



Changing Together

Eco-Schools 1994-2019



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Changing Together was developed by the Foundation for Environmental Education on the occasion of the 25th Anniversary of the Eco-Schools programme.

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FEE is an NGO and a non-profit umbrella organisation spread all over the world. FEE is registered as a charity in England and has member organisations based in 77 countries, who are all locally implementing a number of FEE's five programmes; Blue Flag, Eco-Schools, Green Key, Learning about Forests (LEAF) and Young Reporters for the Environment (YRE). The Eco-Schools programme was developed in 1994 with the aim of creating active citizens who are equipped to handle future challenges through action-based student-led Environmental Education.

Cover picture: Provided by Keep Northern Ireland Beautiful

(Left to Right)

Carol Forster, Head of Operations, Keep Northern Ireland Beautiful

Catherine Rutledge, Nursery Assistant, Downpatrick Nursery School

Lorna Burns, Principal, Downpatrick Nursery School

Alan Rutledge, Former Student, Downpatrick Nursery School, son of Catherine Rutledge

Kelsie Erskine, first Principal, Downpatrick Nursery School

Eboni Rutledge, Student, Downpatrick Nursery School, daughter of Alan Rutledge

Eboni Rutledge is holding a picture of her father's class during the first Green Flag award ceremony in Northern Ireland in 1994. The cover picture of the publication was taken on the occasion of the 10th Green Flag award celebration at Downpatrick Nursery School, Northern Ireland.

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LAURA S. HICKEY, FEE BOARD MEMBER

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Started in 1994, the Eco-Schools programme has grown to be the largest school programme focused on Environmental Education and Education for Sustainable Development. It is a shining light into how the world can become a better place for today's and future generations, and we are beholden to our national operators and the more than 59,000 participating schools around the world who are the heartbeat of the Eco-Schools programme.



Students interacting with Alexander Leicht, Chief, Section of ESD, Education Sector, UNESCO

Foreword

UNESCO - 25 YEARS OF QUALITY EDUCATION FOR CHANGE



Education for Sustainable Development (ESD) aims to empower everyone with the knowledge, skills, values and attitudes that are needed to contribute to sustainable development, locally and globally. In light of the challenges that the world is facing, ESD must be considered as a central element of what quality education means today. Moreover, ESD serves as an important instrument to achieve the Sustainable Development Goals, which were adopted by the global community as an ambitious roadmap for transformational change.

The Eco-Schools programme of the Foundation for Environmental Education makes a major contribution to ESD across the world. Eco-Schools integrate environmental issues into every aspect of the school life and involve all concerned stakeholders along the way. Eco-Schools promote learning that is hands-on and that ultimately results in beneficial actions in the community. In this way, Eco-Schools are spearheading the 'whole-school approach' to ESD, where students learn what they live and live what they learn.

UNESCO, as the lead UN agency for ESD, has been pleased to be able to work closely with the Foundation for Environmental Education and its Eco-Schools programme for many years. Eco-Schools are a strong and credible partner for UNESCO. They work on the ground, every day, to make ESD a reality for students worldwide. With its over 59,000 schools in 68 countries, and a strong network of National Operators, the Eco-Schools programme provides quality ESD at a large scale. For five years, the Foundation of Environmental Education and its Eco-Schools programme have been one of the most active Key Partners of UNESCO's Global Action Programme on ESD (2015-2019).

At UNESCO, we look forward to continue working with the Eco-Schools programme as we move beyond the Global Action Programme into a new ESD framework that will strive to accelerate the transformational change that is needed across the world to achieve the Sustainable Development Goals.

Alexander Leicht, Chief, Section of ESD, Education Sector, UNESCO



UN ENVIRONMENT



Eco-Schools is Education for Sustainable Development in action. It is a well-structured programme with clear steps to get involved and with 25 years of experience, success is certain. It is a meeting point for youth worldwide driven by aspiration, commitment and actions towards a sustainable environment. Its clear structure and consistency in activities have not only made Eco-Schools a well-established institution in its 25 years long-standing history, but it has also made it sustainable in itself. It constitutes a great example that we, at UN Environment, hope others will follow. For UN Environment, the Eco-Schools programme is an entry point to disseminate messages and information to the largest global network of schools in the world. At UN Environment we hope that the programme will continue to accelerate working with the communities that surround the schools, with the Sustainable Development Goals and with aligning advocacy at the national level.

Mari Nishimura, UN Environment Associate Programme Management Officer



MARS WRIGLEY FOUNDATION



The Mars Wrigley Foundation is proud to support the Eco-Schools Litter Less Campaign because it allows students to contextualise the issue of litter and waste and make it relevant in their lives. By giving students the opportunity to learn more about the various challenges and identify solutions, they become leaders in protecting our environment. And their energy and ingenuity benefit communities around the world. Eco-Schools has broadened my view on what is possible when addressing the challenges of litter and waste. There are many problems and there are also many solutions. The students are truly inspirational and set a great example for everyone to follow.

Anne Vela-Wagner, Mars Wrigley Foundation Executive Director



Foundation for Environmental Education (FEE) is an umbrella organisation of NGOs working nationally in their local communities. Eco-Schools, as an educational programme drives excellence through assessment of processes. It fits very closely with FEE's vision and mission as well as the way FEE engages through its programmes.

Eco-Schools is a large programme and one through which FEE as an organisation is recognised internationally. When one looks at the size of the Eco-Schools programme, the number of schools involved, the number of countries that are running it and the fact that it is growing so progressively, it is evident that its Seven-Step methodology, clear whole institutional approach towards Education for Sustainable Development (ESD) and its flexibility in terms of local context (culture, economic and environmental) is what makes the programme appealing and successful on such a large and wide scale. Generally speaking, many formal education systems around the world, unfortunately, see ESD as an extracurricular activity, or a choice in the midst of the fundamental challenges before the governments in terms of access, retention and quality that need attention. Even though in some countries there are strong connections between the programme and the Ministries of Education, in general, it is the Ministries of Environment and civil societies that are involved and committed to champion the importance of education in bringing about positive sustainable change.

We are challenged by the need to look at the workplace of the future, as it represents the place where we create problems and solutions for future generations. We need to ask ourselves, how can we get children and youth to develop skills that will help them be aware, productive and skilful in the fields we need to develop for a sustainable future. We have to ask what kind of society we want to have and what kind of challenges we will be facing in 10, 15, 20 or 30 years' time. We believe that the Eco-Schools programme is a way to create that dialogue within these structures to recognise the fact that sustainability will be a key factor in years to come and that the expectation of reaching sustainability should be reflected in the educational systems. When you have such a large number of schools, teachers, students, parents and educational systems involved, then you have increased impact addressing these challenges at all levels. This is why Eco-Schools is such an important programme for FEE. We work with other sectors such as the tourism sector with our Blue Flag or Green Key programmes, but we need to make sure we create the hotel managers of the future or the next civil servants in municipalities that have an understanding of the need for sustainability. We need to have a future working force, political and business leadership and an electoral base that is educated and aware of the importance of sustainability in the decisions we all make. Eco-Schools is a very good programme to try and achieve this.

...the Eco-Schools programme is a way to create that dialogue within these structures to recognise the fact that sustainability will be a key factor in years to come...

The long term strategy should include educational reform. We need to think about how we actually change the way educational systems perceive themselves and what is their role, vision and mission. We need to ask ourselves if the systems we have in place today are succeeding in forming adults that understand, value and are committed to the sustainable world we aspire for. The short term goal, on the other hand, should be to adapt ESD to the current curricula and current systems. Many of the challenges that we are facing at the moment are so urgent that we cannot only invest in the long term reconstruction of all our systems. We just don't have the time. We urgently need to invest time, effort and resources in developing and adapting our ESD materials to fit different disciplines and in creating tools that do not interfere with the system's official objectives, but actually support their work, save time and still communicate and teach the sustainable development message loud and clear. We need to show that ESD can be embedded in STEM, language and social studies without marginalising the academic required results. We need to show how a programme like Eco-Schools helps municipalities save funds in energy spending, reduce costs associated with vandalism, or how Eco-Schools Eco Committees allow for the inclusion of students with special needs into the daily school life.

This approach should include impact measurements of awareness, wellbeing and the relationship between ESD and academic results. It is hard to measure these qualitative aspects compared to measuring how many litres of water or kWh of electricity the school has saved - but we have to do both. As we move forward, we, as a network of organisations will continue to work hard so we can affect these outcomes. We need and we can showcase the aspects of achievement of Quality Education through the Eco-Schools. And we can do this because Eco-Schools simply works!

Daniel Schaffer, FEE CEO

LESLEY JONES, FEE PRESIDENT

Eco-Schools is a remarkable programme. It currently reaches out to 20 million students, but it has the potential to reach every student in every school, in every country across the globe.

One of the most important responsibilities we have is to engage and empower young people, supporting them to understand and take positive action to tackle the serious environmental issues that face our world.

Eco-Schools is such a powerful programme because it is student-led. We are not telling young people what to do, but supporting them to do it for themselves and bringing the adults with them. Eco-Schools is about more than academic learning and carrying out projects in schools. The learning is taken into the home and the wider community, encouraging and persuading people to do the right thing to protect our precious environment.

I have asked some of our members – significant organisations that run other Environmental Education (EE) programmes in their own countries, why they joined FEE to take the opportunity to run Eco-Schools. One reason is, of course, the important international dimension, but equally important is the structured framework of the Seven Steps. Every school will have an Eco Committee, be carrying out environmental reviews, learning and taking action and spreading the message out to the wider community. But the themes followed and the actions taken will be different reflecting the circumstances, culture and challenges of each country. FEE gives NGOs the opportunity to become members of an international organisation, whilst running programmes at the national level. This ensures quality and consistency, but also a diversity of approaches. There are tremendous opportunities to learn from one another and share ideas.

We need to do more to communicate our messages. We must let the world know, from the highest level of government and business to local people in villages and towns across the globe, about the positive impact Eco-Schools can have – we need to tell our story – shout it from the rooftops!

Since I joined the FEE Board in 2012, I have been fortunate to visit many Eco-Schools around the world, being inspired and humbled every time by the enthusiasm and determination of students and teachers. So many memories, but one that stays in my mind is a visit to a school in India, where I stood before hundreds of expectant faces sitting in an open courtyard and told them about Eco-Schools. When I explained they would be joining a family of 20 million students in 51,000 schools across the globe, they cheered and clapped.

That is the power of Eco-Schools – bringing people together with a united approach and a belief that it is not too late to ensure a bright future for ourselves, our children and our planet.

Lesley Jones, FEE President

Preface

PRAMOD KUMAR SHARMA, FEE SENIOR DIRECTOR OF EDUCATION

For a quarter of a century, the Eco-Schools programme has been engaging young people in taking positive actions that transform their lives. From its modest beginnings in a few European countries, the programme has expanded to effect change in some 59,000 schools in 68 countries across the globe. The impact of the programme is well-recognised and respected by stakeholders that range from UN agencies to the communities in which a school is ingrained. Anne Vela-Wagner from Mars Wrigley Foundation, a long-standing partner of Eco-Schools, was moved to the realisation that the programme has broadened her view and made her appreciate that, while there are many problems, there are also many solutions. Eco-Schools students are truly inspirational in what they do and set a great example for everyone to follow. Recognised by UNESCO and UN Environment as a world-leader within the fields of Environmental Education (EE) and Education for Sustainable Development (ESD), the Eco-Schools programme is not just an economic model to lower costs, it is also a humanistic model that places the students and stakeholders at the centre of a process of change towards sustainability, connecting them to the real issues in their communities.

The impact of the programme is wonderfully reflected by Nojuel;



“It changed my perspective on things that I once turned a blind eye to and it widened my view, enabling me to think outside of the box rather than just stay in my comfort zone. The Eco-Schools programme taught me that despite having different beliefs, different dreams, different races and just being different in general, we humans are still living on ONE planet with ONE mother nature. Throughout my four years of being in this programme, I also realised that changes are possible and it is up to us to help make our world a better place so that our future generations could have a chance to live in a world filled with the wonders of mother nature.”

Nojuel JC Soluku, Student, SM St Michael Penampang, Malaysia



We felt that the milestone of the 25th year of the Eco-Schools programme is an opportunity to reflect and tell our story. A story of change that has impacted everyone who has come across the programme where every interaction has helped develop the programme as we know it today.

This realisation gave rise to what seemed like the most apt title for the publication:

“Changing Together!”

Eco-Schools, like any other programme of the Foundation for Environmental Education (FEE), draws its strength from the members and National Operators who lead it at the country level. The celebration of the success of the programme is due to the hard work that they have put in over the years. The Dream Team of National Operators meets once a year to discuss developments, share their notes and plan for the future. The selfless attitude of openly sharing resources and experiences for free has ensured that the learning curve is easier and faster for a new country that joins the programme or for a new National Operator who takes on the mantle of leading the programme in a country. This process is made even easier through technology and the emergence of social media. Experience has shown that the hands-on approach of National Operators has been a vital contributing factor to the success of the programme.

This publication is divided into two sections. The first section tells the story of how Eco-Schools was conceptualised, its history and evolution, and also describes the famous “Seven Steps” – one of the most recognised aspects of the programme. The Seven-Step process is the basic framework that guides an Eco-School to plan and implement the learning journey. The steps are intended to be flexible enough to accommodate any school context and environmental theme. The Seven-Step methodology has stood the test of time as an effective pedagogy across different contexts of educational systems, types of schools, cultural and socio-economic conditions. The nature of each of the Seven Steps and the order in which they are implemented allows for incremental change in sustainability literacy through active learning, as the actions of students improve the environmental performance of the whole institution, starting first with their behaviour. This robust pedagogical process empowers students with the drive and confidence to continue to have a positive impact in their bid to make the world a better place to live in.

The first section also includes a chapter with a literature review of more than 68 research reports from multiple countries. The results have been synthesised and summarised under four major categories, Academic and Skills Development Changes, Environmental Impact Changes, Behaviour/Attitudinal Change and Whole School Sustainability Programme Approach with selected country case studies highlighted. The second section tells the story of the development of the programme in different member countries. The presentations detail basic information about each country, the status of EE in terms of national legislation, K-12 curriculum and professional development. The different stages of evolution and maturity which the programme is at in different countries is illustrated in the reflections of different stakeholders.

We will be analysing the data we have collected in the process of developing this publication and publish synthesis papers to support the development of the field of EE and ESD in the coming months. A quick analysis of the data and experiences shows that the programme draws its strength from how it engages young people and how their work draws others to engage in positive action. There is evidence that EE/ESD is shifting from being an add-on subject to being an integrated part of mainstream curricula.

The Eco-Schools programme is a testament of a good EE and ESD development programme that has been able to demonstrate its effectiveness in different contexts. The strength comes from the way it was conceptualised – a process of child-centred and child-lead pedagogy, symbolised by Seven Steps that can be adapted and contextualised by teachers around the world. The process ensured making a positive difference every day along with a focus on long term impact. Over the years, the experiences have been codified into a handbook, which is still more of a guide with the flexibility to make the programme the schools’ own without compromising essential values and characteristics. It can link well to the Curriculum for Excellence and its international dimension is highly valued.

This publication is dedicated to the teachers who are at the forefront of providing children with the most stimulating experiences possible: it is they who have built this programme. Though their role is envisaged as facilitators, it takes many hours to glean the necessary experience owing to all the challenges that our education systems are faced with. It is their belief and commitment that has created the Eco-Schools we see today. As part of their master thesis, two students from Malmö University, Catarina Alves and Felipe Araya, interviewed Eco-Schools teachers from eight different countries and identified them as conscious people, people with a particular spirit, people with environmental and social awareness, people worried and engaged with making the future better by taking concrete actions. Their concerns inspired them to develop new pedagogical ways to transmit awareness and knowledge to their pupils, enhancing the efficiency of their job, spending their free time and weekends researching, preparing materials and guiding students to lead their Eco-Schools projects. Being part of a network sustains their strength to keep working or even engage new people. As one teacher said: “teachers get motivated by other teachers”. The country chapters acknowledge that they not only learnt a great deal but also experienced a change in the level of satisfaction they felt in seeing how motivated their students are with their Eco-Schools projects.

Diversity is one of the strengths of the Eco-Schools programme. For the school staff, the opportunity to develop collaborations and friendships with other schools is highly valued as all the good practices and ideas can be pooled together. Another important aspect is that the Eco-Schools programme has been giving teachers a chance to participate in many local and international projects where they can exercise their creativity and learn about examples of best practice from elsewhere.

The Eco-Schools programme is a testament of a good EE and ESD development programme that has been able to demonstrate its effectiveness in different contexts.

Hard work, collaborative actions, a resilient attitude and a consistent commitment to promoting sustainable actions in schools and communities are keywords that can be found in the statements of a multitude of different stakeholders throughout the world. It is widely acknowledged that the programme has developed skills and values through its educational model that also help realise the importance of democratic participation, ethics reflected in caring for one another, a shared vision of hope, individual and collective empowerment and resilience.

Lesley Jones, FEE President, is convinced that the power of Eco-Schools is its ability to bring people together with a united approach and a belief that it is not too late to ensure a bright future for ourselves, our children and our planet. The stakeholders feel privileged to have been involved in the programme which has provided opportunities to bring fresh and dynamic initiatives to complement the traditional pedagogical approaches in schools. The programme has infused curriculum with a meaningful purpose for the wellbeing of our planet. The success of the programme also put a certain pressure on the community as a whole to think more about sustainability. In many countries, it was parents or schools that pushed the introduction of the programme.

The thing that sets the Eco-Schools programme apart from other EE programmes is the framework and the fact that it is international, allowing Eco-Schools from different countries to collaborate at a global level. As we use a bottom-up approach, schools are aware that their daily actions that happen on a small local level in the school are being carried out every day in the numerous Eco-Schools around the world. With the small, local actions, the schools are in fact continuously participating in a large, global movement. The reflections in country reports also highlight the fact that, as education is changing globally and becoming hands-on, the schools that are involved in the Eco-Schools programme find it easier to adapt and understand the new goals and methods as they follow very similar principles: collaboration, teamwork, learning by doing, Project-Based Learning, problem-solving, critical thinking, real-world experiences etc.

We have reflected and identified various areas of future developments in the programme that need to be prioritised. One major gap is a lack of longitudinal studies to share the impact the programme is making to show how Eco-Schools participants maintain their enthusiasm as they grow older and leave school. We offer collaboration in such research along with various other questions being asked. The programme also has to keep pace with the changes that are happening in education itself, particularly in the area of using the developments of Information Technology and harness its potential.

Eco-Schools is the largest global school network built with an investment of 25 years that can support education and the Agenda 2030.

The other key thrust area would be regional cooperation amongst members. We already have two networks that have been initiated and we are excited by the possibilities to initiate large learning and sharing projects for greater impact.

We are now in the process of development of our next strategic plan and have identified the global challenges of climate change, pollution - especially plastics related issues - and biodiversity loss as priority areas of action. We look at these as integrative themes that provide an opportunity to break away from the silos of different environmental issues. In Eco-Schools, the Seven Steps ensure that we have a children-driven process and the themes are contextualised and spread across K-12 years. We need to identify the things that have worked, and not get distracted with the pressure of finding new and innovative projects. This is often a big distraction for education as the need is to scale up what is working, instead of spending the valuable resources thinly, often on reinventing the wheel. We have to liaise better with the Ministries of Education taking the driver seat instead of the agenda being driven by other various ministries. This will help in having real integration in the curriculum for broader literacy outcomes. As Daniel Schaffer, FEE CEO, highlights in his foreword, the long term strategy should include educational reform. We need to think about how we actually change the way educational systems perceive themselves and what is their role, vision and mission.

We are committed to reaching every child with ESD and this requires resources and collaboration. We invite all stakeholders to contribute to scaling up the programme. Eco-Schools is the largest global school network built with an investment of 25 years that can support education and the Agenda 2030 - the global agreement on the Sustainable Development Goals that provides us with an exciting opportunity to engage 20 million students being supported by 1.3 million teachers. The possibilities are immense and being part of this transformative process is exciting!

Pramod Kumar Sharma
FEE Senior Director of Education



Eco-Schools Scotland

The History of Eco-Schools

NICOLE ANDREOU, INTERNATIONAL ECO-SCHOOLS COORDINATOR

In 2019, Eco-Schools celebrates 25 years of excellence in the field of Environmental Education (EE) and Education for Sustainable Development (ESD). It is, to date, the largest school network globally, implemented in over 68 countries, involving over 59,000 schools that engage 20 million students and 1.3 million teachers.

The Eco-Schools programme is contributing to ensuring that the environment is recognised as a critical element – the most important public good on which 'Quality of Life' is dependent. Since 1994, we have, all together, strived to make the programme a globally well-established vehicle for EE and ESD through deep experiential learning to prepare generations of active citizens who take the public responsibility to not only conserve the environment but also through their handprint reverse the challenges before humanity. The 25th Anniversary Declaration of Eco-Schools pledges to reach every child with ESD as an important Human Right.

The Sustainable Development Goals (SDGs) provide us with a vision of our common future, a framework and a timeframe; they set before us an agenda to engage with sustainable living for everyone. With an engaged sustainability movement, quality teacher training and setting and improving our standards, we hope to contribute to combatting the most pressing challenges of our time.

Our roots

The Foundation for Environmental Education (FEE) is a non-profit NGO, founded in 1981 in Leiden, Netherlands. Starting with Blue Flag in 1987, an eco-label for beaches, marinas and sustainable boating tourism operators, FEE saw the need to address school-based EE. In 1994, Eco-Schools and Young Reporters for the Environment (YRE) were launched. While YRE focuses on youth solution-based research of environmental and social issues through investigative journalism, FEE's 1996 programme, Learning about Forests (LEAF) promotes instilling our connection with the outdoors through learning. Later, in 2003, FEE adopted its fifth programme, Green Key, an accommodation eco-label within sustainable tourism.

Eco-Schools was a concept developed in 1992 as a response to the UN Conference on Environment and Development in Rio de Janeiro. The document coming out of the Rio conference suggested that youth-led environmental protection and development were key (United Nations, 1992). Eco-Schools then became a necessity - a programme initially developed by the Danish collaboration of an NGO and a municipality and extended to the world to promote student and teacher engagement in environmental and sustainability education that is a result of mobilisation. The programme was first piloted in Denmark in 1992 and expanded to other countries in Europe in 1994 - Germany, Greece and the United Kingdom.

When country member organisations joined Eco-Schools

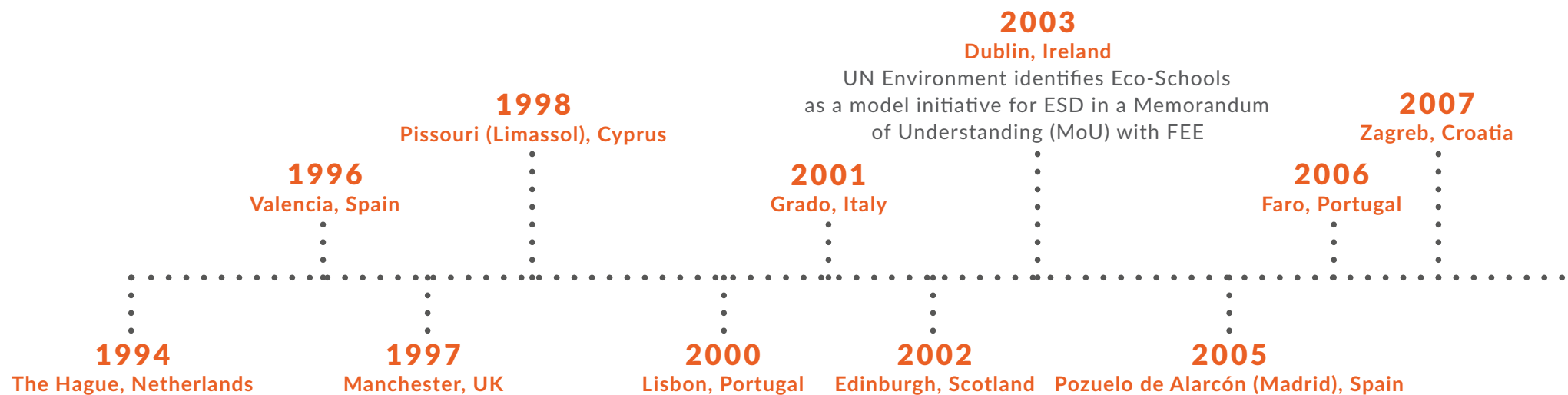
Launch Year	Country
1992	Denmark (pilot in 1992, launch in 1994)
1994	France, Germany, Northern Ireland, Scotland, Wales
1995	England, Greece, Turkey
1996	Bulgaria, Portugal, Slovenia, Spain, Sweden
1997	Ireland
1998	Croatia, Cyprus, Finland, Italy, Norway
1999	Romania
2001	Iceland
2002	Malta, Russia
2003	Kenya, Latvia, Netherlands, South Africa
2004	Lithuania, Slovakia
2005	Czech Republic
2006	Kazakhstan, Morocco
2007	North Macedonia
2008	Belgium, Brazil, Dominican Republic, Japan
2009	Bahamas, China, Jordan, Uganda, USA
2010	Iran
2011	Malaysia, Mongolia
2012	Serbia, UAE
2013	Singapore
2014	Australia, Bermuda, Ghana, India, Poland
2015	Tanzania
2016	Estonia, Montenegro, Switzerland, Thailand, Ukraine, US Virgin Islands
2017	Comoros, Madagascar, Mauritius, South Korea, Zanzibar
2018	Qatar, Chile
2019	Bosnia & Herzegovina, Canada

National Operators Meetings

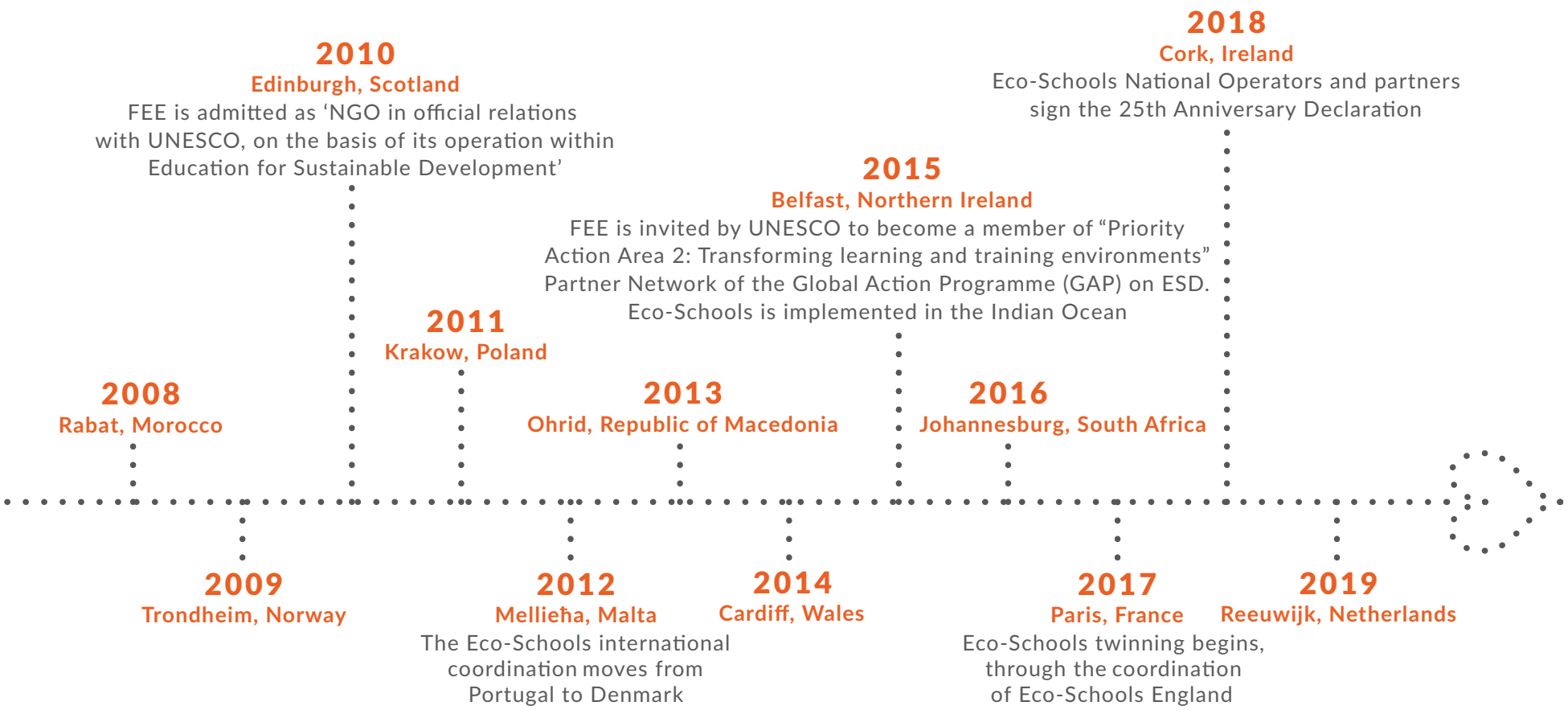
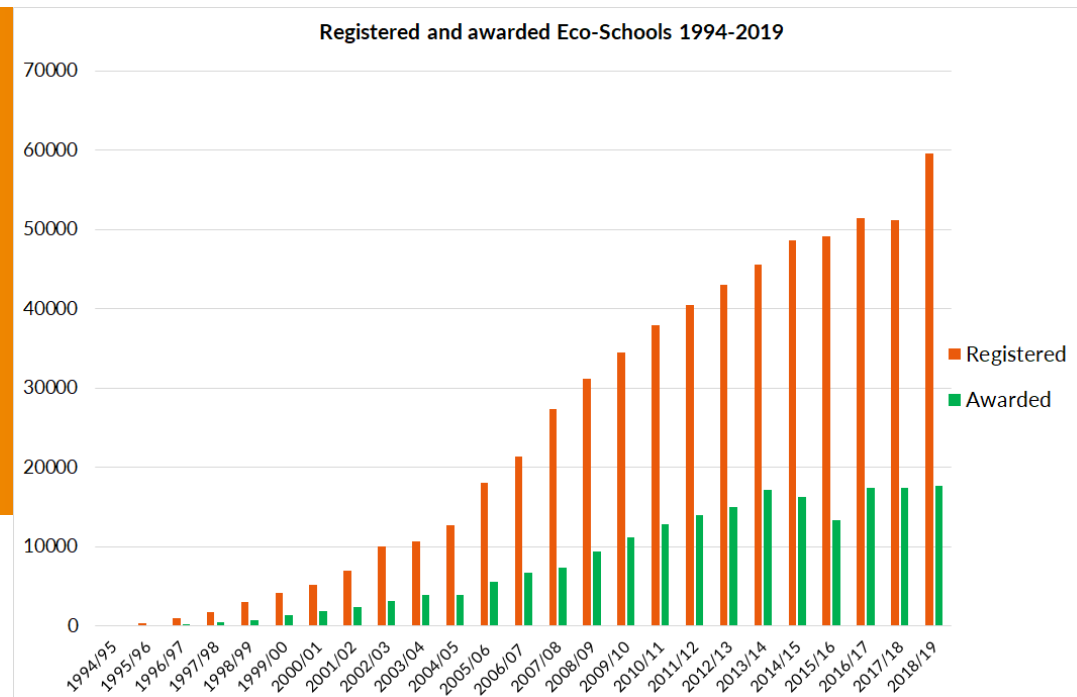
A National Operators Meeting (NOM), is a platform for all Eco-Schools operators globally to come together and discuss development, strategic planning, undergo professional development training and share their experiences with the implementation of their respective national Eco-Schools programmes.

Country member organisations take up the hosting and administrative coordination of each meeting, bringing together local partners, local authorities and participating schools to share their learning journey with their global colleagues.

Year & Places NOMs where held:



The growth of registered and awarded Eco-Schools



ECO-SCHOOLS 25TH ANNIVERSARY DECLARATION

We, the National Operators of the FEE Eco-Schools Programme participating in the National Operators Meeting gathered here in Cork, Ireland in November 2018 at the launch of its 25th year are:

Determined to

- Ensure the Eco-Schools programme continues to develop and grow in every country around the world, and helps them to address the Sustainable Development Goals through positive actions
- Ensure the programme continues to develop in all educational settings, (at the primary, secondary as well as at the tertiary level as the Eco-Campus programme, and also to develop with the transition to, and needs of, life-long learning)
- Ensure that every National Operator has the support and mentorship to make these happen

We Recognise That

- Climate change and associated climate breakdown is the biggest existential crisis for all humanity
- The over-exploitation of our land resources, seas, and particularly plastic pollution, is in itself at a crisis point
- The loss of biodiversity is at mass extinction levels and is severely threatening the ecosystem services that support life on earth
- The environmental issues are closely linked to the social, economic and cultural aspects of our society

We Acknowledge That

- Education, and particularly the Eco-Schools programme, is a key hope to meeting, mitigating and adapting to these challenges as well as many others
- The Sustainable Development Goals provide an excellent framework and context to this education
- It is never too late to learn and affect positive change

We Reaffirm Our Commitment To

- Supporting and mentoring all educators everywhere to undertake the Eco-Schools programme
- Working with any and all applicable stakeholders to increase the reach and impact of the Eco-Schools programme at a local, regional, national, and global level
- Support each other as National Operators through the sharing of experiences, research, exchange of best practices, evidence of educational outcomes, and peer-to-peer learning

We Are Convinced That

- The Eco-Schools programme has a meaningful and sustained impact, both in Quality Education as well as environmental engagement and outcomes
- Due to its bespoke structure and nature, the Eco-Schools programme allows for and delivers this impact in every setting and context
- The Eco-Schools programme plays an essential role in developing 21st century skills

The Eco-Schools programme is one of the most essential elements of a sustainable future for all

So Declared, This 22nd Day of November 2018

Eco-Schools

(The page is surrounded by numerous handwritten signatures and names in various colors, including: Ricardo Oebling IAR BRAZIL, Sri Tharmudu Green Growth Asia Foundation Malaysia, ALG K SANJAYA EAST, SEKISIA, Dorcas Atieno KPEE Kenya, Clare McDonald Spain, Edith Bajurigi Cecobi Uganda, Rasalbatambona Hony, YORINA KANG SOUTH KOREA, Dennis Jacobs CORNWALL, Belgium BRUSSELS, Stephanie Boney Tamarit France, Jan Smrcka TERESA CZECH REPUBLIC, Tráca Di Fáilte KNIIB, Devinda Morris Scaerock Bermuda, Kim Montmarquet NWF - USA, Maura Linnhe FEE Ireland, Jaap Joen Jemshoren NL, Boris Gordonov FEE Bulgaria, Annette Hainy Schloss MONTENEGRO, Marina Slobodanovic MONTENEGRO, Mathi Yalani WWT-Malaysia, Catha Gorman Northern Ireland (KNIIB), Lolly FEE, Vond ELISA, Lisa O'Grady Ireland, Kristina Bjela Sweden, Linda Van Rosse Belgium Flandres, Gregor Slovenia, Theodora Polyzoidou HSPN Greece, John Lweeney A.T. MAAGREDA (PROZOUVAL), YING FENG SEEC CHINA, Sue Christie KNIIB, J. Wright DONOS KBT, Yulia Himmova SEEC, Johleen Koh NWF-MALAYSIA, Dohra FEE, Edin Hamay AN-TAIWEI, Jay M'Gonigal FEE-LEAK, and others.)



The story of the Eco-Schools logo

(adapted from National Wildlife Federation, 2017)

“When the programme was launched in 1994, it ran a logo competition for Eco-Schools, for an image that would visualise environmental school education and student involvement. The winning entry formed today’s logo with people as the centre of the programme, who are responsible for greening the future. This is symbolised by the flowers growing from the central person’s arms. The flowers symbolise both the environment that shelters and protects humans, as well as the knowledge gained by students who participate in the programme and whose actions help develop values, attitudes and behaviour towards the environment.

The book in the logo represents schools and knowledge, with two different pages; the blue page represents the past, the history that one needs to familiarise with and the problems in society already created and need to be dealt with. The white page represents the future, a blank page to be filled with new knowledge and innovative experiences.”

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United Nations (1992). *Agenda 21*

The Evolution of Eco-Schools

JAN ERIKSEN, FEE PRESIDENT 2004-2016

Jan Eriksen is a founding member of the Foundation for Environmental Education. He served as the FFE Vice President in 1996 – 2004, as the President of FEE in 2004 – 2016. To this day, he is an Honorary Member of FEE.

He is chairing his second term as head of the Council of Wildlife Management for which he was appointed by the Danish Minister of the Environment and he is the Deputy Chair of the Board of the Danish National Park 'Skjoldungernes Land'.

Jan Eriksen has more than 50 years of experience in the world of NGOs, where he has had both political and administrative positions. He was educated as a teacher in 1976 and his main subjects were biology and geography. He is field biologist and a birdwatcher and has participated in radio and television broadcasts and written educational materials and books concerning these fields.

Jan Eriksen's travel experiences have included contacts with NGOs and authorities around most of the world. During his presidency of FEE, Memorandums of Understanding have been established between the organisation and UNESCO, UN Environment, UNWTO and EAUC.

A conversation with Jan Eriksen

The origins of Environmental Education (EE) and Sustainable Development (SD)

The story of Eco-Schools is also the story about how the whole world works with the environment. If you look into history, I think we all have to realise that the environment has been on the agenda for a very very short time.

The first environmental summit took place in Stockholm in 1972, and it was defined in the final resolution of this same summit that there should be more Environmental Education (EE) - if we want the population of the globe to behave in a better way, education is key. To take that up, the Tbilisi conference of 1977 was organised with one headline: Environmental Education.

Out of the '72 and '77 conferences, a long debate started on what materials we use, resource scarcity and so on. It made a lot of people think about it and out of that process came the concept of sustainable development. This was actually a vision; yes, there are limits, but if we do things in an intelligent way building on the three pillars of sustainable development, we can actually still have growth and save a lot at the same time. Therefore, in 1986 we had the presentation on sustainable development, which in my opinion is the foundation also for today's Sustainable Development Goals (SDGs).

The origin of the Foundation for Environmental Education (FEE)

At the Tbilisi conference, the Council of Europe invited EE experts from Europe to create an EE taskforce under the Council of Europe. This group then decided to stay together after the Tbilisi conference and it later formed the Foundation for Environmental Education in 1981. So, the conferences were the starting point for FEE as well.

In 1986, FEE France, now called Teragir, came up with the idea of the Blue Flag programme. The French came with a programme that was focused a lot more on activism. The Blue Flag became a symbol of changing attitudes in environmental activism: from using the stick with polluters to using the carrot – the Blue Flag! That was a shift of paradigm in the environmental way of working.

At this point, I think we realised that we were much better as a programme organisation, but for the first seven years, there were no other programmes. We talked about it, but none, in fact, came to the table. In 1992, the Danish Outdoor Council (DOC) got two applications from two Danish organisations. One of the experts that were in Tbilisi was also a board member of the DOC and was also one of the founders of FEE. He had seen with some surprise how the Blue Flag developed successfully. He and his staff in the educational department of the Municipality of Copenhagen came up with the idea of making Copenhagen schools green. At the same time, a small activist organisation called Coast Watch, operating from a little island called Fanø on the West coast of Denmark had the same kind of idea. We could not support them both, as they wanted to do the same thing. So, we invited the two groups to my office and said: “We can support both of you for one project but then you have to cooperate, and we have one request: if this programme is successful we would like to coordinate it internationally through the DOC”. In the end, they accepted it!

The Evolution of FEE

We developed things when there was a need for it. Some really good researchers have asked me, “why didn’t you do this and that from a research point of view?” But it was never on our minds to do this or that because for us it was about survival in the best possible way. We used to have all the programmes organised in different countries. The three youngest programmes were organised in the countries where they originated. The Blue Flag was moved from France to the Netherlands and later to Denmark with the presidency. Because the Blue Flag was already in Denmark when Eco-Schools was taken on, the administration moved to Portugal.

We divided all the responsibility. Not only because it was clever politically, but this was also a question about getting things to run financially. As the responsibility was divided between multiple organisations they could all try and get financial support from their respective ministries and governments.

In 2009, Portugal decided to drop the international coordination of Eco-Schools. At that time, I was President in my second term and we did what we normally did then: we made a call for tender. But Eco-Schools had become quite a big success and it would be an enormous burden for any country to take it up. After getting a single application we had to ask ourselves: What do we do? Out of that then came the idea that the time had come to bring things together. We met in Turkey, where I shared my thoughts and, even though most of the board members were very sceptical, it did not take more than a few hours before the answer was clear: we had become an international organisation and we had to work towards a unification of the secretariat. I had to write a letter to the members and explain what we had decided in Turkey and that we at the General Assembly in China the following summer would come up with a new administrative structure. I also wrote that all those that were hesitant amongst the members should write to me so we could have an open discussion. I got about twenty emails and all those emails had to go out to everyone. This had to be a completely 100% open process.

In China six months later, it was a completely unanimous decision by all the members of FEE that within two years’ time we should be working towards the unification of the secretariat. And we had a good General Assembly here in Copenhagen in 2014 and showed the new office.

We made the right move thanks to Portugal’s withdrawal and that is again something we did when it was needed, and we found good solutions.

Progression in the financial structure

We introduced progression into our membership fees and our reimbursement of travel expenses, so that, depending on the GDP, wealthier countries pay more and less wealthy pay less. And, when it comes to reimbursement it works the other way around. The broadest shoulders have to carry the biggest burdens and that has been kept in the organisation as a way to think socially.

I know that we have countries in this world that are in such state that even with the reduced costs cannot afford to become a member. And if an organisation should get into severe financial problems we also have a helping hand due to the contingency fund, so that we can help them for a short period of time. This is also something that has contributed to the success of the organisation, an expression of solidarity within the organisation that goes hand in hand with democracy.

Voluntarism and engagement

Two words that go hand in hand are voluntarism and engagement. Because you do not become a volunteer unless you are somehow engaged. I think the engaged way that FEE works is a great part of the success. In my many years in the organisation, I have met this engagement in a vast majority of the people no matter their position in FEE.

In a way, EE can be seen in two ways. On one hand, it is scientific work with the environment and on the other it is humanistic educational work with people. To work in an interdisciplinary way and bridge those two things that creates an engagement – that is extraordinary. You are together with people working for a better world.

Looking back over the last 25 years, what do you see as the one greatest contribution of the Eco-Schools programme?

One could definitely mirror Eco-Schools into most of the SDGs. The most important to me is probably the equity between girl and boy, men and women. If I look at the future, I think that the equity part of it is probably the most important.

But, for me, there is also a big but here. On one hand, I love the 17 goals and I have to say that I love the design. 193 countries have now signed the SDGs – that is fantastic. I feel and I see that sometimes people like to be picky with the goals and that is probably good, but you have to keep in mind that the 17 goals are a holistic approach to the environment.

Here I get excited again because in this field we are in the middle. With the picking of the goals on one side and the holistic picture of them on the other. The middle point where they meet, that is where I see FEE, this is where I see Eco-Schools playing a fantastic role by getting these two sides to meet – seeing it as a holistic picture but pick out whatever is relevant.

The biggest of all contributions is, of course, bringing to the world a programme like ours. The fact that it has become the success it has, shows that we have actually presented something that has a value. The way Eco-Schools is organised, the content, the Seven Steps, etc., shows on an international level, a national level, on the level of the schools and thereby on level of the students and the teachers that we are dealing with things around the world that aren't exactly the same, but which have the same topics. Realising that there are differences in culture and curricula and in many things, but that the stronghold of Eco-Schools is that wherever there is an Eco-School, students are dealing with the same topics.

Diversity

When I first took over we were about forty countries, and I promised to visit all of them including all the new ones we would get within my first term. That has of course given me a lot of friends and a lot of understanding about what each organisation and country is facing. The economic situation, the cultural, the political and the religious situation etc.

I am one out of seven billion. Even though I am proud to be able to say that I have met this and that princess or king during my presidency, they are also people and I have always met them as Jan from Denmark and without caring about their title. There is equality between all human beings. It is a matter of respecting what they actually represent, but also realising that the purpose was EE.

In the future of FEE, I see even more diversity. That is a challenge for the leadership of FEE both the administrative and the political. But diversity is the beautiful many colours of the world. Diversity is on one hand something that you have to deal with and on the other something that you have to adore. I believe that a lot of the power in FEE lies with the diversity of the organisation; the dialectic thinking and interpretation of the situation and the realisation of the fact that we are here for the common goal of EE. I love it and I think it has really been a driving force for me in my work in the organisation. I believe that diversity will become bigger and the possibilities from that even bigger.

Where do the Seven Steps come from?

The Municipality of Copenhagen and Coast Watch both told us that they took inspiration from Blue Flag and that they would like the schools awarded with some sort of a Green Flag. They tried to build up a set of criteria, but it was very rapidly realised that you couldn't build a purely educational programme in the same way as Blue Flag was built.

With the Green Flag, you are working much more with human beings and their behaviour where the Blue Flag is partly human beings but also, partly very strictly engineering. How can we actually award them with the Green Flag? Is it to be an intentional award or an award for a result? It was decided that they should go through a programme in the school and then they could get the Green Flag and not the other way around. Out of that came the discussion on how the procedure should be to become an Eco-School and that brought the Seven Steps methodology into the programme. The full set of steps was something that came out of the international networking and the first National Operators and at that time the Danish and later on the Portuguese coordination. The Eco Committee, I remember, was already the starting point. And, when we went internationally we realised quite interestingly the cultural differences even within Europe. Whereas we in Denmark had found it so natural to have an environmental committee with teachers, students, technical staff from the school, maybe parents, not all felt the same way and some said, "no way!". And that's where I see FEE and why I am so fond of FEE because we said that maybe there was no way, but they still had to do it! The Eco Committee was the key.

The key to Environmental Education

After the introduction and success of the Eco-Schools programme, some of the UN institutions started to recognise its impact. First UN Environment and later on UNESCO. The main topic of the summit in Rio in 1992 was 'Act Locally, Think Globally'. And Eco-Schools did exactly that. To me, it was not a surprise that we were invited to discuss EE with UNESCO. The Decade of Education for Sustainable Development introduced by UNESCO in 2004, was an area where we were very often invited by the national UNESCO committees to share our experiences with Eco-Schools. We were the practitioners who actually had the key to ESD.

We also realised with the Seven Steps that this methodology could set up, not only a committee but also the curriculum. School curricula around Europe were so different and the room for EE varied. Therefore, there was, in fact, a need for the schools to have the framework of Eco-Schools but inside that framework to be independent and to have autonomous thinking on the national level as well. You couldn't say, like with the Blue Flag beaches that all schools have to be 100% the same. It doesn't matter whether you go to a beach in Spain or in Finland – Blue Flag is the same and that is how you can be trusted as an organisation. That was not needed with Eco-Schools; it was more about the methodology and the framework schools had to work with. Therefore, although the inspiration came from Blue Flag, it moved independently on its own way forward.

Democracy

One of the very important roles of Eco-Schools is that we are advocates of democracy. You could say that it starts in the very small things like an Eco Committee at a school. But one should not forget that for many students that is new - to actually be together and work on something that is not the normal way of doing schoolwork, to be able to think more holistically about the environment and discuss with people who they usually do not discuss with.

Jan Eriksen, FEE President 2004-2016

LOURDES DÍAZ COLÓN, FEE BOARD MEMBER



Bringing Blue Flag to Puerto Rico was a huge challenge. Not only because of the stringent criteria we had to meet with our beaches, but also because we had no culture of managing the resources in an environmental way, nor integrating environmental education within the process.

It was amazing just how much we learnt and enjoyed working precisely with Environmental Education. We immediately began designing and adapting activities from other countries for different target groups. Though it wasn't until we worked with students and the coastal communities, that we understood that if we wanted to see change in terms of how we treat our resources and truly embed sustainable development, we needed to do much more.

It was a natural progression, even though our main interest was in the tourism sector, for Eco-Schools to be our choice for the second programme. Through its Seven-Step methodology, it provides the opportunity to not only create environmental awareness but also to realise that we are all part of the problem and that we can also become part of the solution.

Throughout the years, because of the experiences Eco-Schools provide, our students have developed important skills such as research, analysis, problem-solving, critical thinking, that otherwise would have been very difficult to achieve. I have no doubt in my mind that these students as adults are becoming the sustainable citizens we need. Those becoming our next generation of leaders will be able to make better decisions, to assume responsibility and to take action. Citizens that, because of their experiences, will face life ensuring that the right economic development decisions are made without compromising our natural world. This is definitely what Eco-Schools is achieving in our school communities: true leadership, environmental awareness and a true love for their Island.

Lourdes Díaz Colón, FEE Board Member and OPAS President, Puerto Rico



Eco-Schools Spain



OLE LØVIG SIMONSEN, FEE BOARD OF DIRECTORS 1990-1994



My sincere thanks and congratulations on your 25-year anniversary!

There is a direct connection from the World Summit in Rio in 1992 and up til where the Eco-Schools programme is now. People back at the Rio Conference and in FEE were very convinced that it was important to find ways to get children and youth engaged in creating a more sustainable world. I remember very well when I delivered the first Green Flag to a school in my constituency - that was a fantastic event and day.

Today, Eco-Schools is a worldwide movement with a lot of different activities, where we learn and are inspired by each other. There will always be issues and areas to be developed - that is what symbolises and characterises a movement. In the years to come, Eco-Schools will be a significant and important actor in creating a more sustainable world as long as we stick to our values, based upon engagement and participation, our respect for our cultural diversity, based upon democracy and based upon the future.

With my deepest respect and thanks,

Ole Løvig Simonsen, FEE President 1990-1994



BRÍD CONNEELY, INTERNATIONAL ECO-SCHOOLS DIRECTOR 2013-2018



Very quickly after I started work, I became caught up in the affairs of FEE and Eco-Schools, learning on the hop. In February 2013 I found myself speaking at an event in Northern Ireland, on a Green Flag panel for Trinity College Dublin, and on my way to India to speak at a conference - all in the same five days.

As nobody else could go, I jumped at the chance to speaking in India, as the 'hidden agenda' was to hold meetings with Kartikeya Sarabhai at Centre for Environment Education, which I did and eventually they came on board as a FEE member. A sweet success, as having the sub-continent join us really meant that sustainable development was going to happen on a large scale.

Another fond memory is coming up the stairs of FEE one Friday morning when my phone rang. I could see it was Daniel, so I continued up the stairs and was greeted by: "Can you go to Singapore on Tuesday?" Off I went to stand in for Jan Eriksen. Keenly aware that I was filling big boots. This also was deemed a success, as the Director of WWF Singapore suggested I go on TED talks with my Eco-Schools stories.

The Eco-Schools programme is worthwhile and far-reaching. It can and does contribute to Education for Sustainable Development at the very early stages of a child's life, as parents and kindergarten teachers in many countries can confirm. Teamwork, public speaking, ability to produce, sustain and carry out a plan - all these and many more skills are learnt as an integrated part of the programme. Eco-Schools is also turning out leaders in the sustainability campaigns all around the world. And I do hope that the Eco-Schools already on board are supporting #FridaysforFuture and the wonderful #GretaThunberg, and the Climate Strikes.

One of the very best things about the Eco-Schools programme is that each child, young adult, teacher and parent knows that they are not alone, that there are millions and millions of like-minded people all over the globe doing their bit to prevent climate breakdown. Imagine a future Environment Commissioner in the EU asking a fellow environmentalist politician from another country, "When did you first become interested in the environment?" And the answer ringing clear and loud, "At school, when our school joined the Eco-Schools programme and we received our first Green Flag."

Bríd Conneely, International Eco-Schools Director 2013-2018



“One of the very best things about the Eco-Schools programme is that each child, young adult, teacher and parent knows that they are not alone...”

BERNARD HOLLAND, INTERNATIONAL ECO-SCHOOLS DIRECTOR 2010-2012



For me, Eco-Schools is represented by the quality, integrity and diversity of the National Operators and their relationship with their in-country network. Having been in social media contact with National Operators since I left FEE in 2012, it is evident that there are so many committed and dedicated operators and partners continuing to build and strengthen the network.

A number of key memories stand out to me in my time as Director of Eco-Schools. Firstly, my two 10-day visits to Tanzania to help develop the capacity of an NGO to deliver the Eco-Schools programme, and now seeing the Eco-Schools has spread to many surrounding island countries. Secondly, seeing the innovation of entities like Lund University and its Young Masters Programme, the European Union Energy Awards, and finally, Trinity College Dublin proudly professing how Eco-Schools has helped them become the green University in the green isle.

I think it is true to say from my background in educational leadership that true leaders will freely give their power away so that others can enact change, and take ownership for their initiatives and continue to grow the strength and integrity of positive actions in the pursuit of a common goal which I now understand to be 'Caring for our Common Home'. From an academic perspective, it is hard to determine the direct correlation of data between academic outcomes and engagement and sustainability topics. What I do know from engagement with such programmes on a global scale is that the future leaders are the ones who develop their change management skills in the safe meaningful settings of school committees, building confidence and developing lifelong skills that will underpin success as they become the people that created a better world for themselves.

What we know in a fragmented world of mixed messages is that young people innately believe in social justice and ecological justice and that these two concepts are now inextricably linked through an understanding of integral ecology. A world where the poorest will suffer the most from our anthropologically induced climate crisis.

What Eco-Schools does is create a common platform for a global discussion and coordinated action across multiple themes.

Bernard Holland, International Eco-Schools Director 2010-2012



“What Eco-Schools does is create a common platform for a global discussion and coordinated action across multiple themes.”

MARGARIDA GOMES, ECO-SCHOOLS NATIONAL OPERATOR, ABAE/FEE PORTUGAL



I started coordinating the Eco-Schools programme in 2000. We had 100 schools registered at the time. Today, over 1,600 Eco-Schools are awarded Green Flags, spread across 80% of the country's municipalities. However, my key concern as National Eco-Schools Coordinator has gone well beyond increasing the number of schools.

I wanted to provide accredited annual training to enhance the role of teachers as key stakeholders in the success of Eco-Schools; provide educational assets (including educational assets mainstreaming gamification principles) such as turnkey packaged school projects, exhibitions, and educational resources that encourage 21st-century skill development and learning; ensure effective central monitoring and evaluation throughout the process, by working directly with schools to develop and refine measurability instruments and indicators, and to collect year-round information on our Seven-Step methodology, allowing us to provide invaluable feedback about its implementation in each school.

The recognition schools get from the on-going monitoring and evaluation processes, progress reports, results measurement, the innovations that we keep introducing in the programme have all been contributing factors in keeping schools motivated and part of the Eco-Schools programme over the years.

I am personally grateful that this programme enabled me to work with an incredible number of enthusiastic and dedicated teachers, that I could always count on an outstanding team at ABAE/FEE Portugal and that I get to be part of this ever-growing, diverse, and inclusive FEE family.

In 2000, the Eco-Schools National Operators Meeting took place in Portugal, where, at the time, the international coordination of Eco-Schools was also based. Sérgio Santos was then at the helm, paving the path for Estela Gonçalves first, and later – when FEE's international programmes coordination was aggregated in Copenhagen – for Bernard Holland who, among other significant improvements, launched the Global Action Days. After Bernard, under the direction of Brid Connery, I could also see with great pleasure and enthusiasm that growing attention was put in keeping the essence of Eco-Schools alive by placing emphasis on the educational aspects of the programme, on the role of teachers, and the 'hand-print' concept.

It is a privilege to watch Eco-Schools grow internationally without losing sight of its essential mission of contributing to the formation of aware citizens, concerned about our collective impact on the planet and better able to embrace the change needed to ensure our planet is enough for all of us, forever.

Margarida Gomes, Eco-Schools National Operator, ABAE/FEE Portugal



“The recognition schools get from the on-going monitoring and evaluation processes, progress reports, results measurement, the innovations that we keep introducing in the programme have all been contributing factors in keeping schools motivated and part of the Eco-Schools programme over the years.”

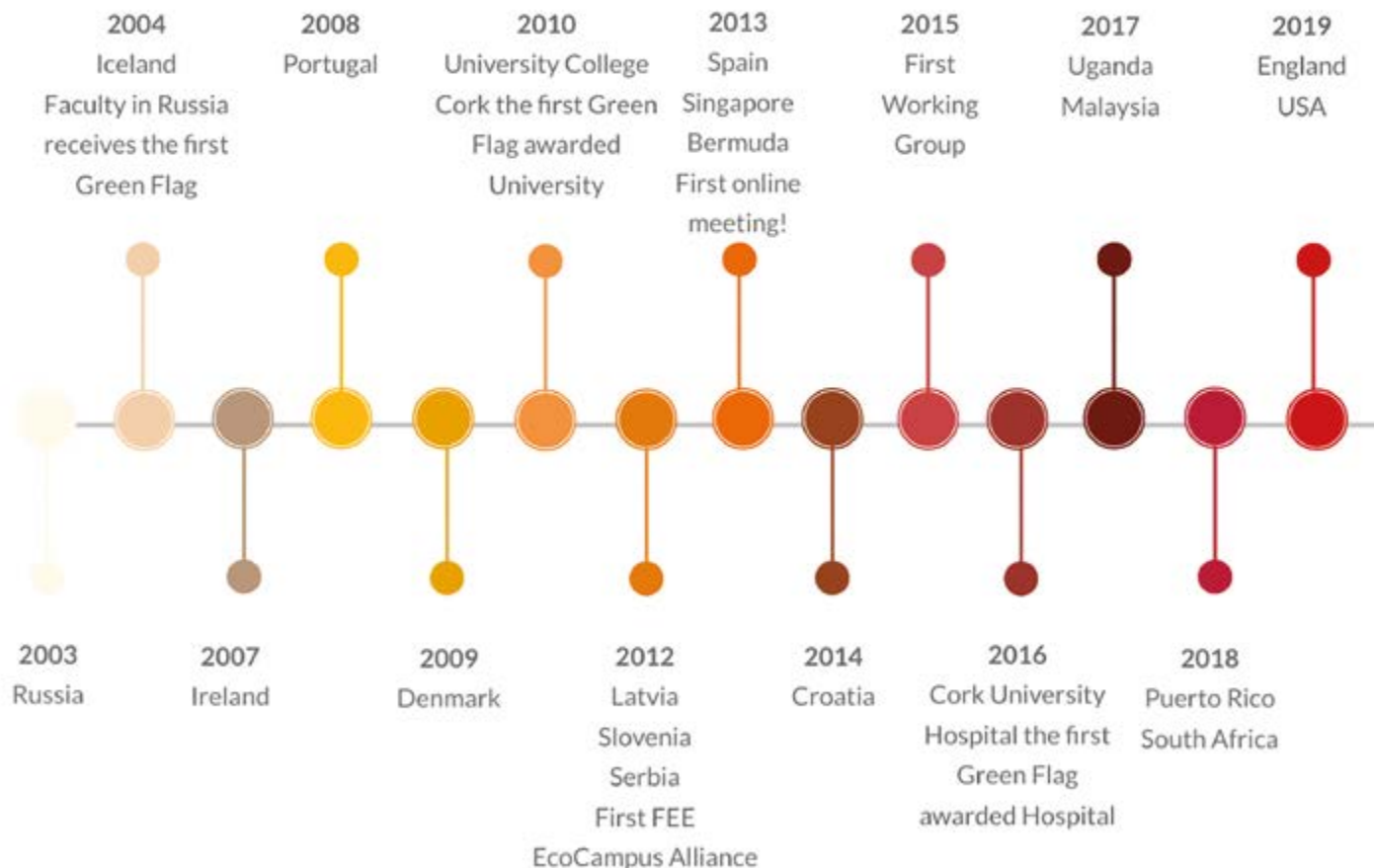


FEE EcoCampus

EMPOWERING STUDENTS TO BE LEADERS FOR SUSTAINABILITY

The FEE EcoCampus programme is an educational award programme with the goal to help transform Higher Education Institutions (HEI) as a hub for Education for Sustainable Development. The goal is to empower students to become leaders and active citizens for sustainability by engaging teachers, staff and students as well as the wider community in positive actions.

The programme is the evolution of the Eco-Schools programme at tertiary level. Like Eco-Schools, it provides the means to foster environmental awareness in a tertiary level institutions in a way that links to everyday activities and study and ties in with the operational requirements of a complex multi-use facility. The programme is based on the EU EMAS (Eco-Management and Auditing System), and the Seven Steps align with the 'plan-do-check-act' management method used in ISO 14001:2000 Environmental Management System Standards. The FEE EcoCampus award takes into account both the action on operational elements (like water saving, energy saving, waste reducing actions), along with educational aspects that aim to equip students at Green Flag Campuses with critical competencies for sustainability, knowledge regarding critical issues of sustainability, and positive behavioural outcomes.



In 2019, the programme is being implemented in 125 campuses across 21 countries. Countries and campuses are different and there is no “one size fits all”. FEE EcoCampus offers well-defined, controllable ways for educational campuses to take environmental issues, innovation and research from the academic departments and apply them to both greater societal challenges and the day-to-day management of the campus. As a holistic programme, it aims to make environmental awareness and action an intrinsic part of the life and ethos of an institution. The programme endeavours to extend learning beyond the lecture theatre to develop responsible attitudes and commitment, both at home and in the wider community. This means the entire campus community, students, academic staff, non-teaching staff, as well as media, local businesses, contractors and visitors must be included. The programme requires the active support of the top management of an institution, involvement of representatives from all sectors of the campus community in decision making and action at every stage, active involvement and support from the local community and a willingness to take action to instigate long-term change.

The FEE EcoCampus is both a programme and an award. A set of guidelines that keeps on evolving support the National Operator in adapting the programme. While the International Green Flag award is given to campuses that complete all the essential elements, the programme is flexible and encourages different countries and campuses to find different routes to achieving the award. As a long term programme, the emphasis is on incremental positive impact, the award requires progress reports to be submitted annually and a full reassessment every 2 years.

FEE EcoCampus does not only award those third-level institutions that are able to invest financially in large scale projects - instead, just like the Eco-Schools programme, it rewards long-term commitment to continuous improvement from the campus community. FEE EcoCampus acknowledges that a key role of universities is the production of knowledge, therefore the programme emphasises campus support for cross-disciplinary research that tackles, for instance, the SDGs. The programme incentivises institutions to work more closely with the relevant stakeholders of their surrounding locality; this could be the municipality, businesses working on similar issues, or other interested citizen organisations.



Eco Committee at Trinity College, Dublin, Ireland

It is recommended that the programme operates through the four cross-cutting themes

- **Climate Change & Carbon**
- **Health and Wellbeing**
- **Equity & Equality**
- **Global Citizenship**

Each cross-cutting theme impacts or is impacted by the six main themes

- **Biodiversity**
- **Waste & Resources**
- **Water and Sanitation**
- **Energy**
- **Food**
- **Transport**



Once the first campus Sustainability Audit has been executed, the campus chooses which themes they wish to focus on in their action plan. Though all themes do not have to be present in every action plan, some institutions chose to create long and short-term goals and targets pertaining to elements under all themes.

Interdisciplinary curricular integration is the key practice for FEE EcoCampus. This has been achieved by encouraging schools and faculties to identify and assess their ability to promote research within the field of sustainability by creating a register of feasible projects, their objectives, and possible participants. This requires that the faculties agree to take responsibility and willingness to undertake joint guidance. Universities are auditing their curriculum to explore opportunities for adding the perspective of sustainability. This requires seminars and presentations on sustainability and environmental issues for teachers and staff to urge teachers to build their knowledge and skills in addressing issues related to sustainability and the environment. Some of the campuses have created 'open to all' elective course on environment and sustainability. The module is open to students, staff and the general public and can be taken for interest, additional university credit or Continuing Professional Development.

The campuses that have successfully implemented the programme have received strong support from the campus management including top management, active participation of the students' union and other student groups, such as clubs and societies. They have demonstrated willingness to involve the campus community in discussions and decision making. The other elements that have made the programme better include frequent events, meetings and activities facilitating incremental progress and student leadership initiatives.

Rasebilu upcycle group photo, South Africa, 2018 >



Eco-Schools

Learning with Eco-Schools

THE FRAMEWORK OF THE SEVEN STEPS – THEORY AND PRACTICE
PROF. PAUL PACE & DR. PRAMOD KUMAR SHARMA

Background of the Seven Steps

The Seven Steps were introduced 25 years back, in a pilot project coordinated by Denmark. The Municipality of Copenhagen and Coast Watch took inspiration from the Blue Flag programme and proposed to award schools with a Green Flag as a quality label. They tried to build up a set of criteria, but it was very rapidly realised that they could not build a purely educational programme in the same way as Blue Flag was built. The Green Flag programme focuses more on human beings and their behaviour whereas Blue Flag, while partly dealing with human beings, also deals with issues related to engineering or technological solutions to environmental issues. It was decided that schools should go through a school-based programme to achieve a Green Flag award. The procedure or the framework defining the Eco-Schools programme was defined as the Seven-Step methodology. The full set of steps were developed through international networking by Denmark who assumed the first international coordination and Portugal which, later on, took over the responsibility.

From the very start, it was realised that the Seven-Step methodology did not just provide an institutional framework, but it also provided an opportunity for curriculum development. School curricula around Europe were so different and curriculum space for Environmental Education varied. Therefore, while providing schools with a framework, the Eco-Schools programme needed to be flexible enough to adapt to the different levels of curriculum autonomy of participating countries. Unlike Blue Flag that aimed at standardisation through a set of criteria, the emphasis of Eco-Schools would be more about the methodology and the framework schools had to work with.

The Seven-Step process is the basic framework that guides an Eco-School to plan and implement the learning journey. The steps are intended to be flexible enough to accommodate any school context and environmental theme. They are the 'means' to bring about change through active involvement of young people through a rigorous pedagogical process. The nature of each of the Seven Steps and the order in which they are implemented allows for the incremental change in sustainability literacy through active learning as the actions of students improve the environmental performance of the whole institutions starting first with their behaviour. This process empowers them with the confidence to continue to positively influence themselves to make the world a better place to live in.

Environmental Literacy with the Seven Steps

The Seven Steps (Figure 1) are learner-centred by design with teachers acting as facilitators. Teachers do not just provide instructions and assessment inputs, but are also co-learners as they co-create with their students the learning journey in a fast-changing world where information is available at the press of a button. The pedagogical approach, as an iterative process, requires the learners to be flexible, curious and optimistic as they learn that the world is far from ideal. This encourages metacognition or learning to learn which is an important skill for lifelong learning. The Seven Steps are aligned to the four pillars of learning, i.e. learning to know, learning to do, learning to be and learning to live together. Table 1 shows how the Seven Steps align with the objectives of Environmental Education (EE) and the features of Education for Sustainable Development (ESD).

Table 1 – Seven Steps alignment with Environmental Education and Education for Sustainable Development >

The Seven-Step Framework	Categories of Environmental Education (EE) Objectives	Features of Education for Sustainable Development (ESD)
While conducting an Environmental Review , students identify the local or place-based context of global environmental problems.	Awareness: to help social groups and individuals acquire an awareness and sensitivity to the total environment and its allied problems.	Locally relevant: addressing local as well as global issues, and using the language (s) which learners most commonly use.
The students develop an Action Plan to engage with environmental issues and realise the challenges they have to face to resolve them by Monitoring and Evaluating their actions. The entire learning process involves Linking to the Curriculum .	Knowledge: to help social groups and individuals gain a variety of experience in, and acquire a basic understanding of, the environment and its associated problems.	Applicability: the learning experiences offered are integrated in day to day personal and professional life. Interdisciplinary and holistic: learning for sustainable development embedded in the whole curriculum, not as a separate subject.
The Eco Code presents the ethos of the school – a synthesis and reflection of the learners’ attitudes and values developed during the programme.	Attitudes: to help social groups and individuals acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection.	Value-driven: it is critical that the assumed norms – the shared values and principles underpinning sustainable development – are made explicit so that they can be examined, debated, tested and applied.
By adopting the plan - do/act - reflect cycle learners go through the problem-solving process. This builds the skillsets and confidence needed to engage with environmental issues as an individual and also as part of a social group.	Skills: to help social groups and individuals acquire the skills for identifying and solving environmental problems.	Critical thinking and problem solving: leading to confidence in addressing the dilemmas and challenges of sustainable development.
The Formation of an Eco-Committee ensures that the process is participatory and child-driven. Informing and Involving all stakeholder is a key step to get the larger school community involved in the environmental education journey.	Participation: to provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolution of environmental problems.	Participatory decision-making: learners participate in decisions on how they are to learn. Multi-method: using different pedagogies in which teachers and learners work together to acquire knowledge and play a role in shaping the environment of their educational institutions.

Figure 1 - The Seven Steps



Step 1: The Eco Committee

The first step of the Eco-Schools programme involves establishing a viable Eco Committee within the organisational structure of the institution. The Committee aims to direct and address all phases of the Eco-Schools programme. It is the driving force of the programme and ensures that students are at the centre of the process as other steps are carried out.

The Committee empowers the children for leadership and democratic values. It provides them with an experience of being aspirational and believe in their abilities to be change-agents. The most important aspect of learning they develop is taking responsibility with empathy and understanding the complexity of decision making in a multi-stakeholder environment. In the process, they learn to debate, negotiate, respect different viewpoints, take decisions through building consensus and work in a team. Achieving this step calls for controlling emotions, punctuality and regular participation and a sense of volunteerism for a larger societal good.

Step 2: Sustainability Review

Issue identification is an important skill. The aim of the Sustainability Review is to identify the level of sustainability in the school and it also calls for skills to prioritise actions based on the results of the review used to develop the Action Plan.

The process of review or audit builds the awareness and sensitivity to the biophysical environment and its allied issues increasing the theme-specific basic understanding or disciplinary knowledge. The experience of investigation develops the attitudes, values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection. These learning outcomes are reflected as they develop and implement the Action Plan. The step is not just limited to identifying the environmental challenges, but also to filling the gap in the students' behaviour and the school's policies and practices. In the process, students reflect on their own choices and lifestyles and relate to the change required at a personal level before they plan for a larger change in the institution. The process develops the skills of research, analysis, curiosity, etc. It is important that the process calls for the application of the skills of numeracy, language and science that they learn in different subjects. The step encourages students to develop the skills to collect and use relevant data, to argue the need for change and use criteria for prioritisation of actions. The conceptual clarity helps them identify the barriers in real life that limit our actions, this helps in setting realistic targets and monitoring implementation.

By including experts in the field, students are given an experience of future careers and an in-depth understanding of the subject. They learn to think and act like a practitioner. It shows the relevance and purpose in students' learning, helps deepen their understanding and, most importantly, the relevance of the actions in their own community.

Step 3: Action Plan

This is one of the most important steps to develop active citizenship amongst students and help plan their activities. Developing action plans is an important transferable skill that is required at both personal and professional levels. It also helps in developing the skill of anticipation and mapping scenarios by projecting the consequences and potential impact of different decisions.

The Action Plan calls for demonstrating skills for budgeting - estimation of time and money, using criteria for prioritisation and decision making, innovative thinking, divergent and convergent thinking and lots of patience.

The Action Plan is an opportunity for learners to practice transformative competencies by questioning the status quo, thinking of new ways of doing things, collaborating, resolving differences and dilemmas as they try to optimise the outcomes and, most importantly, have the courage to take responsibility to bring about change. The process of negotiating an action keeping all the stakeholders' interests calls for a demonstration of emotional quotient. The process of negotiating plausible actions gives students an opportunity to recognise values and clarify perceptions and perspectives that often stem from their cultures.

Step 4: Implementation, Monitoring and Evaluation

Implementation, Monitoring and Evaluation is action research. As an exercise to assess progress made towards achieving targets identified in the Action Plan and to identify areas that require further corrective action, students learn to work together with dedication and determination. Effective problem solving requires the ability to investigate and evaluate against a set of agreed criteria.

The process makes students learn the importance of a review system and develop a growth mindset that drives motivation and achievement. The failures and success as they implement the Action Plan helps them develop strategies for being resilient and bounce back. Reflection is a key learning outcome for transformation and learning to take critical feedback simulates real-life situations.

Step 5: Linking to Learning in the School

The role of education is to prepare young people for society and, therefore, the sustainability challenge is one of the most important issues that we all need to address. The biggest challenge is to consider the Eco-Schools programme not as an add-on activity to the schools' programmes, but as an integral part of the learning experience offered in educational institutions.

Mapping the actions based on the Sustainability Review with subjects and skills outlined in the curriculum is important. The students should be provided with an opportunity to enable them to set their targets for sustainability as they do for any subject or behaviour. To avoid curriculum overload it is important that the actions are embedded within the existing curriculum in a meaningful way so that all students benefit from both deeper learning experiences and quality learning in the core foundations of the issues they explore. The interdisciplinary nature of the subjects creates an opportunity for making a holistic and balanced perspective possible. This requires that the teachers identify key concepts over subjects, explore the connectedness of these subjects and integrate themes by encouraging project-based learning. The action orientation of the ESD curriculum helps in the development of critical thinking and problem-solving skills.

Step 6: Informing and Involving the Whole School and Wider Community

The aim of the Informing and Involving step is to spread the Eco Committee's message throughout the school and the wider community through ongoing publicity. It is training to communicate using various tools and to celebrate success. Students learn to share and acknowledge the contributions of different actors – big and small – for the future. They learn important skills such as public speaking and influencing large community actions. It is a collaborative platform where students, teachers, parents and communities work together to help students progress towards their shared goals of collective wellbeing. Learning how to function and interact in a complex society is a 21st century skill whose development cannot be left to chance.

One of the important learning outcomes to solve the sustainability challenge we are facing is the realization that we are global citizens. Linking and/or twinning schools in different local and foreign contexts promote the understanding of local issues within global perspectives that are shaped by different cultures.

Step 7: Eco Code

The Eco Code is a synthesis and reaffirmation of values that determine disposition – a very good predictor of behaviour. The Eco-Schools programme provides students with opportunities for decision-making based on and respectful of societal norms. This enables a process of self-formulation of a code of behaviour about issues that cement the transformation for life!

The Eco-Schools programme takes a holistic, participatory approach to learning for sustainability. Eco-Schools provide an integrated system for the environmental management of schools and involve all stakeholders in this process. Table 2 summarises how different stakeholders are involved in the implementation of the Seven Steps

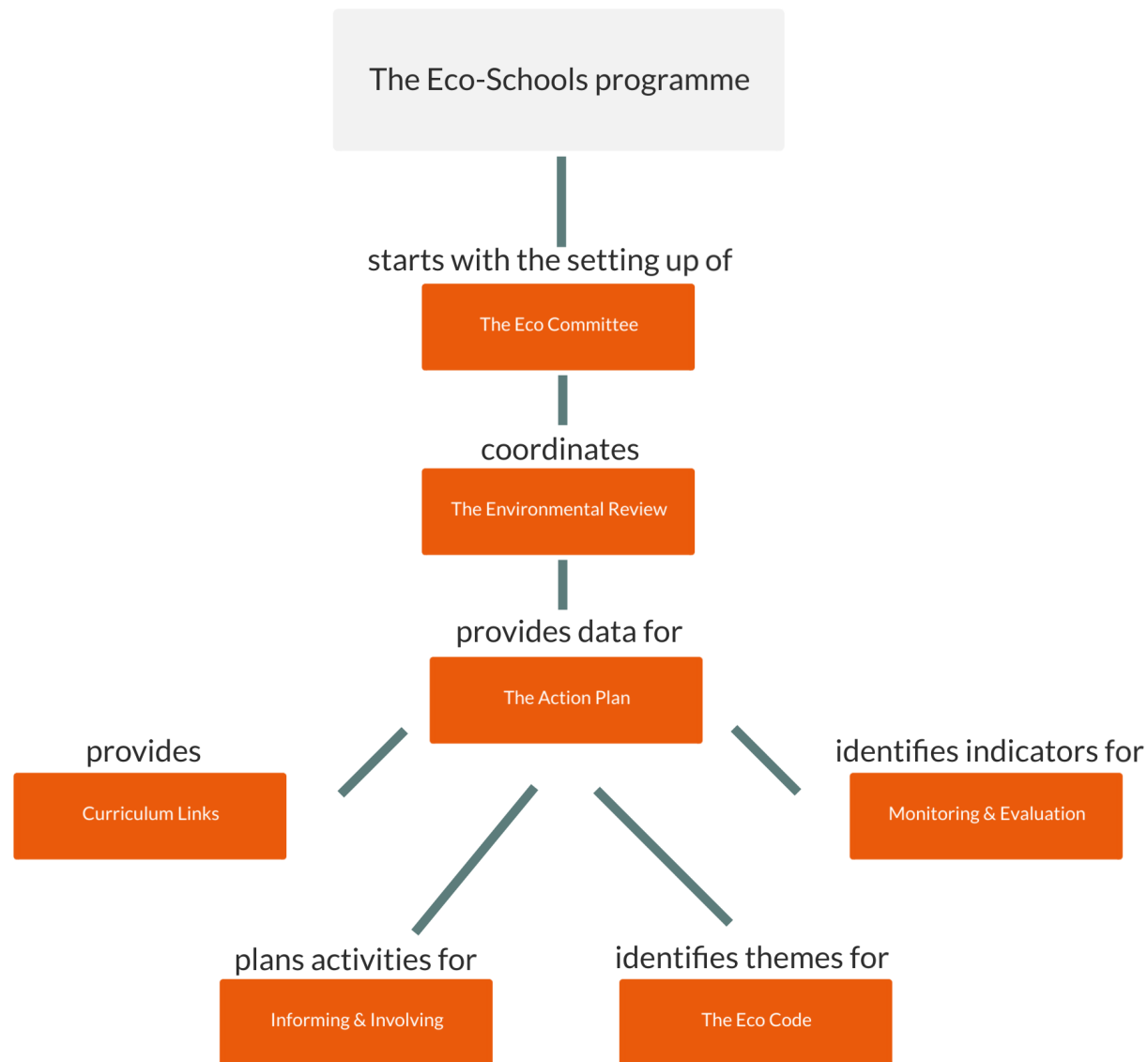
Table 2 – The role of stakeholders in each of the Seven Steps >

Role of stakeholder	Students	Teachers	Non-Teaching Staff	School Leadership	Parents	Other Community Stakeholders: Municipality, Neighbourhood
Eco-Schools Steps						
1. Eco Committee	Key actors	Facilitators	Facilitators	Facilitate and support the implementation of decisions of the Eco-Committee	Connect learning to homes. Professional experts	Provide context to actions
2. Environmental Review	Key actors	Facilitators	Facilitators and Data providers	Facilitate and receive the review findings to prioritise	Connect learning to homes. Professional experts	Provide expertise and context to prioritise and take actions
3. Development of Action Plan	Key actors in the development of the plan and in its implementation	Facilitators, provide expertise and are key actors	Provide expertise, facilitators and key actors	Facilitate and provide commitment, support, resources and engagement for the proposed actions	Support the Action Plan through their participation and resource mobilisation	Support the Action Plan through different resources and through wider community engagement
4. Monitoring and Evaluation	Lead the implementations, collect and analyse data	Facilitators, key actors and provide the tools for data collection and analysis	Facilitators, key actors and data providers	Facilitators and key actors	Facilitators and key actors	Acknowledge and support/promote the actions
5. Curriculum Linkages	Contribute to the learning goals, reflect on the learning achievement based on indicators	Plan the connections and synergies with the curriculum. Facilitate the curriculum implementation.	Support the various steps to achieve the curriculum objectives	Facilitate and integrate a whole institution approach	Acknowledge and support their children's learning in everyday life	Acknowledge and provide flexibility
6. Inform and involve	Prepare, present and share the environmental and educational impacts to the whole school community	Facilitators	Facilitators	Facilitate and receive suggestions, provide support for the next cycle of the programme	Learn, acknowledge and support their children's learning in everyday life. Facilitate wider dissemination	Learn, give feedback and support for the next cycle of the programme
7. Eco Code	Summarise the learning in terms of the Eco Code (values and attitudes) and follow it	Facilitate, follow and model the Eco Code	Facilitate, follow and model the Eco Code	Facilitate, follow and integrate the Eco Code in the whole institutional ethos	Facilitate and follow the Eco Code	Scale up the ethos in the Communities

Praxis of Seven Steps and educational context

The Seven Steps are a guiding framework and the framework has evolved with adaptation by individual countries in response to the different contexts in which schools operate. Adapting to the educational context and rationale to facilitate seamless integration of the Eco-Schools programme is more important than adhering to a rigid order of implementation of the steps. What follows are experiences from different countries.

In Malta, experience has shown that because of different school realities, the process is not always cyclical, but rather a flow as depicted by Figure 2.



In the Czech Republic, Curricular Work, Informing and Involving, and the development of the Eco-Code are seen more as an ongoing process through the academic cycle as depicted in Figure 3. The Eco Committee engages through these steps with the process defined by the outermost circle of the learning process that mirrors the Deming Cycle of Plan-Do-Check-Act. This also conforms with Kolb's Experiential Learning Cycle: (i) having a **concrete experience**, (ii) **observation and reflection**, (iii) forming **abstract concepts for generalisation**, and (iv) **application to new situations**.

Figure 3 – Presentation of the Seven Steps in the Czech Republic



Curriculum linkages in most cases are done early in the cycle as teachers realise the importance of planning ahead for the scholastic year and the integration of EE content in the curriculum. Although the other steps are learner-led and implemented, curriculum linking is seen as the role of the educator although students are expected to know the learning goals achieved during this process. Eco-Schools USA emphasises on giving students the opportunity at most grade levels and across disciplines to integrate environmental issues into the classroom, on the school site or in the local community.

The assessment of the Seven Steps is an important criterion for the award of Green Flag. The Quality of the outcomes expected from each step determines the development of literacy and most countries have clear indicators that define the indicators to assess the implementation of the step.

Practice and Perspective of National Operators

A survey was conducted amongst the National Operators (NOs) of the programme to further understand the practice and their perspective on the implementation of the Seven Steps. A total of 36 responses were received (out of a possible 67). 92 per cent of the NOs responded that Eco-Schools in their country follow the original order of Seven-Step methodology. Any deviation from the order is due to the embedding of curriculum linkages in all the steps, merging of Eco Code with the Green Flag assessment in Eco-Schools Sweden and to align with the 2-year award cycle that has an annual review change for Eco-Schools England. 65 per cent of the respondents reported that though they recommend that the steps are followed in the original sequence but are not rigid and ensure that the steps are covered. Table 3 reports the percentage of following the sequence.

Table 3 – Practice of following the sequence of Seven Steps

Order of Step	Order	Percentage following the order
1	Forming an Eco Committee	100
2	Carrying out an Environmental Review	96
3	Developing an Action Plan	86
4	Monitoring and Evaluating	70
5	Creating Curriculum Links	72
6	Informing and Involving	82
7	Developing an Eco Code	88

The NOs are divided on their perception of the importance of sequence, on a scale of 10, the average score was 5.8. The Seven-Step methodology has a rationale in its sequence and the schools are encouraged to follow the Seven Steps, but they also have the flexibility to change the order. It is a guideline, not a strict rule to follow the order of steps in a sequence. Also, following the steps limits the possibility of showing parallel processes. The need to have alignment with education systems is also an important reason to have flexibility. In Eco-Schools Italy and true for some other countries too, the monitoring and evaluating, creating Curriculum Links and Informing & Involving are taken as cross-cutting steps, and are reviewed with the implementation of each step. One of the important reasons that the steps are followed in a particular sequence is the branding of the programme. Some of the Eco-Schools start with the prescribed sequence in the first year of implementation and change it in year 2 to suit their context as they better understand the rationale of the Steps.

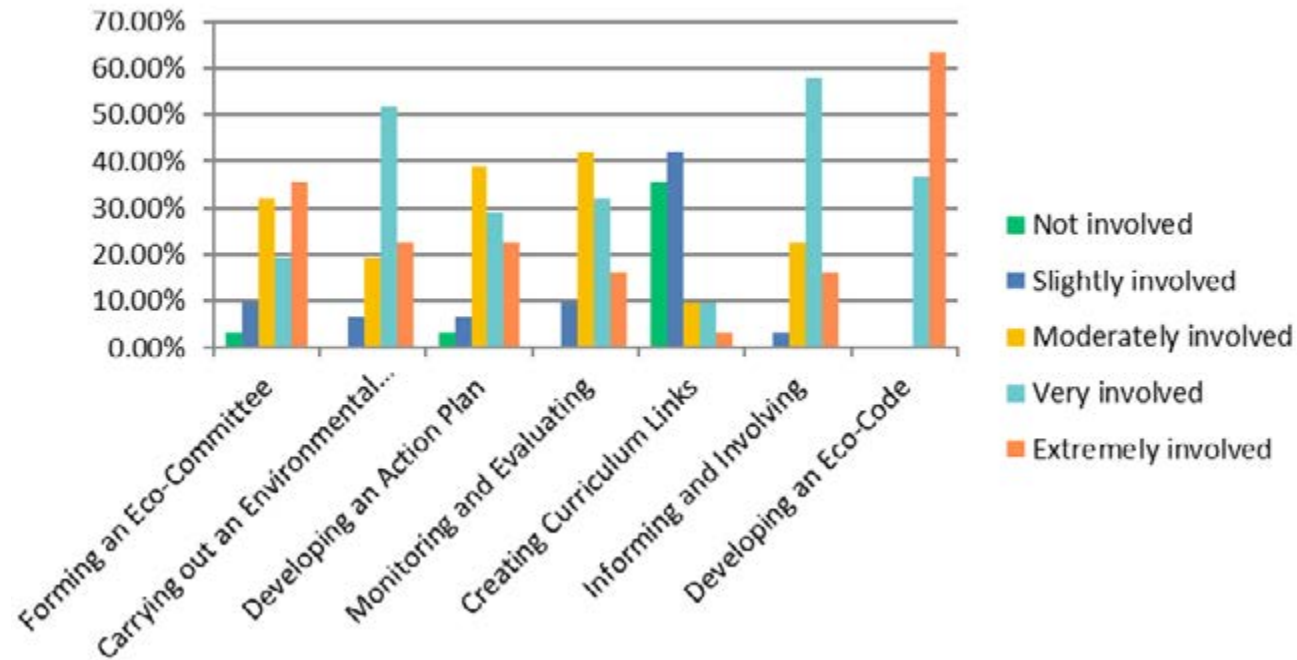
Table 4 reports the perception of difficulty level of the implementation of the Seven Steps. The list of challenges being faced by the schools include involving all stakeholders whole school engagement, including the support of administration, continuity after the teacher coordinator is transferred to another school, scope of curriculum integration especially in higher classes, developing an action plan after environmental review, having a functional Eco Committee due to younger age of children, cooperation of teacher and selection from different age levels, lack of tools to do environmental review in certain themes, time management, creating indicators and access to data from monitoring and evaluation, budget/funds, permissions to go beyond school boundaries, interest of all the students, tools for assessing the impact on learning, seeing the actions for long term change.

Table 4 – Perception of difficulty implementing the Seven Steps by schools

Eco-Schools Steps	Order	Percentage following the order
Forming an Eco Committee	90%	0%
Carrying out an Environmental Review	68%	0%
Developing an Action Plan	71%	7%
Monitoring and Evaluating	54%	18%
Creating Curriculum Links	57%	14%
Informing and Involving	64%	21%
Developing an Eco Code	93%	0%

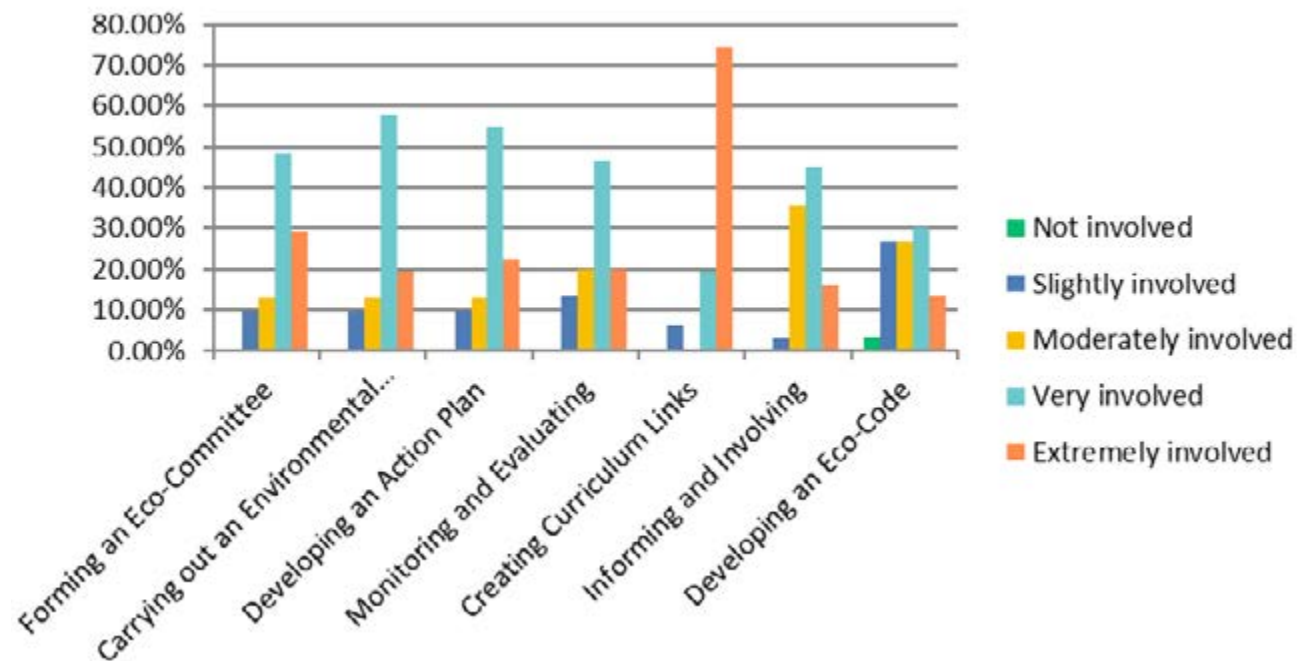
As seen in Figure 4, Students are active participants in all steps except in the step of curriculum linkages. The programme needs to invest in strengthening this aspect with teachers to help students understand the content and skills they need to master. Primary barriers to this identified by NOs are the age of children, particularly young who are more active in the Seven Steps compared to others and capacity of teachers.

Figure 4 - Involvement of students in the Seven Steps



The teachers' involvement in each of the steps also varies a lot as we see in Figure 5. The role of teachers' would vary according to the age, aptitude and other developmental factors of students in a particular Eco-School. It is always stressed that Eco-Schools is first and foremost a student-centred initiative. Although there is an agreement that the teachers' facilitation is key to a good implementation of the Seven Steps and in achieving a bigger impact, some of the factors identified are very low numbers of teachers involved and the time they can spend with the process.

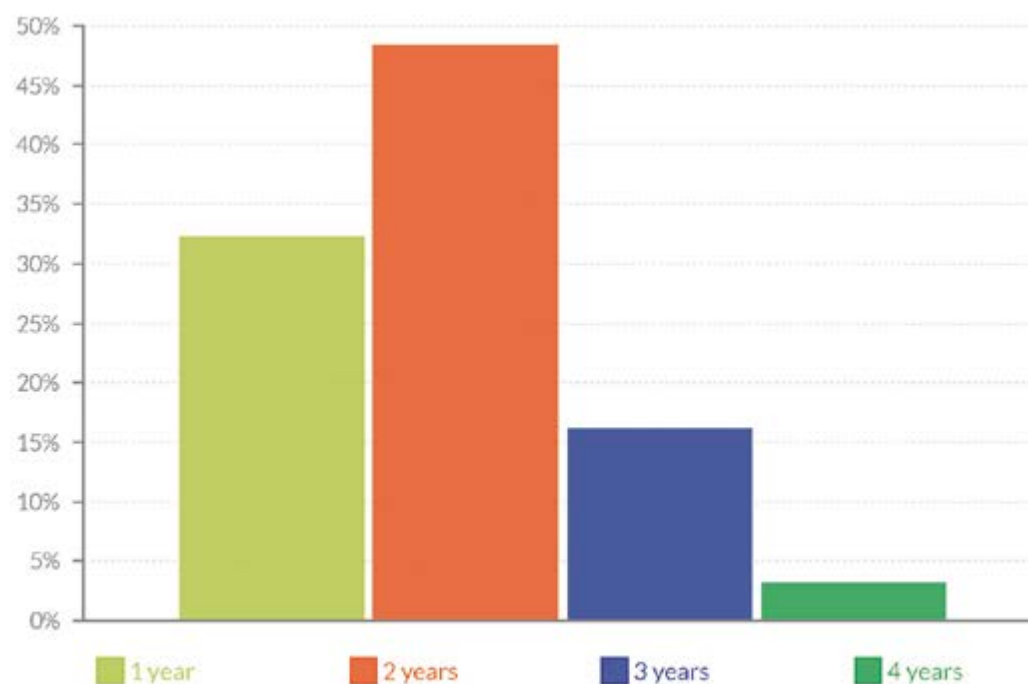
Figure 5 - Involvement of teachers in Seven Steps



Usually, as shown in Figure 6, it takes two scholastic years for a school to effectively implement the seven steps. Year one is a learning phase for the teachers to facilitate the mechanics of the steps and match it with the school systems. Recognising this, at international level, it is recommended that the first Green Flag assessment is done after the second scholastic year. A prescriptive approach or sharing experiences of other schools help in mastering it faster.

Figure 6

Number of academic years required to effectively implement the seven steps in a school



In Portugal, some municipalities celebrate their Eco-Schools by raising all the flags in the municipality's city centre for one week. >



Literature Review of Research Studies

by LAURA HICKEY

A LITERATURE REVIEW OF RESEARCH STUDIES ON THE ECO-SCHOOLS PROGRAMME
IMPLEMENTED IN NUMEROUS COUNTRIES OVER THE PAST 25 YEARS

Introduction

As would be expected, the Eco-Schools programme has been heavily researched over the past twenty-five years since its inception. The type of research, however, varies country-to-country and by topicality. Some research has been conducted by third-parties; other research has been completed by the host organisation. Some research focuses on environmental footprint change; others on behaviour or attitudinal change, while still others focus on academic impact as well as student skills development.

In a recently drafted chapter for a publication, *The Green Schools Movement Around The World: Stories of impact on Education for Sustainable Development*, (Gough, 2019), Kevin J. Coyle, JD from the National Wildlife Federation in the USA wrote:



One of the logical outcomes of having school buildings and grounds that embody principles of environmental quality and sustainability is they would be better places to learn. Indeed, whether a green school is built around a new building or is just trying to improve upon its existing structure and operations, green schools can be highly supportive of many aspects of improved education around the environment, sustainability and skills for the 21st century. In simple terms, green schools can support:

- *Environmental education and environmental literacy,*
- *Academic excellence including higher test scores, and*
- *Development of 21st Century skills such as team work, applied project-based learning, and problem-solving*



For the purposes of this literature review, more than 68 research reports were analysed from multiple countries. The results have been synthesised and summarised into four major categories with select country case studies highlighted:

- Academic and Skills Development Changes
- Environmental Impact Changes
- Behaviour/Attitudinal Change
- Whole School Sustainability Programme Approach

Academic and Skills Development Changes

There are literally hundreds of research reports that document how environment-based, hands-on learning programmes at schools improve academic performance in schools and by students. Environment-based education has a number of positive and measurable effects on a student's ability to learn and be academically successful. These effects include improvements in science performance, math and reading along with improvements in student motivation and behaviour. A research literature review was conducted by Kevin J. Coyle, JD, of the National Wildlife Federation (USA), which highlights many of these reports. (Kevin J. Coyle, 2016)

For the Eco-Schools programme, there is unfortunately a limited number of studies that focus specifically on academic achievement and student skills development changes.

To highlight a few:

Global

HGSE Global Education Innovation Initiative Book 3: Case Studies from 50 Global Examples of Teaching and Learning in the 21st Century; Sowing the Seeds for an Ecologically Conscious Society: Foundation for Environmental Education (FEE)

In 2017, Ashim Shanker and Connie K. Chung from Harvard University developed fifty case studies of international organisations that promote teaching and learning in the 21st century. This publication, Case Studies from 50 Global Examples of Teaching and Learning in the 21st Century, (Shanker, 2017) included a chapter specifically about the three FEE education programmes – Eco-Schools, YRE, and LEAF. The findings of the report were arranged thusly:

Intrapersonal Competencies

All three programmes develop in youth a sense of responsibility for the environment. Eco-Schools cultivate a mindset and a lifestyle that values sustainability.

Interpersonal Competencies

Eco-Schools help participants develop leadership skills, public speaking, meeting, negotiation and communications skills.

Cognitive Competencies

Students can develop the skills of critical analysis, problem solving, research, investigation and decision-making.

Attitudes and Values

Eco-Schools seek to motivate young people to make a difference and to share their pro-environment mindset and proactive behaviour amongst family and friends, ultimately passing it on to future generations.

Pedagogy

Eco-Schools place great emphasis on involving the local community from the very beginning. By doing so, the lessons the students pick up are transferred back into the community where they take hold and lead to more sustainable, environmentally responsible behaviour patterns all around.

England +

S3: Sustainable School Self-Evaluation Driving School Improvement through Sustainable Development

In 2008, England's Department for Children, Schools, and Families (DCSF), now called Department of Education, developed an S3: Sustainable School Self-Evaluation (Department for Children, May 2008) that was an outgrowth from the government's strategy for children and young people, entitled "The Children's Plan."

This Plan complemented another visionary strategy, the UK's 2005 Sustainable Development Strategy, which aims to "enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations." At that time, the government stated that it would like every school to be a sustainable school by 2020, and established a National Framework to guide schools towards that aim.

The development of the S3: Sustainable School Self-Evaluation contains a section that addresses achievement and standards. DCSF recommended that schools use sustainable development to motivate pupils, enhance their enjoyment of learning, and ultimately raise

achievement and standards.

They went on to say that: "Sustainable development offers a real-life context that can make learning more meaningful and relevant. It can enhance pupils' enjoyment and progress, and build practical life skills."

The self-evaluation demonstrates the linkage between a sustainable school and achievement and standards in two ways. The first concerns improvements in pupil attentiveness and concentration through the use of natural light and ventilation, improvement of indoor air quality, availability of nutritious food, and higher levels of pupil fitness.

The second concerns how, through the context of real-world situations and issues, learning can be made more interesting and relevant for young people. Student engagement with and enjoyment of relevant, real-world subjects in and outside the classroom can enhance their achievement and behaviour, and lead to greater job satisfaction among school staff. All of these can contribute to improved standards.

DCSF stated that these benefits are supported by international research and a growing body of practitioner evidence in England and elsewhere.

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The Benefits of Eco-Schools: Views from the Head Teachers of Green Flag Secondary Schools

In 2014, Keep Britain Tidy produced a paper (KBT, 2014) reviewing statements made by Head teachers of 124 secondary schools who currently held the Eco-Schools Green Flag Awards. Head teachers from 37% of the schools reviewed recognised that the Eco-Schools programme helps students to develop a variety of skills. Skills explicitly mentioned include:

- Leadership
- Collaborative Working
- Public Speaking
- Monitoring
- Team Work
- Understanding Wider Issues and Considerations
- Speaking and Listening
- Gardening and Horticulture
- Planning
- Problem Solving

Also reported, the Eco-Schools programme led to 79% of Head Teachers reporting that by taking part, the students and staff are more aware of environmental and sustainability issues. Most of the responses mention a general increase of knowledge or awareness of sustainability issues and the impact this has had.

"Eco-Schools provides an overarching framework for pupils, helping them to understand how different issues are linked together...Eco-Schools encourages experiential learning in the outside classroom in 'real' situations and the diversity of tasks that can be carried out recognises that everyone has a unique learning, working, and thinking style."

Flanders-Belgium

Flemish Eco-Schools Improve Students' Environmental Knowledge

In 2011, Boeve-de Pauw and Van Petegem conducted a research study (Boeve-de Pauw & Van Petegem, 2011) on the effect of Flemish Eco-Schools on student environmental knowledge, attitudes, and affect.

The researchers compared the environmental knowledge and effect of students in Eco-Schools and non-Eco-Schools in the same area, utilising the Children's Environmental Attitudes and Knowledge Scale (CHEAKS) survey. Interestingly, the researchers found that students in the Eco-Schools and non-Eco-Schools were not randomly distributed in terms of their socio-economic backgrounds and language spoken at home. When controlling for these variables, the findings did demonstrate an increase in environmental knowledge among Eco-Schools students; however, there was no significant difference in effect among Eco-School and non-Eco-School students.

They concluded that more research is necessary to determine whether some of the Eco-Schools are better at influencing students' attitudes and values.

Iceland

"Mig langar til að næsta kynslóð hafi Jörð til að lifa á": Könnun á þekkingu og viðhorfum nemenda í Grænfánaskólum til umhverfismála
Rough translation:

"I want the Next Generation to have an Earth to Live On": Survey of Knowledge and Attitudes Towards Environmental Issues of Students in Eco-Schools

In 2015, research was conducted by Hungrun Geirsdóttir (Geirsdóttir, 2015) to survey the attitudes and knowledge of Eco-School students in environmental issues.

The method of convergent parallel design was applied by collecting data, using both qualitative and quantitative methods. A questionnaire, designed for students in grade 7 in compulsory schools, was sent to a sample of 40 Eco-Schools in Iceland. Only 13 schools responded, resulting in 326 answers. The results suggest that

participating schools proceed well to achieve the goals of the Eco-School programme which involved active environmental policy and improvements in the school surroundings.

The results indicate that participation in the programme increases school image and sense of community. The students proved to be aware of environmental issues and their positive behaviour towards the environment improved to some extent with education and by following the schools' environmental policy.

The results also showed a need to put further emphasis in training students to be competent in dealing with environmental issues in democratic ways. The program has an opportunity to connect with the school curriculum as sustainability is one of the fundamental concerns of the new national curriculum. The results also showed that more emphasis is placed on the programme in classes of younger students.

South Africa

Eco-Schools and the Quality of Education in South Africa: Realising the Potential

In 2008, Dr. Eureka Rosenberg from Rhodes University wrote a journal article, "Eco-Schools and the Quality of Education in South Africa: Realising the Potential" (Rosenberg, 2008) that shared the findings of an evaluation of the Eco-Schools South African programme in relation to the quality of education in South African schools. In summary, learner and teacher work in Eco-Schools showed signs of the problems with the quality of education as part of the current conditions in the system, and there are indications that the programme – at times – adds to the complexity to which some educators struggle to respond coherently. However, the evaluation also found that Eco-Schools has the potential to strengthen teaching and learning and that many teachers highly value the programme's contribution in this regard.

Interestingly, the researchers found that although programmes like Eco-Schools are perhaps not designed first and foremost to improve the quality of education, they can and must make a contribution. Eco-Schools, with its combination of practical environmental improvement projects, teacher support for better curriculum-based lessons, and attention to planning and management, does indeed address a number of facets described by these researchers as likely to improve the quality of teaching and learning. These include:

- Poverty and learner motivation
- Whole school management and planning
- Resources to support teaching and learning

USA

Maryland Green Schools (part of Eco-Schools USA)

Maryland's Green/Eco-Schools utilise the Environment as an Integrating Context (EIC) (Lieberman & Hoody 1998) approach for learning that has far-reaching benefits, including increased student achievement in science and social studies as measured by standardised tests, increased student attendance, and a decrease in the number of student disciplinary referrals.

This particular study, "A Study of Green Schools & Student Academic Achievement" (Education, 2004) (conducted in 2004 and again in 2010) examined the relationship between Green/Eco-School designation and student academic achievement as measured by the Maryland Student Assessment (MSA). The studies used a hierarchical regression model to control for differences in schools socioeconomic status and percentage of students receiving special education services.

Four hierarchical regressions were performed examining the relationship between the design as a Green/Eco-School and achievement in grade 5 and 8 reading and mathematics. The results indicate that Maryland Green/Eco-School designation significantly correlates with higher reading achievement in fifth grade; higher reading achievement in eighth grade; and higher math achievement in grade 8. Designation as a Green/Eco-School did not correlate significantly with higher grade 5 mathematical scores.

The 2010 study examined the relationship between the comprehensive EE found in Green/Eco-Schools and student science achievement. Based on the analysis, students from Green/Eco-Schools have significantly higher percentages of students scoring excellent in the Maryland School Performance Assessment Program (MSPAP) science test than schools that are not Green/Eco-Schools.

Academic Research Gaps:

Although many studies have been performed on the efficacy of environment-based education on academic achievement, few have been conducted based specifically on the Eco-Schools programme. This is a critical research gap that needs to be filled over time. Anecdotally, FEE receives information from National Operators and their participating schools that academic scores have been increased due to the programme. While helpful, it would be worthwhile to have several countries conduct an evaluation of academic achievement with a control group of Eco-Schools and non-Eco-Schools to demonstrate the difference.

Environmental Impact Changes

The Eco-Schools programme is an ideal way for schools to embark on a meaningful path towards improving the environmental footprint of a school, a change which inevitably leads to a more sustainable, less costly, and more responsible school environment. Through the use of the Eco-Schools themes (environmental focus areas), students conduct audits and develop action plans that they set into motion and monitor over time. These actions often contribute positively to reducing the environmental impact of the school and surrounding community.

Some examples of how this has been accomplished are shown below.

Canada

Ontario (Canada) Eco-Schools Energy Performance Study 2017

In 2017, a third-party analysis, "Ontario Eco-Schools Energy Performance Study 2017," (Inc, 2017) of the energy performance of certified Eco-Schools compared to non-certified schools in Ontario was funded by the Ontario Ministry of Energy. In the summary of findings, the overall energy performance of certified Eco-Schools (elementary and secondary) was better than overall energy performance of non-certified schools. Some interesting statistics from the report:

- On average, if a non-certified elementary school used energy as efficiently as a certified Eco-School, it could reduce its greenhouse gas emissions by 12 tonnes/year
- On average, if a non-certified secondary school used energy as efficiently as a certified Eco-School, it could reduce its greenhouse gas emissions by 52.1 tonnes/year

Ontario Eco-Schools Waste Comparison Study

In 2016, the Ontario (Canada) Eco-Schools Waste Comparison Study (Technologies, 2016) was conducted by Immacutec Systems Technology, Inc., an independent waste audit consultant.

Key findings include:

- Certification from Ontario Eco-Schools is associated with lower landfill and total waste generation per student
- The key factor to the success of waste reduction and diversion initiatives at the schools studied was consistent engagement and support from teachers, administrators and board level officials
- Principals, in particular, had a great degree of influence over the mentality associated with waste diversion programs at the schools

Climate Change Learning & Action in Ontario's Certified Eco-Schools

In 2017, a report (Goodchild, 2017) was issued that summarised and evaluated the findings from the Climate Leadership project conducted by Ontario Eco-Schools during the 2016-17 academic year. The project was funded in part from the Government of Ontario's carbon market, as part of Ontario's Climate Change Action plan. The goals of the project were to provide baseline information on climate change learning and action currently practiced at certified Eco-Schools in Ontario, and increase climate awareness and leadership capacity among educators and students. The report found that the Ontario Eco-Schools programme is well-positioned to facilitate the integration of climate change learning and action throughout school communities. Results show that climate change education is happening at all grade levels and in a variety of subject areas at certified Eco-Schools. Moreover, Eco-Teams organised hundreds of school-wide campaigns

and activities to increase climate change learning and action. Participating schools reported impacts on awareness, Eco-team participation, and school performance on energy and waste indicators. Surveyed teachers reported that Eco-Schools workshops and resources improved their capacity to understand and teach climate change material. They also identified barriers to accessing resources and increasing climate change knowledge and action at their schools, such as lack of time and the challenge of incorporating extra material into an already demanding curriculum.

Ireland

Green Schools Travel Progress Report

In 2009, An Taisce conducted a review (Purcell, 2009) of the first year of the national roll-out of Green Schools Travel programme which proved hugely successful in terms of reducing the number of pupils traveling to school by private car, while increasing the number of pupils traveling to school by sustainable modes of travel such as walking and “park n’ stride.” Some statistics from the report are:

- A 27% reduction in private car use to more sustainable modes of travel to school. This equates to a modal shift of 12.6% or over 9300 people/day from the private car to various sustainable methods of transport, i.e., walking, cycling, and park n’ stride. This represents a reduction of almost 20,000 car-related trips to school per day, or nearly 100,000 trips per week
- The modal share for walking to school increased from 17.5% to 25% over the school year, indicating a 43% increase in walking to school
- The number of pupils traveling to school by bus decreased by 10% over the course of the school year

The Diversion of Waste from Landfill Achieved by the Green-Schools Programme in Ireland

As part of a larger report in Year 4 of the Eco-Schools programme in Ireland, researcher Frances Fitzgerald explored the successes and challenges of diverting waste from landfill by the Green-Schools programme in 2001 (O’Mahony, 2001). At the time of the study, over 800 primary and secondary schools were participating in the programme. Results are as follows:

- The reduction of average waste to landfill by schools that completed the programme was 45%
- Urban schools typically generated slightly more waste to landfill than rural schools. This could be accounted for by the general larger size of urban schools

- 39 out of the 47 schools surveyed were being charged for waste disposal. The study indicates that schools that were paying a waste disposal levy were producing less waste for landfill than those that didn’t have to pay
- 26 out of the 47 schools surveyed were monitoring their waste prior to the survey using a variety of methods: by weight, by volume, counting the number of bags or bins going to the landfill, etc. The study indicated that schools that monitored their waste typically generated less waste to landfill
- The number of recycling and reuse projects was higher within awarded Green Schools. The study indicated that the larger the number of projects, the lower the waste per capita value

Northern Ireland

Green Schools Travel Progress Report

In 2013, an end-of-year project evaluation of Keep Northern Ireland Beautiful (KNIB, formerly Tidy Northern Ireland) and Bryson Charitable Group’s Rethink Waste project was conducted (Maria Curran, 2012-2013).

The aim of the project was to raise awareness of waste issues among 32 Primary and 12 Post Primary schools across Northern Ireland, encouraging a move from recycling waste to waste prevention and reuse, in turn reducing associated greenhouse gas emissions. Some statistics from the report are:

- The submission of 6712 household addresses to the Mailing Preference Service which will reduce junk mail being sent to these homes (an estimated 112.76 tonnes/year)
- The distribution of 8250 water bottles will impact upon the daily reuse of these bottles rather than parents buying drinks for school (an estimated reduction in plastic waste of 39.18 tonnes/year)
- A result of reduction in plastic and paper waste will achieve a significant impact of reducing greenhouse gas emissions by 230 tonnes/year
- An estimated 22,432 people as a minimum were engaged to some extent with the Rethink Waste project

Turkey

A study of Energy Conservation Policies at (Primary) Eco-Schools in Istanbul

In 2013, researchers from the Department of Architecture, Gebze Institute of Technology, in Kocaeli, Turkey, conducted a study (Tonuk, 2013) that examined primary schools in Istanbul that are part of the Eco-Schools international programme. A questionnaire-based survey was administered on the theme of energy management within primary schools in Istanbul, and the findings of a field observation were examined. Questionnaire findings were categorised under three main themes: energy usage and conservation policies at the Eco-Schools' building envelope; energy usage and conservation policies in the indoor environment of Eco-Schools; and types of energy sources used at Eco-Schools. The questionnaire investigated the strengths and weaknesses of the energy conservation policies adopted by Eco-Schools in Istanbul (55 total, 37 survey respondents). The study findings show that there are some deficiencies in the awareness and economic use of energy in the indoor and outdoor environments of the Eco-Schools located in Istanbul that participated in the study. Based on the findings of the present study, the following recommendations can be made for the progression of Eco-Schools in Istanbul:

- Solar control elements should be applied on the facades, according to how much sunlight they receive
- The use of double-skin facades should be discussed when constructing new buildings and in comprehensive building renovations
- Preventive measures should be considered in all Eco-Schools to reduce heat loss from windows and double-skin and energy-effective woodwork applications (which are in limited use in the Eco-Schools) should be generalised to all Eco-Schools
- Methods aimed at energy conservation from windows (which are used in a small proportion of eco-schools) should be discussed and should be integrated in all eco-school buildings
- Self-closing mechanisms (which are in limited use on the entrance gates of some Eco-Schools) should be integrated to the entrance gates of all Eco-Schools
- Low-energy consumption bulbs and fluorescence lights, which are used widely in the indoor environments of the Eco-Schools, should be generalised to the indoor environments of all Eco-Schools. Independent control of energy systems, installed in a small proportion of the eco-schools- should be integrated to all Eco-Schools environments

- The use of sensors mounted on illumination elements and other electrical elements should be generalised in the Eco-Schools
- It is seen that natural gas is used by 100% of survey respondents and that renewable energy resources are used only at low levels for testing purposes and/or to make small contributions to energy gain

The initial investment costs of advanced technologies - used for renewable energy gain purpose - remain at significantly high levels. Although this presents less of a problem for developed countries, these high costs are a real problem for developing countries. However, it is concluded that the study schools, which are labeled as Eco-Schools, should pioneer the use of such technologies and should create special budgets for the adoption of renewable energy resources. Considering the general results, it is recommended:

- To gradually apply the same or similar applications in all primary schools in Istanbul and Turkey
- To add educative seminars and/or compulsory lessons on the topics of "environment", "environmental awareness", "energy conservation and management" to the curriculum in addition to basic education subjects
- To seek active support from professionals in the fields of "education" and "environment and renewable energy systems" (universities, those working in applied fields, non-governmental organizations, provincial governments etc.)

USA

Eco-Schools USA: Reducing School Operating Costs Annually

The Eco-Schools USA programme has a built-in online dashboard for every participating school. On this dashboard, schools are able to track their progress and report metrics towards their goals in addressing each of the twelve environmental themes offered.

In 2016, participating U.S. Eco-Schools saved more than \$75 million on school utility bills; in 2018 that number grew to more than \$100 million. Schools report kilowatt hours saved; gallons of water saved; amount of CO2 emissions avoided and more on the online dashboard. U.S. Eco-Schools report savings of up to 20% in energy usage and 30% in water consumption each year.

Behavioural/Attitudinal Changes

Of all the research that has been conducted on the Eco-Schools programme, most of it has focused on behavioural and attitudinal changes of students and school faculty members.

Czech Republic

Eco-Schools in Kindergartens: The Effects, Interpretation, and Implementation of a Pilot Programme

In August 2015, researchers conducted an analysis (Jan Cincera) of a Czech pilot project in implementing the Eco-Schools program in kindergartens. The evaluation applied a mixed design that included pre/post testing of children using picture-based questionnaires, and interviews with the teachers responsible for conducting the programme. The findings revealed a significant increase in the pro-environmental attitudes of the children between the pre-test and the post-test. The results of the qualitative analysis illustrated a broad spectrum of the ways in which the programme was interpreted by the teachers. While some teachers interpreted the program in a highly instrumental way, others interpreted it as emancipator. Their different ways of interpreting the program led the teachers to different models of distribution of power between the adults and the children. Some of the teachers made the effort to establish a democratic participation of the children in setting the programme agenda, while others manipulated the children to obtain their agreement with pre-selected activities.

Although the study did not find any evidence that the instrumental implementation of the programme would be less effective in promoting children's attitude change, it showed differences in the interpretation of the merit of the program amongst the teachers.

England

Children's Environmental Values in the Early School Years

In 2005, Dr. Paula Owens, Deputy Head, Eastchurch CEP School in Kent, England conducted research (Owens, 2005) to investigate how children's environmental values developed during the early school years within school contexts. Her research was designed to discover what kinds of environmental experiences young children were having, how these had been laid down into memory, and how this affected the development of their values, skills, knowledge and capacity for action.

The school setting was chosen for this research because of its common frame of reference for all children and potential for influence on their development. Some key findings include:

- Children valued rules that they had been given, and where they saw them being consistently applied, they derived positive connotations from them. For example, while the youngest children in Village School said that you mustn't put litter on the floor, older children at the same school said that bins were valued because you could put litter in them
- Children's environmental language acquisition reflected the degree of outdoor curricular learning they had experienced. For example, groups of Year 2 children at Edge School had mentioned mostly playtime activities at the start of the year but in July, after a successful topic investigating the school pond, their drawings reflected the learning and specialised vocabulary they had acquired
- Collaborations between children and adults were valued by children; for example the joint community building of a gazebo at Edge School was mentioned by a high proportion of pupils from all age groups at the school
- Overall, compared to non-Eco-Schools, the children appeared to have a higher degree of involvement in the running of their school through the democratic and participative structures in place. The children appeared to be more confident and have more critical skills, i.e., they were more willing to question environmental practices in their school and suggest alternatives

Scotland

Scottish Parliament's Education Committee Call for Evidence – Pupil Motivation Inquiry

In 2005, Kate Campbell, then Eco-Schools Manager for Keep Scotland Beautiful, submitted evidence (Campbell, 2005) to the Scottish Parliament how children and young people can be motivated and engaged as much as possible by their school experience. Kate detailed how in 2001, the Scottish Executive Department (SEED) adopted involvement in the Eco-Schools programme as a performance measure for one of the Government's National Priorities

in Education, National Priority IV relating to values and citizenship. Local authorities must report on 'the number/percentage of primary and secondary schools within their area that are participating in the Eco-Schools award or similar accredited environmental award'.

Many local authorities and schools report that Eco Schools involvement also addresses many, if not all, of the other national priorities, especially NP I : attainment and achievement, NP III : inclusion and equality and NP V : learning for life.

Our experience in working with all 32 local authorities and numerous schools across Scotland is that involvement in the Eco Schools programme can have a positive effect on pupil motivation, particularly amongst disaffected young people, pupils with learning difficulties and the less academically able. We can highlight a number of excellent case studies from all over Scotland. At the moment, this evidence is largely anecdotal, but Eco-Schools Scotland is intending to undertake research during 2005 to see if this is, in fact, the case.

Turkey

Can Eco-Schools Improve Elementary School Students' Environmental Literacy Levels?

In 2012, three Turkish researchers (Ozsoy & Ertepinar, Dec 2012) conducted a study to investigate the effects on elementary school students' environmental literacy levels. Data of the study were gathered from 216 students enrolled in two elementary schools, one of which was determined as an experimental group receiving Eco-Schools application, and the other set as a control group receiving traditional school application.

The Environmental Literacy Questionnaire (ELQ) used had four subscales: environmental knowledge; attitudes, uses and concerns, and was used to determine students' environmental literacy levels. Results revealed that there were significant differences between control and experimental groups of different grade levels in terms of all subscales of the ELQ in favor of the experimental (Eco-Schools) group.

In addition to the study results, the researchers also provided recommendations for further research:

- That a similar study could be conducted with urban and rural schools having students with different backgrounds
- Replication of the ELQ study with students from different locations and cultures conducted internationally to look for similarities and variations
- Expanding the research to include other variables such as environmental values and beliefs
- Increasing the time frame for the study to determine the long-term retention of environmental literacy and the extent of its continued impact on environmental attitudes and behaviours, i.e., a longitudinal study

Whole School Sustainability Programme Approach

The Eco-Schools programme employs a whole school approach to education for sustainability development (ESD). Students, faculty, school administration, community members, and more are all engaged and involved in the program to one degree or another. Research has been done by individuals and groups within several countries on the efficacy of the whole school approach that Eco-Schools utilizes.

Germany

The Concept of the Whole School Approach – a Platform for School Development with Focus on Sustainable Development

In 2013, Reiner Mathar, the State coordinator for Education for Sustainable Development in the Hessian Ministry of Education and Ministry of Environment, Energy, Agriculture, and Consumer Protection, Germany, wrote a concept paper (Mathar, 2013) that draws upon reflections, discussions, and state-of-the-art evidence from practical implementation of an international network of experts from various ministries, universities, and NGOs in India, Germany, Mexico, and South Africa called the ESD Expert Network. In his concept paper, Mathar references the 2012 UNESCO Report, “Shaping the Education of Tomorrow,” in which Eco-Schools are discussed as an example of a whole-school approach to sustainability:

‘The key message that comes from the story of Eco-Schools success has to be that for change to happen, power must be disseminated to the point of implementation. Schools are dominated by students. They are the ones who act as the eyes and ears of behavioural change. Develop the schools processes and systems to support student led change. Eco-Schools highlight that ESD is not just about curriculum content, but a whole of school body, whole of school mind set and whole school action process. The case study also acknowledges that change is slow, incremental and is only sustainable if genuine models of participatory learning and decision making form the basis of the process.’

The greatest gift a school head teacher can give to his/her students therefore, is the gift of freedom for self-directed and purposeful learning, supported by structures and processes that empower and engage with real life ecological issues.

The lessons of Eco-Schools also highlight that those who create the ecological footprint need to have opportunities to reflect and understand what it means to be part of the environment, the effects one has in all the different interconnected cycles and biomes of life and to be involved in and control of remedial action or proactive measures. Ultimately, Eco-Schools are a process that becomes a way of life. A cultural paradigm for school administrators to master through delegation and a belief in their teachers and students capacity to change the school from the ground up.’

Interestingly, since 2009, the international ESD Expert Network (Germany, India, Mexico, and South Africa), has discussed the existence of a common understanding and a common concept of school development in the field of ESD focusing on three key aspects: education in general; school development in detail; and guidelines and directions of curriculum development.

They also looked at existing studies such as the British S3 and the Australian Research Institute in Education for Sustainability. Taking these into consideration, they identified different aspects of sustainable development and ESD that a school could focus on that mirror Eco-Schools themes as well:

- Food and Drink
- Water
- Purchasing and Waste
- School Grounds
- Local Well-Being
- Energy
- Travel and Traffic
- School Buildings
- Inclusion and Participation
- Global Dimension

Ireland

The Performance of the Irish Green-Schools Programme: Results of the Green-Schools Research Projects

In 2001, research was conducted by AnTaisce’s Dr. Michael John O’Mahony and Frances Fitzgerald that outlined the performance of the Green-Schools programme in Ireland. (O’Mahony, 2001). The research took place during Year 4 of the programme in Ireland (September 2000-June 2001). The performance of the programme was assessed and evaluated in two main areas: 1) the quantification of the diversion of waste from landfill achieved by the programme; and 2) the impact of the programme on environmental awareness, behaviour, environmental leadership and a number of related topics. The main question that An Taisce wanted to answer was, “*Is the Green-Schools’ programme having any success in improving the student’s attitudes and behaviour towards the environment?*”

The research comprised a nationwide comparative study of grade 5-6 primary school students (age range 10-13) from awarded Green-Schools and the same from non-Green-Schools. The survey method was a personally issued questionnaire.

The findings are as follows:

- Environmental knowledge/awareness levels are very similar for the two groups
- Regarding positive behaviour towards the environment, the Green-Schools students scored significantly higher. Overall, the Green-Schools students are less likely to drop litter and more likely to participate in local clean ups and environmental projects, conserve water and electricity and consider the environment when making a purchase
- Environmental opinion leadership among Green-Schools students are considerably higher than non-Green-School students
- Environmental problems are seen as more of an urgent problem among Green Schools students whereas non-Green Schools students feel environmental problems are more of a problem for the future
- The levels of recycling of paper, cardboard, aluminum, and glass are higher within the homes of Green Schools students. Home composting levels are also higher
- Interestingly, 90.8% of non-Green-Schools students felt that they could do something about the state of the environment. This number was even higher among Green-Schools students at 95.6%

South Africa

An Assessment of the Role of Eco-Schools in Achieving Whole School Development Through Sustainability Education

In 2009, as part of her Master's programme requirements, Waheeda Maria Carvello undertook an assessment (Carvello, 2009) of the role of Eco-Schools in achieving whole school development through sustainability education. Her research examined what impact the South African Eco-Schools programme, since 2003, has had on the implementation of sustainable education through whole school development. The qualitative evaluation research design was used and data was collected through interviews, questionnaires, and narratives that included all role players. It noted the strengths of the programmes already in place and identified the challenges that still need to be addressed. The outcome of the study proved that the Eco-Schools programme does achieve whole school development by implementing sustainability education and should be incorporated into the formal education system.

Some key findings:

- The Eco-Schools programme incorporated both the criteria set by the 12 principles for Environmental Education and the learning contexts as set out in the sustainability education in European Primary Schools (SEEPS) framework for whole school development. These were successfully integrated within the South African context
- Schools demonstrated established models of whole school development within their local contexts
- Learning activities promoted active and experiential learning. Learners enjoyed being actively involved in learning outside the classroom, thus taking ownership of their growth and development
- Parents, teachers, and Eco-School coordinators highlighted the importance of administrative skills and teamwork
- Learners' responses indicated gaps in the teachers' knowledge and skills
- Teachers noted the need for professional development

Some findings from Carvello's research were surprising:

- A special school for the blind, the deaf, the physically disabled and learners with severe barriers to learning (Appendix B2 & D1) was extremely successful in implementing the Eco-Schools programme. Despite the usual challenges experienced by other mainstream schools within the Eco-Schools programme, this school has outperformed many of these mainstream schools to meet the performance criteria of Eco-Schools. For example, the school supports an orphanage from its food garden and uses the skills acquired from the Eco-Schools programme to help them become learners for life by developing entrepreneurial skills that would make them self-reliant and independent despite their disability. The learners interviewed were very knowledgeable about their environment and their role in sustainable development
- At an urban school (Appendix B1 & D1), the entire staff was part of the Eco-School programme. To ease the teachers' workload, the entire programme is managed by the parents' committee. This arrangement has had the admirable result of helping the school earn the prestigious "International Flag" award
- The Department of Basic Education's lack of support and inefficient, ineffective programme delivery were creatively overcome by the Free State Regional Coordinator of the Eco-Schools programme. This was done by working through the Free State Department of Tourism and Environmental Affairs to get all the disjointed environmental programmes streamlined and brought under the umbrella of the Eco-Schools programme

Global

Whole –School Approaches to Sustainability: An International Review of Whole-School Sustainability Programmes

In this report prepared by the Australian Research Institute in Education for Sustainability (ARIES) for the Department of the Environment and Heritage, Australian Government, several Eco-Schools National Operators provided significant contributions. These National Operators were from South Africa, Scotland, and Ireland. The study (Henderson, 2004) found that there is a lack of evaluation and research findings to address questions regarding implementation and effectiveness conclusively, but that there is some evidence which points to a number of critical success factors for whole school sustainability programmes. These include: alignment with national government priorities; access to expertise in EE and/or EFS during program design and implementation; significant and continuous funding; alignment with EFS approaches; investment in professional development of program teams as well as school partners; creating links with EE initiatives already in operation; and establishment of multi-stakeholder partnerships.

The researchers determined that the key features which characterise a Sustainable School are:

- Engaged school leadership that practices sustainability through democratic decision making
- Whole school participation with extensive school-community partnerships
- The school as a 'learning organisation' using participatory learning approaches for students, reflective practice for teachers, and regular professional development for all participants
- Transdisciplinary approaches to curriculum
- 'Greening' of school grounds and extensive use of 'outdoor classrooms'
- Reductions in a school's 'ecological footprint'

The critical success components in the formation of a Sustainable School were found to be:

- Effective multi-stakeholder partnerships
- Expertise in Environmental Education /education for sustainability - focusing on socio-cultural dimensions of sustainability rather than a restricted focus on 'green' agendas

- Political support - through national sustainability priorities - and programme autonomy and flexibility
- Continuous financial support over lengthy timeframes – there are no 'quick fixes'
- Program support – such as facilitators and coordinators, professional exchanges and networking opportunities
- Professional development of teachers and others involved in the process
- Curriculum practices that are seen as part of core commitments and professional priorities
- Accreditation and certification processes which offer recognition and accolades for schools' efforts and achievements
- Investments in monitoring and evaluation to inform development and effectiveness of initiatives

The Whole-School Approach to Education for Sustainable Development: From Pilot Projects to Systemic Change

In 2008, Lucy Hargreaves developed a journal article (Hargreaves, 2008) for the Policy & Practice publication on the whole-school approach to ESD. Her article outlined a whole-school approach to ESD that includes examples where such an approach has been successfully implemented and highlights some of the key challenges that must be addressed to make the widespread adoption of the whole-school approach to ESD a reality. The international Eco-Schools programme was one of those highlighted, and even though it is noted that the programme is very successful, there are still significant challenges in transitioning the whole-school approach to ESD from pilot project to wide-spread systemic implementation in the formal education sector.

Hargreaves identifies these key challenges and opportunities:

- Time and resource constraints are identified by teachers and school administrators as common barriers to ESD implementation. Adopting a whole-school approach to teaching and learning is viewed by many as simply impractical given current constraints on teachers' time within already overcrowded curricula. ESD continues to be conceptualised by many practitioners as an 'add-on', rather than a holistic change in teaching and learning practices. To obtain support from school administrators, governments and teachers alike, it is necessary to highlight the importance of curricula integration, rather than the creation of new courses. It is also critical to underscore to decision makers the cost savings that can ensue from more sustainable operations within schools

- Leadership challenges, both within schools and within their larger administrative communities, are prevalent in moving toward a more systemic approach to ESD in schools, a trend articulated in a recently released report (Jackson, 2007). Results of this study show that those leaders who develop sustainability within their schools are motivated by a personal passion for sustainability. The same study noted a lack of priority for sustainable development within many local government authorities and a consequent lack of institutional support for implementation of ESD in schools. It is critical that governments harness the energy and commitment of individual leaders, communities and NGOs who support the whole-school approach to ESD to drive a more systemic implementation of ESD for a greater impact. Enhanced leadership could create the governance structure necessary to ensure the longevity and sustainability of ESD.
- Studies show gaps in appropriate pedagogy and curriculum development in teacher training, the absence of a positive vision, and a general lack of conviction that individual teacher efforts will

really make a difference. Teachers also require greater capacity to undertake the immense and challenging task of implementing a whole-school approach to ESD (Sustainable Development Education Panel, 2003). Enhanced pre-service and in-service teacher training is urgently required for educators to be able to act as effective facilitators in the ESD process.

- A whole-school approach to ESD presents a significant opportunity for the formal education sector. Not only can it enhance the environmental performance of schools as institutions, but it can raise the quality of education and build a more sustainable future by imparting the values and tools that today's children and youth will need to build and maintain more sustainable societies. Commitment to change is required from all stakeholders, from grassroots activists to educators to policymakers. Only by working together at all levels can we ensure that ESD moves beyond the realm of pilot projects and individual case studies to a more system-wide catalyst for change.

In closing

As evidenced by the various highlighted reports, articles, or evaluations that have been highlighted in this section on what research and evaluation has been undertaken to date on the Eco-Schools programme, that the programme works to a great extent in the four major categories identified: Academic and Skills Development; Environmental Impact; Behaviour/Attitudinal Change; and Whole-School Sustainability Approach. There are, however, still many gaps in the research on our programme, some of which are identified below:

Something to Munch On – For our Next 25 Years!

Here are some proposed research ideas for the collective Eco-Schools family to “munch” on as we consider how best to enter our next 25 years! Please feel free to add to these as time goes on, or if research has already been done that fits the niche, please provide that information to the FEE Head Office.

Noticing “Spots” in Environmental and Sustainability Education Research:

Alan Reid posed this interesting concept earlier this year in the Environmental Education Research publication (Volume 25, 2019 – Issue 2):

NOTICING SPOTS IN ENVIRONMENTAL AND SUSTAINABILITY EDUCATION RESEARCH

‘blank spots’ – those topics about which ‘we know enough to question, but not to answer’

‘blind spots’ – those topics that we ‘don’t know well enough to even ask about or care about’

‘bald spots’ – those topics that are repeatedly pursued in research’

‘bright spots’ – those topics that inspire and innovate research’

Source: Adapted from Reid, A., and W. Scott. (2013). “Identifying Needs in Environmental Education Research”, Stevenson, R. B., Dillon, J., Wals, A. E. J., and Brody, M. “The Evolving Characteristics of Environmental Education Research” and Wals, A., Stevenson, R., Brody, M., and Dillon, J. “Tentative Directions for Environmental Education Research in Uncertain Times. In International Handbook of Research on Environmental Education, edited by R. B. Stevenson, M. Brody, J. Dillon, and A. E. J. Wals. London, UK: Routledge

RECOMMENDATIONS

- More holistic approach and focus on societal changes.
- There is no agreement on the question of what is the correct/right/best behaviour from an environmental or sustainable point of view.
- Beliefs, knowledge, values, experience and action are all connected, the focus has shifted from examining the above mentioned terms like beliefs and behaviour to examining how people make sense of their surroundings.
- EE has been depoliticised and, the role of politics has not been sufficiently reflected in EE research.
- EE researchers tend to operate with a more eco-philosophical worldview than the traditional rationalist worldview of science.
- Another strategy for making such an identification is to consider; “Blind spots” – that we don’t know well enough to even ask about. “Blank spots” – where we know the questions but not the answers. “Bald spots” – where the areas have been worn down so to speak due to researchers continuously approaching them in the same way and

IMPLICATIONS

- With large Eco-School network and possibility of longitudinal studies, we could support this research.
- Eco-Schools provide a frame for countries to work with their own issues and behaviours which will grant insight into more general behavioural structures.
- Large scale environmental literacy – how do we as a group define this?
- More research on global- and active citizenship as well as incorporation of general civics within the Eco-Schools themes and steps
- What are the blank-, blind- and bald spots in the Eco-Schools programme?
- Some of these might apply to Eco-Schools as well as EE research in general.
How does practice influence research?
How do we get people engaged more as well as more people engaged?

therefore, not getting anywhere new.

- The attached appendix is categorized into three key ideas under which a lot of needs are identified:
 1. EE research as connected across interest, preferences, approaches, time, and distance.
 2. EE research foci that needed attention.
 3. sustainable development as inherently a learning process that needs researching by/with those involved in the dynamics of such learning
- The field should also continue to encourage and support research in EE that can shed light on the intersection and relationship between race/power/culture and action/experience/technology
- Doxas means in this context presuppositions in the field, or “sets of inseparable cognitive and evaluative presuppositions whose acceptance is implied in membership itself”. Such doxas are a part of what sets the boundaries of a field of inquiry and determine and govern priorities for everyone working in the field. Besides this, they are often tacit
- Gaps in EE research regarding the digital age and the connection of the technological changes to both environmental and cultural changes
- Challenge for EE researchers that misinformation and conflicting information become just as accessible as all other because confusion about what to think and do about e.g. climate change makes people unengaged
- “What might be some of the implications of living and learning in times of accelerating change, uncertainty, risk, complexity and contestation of knowledge for EE research?” - In connection with this question, three tentative directions for consideration by researchers are suggested:
 - 1. Connecting biophilia and videophilia
 - 2. Creating spaces for hybrid learning
The boundaries between formal and informal education are breaking down and therefore, EE researchers as well as environmental educators should investigate what spaces this hybridity opens up for.
 - 3. Strengthening engaged scholarship with a planetary conscience
Engaged scholarship can be characterised as science as community and contrasted with science as commodity
- What are the critical points for success?
 - What is success – how should it be defined? - How is it reached?
 - How do you measure it? - What are the common elements?

- All represented in Eco-Schools.
- Identify the doxas when Eco-Schools are being researched as well as the doxas within the Eco-Schools programme.
- Do Eco-Schools use the full potential of the technological age? Identify potential and gaps regarding technology in Eco-Schools.
- Eco-Schools seem to overcome this challenge. How?
- Research on changing roles of e.g. formal education institutions.
- Research how consumption of nature through digital or virtual media compared with real nature experiences impact children? Are one as valuable as the other in term of behavioural change and value forming?
- In what ways does Eco-Schools encourage the teachers in the programme to rethink their way of teaching? Curricular competitions etc. - Research in the future of learning due to technology advancement and artificial intelligence
- How does global citizenship change the way one thinks and acts?

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