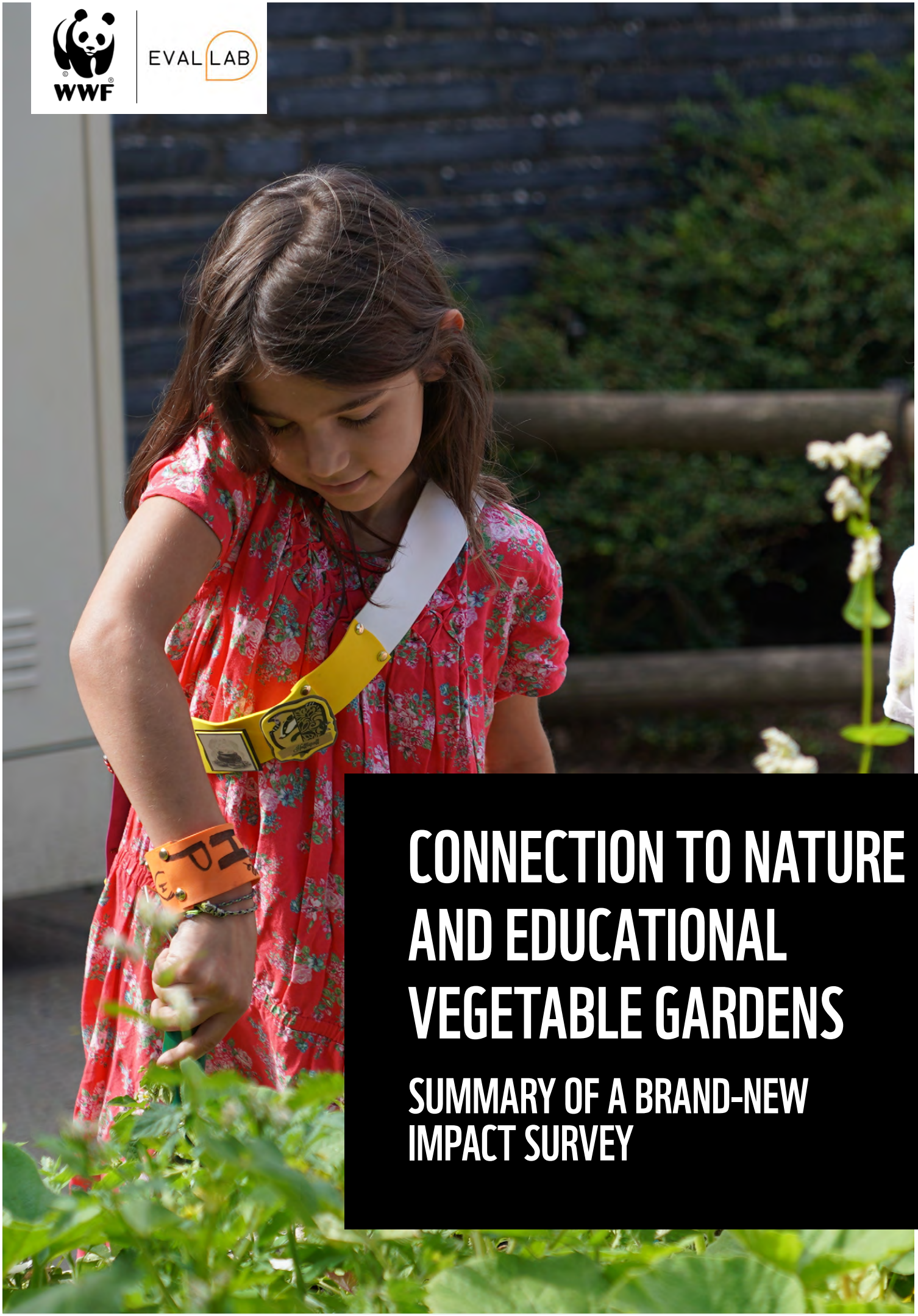

CONNECTION TO NATURE AND EDUCATIONAL VEGETABLE GARDENS

SUMMARY OF A BRAND-NEW IMPACT SURVEY

WWF

The World Wildlife Fund (WWF) is one of the leading organisations in the world devoted to the protection of the environment. It has an active network in more than 100 countries and is supported by almost 6 million members.

WWF France, a recognised public interest foundation, works to protect the planet, and keep it alive and thriving. It is based in Paris, Marseilles, the Alps and New Caledonia.

With the help of its volunteers and the sponsorship of its donors, WWF France carries out concrete actions to protect natural environments, as well as the species living there, establishes enduring ways of life, trains decision makers, works alongside businesses striving to reduce their ecological footprint and educates young people. We aim to raise awareness in children from a very young age about the importance of wildlife and nature in general, so that when they become adults, they also do their best to protect the environment.

This is our philosophy. And this is why the experience of WWF is vital in helping children see nature as a key factor in their lives. It is equally important to help all education specialists who would like to share their knowledge and motivation about nature to educate very young people to have a greater understanding of the living world. For further information on our programmes for children and young people, please consult: https://www.wwf.fr/

Ensemble, nous sommes la solution (together we are the solution).

With contributions from : Marjolaine Girard (WWF), Lauranne Pellissier (WWF).

Eval-Lab : scientific excellence at the service of social change

Eval-Lab is a unit specialised in the evaluation of the impact, collection and analysis of data, research and consulting. Our team brings together social science experts and professionals who are passionate about our programmes, helping to render our societies fairer, more equitable and inclusive. After working with the best national and international universities, we share this experience with associations, foundations and international organisations. At Eval-Lab we are convinced that durable change must be based on solid proof. This is the reason why we develop and carry out meticulous studies in order to increase the knowledge which sheds new light on, and strengthens the impact of the initiatives which we carry out.

Authors : Quentin Daviot (Eval-Lab), Thomas Escande (Eval-Lab).

This survey was carried out by Eval-Lab for WWF-France.

Partners

The partner research team : Gladys Barragan-Jason (university of Toulouse), Simon Briole (university of Montpellier), Lisette Ibanez (university of Montpellier), Joanna Lucenet (university of Bordeaux), Sébastien Roussel (university of Montpellier), Arielle Syssau-Vacarella (university of Toulouse).

The quality evaluation team: Noémie Caplet, Pauline Misset.

The team of Global Impact Metrics in charge of the socio-economic analysis: Benjamin Michallet, Paulo Gugelmo Dias, Germain Marchand.

The team in charge of the design of the pedagogical activities for the vegetable garden: Albane du Boisgueheneuc, Florence Sevin.

IDEE (innovations, data and experiments in education), state-of-the-art equipment to develop large-scale experimental research in education and promote the use of its results. The IDEE programme is financed for 8 years (2021-2029) by the State, through the ANR (the national research agency) in its programme of Investments for the Future, ref: ANR-21-ESRE-0034

Acknowledgements

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Not forgetting, of course, all the schools, teachers, pupils and families who took part in this survey, by taking the time to answer all our questions. This job would not have been possible without you, in particular all the schools in the comparative group, who played along with the draw until the very end. Thank you for your commitment, your input and your passion.

Report published in December 2025

SUMMARY

Cover photo : © Gaetan Bounkheuth / WWF-France

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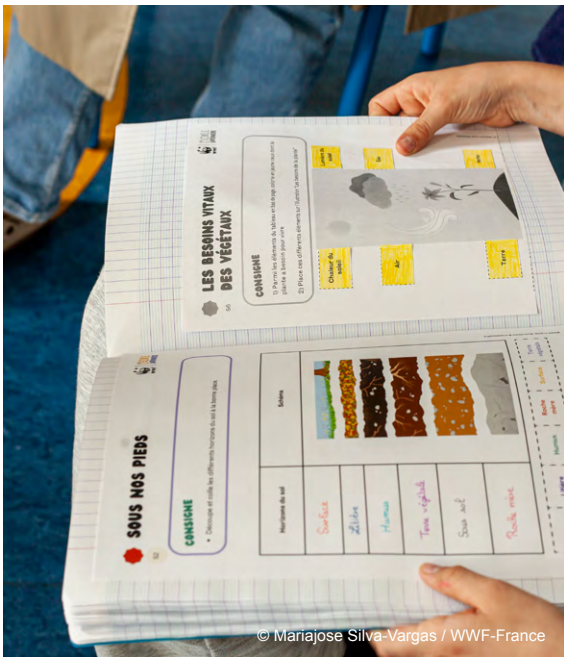
CONTEXT

Without decisive action, **a child born in 2020 will have to face 7 times more extreme weather events than a child born in 1960**[1]. However, at the same time as these risks increase, human societies are moving away from nature[2].This distance is creating more and more indifference towards nature[3].

Environmental education, an essential leverage for awakening interest in nature



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In this context, **environmental education appears to be a decisive lever**, particularly during childhood, when children are naturally more connected to nature[4], and express stronger prosocial and altruistic feelings[5]. These same preferences can be influenced: experiments have proved that through education, these cooperative and respectful behaviours towards the environment can be reinforced[6].Environmental education during childhood is a strategic opportunity to develop informed citizens, committed to respecting the common good.

The limits of information campaigns

Most of the programmes used and analysed in rich countries accentuate information about the causes and consequences of climate change, and the need to reduce emissions[7]. Whilst these programmes improve people's knowledge, they do not produce any lasting change[8]. To this day, there is no solid scientific proof to show that this education provokes any change in people's intentions, actions or habits[9]. On the contrary, by insisting on the consequences of climate change, this can create serious eco-anxiety[10], often coupled with minimising the problem and distancing oneself from the anxiety-inducing information, and even complete denial (*«Deemphasizing coping»*)[11].

Despite an abundance of literature, environmental educational research is undermined by a lack of meticulous assessment, limited samples, an absence of

1 Thiery et al., 2021.
2 Miller, 2005.
3 Mayer, 2018 ; Brenner et al., 2015.
4 Kellert et Wilson, 1993.
5 Fehr et al., 2013 ; Sutter et al., 2019.
6 Bettinger & Slonim, 2006; Kosse et al., 2020.
7 (Bottin et al., 2023).
8 Dijkstra et Goedhart, 2012 ; Brownlee et al., 2013.
9 Cordero et al., 2020.
10 Wang et Chen, 2022.
11 Ojala, 2012.

independent legitimacy, and significant bias in the methodology[1]. We still have very little reliable information to help us identify what really changes people's behaviours, or the environmental habits and standards of our future citizens.

Locally-based projects concentrating on children's connection to nature, seem to be more efficient

On the positive side, certain recommendations seem to be promising. Firstly, focussing on local programmes plays an essential part: it creates an environmental citizenship, rooted in the local community and reinforces collective ideas[2].

An awareness of our connection to nature, i.e. the way people understand better how they fit into nature, is systematically associated with better physical and mental well-being, and behaviours more respectful of nature[3]. This connection is created through concrete experiences with nature, not through theoretical information[4].

Lastly, the research seems to indicate that the most eeicient approach is to combine several different levers: cognitive, emotional and real experiences, rather than a single element[5].

Moving forward, we have a major challenge to overcome: **how to design programmes that induce a positive emotional reaction, but also achieve real behavioural change .**

The pivotal role of teachers

Teachers play a pivotal role in this context. They show a strong interest in achieving this objective, but also express specific needs for help: 70% say they need ready-to-use tools, 60% ask for concrete ideas, and a large number say they need extra time devoted to the task, and more recognition from their institutions[6]. This dichotomy is reflected in the Ecolhuma 2025 barometer of sustainable development education[7], which shows a clear drop in teachers interested in sustainable development education from 84% to 54% in 2 years. The causes cited are : lethargy, work overload, and the fact that the subject has become too political.

Nevertheless, schools and teachers are in the best position to motivate future citizens and decision makers. It is essential to give them the specific tools they need, which are universal and accessible to every level of society and everywhere in the world.

1 Bottin et al., 2023.
2 Bottin et al., 2023.
3 Barragan-Jason et al., 2021, 2023 ; Mackay & Schmitt, 2019 ; Whitburn et al., 2020.
4 Lumber et al., 2017 ; Barragan-Jason et al., 2021.
5 Bottin et al., 2023.
6 Ecolhuma, 2025.
7 Ecolhuma, 2025.

ENVIRONMENTAL EDUCATION AND SCHOOL VEGETABLE GARDENS

The school vegetable garden can seem very ordinary, but it is very concrete and corresponds to many of the recommendations outlined above. It is far from a new idea. There has been a long tradition of pedagogical gardens, alongside learning in the open air and learning by experimentation. These ideas come from thinkers and philosophers such as Rousseau, Montessori or Dewey, who have long promoted the concept that learning by real, direct experiences is a fundamental constituent of education[1].

The educational vegetable garden : a universal, cross-functional and adaptable tool

The vegetable garden is a particularly fascinating tool, largely thanks to the fact that it is universal. It is accessible to all pupils, whatever their age, social background or educational level may be. It provides a direct experience of nature : observing, touching, experimenting : many of its elements can easily be included in a school curriculum, whether it be studying living entities, reading, oral expression, physical education or even mathematics.

Experiments can be set up in the classroom all year round, even in winter, to study soil, planting, and germination. These experiments can cut across all generations, when the pupils take home their results and show them to their parents (as literature proves[2]). The vegetable garden is also very adaptable : each school designs its own projects - in the ground, in garden troughs, in pots, inside or outside the school premises. Each project can be designed to suit the available space, the budget and the creativity of the teachers

The vegetable garden is a very powerful tool to reinforce the children's connection to nature, to generate positive emotions and encourage suitable long-term behaviours, and all this at a very reasonable cost. Many schools in France already have a vegetable garden, or an ordinary garden.

Underutilised vegetable gardens and numerous obstacles

In order to prepare this survey, 500 schools with a vegetable garden were consulted. This number shows, however, that the enormous potential of these gardens is still very under developed. In addition, the majority of teachers do not use them, or spend too little time on them.

1 Desmond, Grieshop et Subramaniam, 2002 ; Subramaniam, 2002 ; Trelstad, 1997.
2 Lawson et al., 2019 ; Crandon et al., 2022.

This survey also highlights the fact that 90% of teachers have never received any specific training on how to use a vegetable garden. They all express a great need for support, giving them simple toolkits that can be easily integrated into the curriculum all year long.

Other obstacles were also observed and correspond to the findings of other studies[1] : the difficulty of organising the use of these gardens for a large number of pupils, the idea that these gardens can only be used at the end of the school year, the belief that the vegetable garden is only a pastime and not a learning tool (which can generate feelings of guilt when faced with the attitude of peers or parents), or even a productivist approach where one feels compelled to plant, grow or harvest "successfully".

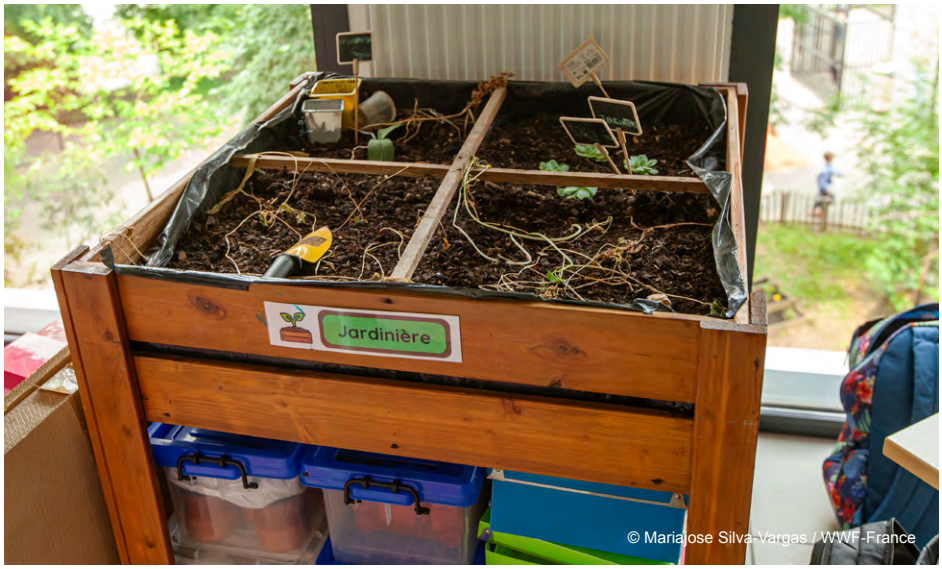
Generally speaking, the mere presence of a vegetable garden is not sufficient: it is essential to equip and train the teachers to enable them to fully exploit this infrastructure and to use its educational potential to the full.

The educational vegetable garden is a very promising educational tool, which at present is only used on a small scale and is just waiting to be fully exploited.

1 Ozer, 2007 ; Azuma, Horan et Gottlieb, 2001

THE WWF FRANCE "ECOLE JARDINIERE » PROJECT : EQUIPPING THE TEACHERS

The WWF France "École Jardinière" project sets out to boost interest in educational gardens in schools and to publicise the project in order to achieve the long-term aim of regular, widespread use of these gardens. In response to teacher demand expressed in the preliminary survey, WWF provide high quality educational tools, aligned with the school curriculum. In addition, we hand out ready-to-use activity sheets for gardening workshops, either in the classroom or in the garden. These materials are designed to be immediately operational and do not require any previous training for the teachers. The programme is based on the assumption that this support will increase the time pupils spend on environmental educational activities linked to the garden, and increase their exposure to experiential learning about living things, and that these experiences will then strengthen pupils' connection with nature, their ecological awareness and their pro-environmental behaviour, with potential knock-on effects within families.

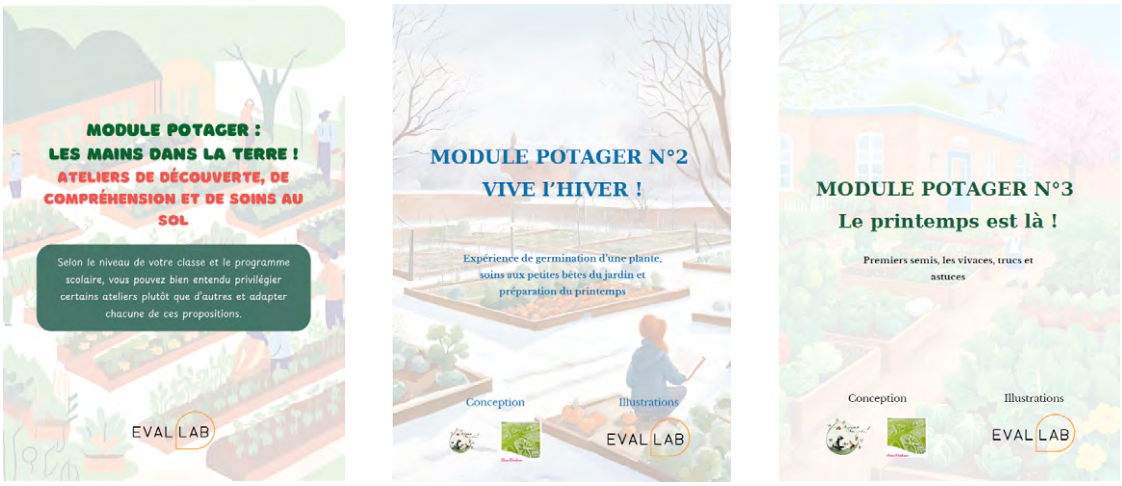


Appropriate operational teaching resources

The École Jardinière programme is an online toolkit that teachers can access free of charge. In order to measure the programme's impact, 17 École Jardinière activities were selected, revised and sent to teachers by post in four instalments between December 2024 and May 2025. Some focus on discovering living things in general – for example, exploring soil composition – and can be carried out in the classroom or outdoors. Others are specifically designed for the vegetable garden, allowing pupils to discover and experiment with nature in a practical way and learn through hands-on experience. The packages also include seeds, enabling pupils to carry out planting and germination activities straight away.

Thanks to these activities, the time teachers devoted to environmental education related to the vegetable garden has increased by 50%, from 12 to 18 hours per year during the study.

Teachers express a high level of satisfaction with the programme, highlighting the quality of the materials provided, the ease of implementation and the wealth of teaching suggestions, which are perceived as stimulating and suitable for a wide variety of contexts. In line with the results of the Ecolhuma barometer (2025), this type of programme directly responds to the needs expressed by teachers for concrete, ready-to-use and easily accessible resources for environmental education activities.



Example of printed activities sent to schools

ASSESSING THE IMPACT OF EDUCATIONAL GARDENING

To assess the impact of this programme, Eval-Lab implemented a randomised controlled trial, a method recognised for its scientific rigour and transparency in isolating and measuring the effects of an intervention or a programme.

Why is it difficult to measure the impact of a programme ?

If children at schools with vegetable gardens express a strong connection to nature and good environmental practices, several questions arise : is this due to the vegetable garden, the child's environment (parents, school, surrounding nature), or a combination of both? It is important to note that correlation does not necessarily imply causation : only a rigorous impact assessment can determine whether there is a causal link between the vegetable garden and the connection to nature[1].

Defining the social impact of a project

The social impact of an intervention is defined as the comparison between "what I have become as a result of an intervention" and "what I would have become without that intervention". Since the latter situation is by nature unobservable, the assessor must use a comparison group that mimics what the beneficiary group would have become if it had not benefited from the intervention. The difficulty of a true social impact evaluation lies in selecting a credible comparison group that is equivalent to the beneficiary group before the intervention, so that any dieerence between the two groups following the programme is exclusively due to the programme and not to initial differences between the two groups. A rigorous and transparent method for constructing this comparison group is called randomised controlled evaluation.

Randomised controlled evaluation

In a randomised evaluation, the beneficiary group and the non-beneficiary group are selected at random from a sample of subjects eligible for the intervention. Random assignment from a sueiciently large sample allows groups to be formed that are similar on average at the start of the programme. In this way, and provided that the programme and evaluation have been properly designed and implemented, any differences that subsequently arise between participants in the two groups can be interpreted as the effect of the intervention rather than other factors. This difference therefore provides a reliable estimate of the impact of the programme being evaluated.

1 More broadly, having reliable and methodologically sound impact studies helps shed light on the dynamics of social change. Credible evidence helps organisations to better understand the e[ects of their actions, adjust their strategies when necessary and, more generally, strengthen the relevance of their interventions.

A VERY LARGE SAMPLE TO ENSURE A RIGOROUS ASSESSMENT

89
primary schools spread across mainland France[1]

184
teachers

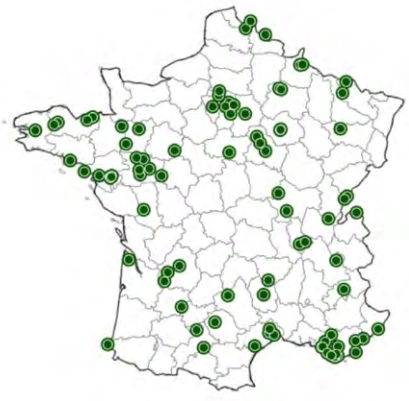
+ over 3,500
pupils

In this study, several key factors were measured among pupils: their connection to nature, their environmental awareness, their pro-environmental skills and their wellbeing at school. To assess these different aspects, standardised scales validated by scientific literature were used, collected through paper and electronic questionnaires. Information was also gathered from school administrators, teachers, and parents. Overall, this study has made it possible to compile, for the first time in the world on such a scale, a unique body of data aimed at better understanding the proenvironmental profile of teachers, students, and their families, as well as the links that may exist between these different players.

COLLABORATION WITH EXPERT RESEARCH TEAMS

To carry out this scientific study, Eval-Lab assembled a multidisciplinary team of researchers from the universities of Montpellier, Toulouse, Bordeaux and the CNRS. By combining approaches from economics, psychology, ecology and sociology, this team brings together the expertise needed to conduct a truly multidimensional and rigorous assessment, capable of producing robust, useful results, enabling concrete action for WWF France and all stakeholders in education.

CHARACTERISTICS OF THE SCHOOLS TAKING PART



The 89 primary schools taking part in the survey are spread across the entire metropolitan area and have very diverse profiles. This diversity offers interesting variability and contributes to the overall representativeness of the sample. On average, the schools have 9 teachers and 165 pupils, ranging from CP to CM2. They have varied socio-economic profiles: 13% belong to the priority education network (REP) and the average social position index[2] (IPS) of the sample is close to the national average. Furthermore, 71% of the schools are public and 29% are private, a distribution that is slightly more weighted towards private schools than that observed at the national level (approximately 18%).

1 The restriction of the study to metropolitan France was not a methodological choice on our part. The study was open to and communicated to all schools in France, but no schools outside metropolitan France participated.

2 The Social Position Index (IPS) of a school is an indicator calculated by the Directorate for Evaluation, Forecasting and Performance (DEPP). It summarises the socio-economic and cultural conditions of the families of the pupils attending the school. The IPS thus makes it possible to report on the social disparities that exist between schools and within the same schools.

Schools involved in vegetable gardens

Among the establishments involved, 74 already had a vegetable garden. These vegetable gardens were mainly set up on the initiative of teachers and/or school management. The majority of these schools had a vegetable garden in the ground and/or in containers.

Teachers are convinced of the usefulness of vegetable gardens in developing environmental values, but many find it difficult to organise activities related to vegetable gardens, and nearly 90% would like advice and assistance in order to be able to make effective use of vegetable gardens with their pupils.

Randomised evaluation in practice

Eval-Lab conducted a stratified random draw that assigned 45 schools to the beneficiary group – in which teachers received the École Jardinière activities during the 2024–2025 school year, and 44 schools to the comparison group, which did not receive these materials.

Two series of data collection were carried out in all schools : the first at the beginning of the school year, in September/October 2024, and the second at the end of the year, in June 2025.

High level of participation by teachers, pupils and their parents

In the 89 schools included in the evaluation, 184 teachers and their classes participated in the study. Teachers are on average 44 years old, have been at their current school for 8.5 years and have nearly 17 years of experience in education. They express a high level of professional satisfaction : nearly 90% say that if they had to make the choice again, they would choose to be a teacher. At the same time, 90% of them feel that their profession is not sufficiently valued in society.

In total, more than 3,500 pupils took part in the study. Eval-Lab collected questionnaires at the beginning and end of the year from 87% of them, a particularly high response rate. All primary school levels are represented, with approximately 700 pupils per level, from CP to CM2. Finally, a questionnaire sent to families at the end of the year received more than 700 responses, representing a participation rate of 20%.

Characterisation of pupils: environmental profile

Thanks to the size of the sample and the wealth of data collected, it is possible to examine in detail the profile of the pupils, as well as the relationships between the different dimensions studied. This section presents the main findings that emerge from this analysis, which are consistent with the results of analyses conducted in other contexts around the world.

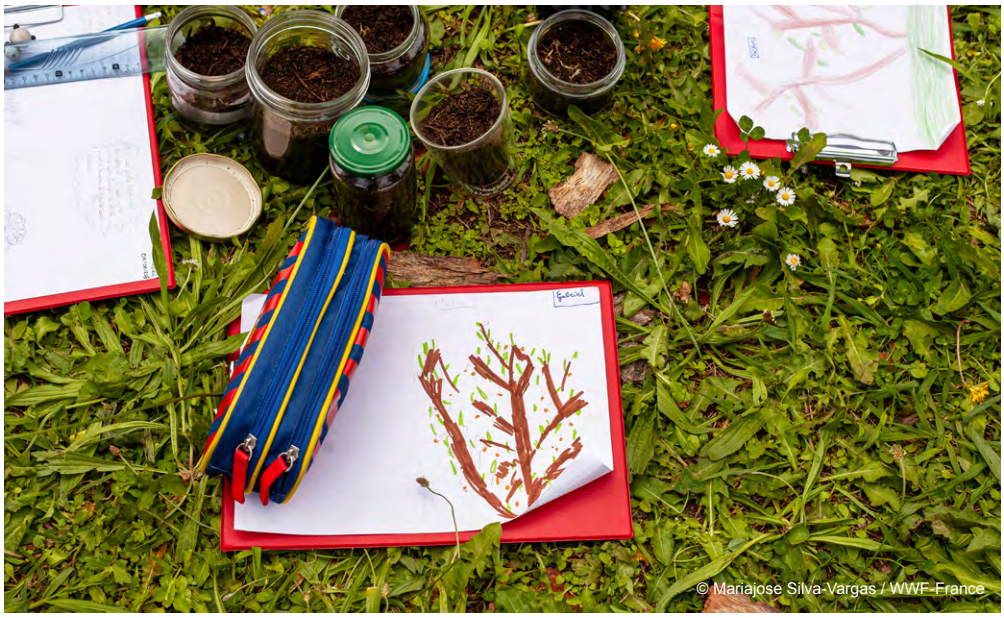
Students show a strong connection to nature, reflecting the "natural biophilia" characteristic of childhood[1]. They feel deeply connected to the natural world. However, this connection tends to diminish with age : as children grow older, they report a significantly weaker sense of belonging to nature. This phenomenon, documented in various contexts, shows a gradual decline in connection to nature, which generally reaches its lowest level at the end of adolescence, around the age of 15 to 17[2].

1 Kellert et Wilson, 1993.
2 Voir par exemple Barragan-Jason *et al.*, 2025 ; Hughes *et al.*, 2019 ; Richardson *et al.*, 2019.

Students who feel more connected to nature tend to have higher levels of well-being, greater ecological sensitivity and better pro-environmental practices. The analysis highlights a positive association between connection to nature and these different dimensions : the more a child reports feeling close to the natural world, the more likely they are to express greater well-being, stronger ecological awareness and environmentally friendly behaviours.

Marked territorial inequalities appear, closely linked to the socio-economic profiles of the pupils. Pupils enrolled in REP schools, who represent 30% of the sample, mostly live in urban areas with little vegetation. They report a weaker connection to nature, more limited pro-environmental practices and a lower level of eco-anxiety than the average for other pupils.

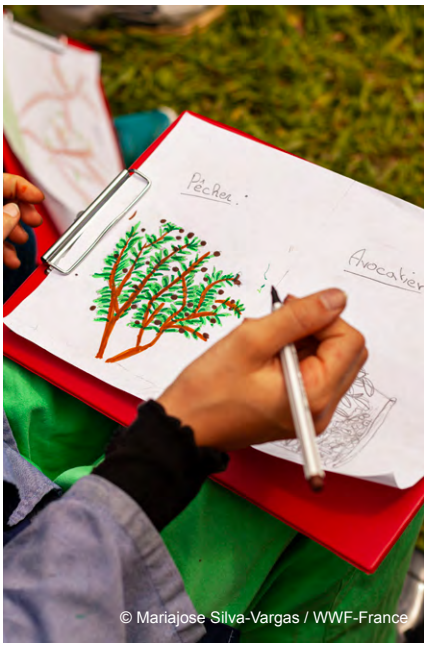
The role of childhood and family socialisation also appears to be decisive. Data suggests that parents who grew up spending more time in nature develop a stronger connection to the natural world as adults and are more likely to adopt pro-environmental behaviours. Furthermore, a strong connection to nature among parents is associated with a stronger connection among their children, as well as more assertive pro-environmental practices.



THE IMPACT OF THE «ÉCOLE JARDINIÈRE» PROGRAMME

Pupils spend more time on school activities related to environmental education linked to the vegetable garden. Thanks to the École Jardinière support programme, teachers are increasing the number of sessions devoted to the vegetable garden (+5.8 sessions from December 2024 to June 2025), whether they take place in the classroom or outdoors. This translates into a significant increase in the time allocated to these activities, with approximately 6 additional hours, or a 50% increase.

The programme significantly improves children's connection to nature, their ecological awareness, and their reported pro-environmental skills. In absolute terms, the estimated effects on these factors are only moderate in magnitude[1]. However, when considered in relation to the programme's low intensity, short duration, and very low cost, the impact achieved appears substantial and particularly encouraging. Furthermore, the programme does not increase eco-anxiety among pupils, which is an important result compared to other programmes that can generate an increase in eco-anxiety. On the other hand, no significant effect was observed from what the children reported about their well-being at school.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The effects of the programme are particularly marked for pupils enrolled in REP schools. Analyses show that these pupils make significantly greater gains in terms of connection to nature, ecological awareness and reported proenvironmental skills. This result confirms that the programme primarily benefits pupils who are furthest removed from nature in their everyday environment. It thus plays a catch-up role, since pupils in REP schools initially had a less developed environmental profile than their peers in non-REP schools. However, the study also highlights an increase in eco-anxiety among these pupils, even though their initial level was lower. This is an important point to consider in the design and future adaptation of this type of programme, in order to maximise educational benefits while preventing any undesirable effects.

The programme's effects on environmental awareness are consistent across all student profiles, demonstrating that it broadly enhances their environmental consciousness. However, the impacts on connection to nature and pro-environmental skills vary according to the characteristics of the pupils. They are particularly marked among girls and pupils who were initially less connected to nature. These results suggest that the programme has differentiated effects and can respond in a targeted manner to the needs of certain subgroups of pupils.

The programme does not appear to have a significant effect on teachers' perceptions or practices. Overall, no statistically significant impact was observed on their identification with nature, their pro-environmental skills or their job satisfaction. However, these results should be interpreted with caution, given

1 The size of the statistical effects can be interpreted in light of international standards in education, which empirically categorise the magnitude of effects based on hundreds of studies in the field. In our case, the effects produced by the programme fall into the 'moderate' category, compared to the adjacent categories of "weak" or 'strong' effects.

the small sample among teachers and the voluntary recruitment method, which resulted in a group of teachers who were already highly aware of environmental issues.

In terms of teaching, the programme does not change pupils' behaviour in class, whether in terms of attention, cooperation or the general classroom atmosphere. However, there has been a significant increase in the number of disciplinary measures in schools participating in the École Jardinière programme. This increase can be explained by the difficulty teachers have in managing the whole group during outdoor activities, where some pupils perceive these moments as times for relaxation or play, which can encourage disruptive behaviour. This result highlights an important point for future adaptation of this type of programme : strengthening support for teachers in managing the group outdoors and further integrating the development of psychosocial skills to help pupils adopt appropriate behaviour during these activities.

VEGETABLE GARDENING PRACTICES AND ASSOCIATED EFFECTS: INSIGHTS FROM QUALITATIVE ANALYSIS

In order to supplement the quantitative analyses presented above and to better understand the use of the "École Jardinière" programme and the short-term effects observed in pupils when they work in the vegetable garden, EvalLab conducted interviews with seven teachers.

The conclusions of these interviews broadly concur with those of the quantitative study, particularly with regard to the development of environmental awareness. However, some results differ : teachers report positive short-term effects on pupils' well-being, motivation and several psychosocial skills such as inclusion and cooperation[1].

€

€30
per pupil in a school with 150 pupils

€1,38
per pupil per year for sending out activities

Estimated return of

3,35€
per euro invested

HOW MUCH DOES A VEGETABLE GARDEN COST?

The cost of a vegetable garden
School vegetable gardens take many different forms depending on the school : in open ground, in containers or planters, built all at once or developed gradually. Each school can therefore design a vegetable garden that suits its budget, space and identity. It is therefore difficult to suggest a standard cost, as there are so many possible configurations. In the sample, the budgets allocated to vegetable gardens ranged from a few hundred euros to tens of thousands of euros, reflecting this significant diversity. In addition to these initial investments, there are recurring expenses for equipment, soil and seeds. On average, the initial cost of a vegetable garden is estimated at around €4,000, or less than €30 per pupil in a school with 150 pupils.

The educational programme associated with the vegetable garden
Apart from the cost of designing the programme, sending activities to teachers represents a very low expense. In this study, the four mailings sent during the school year cost €42 per class, or approximately €1.38 per pupil for a class of 30 pupils.

Socio-economic analysis of the vegetable garden
A socio-economic analysis conducted in parallel with the impact study highlights the profitability of the vegetable garden : for every euro invested, the estimated long-term return for the community is €3.35.

1 Some of these e[ects, particularly those related to wellbeing, may be felt at the time but then fade quickly, especially given the low intensity of the intervention. This could explain why they do not appear in the quantitative assessment.

CONCLUSION AND RECOMMENDATIONS

One of the major strengths of this study is that it evaluates a programme as it is actually implemented in the field, without any special support, dedicated training or close supervision by a research team. The intervention was implemented under entirely "ecological" conditions : field workers used the programme as they would have done in practice, with their time constraints, trade-oes and natural level of commitment. The impact measured therefore corresponds to a "real" impact, i.e. the impact that can reasonably be expected from large-scale deployment, without intensive or unrealistic support measures. This characteristic makes the results particularly credible, transferable and directly useful for public decision-making.

The results of the study clearly show that vegetable gardens are a credible and effective tool for environmental education, capable of having a significant impact on pupils' engagement and their relationship with living things. However, their use and impact are not automatic : they require adequate guidance and structured support. With a view to scaling up this tool or implementing a programme of activities similar to that of the École Jardinière, several elements deserve particular attention.

The vegetable garden must be accompanied by practical, simple and directly applicable activities so that teachers can truly exploit its full potential.

Generally speaking, the mere presence of an existing infrastructure does not guarantee its use : teachers need support to take ownership of it and turn it into a real teaching tool. This is particularly true for schools and teachers who are less familiar with environmental education or who need extra support to ensure effective adoption. Furthermore, the study is based on a sample of schools and teachers who volunteered to participate and who were already sensitive to these issues. It is therefore all the more essential to support less committed teachers so that they, too, can adopt the tool and benefit from simple, tailored activities. The impact could be even greater.

Helping teachers overcome limiting perceptions. Support for schools and teachers must help them move beyond the perception of vegetable gardening as a leisure activity, both on the part of teachers and parents. In order for it to be fully utilised, it must be recognised as a credible educational tool, capable of supporting practical learning, enriching the relationship with living things and mobilising a variety of skills. This recognition is an essential condition for giving it a real place in everyday classroom life. Beyond this necessary evolution, it is also important to break with the productivist vision often associated with vegetable gardening. The challenge is not to "succeed" in producing, harvesting or feeding a class, but to promote the vegetable garden as a space for observation, trial and error, and exploration. It is these factors – and not just yield – that make it a rich educational tool. **The learning processes, discoveries and even failures**

must be considered legitimate and valuable components of the educational experience in the garden.

Supporting the formalisation of the educational project. The educational activities offered can be fully aligned with the school curriculum for pupils at all levels of primary education, in the five areas of fundamental knowledge and skills acquisition, as defined by the French Ministry of Education[1]. In general, it is possible to offer teachers simple activities in the vegetable garden that allow them to work on fundamental skills in life sciences, English or even mathematics, while providing an experience of nature that stimulates the development of a connection to nature and pro-environmental practices.

Integrate socio-emotional development activities. The vegetable garden is not only a learning tool : it is a powerful space for developing social relations, that promotes the development of essential socio-emotional skills, such as perseverance, empathy, cooperation and emotion management, which play a decisive role in the sustainable adoption of environmental practices and the emergence of a deep ecological awareness. It is important to design activities in the vegetable garden that are explicitly geared towards developing these socioemotional skills. Strengthening these skills is a major lever for guiding children towards sustainable change, both in their personal development and in their commitment to the environment.

Involve all stakeholders in the educational community. The vegetable garden can become a unifying force that extends far beyond the school. To encourage this dynamic, it would be a good idea to establish regular times when the garden is open to the community – participatory days, collective projects, intergenerational workshops, visits from environmental associations or municipal gardeners. These events strengthen the link between the school and its environment, lighten the workload for teachers and enrich the educational experience for pupils. By anchoring the vegetable garden in local life, the school turns it into a genuine joint project that is sustainable and supported by all stakeholders.

1 Languages for thinking and communicating, methods and tools for learning, personal and civic education, natural and technical systems, and representations of the world and human activity. © Mélanie Ogloza / WWF-France 18

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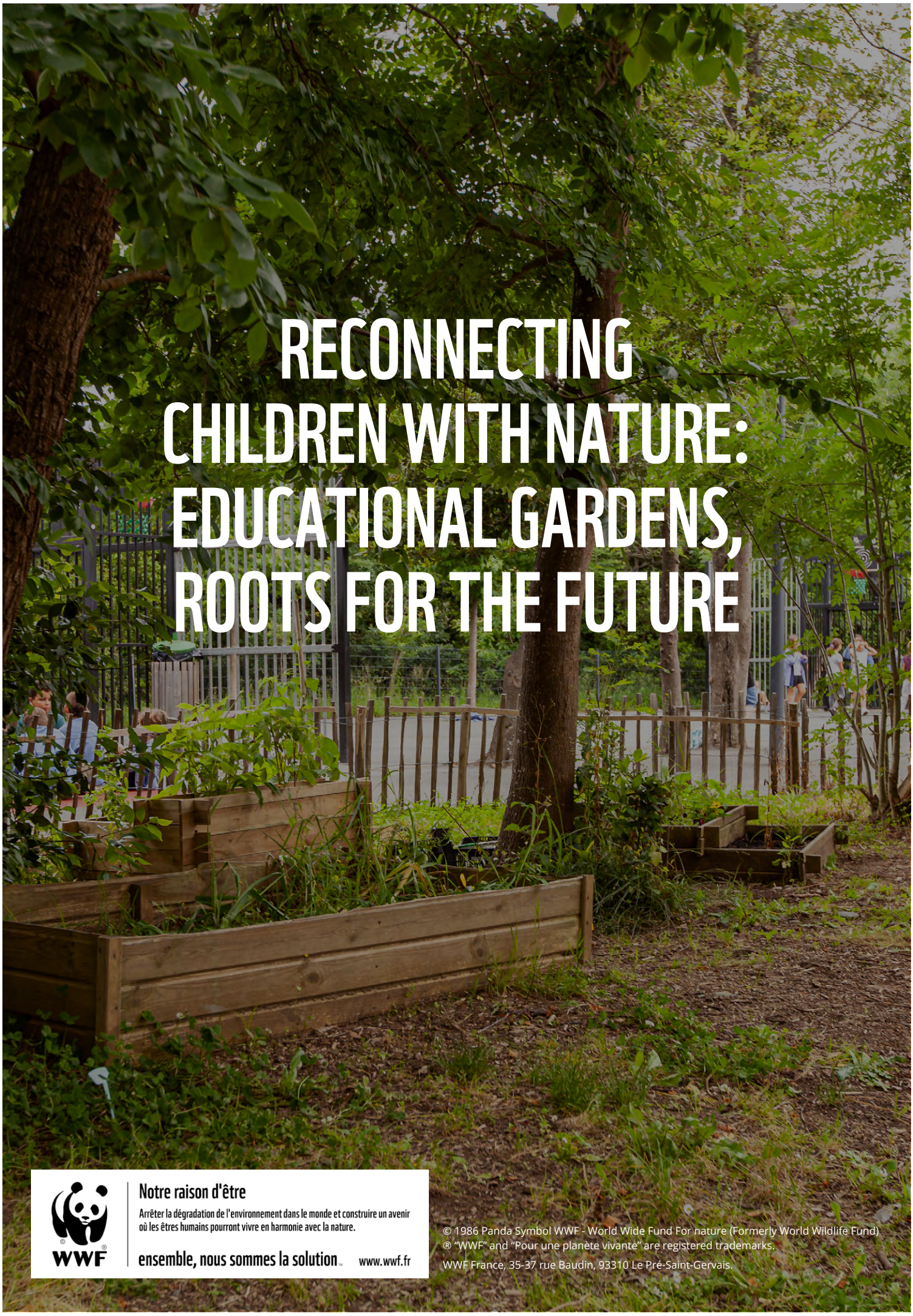

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