


NATIONAL REPORT POLAND

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1. INTRODUCTION

The ANHER project is the first attempt to produce integrated didactic materials systematically addressing wide concerns of both archaeology and natural heritage professionals. The high quality materials shall be produced following a detailed analysis of the state-of-the-art in both types of heritage, in particular their dynamically changing roles in different domains of contemporary Europe. Additionally, an analysis of existing training courses in both sectors will be conducted to attest the skills of archaeologists in the green sector as well as the natural sector professionals' understanding of the concerns of archaeological heritage. The achieved results will make it possible to define didactical needs of both groups in terms of training content and didactic methods. The produced courses will cover the most appealing issues of integrated approach to conservation and management of archaeological and natural heritage and their impact upon planning policies and development.

In general terms, the project will explicitly address challenges and needs of a vocational education and training using different methods of distance learning in the domain of integrated archaeological and natural heritage. Hence, it will promote the professional development of staff and potential new employees. The project will also involve the training of selected groups of end users delivered in national languages of the project partners. This will further facilitate the validation of non-formal and informal learning and its permeability with formal education pathways. As different modes of distance learning be applied, these activities will promote ICT skills of both trainers and trainees. Moreover, the project intends to expand and strengthen a group of teachers/trainers and different didactic bodies responsible for delivering vocational training. Hence, it explicitly postulates setting up the Centers of Integrated Heritage Teaching Excellence.

The ANHER project is explicitly based upon outcomes of two LdV projects (PL/07/LLP-LdV/TOI/140017; 2010-1-PL1-LEO05-11465) and it aims to transfer both methodology of course production and training, as well as use of didactic materials stored in the Content Repository (<http://www.e-archaeology.org/contentrepository>). The didactic content will be produced applying innovative practices in education and training by providing personalised learning approaches and collaborative learning thanks to a wide variety of distance learning methods in accord with different needs of different beneficiaries. All newly produced didactic materials will be stored in the Content Repository - a kind of interactive database of e-learning resources in the field of protection and management of archaeological heritage. Its major functionality is a capacity to create tailored e-learning content to meet needs of different trainees. Flexible content authoring supported by the web-based Content Repository software enables the storage and processing of distance learning content in a SCORM standard, so as to facilitate its further expansion and enlargement.

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The project aims to produce a range of new didactic materials covering the most pertaining aspects of the green archaeological heritage and archaeological dimension of natural heritage. The innovative didactic content will have a form of eight modules covering such issues as sustainability of archaeological landscape management and nature conservation planning, nature conservation of archaeological resources, land use in perspective of integrated archaeological and natural heritage, archaeological and natural heritage in landscape planning and policy analysis, integrated floodplain management and its impact upon archaeological heritage, integration of archaeological heritage into historical landscape and the built environment, archaeological heritage in the process of decision making in the natural heritage sector, etc. Two modules will provide a systematic training of trainers and teachers using different method of distance learning, in particular covering complexity training delivery, including specifying needs of trainees, production of course curricula, use of available didactic resources, delivery of training to different target groups using methods of distance learning, etc.

The project team is made of partners from six European countries: the Netherlands (Amsterdams Archeologisch Centrum, Universiteit van Amsterdam), Great Britain (Landward Research Ltd), Portugal (A Rocha - Associação Cristã de Estudo e Defesa do Ambiente), Italy (InEuropa srl), Spain (Aranzadi Zientzi Elkarte) and Poland (Instytut Prahistorii, Wydział Matematyki i Informatyki, Uniwersytet im. Adama Mickiewicza w Poznaniu).

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2. DOMAIN OF ARCHAEOLOGICAL HERITAGE

2.1. Analysis of good practices

The Polish state in order to fulfill current policy of European funding perspective 2014-2020 is obligated to train professionals and support financially cultural institutions in implementing training programs and courses. As the current funding perspective is being introduced, more courses and trainings will be provided, conducted and evaluated publicly, most beneficially via the internet.

However, until now most conducted courses were rather not made publicly known or published. In order to present good practices in vocational training in archeological heritage, their three different forms be discussed (a) online courses, (b) stationary courses and (c) conferences. Representative examples from each category will be presented to provide a comprehensive overview of major activities in the domain of vocational training in archaeological heritage in Poland. All of them were categorized, where the following issues were listed: location, title of the training, name of organization organizing the training, type of organization, abstract/summary, key concepts, target groups, skills/competences, methodology, accessibility of materials, references and additional material.

However, the conducted analysis revealed that a vast majority of vocational trainings carried out to date have addressed either one of the other heritage, very rarely both. In this section a number of courses in the domain of archaeological heritage will be discussed.

A representative vocational training in the domain of archaeological heritage in the form of a stationary course has been conducted in Kraków. The course was addressed to volunteers and members of the *Archeologia Foundation*. It was run by the Foundation with the financial assistance of the Ministry of Labour and Social Policy. The course was entitled “Solid management as a tool in archeological heritage protection” and was aimed to train participants, mainly foundation employees and volunteers, in a joint endeavours to actively protect archaeological heritage during the Foundation run projects. In particular, the participants learnt the basics of a teamwork getting to know each other. A wide range of issues were taught, such as legal matters in the domain of archeological heritage or geophysical methods used in archeological research and protection of cultural landscape. However, the main focus was on the efficient means of funds raising for protection of archaeological heritage. This is the main objective of the *Archeologia Foundation*. Moreover, the course participants were taught how to build up a well-organized and harmonious team aimed at activities in the domain of protection of cultural heritage. The selection of a narrow group of end users, including the Foundation employees and volunteers, was dictated by focus on

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knowledge popularization and dissemination of awareness of a significance of heritage and its protection. The course was aimed to teach the trainees to better achieve this goal.

The course was carried out during four two-days blocks in approximately 2 weeks gaps. Its completion was not formally completed by any test or any other kind of homework but on the basis of participation in seminars. The course participants did not get any certificate proving acquired skills and competences in archaeological heritage protection or fundraising.

The second representative training had a form of e-learning course. “Vocational training system in archaeological heritage based upon e-learning resources” carried out as a part of the Lifelong Learning Programme Leonardo da Vinci II Transfer of Innovation, Multilateral Cooperation Projects entitled ‘E-learning as a tool of knowledge transfer in the field of protection and management of archaeological heritage’. It was addressed to a range of end users including staff of heritage offices, extramural students, architects, teachers and other groups that are interested in archaeological heritage.

The course modules were available on e-learning platform in the duration of the project. The completion of the course was possible after completing of all allocated tasks, including preparation of a joint essay. All modules prepared in the project were made available to the trainees.

The following modules were prepared in the project and then translated into Polish:

- Archaeological heritage in contemporary Europe for professionals employed in heritage sector for graduate and extramural students of archaeology
- Social challenges of archaeological heritage for culture heritage employees
- Archaeological heritage and development for culture heritage employees
- Issues in contemporary archaeological heritage management for early career historic environment professional practitioners
- Engaging with the public for archaeologists working in various institutions or companies
- archaeology in action for local administration employees
- the archaeological past for school teachers

The aims of the training was to improve skills of professionals of different professions (mainly cultural or heritage oriented institution employees) and disseminate knowledge on archaeological heritage, explicitly designated for needs of various end users. Besides a wide diversity of the offered courses, being itself an advantage, this vocational training program was carried out online, what cut down travel costs and making possible to study and work in domestic settings.

There was only a single example of training combining both: archeological and natural heritage. It was carried out during a conference on natural and archeological

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heritage, and their mutual relationships. A conference “Natural history of forest – how to recognize, study and protect historical heritage in forests” was organized by the National Heritage Board, as a part of bigger project, ‘Research Potential in the Protection and Sustainable Management of Biodiversity – BIOCONSUS’. The topic of this day long lectures involved a cooperation of archaeologists and foresters as such, and possibilities to distinguish historical sites in forests. It was aimed at facilitating a cooperation between these two professions, which is believed to be a pertaining issue in order to protect both, archeological and natural heritage as a whole, integrally not separately. The participation in the course of lectures was certified in the form of diploma.

The analysis presented above revealed that trainings in the domain of archaeological heritage in Poland subject are relatively uncommon and carried out in a number of different formats. However, their curricula are clearly ambitious and they intend to grasp the newest and most pertaining issues. All of them are to provide participants with the newest issues in the domain and to address the newest developments in protection of national heritage. The analysis of good practices seem to indicate that the training curricula are designed holistically, which reflects an approach to archaeological heritage in Poland. As target groups are well defined, the analysed courses are mainly designed for a wide range of employees of different professions, and they are modified to meet their expectations.

2.2. Analysis of relevant publications

A similar situation as in case of vocational training refers to the analysis of relevant publications addressing integrated issues of cultural and natural heritage. They either refer to the one or the other, while the works integrating both are rare.

This overview presents the results of the analysis of relevant publications, including manuals, textbooks and academic publications dealing with vocational training in the domain of cultural and natural heritage. In particular, the analysis aimed to: (a) address the character of the heritage sector in Poland, (b) identify major concerns of heritage in Poland, (c) discuss different formats of VET in Poland, (d) discuss the training modes in both sectors, and (e) present training methodologies relevant to the project.

In order to meet the above mentioned recommendations, five different publications have been analysed. They discuss general issues of archaeological heritage, its legal status, ways of protection (present and future) and education in Poland. The first publication entitled “Archaeological guide for investors, engineers and building contractors” was prepared by Arkadiusz Marciniak and Arkadiusz Klimowicz as a result of the Leonardo da Vinci II project ‘Archaeology and Construction Engineering Skills’. The report aims to educate professionals in the domain of archaeological heritage and construction engineering about their own field

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to facilitate better understanding and cooperation between both professions. In particular, it aims to present both domains in a comprehensive and synthetic way and shows a significance of preservation of archaeological heritage for the benefit of the society at large. The publications discusses a number of relevant issues including: (a) a general prehistory of Polish territory, (b) an overview of major types of archaeological sites, (c) the character of archeological process and its constituent elements, and (d) legal situation and the organizational structure of archeology and archaeological heritage management. It is conclude by discussing a number of relevant archaeological projects in relation to large investments is considered, which are of major concerns for the archaeological and constructional sectors alike.

The second publication “Analysis of infrastructure needs in the area of cultural heritage, artistic education and cultural infrastructure in Poland in the context of financing in future EU perspective and compliance with the objectives of the Strategy Europe 2020 and flagship initiatives” was written by Bartosz Ledzion, Paweł Kościelecki, Alicja Weremiuk, Andrzej Gołoś of the commission of the Ministry of Culture and National Heritage. The main objective of the study was to recognize the needs in relation to the present state of preservation of cultural heritage, cultural and artistic education infrastructure in order to develop areas of support and directions for interventions in EU funding for the future financial perspective 2014-2020. The report is based upon results of survey designed to identify and develop areas and scope of support which should be included in the future financial perspective, consistently with the objectives of the Europe 2020 Strategy and the flagship initiatives, which will be used for the preparation of proposals for provisions in the new national program 2014-2020 operating perspective, supporting the area of culture. Amongst other topics, report considered need of introduction of new courses which would improve competency of professionals in area of culture, employed by governmental, public and private institutions responsible for heritage and culture protection. Reports shows, that in past perspective such undertakings where neglected, and propose new financial strategy in order to improve not only funding system but also level of obtained knowledge during courses and workshops supported by EU finances.

The third publication “Crossroads of protection of cultural heritage in 2011” was a part of edited volume “Monument protection system in Poland – diagnosis, analysis, propositions” and prepared by Bogumiła J. Rauba. This a thorough analysis of the present situation in this domain. It brings about different solutions to overcome recognized shortcomings and proposes different activities and steps to be taken in order to more effectively protect cultural heritage. The edited volume “Monument protection system in Poland – diagnosis, analysis, propositions” has been financed by the Heritage Office of the Capital City of Warsaw. It aims at presenting the most pertaining issues of conservation and discussing a range of activities to be taken in order to protect heritage from the national institutions standpoint. The author points out numerous issues related to the nature of social processes, namely taking dynamic

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changes in civil society into consideration and growing interest in heritage in the public domain. The article further stresses different solutions to improve the heritage protection system and legal regulations. All these issues are to be seen as an outcome of general tendencies in the domain of protection of cultural heritage in Poland. The author concludes by urging people responsible for heritage protection for implementing more efficient and effective solutions in heritage protection.

The fourth publication is related to both archaeological and natural heritage. It is entitled “The new direction of conservation training, a successful combination of monuments and nature protection” and it was published by Jakub Lewicki in edited volume “Teaching and popularization of heritage protection”. The author provided the background of teaching protection of cultural and natural protection as an intrinsic part of the university curricula. In particular, he discussed the-state-of-the-art of relations between these two domains in Poland and presented examples of a fruitful relations between them. The article sums up the state of affairs in Poland and advocated a need of education of both cultural and natural heritage in an integrated way. It should become intrinsically related to the protection of the Polish national heritage.

The volume is an outcome of the conference “Teaching and popularization of heritage protection” held in Warsaw in December 2013. It was organized in the form of two thematic blocks: (a) teaching with 18 presented lectures and (b) popularization discussed in 7 lectures. The main goal of the conference was to present an educational system at Polish universities, mainly in terms of the role of conservation and heritage as well as the public outreach and popularization of heritage protection, as exemplified by particular projects, participation in public domain, and activities of cultural institutions.

The fifth publication providing some insight into training in the domain of archaeological heritage domain is an internet report “Good course of interpretation of heritage. Our experience in the project InHerit”. The documents is aimed at reporting the experience gained during participation of the Malopolska Cultural Institute in the InHerit project. The project’s objective was to enable heritage related employees to increase a capacity for competence oriented on non-formal learning in inspiring contexts that may improve adult learning potential at heritage sites, through professional development of managers and educators at these sites. In-service training courses at the European and national level strengthened their competences to realize the full potential of heritage interpretation for non-formal and informal learning.

The report focused on the specificity of Poland and needs of local stakeholders in producing high quality courses in the domain of heritage protection. They should meet a number of criteria: (a) combination of theory and practice, (b) answers adequate for needs of specified social group, (c) course be conducted by professionals with practical knowledge who are in a position of an adequate understanding of heritage, (d) course results be used in practice, and (e) course have an impact on the functioning of the entire organization, not just improve the skills of its staff.

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The report further presents a good practice in conducting vocational courses in the domain of heritage interpretation. The experience of MCI should be taken into account while producing courses that are of high quality and efficiently spread out the knowledge.

The last of the analysed publications in the archaeological heritage domain is the “Manual of good practices of protection of Żuławy monuments” published as a part of larger project named “Rescuing monuments”. The main aim of the project was to introduce good practices in monuments protection. The publication includes a range of suitable case studies exemplifying good practices in the region of Żuławy (northern Poland), providing an adequate theoretical background for different ways of protection of local heritage that is well supported by relevant publications.

The following aspect of the protection of local heritage are discussed, as manifested by titles of subsequent chapters: (a) rescuing monuments, (b) understanding of cultural landscape, (c) about rescuing of Żuławy, (d) rescue activities, (e) protection of monumental commentaries, (f) international cooperation, (g) new function of monuments, (h) preservation of monuments, (i) non-government and local government museums, and (j) raising funds for protection of monuments.

The guide presents thoroughly the state-of-the-art of numerous activities in protection of local heritage in the region of Żuławy.

The analysed publications are representative for the current situation in providing training in the domain of archaeological heritage in Poland. They all postulate the need of changes in legal regulations and different financing system. Interestingly though, they all stress the need of integrated protection of archaeological and natural heritage. This call may soon result in implementing some kind of practical solutions and actions that will be an important step forward in realizing these postulates. A comprehensive protection of heritage appears to be a burning issue awaiting a satisfactory solution. Some of the reviewed publications on training solutions in the domain of archaeological heritage protection may well serve as suitable manuals for professionals from the natural heritage domain, who would like to train themselves in the matters of protection of archaeological heritage. A particular suitable from this standpoint seems to be a guide “Archaeological guide for investors, engineers and building contractors”, which one step after another presents archaeology and all the elements of the archaeological process. Of similar significance may be the “Manual of good practices of protection of Żuławy monuments” despite the fact that it explicitly refers to a specific case study. The publications, which present protection of archaeological heritage as a process described in consecutive steps, including theory, methodology and case studies may serve as very good introductory handbooks for specialists in natural heritage, who are eager to know more about archaeology, and its ways of protection of heritage. Such publications may also serve as a kind of must-read for participants of vocational trainings oriented on archaeological heritage, whose profession does not include primary archaeological training.

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2.3. Analysis of needs of target groups

2.3.1. Online Questionnaires

Introductory remarks

1. **The questionnaire** template was prepared by the partners of the project. It was then translated into national languages and used in all countries participating in the project. It consists of a part with a statistical data (profession, education, years of experience) and eight questions. It refers to the most pertaining issues address in the project.
2. **Questionnaires** in a number of approx. 120 were sent out to archaeological heritage professionals from all of sixteen Provincial Heritage Monuments Protection Offices in Poland and all their Regional Departments as well as major Archaeological Museums and the National Heritage Board of Poland. The aim was to get a representative result at the national level. The analysis below is based upon 21 questionnaires. The responders did not reveal their personal data. A sexual differentiation was not taken into account during collecting and analyzing the material.
3. **Education:** More than 95% of respondents have the higher education (MA). 4,76% declared degree higher than Master (Doctorate). Any of respondents marked education on the level of Bachelor or lower.
4. **Profession:** In this question respondents could choose from the following option: archaeologist, building/heritage conservator, teacher/lecturer, public administration worker. It has to be noted that archaeologist (in Poland) is both a professional title and a profession, therefore it was frequent more than one option chosen (for example “archaeologist” and “heritage conservator”). 85,68% of respondents declared their profession as an archaeologist. A significant number (33,32%) reported a “public administration worker” as their profession (one person added “worker of the National Heritage Board of Poland). The other 19,04% declared themselves as building/heritage conservators. 4,76% among all reconders did not declare any profession. Also 4,76% added “art historian” as the profession.
5. **Years of professional experience:** Respondents declared the period of the professional experience by giving a number of years. The following options were provided: <5; between 5 and 10; between 10 and 20; between 20 and 30; >30. The table below presents the results:

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Period of professional experience	Percent of respondents	Number of people
<5	0,0	0
between 5 and 10	19,04	4
between 10 and 20	28,56	6
between 20 and 30	9,52	2
more than 30	19,26	4
no data	23,80	5
Total		21

The knowledge of the natural heritage management aspects

In the question Q2 by marking “YES” or “NO” respondents declared their familiarity with chosen aspects of the natural heritage management. They could pick just one option. Any other options (such as “Other” or “Partly”) were not included into the questionnaire. The results are as follow (in numbers and in percent):

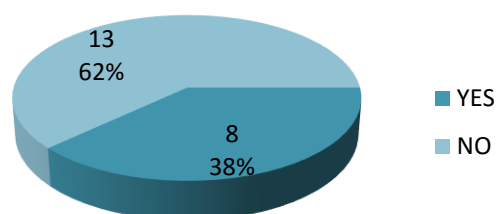


Figure 1. National legal frameworks for natural protection and conservation

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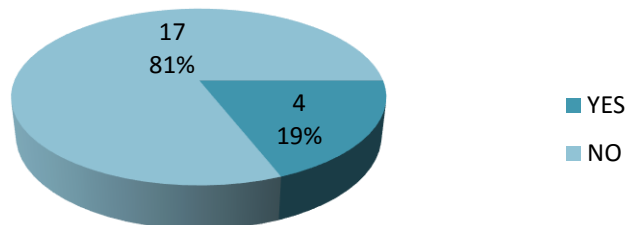


Figure 2. International legal frameworks for natural protection and conservation

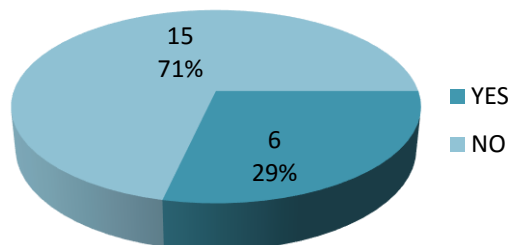


Figure 3. The public use of natural space

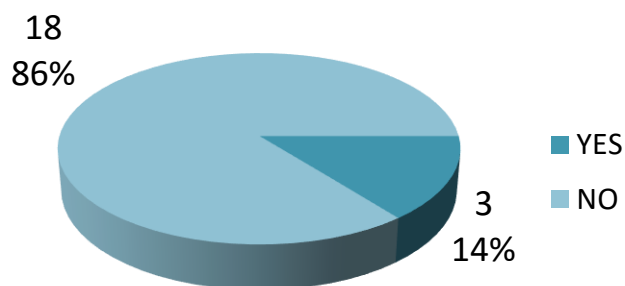


Figure 4. Ecosystems and biodiversity conservation

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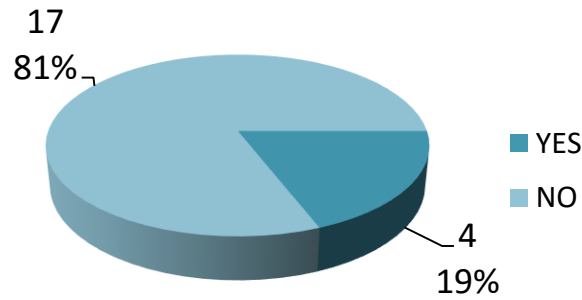


Figure 5. Management of natural reserves/parks/spaces

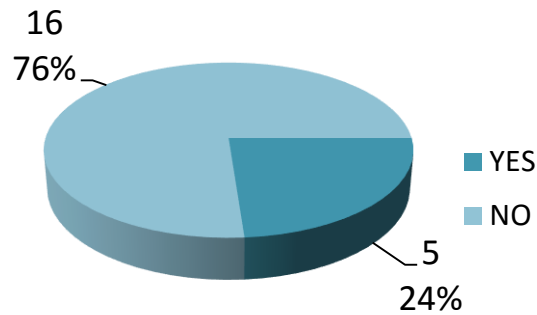


Figure 6. Promotion strategies for natural heritage management

The achieved results show that the most recognized aspect of natural heritage protection is: “National legal frameworks for natural protection and concentration”, which gained 38% of positive answers. It is worth noting that as many as 29% of respondents was familiar with “The public use of natural space”. The less known aspect of natural heritage management aspects was “Ecosystems and biodiversity conservation”, known only by 3 responders (14%). However, it has to be stressed that any of the listed aspects of the natural heritage management is widely known among archaeological heritage professionals.

Note: As the analysis is quantitative in scope, there is no means of verifying the answers. Even if the positive answer (“YES”) is marked, it cannot be found what exactly respondents understand by the indicated aspects of the natural heritage management. The qualitative analysis (for example in the form of interviews) could help resolving these dilemma.

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Benefits from integral approach to natural and archeological heritage

The question Q3 referred to different domains which could potentially benefit from an integrated approach to natural and archeological heritage. Respondents ranked the listed domains from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in the table:

Domain	Number of respondents	Total mark	Average mark
Planning strategies	21	42	2
Landscape management	21	46	2,19
Sustainable development	21	62	2,95
Tourism	21	64	3,05
Wellbeing and quality of life of local groups	21	84	4

The results show that planning strategies would largely benefit from an integrated approach to natural and archeological heritage. Similarly important would also be landscape management with a rate below 2,5. Less important would be sustainable management and tourism with marks around 3 (2,95 and 3,05 respectively). The domain of wellbeing and quality of life of local groups got the mark as high as 4 and was found to be the least beneficiary from the studied perspective.

Improving competence and performance by enhancing knowledge of natural heritage management

The question Q4 referred to the opinion of responders on improving their competence and performance by enhancing their knowledge of natural heritage management. The responses were ranked from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in the table:

Competences and performance	Number of respondents	Total mark	Average mark
Better understanding of the	21	42	2

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complex nature of landscape, in particular natural and environmental context of human actions			
More integrated and efficient landscape protection	21	49	2,33
More adequate management strategies	21	56	2,67
Application of more efficient mitigation strategies to deal with emerging challenges	21	74	3,52
Better communication and social awareness	21	76	3,62

The competence which was shown as having the biggest potential to be improved is “Better understanding of the complex nature of landscape, in particular natural and environmental context of human actions” (a good rank of 2). Similarly, “More integrated and efficient landscape protection” gained rank below 2,5. One more competence (“More adequate management strategies”) was marked below 3. “Application of more efficient mitigation strategies to deal with emerging challenges” got the average rank of 3,52, similar to “Better communication and social awareness” - 3,62.

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

In the question Q5 archaeological heritage professionals ranked how the landscape protection be improved by integrated approach to natural and archaeological heritage. Again propositions were valued from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. Received quotients are presented below:

Improving landscape protection by	Number of respondents	Total mark	Average mark
More efficient integration of landscape into regional and town planning	21	36	1,81
More efficient integration of	21	56	2,67

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landscape with cultural, environmental, agricultural, social and economic policies			
Establishing and implementing legal measures aimed at efficient landscape protection	21	57	2,71
Increasing awareness of value and importance of landscape to the public	21	65	3,1
Triggering training and educational initiatives in landscape for general public	21	82	3,9

Three of propositions was evaluated under 3. Two of them (“More efficient integration of landscape into regional and town planning” and “Establishing and implementing legal measures aimed at efficient landscape protection”) got the mark around 2,7. It is worth stressing that one aspect, namely “More efficient integration of landscape into regional and town planning”, got a very good rank of 1,81. The last two domains were evaluated as less beneficial and got the rank of 3,1 (“Increasing awareness of value and importance of landscape to the public”) and 3,9 (“Triggering training and educational initiatives in landscape for general public”).

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

Analogously to the question Q5, in the question Q6 archaeological heritage professionals ranked how the landscape management will be improved by integrated approach to natural and archaeological heritage. As in case of previous questions, propositions were valued from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented below:

Improving landscape management by	Number of respondents	Total mark	Average mark
More efficient strategies of planning at the regional level	21	38	1,81
Facilitate better protection of landscape	21	44	2,1
More effective and efficient use of available resources	21	59	2,81

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More effective and accurate reaction to the needs of sustainable development	21	73	3,48
Better serving the needs of local groups	21	87	4,14

The highest chance for getting the landscape management improved was given to “More efficient strategies of planning at the regional level”, which got the rank of 1,81.

Two other aspects, namely “Facilitate better protection of landscape” and “More effective and efficient use of available resources” got scores below 3 (2,21 and 2,84, respectively). The least expectations were ascribed to “Better serving the needs of local groups” (4,14). Above 3 was also evaluated the “More effective and efficient use of available resources” option.

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

A direct continuation of issues raised in questions Q5 and Q6 was the question Q7. Archaeological heritage professionals were asked which aspects of landscape planning will be improved by integral approach to natural and archaeological heritage by ranking them from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in the table below:

Improving landscape planning by	Number of respondents	Total mark	Average mark
Better definition of different components of landscape and their hierarchy	21	40	1,9
Better definition of the peculiar character of a region	21	53	2,52
More efficient integration of natural and archaeological/cultural heritage into planning strategies	21	54	2,57
More explicitly address	21	70	3,33

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concerns of different facets of landscape management in implementing planning strategies at different administrative levels			
Better serving the needs of local groups	21	83	3,95

Similarly to previous questions, one solution was ranked under 2 (“Better definition of different components of landscape and their hierarchy”) and got value of 1,9. The next two propositions got also the rate below 3 (“More efficient integration of natural and archaeological/cultural heritage into planning strategies” and “Better definition of the peculiar character of a region” - 2,52 and 2,57). The last two aspects “More explicitly address concerns of different facets of landscape management in implementing planning strategies at different administrative levels” and “Better serving the needs of local groups” got marked 3,33 and 3,95, respectively.

2.3.2. Interviews

One interview as carried out with archaeological heritage professional. The person was selected from a group of respondents who filled in the questionnaires. Anonymity was guaranteed. The interview was aimed to discuss in depth a range of issues tackled in the questionnaire. Altogether nine issues were discussed:


- (1) Landscape approach – it was indicated that an integral approach would be useful for the landscape approach. Both natural and archaeological heritage is believed to be a part of the landscape. Only integral approach to their management, would help in achieving a wide landscape perspective.
- (2) Better protection of natural heritage – according to the interlocutor, natural heritage is protected better than the archaeological one. If heritage is to be protect jointly, archaeological heritage would benefit from prerogatives of natural heritage protection, including its legal context. A number of examples of archeological heritage has been mentioned, which have already been protected within the framework of natural heritage. Their protection is arguably much more efficient when compared with archaeological objects protected independently.
- (3) Mutual dependency – an integral approach to both types of heritage would highlight a mutual dependency between them. It allows to perceive them as inseparable.
- (4) Lack of good experience – the interlocutor has expressed his scepticism about the hitherto existing forms of integral approach to natural and archeological heritage protection. He made it clear that existing solutions cannot be regarded as a genuinely

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integrated approach. These are exemplified in protection of parks, where different forms of cultural and natural heritage are connected. However, archaeological heritage is clearly margined here and its overall contribution to the presentation of this heritage is minimal.

(5) Potential benefits – the following domains are believed to mostly benefit from integral approach of natural and archaeological heritage: (a) popularization and development of tourism, (b) growth of local awareness of residents, and most importantly (c) safety of the heritage. Integrated approach can be the only warranty of the heritage security.

(6) Devastation – according to the interlocutor, the most dangerous consequence of a lack of integral approach to archaeological and natural heritage is their devastation by uneducated specialist, both natural and archeological. There are numerous examples of destruction of archaeological heritage by natural professionals and *vice versa* caused by a lack of mutual understanding.

(7) Lack of knowledge – both professionals do not have the knowledge about each other domains. Foresters are usually aware of archaeological objects in forests, however they do not know how to protect them and what kind of legal solutions to apply. In the opinion of the interlocutor, it is connected with the current situation in Poland where knowledge of natural heritage protection is much wider, as it is even taught at schools. At the same time, knowledge of archeological heritage protection is only rudimentary. The applies to the lay public, foresters and students of archaeology alike. As of today, the main source of knowledge of both types of heritage is personal work experience.

(8) Integral approach as a solution for current problems – the integral approach can facilitate an application of more efficient solutions for a number of appealing issues, such as people with metal detectors destroy both natural and archeological objects.

(9) Exchange of experience as a method of learning – joint workshops offering an exchange of experience was presented as the most desirable form of learning. It was followed by on-line courses and joint publications (which could result from these workshops).

According to the presented data, integral approach to natural and archaeological heritage protection can offer a more effective, reasonable, rational and harmonious approach to their protection. A lack of this form of integrated solutions, along with a poor understanding of each other, can not only result in a lack of their satisfactory protection but their destruction and devastation. This clear gap in education in the domain of archaeological protection should be taken under consideration both by universities and heritage offices. The interlocutor strongly believes that natural heritage in contemporary Poland is better protected than the archaeological one. It is due to arguably more efficient legal solutions in this domain.

3. DOMAIN OF NATURAL HERITAGE

3.1. Analysis of good practices

Natural heritage is widely discussed in relation to ecological matters concerning general protection of natural environment and its biodiversity. The ongoing debate also embraces sustainable development and social responsibility to preserve natural environment for future generations in most undisturbed, possible way.

Protection of natural heritage accompanies general, statutory environment protection matters, but rather as marginal issue amongst other, more overwhelming and burning issues. Nevertheless, trainings serving upgrading professional skills of institutional and administrative employees are conducted. As examples may serve three different courses addressed to different target groups. Natural heritage is relatively often discussed in relation to cultural heritage of the region, which are integrally understood as one value, which needs protection and preservation.

The first relevant course is “Sustainable development of the Carpathians based on environmentally friendly tourism”. It was prepared and carried out by Environmental Information Center and Ecopsychology Association, both being public institutions. General aim of the course was to present good practices of sustainable development of tourism in the Carpathians with special focus on natural heritage of the region and necessity to preserve it as national good. Seminars and workshops, which lasted one day, focused on presentation of good practices and analysis of municipal potential for sustainable development with indication to local attractions, mainly of natural nature. Target groups were local entrepreneurs connected to tourism and administration representatives. Participants in the course were equipped with a guide gathering local touristic attractions and rules of sustainable development compatible with natural environment protection policy of the Carpathians. Details on evaluation of the course, similarly to publication of the course materials or scripts, are not available. Participants did not obtain any certificate.

The second example is a course “Culture and life of past people – traces written in flora and landscape of Bieszczady National Park – workshops for school teachers”, which title directly specifies the target group. The training was organized in the form of two days meeting as a part of larger project to commemorate the 40th anniversary of the creation of the Bieszczady National Park (SE Poland). Participants took part in workshops and field seminars, which aimed to facilitate empathic relations and better understanding of local natural and cultural heritage. Teachers got acquainted with representatives of local cultural and natural heritage protection groups who introduced them current protection policies and guided field trips to practically exemplify theoretical considerations debated during the course. The course achieved its goal by

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providing target groups with local problems in this domain and presenting a number of relevant good practices in integrated protection policies of natural and cultural heritage. Participants learned that protection of heritage is necessary due to a number of different reasons. School teachers got to know the region of Bieszczady National Park as a wonderful touristic place, but learned as well that protection of such places is very important, to prevent this national/regional asset from destruction. No certification for participants was provided, as well as any formal evaluation of their participation in series of lectures and seminars.

The third example of training in natural heritage is “Environment and natural heritage protection in areas depended on fishing – practical matters on projects realization”. The training was carried out as an initiative of local municipalities gathered to complete the project “Między Nidzicą a Pilicą” [Between the Nidzica and Pilica rivers]. The project required a close collaboration between local community, public institutions and private investors in order to develop the region according to the requirements of sustainable development. The course was addressed to all interested bodies, but in particular to representatives of the Local Fishing Group. Seminars and workshops were focused upon natural heritage and biodiversity of the region and its meaning as an added value to the otherwise important region. They are to serve a promotion of the region. A fragile nature of this heritage was also stressed, which requires a constant care. The course content presented regional natural heritage, ways of its preservation as well as national programs, such as Natura 2000, serving the needs of protection of natural and cultural heritage. A duration of the course was 3 days. No information on evaluation or certification for participants is available.

The presented examples of vocational training in the domain of natural heritage indicate that very often (2 out of 3 cases) they also take cultural heritage into consideration. It may indicate that the protection is more efficient and thorough when national/local heritage is preserved integrally, not selectively. It is worth remembering that natural heritage is understood as composed of floral heritage as well animals that inhabit different settings. Protection of biodiversity and natural landscapes is equally valuable and it is further strengthened when linked with protection of cultural heritage. The discussed examples of training were not easy to find due to a very bad promotion. One would expect that more efficient promotion and dissemination strategy will results in much wider impact of these important issues.

3.2. Analysis of relevant publications

Analysis of a number of relevant publications, including manuals, textbooks and academic publication, on vocational training in the domain of natural heritage was aimed at identifying a number of pertaining issues addressed in the project. These comprise (a) character of the natural heritage sector in Poland, (b) identification of major concerns of heritage in Poland, (c) presentation of different formats of VET in

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Poland, (d) discussion of the training modes in both sectors, and (e) presentation of training methodologies relevant to the project.

In order to meet the above mentioned objectives five relevant publications have been analysed. The analysis identified current needs in protection of natural heritage in Poland, as articulated in relevant publications. They mainly address natural heritage only, while the publications targeting integral natural and archaeological heritage are relatively uncommon. In particular, the analysed publications brought about a presentation of the state-of-the-art in natural heritage protection, presentation of the most pertaining needs, and discussing challenges and obligations of the future.

The first publication is entitled “The study of environmental awareness and behavior of Polish inhabitants” and it is a report commissioned by the Polish Ministry of Environment and prepared by TNS Polska. It aims to discuss social consciousness in the domain ecology in general. It further wanted to recognize a currently existing level of ecological awareness in Polish society. The analysis of collected data was to help in preparing future projects on environment and its evaluation. The report focused on seven interlinked issues related to environment: (a) the most evident challenges for environmental policies in Poland, (b) the environment and its protection, (c) air quality, (d) waste management, (e) climate change, (f) promoting environmental protection and individual action consumer behavior, and (g) image of the Ministry of Environment.

Issues discussed in the report in relation to social awareness of natural environment and its outcomes, may be used for preparing a range of courses on different issues related to natural heritage of Poland, embracing a wide range of environmental challenges discussed in the report. The report may serve as a useful point of departure for natural heritage protection projects.

The second publication is entitled “Forests and forestry in the culture and national heritage”, as is an outcome of the experts’ panel for the National Forestry Program presented during conference on forests and forestry in cultural and national heritage. The National Forestry Program is an integrated initiative of the Ministry of Environment aiming at preparation of a wide range program of sustainable development of forests, their protection and management. This publication is an outcome of the conference and offers 24 clear recommendation aiming at preservation, social understanding of the forest, its protection and preservation of the cultural heritage sites hidden in forests being slowly forgotten and increasingly destroyed. It formulates recommendations for sustainable development of forest areas in order to present them as a touristic attraction but at the same time respecting protection agenda. In particular, some recommendations refer directly to archaeological heritage in forests. Some others stress a necessity of integrated protection natural and archaeological heritage.

Third examined publication in training in natural heritage is entitled “Manual of good practices for sustainable development”, commissioned by the Office of the

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Marshal of the West Pomerania. The main purpose of the Manual is to identify which aspects of sustainable development will better serve a coordination and stimulation of the development processes in the Region of West Pomeranian from economic, environmental and social standpoints. One of the aspects of the report is natural heritage domain. It outlines theoretical background and practical solutions represented by local, West Pomeranian good practices in protection of regional natural heritage.

The fourth examined position is a publication “Forests and forest management as a tool for shaping the environment and nature protection in the forests – recommendations”. It was a document prepared for the National Forestry Program and presented at the already mentioned conference on forests and forestry in the culture and national heritage. The National Forestry Program is an integrated initiative of Ministry of Environment aiming preparation of wide ranged program of sustainable development of forests its protection and management.

The publication presents 31 recommendations as regards forests protection and management in Poland. They mainly aim to re-evaluate existing legal regulations concerning forests protection and management. The recommendations address also needs to protect forests as national heritage and teach about their history and traditions of forestry in Poland. New ways of arranging of forest areas are claimed, namely the so-called wild areas, which may become substitution for reserves and national parks, but with no limitation on tourism development. Social awareness is clearly at stake and the recommendations strongly opt for societal involvement in planning and management of forests development. As archaeological sites are very often located in forests, forestry protection policy will have also a very direct impact on archaeological heritage protection.

The fifth publication related to natural heritage domain is “How to create a natural monument”, and was published by the Naturalists’ Club (Klub Przyrodników). The Naturalists’ Club offers help, guidelines or supervision over various projects serving protection of local natural heritage. The association carries out an active conservation and environmental education for different segments of society. In particular, its works are concentrated on western Poland, in particular around its headquarters in Świebodzin. Two major activities of the Club involve conservation and education. The other major domains of its activities comprise: inventorying natural resources, valorization of natural environment, developing project’s documentations as well as preparation of plans for the protection of nature reserves, parks, Natura 2000 sites and other areas of different kinds.

This Manual provides a competent overview of major legal issues concerning creation of natural monuments. In particular, it clarifies a range of different legal matters concerning establishment of new natural monument, providing criteria for defining natural monument and specifying different kinds of trees that in particular are deserved to be protected as natural monument. The Manual offers also a number of

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practical hints in relation to the implementation of the process and identifies the most commonly encountered difficulties in this regard.

The analysed publications on trainings in natural heritage in Poland are mainly focused upon practical needs of its protection. Strict recommendations refer to current issues and offer a number of solutions in natural environment protection policies. Natural heritage is most often included in general, statutory policy on environment development. Archaeological heritage is quite often mentioned in relation to natural heritage, and their integral protection is often underlined in the context of sustainable development.

Publications referring to natural heritage protection and management provide very useful materials for archaeologists and people engaged in protection of cultural heritage. However, out of the reviewed publications none seems to be suitable to become a manual for people unfamiliar with natural heritage protection. Hence, preparation of such a publication would be very useful from the standpoint of producing the vocational training content for non-naturalists. The manual “How to create natural monument” may be seen as a good example of such a publication as it integrates theoretical, methodological, legal and administrative matters while discussing matters related to natural heritage.

3.3. Analysis of needs of target groups

3.3.1. Online Questionnaires

Introductory remarks

1. **The questionnaire** was prepared by the project partners. It was then translated into national languages and then used in all countries participating in the project. It consists of a part with a statistical data (profession, education, years of experience) and eight questions that address the most pertaining issues addressed in the project.
2. **Questionnaires** were sent out to a number of natural heritage professionals without any particular regional focus. The target was to get the results, which will be representative at the national level. Approximately 160 questionnaires were sent out to e-mail addresses. The analysis is based upon results of 26 questionnaires filled in by natural heritage professionals from: The State Forest, National Parks, Landscape Parks and Regional Directorates of Environmental Protection. This institutional variety allowed us to grasp institutional differences and analyze their approach to natural heritage protection, which is in hands of a number of administrative units in Poland. The respondents did not disclose

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their personal data. Gender differentiation has not been taken into consideration while analysing the empirical data.

3. **Education:** More than 96% of respondents have higher education (MA). Less than 4% declared degree higher than Master (Doctorate). Any of respondents has Bachelor or lower degree.
4. **Profession:** In this questionnaire respondents could choose from the following options: forester, National Park worker, Landscape Park worker, ecologist, biologist, teacher/lecturer, public administration worker. In the Polish educational system, forester, biologist and ecologist is both a professional title and profession, therefore many responders have chosen more than one option (for example “forester” and “National Park Worker”). Almost 54% of respondents declared their profession as forester. 34,65% of them are National Park’s workers. The other 11,55% are hired by Landscape Parks. 7,7% of respondents reported that they are workers of public administration. The following 7,7% defined themselves as ecologists while 3,85% as biologists. Only 3,85% of responders declared themselves as teachers/lecturers. It is worth stressing that the last option (teacher/lecturer) has always been selected with at least one other option.
5. **Years of professional experience:** An important diversity has been revealed. The respondents declared years of their professional experience in the following categories: <5; between 5 and 10; between 10 and 20; between 20 and 30; >30. The table below presents the results:

Period of professional experience	Percent of respondents	Number of respondents
<5	15,4	4
between 5 and 10	23,1	6
between 10 and 20	19,25	5
between 20 and 30	19,25	5
more than 30	11,55	3
no data	11,55	3
Total:		26

The knowledge of the archaeological heritage management aspects

In question Q2, by marking “YES” or “NO”, respondents have declared their familiarity with selected aspects of the archaeological heritage management. They have been allowed to pick just one option. Any other possibility (such as “Other” or “Partly”) has not been available. The results are as follow (in percent):

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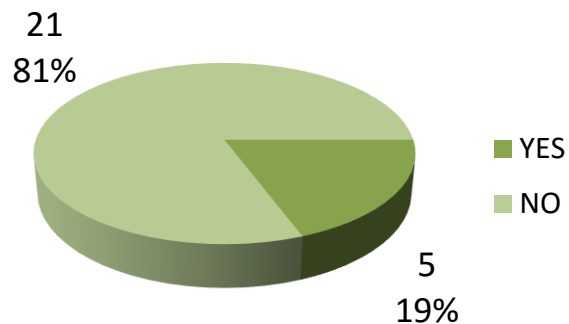


Figure 7. National legal frameworks for archaeological protection and conservation

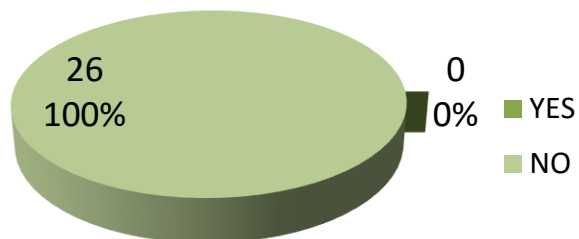


Figure 8. International legal frameworks for archaeological protection and conservation

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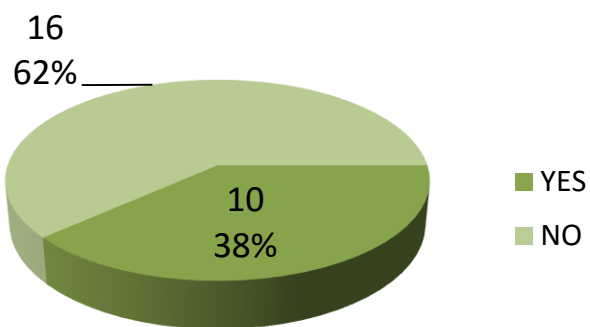


Figure 9. The concept of cultural landscape

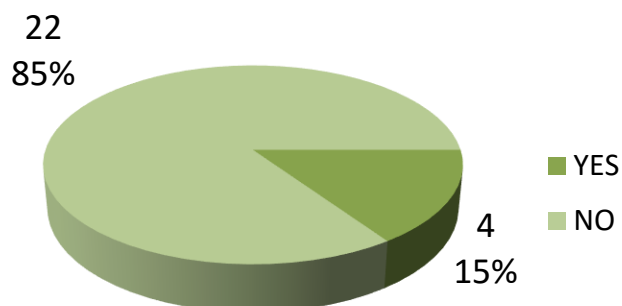


Figure 10. Significance and role of archaeological heritage management

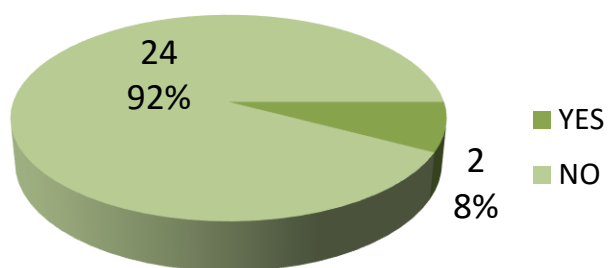


Figure 11. Promotion strategies for archaeological heritage management

Partners:

The results clearly indicate that any of the listed aspects of the archaeological heritage management is not widely known among natural heritage professionals. The most familiar is the concept of the cultural landscape, known to more than 30% of respondents. It is worth stressing that none of the responders is familiar with “International legal frameworks for archaeological protection and conservation” (question 2).

Note: As the analysis is quantitative in scope, there is no means of verifying the answers. Even if the positive answer (“YES”) is marked, it cannot be found what exactly respondents understand by the indicated aspects of the archaeological heritage management. The qualitative analysis (for example in the form of interviews) could help resolving these dilemma.

Benefits from integral approach to natural and archeological heritage

Question Q3 referred to domains which could potentially benefit from an integral approach to natural and archaeological heritage. The respondents have been asked to rank these domains from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in the table:

Domain	Number of respondents	Total mark	Average mark
Sustainable development	26	68	2,62
Landscape management	26	73	2,81
Planning strategies	26	75	2,88
Tourism	26	84	3,23
Wellbeing and quality of life of local groups	26	92	3,54

The results indicate that the domain which can potentially benefit the most from an integral approach to natural and archaeological heritage is sustainable development. The least suitable was wellbeing and quality of life of local groups. However, any of the specified domains was believed to have a significant chance to benefit from integral approach - any of the specified domains gained an average below 2,60 and two of them gained an average above 3.

Partners:

Improving competence and performance by enhancing knowledge of archaeological heritage management

The fourth question referred to respondents' opinion about improving their competence and performance by enhancing their knowledge of archaeological heritage management. They ranked their responses from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in below:

Competences and performance	Number of respondents	Total mark	Average mark
Better understanding of the complex nature of landscape, including its changes through time	26	54	2,25
More integrated and efficient landscape protection	26	73	3,04
Better communication and social awareness	26	78	3,25
More adequate management strategies	26	83	3,46
Application of more efficient mitigation strategies to deal with emerging challenges	26	90	3,75

The competence which has been shown as having the highest potential to be improved is "Better understanding of the complex nature of landscape, including its changes through time". Similarly, "More integrated and efficient landscape protection" gained rank around 3. However, three last competences have been given very low scores above 3, two of them ("More adequate management strategies " and "More adequate management strategies") exceeded 3 significantly. "Application of more efficient mitigation strategies to deal with emerging challenges" got the average rank of 3,75, which indicates that natural heritage professionals perceive this field as the least benefiting from enhancing knowledge of archaeological heritage management.

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

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In question Q5 natural heritage professionals have been asked to rank how the landscape protection be improved by integral approach to natural and archaeological heritage. Again the answers have been ranked from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in the table:

Improving landscape protection by	Number of respondents	Total mark	Average mark
Establishing and implementing legal measures aimed at efficient landscape protection	26	67	2,58
More efficient integration of landscape into regional and town planning	26	70	2,69
More efficient integration of landscape with cultural, environmental, agricultural, social and economic policies	26	75	2,88
Increasing awareness of value and importance of landscape to the public	26	81	3,12
Triggering training and educational initiatives in landscape for general public	26	107	4,12

Any of outcomes has received a score below 2,5. It is only “Establishing and implementing legal measures aimed at efficient landscape protection” has been closed to this threshold receiving the rank of 2,58. The following two (“More efficient integration of landscape into regional and town planning” and “More efficient integration of landscape with cultural, environmental, agricultural, social and economic policies”) got the rank below 3. It is was stressing “Triggering training and educational

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initiatives in landscape for general public” has been perceived very negatively receiving only the score of 4,12.

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

Analogously to question Q5, in the question Q6 natural heritage professionals have been asked to rank how the landscape management be improved by integral approach to natural and archaeological heritage. Similarly as in case of previous questions, they have ranked their answers from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented below:

Improving landscape management by	Number of respondents	Total mark	Average mark
Facilitate better protection of landscape	26	66	2,5
More efficient strategies of planning at the regional level	26	67	2,58
More effective and accurate reaction to the needs of sustainable development	26	75	2,88
More effective and efficient use of available resources	26	87	3,35
Better serving the needs of local groups	26	89	3,42

An average value of all of the answers was not higher than 2,5. The highest chance of getting landscape management improved has been arguably through “Facilitate better protection of landscape” and “More efficient strategies of planning at the regional level“. The least expectations has been ascribed to “More effective and efficient use of available resources” and “Better serving the needs of local groups” - both were ranked above 3.

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A continuation of the latter two questions was question Q7. Natural heritage professionals have been asked here to judge which aspects of landscape planning be improved by integral approach to natural and archaeological heritage by ranking them from 1 to 5 (where 1 was the highest and 5 the lowest mark). An average mark was calculated by summing up all assigned rates and dividing the total sum by the number of questionnaires. The received quotients are presented in the table below:

Improving landscape planning by	Number of respondents	Total mark	Average mark
More efficient integration of natural and archaeological/cultural heritage into planning strategies	26	71	2,73
Better definition of different components of landscape and their hierarchy	26	74	2,85
More explicitly address concerns of different facets of landscape management in implementing planning strategies at different administrative levels	26	76	2,92
Better definition of the peculiar character of a region	26	82	3,15
Better serving the needs of local groups	26	91	3,5

Similarly to answers to a previous set of questions, any of the average marks was not ranked under 2,5. Two propositions got the rate around 2,8 (“More efficient integration of landscape into regional and town planning” and “Better definition of different components of landscape and their hierarchy”). Two potential outcomes got marks above 3. These comprise “Better definition of the peculiar character of a region” and “Better serving the needs of local groups”.

3.3.2. Interviews

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A number of interviews has also been conducted. Three of interlocutors were natural heritage professionals and employees of the National Forest Holding “State Forests”. They work on three different positions, at different levels of the hierarchy (“State Forests” has a three-stage organizational structure). Interlocutors were chosen from a group of respondents who filled in the questionnaires. Natural heritage professionals were selected to facilitate a wide participation of representatives of this group in a survey part of collecting data. The other rationale beyond this decision comprised a range of problems and issues indicated by the foresters during collection of questionnaires that directly referred to with the integral approach to natural and archaeological heritage protection. The interviews made it possible to reflect the reported concerns in a much developed way.

It is highly important to include the standpoint of foresters in this project. The “State Forests” manages almost 80% of Polish forests, what constitutes almost the one third of the territory of Poland. A majority of natural heritage objects is located in this area. However, a significant number of archeological heritage objects is located in forests. Hence, an attitude and perspective of foresters is a key in negotiations of the cooperation between natural and archaeological heritage professionals.

The most important issues indicated by foresters are as follows:

(1) Competences – there are a few bodies in Poland responsible for or having some kind of influence on the natural heritage protection. Their competences clearly overlap. The natural heritage is formally a responsibility of the National and Landscape Parks and Directorates for Environmental Protection. However, in many cases territories which are protected, are administrated by “State Forests”. However, even when the protected area is situated on the territory of “State Forests”, this organization have not been given a full right to decide about a form and scale of protection, which competence remains in hands of respective Regional Directorate for Environment Protection.

(2) Protection – protection of the natural heritage is not the major objective of “State Forests” as it is beyond its statutory competences, as mentioned above. However, in practice, foresters protect the natural heritage on a large scale using income from a forestry management. To generate this income, foresters need to get engaged in economically viable activities. For example, they acquire and sell timber. This kind of activity, however, may have a negative impact upon archaeological heritage which can easily be destroyed. Particularly endangered can be objects directly underneath the ground or slightly above it, such as graves, tumuli, barrows, which most often are not recognized by foresters. Protection of archaeological objects on a large scale, especially the smallest one and without a straightforward significance, should involve some kind restrictions in cutting down the trees and re-plantation activities of foresters. This however, can have serious financial consequences as well as related to potentially dangerous changes in the cutting/plantation cycle.

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(3) Forest Management Plan (pol. *Plan Urządzania Lasu*) – the responders listed this as one of the major problems. Each Forestry office has to prepare and strictly follow its own forest management plan. It is to be prepared for each Forestry office individually and cover a period of few (10) years. It has to be approved and signed by the Minister of the Environment. Any changes in this document are very difficult to introduce and require much of an effort from the foresters side. Hence, when a new archaeological object is discovered inside the forest, implementing efficient protection solutions would be very problematic for foresters, at best. In such case, the Forest Management Plan needs to be corrected and the corrected management plan accepted by the Ministry. In the process of preparation of the Forest Management Plan, the law guarantees room for negotiations with interested bodies from outside the forestry. This could be a good moment for inviting archaeological experts and cultural heritage professionals in the decision making process. They should be given a possibility to comment on the received version and propose their own solutions, in particular in relations to areas of archaeological significance, which should be excluded from the cutting or intensive forestry management works. To sum up, a lack of flexibility in the Forest Management Plans should force a close cooperation between foresters and archaeologists in terms of planning and joint activities. The negotiations preceding the approval of the Forest Management Plan in a particular Forestry Office, would be a good time and opportunity for introducing an integral approach to natural and archaeological heritage.

(4) A lack of instruments for archaeological object protection – Foresters reported that in many instances they are aware of the presence of archaeological objects on their territories. However, they do not have legal instruments for protecting them and for connecting their protection with natural heritage conservation. They strongly advocate a need of introducing legal instruments or solutions, which would make these kinds of actions possible.

(5) A lack of competence and knowledge – one of the major concerns of foresters involves a lack of adequate competences in the domain of an integral approach to natural and archaeological heritage. As has been strongly stressed by them, they do not know what should be protected and how this should be achieved. Additionally, they indicated no access to the relevant information in this regard. They further stressed a lack of relevant training – courses, workshops, conferences, publications. Furthermore, these issues have not constituted an element of a forestry education. Foresters feel that they do not have a professional background in this domain.

(6) Funds – foresters expressed serious doubts in terms of raising satisfactory funds to make integrated natural and archaeological heritage protection viable and sustainable. They suspect that foresters would have to be financially responsible for these activities and do not agree with this kind of solution. Hence, they stress a need of applying for external funds, outside the “State Forests” budget.

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(7) Implementation - Foresters have expressed serious doubts as regards the possibility of implementing the integral approach to natural and archaeological heritage. Their major concerns are as follows: (a) scale of the project – it would be not possible to effectively introduce this kind of protection on a big scale, (b) completion of the project – foresters argue that implementation of the project can be very difficult due to its high costs, (c) competence – they are concerned that their lack of competence in the domain of archaeological heritage will make the prospective project of this kind inviable. Furthermore, they are afraid that the project of this type would lead to mixing up tasks and responsibilities of both groups of professionals. This in turn can create unnecessary confusion and trigger conflicts.

(8) Benefits of the project – foresters have serious doubts whether the project of this kind could bring expected benefits. In particular, they have expressed their concerns whether it would facilitate the management of landscape and spatial planning. The major concern referred to a potential impact on local residents` life. Foresters suspect that the idea of integral protection of natural and archaeological heritage can bring stricter regulations, which in turn shall limit rights of local people and their influence on the decision making process. This can rightly be seen as introducing a range of new restrictions for them. Foresters further argue that this may restrict access to local resources by local people. .

The problems discussed above are well summarized in one of foresters` statement: “I am afraid that the “State Forests” is not ready for integral approach to natural and archeological heritage protection. From one hand, it is due to a lack of appropriate legislation justifying this kind of approach, there is also no educated and trained foresters in the domain of archaeological heritage. From the other hand, I see difficulties in a lack of new positions and financial resources for activities connected with this approach”.

In short, major problems identified by foresters are: a lack of legal regulations, lack of trained employees and lack of financial support for such kind of activities.

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4. CONCLUSION

The collected data make it possible to formulate a number of generalizations. An efficiency of heritage protection (archaeological and natural) requires updating legal measures and taking a number of specific steps in order to improve current situation of heritage preservation in Poland. These changes are clearly postulated in the analyzed publications. However, a rather blurred reaction to these postulates in vocational trainings offered to date is clearly indicated by the results of questionnaires. Archaeological heritage in different formats of training is rather directed to specialists of cultural heritage. Their curricula are mostly focused upon legal or financial issues of heritage protection. However, a different situation is reported in case of vocational trainings in natural heritage, which seem to much more often integrate different issues of cultural heritage in their courses than do their cultural counterparts. Publications go one step further by listing postulates and recommendations as regards changes in protection of heritage (archaeological and natural) and training of highly skilled specialists, who would be in a position to lead the advocated programs. Legal issues are strongly stressed by the authors of reviewed publications and indeed, this seem to be a burning problem of Polish heritage protection policies.

A distinct separation between archeological and natural heritage protection is clearly seen in the analysis of questionnaires, where knowledge about heritage, both natural and archeological, is only familiar to specialists from particular disciplines. The knowledge of archeological heritage professionals about natural heritage is not substantial. The same applies to natural heritage professionals and their knowledge about cultural/archeological heritage. As many as 38% of the interviewed archaeological heritage professionals is familiar with the national legal regulations for protection and conservation of natural heritage while only 19% of them with the international ones. At the same time, only 19% of the interviewed natural heritage professionals got acquainted with national legal frameworks for archaeological protection and conservation and any of them have got to know international regulations in this domain. As many as 29% of archaeological heritage professionals have a knowledge about the public use of natural space, but this number drops to 19% and 14% as regards management of natural reserves/parks/spaces as well as ecosystems and biodiversity conservation. A relatively high percent of natural heritage professions is aware of the concept of culture landscape. However, just 15% of them is familiar with significance and role of archaeological heritage management. A very low percent of natural heritage professionals (8%) is aware of promotion strategies for archaeological heritage management. At the same time, 24% of the interviewed archaeological heritage professionals is familiar with promotion strategies for natural heritage management.

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Further analysis of questionnaires allows to compare opinions, views and analyse expectations of natural and archaeological heritage professionals. In question Q3, they have been asked about domains which could potentially benefit from an integral approach to natural and archeological heritage. Natural heritage professionals indicated sustainable development as the most beneficial domain. Archaeological heritage professionals, on the other hand, have pointed to planning strategies. The least beneficial for both sectors was wellbeing and quality of life of local groups. In question Q4 both groups have been asked about improving competence and performance by enhancing knowledge of archaeological/natural heritage management. Natural heritage professionals argued for better understanding of the complex nature of landscape, in particular natural and environmental context of human actions. Archaeological heritage professionals were of similar opinion. They have referred to better understanding of the complex nature of landscape, in particular natural and environmental context of human actions. Naturalists have been the least convinced by an application of more efficient mitigation strategies to deal with emerging challenges, while cultural heritage professionals by better communication and social awareness (it has to be remembered, however, that an application of more efficient mitigation strategies to deal with emerging challenges, got a very similar rank - 3,62 and 3,52). While asked about improving landscape protection by the adaptation of an integral approach to natural and archaeological heritage (question Q5), archaeological professionals have indicated that it may be mainly achieved by more efficient integration of landscape into regional and town planning. Natural heritage professionals have linked more hope with establishing and implementing legal measures aimed at efficient landscape protection followed by more efficient integration of landscape into regional and town planning (the rank of 2,58 and 2,69, respectively). Both groups have been pretty sceptic as regards perspectives in triggering training and educational initiatives in landscape for general public. In question Q6, natural heritage professionals have pointed to better protection of landscape as potentially profiting from improving landscape management by the adaptation of an integral approach to natural and archaeological heritage. This was followed by more efficient strategies of planning at the regional level, which was the first choice for archaeological heritage professionals. Both groups have given the lowest marks to better serving the needs of local groups. A question about landscape planning and improving it by the adaptation of an integral approach to natural and archaeological heritage have also brought similar results. Both groups have argued that better serving the needs of local groups is the least achievable goal. Naturalists have ascribed a major significance for more efficient integration of natural and archaeological/cultural heritage into planning strategies, while archaeological heritage professionals have referred to better definition of different components of landscape and their hierarchy.

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Results of the analysis of both questionnaires directly indicate a need of trainings, personalized learning approach and collaborative learning, which has been indicated as an efficient means of meeting different needs of different beneficiaries.

The most critiqued in the existing vocational training system in heritage protection was a lack of a satisfactory number of courses, their accessibility online and availability. For example, individuals who would potentially be interested in participating in such courses have very little options. The presented examples lack appropriate certifications and systematic evaluation based on the verification of acquired knowledge. However, as the collected data imply, new courses in this domain are very welcome. The existing courses, as indicated by the analysis of relevant publications, mainly address current heritage issues, legal framework, administrative solutions. A lack of appropriate training materials has also been clearly indicated in questionnaires. The responders have clearly advocated for appropriate certificates and contacts with professional tutors during the training process.

Sustainable development is a goal or condition in most of the European Union financed projects. It is believed to be particularly suitable for tourism, which more and more is to be developed in relation to national heritage. In this case, a necessity to protect natural and cultural (including archaeological) heritage is seen as a must. Tourism movement, when not organized and properly managed may cause destruction of natural habitats, as well as archaeological sites or historical monuments. Therefore, relevant specialists have to take appropriate steps and act accordingly in order to actively protect entire landscapes, not just individual monuments. There is a clear need to educate specialists, who will be in a position to set up adequate programs integrating natural and cultural heritage protection. However, in order to formulate such thorough and integral heritage protection strategy, new legal solutions must first be introduced. New perspectives on vocational trainings of institutional and administrative employees need also be set up. Of equal importance is education aiming at increasing social awareness of a necessity to protect national heritage. A large scale cooperation between naturalists and archaeologists, creating well-organized teams of highly educated and specialized professionals, is particularly important in order to provide a sustainable development platform for integral heritage protection and spatial planning.

The analysed publications in both domains show, that, in order to facilitate efficient solutions for integral natural and archaeological heritage protection, there is a need for preparation of specialized manuals. Such handbook should address matters of archaeological and natural heritage in relation to each other and pinpoint important issues concerning them both. However, as results of questionnaires indicate, these introductory information should precede any call for integrated solutions, as both domains know very little about each other. Such publication will serve as a useful handbook for vocational training, providing a thorough overview of both domains and widening a scope of awareness of practitioners in both sectors. In order to produce

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such handbook, recommendations specified for the National Forestry Plan may prove to be quite useful, as they address both domains, including their state of affairs and pertaining issues for the future. Having them included in the handbook is a must as vocational training for the protection of archaeological and natural heritage in Poland to be efficient. Doubtless to say, it needs to undergo changes for which competent and well educated personnel is needed.

The form of vocational training, expected by archaeological and natural end users, should have a form of few days long block of courses. Certificates should most importantly be provided as well as post-trainings publications or course materials be secured in order to provide participants with an easy access to the course content and its application it in real life situations. This practical aspect of the knowledge transfer is highly important. Issues discussed in trainings should be in a position to resolve emerging practical problems facing the natural and archaeological heritage professionals. The results of questionnaires make it clear that the cost of training is an issue and both cannot be more clear about that. Of similar significance is a flexibility in terms of time and place in which the course takes place. Those factors have to be taken into consideration while planning and designing courses and trainings.

5. Annex I: Publications (in English)

6. Annex II: Good practices (in English)

7. Annex III: Interviews (in national language)

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