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## Outdoor Activities Guidelines and Recommendations for Preschool Education

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## 1. Contextualization

Moving and Learning Outside (MLO) is an international action-research project that aims at promoting the practice of outdoor education through a play-based and physical activity approach in preschools. This project was endorsed by the Portuguese municipality of Torres Vedras (<http://www.cm-tvedras.pt/>) and it counted with the participation of 7 partners from different countries. From Portugal, besides the municipality, the partners were a preschool in Torres Vedras, Agrupamento de Escolas Madeira Torres, JI/EB Conquinha (<http://moodle.madeiratorres.com/>), and a faculty from the University of Lisbon, Faculdade de Motricidade Humana (<http://www.fmh.utl.pt/pt/>). The Croatian and Estonian partners were 2 preschools, Kindergarten Matije Gupca (<http://www.vrtic-matijegupca.zagreb.hr>) and Kindergarten Naba (<http://www.naba.ee/en/private-kindergarten-naba>), respectively. The Greek partner was an NGO called Payzontas ([http://paizontas.gr/index\\_en.asp](http://paizontas.gr/index_en.asp)), and the Norwegian one was the Queen Maud University College of Early Childhood Education (<https://dmmh.no/en>). The MLO project was carried out during the period of 30 months from the 15<sup>th</sup> of October, 2017 to 14<sup>th</sup> of April, 2020.

The knowledge and scientific background about cultural differences regarding the approach to preschool learning processes between Northern and Southern European countries served as starting points to devise this project. In Northern countries, namely in Scandinavia, the preschool curriculum and practice is predominantly based in play and child led strategies, in which autonomy and the contact with natural environments are privileged. While in the South, the pedagogical practices are strongly defined by the pursuit of academic success and standardized adult led processes, which privilege indoor sitting activities to foster the learning of writing, reading and counting skills. Therefore, the underlying motivation behind the MLO project was to devise a set of practical tools that could be useful to change this paradigm, in order for children in preschools to use the outdoor as a place where they can learn and develop through outdoor play, autonomy, independent movement, contact with nature and their communities.

### Partners' choice and roles

There were several steps taken in order to initiate the MLO project.

Firstly, in October 2016, the Municipality of Torres Vedras and the kindergartens Naba (EE) and Matije Gupca (HR) attended an Erasmus+ Contact Seminar in Turku (FI) within the field of school education, more specifically, Early Childhood Education and Care. From this seminar came the idea of designing a project that could address a common interest: the development of the offer of outdoor activities for preschoolers in the three countries

Secondly, the municipality of Torres Vedras invited the Motor Behavior Laboratory of the Faculdade de Motricidade Humana, University of Lisbon, to conceive an international action-research project that would privilege play based and outdoor pedagogical practices of early childhood education as promoters of children's health and well-being. This project should include a diagnosis of the use of outdoor for pedagogical activities and free play as well as an assessment of the perceptions of teachers, caretakers, staff and parents regarding the use of the outdoor; a collection of training resources pack and communication materials; and a set of guidelines as best practice indicators. The Faculdade de Motricidade Humana would be responsible to devise the project in terms of methodologies, scientific and interventional approaches and dissemination of the research findings in international peer reviewed journals and academic conferences.

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Thirdly, although Portuguese municipalities have increased responsibilities and a reinforced role in the definition of local educational policies and strategies, it was necessary to involve as partner the Agrupamento de Escolas Madeira Torres so that the research could also take place in a Portuguese kindergarten.

Fourthly, the group of researchers in the Faculdade de Motricidade Humana suggested the inclusion of the Queen Maud University College of Early Childhood Education, in Norway, as an important partner. Norwegian preschool children, regardless of sometimes very severe weather conditions, play outdoors most of the time, and their educators and caretakers value the experience of the outdoor as a fundamental for learning and development. Moreover, professionals from that institution are recognized worldwide as experts on teaching of outdoor play and learning in Early Childhood Education Centers (ECEC), as well as conducting research studies in this area. In this way, it was important to have them included as partners in the project so that their good practices could be shared among the other participants.

Finally, it was established a contact with Payzontas Greek NGO due to their work in Greece in projects related with play provision and play advocacy. The local knowledge of preschools and municipal institutions detained by Payzontas was a valuable asset in order to gather the interest of preschools from Athens to become participants of the MLO project.

The project involved all partners in its different roles, working as an organism where each part contributes to the whole, having its specific role: the educational community (children as main actors, parents as informants, educators and caretakers as participating observers); the investigators who analyzed all results and transformed them in new practices and guidelines; and the municipality as a local policy maker and disseminator, allowing the results to go back to the schools and to the children.

### **Aims of the project**

The Moving and Learning Outside project aimed at promoting the practice of outdoor education through a play-based and physical activity approach in preschools. Inspired and supported by the kind of pedagogical approach widely spread in Norway, our project aimed specifically at:

- Drawing changes on the perceptions of policy makers, teachers, caretakers and parents on the possibilities of the outdoor as a rich and valuable environment for preschool children's learning, development and well-being.
- Improving pedagogical competencies of preschool teachers and caretakers working with children in the outdoor environment, adopting physical activity and play based strategies.

These objectives were achieved through the implementation of different activities and tasks involving children, preschool staff members, parents and municipality staff with the purpose of changing adult perception regarding the benefits of outdoor play and the use of outdoor pedagogical resources when working with preschool children. The design of the MLO, its conceptualization and methodological approach was carried out by the team members of the Faculdade de Motricidade Humana. The action-research stance on which the project was built enabled the design of each phase of the project to be based on previous stages, including the feedback of the other partners regarding the processes which were being implemented.

### **Design of the project**

The design of this project was underpinned by a methodological framework constituted by four approaches:

- Conceptual- A methodological approach related with the conceptualization of data collection materials and subsequent training activities.

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- Descriptive- A methodological approach related with portraying children’s perceptions and behavior in the socio-physical environment.
- Participant- A methodological approach related with the active involvement of teachers and children as active co-researchers in the project.
- Comprehensive- A methodological approach related with producing scientific knowledge (papers, reports and other outputs) based on the juxtaposition of the three previous methodological approaches.

In this sense, after an initial diagnosis, the activities planned for this project aimed to contribute to 3 major outputs: Teacher’s training pack; Didactic-pedagogical resources pack; Outdoor Activities Guidelines for Preschool Education.

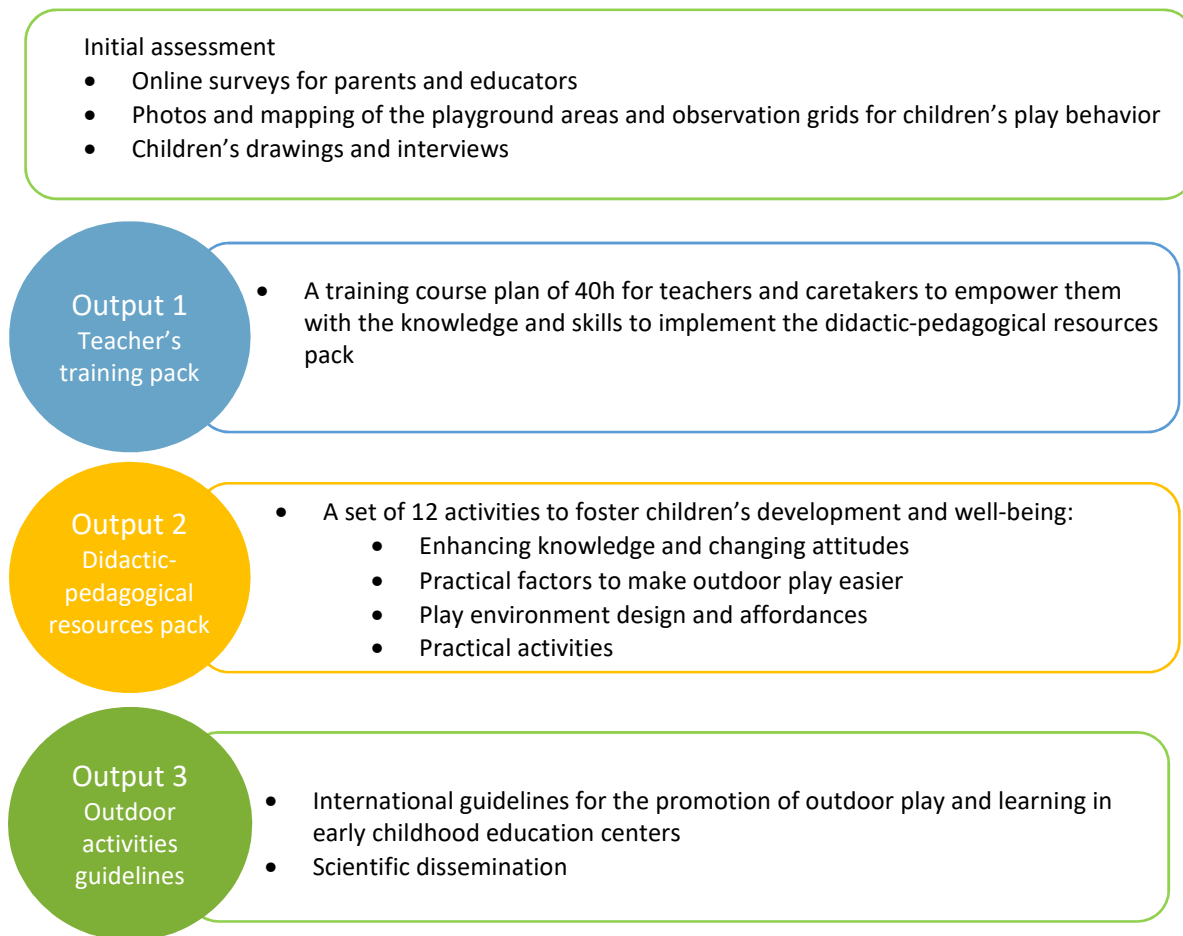


Fig. 1. Outputs and activities.

## 2. State of the art

Nowadays, there is a growing concern about low physical activity levels and health related problems in young children. The sedentary lifestyle in modern societies is a global problem (WHO, 2010) and it starts early in life. Moreover, it is indisputable the drastic decrease of children's opportunities for free play, namely in what concerns contact with the outdoors and with nature, or nature elements (see e.g. Brussoni, Olsen, Pike, & Sleet, 2012; Freeman, 1995; Gray, 2011; Lester & Maudsley, 2006; Moss, 2012).

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Play is a leading source of development and learning for children. It is the universal cultural language children adopt to communicate with their inner and outside worlds and a privileged mean to exert participation in their communities (Lopes & Neto, 2014).

There is a lot of research that supports and documents the importance of the play for children's development, learning, health (both physical and mental) and quality of life (Cheng & Johnson, 2010; Gleave & Cole-Hamilton, 2012). Play is the leading source of development in the ages between 2 and 6 according to Vygotsky. They are also the years when children play the most. When possible, they spend their days at play. They develop their bodies and minds through play while they are inventing games and dramatizing fantasies (Frost, 2012). Through play children develop intrinsic interests and competencies; learn how to make decisions, solve problems, exert self-control, and follow rules; learn to regulate their emotions; make friends and learn to get along with others as equals; and experience joy (Gray, 2011). In a study about the connection between preschoolers' free play and social and emotional functioning, Veiga, Neto, and Rieffe (2016) found out that less time for free play is related to more disruptive behaviours in preschool children, suggesting that free play might help to prevent the development of disruptive behaviours.

Playing in outdoor environments is fundamental for promoting children's health and development and that complex and diverse natural landscape characteristics are associated with increase play affordances (Fjørtoft, 2004). Children's outdoor play in general has great importance for increased physical activity, which in turn has a number of positive health effects (less overweight, better physical form, less cardiovascular diseases, etc.), better mental health and quality of life (both for the child and for the family), better cognitive (learning outcomes and academic skills) and social competence (better social relations - also between different ethnic groups), better adaptation in school life, and reduction of antisocial behaviour and vandalism (Brussoni et al., 2012; Burriss & Burriss, 2011; Cheng & Johnson, 2010; Gill, 2014; Gleave & Cole-Hamilton, 2012; Moss, 2012).

The same positive effects have been found in studies on the effect of children's play in nature (see e.g. Moss, 2012). Fjørtoft (2004) found that children playing in the natural environment, when compared to those attending normal preschool activities, displayed better coordinative skills. Unpredictability is one of the main features of the play activity (Lester & Russell, 2014), and, therefore, children seek risky forms of play in any play environment, namely in play spaces with natural and moveable features (Sandseter, 2009). Also, when playing in nature, research has also shown that this is important for children's relationship to nature and nature/environmental consciousness, independence, space orientation ability, and place belonging (see Lester & Maudsley, 2006 for review of existing research).

Playing in the outdoors enables children to be in contact with more risky play affordances. In a study conducted with preschool children, Sandseter (2007) defines risky play as thrilling and exciting forms of play that take place in physical and emotional stimulating and challenging environments, involving a risk of physical injury. In this same work, Sandseter categorizes risky play in six categories, playing with great heights; playing with high speed; playing with harmful tools; playing near dangerous elements; rough-and-tumble play; and playing where the children can disappear escaping adult supervision.

Through risky play children engage in challenging, thrilling and scaring physical activities exploring bodily boundaries between being in and out of control in order to overcome the fears, unknown and uncertainty which in the first place drew them to those activities (Coster & Gleeve, 2008; Sandseter, 2010; Sandseter & Kennair, 2011; Stephenson, 2003). Risky play experiences enable children to engage in deep and immersive play which allows the development of survival skills and to conquer fear (Hughes, 2006). Moreover, risky play situations are likely to create conditions for children to build up their self-control in managing risk playing experiences (Coster & Gleeve, 2008). In the toolkit to assess and improve local play opportunities developed by PlayScotland, it is reinforced that by offering children risky play affordances, children learn to recognise and assess risk for themselves and to test and expand their capabilities (Cole-Hamilton & Crawford, 2011).

On this matter, Tim Gill (2007) argues that there are three main arguments in favor of children's contact with risk throughout development:

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1 – Experiencing certain types of risk helps children to learn how to manage those risks. Such arguments underpin initiatives that teach children practical skills that help them to deal with risk, such as swimming or road safety skills;

2 – Many children like risk-taking and look for risky situations. This argument underpins initiatives such as the creation of skate parks and other 'extreme sports' facilities arguing that dedicated provision is preferable to compelling enthusiasts to pursue them in streets and other public spaces, where risk is more difficult to control.

3 – By undertaking activities with a degree of risk during childhood, children might gain other benefits, such as the development of risk management strategies and the ability to make appropriate decisions later in life related to substance use, relationships, and sexual behavior. By dealing with risk and overcoming challenging situations, children also become more adventurous, resilient, self-reliant, entrepreneurial and happy with life.

Nevertheless, the concept of childhood has changed and a generational shift has occurred from playing freely outdoors to a more restricted and sedentary ethos of play in the indoors (Clements, 2004; Francis & Lorenzo, 2006; Ginsburg, 2007; Kemple, Oh, Kenney, & Smith-Bonahue, 2016). Concomitantly, children's independent mobility, meaning their parental licenses and opportunities for autonomous movement in the local community, in their school itinerary and to other meaningful places have become very restricted (Brussoni et al., 2012; Lester & Maudsley, 2006; Shaw et al., 2015). This deprivation of public space use for independent travel is particularly noted in the United States (Alparone & Pacilli, 2012), and in southern European countries, such as Portugal and Italy (Cordovil, Lopes, & Neto, 2015; Marzi & Reimers, 2018). The playability of urban neighbourhoods has also been compromised, preventing children from playing freely outside (Francis & Lorenzo, 2006), leading them to spend more time in indoor places such as homes, day care and schools (Kernan, 2010). An increased safety focus on eliminating all opportunities for risk in children's lives has been thoroughly adopted by an over-protective society, which is driven by false-beliefs, misconceptions and moral judgements regarding safety and parental rearing of children (Thomas, Stanford, & Sarnecka, 2016). The concern with "stranger danger" (i.e., fear that children can be kidnapped by strangers), with the fear of being sued by accidents and injuries, and the pressure from the insurance industry to avoid any injuries (Brussoni et al., 2012; Gleave, 2008; Lester & Maudsley, 2006; Sandseter & Sando, 2016; Skår, Wold, Gundersen, & O'Brien, 2016) reinforce the view of a 21<sup>st</sup> century ultra-securitized childhood. A part of the safety focus is also related with the traffic situation and the fear that children would be harmed by cars (Gielen et al., 2004; Gray, 2011; Jolleyman, McPhee, Brussoni, Bundy, & Duncan, 2019; Witten, Kearns, Carroll, Asiasiga, & Tava'e, 2013), leading to a restriction of children's access to residential streets, which also contributes to the decline of outdoor free play (Tranter, 2015). Additionally, the increasing concern with cognitive skills and a traditional view of the learning process, where non-play strategies are used as a vehicle for learning and development (Frost, 2006) have led to a decrease of children's outdoor play time, even in preschool settings. In preschools, methodologies that use scripted teaching, computerized learning and standardized assessment have become popular (Almon, 2003) and at the same time the full potential of outdoor experiences is not properly valued. Research shows that preschoolers' physical activity level is characterized as sedentary throughout their preschool day (W. H. Brown et al., 2009). In addition, at home, many children spend an excessive amount of time in front of screens (television, video games and computers) and children's free play with other children has declined sharply (Gray, 2011). Today studies indicate that play in nature environments no longer have the same frequency and importance and children's exploration in neighbourhoods and nature environments is replaced by adult led and organised activities (Gray, 2011; Skår & Krogh, 2009). Amongst early years practitioners there has been a recent resurgence in the provision of outdoor play, and an increasing interest in Forest schools and the outdoor schools in some areas of Scandinavia (Frost, 2012; Tovey, 2007). However, these positive experiences have not been widespread. Sandseter and Sando (2016) underline that Norwegian early-childhood education and care (ECEC) practitioners view risky play positively compared to practitioners in other Western countries.



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In sum, nowadays the lives of children and young people, particularly in economically developed societies, are under a series of constraints that limit their motor, social and cognitive development, as pointed out by Neto and Lopes (2017), namely:

- The increase in screen culture, which implicates a predominantly sedentary involvement by children;
- The progressive disappearance of the "street game culture", also caused by changes in children's spaces, affected for example by the increase in traffic density and the urbanization phenomenon;
- The increased sense of insecurity that drives families to change the standards of freedom in their children's education, often taking a restrictive and overprotective position;
- The increased formality of school life, with more organized curricular activities and less free play (e.g., little recess time);
- The increase in institutionalized activities and games (sports, artistic and religious activities), which often function as "parallel schools", with some children having heavier schedules than many adults;
- The decrease in the levels of independent mobility, which led to a significant decrease in the autonomy of children in the urban space in recent years.

In order to tackle the play deprivation, namely in the outdoors, and the lack of physical activity that characterizes contemporary childhood, national and international guidelines and recommendations have been advanced by researchers, paediatricians, play advocates, and other organizations spread around the world. The International Play Association (IPA) clearly underlines the importance and implications of fulfilling article 31<sup>o</sup> of the Convention on the Rights of the Child. In this way, the right to play, recreation, rest, leisure and participation in cultural and artistic life is not only a fundamental right of every child, and also a promoter of significant societal benefits (UNICEF, 2014). The final *Position Statement on Active Outdoor Play* states that access to active play in nature and outdoors—with its risks— is essential for healthy child development, recommending that children's opportunities for self-directed play outdoors in all settings (home, school, child care, community and nature) should be increased (Tremblay et al., 2015). A recent systematic review also underlines the importance of supporting children's risky outdoor play opportunities as a means of promoting children's health and active lifestyles (Brussoni et al., 2015). The recognition that playing actively outdoors has several benefits for the development of children, is the basis of different initiatives that have emerged with the aim of promoting free and spontaneous play (e.g., ParticipACTION, 2015; Tremblay et al., 2015). According to physical activity guidelines, 3 to 4-year-old children should be physically active every day for at least three hours, spread throughout the day (WHO, 2019).

Very recently the American Academy of Pediatrics reinforced the need for clinical providers to tell parents about the benefits of play, and also to encourage them to grant their children opportunities for free play, namely in the outdoors (Yogman, Garner, Hutchinson, Hirsh-Pasek, & Golinkoff, 2018).

Considering the current state of the art and the above-mentioned concerns and barriers for children's outdoor play, it is important to carry out initiatives and projects that comprise both scientific and interventional domains in a cross-cultural perspective. The Moving and Learning Outside project aimed at filling this gap. The first step was to enable the partners to make an initial diagnosis of the opportunities and perceptions regarding outdoor play in each preschool (initial assessment). The second step was to create a Teacher's Training Resources Pack (Output 1) that would empower teachers and caretakers with the knowledge and skills to implement a set of practices to enhance children's physical activity and play in the outdoors. The third step was to devise a set of 12 activities (Didactic-pedagogical Resources Pack for Teachers and Caretakers) based on the initial assessments to promote children's physical, motor, social, emotional and cognitive development in the outdoors (Output 2). Finally, and stemming from the three previous phases, a set of Outdoor Activities Guidelines and Recommendations for Preschool Education are presented (Output 3) to be made accessible online to researchers, teachers, practitioners, play advocates, organizations, municipalities, policy-makers and other relevant stakeholders who have an interest in promoting children's outdoor play in educational settings.

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### 3. Outdoor activities guidelines and recommendations for preschool education

#### Main project conclusions

As for the initial diagnosis of regarding the perception of the outdoor use by children for play and learning, it was found that:

- Parents played at streets, home, and at school (more than 50% everyday), whereas children play mostly at home and at school (more than 50% everyday);
- There were also some differences between countries regarding play spaces, namely: playing at wild nature / forest and at streets around local area was more frequent in Norway and playing at local parks less frequent in Estonia;
- Parental licenses of independent mobility are granted earlier in northern Europe than in southern Europe;
- Parents from Greece and Portugal identified more barriers for playing outside than parents from the other countries;
- There are more concerns about media alerts and stranger danger in Greece and Portugal and lack of playspaces and poor play facilities is frequently mentioned in Greece;
- Parents from all counties except from Norway considered that the society is less safe than when they were children and this is a barrier to let children play outside;
- Most parents and teachers/caretakers believe that by playing outside children become healthier; teachers/caretakers also believe that creativity is another benefit of playing outside;
- The most important features that parents identified for outdoor play were natural features, elements to climb and flat surfaces. Sand and elements to slide, to balance and to swing are also valued. Teachers/caretakers valued all these elements but also highlighted water, elements to jump down, hiding places, places for sitting and gathering, places for rough and tumble and graspable / detached objects;
- The use of risky tools with adult supervision was mostly valued by teachers/caretakers from Norway and Estonia;
- Norwegian teachers/caretakers don't point any barrier. Greek teachers/caretakers consider there are more barriers (even weather conditions);
- The existence of poor play facilities is frequently mentioned as a barrier to children's play outside by Portuguese and Greek preschool teachers/caretakers. Norwegian preschool teachers/caretakers did not identify any barrier;
- Most teachers/caretakers say there is no specific school policy concerning playing outside. In Greece and Portugal all the teachers/caretakers mentioned that such a policy did not exist;
- Children in Portugal and Greece did not have special clothing to play outside in bad weather conditions;
- Teachers/caretakers' own beliefs and school conditions were the major influences on the decision of letting children play outside;
- The use of the playspace grids, the viewing of the photos and the visits to the preschools showed that there are differences between the playgrounds in terms of physical features, as well as in the rules that children are subjected to in the use of outdoor space;
- The preschools in Norway, Estonia, Croatia and Portugal share a common trend in terms of diversity of outdoor environmental resources (fixed and moveable components) which are available for children to play. However, permission given to children by adults to engage in flexible, unpredictable, child-led play was greater in the Norwegian preschool, as it was in terms of allowing children to engage in risky play. In the Greek preschool, outdoor free play was very much limited by the lack of environmental resources, namely, moveable components and natural features, associated with existent rules and norms of outdoor use that constrict child-led play;

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- Children’s drawings and interviews revealed that children’s perspectives about play are very subjective, depending on their interests and preferences but also on the availability of specific features that enable them to play in certain ways. Therefore, play types were diverse, although physical activity play was very expressive for most children. As for the elements children would add to the playground, our results show that children are critical of their current play spaces and would like to introduce novelty, risk, loose parts and moveable toys in their play settings. Concerning, the most exciting places to play, generally, it was found that children refer to places where they afford risky play behaviors and where it is possible to contact with loose parts.

In terms of the project’s outputs, it was possible to create the following working tools to promote children’s outdoor play and outdoor learning in school and other educational grounds:

- A training plan for teachers/caretakers that work in preschools or early childhood education centers that will empower them to recognize the importance of outdoor play in children’s development, health and well-being; and to promote outdoor active play, physical activity and active participation in their work with children.
- A set of 12 activities to be implemented with school community that enable children to spend more time in the outdoors in free play and adult-led activities, which promote children’s motor, social, emotional and cognitive development. In addition, some of these activities enable practitioners to make low-cost temporary or more permanent physical changes to the preschool playgrounds, enriching the play environment and enhancing the quality of play. The impact of these activities in the participating preschools from Croatia, Estonia, Greece and Portugal was very positive since the activities were rated as “very important” or as “important”, as being beneficial for different domains of child development, and also because all teachers/caretakers intend to repeat these activities in the future.

## Recommendations and guidelines

Based on the Moving and Learning Outside Project, in order to increase children’s opportunities for outdoor play and learning in preschools or in early child education centers it’s important to act on 3 major dimensions:

### Enhance knowledge of outdoor play and learning

- Keep up to date with evidence-based information about the benefits of outdoor play.
- Be aware of media alerts that create a culture of fear and risk aversion in childhood.
- Remember your own memories of childhood and the pleasure of playing outside.
- Watch children playing outside and try not to interfere.
- Take photos or make videos of children playing out and send them to parents.
- Invite families to come to school for outdoor activities with children.
- Remember that play is usually messy, noisy, boisterous... but lots of fun!
- Trust children, they are much more capable than you might think!

### Guarantee prerequisites for outdoor play and learning

- Have appropriate clothing to play outdoors in all seasons (for children and adults).
- Find an appropriate space in school to keep these clothes and to dry them if necessary.
- Have a transition area between indoors and outdoors that facilitates dressing and undressing.
- Encourage your staff to allow children to play outside.
- Adopt a friendly supervision when children are playing outside.
- Consider the playground as a place which is crucial for playing but also for learning (include the outdoor as part of your classroom).

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### Design play environments for outdoor play and learning

- Make sure the playground allows for diversity of play types, has a good balance between natural features and fixed equipment, and is prepared for the different seasons of the year.
- Introduce new elements, such as loose parts and other moveable components, to the playground to keep play interesting and novel.
- Get families involved in gathering loose parts, such as natural and recyclable materials to be used in children's outside play at school.
- Develop projects with children to create new spaces and opportunities for playing in the playground.
- Make opportunities to teach children how to handle dangerous tools with supervision.
- Discover the neighborhood outside your preschool.
- Take children recurrently to natural places such as forest, woods, beach and allow both for free play and adult led activities.
- Prepare the outdoor space for different activities that usually take place inside, such as: having a meal, doing a play, reading... include children in this process.
- Include children in assessing the conditions of the playground and listen to their suggestions for improving the spaces.

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