

INCULTUM Innovation factsheet

Pilot #1 Altiplano de Granada (V2)



**UNIVERSIDAD
DE GRANADA**

**MEMOLab. Laboratorio de
Arqueología Biocultural**



Visiting the margins
INnovative CULTural ToUrisM in European peripheries



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José María Martín Civantos
María Teresa Bonet García
Elena Correa Jiménez
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EXECUTIVE SUMMARY:

Following the established guidelines, in the Altiplano we are working in (developed below):

1. The constitution of a heritage resource as a **common** (good).
2. The **involvement of the community**
3. creating **new visitor itineraries**
4. The design of **attractive narratives**
5. The **participatory heritage inventory**

INNOVATION IN PILOT #1

The main innovation elements explored by INCULTUM and directly implemented in #1 Altiplano de Granada are:

1. The constitution of a heritage resource as a **common** (good).

In the social context of the municipalities of the Altiplano of Granada (and in general of the Southeast of the Iberian Peninsula) the historical and traditional irrigation systems are elements assumed by all as something intrinsic in our collective thinking and landscapes. Historical irrigated land is a rural commons. They are managed by an irrigation community, which has a communal governance system. Beyond the irrigators community, historical irrigation systems are at the local level a very strong identity element, for different reasons:

- I) because normally all the families are part of the irrigation community or have a direct relationship with it and with irrigation;
- II) because they have been the main productive spaces for generations;
- III) because they have indelibly marked the landscapes and the villages;
- IV) because they have been the main productive spaces for generations;
- V) because they have indelibly marked the landscapes and the villages.

In our andalusian context, everybody knows what is an irrigation channel but maybe not everybody knows what it really means and how it works. For this, they are not valued with all the potential they represent. The irrigation channels, the waterwheels, the mills, the subway galleries are elements created in the Middle Ages by the Islamic culture that brought this way of managing the water. In recent years, last research has led to a better understanding of how these systems work. We have (re)discovered that the functionality of these systems goes beyond local agricultural production or the creation of beautiful landscapes. Historical and traditional irrigation systems generate an enormous amount of **ecosystem services**: protection and generation of fertile soils, aquifer recharge, ecological corridors, among others. These benefits are a common good that must be recognised and protected by all society.

Within the activities that are being carried out within INCULTUM, the cultural trails have an educational complement (through the website <http://www.regadiohistorico.es>) where this information is available on all these ecosystem services generated by historical irrigation

systems. In this way, raising awareness of the common good they represent in order to promote their protection.

At the end of INCULTUM Project we have completed four cultural routes through historical irrigation systems in different municipalities in the Altiplano:

- Acequias y fuentes de Zújar trail (SL-A 391): <https://zenodo.org/records/10957072>

- Acequia del Alcázar trail (Jérez del Marquesado) (SL- 389):

<https://zenodo.org/records/10910307>

- Acequias de la Vega de Tubos trail (Castril) (SL- A 380):

<https://zenodo.org/records/10910356>

- Acequias del Jaufí y Rasmal trail (Benamaurel): <https://es.wikiloc.com/rutas-senderismo/sendero-acequias-de-jaufi-y-rasmal-benamaurel-granada-147118317>. This is

the only one which have not be able to be homologized by the Spanish Mountain Federation, by the timing of the project (see Conclusiones for more information about next steps in the project's continuity).

2. The **involvement of the community** in the management of the heritage resource is a priority action over all others.

At MEMOLab UGR, we believe it is essential to involve local communities. In the case of the Altiplano and INCULTUM, we have direct and almost permanent contact with the irrigation communities that manage the traditional irrigation systems. Collaboration between research entities and local communities also serves as an incentive and a boost for the empowerment of these communities. The main achievement we are working on are the payment for services agreements. These agreements are based on a payment for services in which both institutions (irrigation communities and town councils) undertake, on the one hand, to maintain the traditional irrigation systems and the paths created within the INCULTUM project; and the town councils, on the other hand, to collaborate in this maintenance through a "payment" (not always economic) that implies collaboration between both institutions. This payment can also be in the form of the transfer of material for the repair or conservation of the irrigation ditches or the paths themselves, or in the provision of labour to carry out the necessary work.

All this work involves a participatory approach, giving them a leading role in the proposal, design and management of the routes, so that they maintain control and autonomy, and the benefits revert directly to the local communities, generating positive impacts. This is why these routes, which will run alongside the historic irrigation channels, will also cover part of the cultural, historical and gastronomic heritage of each locality.

At the moment (May 2024) we have an agreement signed between the irrigation community of Cádiz and in the next few weeks the second agreement will be signed between the Castril Town Council and the Castril Irrigation Community. The processes to materialize the signing of these agreements are long and sometimes very costly. Irrigation communities are very rigid associations in their internal functioning and require a lot of time for decision making. Likewise, the municipalities also need to process decision making with administrative times that are not always the same as the execution of the projects. For this reason it has not been possible to materialize these agreements in more municipalities. However, negotiations are underway in several municipalities (Jérez del Marquesado, Zújar and Benamaurel) and we hope that they will finally materialize soon.

This collaboration with the local communities is also reflected in participatory activities, such as the cleaning of irrigation ditches, a school of balates or guided visits to particular heritage sites. We also work with the educational community of the municipalities in which we work, trying to bring the hydraulic heritage and the associated ecosystem services to the youngest children. In this occasion we participated in a training session with teachers about the importance of the historical irrigation systems and its application in education and tourism (<https://www.digitalmeetsculture.net/article/incultum-pilot-in-al-andalus-training-on-water/>) We also consider contacts with local associations to be essential. In this sense, thanks to the influence of the INCULTUM project, we have been able to count on the support and collaboration of the [Pasos Association](#) of the municipality of Galera. This collaboration has borne fruit in several collaborations throughout the year 2024, in particular a guided tour of the Acequia de la Alpanchía (<https://www.digitalmeetsculture.net/article/incultum-participated-in-the-interpretative-route-through-the-acequia-de-la-alpanchia/>). This first collaboration and guided tour was later expanded with the recovery of the Alpanchía irrigation ditch with the work of volunteers (<https://www.digitalmeetsculture.net/article/after-6-years-of-disuse-the-irrigation-channel-of-la-alpanchia-is-eventually-recovered/>).

In the case of our pilot, we consider the collaboration with local communities to have been a success throughout the INCULTUM project. Thanks to the work of volunteers and social agents involved in the protection of the hydraulic heritage of the Altiplano, the impact of our work here has been very fruitful and we are sure that, in the medium and long term, these same communities will benefit.

3. Most of the pilot projects have in common the objective of creating **new visitor itineraries** that make it possible to discover the resources of a territory along a route (most of the time using soft means of transport). In the same direction, the design of **attractive narratives** of the itineraries is essential.

We have already mentioned that at the end of the INCULTUM project we have been able to homologate 3 routes and a fourth one is in the process of being homologated by the Spanish Mountaineering Federation. These routes are currently available in the specific [Wikiloc](#) profile and with complementary information for users who require it. The routes are also available in the Zenodo INCULTUM Community. Along the routes, marked according to the criteria for approval can be accessed through QR codes to information on points of interest, complete guides of the routes and images. Some examples:

- Guía del sendero de las acequias de la Vega de Tubos (Trail guide of acequias of Tubo's Vega), Castril (Granada): <https://zenodo.org/records/10955729>
- Route start sign: <https://zenodo.org/records/10948881>
- Route start sign in Zújar: <https://zenodo.org/records/11035279>



2. Detail of Acequia del Alcázar trail (Jérez del Marquesado)



3. Two interest points: water mill and irrigation channel in Fuente de Tubos (Image: Celia López)

5. The participatory heritage inventory and the participatory design of itineraries also seem to be vectors considered relevant by all the partners. It would therefore be useful to better **share tools/methods** to facilitate this mode of participation: importance of field surveys, availability of digital tools for collecting and sharing information.

In our case, the digitalisation of the traditional irrigation system of Castril has been fundamental in order to have a general knowledge of the hydraulic heritage. With this information it has been possible to establish a first layout of the path that is going to be homologated. The work process has been as follows:

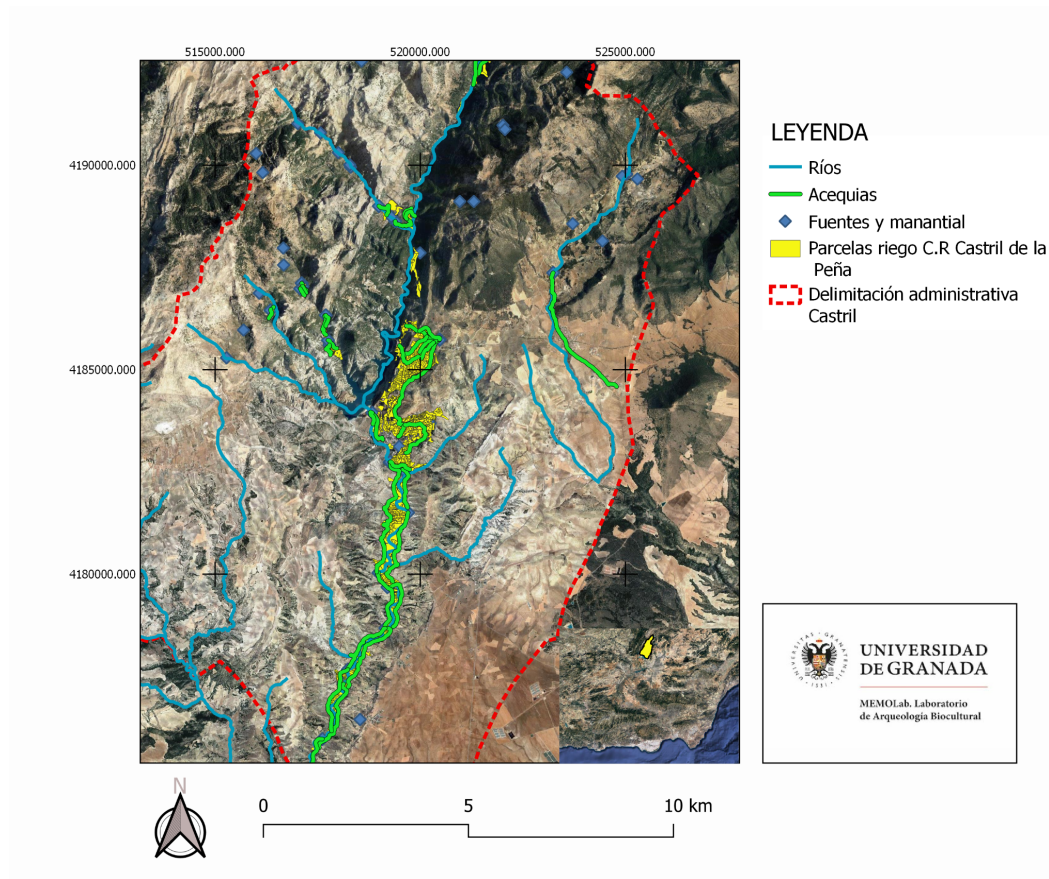
1. Contact with the irrigation community of Castril to obtain the necessary information: main irrigation channels, irrigation shifts and characteristics of the functioning of the irrigation system.
2. Field work: using QField, two archaeological technicians (Celia López and Elena Correa) were in charge of the complete digitalisation of the network of irrigation ditches and the location of the points of interest.



4. Field work in Castril(Image: Celia López)

3. Once all the field information had been obtained, and after several meetings with the Irrigation Community and the Town Council, a first layout of the path to be approved was established. At the same time, talks began to establish the points of the payment for services agreement, which will include the maintenance of the trail.

- Contact with a company for the creation and homologation of footpaths which, with the field information obtained previously, is proceeding to homologate the footpath.



5. Final cartography of the irrigation system of Castril

Conclusions

The innovations achieved in pilot #1 of the INCULTUM project may not be based on the latest technologies. But for several reasons we consider that the fundamental innovation, the fee-for-service agreements, will undoubtedly be a tool that will mark the coming years in this territory. The Altiplano of Granada has always been a marginal and peripheral area with very strong socioeconomic stigmas that have kept it at the tail end of the economic development of the province of Granada. Basing ourselves on the hydraulic heritage, on the traditional irrigation systems, is undoubtedly a novelty in that they are elements strongly instilled in the collective thinking but always seen as something undervalued. Over time we have been able to demonstrate that the intrinsic values of these historical and traditional irrigation systems are fundamental for our subsistence. In a semi-desert area with a high risk of impact due to climate change, these systems make it possible to maintain a sustainable irrigated agriculture that will be fundamental in the coming years. The groundwater harvesting techniques that these systems have been practicing for centuries will be the future for maintaining the aquifers that can sustain the food supply of these communities, as long as their functioning is understood and they are protected on a local scale. The fee-for-service agreements between the communities that manage these systems and the local

administrative entities (municipalities) must be understood as a first step to promote the protection of the systems and their traditional management in the face of an uncertain future.

Within MEMOLab UGR we will continue working, despite the end of the INCULTUM project, in this sense. In fact, thanks to the coordination and participation in the SECRETour project ("Sustainable, Engaging and CREAtive Tourism as a driver for a better future in rural and remote areas" - Project num. 101132584, of the Horizon program) we will continue working in this direction.