HICAPS - HISTORICAL CASTLE PARKS

Report on Transnational Educational outdoor trail tools

WP-T2	Tool development and consensus building
D.T2.2.3	Transnational Educational outdoor trail tool (EOTT)
	Version 1.0

Table of Contents

History of the document

Version	Status	Date	Changes	Comment
0.1	First draft	15 June 2018		
1.0	Final	30 June 2018		

1. Introduction

This document presents the conclusion of the Activity A.T2.2 (Development of educational tools about the historical parks for schools and public) of the Thematic Work-package T2 (Tool development and consensus building), started in July 2017 and successfully completed in June 2018.

After an initial socio-historical overview of the historical parks present in the partner areas, followed by an analysis of the existing plant diversity present in them, this final step wants to achieve the overall expected output of the activity, i.e. the development of educational tools presenting the knowledge jointly gathered by the partner institutions through the HICAPS project.

This manual described the proposed educational outer trail tools proposed for being implemented in the historical parks where the project's outputs are going to be fully deployed is produced as an on line, as well as proposed as a model and a good practice to any other historical garden of the Central Europe area interested in taking benefits of the work done by the HICAPS project.

The present document is presenting the most interesting tools that are going to be used for establishing and implementing an outdoor trail in the HICAPS historical parks, according to the different types of audiences (citizens, tourists, schools, scholars, people with special needs, etc.) and fields addressed by the project (history, natural sciences, fauna, accessibility, etc.).

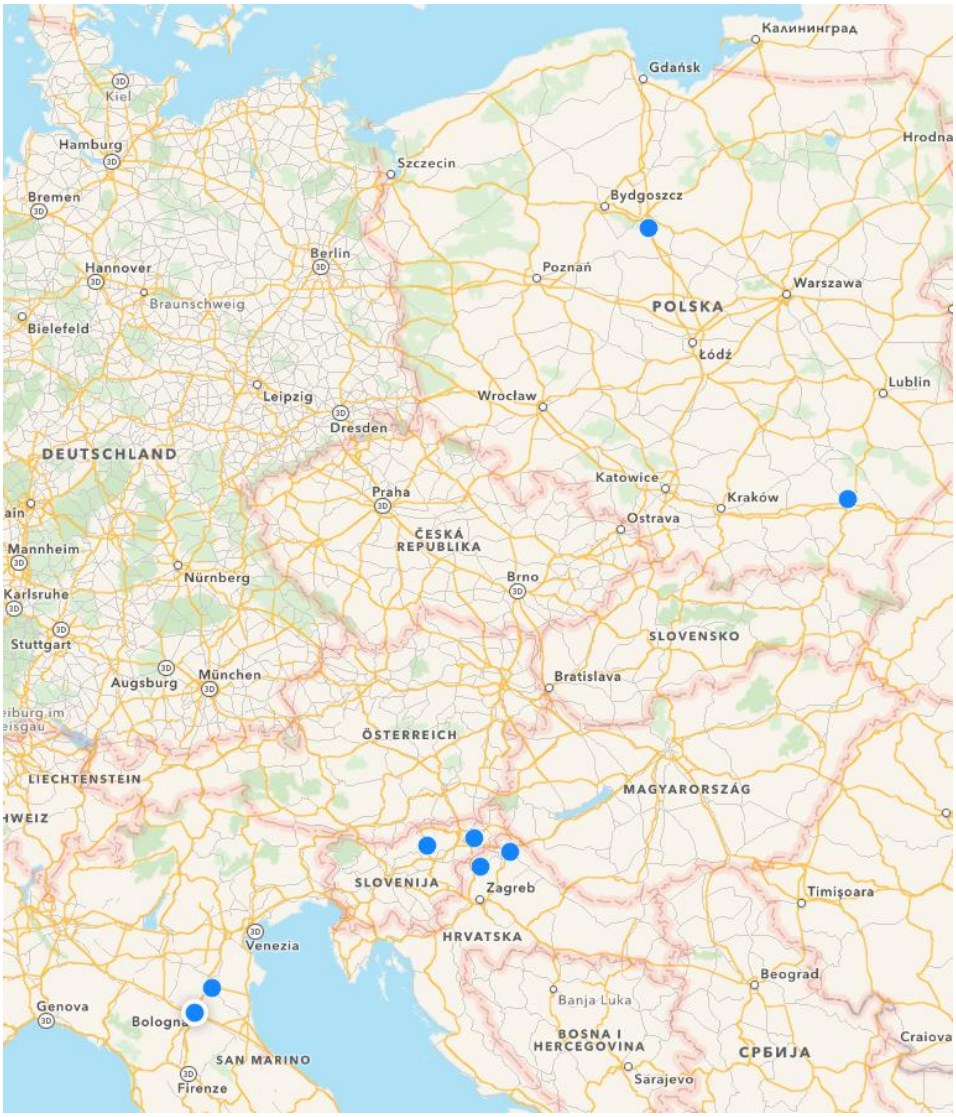
The overall goal of this relevant effort consists of increasing the knowledge among public sector, politicians as well as the general public about the importance of accessibility to cultural landscape. The handbook developed through this transnational cooperation will be made available on the project and the partners' website, with the objective to support the development of active strategies to improve the educational potential present in historical gardens, empower the visitors with new knowledge and improve the quality of their life. A set of press conferences and press releases, as well as local and regional public workshops will be organised, to present to the relevant stakeholders this important achievement and pave the way to a wider implementation.

The Transnational Educational outdoor trail tools (EOTT) provides effective and easily implementable examples for creating educational outdoor trails for general and specific publics. They are going to be tested in the pilot actions planned by the HICAPS project in 2019.

In the following chapters, the identified educational tools are presented, organised according to the institutions that have proposed them. The outdoor education training tools well show the variety and richness of the potential present in the cultural and natural heritage present in the HICAPS historical parks. All the partners have contributed to the development of the handbook:

- Municipality of Bedekovčina (Croatia)
- Municipality of Varaždin (Croatia)
- Municipality of Ferrara, Emilia-Romagna Region (Italy)
- Villa Ghigi Foundation, Bologna, Emilia-Romagna Region (Italy)
- Kujawsko-Pomorskie Voivodeship (Poland)
- Rzeszow Regional Development Agency (Poland)
- Scientific research centre Bistra Ptuj (Slovenia)
- Municipality of Velenje (Slovenia)
- the Faculty of Architecture of the University of Ljubljana (Slovenia)
- the Association for promotion of informal education, critical thinking and philosophy in practice "Petit Philosophy" (Croatia), that was the effective animator of the discussion among the partners, providing examples, ideas, suggestions and good practices.

The following map reminds the reader the geographical location of the parks.



2. Analysis of the Proposed Training Tools

The proposed training tools to be used for Educational Outdoor Trail includes the following list:

The proposed training tools to be used for Educational Outdoor Trail includes the following list, organised by the institution that proposed it. You can see that each partner that is managing one historical park has proposed and is going to implement at least one training tool in its pilot action, while the University of Ljubljana and Mala Filozofija have proposed some "horizontal" tools, that can be applied in any context.

Municipality of Bedekovčina (Croatia)	Quiz Path
Municipality of Varaždin (Croatia)	Interactive application for walk lane J.J Strossmayer
Municipality of Ferrara	Action Trail for Developing Motor Skills
	Interactive guide to plants
	Biodiversity in the Park
Villa Ghigi Foundation	The world of spontaneous grasses
Kujawsko-Pomorskie Voivodeship	The field classes scenarios in the landscape parks
Rzeszow Regional Developm. Agency	Nature and educational path at the Maria Konopnicka Museum in Żarnowiec
	Dendrological and educational path
Scientific research centre Bistra Ptuj	The world made by small springs
Municipality of Velenje	The Dragon's Castle Trail Around Velenje
University of Ljubljana	Learning by doing with volunteers
Mala Filozofija	A Smart Park
	Book Crossing
	Curious path
	Labyrinth
	Psychomotor path – therapy and relaxation
	Recycling corner
	Riddle corner
	Riddle path
	Sensory Rope Trail
	Social games corner
	Who am I?
	Write your own story

We can organise the tools according to three main themes: the history of the park, the biodiversity and the natural sciences elements typical of the park, and their tools for general culture, health, wellness and entertainment.

The following table presents the organised list:

	History of the park	Biodiversity, Natural sciences	Health, Wellness, Entertainment
Quiz Path	X	X	
Interactive application for walk lane J.J Strossmayer	X	X	
Action Trail for Developing Motor Skills			X
Interactive guide to plants		X	
Biodiversity in the Park		X	
The world of spontaneous grasses		X	
The field classes scenarios in the landscape parks	X	X	
Nature and educational path at the Maria Konopnicka Museum in Żarnowiec		X	
Dendrological and educational path		X	
The world made by small springs	X	X	
The Dragon's Castle Trail Around Velenje	X	X	
Learning by doing with volunteers	X	X	
A Smart Park	X	X	
Book Crossing			X
Curious path		X	X
Labyrinth			X
Psychomotor path – therapy and relaxation			X
Recycling corner			X
Riddle corner			X
Riddle path	X	X	X
Sensory Rope Trail			X
Social games corner			X
Who am I?		X	X
Write your own story			X

Finally, we can analyse the list of training tools according to the target beneficiaries. Together with children (divided in the age groups, namely 0-6, 7-11 and 12-15), youngsters, adults, generic citizens and tourists, some tools also specifically target people with special needs (blind, disabled people), scholars, and people with a specific interest (e.g. geocachers). The following table present the distribution so obtained: please consider that the "special needs" section includes only the tools with a specific focus on this category, even if most of the tools can be easily applied also to people with several forms of unpairness.

	Children 0-6	Children 7-11	Children 11-5	Youngsters	Adults	Tourists	Special Needs	Scholars	Specific interest
Quiz Path		X	X	X	X	X			
Interactive application for walk lane J.J Strossmayer		X	X	X	X	X			
Action Trail for Developing Motor Skills	X	X			X	X			
Interactive guide to plants		X	X	X	X	X			
Biodiversity in the Park			X	X	X			X	X
The world of spontaneous grasses		X	X	X	X				
The field classes scenarios in the landscape parks		X	X	X	X				
Nature and educational path at the Maria Konopnicka Museum in Żarnowiec		X	X	X	X	X			
Dendrological and educational path		X	X	X	X	X			
The world made by small springs		X	X	X	X	X			
The Dragon's Castle Trail Around Velenje	X	X	X	X	X	X			X
Learning by doing with volunteers		X	X	X	X	X		X	
A Smart Park	X	X	X	X	X	X			
Book Crossing	X	X	X	X	X	X			
Curious path	X								
Labyrinth	X	X	X	X	X	X			
Psychomotor path - therapy and relaxation	X	X			X		X		
Recycling corner		X	X		X	X			
Riddle corner		X	X		X	X			
Riddle path		X	X		X	X			
Sensory Rope Trail	X	X			X		X		
Social games corner	X	X	X	X	X	X			
Who am I?		X	X	X	X				
Write your own story	X	X	X	X	X	X			

It is evident how the set of tools well responds to the general and specific objectives, is well balance among the expected target beneficiaries, and covers all the key themes planned by the HICAPS project.

FURTHER ANALYSIS WHEN WE HAVE THE FULL SET OF TOOLS

In the following chapters, the tools are presented in detail, describing the general idea and purpose of the tool, focusing on the preparatory works and activities, listing the materials necessary for their successful implementation and documenting in annex all the necessary instructions and additional information useful for those who intend to apply them in their own park or garden.

3. Conclusive remarks

 **Lesson Learnt by the Partners**
FURTHER ANALYSIS WHEN WE HAVE THE FULL SET OF TOOLS

 **Recommendations to our Central Europe colleagues**
FURTHER ANALYSIS WHEN WE HAVE THE FULL SET OF TOOLS

Annex A: Template for data collection

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D.T2.2.3 Transnational Educational Outdoor Trail

Template to collect information
Deadline for submitting the first part of the document: 30/04/2018

1. **Title of the Educational Tool**

2. **Short description / presentation of the tool**

3. **Target beneficiar(ies)**

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

Many thanks for your time and effort

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Bedekovčina

1. **Title of the Educational Tool**

Quiz Path

2. **Short description / presentation of the tool**

Quiz path is educational path for all generations, especially for children. The idea of quiz path is to make possible for general public to learn about history and biodiversity of park in an interesting way. Path is made of several boards. Each board is made of small rotating parts. On one side of the small part are questions about history and biodiversity of the park and on the other side are the answers. For each answer one gets certain point so people can compete with each other.

In that way people will learn about the park and have fun at the same time.

3. **Target beneficiar(ies)**

Primary school (from 7 to 15 years old). Adults and general population.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Varaždin

1. **Title of the Educational Tool**

Interactive application for walk lane J.J Strossmayer

2. **Short description / presentation of the tool**

Instructive boards with interesting information on the plant species in park (existing valuable plants and new plants planned by the landscape project) and interactive point for mobile App that would provide citizens of the City of Varaždin and tourists with information about the promenade itself (who was Josip Juraj Strossmayer, how and when the ramparts, plant and animal species were present on the promenade, interesting things about them and similar content for identifying plant and other data about plant use and Slavic and Christian mythology on the trees and perennials in Croatia. Application should be simple to update and specially to use.

3. **Target beneficiary (ies)**

Visitors in the park are children, citizens, tourists

Z komentarzem [PGS1]: Can you please detail?

4. Materials and initial preparatory activities necessary to effectively implement the tool

For preparation of this tool it is necessary to make a database with information that will be presented via application.

Z komentarzem [PGS2]: Can you please detail?

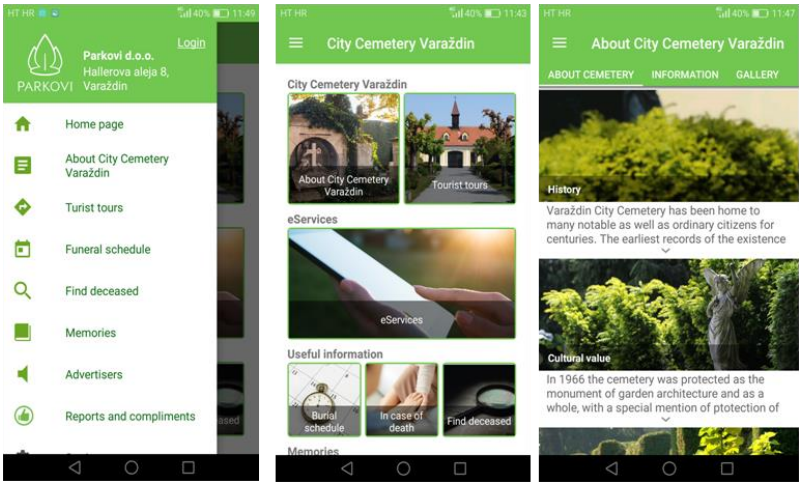
5. Detailed description how to implement the tool (teachers / educators guide)

Application needs to be downloaded and the tool is ready to use.

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

Interactive application for walk lane J.J Strossmayer should be programme similar like application that is already used for Varaždin Cemetery. This existing application can be used as a model or concept for our new application, that contain information about our walk lane and plant and animal species that are present on it.

Here is an example of the layout of the menu that we like to use in our application:



HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Ferrara

1. **Title of the Educational Tool**

Action Trail for Developing Motor Skills

2. **Short description / presentation of the tool**

This tool has been firstly developed by the University of Tampere, in different green areas within the City of Tampere, in Finland. It is based on the Recommendations for physical activity in early childhood, published the Ministry of Education and Culture in Finland, and the United Nations Convention on the Rights of the Child. The recommendations also include guidelines on physical activity for a child, the roles of the physical, psychological and social environments, and the planning and implementation of guided physical exercise as part of early childhood education. The objective of this tool is to promote the development of fundamental movement skills in early childhood and to provide educators with various examples and ideas for different ways of exercising and developing fundamental movement skills.

Every child has a natural attitude to be physically active. Physical activity is a prerequisite for a child's normal growth and development, as well as for health and ability to function. Through play and motion, children learn new things and simultaneously practice and develop their motor skills. Also, the development of learning capacities, social skills and self-esteem are connected to physical activity. A physically active way of life starts to develop in early childhood, and an active childhood predicts a physically active adulthood. Physical activity should be a natural part of a child's everyday life both at home and in early childhood education. The early years are the most significant for developing motor skills. The central basic movement skills such as walking, running, jumping, throwing, kicking and catching should be learned before the age of seven. The development of motor skills is a prerequisite for a child to later independently cope in various situations in life. The automatization of motor skills requires thousands and thousands of repetitions for the same movement model.

3. **Target beneficiar(ies)**

Pre-primary and Primary school children (from 3 to 9 years old). Parents and children. Citizens.

4. **Materials and initial preparatory activities necessary to effectively implement the tool**

The Action Trail proposed includes 25 games, divided into five areas of learning, each with levels of difficulty. The children's age and level of development should be considered when planning and implementing the tasks. The tasks can be put on a map of the park(s) involved, to help educators and parents to run them in areas better designed for their objective.

Many games do not ask for any specific material, sometimes the educators are requested to prepare themselves some materials to be used for playing. The following items are requested for some of the proposed games:

- A dice with different letters on the sides, corresponding letters to be put on the wall;
- A wheel of fortune with eight sectors;
- A game board with a map of Europe, a dice and pawns
- Some baskets, playing cards, a , sticky tape, pens and paper
- Musical Instruments, an audio player and recorder, a camera or a tablet
- White pieces of cloth or paper to be used as a canvas
- Bingo grids.

5. **Detailed description how to implement the tool (teachers / educators guide)**

The games are organised in five areas: a) the World of Languages; b) Forms of Expression; c) Our Community and I; d) Can You Hear the Difference? e) Growing, Moving and Developing.

A certain number of points are associated to each task, according to the level of difficulty of the task (t levels per area), so that the tasks with the lowest number of points (10 points) can be completed quickly and easily by children, and the more complex tasks (50 points) require a lot of planning and documentation.

At least one task from each area should be completed, and – if possible, the children's performance must include tasks from all levels of difficulty. The game is successful if the child collects a minimum of 200 points. There is no predefined route to be followed: you take the one that you like towards the finish line.

The full description if presented in the attached document.

6. **Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.**

The methodological background and the full description of each game are provided in the attached Annex 1.

7. **Additional remarks, if any**

The fundamental movement skills are detailed in the table below, divided into three types of basic skills (Table 1). These different skills can be developed by using and changing different motion factors, which are directions, space, time, strength and level (Table 2). This part also includes a few scientific articles on developing fundamental movement skills.

Table 1: Fundamental movement skills (Gallahue, D. L. & Donnelly, F. C. 2003. Developmental physical education for all children. Champaign, IL: Human Kinetics)

Stability Skills	Loco-motor Skills	Manipulative Skills
bending	walking	throwing
stretching	running	catching
twisting	jumping	kicking
turning	hopping	trapping
swinging	skipping	striking
inverted supports	galloping	volleying
body rolling	sliding	bouncing
landing/stopping	leaping	ball rolling
dodging	climbing	punting
balancing		

Table 2: Motion factors (Kokljuschkin, M. & Pulli, E. 1995. Liiku ja kehity. Helsinki: Nuorten keskus)

Directions	forward - backward - sideward rightward – leftward
Space	a large or small area to play or act motions with relation to space: curved motion, large motion
Time	slower – faster slowing down – speeding up sudden movement – steady movement
Strength	strongly – lightly decreasing strength – increasing strength tension – relaxation
Level	upper level (on the balls of the feet, hand movements above the chest), mid-level (movement between the knees and the chest), lower level (lying down, crawling flat or on all fours) upward – downward handling equipment high – low

1. **Title of the Educational Tool**

Interactive guide to plants

2. **Short description / presentation of the tool**

In the Barco district of Ferrara, not too far from the Este Walls, in December 2015 the small park dedicated to Claudio Abbado, who defined himself as a gardener dedicated to music, was born. The Bosco Abbado, 80 m long and 26 m wide, is composed of two identical linear modules: a rich vegetation belt capable of translating environmental quality into the urban environment of a small "forest", with the aim of guaranteeing biodiversity in a small space. The project aimed to have the most of the planting density, with the objective to insert as many species as possible. The presence of fruit trees together with traditional trees and shrubs provides a wide association of species.

The interactive guide to the trees and shrubs of Bosco Abbado, easily extendable to the whole Este Wall area, has been created in collaboration with the Dryades project of the Department of Life Sciences of the University of Trieste. It aims to enhance the forest by creating tools for easy consultation and bring citizens closer to the urban forest. Above all it wants to provide pupils and teachers with a tool that allows them to use the city green areas as real outdoor laboratories, in which they can carry out educational activities centered on the identification of plants.

3. **Target beneficiar(ies)**

Primary and secondary school children. Parents and children. Citizens.

4. **Materials and initial preparatory activities necessary to effectively implement the tool**

The interactive guide is accessible from a single-user interface, where the user is asked to choose several times between a couple of options, until she/he gets the name of the plant /shrub. The system is organised in this way:

- At each step, user is requested to choose between two options.
- To choose an option, she/he has to click the corresponding button (to simplify the model, the illustrations of the options refer to the plant characters in a general sense, and do not necessarily reproduce the organism to be identified).
- It is always possible to 'go back', by clicking the 'back' key, or to start over from the beginning by clicking the 'restart from top' key.
- After selecting an option, the number of remaining species is presented to the user: by clicking on it she/he can get the complete list.
- When the number of remaining species is less than 16, an additional key allows to show an illustrated information, including photographs of the remaining species.
- When the final species arrives, a page is displayed with its Latin and Italian name, its family and a digital photograph.
- The user can access several photographs of that species, by clicking the corresponding button.
- A series of digital photos appears. To enlarge a photo, the user has to click on it. By clicking the lower right corner, it is possible to further enlarge the photo.

5. **Detailed description how to implement the tool (teachers / educators guide)**

Her an example how the system works.

Look at the plant in front of you and provide the correct option

First key:

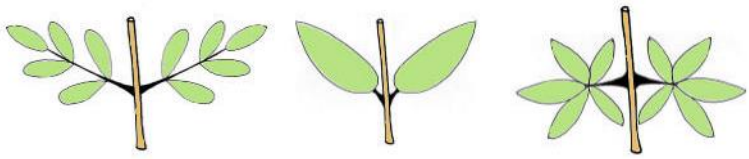
Needle-like leaves,

or

Not needle-like leaves

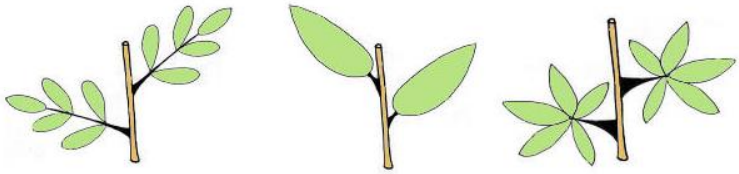
Second key: If the user selects the “Not needle-like leaves” option, the following information is shown:

42 records left



Opposite leaves,

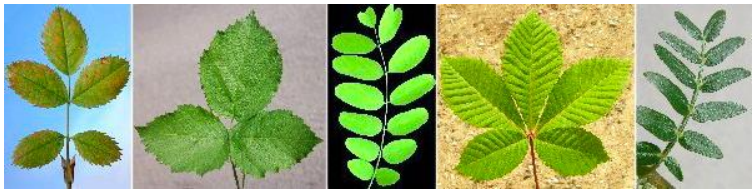
or



Not opposite leaves

Third key: If the user selects the “Opposite leaves” option, the following information is shown:

12 records left



Composite leaves,

or

Non composite leaves

Fourth key: If the user selects the “Composite leaves” option, the following information is shown:

6 records left

Plant with climbing or twisting stems,

or

Trees or shrubs

Fifth key: If the user selects the “Plant with climbing or twisting stems” option, the resulting plant is fully presented:

Clematis vitalba L.

Family: Ranunculaceae

Italian names: Cincinis, Clematide vitalba, Viorna, Vitalba

The vitalba is a vine with European distribution present in all regions of Italy, from sea level up to the mountain thermophile beech forests…

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

At the moment the system can be accessed only at the URL
http://dbiodbs.units.it/carso/chiavi_pub21?sc=669 (in Italian language).

1. **Title of the Educational Tool**

Biodiversity in the Park

2. **Short description / presentation of the tool**

This tool concerns the use of the Syrphoidea and Carabidae insects as indicators of biodiversity. It is targeting more operators who take care of the park, however it has a high potential to be used as a demonstrator for the whole citizens, making them aware about the relevance of biodiversity in the city. In fact, the urban park plays important ecological functions, such as climate mitigation, including support for biodiversity.

The intent of the Municipality of Ferrara is to set a survey to assess the capacity of an urban park in supporting the indigenous biodiversity, using the two groups of insects mentioned above as bioindicators. These groups meet the fundamental requirements required to be valid bioindicators of biodiversity:

- information on biology and biogeography must be abundant and easily available;
- distribution of the upper taxa (e.g. families) must be wide, covering a large range of habitats;
- lower taxa must be specialized and sensitive to habitat changes;
- identification of taxa must be simple and the name of the taxa must be well established;
- sampling techniques must be effective and easily standardized, sampling and labeling must be expensive in money and time;
- it should be related to those of other taxa: good ecomomic interest

3. **Target beneficiar(ies)**

Secondary school pupils and teachers. Parents and children. Citizens. Scholars. Park management staff.

This tool is mainly interesting for people taking care of the park – the park managemet operators, as well as the managing institution - however it has a high demonstrative value for the citizens and can be used as a method to bring students closer to the use of bioindicators.

4. **Materials and initial preparatory activities necessary to effectively implement the tool**

Guides useful for the identification of Diptera Syrphoidea and Coleoptera Carabidae existing in the region, based on bibliographic references. Collecting information about the ways Carabidae species are used to feed themselves, and identification of the habitats present in the park's ecosystem.

The tool can be used in a simplified version in which only the presence of ecologically demanding species is analysed, looking at some specific feature that can be directly detected on the collected insects, without using more detailed references and databases.

An mportant reference material is: Van Veen M.P., 2004. Hoverflies of Norhwest Europe. Identification keys to the Syrphidae. KNNV Publishing, The Netherlands.

5. Detailed description how to implement the tool (teachers / educators guide)

The tool should include the following steps:

- Regional lists of Diptera Syrphoidea and Coleoptera Carabidae based on bibliographic references;
- Reference to existing guides useful for the identification of the Sirfidi and Carabidae species in the region;
- Samples of Syrphoidea and Carabidae with the two techniques described above;
- Analysis of materials using stereomicroscopes; counting of the Carabidae with reduced or absent wings; preparation of captured specimens and identification of the related species with the help of the guides;
- Tracking information on the feeding of Carabidae species;
- Identifying habitats present in the park's ecosystem;
- Defining the list of species expected for the park's ecosystem using the Syrph the Net database;
- Calculating the ratio between the number of species actually found and the expected ones. Make considerations on the species found but not expected, once the migratory species are excluded;
- Applying the Index of Natural Value with the Carabidae by summing the percentages of species and individuals with reduced or no functional wings, percentages of species and individuals with specialized feed and the index of evenness;
- Comparing and discussing the results obtained with the two indices;
- Identifying actions to increase biodiversity of the park, compatibly with their public use;
- Giving directions for the simplified application of the tool.

The Diptera Syrphoidea are a very widespread flies. Some species are sometimes mistaken for bees or wasps, as the group often adopts the so-called "Batesian mimicry": the animal, which is completely harmless, takes colour, form and behaviour similar to those of dangerous species, to defend against predators. The Sirfidi are however flies, that is they have only one pair of wings, while bees and wasps are Hymenoptera Aculeati, that is they have two pairs of wings and they are equipped with a sting able to inject a poison.

The use of Syrphoidea as bioindicators is based on the Syrph the Net method (StN), deeloped by M.C.D. Speight, E. Castella, P. Obdrlik and S.G. Ball. The method uses a database that collects about 800 known species in Europe and, for each of them, lists the preferential macro and micro habitats.

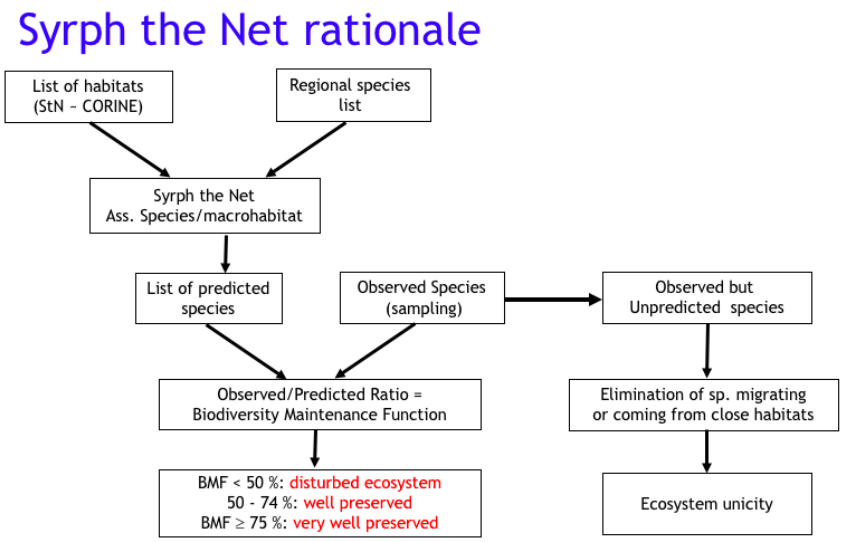
The bioindicator capacity of the Sirfidi is not present in the adult animal, but in their larvae. In fact, while all the adult feed on nectar and pollen for which they fly on the flowers (the Sirfidi are good pollinators), the larvae of the different species, of vermiform aspect, are born from eggs deposited in many different places. They larvae are therefore able to exploit the thousand facets of the ecosystem and describe the state of conservation. This larval diversity is "transferred" on the adult individuals, that are the object of the sampling.

The sampling takes place with the "Malaise trap", an instrument passively collecting adult insects that fly between patches of vegetation. Being passive, sampling is much more objective than it would be with active collections by entomologists, as the active collections are inevitably influenced by the ability of the collector and, perhaps unconsciously, by his/her preferences: consequently, the collections with Malaise traps are standardizable.

When using the Syrphoidea as bioindicators, we must first rebuild, thanks to bibliographic references or on the basis of direct collections, the list of species present in the region of interest (e.g. the eastern Po

Valley). Then, we list the habitats present in the area subject to sampling (e.g., in the case of the Ferrara's walls, they can be hedges, ditches, mowed lawns, well-drained meadows, wet meadows, depending on where exactly the trap will be placed), defining them through the CORINE codes: the CORINE codes correspond to the Syrph the Net database. It is also possible to define a correspondence with the Natura 2000 and EUNIS codes.

Having defined the regional list of species and the habitats present, the database supports you in generating a list of expected species. This list will be compared with the species collected through the sampling with Malaise: if less than 50% of the expected species are harvested, the habitats will be poorly conserved, between 51% and 75% we will have a good conservation status, over 75% we will have an excellent state of conservation. With the StN method, it is possible to identify exactly which components of the habitat are suffering, since it is applicable at the microhabitat level (for example, it allows to evaluate the health status of roots, the foliage of trees, etc.) and to simulate the effects on biodiversity of any changes made to the ecosystem (for example, by adding or removing a hedge or a pond).



The principles on which the Syrph the Net method is based

The Coleoptera Carabidae include 40.000 species in the world, 10,000 in the Palearctic region, about 1.300 in Italy and 500 in the Emilia-Romagna region. Like the Syrphoidea, they are well-studied insects, relatively easy to capture, many of the species are large, some have fascinating colors and shapes. Often scholars who decide to devote themselves to entomology starts from these animals and develop specific skills.

Also in the use of Coleoptera Carabidae as indicators it is necessary to adopt a standardizable sampling technique,

poorly depending on subjective factors. The appropriate technique is that of falling traps: a standard-sized container (12 cm depth, 9 cm diameter upper), with smooth walls, is inserted into the ground, so that its mouthpiece is "flush with the surrounding soil surface" . Above the container is added a cover slightly raised from the ground that protects the trap from debris and excessive rain but does not prevent the passage of insects. The trap is emptied approximately every two to three weeks. At each collection site, at least 6 replication traps are placed at a distance of about 6 meters from each other. Sampling can continue for a few months continuously, from spring to autumn, or even to winter, depending on the latitude.

Like all Coleoptera, the Carabidae have two pairs of wings: the first pair (elytra) is rigid, it is not functional to fly but serves to protect the second pair of wings, which is membranous and is what actually serves to fly. The development of functional wings is not identical in all species: there are indeed Carabidae with well-developed functional wings and species with functional wings so small that they are almost absent. There are also species that, in certain ecosystems, have individuals with well-developed wings and in others have reduced wings and are called "dimorphic". Wing development is linked to the possibility of escaping the perturbations of the environment and the ability to recolonise an environment after a disturbing event. Animals with well-developed functional wings can escape effectively in the event of systemic disturbance, for example when a tree is cut or fires, and can then quickly re-colonize the environment as soon as the situation returns favorable. Hence, in the disturbed ecosystems there is a prevalence of species and of macrotheres. On the contrary, species with reduced functional wings are not able to escape from the disturbance and quickly re-colonize so that their presence characterizes the most stable environments, like certain primary forests. The greater the presence of species and individuals brachitteri, the less the ecosystem is disturbed. Given the wing variability described above, the degree of wing development must be examined directly on the individuals collected.

Another biological characteristic that is considered in the use of Carabidae as bioindicators is the type of food: all are basically carnivores, however even in this case there are generalist species, which adapt to eating plant seeds, other small insects, etc., and others that are very selective and do not adapt to what is available. As for wing development, the most demanding species from the food point of view characterize the presence and number of individuals of the most stable environments, which guarantee over time the presence of the particular food resources needed.

Carabidae with specialized feeding and generalist: the first has very strong jaws (Brandmayr et al., 2005).

In the use of Carabidae as bioindicators the biological characteristics are combined for the calculation of the INV index "Index of Natural Value" proposed by the working group of Prof. Pietro Brandmayr (2005). The low values (e.g. <20) characteritises very disturbed and high environments, and high values (e.g.> 40) the stable ones.

The importance of Coleoptera Carabidae as bioindicators is highly recognized at European level, and is useful to systematize the knowledge on the biology of the various species by gathering them in a database that can be consulted for free online. The database published on the www.carabids.org website contains detailed information on the biology of about 10.000 species, in the ecological macro-region in which Europe is located. The consultation of a bibliography linked to the localfauna can help to solve doubts when the biology and ecology of the individual species deviates from what is reported in the database.

6. **Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.**

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- http://www.carabids.org
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- http://www.markgtelfer.co.uk/beetles/carabidae-ground-beetles/

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Fondazione Villa Ghigi

1. **Title of the Educational Tool**

The world of spontaneous grasses

2. **Short description / presentation of the tool**

At the end of the winter, many blooms of numerous herbaceous plants begin to appear in the meadows. Usually there are several dozens of different species, most of which belong to a few and often well identifiable botanical families.

Starting from the observation of the spontaneous grasses, it may be interesting to start a methodical observation of the plants. The objective of this tool must be mainly to turn the attention of the participants to the fascinating, and often little known, world of herbs, trying to put order in the great richness and variety that even a small lawn is able to offer.

The study of a lawn must be addressed to grasp the biological richness of this environment, its evolution and the relationships between animal and plant species. It is then necessary to increase our knowledge of some herbs and to be able to get to their classification. The determination of a species, i.e. the attribution of the common and also the scientific name, is not necessarily the fundamental objective, but is an effective way to motivate the participants to make precise observations, identifying criteria to establish any affinity and compare the hypotheses formulated with texts and images from the manuals.

3. **Target beneficiar(ies)**

Primary school (from 7 to 11 years old). Secondary school (from 11 to 14 years old). Parents and children. Citizens.

4. Materials and initial preparatory activities necessary to effectively implement the tool

For this activity, the necessary materials are: magnifying glasses and linen testers, notebooks, paper or digital manuals for the identification of the analytical keys, cameras or tablets, a white sheet (where the

different samples collected can be set down) and of course the plant material collected during the outdoor excursion.

Regarding the collection of plant material, if it is necessary to provide precise information to the participants in the activity (e.g. pay attention to take complete samples of plants including roots; focus on flowering plants; take only few samples), on the other side it is also necessary to satisfy their curiosity and questions, to keep alive their interest and involvement in the activity.

As an example of the herbs that can be found at the beginning of spring, it is possible to recognize the yellow flowers of dandelion *(Taraxacum officinale),* the white petals of daisy *(Bellis perennis),* the shiny and golden petals of buttercup *(Ranunculus spp)* or the mouth-shaped petals of nettle *(Lamium spp).* As summer approaches, these flowers disappear, leaving room for grasses *(poaceae)* and other flowers typical in summer.

5. Detailed description how to implement the tool (teachers / educators guide)

Participants are divided into groups with specific tasks: collection of plants, annotation of plant characteristics, drawings and photos. The different tasks are identified according to the abilities of participants; however, the tasks should be changed as much as possible so that everyone can run different activities.

Once the sample is collected, the observation should focus on the different organs (leaves, stems, flowers, fruits), trying to involve all the senses. After an initial careful observation, it is possible to draw up a first list of the characteristics of each plant, trying to arrive, as the botanists do, to a classification of the plant through its characteristics. Careful observation and identification of the characteristics of the plants allows to group them according to common elements and similarities and then, comparing what has been observed with the suggestions offered by the appropriate identification keys. In this way it is possible to get to the name of the botanical family and sometimes also of the genus and of the species.

If participants are secondary school pupils or adults, the activity can be carried out with the help of simple artefacts (rods or wooden frames) to have a real phytosociological survey (distribution and type of plants).

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

The requested documents are available in annex.

7. Additional remarks, if any

This activity helps developing a careful and methodical observation on the field, aimed to: i) follow the development of some species of plants observing them from the flower to the fruit; ii) create a collection *(herbarium)* of the plants collected and identified; iii) set a calendar of the flowerings of the lawn, reflecting on their shapes and colours, and planning, if appropriate, an enrichment of the green area in which you work; iv) observe the interactions between plants and some animal species, first of all, but not only, the pollinating insects.

The study of the lawn triggers an effective acquisition of skills transversal to different disciplines. During this activity, the expert or teacher must pay attention to the presence of rare and protected species, which obviously must be preserved and not collected, as well as noted and photographed.

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Kujawsko-Pomorskie Voivodeship

1. **Title of the Educational Tool**

The field classes scenarios in the landscape parks

2. **Short description / presentation of the tool**

The field classes scenarios consist of set of methods for different age groups in selected topic areas. Teacher can freely prepare activities by choosing and modifying available methods, adjusting the scenario according to age and interest of students, expected purposes and external conditions (weather, landscape) of conducted lessons. The classes can be divided into few stages e.g. during longer bus trips as well as walks in the nearest surroundings. Sometimes the preserved areas can limit the scope of activities, so it should be foreseen accordingly in the scenario.

The aim of field classes is to know the natural and cultural richness of particular region, especially paying attention on objects and natural assets within the landscape parks. Moreover, it is practical guideline for teachers in conducting outdoor lessons and increasing attractiveness of school field trips. The scenarios were prepared based on the general education programme.

Z komentarzem [PGS3]: Example is quite general, in the following description of the tool more detailed description is needed.

3. **Target beneficiar(ies)**

Primary and secondary school teachers and students.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Rzeszów

1. **Title of the Educational Tool**

Nature and educational path at the Maria Konopnicka Museum in Żarnowiec

2. **Short description / presentation of the tool**

On the path running through the entire park area, 40 stands for the most interesting plant specimens were designated. Each of them was appropriately described on the information board next to him. In addition to plants, interesting natural phenomena have also been distinguished, such as a sandstone outcrop or a pond fed by a stream. The elements related to Maria Konopnicka were also not forgotten. On the route there is a mound - at which the writer gave one of his speeches on the occasion of his 25th anniversary, a bust of a writer from 1988, a Suwałki boulder - set for the poet's 150th birthday and medallion - designed for the 90th anniversary of the writer's offer. The aim of visiting the nature and educational path is to familiarize the participant with both native and strangers (including exotic) plant species and a reminder of important dates from the writer's life.

3. **Target beneficiar(ies)**

Pupils, students and adults.

4. Materials and initial preparatory activities necessary to effectively implement the tool

In order to implement the above-mentioned operation, the Museum has developed a special folder containing a map of the natural and educational path along with a description of all 40 posts. The stands were also marked by a special network of information boards, extending the messages contained in the folder. Particular attention was paid to the origin of individual trees and the history of their acclimatization. Sites related to the life story of the poet were also marked. There were also designed boards showing the entire park layout. The same materials are available on the website.

Z komentarzem [PGS4]: Can you please annex a copy of the folder?

To carry out this activity, it is necessary to equip the participants with materials developed by the museum and to focus their attention on reading the information boards.

Z komentarzem [PGS5]: Can you please annex a copy oft he materials?

5. Detailed description how to implement the tool (teachers / educators guide)

You can conduct at least 2 types of activities using materials developed by the museum. The first one is for expanding knowledge about plants. We talk with participants about the species of plants that they think are native Polish plants. We discuss their shape. Then, during the walk in the park, the participants have to find the species they indicated. We confront their knowledge with information provided by information boards. If the participants mistakenly embed a given species, we are looking for an answer, which was the reason for it - most often it is the former adaptation of the plant. Thanks to this, participants acquire knowledge not only from the field of natural science but also from history.

The second action is to indicate the features of a typical landscape park based on the above-mentioned materials. Participants discuss the assumptions of landscape gardens known to them, the speaker systematizes their knowledge and emphasizes the most important elements of the nineteenth century garden assumptions. Next, participants are tasked with finding the elements of the assumption discussed above and documenting them through drawings or photos. At the end of the walk the participants show their works, the delegate sums up their activities, and then together they create a "garden of dreams" composed, however using typical elements of the nineteenth century landscape garden.

Z komentarzem [PGS6]: How exactly? A little more detailed description maybe?

A natural path was also designed based on the existing, most interesting plant positions (including centuries-old trees, such as plane tree, tulip tree, cork tree, ginkgo, white dogwood, sweet viburnum, Siberian karagana, Chinese juniper, goldcap), respectively describing and marking them. The path also uses the existing original compositional elements of the nineteenth-century landscape garden (pond with a small island, mound or geological phenomenon "sandstone outcrop" and contemporary designed places of memory of Maria Konopnicka, which, however, fit into the nineteenth century picture of the park. with each other by means of a coherent route, described in the folder and marked in the park by means of low information boards, both the folder and the park itself contain maps presenting the park assumption, which facilitates moving around it. These materials are also available on the museum website.

Z komentarzem [PGS7]: Maybe to put a link to a museum website (where the materials are)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

The Maria Konopnicka Museum in Żarnowiec is located in the manor house along with the park surrounding it, which Maria Konopnicka received from the nation on the occasion of the 25th anniversary of writing work. The park was founded at the beginning of the 19th century. At the end of the 19th century, it gained its current character of a landscape park. As a landscape park, it is characterized by the diversity of tree species (about 40), shrubs (about 30), vascular plants (about 170). The park is also distinguished by its rich old-growth trees and rare dendrological specimens such as plane trees, tulip trees, bark beetles and ginkgo trees or shrubs: white dogwood, sweet viburnum, Siberian kargana and Chinese juniper). In the park there are also souvenirs related to the life of Maria Konopnicka. However, despite such dendrological richness, the park was often visited without due attention and its compositional and natural values were underestimated. This resulted most often from inability (ignorance) to recognize the stand and lower vegetation, and thus also to assess their value. In order to change this state of affairs in 2004, the Museum has developed a nature and educational path that approximates the park's values and the life story of Maria Konopnicka.

Chestnut alley Żarnowiec

Park alley Żarnowiec

Pond Żarnowiec

Map of the park

An example of a board

Folder

7. Additional remarks, if any

This action is aimed at restoring the park and its collection of plants to the right place and making it local. It also extends knowledge in the field of dendrology and history of gardens, as well as brings new news about the life of Maria Konopnicka.

1. **Title of the Educational Tool**

Dendrological and educational path

2. **Short description / presentation of the tool**

The path was marked out in the park in Jureczkowa. Among the richness of the species of trees and birds found here, 8 most valuable were selected, at which information boards were placed. The messages presented on them do not only concern botanical or ornithological knowledge, but also convey cultural messages: they tell about the beliefs and legends associated with the discussed species. There is also a table on the role of bees in nature as well as in history. The path starts with the marked-out car park and ends with a camping place. There are benches and litter bins along the entire length of the path.

The first stop is devoted to two species of coniferous trees, the native common yew and the Douglas-fir (litter) originating from western North America. This is, in addition to the sequoias, the fastest growing and the highest tree in climate zone. In its homeland it can reach even more than 100 m in height, while in Polish conditions maximum 45 m. The specimen growing on the path route is 32 m high and 300 cm in circumference. At the next stop we get to know two native species of lime tree. Both of them during flowering secrete a large amount of nectar and are eagerly visited by bees. On the third stop we find out which species of birds live in the hollows in the old trees growing here. These include flycatchers, starlings and cants. Then we get to know two species of poplars - white and black, which in this park reach successively heights of 25 and 23 m. At the end of the tour, almost 300-year-old pedunculate oak grows, reaching 30 m high and 470 cm trunk perimeter. The last stop informs us about the North American pine tree, two of which grow in this park and reach a height of 26 and 29 m.

3. **Target beneficiar(ies)**

Children and adults.

4. Materials and initial preparatory activities necessary to effectively implement the tool

Z komentarzem [PGS8]: Needed more concrete information.

An information campaign is needed to implement the above-mentioned tools. A lot of information can be obtained from the Landscape Parks Complex in Przemyśl, which carries out numerous information activities. In 2002, the Complex of Landscape Parks in Przemyśl published a richly illustrated 32-page folder devoted to the dendrological and educational path "Trees of the manor park in Jureczkowa", which can be purchased at information points and at the headquarters of Landscape Parks Complexes in Przemyśl.

5. Detailed description how to implement the tool (teachers / educators guide)

This path was established in a neglected park. Plates / information points designed on its route were located under the most valuable dendrological specimens and in the place of existence of the most interesting ornithological species. In the park itself, there are 23 monumental trees, including 3 Douglas -fir, 3 sessional oaks, white chestnut, 4 Turkish hazel, 4 broad-leaved limes, 4 European larches, spring pine, white poplar and aspen poplar. The path creators used the natural richness of the park's establishment; however, the botanical information was extended by information about the symbolism, beliefs and legends associated with a given tree. Likewise, a description of ornithological species such as flycatcher , Blue Tit, European starling, woodpecker, blackbird, robin, finch, lesser spotted eagle, owl and tawny owl. At the beginning of the path, a parking lot was located, while at the end, a special camping space was designated with a designated fire pit and a large network of benches to serve as a resting place. This place was located at the

point of the route, where one of the few in Poland, table plantations, also known as dinner plantings or a woody gazebo have survived. These are circular plantings, in Poland most often lindens (here small-leaved and broad-leaved lime), in which the tables were placed and used for feasting and resting in the open air. While designing the path, the existing alley network was used, thus restoring the original state of the park. In order to diversify the walk, attention was paid to the diversity of areas through which the path runs. Participants should be equipped with dendrological tables, presenting selected specimens of trees and images of birds. You can also equip them with audio recordings of bird sounds. The task of the participants is to recognize the appropriate species of trees and birds and to perform their drawings. Dendrological tables can be adapted in terms of seasons, instructing them to recognize trees by leaves or fruits. You can also create a mini-herbarium from the collected materials.

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

The park was founded in the 19th century on a rectangular plan. The access road with a bridge over the River Wiar and an earth platform with remains of fortifications - ramparts and earth bastions, as well as beautiful old trees have survived from previous assumptions. In the southern part of the park, there remain dikes, overgrown ponds and a water channel. The nineteenth century park layout was characterized by a great diversity of dendrological specimens, often imported from other continents. Over the years, the original shape has become blurred. He also lost his meaning to the local community. Once considered one of the most interesting dendrological parks in the Podkarpacie region, it has now fallen into oblivion. The dendrological diversity of the goods here is also the wealth of the ornithological world. Visitors to the park, due to the lack of professional knowledge, were not able to properly assess the values of the trees planted here, to recognize the species of birds that live there, or to read the traces of the assumption itself. In 2002 The Complex of Landscape Parks in Przemyśl set out a dendrological and educational path in the area of the former park.

Information board: map and a description of the path Jureczkowa

Lime alley Jureczkowa

Information board Jureczkowa

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Ptuj

1. **Title of the Educational Tool**

The world made by small springs

2. **Short description / presentation of the tool**

Educational outdoor trail will be led on historical path in Castle park Turnišče. Castle park had few paths, that were developed during park use. Parks reorganisations caused some paths to be abandoned, some paths were newly formed. But one path remains more visual - path from NW entrance to the park, leading towards castle, than circles towards west and ends again in NW entrance to the park.

One part of path goes on the edge between park and stream Studenčnica. There are several small springs of stream, that are the source of all flora and fauna life.

On that path we would like to establish educational trail, thematically focused on zoological and botanical flora species. We will present castle park Turnišče as natural treasure of national importance for zoological, botanical - flora species.

Z komentarzem [PGS9]: Example is quite general, in the following description of the tool more detailed description is needed.

3. **Target beneficiar(ies)**

General public, pupils, students

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Remarks, if any

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Velenje

1. **Title of the Educational Tool**

The Dragon's Castle Trail Around Velenje

2. **Short description / presentation of the tool**

For the purpose of conceptualising and rounding up of natural and cultural tourist endowments in Velenje and Šaleška dolina valley an artificial legend of Pozoj – the lake dragon was born. Within the CUSTODES project (Central Europe programme) Municipality of Velenje implemented successful story named *The Dragon's Castle Trail around Velenje*. Visitors of the trail are learning about cultural historical remaining's and legends related with them.

THE LAKE DRAGON (POZOJ) is a mythological creature. This means it never really existed, but people used to be convinced it did. At the edge of the Šalek Valley, pieces of coal were found sticking out of the ground. Coal was once called "dragon's blood" – and where there is dragon's blood, there had to be a dragon. It was believed that a dragon hatches from a red egg laid by a seven-year-old cock. The egg would sink into a subterranean lake in the mountain where the dragon grew, and it then pecked its way into the open through the mountain rock.

"The revitalized legend of Lake Dragon" was use as basis for development of pilot actions, which can be treated as a tool to teach younger generations about their local legacy.

The pilot action includes two separate measures: informatization of selected castles and establishment of so called castle route and implementation of geocaching activities on the castle route and lakes of Velenje

The trail connects five sights on the circular trail. These are five castles: Velenje Castle, the castles of Šalek, Ekenštajn and Turn, and the site of sunken Škale, which used to be the heart of the Šalek Valley.

With time to spare, other points of interest can be seen along the way (shown on the map at the beginning of the guide). The trail can be covered on foot and, for the most part, by bicycle. The trail starts and finishes at Villa Bianca. There is a Tourist Information Centre (TIC) where you can pick up a card for collecting stamps. You will find these on the information board at each site. The stamps need to be rubbed with a pencil. If you manage to visit all five sights, you can collect five stamps. With card with all the stamps at TIC and you'll get a gift – a dragon sticker that fits into the frame at the end of the guide. The dragon

accompanies us from castle to castle, which is why the trail is called the Dragon's Castle Trail around Velenje. The trail is unmarked but easy to follow with the help of the guide map and descriptions of the route. You can choose paper or electronic guide (you need a smartphone with Android platform). It is not challenging and is designed as a trip of several hours for children in the company of an adult. It follows roads and safe paths except from Šalek Castle to Ekenštajn. The wood path on the crest just before the ruin of Ekenštajn is quite steep. This part of the route is marked as a hiking trail called "Šaleška planinska pot".

Implementation of Geocaching (outdoor activity game): Geocaching is organised and implemented as a treasure hunt on the castle route or trail of Pozoj dragon. Custom made Geocoins (with image of Pozoj and CUSTODES logo) provided as collectible objects for the geo-hunters as well as "travel bugs", which objective was to visit all other geocaching locations established within the CUSTODES project.

3. **Target beneficiar(ies)**

- young families, kids and youth

- kindergartens

- castle tourists

- outdoor activities enthusiasts - geocachers

4. Materials and initial preparatory activities necessary to effectively implement the tool

To implement such tool, you need to hire an expert with knowledge on the theme (if you don't have it inside of your organisation) to prepare materials, designer to „convert and present" all materials in friendly and interesting way regarding the target groups and then to implement it on the spots.

Information materials on spot: on the selected castles and on the route information tables, providing brief history and description of the castles

Paper guidebook and trail card

Geocoin, content with hints and GPS.

5. Detailed description how to implement the tool (teachers / educators guide)

When everything is developed and implemented, you just need to pick up a card for collecting stamps. You do not need no additional expert, you just follow the card map and education of yourself can start. Ideally, the trip should be made in the warmer months (from March to November), with hiking equipment.

Geocaching: to download app and then the hunt can begin.

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

Annex 1: Pilot Action in Velenje Slovenia

Annex 2: Project Custodes

Annex 3: Elcome the Geocacher

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by the University of Ljubljana

1. **Title of the Educational Tool**

Learning by doing with volunteers

2. **Short description / presentation of the tool**

Heritage education is an essential aspect of heritage-related volunteering. Its range of activates are very diverse from restoring a heritage site like historical parks, gardens and cultural landscapes and to learn about different disciplines as well as processes like archaeology, documentation and revitalisation of abandoned heritage sites and natural heritage preservation. The participants gain essential knowledge in handcrafts as well as more specific knowledge in traditional techniques. The volunteering projects are usually complemented by lectures and guided visits that grant volunteers insight into the heritage site's history, as well as specific historical, natural and cultural aspects of the geographical region.

The educational part of the project will inform the participants about the background of the project, provide knowledge about historical gardens and park architecture, traditional gardening and other related topics and will include lectures and guided tours as well as excursion to related heritage sites.

3. **Target beneficiar(ies)**

Craftspeople
field-specific professionals
Diverse international mix of participants, with their various cultural backgrounds and own country-specific knowledge about heritage, permits a complex and interesting exchange of experiences, approaches and ideas. Their knowledge could share with ability of wider target groups of mix generations:
primary and secondary school,
students,
parents and children,
citizen.

4. Materials and initial preparatory activities necessary to effectively implement the tool

The material you need are: Notebooks, computers, tablets, cameras, maintaining tools needed for special technique for conservation and restoring practices, …

5. Detailed description how to implement the tool (teachers / educators guide)

The approach of the educational tool is to instructing volunteers on conservation and restoration practices and techniques, as well as providing training courses in handicrafts, projects for students, volunteer camps and other activities with the intent to educate the participants and to raise awareness in the field of cultural and natural heritage.

Participants are divided in groups with different tasks according to their abilities:

Restoring a system of historical elements in the parks – searching for remains of the original elements which disappeared, restored them and rebuild them…

Maintenance parks and gardens with the only manual working - cutting long-grass meadows on slopes, cutting various specious of plants, cleaning the parks, …

Traditional gardening - Fruit, vegetables and flower gardens: identifying and documenting plants and through the research processes discovering and learning about their botanical families and medical contribution as well and nutrition characteristics and process of planting and growth

Restoring the formative elements of the parks and gardens like ruinous of dry stone walls as important habitat for rare insects and invasive plants. Restorations should be very carefully done - by documentation of the element (wall), collection the fallen down material (stone), restorations and integration of the original material, providing new habitat for the insects, …

The work on side and all activates will be guided by experienced craftspeople or other field-specific professionals, specialist of different fields as additional part of the theoretical knowledge.

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

http://www.heritagevolunteers.eu/en/EuropeanHeritageVolunteersProjects/TraditionalCarpentryTechniques?

Traditional gardening – planting the rice fileds

Restoring the heirtage elements and discovering the building process

Maintaining parks and gardens - manual working on the field

Observation and documentation

Restoring the formative heritage elements of the parks

7. Additional remarks, if any

The participatory system of learning and spreading theoretical heritage knowledge in practise between different groups of volunteers as well as specialist, craftsman, general public and young generations is methodologically very important. With establishing the complex system of knowledge exchange and interdisciplinary approach we could enrich the learning process of the education institutions from indoor to outdoor classrooms. This could become important educational tool for younger generation to be aware of importance of the heritage in their maintaining for the future.

HISTORICAL CASTLE PARKS

WP-T2 Tool development and consensus building

D2.3: Transnational Educational Outdoor Trail

Training Tools proposed by Mala Filozofija

1. **Title of the Educational Tool**

A Smart Park

2. **Short description / presentation of the tool**

A Smart Park is a name for a virtually-guided nature walk through the park. It is a new and creative way to learn about and interact with our immediate surroundings. It implies a link between the physical and the digital in a very user friendly and user applicable way. It is excellent educational and learning tool.

The idea is to have all around the park different stops, that have installed plaques with QR codes. The number of stops/codes is optional. It all depends on the number of information you want to share and on who your target audience is (one part of the QR codes will target children and other will target adults). Information intended for children should be more interactive in nature, and make the experience more playful, fun and entertaining. Ones, directed towards adults, can be more informative in character.

What is QR code and how it works? Quick Response codes, commonly known as QR codes are a type of barcodes that can be scanned by smartphones to access different digital information about the item to which they are attached to. So, all the visitor to the park needs to do is download a QR reader (QR scanning app) onto his smartphone and scan the code through the app. The QR codes will instantly connect the visitor to numerus interesting information and informative materials about the park. It can connect a person to a particular website, it can offer a video, or it can bring up some other kind of digital content.

Information shared through the QR code can present facts about the park's history, information about its flora and fauna. For example, it can provide info about the parks history in general or it can point out an interesting fact about a particular feature in the park. For instance, it can allow us to see old photographs, pictures, drawings and maps of the park showing how the place we are standing on looked like in the past. Also, it can allow us to gain access to other kind of park maps, like different trail maps. Codes are also very useful in providing valuable information about the plant and animals species that live in the park. Using QR code we can find out about their life habits and their habitats in the park. For example, we can walk along the nature trail and scan different QR codes that are placed on signs. Thanks to them we will learn about the trail itself and different animal and plant species that live in that particular area.

QR codes can also be used in numerus educational contents that are intended for the children. Not only that they can be used to illustrate information in a fun way, but they can also be used for learning through interactive games, like for example “Scavenger hunt” (a game where participants need to complete all the tasks or gather all the items from the list). Activity guide of the game consisting of a map and a set of useful hints is provided through QR codes.

The usage of QR code is indeed of a broad spectrum and provides a great opportunity to enhance the quality of visit to the park. It allows people to interact with and experience parks in a whole new way.

3. **Target beneficiar(ies)**

All ages.

4. **Materials and initial preparatory activities necessary to effectively implement the tool**

5. **Detailed description how to implement the tool (teachers / educators guide)**

6. **Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.**

7. **Additional remarks, if any**

1. **Title of the Educational Tool**

Book Crossing

2. **Short description / presentation of the tool**

Book Crossing is a world movement that is based on the idea of leaving a book in a public place to be picked up and read by others, who then do the same. Based on the principle of free exchange, this movement has proven that creativity and enthusiasm can make reading more popular.

To create a Book Crossing corner, the library house is needed. The library house can be built from wood or some other material (but it needs to be protected from rain and the wind) in different shapes.

The idea is that a house is fixed in one place (preferably near the bench) and anyone can bring a book, place it in the library house and take some other book from the free library.

In this way, old books would be "recycled" and visitors would be motivated to spend more time in the park, reading the books.

3. **Target beneficiar(ies)**

All ages.

4. **Materials and initial preparatory activities necessary to effectively implement the tool**

5. **Detailed description how to implement the tool (teachers / educators guide)**

6. **Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.**

7. **Additional remarks, if any**

1. **Title of the Educational Tool**

Curious path

2. **Short description / presentation of the tool**

Curious Path is made of different elements which can be added, adjusted, subducted or combined in one long trail. It starts easy, and as one moves through it, it slowly builds up with more challenging tasks that embrace holistic elements through practical experience of the park (fine motor skills, physically activity, cognitive and creative thinking).

First element: Puzzled Tree
At the beginning of the path there is a billboard with painted tree that can be found in the park (apple, pine, oak tree….). Each picture of the tree should emphasise elements of that tree e.g. leaves, cortex, flowers. These elements should be emphasised in colour and shape as each tree will have a missing part - puzzle that needs to be filled in a proper place in order to get a whole picture of the tree.
Next to the billboard (hanging from the tree, placed in the basket…) there will be mixed pieces of missing puzzle (one leaf, flower and cortex). Children need to take pieces of the puzzle and place it in the matching empty spot of the picture in billboard. Once they place the missing puzzles in the right spot, they will have the entire picture of the tree.

Second element: Ladder
In the second part of the path short ladders (made of rope and wood) are going to be placed on the tree (if possible on a tree from puzzle). At the top of the ladders children can find the fruit from puzzle tree.

Third element: Booklet
Going along the path, the third element is a booklet with pictures of different animals. Based on the privies two elements children need to guess which animal lives in the park. For example, if the puzzle is an oak tree and at the top of the ladders acorn is placed, the animal can be a squirrel.

Forth element: Imitation
At the final part of the path, children need to imitate the movements of the animal they discovered.

3. **Target beneficiar(ies)**

Children (from 4 to 6 years old) with kindergarten teachers and parents.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

1. **Title of the Educational Tool**

Labyrinth

2. **Short description / presentation of the tool**

Labyrinths and labyrinthine symbols are known from the Neolithic Age in different regions such as modern-day Turkey, Ireland, Greece, and India among others.

The idea of labyrinth in the park is to have quiet place where you can contemplate with your personal thought and connect with nature. You enter it with one question and think about it while walking in the labyrinth. The goal is to find the answer by the exit. You cannot be lost in it as from the entrance there is only one path that leaves you to the exit.

Labyrinths can also be educational and can have themes that are related with national or world mythology and culture. For example, in Slavic mythology, Vesna was a goddess of the Spring. The etymology of her name is connected to the old Indian word - vas - meaning to be clear, bright, light. Each year Vesna replaces evil goddess Morana (goddess of winter and death) and brings green fields, blossoming, beautiful weather, more suitable for life and work.

The labyrinth can be dedicated to her and the personal question could be related to new start, awakening.

3. **Target beneficiar(ies)**

All ages.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

1. **Title of the Educational Tool**

Psychomotor path – therapy and relaxation

2. **Short description / presentation of the tool**

Connection of human kind to nature is unbreakable bond which in the modern world is not as present as it used to be. Walking barefoot is an experience that is usually associated with summertime and beach, and rarely presents something more. Tactile sensation is very important part in the early stages of the brain development, and by walking barefoot the connection happens between the brain cells, thus facilitates the development of brain.

The psychomotor path is a tool that gives an opportunity for children and adults to walk on many different surfaces barefoot. Path is constructed in square with box-shaped space filled with different natural materials, where person with walking changes surface one at the time. These spaces have graduate change from one material to another one. Walking on this path gives sensation of connection to nature, feeling of relaxation and comfort.

For the construction of this path numerous materials are required. In this case, wooden frame was made of planks with depth enough to sustain materials filling the box shape (around 5-10 cm). Materials used in this path are the ones available in nature such as grass, small rocks, sand, gravel, forest materials (fallen leaves) etc. It is possible to add other available materials, such as artificial grass, mud and others.

This path gives chance to experience different surfaces, even in urban places where those might not be available.

3. **Target beneficiar(ies)**

Young children older than 2 years (mostly beneficial for those born premature) (therapeutic purpose) and general population (relaxation purpose).

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

1. **Title of the Educational Tool**

Recycling corner

2. **Short description / presentation of the tool**

The idea of a "Recycling corner" is to have a place in the park for children where they can be creative and make things out of different materials. This place would not only encourage children to be creative but also to raise awareness about the importance of waste separation and recycling.

The "Recycling corner" contains boxes, with different materials plastic bottles, cardboard, caps, fabric…), and necessary tools (scissors, glue, rope, sticky tape) for crafting. The idea is that children create practical things that are useful e.g. bookmarkers, pencil holders, bird feeders…

You can place a booklet with pictures and basic instructions on how to make mentioned things, leaving the space for their ideas and creativity.

3. **Target beneficiar(ies)**

Children (from 7-14 years old) and parents.

You are kindly requested to fill in the previous sections by the 30th April 2018. The following sections are not mandatory (even if very welcome) for this first deadline, however you are requested to complete them not later than 30th September 2018.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

1. **Title of the Educational Tool**

Riddle corner

2. **Short description / presentation of the tool**

Riddle corner is conceived as interactive content where children have a task to find and solve all the hidden riddles.

On the site there is a map that helps children to find and locate the hidden riddles. Beside the map there is also a sheet with the correct answers of all the riddles.

After finding all the riddles, and answering them, you go back to the beginning and compare your answers with those on the sheet.

3. **Target beneficiar(ies)**

Children (from 7-14 years old) and parents.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Remarks, if any

1. **Title of the Educational Tool**

Riddle path

2. **Short description / presentation of the tool**

Riddles are well known, fun way, for brain exercise and learning for all generations, especially for children. By solving riddles children have the opportunity to develop or improve thinking ability, creativity, problem solving and critical thinking skills. The idea of riddle path is to combine brain exercise with physical activity in nature.

Riddle path starts with riddle hunting map in which are marked spots where riddles are placed along the path. This map can be fixed or mobile. If the map is mobile children can take it with them and if it is fixed they can take a picture with mobile phone.

As they follow the map they need to find the riddle and try to solve it. The solution of each riddle can be connected with park's animal or plant species, well known facts from history or legends, geology…

When children find and solve the first riddle, they need to write the answer on a piece of paper or in the mobile phone and move on to the next one.

At the end of a path they need to find a "hidden treasure" (marked on the map with an X). The "hidden treasure" are riddles (from the path) with solutions. When they find the treasure, they can compare their written answers with the correct ones and see how many they did guess.

3. **Target beneficiar(ies)**

Children (from 11 to 14 years old). Parents. Citizens.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

1. **Title of the Educational Tool**

Sensory Rope Trail

2. **Short description / presentation of the tool**

Sensory Rope Trail consists of about a 150-meter long rope that extends through the different kinds of terrain. The idea is that without using the sense of sight person has to move along the full length of the rope, from the beginning to the end, passing various obstacles. So, without using eyes and without letting go of the rope he/she must use all the other senses to complete the determined route.

Individuals are blindfolded and lead to the start of a rope that finds its way through the everchanging terrain. The goal is to have different kinds of natural obstacles along the way. For example: tree roots, stones, boulders, trees, bushes, different kind of grass of different sizes, or any other kind of changes in terrain. In one part there is even a possibility to have a missing section of rope. Little by little participants walk slowly feeling their way to the end of the rope.

Along the route there are at least 2 or 3 helpers who have the assignment to assist should the participant need any kind of help especially in more challenging parts of the route. They are also in charge of monitoring the participants comfort level along the way.

This kind of activity gives the children and adults the opportunity to learn how to receive and process stimuli from our surroundings in a different way than we are used to, thus making it completely new and exciting experience. Also, it builds participants self-confidence, allows him/her to achieve better focus and enhances one's imagination.

3. **Target beneficiar(ies)**

Young children in the presence of parents and all other group age.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

http://www.apoec.org.nz/uploads/9/9/6/4/99640756/sensory_trail_safety_management_package.pdf

7. Additional remarks, if any

1. **Title of the Educational Tool**

Social games corner

2. **Short description / presentation of the tool**

A corner for social games is conceived as a place for interaction and socializing in nature by making and / or playing different games that are placed around the “corner”. Games can be sculptured in stone, on chump of wood, on wood panels or something similar. For example, you can easily make games like chess, mill, lady, a game of "school" made of movable panels, twister painted in grass with eco-friendly and easy-to-wash colours, etc.

The idea is to make all the elements out of natural and recyclable materials that are easily assembled and disassembled without damaging the environment. In a word, they are removable and they do not disturb the natural environment of the park.

You can easily connect this corner with the “Recycling corner” in a way that you put the instructions and pictures in a booklet on how to make mentioned games and provide some of the materials that can be used for creating them.

3. **Target beneficiar(ies)**

All ages.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Remarks, if any

1. **Title of the Educational Tool**

Who am I?

2. **Short description / presentation of the tool**

Main objective of this activity is raising awareness on wildlife. It is activity that directly connects children with nature in a way that allows them to use both their bodies and minds. It builds confidence and provides a sense of security because it teaches children to be aware of their surroundings and the animals that live there.

"Who am I" is a path that consists of several routes which contain different animal tracks that need to be followed in order to discover the animal who made them. By following this path, children, not only have the opportunity to experience nature and become aware of their immediate surroundings but they also have the opportunity to learn how to make their own conclusions and decisions based on the evidence. It gives them a chance to use critical thinking skills and scientific research methods.

At the beginning of the path there is billboard with pictures of animal footprints that live in the park (duck, deer, squirrel, rabbit, crow…). The pictures are accompanied by the instructions explaining the task that children are required to do and with the input about the location of first mark that they need to find in their immediate surroundings in order to start the quest. You can use official markings that indicate the correct path on mountain or forest trails. This is a good way for children to learn to recognize the markings that are used in other nature trails.

The first step is to determine from the billboard the route that you are going to follow. The number of routes depends on the number of different footprints (e.g. along first route the rabbit footprints will be placed, along second squirrels…). Each set of footprints should be placed in a way that they can be followed but you need to look for them. For example, first rabbit footprints are directed left and can be found directly on path. Left pointed direction will lead to second footprints that are behind the rock directed straight…

If you wish to set more complicated task you can, at one point, crossroad the different routes and put in the same place several different animal footprints. In this crossroad children will have to figure it out how to continue to follow their trail.

At the end of each rout children will have to look carefully and find the hidden animal they were tracking. The animal (e.g. statue, picture) can be hidden in tree, bush, grass…

3. **Target beneficiar(ies)**

Primary school (from 7 to 11 years old). Parents and children.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Additional remarks, if any

1. **Title of the Educational Tool**

Write your own story

2. **Short description / presentation of the tool**

Write your own story is designed as an interactive space where little stones are placed in one “corner” of the park. It is good to have it hedged so that the stones would not be scattered around the park, but all located in one place.

This is the place where the visitors can write their own personal stories on the stones. The subject of the stories can be various, e. g.: love (family, friendly or any other kind of love), friendship, life, dreams, wishes, messages, etc… The subject can also be connected with some story about the park. Also, little children can express themselves by drawing a picture on a stone instead of writing a text.

The idea is to write your own story, and to also read those already written and left by other people. If there is a connection between the park (maybe some kind of legend about the park) and the subject of the stories, parks story can be written on one stone and hidden among other stones, so that the visitors also have the task of finding it and read it.

All materials (stones, paint, pens, brushes, etc.) needed for writing the stories are provided in the same corner.

3. **Target beneficiar(ies)**

All ages.

4. Materials and initial preparatory activities necessary to effectively implement the tool

5. Detailed description how to implement the tool (teachers / educators guide)

6. Please also provide us with some files (text, PDF, images and videos) presenting templates, examples or models concerning materials necessary or useful to effectively implement the tool.

7. Remarks, if any