NATIONAL REPORT SPAIN

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   Universiteit van Amsterdam University of Amsterdam   Landward Research Ltd.

aranzadi Aranzadi Zientzi Elkartea   InEuropa InEuropa srl   A Rocha A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

1. INTRODUCTION

This template is a guideline for completing a national report that will gather the publications, good practices and needs of the project target groups in the domain of archaeological and natural heritage.

Each national report has to discuss the most pertaining issues in providing vocational training to the archaeological and natural heritage sector. It will scrutinize the current situation in terms of defining the most appealing aspects in both types of heritage in the context, as seen from the national context, of rapid changes across Europe in these domains.

These include, among others:

- Sustainability of archaeological and natural resources and their place and role in environmental policy.
- Integration of archaeological heritage into historical landscape and the built environment.
- A role of archaeological heritage in the process of decision making in the natural heritage sector.
- Place and significance of archaeological and natural heritage in policy planning.

Furthermore, each report needs to identify the potential for the integration of archaeological and natural heritage in the above mentioned aspects taking into account their specific character of each partner country.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

2

2. DOMAIN OF ARCHAEOLOGICAL HERITAGE

2.1. Analysis of good practices

Aranzadi has focused the analysis of good practices in two aspects: first, initiatives that somehow integrate both domains are addressed. This mainly involved public administrations and nonprofit organizations who organize courses and volunteer programs to recover a specific area and preserve its cultural and natural heritage.

Aranzadi itself promotes and carries out this kind of training. This is the case of *Summer volunteer training. Middle Age frontiers of Navarre,* a program organized by Aranzadi with the collaboration of the Basque Public University (UPV/EHU), the municipality of Galipentzu, UEU and Udalbiltza. The aim was to teach students about the cultural, historical and natural heritage of southern Navarre, focusing on the Middle Age in the municipality of Galipentzu. This village is important for its medieval buildings and the special nature that surrounds it, as it is located in an uphill of difficult access, near to a dam. The summer training gave students the opportunity to get to know the natural and cultural resources of Galipentzu, acquire basic competences in archaeology and history based on a scientific methodology and obtain practical knowledge on building restoration.

Another good practice, also in the Basque Country and similar to the one in Galipentzu, is organized by the Basque Government and held since 2013 in Tertanga, Molino Ubiros (Araba). The courses main purpose is to restore an ancient windmill and clear up the surroundings respecting the natural landscape of the site. The volunteer program features cultural and leisure activities for the young workers. This volunteer program, alongside with many others in different fields, is organized by the Basque Government for young people between 18 and 26 years old to promote team work and give them skills to carry out projects of restoration and preservation of cultural and natural heritage. The most interesting part of it is the fact that youngsters have to clean up and preserve the natural surroundings of the windmill of Ubiros and, In addition, their main objective during the training is the restoration of the heritage of the windmill, its façade, interior and relevant elements. The intention is to put the flour mill working again. As in the previous example, students acquire knowledge about cultural and natural heritage in the region and the importance to protect it.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

3

The second aspect of the analysis focuses only in VET in archaeological heritage in an e-learning context. In Spain, this kind of training is offered by universities and specialized private online centres such as CIEMAD or Liceus. These courses have the advantage of an innovative, flexible learning method. Nevertheless, the integration of natural heritage preservation and management is still a shortcoming. Little is addressed in the first course analysed: *Specialisation in heritage as a didactic resource*. The course is a formal VET course (higher education level) aimed to integrate cultural heritage in education, developing didactic projects that will disseminate heritage in general. It's divided in 7 Modules, 6 are theoretical and the last one consists in developing an educational project whose core is heritage management. During this practical assignment students are offered to choose a natural heritage site to work on. The course teaches the necessary tools and techniques to disseminate heritage to a general public, design and carry out cultural projects, build up didactic guidelines and bring schools closer to heritage.

Another similar example is the course Use of *SIG-GIS in Archaeology*. GIS is a fundamental tool for the study and interpretation of the Cultural Heritage. The possibility to create spatial data of the sites makes it essential for modern researchers. In this online course, cultural heritage professionals will learn how to use GIS technology in 5 online modules. At the end of the course, students will be able to identify the key components of SIG technology, apply SIG for research purposes by create graphic and reporting resources and get the necessary knowledge to apply SIG to the archaeological heritage management.

Both courses validate the acquired skills with an official certificate issued by a university (Universidad Alcalá de Henares) or museum (Archaeological Museum of Madrid).

2.2. Analysis of relevant publications

Similar to the analysis of Good Practices, the national reality in Spain regarding an integral approach was difficult to identify. Most of the publications refer to one domain or address the other in a rather vague, general approach. Only manuals for protecting natural sites have a joint view of cultural and natural heritage, and Aranzadi's analysis has focused on these publications as a successful example of it. Thus, this first group of publications is valid for both domains.

The first publication*,* **Immaterial heritage: cultural and spiritual value. Manual for integration on protected areas,** provides training guidelines to prevent possible damage to cultural heritage when managing protected natural areas in Spain. The aim of this publication is to instruct natural heritage planners in identifying, evaluating and

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

4

conserving immaterial heritage. It's a complete tool for natural heritage specialists to learn about cultural heritage management and its techniques. It discusses different formats of VET in Spain, offers a training methodology, identifies risk and opportunities and gives a general overview of the heritage sector in the country. The document is based on solid case studies and refers to good practices that may inspire our intellectual outputs.

The second publication, **Cultural heritage management of the natural site of Doñana,** is aimed to gather all the information and projects that integrate natural and cultural heritage management in the natural site of Doñana, and gives guidelines for training processes based on legal frameworks that protect this iconic territory. The publication gives tools to identify and carry out initiatives to integrate both domains; sums up the legal framework in a national and European level; and provides 3 examples of good practices developed in Doñana that could inspire further projects.

The third publication, **Cultural Heritage in Wetlands,** is a compilation of cultural elements found in wetlands and is designed as a learning tool, gathering practices, traditional ways of management of both domains and promoting a rational use of these sites. It also stands for the traditional way of exploiting the natural and cultural resources of wetlands, giving priority to ancient practices that otherwise will be extinct.

The fourth publication, **Living Lakes – sustainable management of wetlands and shallow lakes. Manual for the elaboration of management plan,** is a manual that describes the contents and the process of preparing a management plan for wetlands or shallow lakes. The publication gives answers to questions about why and how a management plan has to be established. Useful information from other manuals has been included. Practical experience and examples out of the LIFE project "Sustainable Management of wetlands and shallow lakes" and from various Living Lakes partners facilitate the practical implementation. The structure of the manual reflects the elements of a management plan.

This is an integral tool for experts to organize, promote and manage a natural heritage site, specifically wetlands and shallow lakes. Its strengths are, on the one hand, its international scope and a strong European dimension, because the manual is a consequence of a LIFE program. As for cultural heritage management, Chapter 8 (Resources), gives some tips to identify, evaluate, and manage the cultural resources inventory so as to identify the significance of various elements of the cultural landscape.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

5

Another relevant aspect of this study is the situation of VET in Spain, featured in the fifth publication, **Vocational training in Spain. Toward the knowledge society**. The objective of the study is to provide an analysis of the Spanish vocational training system, identifying its principal characteristics as well as the challenges it will face in the near future.

The author looks at the history of vocational training in Spain to offer us a comprehensive analysis of the current situation, the challenges that vocational training faces and the difficulties that it must overcome in the future. He also analyses the influence that the European Union has had on the Spanish system of vocational training and the ways in which it is or is not comparable to that of other countries in the EU. Finally, significant space is dedicated to analysing the impact of the knowledge society and the changes this has led to in the productive and development models on vocational training and the new demands to which it must respond.

The publication intends to provide data and analysis that will contribute to the debate on the current state of and ways to improve vocational training in Spain.

The study is useful to understand the current situation of VET in Spain, but also to put it in a European context, as reflected in chapter three of the document. It's interesting because is basic to understand the framework we are working with and gives useful tips for aspects such as the recognition and certification of these training systems.

It also includes conclusions, relevant bibliography, an index of graphs, tables and charts and a glossary of acronyms, which will be very useful in further stages of ANHER as a reference for consulting.

The third group of publications refers only to those addressing archaeological issues. Two articles are analysis in this group.

The sixth publication, **Integral Management Plan for the archaeological site of Felanitx (Majorca). A work in progress,** defines a development plan for the archaeological heritage in Felanitx, Majorca (Spain). The document is a working document presented by the local council as a pilot plan yet to be implemented in the site, which its main objective is to develop new and innovative archaeological management methods for a XXI. century.

The project's philosophy is closely related to the integral approach of cultural and natural management. There are several relevant points for developing an active society which will be involved and engaged to preserve and give value to the archaeological heritage of Felanitx and Majorca Island.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

6

One of the most interesting initiatives of the project is the setting up of an eco-museum. The document states that the essence of this museum will reside in the concept of landscape, which is defined as "a combined element between nature and human communities). The museum will explain and travel through the changing relations between cultural and natural heritage.

Another important fact is the stress on training and education as a way of empowerment. The document presents a plan for training and education based on the heritage of Felanitx, which will cover all the stages of formal education and vocational training in the island.

The seventh publication, **Public use of the archaeological heritage in protected natural sites of Andalusia**, is an overview of the regulation in both domains and identifies the common points where they could merge so a better planning of measures could be developed. It also mentions the disconnection between cultural and scientific studies and uses examples of Andalusia to support its statements.

In the actual Spanish regional and national administration, Archaeological Heritage management and Natural Heritage management are addressed separately. This happens because of technical, instrumental and conceptual differences of both areas. The article gives a really good state-of-the-art of the difficulties of addressing cultural and natural heritage management jointly. The most interesting side of the text is the common points that the author identifies in the national regulation of this two areas, giving useful arguments and recommendations for enhancing them.

Conclusion

Overall, VET in Spain is well defined in the Spanish educational framework and validation is based on the European legislation. It is remarkable that, in the case of VET in archaeology there are plenty options, both face-to-face and online, that offer official courses and specialization in different areas (zooarchaeology, GIS, etc.). Platforms such as CIEMAD or Liceus are on the rise, with trainings that cover a short time (60 hours) up to MA studies supported by official universities or Archaeological Associations and Museums. This seems to be a new and successful way for professionals to keep learning and gain expertise in specific themes of their jobs.

As for the joint approach of archaeology and nature, there are significant examples, mainly manuals and managements plans of preserved natural sites that keep an eye on their cultural elements and their preservation. In addition, informal training such as summer camps and volunteering programs are introducing a broader view on heritage and its many faces. This is a good starting point, but there's still much

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   Universiteit van Amsterdam University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa InEuropa srl   A Rocha A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

7

more to do in Spain as for the educational part. Some regional governments are sensitive to the integral view of heritage, but the benefits of studying both domains is still to be embedded to the Spanish educational system.

2.3. Analysis of needs of target groups

2.3.1. Online Questionnaires

Methodology: Grades go from 5 (highest) to 1 (lowest). Some participants didn't follow the instructions and gave the same grade to two or more items in the same question. Therefore, the importance given to some elements is equal in some cases.

Respondents: Aranzadi sent the questionnaires to their 1700 associates, who represent professionals from institutions, universities and private businesses in Spain, and more specifically in the Basque Country, that are related to archaeology and biodiversity. Overall, 30 people responded to the questionnaire for archaeology professionals. Respondents did not declare any personal data and sexual differentiation was not taken into account during the analysis.

Educational Level: most of the respondents have university studies (90%), of which 20% have a MA and 30% have a PhD.

Profession: the majority of respondents identify themselves as archaeologists (41,4%), followed by teachers/lecturers (24.1%) and public administrator workers (13,8%). Few of them are architects (10,3%) or building conservators (10,3%).

Years of professional experience: Respondents' professional experience varies, but the sampler covers all the year range homogeneously (around 20% except the last category – more than 30 years). This demonstrates that both young and experienced professionals took part on the survey.

Period of professional experience	Percent of respondents
<5	20%

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

8

between 5 and 10	26,6%
between 10 and 20	20%
between 20 and 30	23,3%
more than 30	10%
no data	0

The knowledge of the natural heritage management aspects
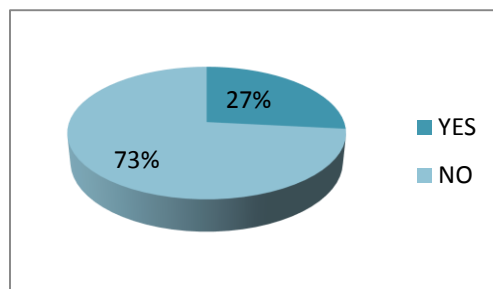
Please use pie charts to address this point.

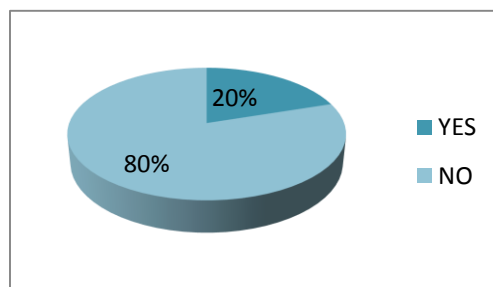**Figure 1. National legal frameworks for natural protection and conservation**

Figure 2. International legal frameworks for natural protection and conservation
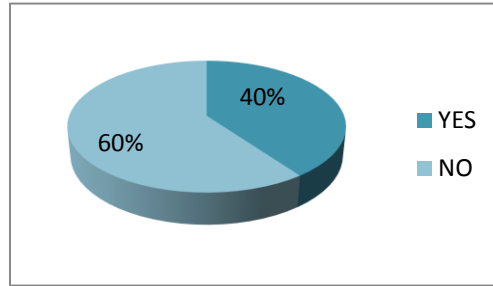
Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   Universiteit van Amsterdam University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

9

Figure 3. The public use of natural space
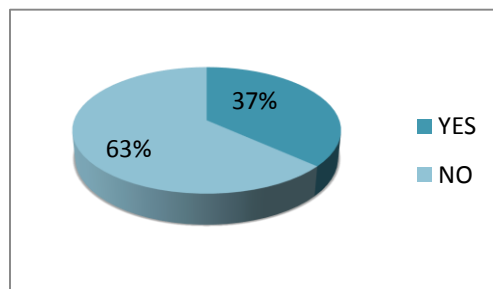

Figure 4. Ecosystems and biodiversity conservation
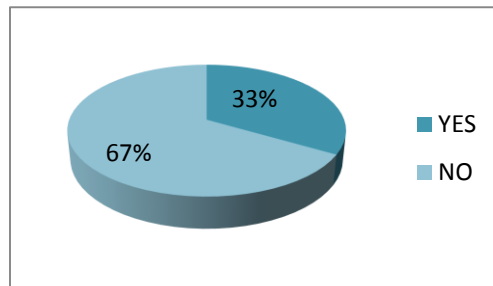
Figure 5. Management of natural reserves/parks/spaces

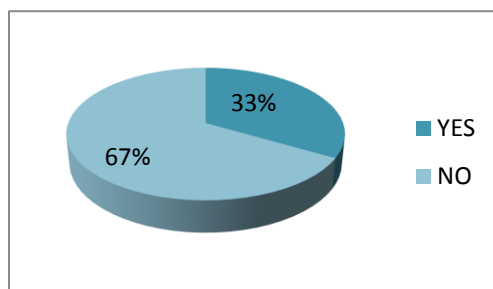Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

10

Figure 6. Promotion strategies for natural heritage management

Summary: Graphs show that the best recognised aspect of natural heritage protection is the use of public space (40%). The third part of archaeology professionals is also familiar with Ecosystems and biodiversity conservation (37%), management of natural reserves/parks/spaces (33%) and the promotion of strategies for natural heritage management (33%). What is relevant in this question is the fact that few cultural heritage professionals know the legal frameworks (both national and international) for natural protection and preservation (20%-27%). This shows that they don't have the legal knowledge to know how to proceed when they work with natural heritage.

Note: As the analysis is made on a base of a quantitative survey, there is no verification of declarations given above. Even if the positive answer ("YES") is marked, it cannot be found what exactly respondents understand by mentioned aspects of the natural heritage management. The qualitative analysis (for example by interviews) could help with resolving this problem in the next stage of the project.

Benefits from integral approach to natural and archeological heritage

Domain	Average mark
Sustainable development	**3,73**
Planning strategies	**3,56**
Landscape management	**3,33**
Tourism	**3,2**
Wellbeing and quality of life of local groups	**3,06**

Summary: According to the surveys, Sustainable development (3,73), followed by planning strategies (3,56) are the two areas that will benefit from integral approach to natural and archeological heritage in Spain. The less important element is Wellbeing and quality of life of local groups (3,06).

Improving competence and performance by enhancing knowledge of natural heritage management

Competences and performance	Average mark
More integrated and efficient landscape protection	**3,7**
More adequate management strategies	**3,6**
Better understanding of the complex nature of landscape, in particular natural and environmental context of human actions	**3,46**
Better communication and social awareness	**2,83**
Application of more efficient mitigation strategies to deal with emerging challenges	**2,36**

Summary: archaeology experts state that a more integrated and efficient landscape protection (3,7) and more adequate management strategies (3,6) will happen if their *competences and performance were supported by a deeper knowledge of natural heritage management.* *Mitigation* strategies wouldn't be affected in their opinion (2,36).

Improving landscape protection by the adaptation of an integral approach to natural and archeological heritage

Improving landscape protection by	Average mark
More efficient integration of landscape with cultural, environmental, agricultural, social and economic policies	**3,63**
Establishing and implementing legal measures aimed at efficient landscape protection	**3,26**

More efficient integration of landscape into regional and town planning	**3,1**
Increasing awareness of value and importance of landscape to the public	**3,03**
Triggering training and educational initiatives in landscape for general public	**2,86**

Summary: An integral approach of natural and archeological heritage in landscape protection will led to a more efficient integration of landscape with cultural, environmental, agricultural, social and economic policies (3,63). This option was by far the most important for the expert, which, on the contrary, weren't that convinced of the increase of social awareness by this integral view (3,03).

Improving landscape management by the adaptation of an integral approach to natural and archeological heritage

Improving landscape management by	Average mark
More effective and efficient use of available resources	**3,53**
More effective and accurate reaction to the needs of sustainable development	**3,3**
More efficient strategies of planning at the regional level	**3,26**
Facilitate better protection of landscape	**3,06**
Better serving the needs of local groups	**2,56**

Summary: An integral approach of natural and archeological heritage in landscape management will led to a more effective and efficient use of available resources (3,53). This option was followed in importance by a more effective and accurate reaction to the needs of sustainable development (3,3) and a more efficient strategies of planning at the regional level (3,26). The least valued answer was a better serving the needs of local groups (2,56).

Improving landscape planning by the adaptation of an integral approach to natural and archeological heritage

Improving landscape planning by	Average mark
More efficient integration of natural and archaeological/cultural heritage into planning strategies	3,96
More explicitly address concerns of different facets of landscape management in implementing planning strategies at different administrative levels	3,13
Better definition of different components of landscape and their hierarchy	3,03
Better definition of the peculiar character of a region	3
Better serving the needs of local groups	2,76

Summary: An integral approach of natural and archeological heritage in landscape planning will led to a more efficient integration of natural and archaeological/cultural heritage into planning strategies (3,96). Archaeologist graded almost with a 4 out of 5 this option, stating one more time that this joint approach wouldn't make it better serving the needs of local groups (2,76).

Value of different elements of the training process

Element	Average mark
Assignments	3,83
Contact with the tutor	3,4
Flexibility of the course	3,23
Cost	2,73
Obtaining a certificate	2,56

Summary: While pursuing a training process, archaeologists value the type of

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

14

assignments of the course (3,83), which means that they give a high value to the content. Flexibility (3,23) and contact with the tutor (3,4) are ranked in the middle, while the cost (2,73) and obtaining a certificate (2,56) are not relevant for them.

2.3.2. Interviews

As with the online questionnaire, each partner should extract a conclusion for each question featured in the interviews to archaeologists. Try to identify the comments and expectations they have regarding natural heritage, their overall degree of knowledge in this domain, and collaborations within both fields.

Give and introduction of the target group/sample:

Sample: 10 face-to-face interviews were carried out with experts from Basque Public University, Archaeological heritage managers from the regional Government of Gipuzkoa, Innobasque and Aranzadi.

Educational Level: all of the respondents have university studies. 40% of them have a Bachelor degree in Geography and History, 30% MA studies related to archaeology, and 30% have a PhD in this field.

Profession: the majority of respondents identify themselves as archaeologists (80%). One of them stated that her main profession is research professor (10%) and another is a public administration worker (10%).

Professional experience: Respondents' professional experience varies, but half of them are working in archaeology related projects for 10- 20 years.

Period of professional experience (years)	Percent of interviewees
<5	10%
between 5 and 10	10%
between 10 and 20	50%

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   UNIVERSITEIT VAN AMSTERDAM University of Amsterdam   Landward Research Ltd.

aranzadi Aranzadi Zientzi Elkartea   InEuropa InEuropa srl   A ROCHA A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

15

between 20 and 30	20%
more than 30	10%
no data	0

Integration of natural and cultural heritage management in their work and specific actions

6 out of 10 interviewees don't integrate natural and cultural heritage management. The other 4 address different issues based on their professional experience.

The first one evaluates the environmental impact of archaeological sites for the public administration; the second, coordinates summer camps that integrate both domains (restoration and landscape management); the third one has recently developed a research project and has helped recovering an endangered plant species based on palynology. The fourth one uses manuals and European directives in her interventions and gives an example of a project that integrates both domains effectively: SPLASHCOS - Submerged Prehistoric Archaeology and Landscapes of the Continental Shelf.

Knowledge of the ecosystems and biodiversity in their area and the strategies to protect, manage, value and promote them

Most of the interviewees (8 out of 10) stated that they know the ecosystems and biodiversity of their area in a general way, and 5 of those 8 are familiar to the strategies to protect, manage, value and promote them.

Three of them had deep understanding of natural heritage management, especially related to Natural Parks and some regional legislation in the Basque Country and Cantabria. Biosphere reservoirs, protected areas and environmental policies are well known by another of our interviewees who works in close collaboration with biologists and rangers. Last but not least, one of the experts is currently involved in a local project in the municipality of Hernani which tries to give value to the medieval and industrial cultural heritage of the riverside of Urumea River as well as raise awareness of its rich biodiversity.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzia Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

16

Skills to ensure natural protection and conservation and methods used for it

5 out of 10 feel like they have enough skills to ensure natural heritage protection while researching in an archaeological site, but they don't specify any concrete method to do that. The other half seek for help in two different ways: one of them, who works for the public administration, has manuals and procedures to ensure it; the other 4 just ask to natural heritage professionals in the preliminary stages of their research in order to see if there's any vulnerable element that they have to take into account.

Collaboration and support from natural heritage professionals

Even if 4 of them already stated that they ask for support in the previous question, 9 out of 10 admit that they collaborate with natural heritage professionals in their field works. It is remarkable that some of them integrate botanists, geologists and rangers to every stage of their research and value this multidisciplinary team work as fruitful. Two of them are usually supported by the regional administration (one of them works there).

A reflection is also given in one of the answers: it is inevitable to alter the natural surface of a landscape while searching for archaeological evidence.

Involvement in landscape management and planning and suggestions for a jointly approach of both domains

Only 3 of the 10 experts are involved in projects that somehow address landscape management and planning. One of them refers to the European Landscape Convention as a useful guide for his interventions, and states that he understands heritage as a whole. Whenever a dolmen, castle or blacksmith is recovered, its natural surroundings are recovered too and the land is free from urbanistic intentions. Another interviewee states that sometimes is impossible not to damage nature while digging.

An archaeologist also refers to a LIFE project about preserving a wetland she was involved in. In the project there was an integral study of both the ecosystem of the area and its cultural elements.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

17

Competences and performance enhanced by developing knowledge of natural heritage management and necessary skills to do that

Most of the experts agree that professionals should have a strong sense of team work and a will to ask for help whenever a natural element of interest is found in an archaeological intervention. A strong leadership in project management is also valued. In addition, they see a need to deepen in knowledge such as botany, zoology, hydrodynamics and geomorphology through courses. One mentions the environmental psychology as an innovative way of enhancing this holistic approach, because it analysis how natural and constructed spaces affect to the behavior of individuals.

Competences that will be perfected include better reporting of the studies; a more adjusted expedition of archaeological permissions; and a better classification of natural elements in order to decide if a special treatment is needed.

Interest in training regarding cultural and natural heritage management

Only 2 out of 10 interviewees have pursued courses related to natural heritage management, basically about legal protection and strategies for promotion of natural sites and attendance to congresses and seminars.

All the respondents were willing to follow a course that would merge both domains.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

18

3. DOMAIN OF NATURAL HERITAGE

3.1. Analysis of good practices

Similar to the analysis carried out in the other domain, Aranzadi has focused the analysis of good practices in natural heritage in two aspects: first, initiatives that somehow integrate both domains are addressed. This mainly involved public administrations and nonprofit organizations who organize courses and volunteer programs to recover a specific area and preserve its cultural and natural heritage. The previously mentioned examples of *Middle Age frontiers of Navarre* and the summer program developed in Tertanga, Molino Ubiros (Araba) are part of this analysis (see 1.1).

The second aspect focuses on a formal VET course (higher education level) aimed to provide competences in planning, management and supervision of natural sites such as mountains, seedbeds and garden centres. The course is really practical and is delivered by Fraisoro Baserri Eskola, Training centre integrated in Itsasmendikoi (Center for Training, Insertion and Development of rural and littoral areas – Basque government), which is closely related and works in cooperation with archaeological associations such as Aranzadi.

This training provides   The course validates the acquired skills with an official certificate issued by the Basque Governement.

3.2. Analysis of relevant publications

Similar to the analysis carried out in the other domain, the publications for natural heritage management are also divided in three groups: the first and second are already mentioned in point 1.2 (publications I, II, III, IV, V, and VI). And the third one refers to those who address solely natural heritage management issues.

The ninth publication, **Basque Coast Geopark: General Interpretation Plan**, is a diagnosis of the Basque Coast Geopark and its objective is to define the strategies for the management of this natural heritage and its elements. The manual analysis all the relevant aspects to be taken into account when establishing a Geopark.

The most interesting aspect of this publication is the identification and hierarchy of the different cultural and natural elements within the park, and the way the manual proposes to use them as a touristic attraction, a place for leisure, research and training. The document gives good example of a well-integrated management of cultural and natural heritage, and could be used as a reference for training purposes.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

19

The tenth publication, **Manual of Good Environmental Practices in tourism and Natural Areas of Catilla and Leon**, is a compilation of Good Environmental Practices in Natural Areas of the region of Castilla and Leon (Spain). The aim of this document is to inform, guide and teach regional promoters to develop a sustainable touristic offer, based on the European Charter of Sustainable Tourism in Protected Areas. It is also focused on involving locals in the management of this Natural Areas and inspire them through the good practices gathered within the manual.

The manual gives basic information and concepts about natural heritage and protected areas based in European recommendations. It also features the local, regional and national legal framework in an easy and understandable format to train the interested reader in sustainable development. In addition, it includes a range of good practices that give coherence and body to the manual, which is designed for trainers and experts who want to introduce sustainability and heritage management in the sector of tourism and, overall, the regional economy of Castilla and Leon.

Conclusion

In the case of VET in natural heritage, courses are mainly face-to-face, oriented solely to landscape management/planning. The lack of online courses is a handicap for natural heritage professionals.

As for the joint approach of archaeology and nature, there are significant examples, mainly manuals and managements plans of preserved natural sites that keep an eye on their cultural elements and their preservation. In addition, informal training such as summer camps and volunteering programs are introducing a broader view on heritage and its many faces. This is a good starting point, but there's still much more to do in Spain as for the educational part. Some regional governments are sensitive to the integral view of heritage, but the benefits of studying both domains is still to be embedded to the Spanish educational system.

3.3.   Analysis of needs of target groups

3.3.1.   Online Questionnaires

In this section, each partner should extract a conclusion for each question featured in the Online Questionnaire. After giving the average score for each element of the question (from 1 to 5), give a summary or reflection on the results (a short paragraph).

Partners:

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

www.e-archaeology.org/anher

20

Give and introduction of the target group/ sample:

Methodology: Grades go from 5 (highest) to 1 (lowest). Some participants didn't follow the instructions and gave the same grade to two or more items in the same question. Therefore, the importance given to some elements is equal in some cases.

Respondents: Aranzadi sent the questionnaires to their 1700 associates, who represent professionals from institutions, universities and private businesses in Spain, and more specifically in the Basque Country, that are related to archaeology and biodiversity. Overall, 23 people responded to the questionnaire for natural heritage professionals. Respondents did not declare any personal data and sexual differentiation was not taken into account during the analysis.

Educational Level: most of the respondents have university studies (87%), of which 17,4% have a MA and 34,8% have a PhD.

Profession: the majority of respondents identify themselves as biologists (60,9%), followed by teachers/lecturers (30,4%) and rangers (8,7%). None of them are ecologists or administration workers.

Years of professional experience: Respondents' professional experience varies, but the sampler covers all the year range homogeneously (around 20% except the last category – more than 30 years). This demonstrates that both young and experienced professionals took part on the survey.

Period of professional experience	Percent of respondents
<5	17,4%
between 5 and 10	21,74%
between 10 and 20	30,43%
between 20 and 30	17,4%
more than 30	13,04%
no data	0

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

21

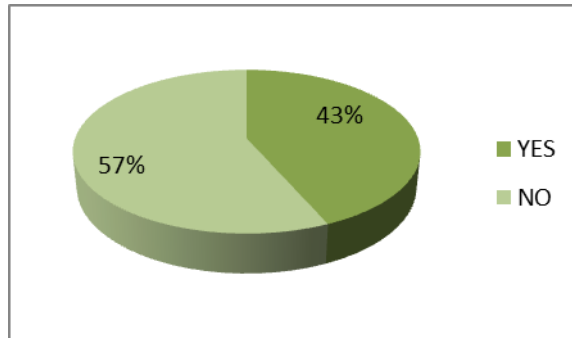*The knowledge of the archaeological heritage management aspects*

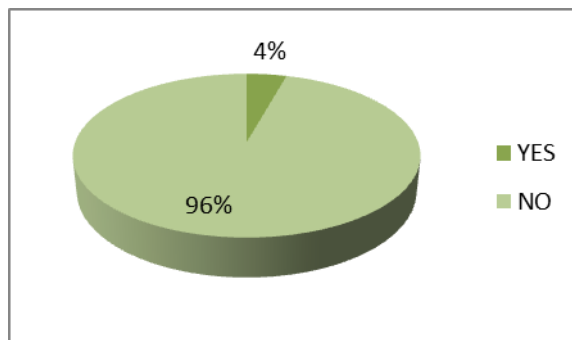**Figure 7. National legal frameworks for archaeological protection and conservation**

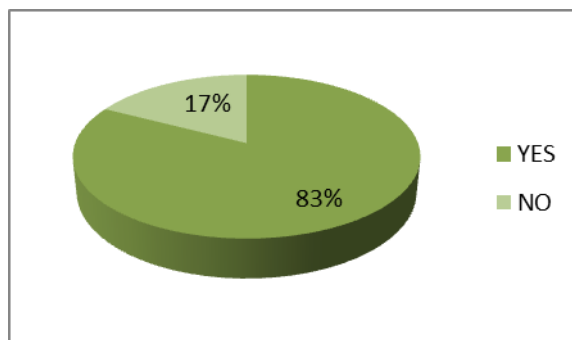**Figure 8. International legal frameworks for archaeological protection and conservation**
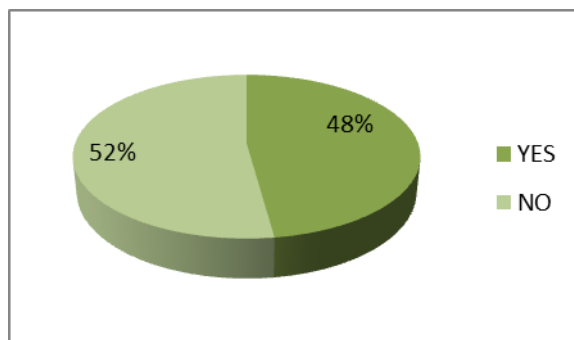

Figure 9. The concept of cultural landscape

Figure 10. Significance and role of archaeological heritage management
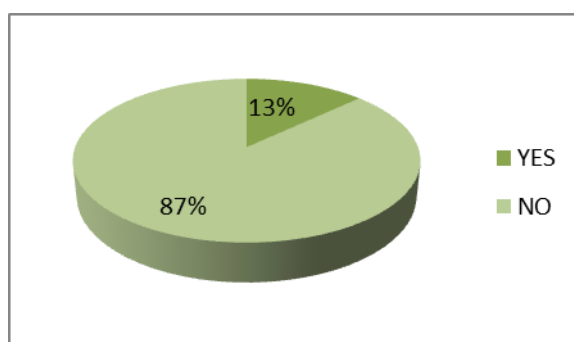

Figure 11. Promotion strategies for archaeological heritage management

Summary: Graphs show that the best recognized aspect of cultural heritage protection is the concept of cultural landscape (83%). Nearly half of the natural heritage professionals are familiar with National legal frameworks for archaeological protection and conservation (43%) and the significance and role of archaeological heritage management (48%). On the other hand, few are aware of the promotion of strategies for archaeological heritage management (13%), while almost no one knows the international legal frameworks for archaeological protection and conservation (4%).

Note: As the analysis is made on a base of a quantitative survey, there is no verification of declarations given above. Even if the positive answer ("YES") is marked, it cannot be found what exactly respondents understand by mentioned aspects of the natural heritage management. The qualitative analysis (for example by interviews) could help with resolving this problem in the next stage of the project.

Benefits from integral approach to natural and archeological heritage

Domain	Average mark
Sustainable development	**3,52**
Planning strategies	**3,35**
Wellbeing and quality of life of local groups	**3,26**
Landscape management	**3,09**
Tourism	**2,69**

Summary: answers show that a more sustainable development would be the most important consequence of an integral approach to natural and archaeological heritage (3,52), followed closely by planning strategies (3,35) and wellbeing and quality of life of local groups (3,26). Tourism (2,69) is the least important aspect for respondents.

Improving competence and performance by enhancing knowledge of archaeological heritage management

Competences and performance	Average mark
More integrated and efficient landscape protection	**3,95**
Better understanding of the complex nature of landscape, in particular natural and environmental context of human actions	**3,91**
More adequate management strategies	**3,87**
Application of more efficient mitigation strategies to deal with emerging challenges	**2,48**
Better communication and social awareness	**2,17**

Summary: nature experts state that a more integrated and efficient landscape protection (3,95), a better understanding of the complex nature of landscape, in particular natural and environmental context of human actions (3,91) and more adequate management strategies (3,87) will happen if their *competences and* performance were supported by a deeper knowledge of archaeological heritage management. Mitigation strategies (2,48) and social awareness (2,17) wouldn't be that

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

24

much enhanced.

Improving landscape protection by the adaptation of an integral approach to natural and archeological heritage

Improving landscape protection by	Average mark
More efficient integration of landscape with cultural, environmental, agricultural, social and economic policies	**3,95**
More efficient integration of landscape into regional and town planning	**3,52**
Establishing and implementing legal measures aimed at efficient landscape protection	**3,43**
Increasing awareness of value and importance of landscape to the public	**3,13**
Triggering training and educational initiatives in landscape for general public	**2,48**

Summary: An integral approach of natural and archeological heritage in landscape protection will led to a more efficient integration of landscape with cultural, environmental, agricultural, social and economic policies (3,95). This option was by far the most important for the experts, followed by a more efficient integration of landscape into regional and town planning (3,52) and establishing and implementing legal measures aimed at efficient landscape protection (3,43). On the contrary, experts think that this wouldn't trigger training and educational initiatives in landscape for general public (2,48).

Improving landscape management by the adaptation of an integral approach to natural and archeological heritage

Improving landscape management by	Average mark
Facilitate better protection of landscape	**4,17**
More effective and efficient use of available resources	**3,34**

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

25

More efficient strategies of planning at the regional level	**3,30**
More effective and accurate reaction to the needs of sustainable development	**2,91**
Better serving the needs of local groups	**2,17**

Summary: An integral approach of natural and archeological heritage in landscape management will facilitate a better protection of landscape (4,17). This option was by far the most important, followed by *a more effective and efficient use of available resources* (3,34) and a more efficient strategies of planning at the regional level (3,30). The least valued answer was a better serving the needs of local groups (2,17).

Improving landscape planning by the adaptation of an integral approach to natural and archeological heritage

Improving landscape planning by	**Average mark**
Better definition of different components of landscape and their hierarchy	**3,82**
More efficient integration of natural and archaeological/cultural heritage into planning strategies	**3,56**
More explicitly address concerns of different facets of landscape management in implementing planning strategies at different administrative levels	**3,39**
Better definition of the peculiar character of a region	**3,34**
Better serving the needs of local groups	**2,26**

Summary: An integral approach of natural and archeological heritage in landscape planning will led to a better definition of different components of landscape and their hierarchy (3,82). Natural heritage professionals gave also importance to a more efficient integration of natural and archaeological/cultural heritage into planning strategies (3,56). On the other side, this joint approach wouldn't make it better serving the needs of local groups (2,26), as stated in the previous question.

Value of different elements of the training process

Element	Average mark
Assignments	**3,26**
Flexibility of the course	**2,95**
Cost	**2,91**
Contact with the tutor	**2,21**
Obtaining a certificate	**2,17**

Summary: While pursuing a training process, biologists value the type of assignments of the course (3,26), which means that they give a high value to the content. Flexibility (2,95) and cost (2,91) are ranked in the middle, while the contact with the tutor (2,21) and obtaining a certificate (2,17) are not relevant for them.

3.3.2.   Interviews

Sample: 10 face-to-face interviews were carried out with experts from Basque Public University, the regional Government of Gipuzkoa and Aranzadi.

Educational Level: all of the respondents have university studies. 60% of them have a Bachelor degree in Biology, 10% MA studies, and 30% have a PhD in this field.

Profession: the majority of respondents identify themselves as researchers (40%). One of them stated that her main profession is research professor (10%) and another is a public administration worker (10%).

Professional experience: Respondents' professional experience varies, but half of them are working in natural heritage related projects for 10- 20 years.

Period of professional experience (years)	Percent of interviewees
<5	0

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

27

between 5 and 10	30%
between 10 and 20	50%
between 20 and 30	20%
more than 30	0
no data	0

Integration of natural and cultural heritage management in their work and specific actions

Half of the interviewees integrate cultural heritage management in their daily jobs. Most of them state that they've participated in multidisciplinary projects of preserving the heritage of an area (mainly LIFE projects). Among these, they are remarkable: a project for preserving reptiles in the fortification walls and castle of Urgull (San Sebastian); educational projects that involve elementary schools and local authorities to create micro-wetlands and preserve drinking troughs; and buffer zones and cataloguing of cultural elements (dolmens, cromlech, cists,…) in mountain ranges.

The other half doesn't integrate a cultural perspective to their jobs and don't see it necessary.

Knowledge of the archaeological heritage in their area and the strategies to protect, manage, value and promote it

6 out of 10 stated that they know the archaeological their area in a general way, but no one is familiar to the strategies to protect, manage, value and promote it. Only one of them states that he has maps of protected megalithic areas and knows some promotion strategies of historical sites in the Basque Country.

Skills to ensure archaeological protection and conservation and methods used for it

Only 1 out of 10 interviewees claims to have enough skills to ensure cultural heritage protection while managing a natural site. He is currently involved in a local project to restore a pond and has faced an unexpected discovery of an archaeological element which altered the course of the project. Thus, he is in touch with archaeologists and the regional government in order to put both natural and cultural elements in value and design a common plan for restoration of the place.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

28

The other 9 respondents don't have any skill related to archaeological protection and conservation, and few don't see it necessary. Nevertheless, it is remarkable the comments of the ranger: he's in charge of a vast mountainous area and, on a daily basis, he comes across cultural elements that may be important to preserve, but doesn't have the necessary training nor help to protect them.

Collaboration and support from cultural heritage professionals

7 out of 10 admit that they collaborate with cultural heritage professionals in their work. Some mention technicians from local authorities that help them identify potential cultural elements; others have direct contact with archaeologists and have worked together in integral projects.

Involvement in landscape management and planning and suggestions for a jointly approach of both domains

6 out of the 10 experts are involved in projects that somehow address landscape management and planning. One of them was involved in a LIFE project that addressed the cultural immaterial value of pollarding trees, how they affected in landscape management and planning and its effect on saproxylic insects.

Another one collaborates with the planning of a natural site in the municipality of Zerain alongside other botanists, herpetologists and an archaeologist; there's one expert who is part of a council for regional landscape planning of Goierri, a mountainous interior county of Gipuzkoa region; an herpetologist states that his team alters landscape by constructing artificial ponds for amphibians; the ranger is involved in large scale forest management.

They all agree that both domains should be jointly addressed, but there are some reluctant comments on how to do it. One of the interviewees states that a neglecting management of cultural heritage (i.e. archaeological interventions) affects aggressively in natural heritage than the other way round, especially in anthropic areas.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

29

Competences and performance enhanced by developing knowledge of cultural heritage management and necessary skills to do that

Management competences (better schedule planning, team building) and a polyvalent attitude towards both domains will enhance their performances. A better classification of cultural elements within natural sites is also mentioned.

Most of the experts agree that professionals should have a strong sense of team work and a strong command from the promotors of environmental policies. One of the biologists suggests that technological literacy is an important tool for a better performance in both domains, GIS for instance.

Interest in training regarding cultural and natural heritage management

No one has pursued courses related to cultural heritage management, but all of them were willing to follow a course that would merge both domains.

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

30

4. CONCLUSION

Taking into account the data gathered in both analysis, the current situation in Spain regarding VET in cultural and natural heritage is encouraging. Even if it is difficult to find a joint approach to both domains in the educational system, attempts to an integral view are gathered in various manuals and action plans in protected natural sites and in the policies of some regional governments. Online courses are still to be exploited and happen to be increasing in success, especially for archaeology professionals. This gives us a hint on how ANHER project and the final output could be an innovative offer for professionals that need to be polyvalent in their jobs.

The analysis of the needs of our target groups have shown that, in the Spanish context, professionals have basic knowledge of the other domain and experience a lack of skills to solve the problems that arise while researching or implementing a management plan. The vast majority agrees that a joint approach would enhance sustainability and protection of the landscape and its cultural and natural elements. Another conclusion is that experts rely on other professionals in order to solve these issues, giving importance to collaboration between different fields. In this sense, they see as essential to build up multidisciplinary working teams, where archaeologists will work alongside biologists, rangers, geologists, architects, etc. to develop actions in delimited spaces.

Some answers in both the online survey and the personal interviews have shown a mistrustful attitude towards the integration of both domains. Natural heritage professionals blame archaeologists of not taking natural elements into account when doing an intervention, a fact that is in contrast with the opinion of some archaeologists, who say that it is inevitable to damage the landscape and ecosystem of a site in some degree. The neglectful performances are often tolerated by a lack of control from the authorities, who often don't monitor the natural/cultural heritage management projects supported by them.

It is also remarkable that archaeological heritage professionals have a deeper knowledge of natural heritage management than the other way round. Natural heritage managers are, in general, more sceptic towards archaeology. Legal frameworks are a pending lesson for both groups, especially the international legal framework. Only one out of 20 interviewees makes an explicit reference to the European Landscape Convention.

For natural heritage professionals it's easy to understand the concept of cultural landscape (83%) but, as for management and promotion strategies, less than a half of them are familiar with them. For archaeologists, only a third part of them are familiar to the Ecosystems and biodiversity conservation in their area (37%), the

management of natural reserves/parks/spaces (33%) and the promotion of strategies for natural heritage management (33%). These facts show an average-low of the other domain, which shows that there's room to improve in each fields.

As for VET, it is clear that professionals demand online courses that could be flexible to their timetables. The quality of the information is the key to success of these courses as stated in the questionnaires, and experts are open to enroll in trainings that integrate both natural and cultural heritage management (19 out of 20 interviewees answered positively to this question).

Overall, the Spanish National Report shows that ANHER aims are achievable as there's a need to deepen in a holistic view of heritage management.

5. **Annex I: Publications (in English)**
6. **Annex II: Good practices (in English)**
7. **Annex III: Interviews (in national language)**

Partners: www.e-archaeology.org/anher

Uniwersytet im. Adama Mickiewicza w Poznaniu   University of Amsterdam   Landward Research Ltd.

Aranzadi Zientzi Elkartea   InEuropa srl   A Rocha - Associação Cristã de Estudo e Defesa do Ambiente

32