). Several interviews revealed the lack of awareness among the owners about the values and conservation of heritage buildings. Therefore, it is important to complement the educational contribution of the process itself with a teaching and systematic information program before and during the campaign, about the value of the heritage that is being intervened and the type of technical solutions that are being planned for its conservation. For that very reason, it is necessary to strengthen the involvement of the owners, both in the meetings or workshops as well as in the unforeseen circumstances during the campaign, which in the Herrerías campaign, mostly had to do with family or tenant conflicts.

All in all, the learning experiences, which in addition to being collective, came from a process that triggered the interrelationship between stakeholders and in this process there is also the change of perspective about the meaning and identity of the neighborhood:

õCampaigns tend to be quite emotional, and that is what motivates one to conservation, to be a neighborhood again. The meaning of neighborhood has been lost a lot in our city, so it motivates one to that, to conserve, to take care, to be a neighborhood again, to share with people, to improve the street environment, to improve the social aspect of that neighborhoodö (expert in heritage conservation 1) Research is currently underway to make these experiences sustainable in the future, with the participation of all stakeholders, from the initial draft of the project to the monitoring phases after the intervention. The International Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume IV-2/W6, 2019 27th CIPA International Symposium "Documenting the past for a better future", 1–5 September 2019, Ávila, Spain

### 4. CONCLUSIONS

The minga of multiple actors or stakeholders has allowed the maintenance of 20 vernacular heritage buildings, with the consequent quality of life improvement of those living there. Furthermore, it is possible to ensure that the participation of the community during the different phases of the maintenance campaign, being planning (analysis, diagnosis), execution (therapy) and evaluation (control), is a guarantee for a successful intervention. Encouraging community participation, raising awareness about the tangible and intangible values of the heritage architecture in which they live is one of the challenges within these initiatives.

In the Herrerías Maintenance Campaign, the participation of the community was proposed as part of a multiple stakeholderøs minga, not only to guarantee the optimization of resources in the restoration of built heritage, as in the previous three campaigns, but also to foster the networks that act in the neighborhood with a shared leading role. The initiative of the university was based on providing its resources at the service of the people, in this case, for the conservation of heritage buildings in a state of high vulnerability. The implementation of the Campaign fostered the collaboration and involvement of other entities, both public as well as private, and of the neighboring community, mainly the owners of the buildings to be intervened.

Through a participatory investigation-action process, it was sought to enhance each phase of the technical process and to carry out a shared work from the formulation of the project among the various stakeholders, with the community being one of the most important to consider. This is because in the community resides the cultural value that gives meaning and significance to heritage, not only tangible, such as the buildings, but also intangible, an essential part of its historical tradition. It is proposed that in future campaigns the training of the community about the value of their heritage buildings is being emphasized and prioritized during the entire maintenance campaign.

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