

# Greening our school grounds

## Background

Children spend a quarter of their day at school. Our schools' physical environment therefore significantly affects the quality of children's lives. Research has shown that greener environments are associated with higher levels of wellbeing. This is the driving force behind a growing movement to green school grounds and provide opportunities for children to be in direct contact with nature, even as more studies are evidencing the multiple benefits for both children and nature.



*"The green school grounds movement is gathering momentum in schools across the world due to the diverse benefits of green spaces to children's development."*

## What are these benefits?

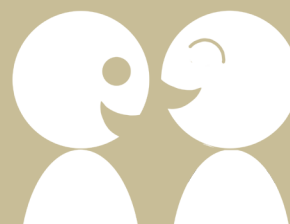
### Promoting physical and mental wellbeing

Children's lack of access to nature is thought to lead to many negative side effects. Conversely, regular access to nature moderates the impact of stressful events in children's lives and improves their overall behaviour. Physically, green spaces mitigate the effects of traffic-related air pollution and of the urban heat island effect, both of which impair children's cognitive development and health.



### Improving social interactions

Green school grounds encourage physical activity and facilitate social interactions, while children engage with each other as they collaborate on curriculum-based outdoor learning in natural settings.



### Improving academic performance

Green school grounds evoke positive emotions and improve focus in the classroom across all abilities, including reducing symptoms of attention deficit hyperactivity disorder. Students engaging in nature-based learning are more motivated to attend school, particularly those from low income families, and perform better in subject learning, especially in mathematics and science.



### Motivating children to live sustainably

Regular experiences in nature form a bond between the child and the natural world that promotes a desire to protect it by engaging in ecological behaviour. School-based programmes connecting children with nature provide a deeper understanding and appreciation of ecosystems and promote environmental activism.



# The challenge

## Urbanisation

Children's lives are moving indoors as society becomes more urbanised, affording children less opportunities to engage with nature. Global urbanisation rates may increase by 60–90% by the end of the century, making the need to connect children with nature more urgent. Together with changing people's lifestyles, urban sprawl has had dire consequences on biodiversity. Urbanisation and loss of nature are aggravating children's disconnectedness from the natural world.

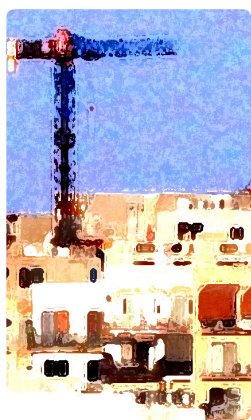
## School culture

Traditionally, school grounds have been designed as places where children can be easily supervised and can get rid of 'surplus energy', leading to the large, concrete expanses that define the majority of our school grounds. This design model leaves little or no room for school grounds' potential to stimulate children's interest and development, and allow for interaction with nature during outdoor learning.

While there is increased awareness of the need to educate about the environment and ecosystems, this is mainly carried out through classroom instruction rather than directly through nature. Learning through nature is a peripheral activity and as such will only have a peripheral effect on children's values and learning, having little impact on behavioural changes.

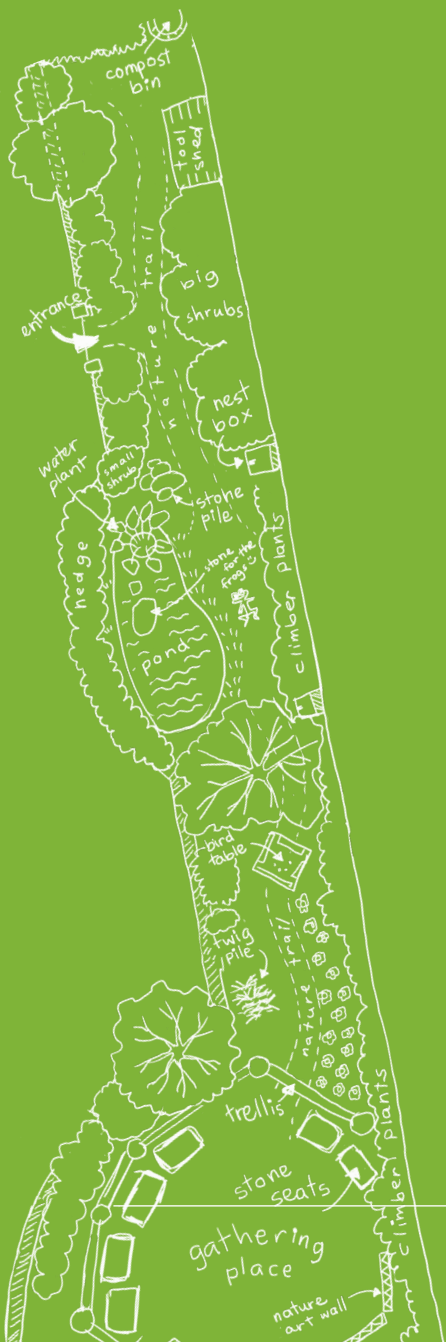
*"As people's experience of nature declines, their interest in nature is likely to diminish."*

Louise Chawla



# The solution

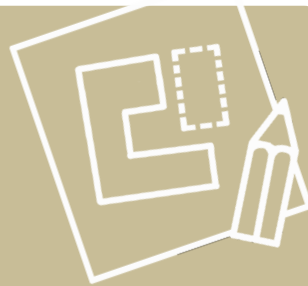
Greening school grounds has the potential to provide opportunities for regular experiences in nature to children in urban environments, especially if these experiences are embedded in the curriculum. Investing in purposely-designed green school grounds is a low-cost solution to improving student wellbeing and outcomes that reduces or eliminates the environmental and financial costs of trips to out-of-school venues. Green school grounds make nature accessible, provide quality environments for learning, and increase children's motivation to attend school.



## Our research

As part of an Erasmus+ project called Teach, Inspire and Protect, BirdLife Malta collaborated with the Institute of Earth Systems of the University of Malta to carry out two related research initiatives.

1



Mapping of Maltese primary school footprints to determine the proportions of different landscapes in each footprint.

2



A national survey among primary school teachers to establish the state of outdoor teaching and nature-based learning in Maltese primary schools

## Key findings

A

Our school footprints are dominated by outdoor hardscapes, with concrete and other hard paving covering an average 49% of our school grounds. Built areas take up an average 29% of the grounds, with only 22% consisting of soft landscaping. These figures are broad averages; several schools have little or no soft landscaping at all.

B

Our schools' soft landscaped areas do not follow the principle of integrated thinking and design: in most cases these areas are behind the school building or at the edges of school property, often as strips abutting roads, or random troughs in unconnected spaces. There is a clear, overall lack of consideration for natural landscaping in the planning and design of primary schools.

C

There is a consensus among primary school educators that outdoor learning is beneficial to children's learning and development, health and wellbeing.



78%

22%

D

56% of teachers engage in outdoor teaching once a week. Most of these are Kindergarten educators, with diminishing regularity of outdoor teaching for higher year groups.

E

School grounds are the most popular venue for outdoor teaching across year groups. The subjects taught most outdoors are Science, Mathematics, English, Maltese, and Emergent Curriculum.

F

The most common school grounds surface used during outdoor teaching is rubber matting or artificial turf, followed by concrete ground. Natural areas are rarely used during outdoor teaching.

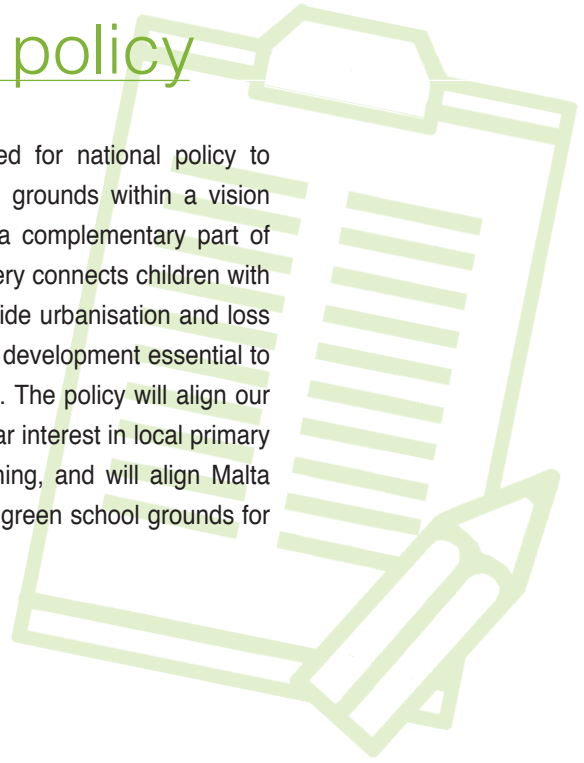
G

The most frequently mentioned aspects of school grounds that discourage outdoor teaching are exposure to the elements, followed by lack of space. Teachers' ideal school grounds would have trees, shelter and appropriate spaces for learning.



# A need for policy

Our survey highlights the need for national policy to integrate the design of school grounds within a vision that sees outdoor spaces as a complementary part of curriculum delivery. Such delivery connects children with nature in recognition of worldwide urbanisation and loss of nature, and provides holistic development essential to children's health and wellbeing. The policy will align our educational services with a clear interest in local primary schools towards outdoor teaching, and will align Malta with a worldwide movement to green school grounds for quality education.



## Policy recommendations



1 School design should recognise school grounds as an integral part of the curriculum that can complement classroom-based learning and provide an educationally valid venue for teaching.

2 Regulations stipulating minimum standards for outdoor space per child should include standards for minimum total area of soft landscaping.

3 Planning should reflect landscape architecture guidelines for green school grounds and research-based guidelines to connect children with nature.

# Policy recommendations



4 Schools should be viewed as opportunities for investing in green infrastructure through the application of nature-based solutions in green outdoor spaces. Design should be based on low-cost, locally sourced solutions consistent with sustainability design principles.

5 Nature-based learning should be adopted on a national level as a teaching approach that regularly connects children with nature and allows them to benefit from a greener environment. Appropriate resources should be dedicated to staff training in nature awareness and the nature-based learning approach.

6 School grounds should receive adequate planning, management, evaluation, resourcing, staffing and maintenance.

7 Wider consultation should be carried out by policy makers in applying policy on school design and include sectors of society engaged in providing outdoor nature-based learning.

## Reference

Chawla, L., (2018). Nature-based learning for student achievement and ecological citizenship. Curriculum and Teaching Dialogue, 20(1 & 2)