

**GLOBAL
FORUM**

VOL35

CARETAKERS OF THE ENVIRONMENT INTERNATIONAL



**LANDSKRONA, SWEDEN
24-28 JUNE 2024**



Caretakers of the environment 2024
Landskrona, Sweden

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Landskrona castle, the Citadel, was built in 1549-1559 by Christian III of Denmark. The fortress offers a fascinating history. During the 1660s, the Citadel was developed into the most modern fortress in the Nordic region. It is the only preserved landfall fortress in Sweden and it has been a listed and protected building since 1935. From the early 18th century, the fortress was used as a prison; in 1827, it became a prison for those serving life sentences. During the 20th century, it served as a forced labour facility for women until 1940. Today, the Citadel area is a lovely, green place to hang out. It offers a large playground, fishing in the moat, and a café.



Foreword

Caretakers of the Environment International (CEI) is a global, independent organization and network for secondary level (high school) students, educators and mentors working on environmental and sustainability issues around the world. Established in 1986, this CEI 2024 conference is the 38th annual conference, with delegations from 17 countries.

The conference is our 3rd hybrid conference and we are delighted to provide a Global Forum that reflects the projects and efforts from both the online and physical delegations. You can also delve into articles about the previous conference in Indonesia, meet the organising team and read articles from other Caretakers about environmental and cultural issues. At the back of the magazine you can find a handy guide to the international board & branches around the world.

This 2024 Global Forum was designed and put together by Jana Cox & Timo Julku with help from the alumni team and the CEI Sweden organising team.

We would like to dedicate this edition of the Global Forum to the late Dan Hoynacki who spent decades editing and improving the magazine. We hope to carry on his legacy in these pages and in the projects and creativity of all Caretakers.



Jana Cox
Senior Alumni Chairperson

Message from the CEI board



Dear Caretakers - students, teachers and friends, on behalf of our International Board, welcome to 38th volume of the Global Forum for Environmental Education, dedicated to the 38th annual Caretakers of the Environment International Conference held on 24-28th June in Landskrona Sweden, under the expert leadership of our Swedish Board member: Karin Warlin. A special thanks must be extended to the extraordinary organizing team of CEI Sweden and the CEI Alumni who have given their own time to organize both a physical and a virtual conference in difficult times.

Each Caretakers conference is unique, as is every delegate who attends either in person or virtually. Each of us must put forth an extra effort to get the most out of a Caretakers conference, not only for yourself, but for your delegation, school, country and the future of this planet. It is one of the few opportunities to personally connect with your international peers and share mutual interests, goals, values and beliefs. In this time of global conflicts, it is particularly important to concentrate on uniting youth in a common goal, to emphasize what we all share and to build a positive global family moving towards a sustainable future.

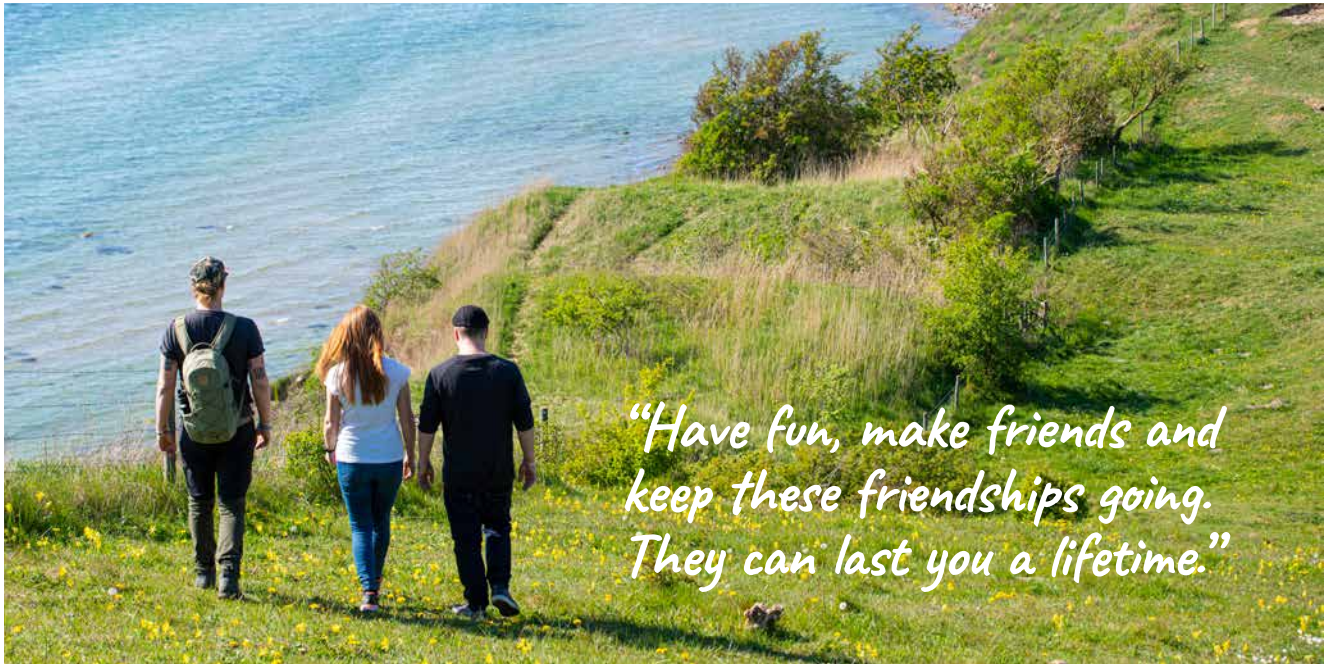
It is always with the deepest sadness that we lose family and it is with a heavy heart that I share

the news of the passing of our former President Dan Hoynacki at the beginning of the year. Dan was a dedicated and enthusiastic Caretaker for more than eighteen years and loved nothing more than encouraging and supporting young people to find their way of environmental stewardship through hands-on practical activities. He will be deeply missed but it is comforting to know that the many students he brought to conferences over the years will be continuing his work in his absence.

The conference itself is an opportunity to not only share the projects you have been working on, but a unique opportunity to meet young people from every corner of the globe, forge friendships, encourage each other, learn about the environment and moreover

make a difference in your local community. Take this opportunity to speak with delegates, teachers and leaders. Make the most of this once in a lifetime chance to connect across the globe either in person or virtually.

My first Caretakers conference was in 1995, long before most of you students were born. It was held in Murmansk, Russia in a new school which had been built for deaf children. Although the organizers were very unsure and had few resources at the time, the warmth and friendship extended during that week has lived with me throughout the years as a reminder that we don't need a lot to make a difference. No matter our personal circumstances we can each make a difference to this planet. By choosing to be part of the Caretakers family you have made a decision to take action.



Almost thirty years later, I have attended many Caretakers conferences. Each one stands out for many different reasons, but the overwhelming thing they have all had in common is dedication. Dedication by the organizers to produce a conference that shows their country to the world. Dedication by the sponsors to highlight the great things happening in the host country but most of all dedication by the delegates to work hard to try to create a more sustainable environment both at home in their local area and globally.

The theme of this year's conference is Education, Regulation and Collaboration. Education is important because without knowledge we do not know what should be done. Regulation is equally important to ensure that everyone follows guidelines and that governments can be held accountable by their citizens. I think however, that the most important area of the theme is Collaboration. Before the conference you all

collaborated on the New Young Masters Programme and during the conference you will have the opportunity for further collaboration which will also continue when you return home. Make the most of this opportunity to work together. Have fun, make friends and keep these friendships going. They can last you a lifetime.

The CEI conference is an excellent forum where teachers and students from all over the world can come together, discuss, learn about other places and customs. It is a space where we all have the possibility to develop tolerance and understanding, to make friends and want the best for other people living under very different conditions. This Global Forum is a way to take a first step forward: to help to protect our world, to find solutions and to make a better future for our nature, our common globe. It is a unique and special place.

Finally, a reminder that we are all volunteers and should be proud of our efforts. Giving up our time and resources willingly because we recognise the importance of what we are doing makes our projects personal. Grasp this opportunity with both hands and have a wonderful conference.



Anne Marie Begg
CEI Scotland
CEI President



In the heart of Landskrona lies Öresundsgymnasiet, offering seven national programs, along with a dedicated sports academy. Öresundsgymnasiet is a modern and newly renovated school in a classic school building, striving for excellence in both education and personal development.

At Öresundsgymnasiet, sustainability is part of our daily life. We have won the "Sustainable High School of the Year" award twice and are looking forward to hosting you at CEI Sweden 2024



Welcome to Landskrona

We are proud to invite young people from all over the world to Öresundsgymnasiet and Landskrona. This gives us a great opportunity to showcase our beautiful city and give young people the chance to exchange experiences and learn more about sustainable development.

Öresundsgymnasiet has been working on sustainability issues for several years and was named Sustainable School of the Year 2022 by the organization Keep Sweden Tidy. Students and teachers from high schools in Landskrona have also represented Sweden at CEI conferences since 2014.

This conference is important because it gives inspiration and energy to young people in both Sweden and other countries to continue working with sustainability. At the same time it is an important event not only for us locally in Landskrona but also for the CEI network.

The city of Landskrona welcomes you and wishes you continued success in your work with sustainable environmental development.



Torkild Strandberg
Chairman of the Municipal Board Landskrona

Message from the CEI 2024 Host



It was the year 2000. My sister in law, Ingrid Adolfson, asked me to help out as a moderator for projects groups in Lund city here in Sweden. She and her good friend Birgitta Nordén had 1994 started the Swedish branch of an organization whose aim was to spread awareness and knowledge of environmental issues among teenagers: Caretakers of the Environment. And now they were to host the yearly conference in Sweden for the very first time.

To be honest I didn't really know what CEI was at the time. But I thought it sounded exciting meeting people from all over the world so I helped out for a couple of hours for a day. I was astounded. The spirit, the energy and determination of all these people coming together, in a united effort to work for a better environment – it was contagious! Caretakers of the Environment would quickly become a part of my life. Today the Swedish branch of CEI celebrates 30 years of work and we feel proud to welcome you all to Sweden once again, this time to the city of Landskrona, where I have been working for more than 35 years as a high school teacher in nature and environmental science.

I have participated at CEI with my students from Landskrona in most of the yearly CEI conferences since 2014. This experience has enriched my life tremendously. Therefore, a couple of years ago, when dear Dan Hoynacki suggested it was Sweden's turn to host a conference, I asked my colleagues from CEISE. And, they said yes. Dan is no longer with us in this world but his spirit will always be with us.

This is the 38th CEI conference and the 3rd time it goes hybrid.



Ingrid Adolfson
CEI Sweden
Co-founder 1994

As you know, the theme for this conference is:

**EDUCATION,
REGULATION AND
COLLABORATION
FOR A SUSTAINABLE
FUTURE.**





“I would like to welcome you to our part of the world.”

The education part already started digitally in December 2023 when we launched the New Young Masters Programme course. More than 300 eager students have now participated in this online programme. Next step was the digital pre conference in March. From a TV studio here in Landskrona, our two keynote speakers gave presentations about biodiversity but also about the importance of having proper regulation in order to reach a more sustainable future. You will be hearing more about regulation during the conference week! Collaboration is the optimal way to work with global challenges. Being a caretaker of the environment means collaborating with people from all over the world and having fun while doing it.

I would like to welcome you to our part of the world. Welcome to a week filled with activities on this important theme.

Finally, I would like to say thank you to my colleagues in the Swedish branch who have worked so very hard to prepare this CEI 2024 for you all. Thank you to the Senior Alumni who among other things organize most of the digital part of this conference week.

Thank you to the board, to our sponsors and to our main partner Landskrona Stad, and thank you students and teachers from many countries for your contribution with projects, cultural performances, posters and never-ending enthusiasm.

Together we can chart a course towards a more sustainable future.



Karin Warlin
CEI Sweden
Conference Chair 2024



The picture represents Sweden's oldest allotment area, found in Landskrona.

Caretakers of the Environment International/Sweden (1994-2024)

Reflections by Birgitta Nordén birhitta of CEI/SE & CEI President 2008-2016

To all CEI 2024 delegates and colleagues, teachers and students involved in Caretakers of the Environment International, the very best mid-year wishes to you! Thank you all for actively supporting the CEI and for never hesitating to engage new students and teachers from countries all around the world.



As we finish one school year and begin a new one, we have many tasks. But it is also a time to renew relationships, make new friends, and learn about our similarities and uniqueness's within our CEI network. I am so proud that our 30th anniversary celebration of the CEI/SE is taking place at the annual conference, when it is being hosted by our most capable colleagues in Landskrona. And CEI/SE has continued its tradition in bringing the important and exciting dimension of the new Young Masters Program (NYMP) to this CEI 2024 conference in Landskrona by urging remote learning and partnerships among schools from different countries within a broad range of topics that encompass environmental education and didactics for sustainability.

Please, take the time to read through this issue of the Global Forum. It is your collective voice and strives to continue to reflect your achievements, challenges and innovations. We are hopeful that the youth of the world will have the opportunity to have their voice heard on the very issues that affect their future well-being. This issue also notes excellent work that is happening with youth and education in countries and communities who have yet to partner CEI. And of course, enjoy the augmented learning opportunities and the reflections from students when meeting in-person and in hybrid format. This global synergy continues within our CEI work at this Landskrona conference and throughout the next year.

I urge you to interact with the CEI Board of Directors during the conference as well as through mail and digitally afterwards to enhance the democratic influences needed today. The strength of the CEI organization lies in the depth of knowledge and diversity of its participants. The common ground we educators share with our students is that we both have much to learn and understand. Our ability to continue and grow our work is determined by how well we continue to communicate with one another in the future.



Birgitta Nordén
CEI/SE Co-Founder
CEI Sweden

CEI/SE VISION

Prevention is better than cure.

There is only one earth. Even so, we are not looking after it as we should. We exploit resources faster than they can be replenished. We use rather than reuse. The greatest challenge facing mankind, today and in the future is how to look after the earth's resources and create an ecologically sustainable society. So that the next generation will really be the next generation. The only option is preventive environmental strategies. But we have to start today. We have to find the best approaches together. We have to work together: across borders. Then, it will not be too late. By thinking in terms of prevention, we can solve environmental problems before they arise. The issues have to be tackled at source. This means, for example, that when a new product is to be made, the design, materials, manufacturing methods and transport are chosen that have the least impact on the environment. It is important that we look at the whole lifecycle of a product and minimize the environmental effects throughout the whole chain. The first step is a change of attitude.

Knowledge is the key to change.

The Faculty of Education and Society at Malmö University conducts research and teaching on sustainability didactics and preventive environmental management strategies. In collaboration established with Lund University educational and research programs we aim to examine pollution prevention by employing cleaner technologies.

Together we can bring about change.

Our vision is that the Swedish Branch of Caretakers of the Environment International, CEI/SE, will be part of a global network within which everybody works together to answer climate change, sustainability, and environmental questions - across national and cultural boundaries. With the New Young Masters Program at Malmö university and the CEI 2024 conference in Landskrona focused on *Education, Regulation and Collaboration for a Sustainable Future*, we are taking another step in realizing our vision.

How it all started... CEI Sweden: past, present & future

The 1994 CEI conference in Scotland was so inspiring that a Swedish Caretakers branch was founded the following August by the teachers Ingrid Adolfsson and Birgitta Norden who registered the CEI/SE branch the very same year. Participating in the conference were: Suryo Prawiroatmodjo from Indonesia, who Ingrid and I (Birgitta) visited thereafter several times bringing students and colleagues with us during the following years.



We will always be grateful to Arjen Wals (CEI, the Netherlands and CEI co-founder) and the late Ed Radatz (CEI USA) for introducing us to the Caretakers fellowship. They were also honoured guests at the CEI/SE conference GEYC 2000.

– Please, read Arjen’s reflection on our first Swedish CEI conference, which he describes as a success.

The Swedish conference in 2000, was one of the largest in the history of the CEI with 550 delegates participating and 78 countries represented during the week in Lund.

The network learning was very rewarding for the participants. Some executive committee members for CEI Sweden 2024, namely: Andreas Feuk and Karin Warlin, got involved around that time in CEI/SE. For three decades they have empowered so many more Swedish Caretakers.

Together, we are bringing this Caretaker history to Landskrona. Thanks also to the support and great commitment from the teachers Carolin Koppelaar and Kristina Helg, and the CEI Alumni and Landskrona Municipality.

I hope delegates who are attending the CEI for the first time during CEI 2024 will have an equally long and enjoyable association with the organization. I also hope that at this conference everyone will find at least one thing to inspire them, at least one thing to make them smile and will go home at least one friend richer. Let us take on new challenges together!

Following page

Professor Arjen Wals (former CEI President and co-founder of CEI in 1987) conducts research and collaborates with Dr. Birgitta Nordén. Do not miss the book *Whole School Approaches to Sustainability: Education Renewal in Times of Distress* in Sustainable Development Goals Series that is published this summer.

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Nordén, Birgitta. (2024). Critical eco-reflexive approaches: A case study of “Teaching for sustainability” towards SDG 4.7 transition via a whole school approach perspective in higher education. In Arjen Wals et al. (Eds): *Whole School Approaches to Sustainability: Education Renewal in Times of Distress*. Sustainable Development Goals Series. ISBN978-3-031-56171-9.

Wals, Arjen (2000). Reflections on Global Environmental Youth Convention 2000 in Sweden. *Global Forum* 10(2), p.5.

Arjen Wals reflects on the Swedish model with YMP

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Reflections on the Global Environmental Youth Convention Year 2000

by Arjen Wals

President of Caretakers of the Environment/International

Back in 1986, we – Biology Teacher Ed Radatz, Science Writer Isabel Abrams and I, then a student myself – had a dream of starting a network of concerned teachers and students from secondary schools around the world. People concerned about the environment, locally and globally, and people with the commitment and competence to improve the environment through both education and action. Our goals were ambitious but the idea resonated with policymakers, funding agencies and corporations with an interest in the environment, but most importantly it resonated with teachers and students around the world. Every year since 1986 we have been able to link concerned teachers and students through conferences held in places as diverse as Russia, Peru, Scotland, Costa Rica, Portugal and Canada. Our original dream has been fulfilled, although we never stop dreaming.



school students, interested in environmental issues, with images of possible environmental careers. Students need to know that after graduation from high school there are many possibilities for translating your personal interest in the environment into a viable and rewarding career in the environmental field.

And so the organizing began; looking for sponsors, partners, country coordinators, speakers, support staff and participants, putting together a distance learning program, a conference program, public relations packages, etc. and, of course, dealing with all the logistics of arranging for meals, accommodation, airport transportation, field trips, etc., etc. This would be no ordinary conference they all agreed, they wanted it to be impressive both in terms of quality (well prepared participants, excellent workshop leaders, and speakers) quantity (well over 70 countries, possibly over 100...) and impact (it should inspire teachers and become a significant life experience for students, and the stories of the conference were to be shared with many who would be unable to attend).

Admittedly, I was a bit skeptical about this level of ambition. After all, as one of the founders of the Caretakers of the Environment/International back in 1986 I have been privileged to be able to attend all 14

international conferences that have been held up until now. From past experience I concluded that although I sympathized with the ambitions of the local

"It's about marrying the development of cross-cultural partnerships, distance learning, hands-on experience and the exploration of preventative environmental strategies..."

Only a few years ago again three people had a dream. This time three teachers from southern Sweden - Ingrid Adolfson, Eva Dessborn and Birgitta Norden – had a dream inspired by their participation in Caretakers of the Environment conferences. They wanted to host the annual international conference some day in Sweden. They established a National Branch of CEI in Sweden and, because they were small, began looking for partners to be able to host the conference. They were very ambitious, they had learned a lot from past CEI conference, not only from their successes but also from their flaws. Their goal was to, for one week, create a community of global citizens from all over the world who would come to the south of Sweden, well prepared through a carefully designed distance learning program, to explore environmental issues and the creative ways to tackle them. Fortunately miracles do happen in dreams, they found an ideal partner with shared objectives, equal ambitions and complimentary skills and resources: the International Institute for Industrial and Environmental Economics (IIIEE now known as triplE 'i', double 'E') in Lund. IIIEE had the visionary idea of providing secondary

organizers, I was not very hopeful that they would all be realized. Now, two months after the conference as I reflect on the whole experience, I must say the organizers proved that I was wrong. The conference was a success on all three accounts: quantity (550 delegates from 78 countries), quality (a very successful distance learning program, excellent speakers and workshop facilitators and positive feedback from the delegates) and, last but not least, impact (many stories, pictures, video clips and ideas for future collaboration and networking are emerging from the conference).

Meet the CEI/SE Board – the Swedish Executive Committee for CEI 2024



Karin Warlin

CEI/SE President 2015–2024

Job:

Highschool teacher in Landskrona for 35 years in Science, Natural Science and Sustainable societies.

Education:

University of Lund: Ba of Science, Pedagogics

Scripps University of Oceanography, California: Graduate courses and research in Marine Biology

University of Toronto: Courses in Microbiology, Virology, Advanced Nutrition

CEI conferences:

CEI/SE Member since a volunteer in CEI 2000/GEYC 2000 in Lund, Sweden

Participated in GEYC in Dubai 2006, CEI2014, CEI2015, CEI2016, CEI2017, CEI2019, CEI2020, CEI2021, CEI2022, digital participation in CEI2023.



Birgitta Nordén

CEI President 2008–2016

CEI Vice President 2000–2008

Co-Founder of CEI/SE (1994) in Lund, Caretakers of Environment/Sweden

CEI/SE President 1994–2015

Vice President 2016–2024.

Job:

PhD in Educational Science & Science Education. Senior Lecturer & Researcher, Dept. Natural Sciences, Maths & Society, Faculty of Education & Society at Malmö University.

CEI conferences:

Scotland 1994, Russia 1995, Netherlands 1996, Israel 1997, Ireland 1998, Costa Rica 1999, Sweden 2000, South Africa 2001, Italy 2002, Greece & Egypt 2004, USA 2005, Polen & UAE 2006, Hong Kong 2007, Denmark 2008, Scotland 2009, Indonesia 2010, Hungary 2011, Netherlands 2012, Indonesia 2012, Scotland 2013, Taiwan 2014.



Andreas Feuk

CEI/SE Director of Finance and Executive Committee - planning and organising ahead of CEI 2024
Treasurer in CEI/SE 2001-2024.

Job:

Development Consultant and Educator at The Swedish Sports Confederation. Former Secondary School Teacher [Maths, Science, ESD, Biology, Chemistry Didactics & Pedagogics].

CEI conferences:

CEI/SE Member since 1999. Participated with students at CEI 2000/GEYC 2000 in Lund, Sweden, Environmental camp 2001 in Kaliningrad.

CEI/GEYC 2002 in Turin, Italy. GEYC 2006 in Dubai UAE with Students and teachers in a Landskrona delegation.



Anel Spahic and Dalila Osmanovic
are CEI/SE Board members 2024
and are presented by the Alumni.



Kristina Helg

CEI/SE Deputy 2023-2024

Job:

Full time: Teacher of English, Civics and Swedish as a Second Language, Landskrona; Part-time: Lecturer, Lund University

Education:

M.A. in International Relations and International Economics, The Johns Hopkins University, Teachers College
CEI conferences: Indonesia 2023 online



Carolin Koppelaar

CEI/SE Secretary 2023-2024

Job:

High school teacher Mathematics, Physics and Technology,

Öresundsgymnasiet Landskrona

Education: M Sc Mechanical Engineering Chalmers University.

MA in Education for teaching in compulsory school Malmö University

CEI conference:

Indonesia 2023.

Special thanks to the Organization Committee

- ♥ **Karin Warlin**, chairperson of the Organising committee
- ♥ **Birgitta Nordén**
- ♥ **Andreas Feuk**
- ♥ **Carolin Koppenaal**
- ♥ **Kristina Helg**
- ♥ **Dalila Osmanovic**
- ♥ **Anel Spahic**
- ♥ **Katrina Taylor**
- ♥ **Alma Skalic**
- ♥ **Maria Kavan**
- ♥ **Hjalmar Nordén**
- ♥ **Samuel Thelaus**
- ♥ **Vildana Basic**
- ♥ **Majlinda Balijsa**
- ♥ **Ingela Fridlund**
- ♥ **Niclas Petersson**



Programme to boost young people's environmental engagement

How can you engage the young generation in environmental and sustainability issues? Birgitta Nordén at Education and Society has been exploring how. She is the initiator of a global and digital programme for secondary school and college students around the world.



Flags and colours at the Youth Sustainability Conference GEYC 2002 in Turin. More than 30 years after the Swedish Caretakers of the Environment International branch was founded, the conference is coming to Landskrona and is expecting participants from 20 countries.

Sustainability is an issue of concern, not least among young people. At the same time, many young people feel bad about the fact that the future prospects for the environment seem anything but bright.

"The New Young Master's Programme in Sustainability is based on nature, health and well-being. Its aim is to strengthen young people's belief in themselves and the future," says Birgitta Nordén, senior lecturer and researcher at Education and Society.

Deep dive into sustainability issues

The New Young Master's Programme (NYMP) is open to participants aged 13–19 worldwide and has been recognised by UNESCO as a flagship in the category of education for young people. Teachers can apply for the programme by registering a delegation that includes both themselves and 2–5 students.

"The programme helps teachers and students to dive deep into sustainability issues and ensures that they have access to cutting-edge research in the field. It is also about awakening the positive emotions, not just focusing on the threats and dangers that exist. The aim is to give them tools to create new solutions and empowerment," says Birgitta Nordén.

The first task in the programme is for students to identify a place in nature that they like.

"If they live in a city, there may be a park or stream where they can relax. Next, they have to think about whether there is anything that threatens this place. The programme then goes into mapping the local environment, ecology and biodiversity," says Birgitta.

Influencing through action

The pupils also study the actors in society and what they stand for. In this way, they find out which paths they can take to make an impact. The programme then ends with a local project.

"The final project involves finding an angle to link to the global sustainability goals of the 2030 Agenda, often involving contact with decision-makers. It has happened that they have been invited to a municipality building to talk about local sustainability, for example with a mayor," says Birgitta Nordén.

Global, hybrid conference concludes

The current cohort of NYMP includes 350 participants from 20 different countries. The programme ends with the young people presenting their final work at a hybrid sustainability conference organised by the non-profit association Caretakers of the Environment International (CEI). This year's conference will be held at the end of June in Landskrona, Sweden, with more than 150 teachers and students in attendance.

How does it relate to sustainability if so many people are travelling here for the conference?

"It means a lot to meet physically on site to network, but the endeavour is of course to reduce it. I will work towards a fully digital solution for the conference within a five-year period," says Birgitta Nordén.

Digitalising for sustainability

The conference has as many participants digitally as on site, and to make the conference equally rewarding for these participants, student teachers from Malmö University have helped design a concept that works for a hybrid conference.

“Our students have come up with very good suggestions, both on how project work can be presented digitally, and on interactive activities online so that all participants can connect. For example, they can showcase their environments, and at the same time conduct a traffic survey at a road junction,” says Birgitta Nordén.

“A wave of commitment”

Birgitta Nordén’s mantra is that ‘prevention is better than cure’ and believes that sustainability is the way forward.

“More and more people want to do something good to influence things for the better – not just be ignorant and powerless spectators. I see a wave of engagement and believe that it will continue to grow, as our latest research in science education shows”.

“I think it is important for Malmö University to both acquire and teach tools about what we can do and how to do it. Here, teachers can be an invaluable link in the chain. I believe that such an initiative makes the entire university more attractive,” concludes Birgitta Nordén.

Author: Emma Danielsson, Malmö University. Published 5 April 2024.

ABOUT BIRGITTA NORDÉN

Birgitta Nordén is a senior lecturer in pedagogy and science didactics. Her research focuses on developing theory-based professional support for sustainability education through subject didactic modelling of complex environmental challenges. Her focus is on learning and application of the UN’s global sustainability goals – with a particular focus on the conditions for teaching Agenda 2030 in everything from preschool to advanced level in teacher education programmes.



The student teachers at Malmö university building bridges and exploring Higher Education Didactics towards Sustainability and global action and learning



The student teachers at Malmö university participated in innovative hackathon workshops to design hybrid conference activities ahead of the CEI 2024.

Voices on the NYMP



Voices from teachers and students who participated in the programme:

“What surprised me most was how many similarities there are in the environmental obstacles we face between different countries, it really shows how climate change and global warming affect us all in the same way.

“In my group we discussed access to clean water and plastic waste. It can be beneficial to cooperate with other delegations when we have similar problems. I think it is valuable to understand the environmental problems that other countries face.”

“The programme provides a valuable opportunity to work closely together and a unique way to make new friendships.”



A look back at CEI 2023

As the host of the Caretakers Environment International 2023 Conference in Indonesia, I am honored to reflect on our inspiring journey under the theme: Natural and Cultural Heritage. Set against Indonesia's rich backdrop of biodiversity and cultural diversity, this conference highlighted the critical interplay between preserving nature and cultural practices.

Teachers, students, board members, environmentalists, policymakers, and community leaders graced us with their presence, contributing valuable insights that shaped our discussions. Keynote lectures highlighted the interdependence of natural and cultural heritage, emphasizing how traditional knowledge enhances conservation efforts.

Interactive workshops and field trips to heritage sites provided practical learning experiences and fostered a strong sense of camaraderie among participants.

I am filled with optimism and determination as we conclude our tenure as CEI host. The passion and dedication displayed by all have strengthened my belief that together, we can make a significant impact. My heartfelt gratitude goes to all speakers, participants, volunteers, and organizers for their invaluable contributions.

Let's carry the spirit of this conference forward, continuing to champion the preservation of our natural and cultural heritage for future generations. I also hope the next CEI 2024 conference in Landskrona, Sweden, will proceed smoothly and successfully.

Thank you and see you at CEI 2024!

"...Let's carry the spirit of this conference forward..."



Desi Arti
CEI Indonesia
Conference Host 2023



CEI 2023 Reflection

Reflecting on my participation as an alumni from Sweden in the CEI conference held in Yogyakarta, Indonesia, I am filled with a sense of gratitude and inspiration. Organized by the passionate team from Indonesia and the Indonesian School of Arts, the conference blended the importance of the environment with the celebration of natural and cultural heritage.



Themed around “natural and cultural heritage”, the conference explored the connection between preserving our planet and celebrating diverse cultures. This was particularly evident during the project presentations and project posters from students exploring the conference theme. The innovative approaches of students in preserving and promoting rich cultural legacies were nothing short of inspiring, showcasing the transformative power of youth-led initiatives.

As an alumni, I carry with me cherished memories of engaging in traditional Indonesian dances, insightful discussions on climate action, and witnessing the dedication of delegates from around the world to improve the environment. These experiences have left a mark on my journey as a Caretaker of the Environment.



Moreover, the warmth and friendliness of everyone involved, from fellow attendees to organizers, created an atmosphere of inclusivity. The fun-filled food market was one of the highpoints, filled with delicacies, singing songs from the conference countries leading to a further enhanced sense of community and shared experiences.

Looking ahead to this year’s conference in Sweden, I am filled with anticipation and excitement. While we may be continents apart, the unity and sense of purpose created in Yogyakarta will serve as an inspiration on how to host a conference that includes everybody. Together, we will continue to strive towards a more sustainable future, fueled by inspiration from Indonesia, and “education, regulation and collaboration” at this year’s CEI conference.

Anel Spahić
CEI Alumni 2023



BORGWARNER



CHARGING FORWARD

Who are we, and what do we do?

For over 130 years, we have been a transformative global product leader, supplying technologies to nearly every major automotive OEM in the world. We bring successful electric innovations to market whilst continuing to advance our emissions-reducing and fuel-efficient combustion technology, empowering everyone to drive sustainably.

Charging Forward

Our strategy Charging Forward 2027 focuses on advancing our position as a technology leader in electrification products and maximizing the value of our foundational portfolio. Our commitment to sustainability remains the same - just like our vision: to create a clean, energy-efficient world.

Create a cleaner more energy efficient world

As the world advances through the energy transition, we expect big demand shifts in electrical vehicle technologies. We believe we can attain significant growth through the adoption of electrical vehicles, which draw high-content potential from our technologies. We continue to change how we operate to help achieve the goals of the Paris Climate Agreement. This is achieved by having approved Science Based Target initiative goals to reach regarding Scope 1, 2, and 3 emissions by 2031.

Live the BorgWarner beliefs

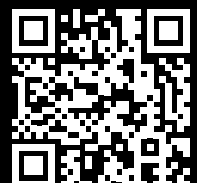
We are committed to promoting and nurturing a diverse and inclusive environment, honoring integrity, striving for excellence, committing to responsibility for our communities and building on the power of collaboration. As we implement our electrification strategy, we are supporting our employees in the evolution of their skills and building the talent pipeline we need to succeed.

Partner with and report to stakeholders

We use a unique operating model that enables Local Accountability through support from Global Strength to ensure our sustainability performance. We strive for frequent engagement with our stakeholders and being transparent in our impacts, goals, and performance. Our sustainability commitment also extends to our suppliers, as we engage them in our environmental and social expectations and gauge their performance. In 2021, we developed a Sustainable Supply Chain Strategy which outlines priority ESG topics for supplier management, with a roadmap for implementing the strategy.

We are committed to operating ethically and with the utmost level of integrity. Our reputation depends on our employees making ethical choices — even when it is not an easy choice. Our beliefs and our commitment to customers reach beyond the doors of our facilities, which is why we are committed to maintaining high standards for human rights and environmental performance in our supply chain.

BorgWarner – we are charging forward



borgwarner.com



A Guide to your First Caretakers Conference

Welcome to CEI! If you're about to go to your first conference, you may be wondering what to expect from the experience. For a whole week, you'll meet new friends, learn about amazing environmental topics, step into Swedish culture, and make lasting memories.

You'll arrive at the conference, in-person or online, with your own group. But throughout the week, you'll have the chance to spend time with delegates from different countries in team-building activities, educational workshops, and at the accommodation. The CEI conference celebrates the international nature of its attendees through group sharing. This happens through cultural performances of dance, music, and art from their countries during the Cultural Evening and at the Food and Fun Market, where songs, food and souvenirs from every country represented are shared.

On the environmental side of the conference, you can expect to explore different sustainability topics through the project posters and oral presentations of your

fellow delegates. Feel free to ask questions, everyone at the conference is there to learn from each other! There are also guest speakers and alumni with areas of expertise in environmental policy, urban planning, etc. who guide educational workshops.

Because the conference is held in a different country each year, the CEI organizers make an effort to highlight the most fascinating parts of culture and nature in that year's host country to ensure that students get the most out of their virtual or physical trip. Swedish hosts will teach workshops about art, music, and other aspects of Swedish culture. Delegates will also get to travel to a few sites around Landskrona to explore the heritage of the area through both natural outdoor sites and cultural sites in the city of Landskrona.

Hopefully you now feel a little more prepared for the incredible opportunities the conference will throw your way. Whether this is your first conference, or you're about to become a CEI alum, this conference is sure to be a memorable one. Let's have a great time in Sweden!

Madeline Painter
CEI USA



Meet the alumni team 2024



Name: Jana Cox
Nationality: Irish
Role: Senior Alumni Chairperson
Job: Scientific researcher rivers, estuaries and deltas
Favourite CEI memory: Either the Ceilidh in Scotland 2013 or the online flashmob at CEI 2021.



Name: Samuel Thelaus
Nationality: Swedish
Role: Junior Alumni Coordinator
Job: Software Engineer
Favourite CEI memory: Eating watermelon for 3 meals a day, every day in Taiwan 2014.



Name: Laura Kelly
Nationality: Irish
Role: Senior Alumni/ Online Teacher Session Coordinator
Job: Assistant Manager Product Database & Sustainability Officer for a Tour Operator
Favourite CEI memory: Hosting the CEI 2021 Conference, especially having former Irish president and Climate activist Mary Robinson open the conference.



Name: Julien Beuken
Nationality: Dutch
Role: Senior Alumni & CEI International Board member
Job: Senior policy officer at the Dutch Ministry of Foreign Affairs
Favourite CEI memory: This is hard! At the 2021 online conference some participants were emotional it was over, proving that it's possible to build real connection and friendship in a short time - even online! - when you share the same ideals and drive to protect our natural world. It's so valuable that CEI can help young people realize they are not alone and they have allies across the globe fighting the good fight with them.



Name: Vanja Taseva
Nationality: Macedonian
Role: Junior Alumni
Job: Software Engineering Student
Favourite CEI memory: Online opening ceremony CEI Indonesia 2023.



Name: Dalila Osmanovic
Nationality: Swedish
Role: Swedish Alumni & Executive Committee CEI2024
Job: Law student
Favourite CEI memory:
Education wise: the debate battle in Turkey 2019. *Cultural wise:* the cultural night in Turkey with the huge stone stage by the cliff. *Fun wise:* the beach clean up day in Turkey.



Name: Ayşegül Şahin
Nationality: Turkish
Role: Junior Alumni
Job: Genetics and Bioengineering Student
Favorite CEI memory: At the 2019 CEI conference, the Indonesian group presented their projects addressing food management challenges due to overpopulation and the extraordinary number of insects in their country. After their presentation, they offered us samples of their solution idea, which were dried maggots and grasshopper heads. That was my first time eating an insect, and it had a whole new taste (spoiler: dried maggots taste like peanuts!).



Name: Anel Spahić
Nationality: Swedish
Role: Swedish Alumni
Job: Engineering Physics student
Favorite CEI memory: Walking in the rainforest in CEI Costa Rica 2022.



Name: Hjalmar Nördén
Nationality: Swedish
Role: Global Youth Reporter Programme (GYRP) coordinator
Job: Musical Theatre Actor
Favourite CEI memory: Coordinating the GYRP at the Dubai conference back in 2006. It's just amazing seeing people excited about learning new skills, passing on knowledge and hungry to bring something to the world!

Follow CEI Alumni on Social Media

Follow @imacei to connect with alumni of the Caretakers of the Environment International (CEI). We're dedicated former student participants who assist at conferences, sharing experiences and leading workshops on environmental awareness and cultural understanding. Year-round, we promote sustainability in our communities, colleges, and workplaces. Follow us for inspiring stories, tips, and updates on our mission!



@imacei



"Bittersweet" by Huey Deng High School, Taiwan #9

1 699 visningar • för 8 år sedan



"Exploring Coastal Defences" - Newtown School, Waterford Ireland #2

758 visningar • för 9 år sedan



"How to protect the oceans" by Szramek High School, Poland #19

686 visningar • för 8 år sedan



"Down Under" by Fethiye Kemal Mumcu Anatolian High School Ankara Turkey, #8

616 visningar • för 8 år sedan



Caretakers - Sing Along (CEI 2015 photo video)

607 visningar • för 8 år sedan



"The Mermaid" by Greece #22

606 visningar • för 8 år sedan



"We Care About Ocean" by Anatolia High School, Turkey #6

566 visningar • för 8 år sedan



"Fishing resources and sustainability" by Colégio Euro-Atlântico, Portugal #14

322 visningar • för 8 år sedan



@imacei

alumnicei.com

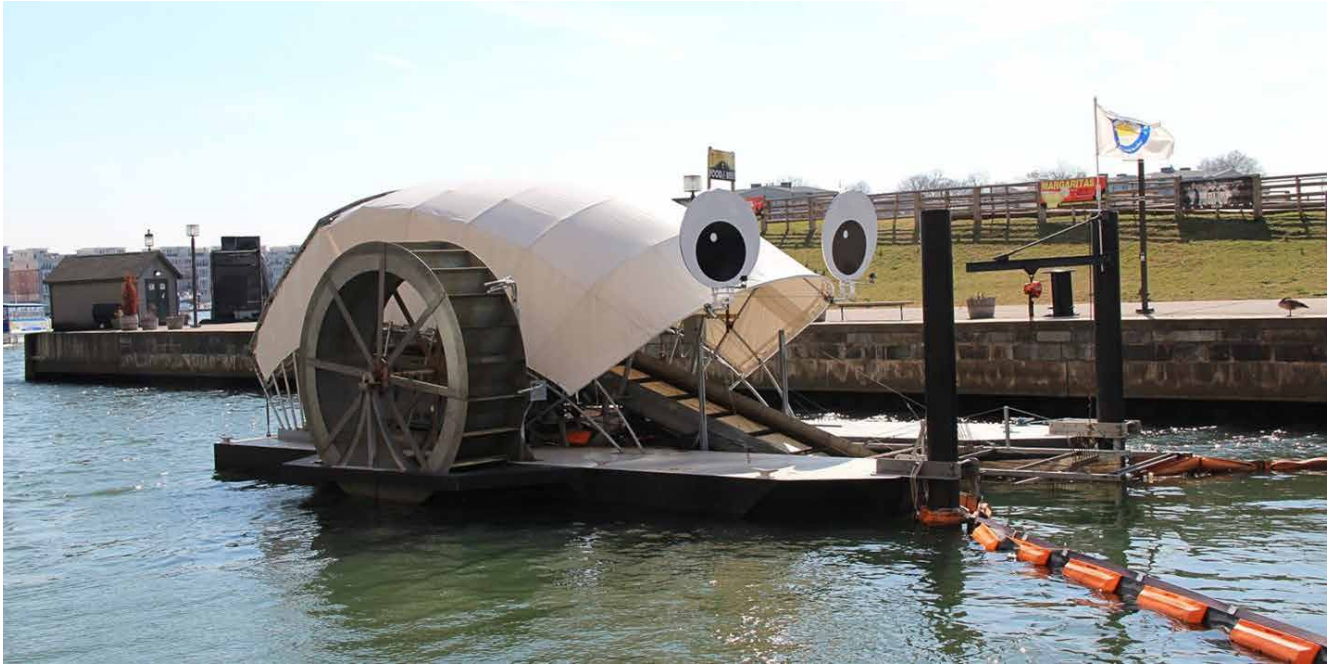


@imacei



@imacei

An ambitious yet achievable goal for a change in the world



Have you ever wondered about how polluted the waters on earth are? Is there any hope left for the thing we cannot live without - water? You might say that the situation is irreversible. There is too much damage, pollution, plastic and oils in our rivers, seas, oceans and lakes across the world.

But what if I can prove you wrong?

In an ideal world, the best solution for our water pollution problem would be banning the usage of any single-use materials or containers worldwide. However, I argue, we need to be a bit more realistic and come up with a way that doesn't include aligned governments and the slow procedure of creating and agreeing new laws or legally binding international agreements. And, even if we did achieve this large policy step, what do we do about the existing pollution like the great ocean garbage patch? After doing some research I have found out that this ambitious step is more than achievable.

In the last few years, plastic sucking machines have become one of the best ways of collecting trash from the oceans. These machines are put on the surface of the body of water and using several technologies can decrease water pollution. They do three key activities: oil filtration, trash collection and autonomous operation. Scientists have developed this machine with a suction system so that it can take in all garbage and store it in a chamber inside. The oil filtration part works with the incorporation of absorbent polymers which act to separate impurities from the oil.

The most interesting part about these machines is that they work on solar energy and don't "run out of battery", they have a GPS system and sensors for oil and plastic. By upgrading the usage of these machines in many water bodies worldwide, there can be huge benefits for the water life and nature and make great steps towards SDG 14: Life Below Water.

That is why solving the water pollution crisis is far from impossible. Our generation is here to make a difference and give a hopeful and sensible direction towards maintaining and keeping the most important resource nature has given us – water.

Vanja Taseva

CEI North Macedonia/CEI Alumni



Read article on:
nationalgeographic.com

A Collaboration Challenge



“...students from different corners of the globe come together, united by a drive to make the world a better and more sustainable place...”

Every year, hundreds of students engage in a project in their local community. If you're reading this you were one of them! There are projects about renewable energy, educating fellow students or community members, recycling, sustainability at school and countless other topics.

You have worked for hours, days or perhaps even weeks and months to transform an idea into practice. To develop a plan into an action. To mobilize people and money to change something for the better. That's what CEI is all about!

Participating in these conferences challenges us to Take Care, to stand up and demand a change and put in work to make it happen. To show to everyone in your area that the voice of young people cannot be ignored, and that age plays no role in making a difference and having bright ideas.

But what if we wouldn't do all that work alone, but rather collectively? Hopefully you know that you are not alone 'fighting the good fight', but either way, CEI conferences are an excellent reminder!

Every year students from different corners of the globe come together, united by a drive to make the world a better and more sustainable place. We're not alone! We are here because we're passionate, committed and interested beyond our own well-being and wealth. That's something we share, and that connects us. How cool would it be if we could use and build that connection all year round?

I challenge you – and your teachers! – to partner up with a school from a different country next year for your project. It's not easy (time zones, extra meetings...), but it can bring us so much! To understand environmental discussions from another cultural point of view, to make friends who share your interests, to test your skills and ideas across different locations and cultures. If we join forces we can multiply our impact and build leaders to shape our future. Let's try together on the road to Mexico 2025!



Julien Beuken
CEI Netherlands
CEI International Board



In the cozy town center of Landskrona, shops, restaurants, museums, playgrounds, and other fun activities are close to each other. Combine your visit with shopping, dining, an exhibition at Landskrona Art Gallery, or a walk down to the sea, which is only 5 minutes away. Don't miss a visit to the Citadel, a historical fortress, or enjoy a scenic walk in the Castle Park. For those interested in contemporary culture, check out the local art installations and street performances.

Stroll along Landskrona's coast, offering a magnificent view over the Öresund and the island of Ven. Cycle along the winding paths on Ven. Head out on the sound with charter fishing boats and try your luck at fishing. Play golf at one of Landskrona's golf courses, or simply enjoy a refreshing swim from one of our piers.

INTERNATIONAL

PROJECTS



The Conservation and Learning Activities of Chinese White Dolphins



The stranding cases of dolphins in Hong Kong are on the rise, drawing our concerns to this iconic marine mammal. Since November 2020, we have sought assistance from dolphin researchers at Ocean Park Hong Kong for their knowledge and advice. We have engaged in discussions with these researchers to identify the main causes of dolphin stranding.

In 2021, we once again received support from Ocean Park for a collection of baby dolphin skeletons. After months of careful work, the bones were positioned correctly, allowing students to study them diligently. Some students feel a sense of regret upon seeing this baby skeleton, as dolphins face the risks of stranding, and calves are even more vulnerable.

Technology plays a vital role in conservation efforts. We have collaborated with the University Research Facility in 3D Printing at the Hong Kong Polytechnic University, utilizing their devices and expertise in 3D scanning and printing. Each bone has been accurately reproduced, and these replicas are now being assembled to reconstruct the baby dolphin.

Based on our experience, we have found that collaboration and education are the keys to success. Through partnerships with various institutes, we have gained access to valuable resources and techniques. Furthermore, it is only when more people understand dolphins that they can truly appreciate and care about their well-being.



Hong Kong
China

School/ organization

Po Leung Kuk Laws Foundation
College

Delegation leader/ teacher

Mr. Leung Wing Kin

Students

Lui Yan Kiu, Wong Tsz Ho, Yip Hei Yu

Partner organization

Ocean Park Hong Kong and the Hong
Kong Polytechnic University

Threats of Dolphins in Hong Kong



Dolphins are a prominent symbol of Hong Kong and serve as a vital species within the marine ecosystem, acting as a keystone species. Any alterations in the dolphin population can potentially disrupt the delicate balance of the food web. Sadly, in recent decades, the dolphin population in our city has experienced a significant decline.



Initially, our team hypothesized that the primary threats to dolphins in our region were water pollution, noise pollution, and plastic pollution. However, since 2020, we have collaborated with the Ocean Park Conservation Foundation Hong Kong (OPCF) to benefit from their expert guidance. Researchers at OPCF have provided us with valuable insights regarding the causes of dolphin stranding in Hong Kong, specifically highlighting the dangers posed by ghost nets and propeller blades.

Over the course of six months, our team had the incredible opportunity to participate in dolphin dissections conducted by OPCF. We visited their laboratory on a monthly basis and actively assisted the researchers during the dissection process. It was truly shocking to witness how marine mammals of such a substantial size could be exceptionally fragile and susceptible to harm caused by irresponsible human behavior.

Through this eye-opening experience, we have come to recognize the immense significance of collaboration and education. By working alongside OPCF, we have gained access to invaluable resources that have inspired us to take action. Simultaneously, we aspire to enlighten and raise awareness within our school community about the imminent threats dolphins are facing.



“...this eye-opening experience...”



Hong Kong
China

School/ organization

Po Leung Kuk Laws Foundation
College

Delegation leader/ teacher

Miss Lau Wai Lam

Students

So Kai Yui, Tse Chi Yin, Yeung Lok
Chingu

Partner organization

Ocean Park Conservation Foundation
Hong Kong

Salt Tolerance - A new way to improve plant growth in salinization conditions



Salinization is a global soil degradation problem that is harmful to the growth and development of plants. According to a report published by the FAO on December 3rd, 2021, approximately 10% of agricultural land is affected by salinization, posing a significant threat to food production.



This project aims to find ways to promote plant growth under salinization conditions, using wheat grain as a model. In this study, wheat grains were soaked in various solutions such as humic acid, calcium solution, citrus compost tea, and almond sesame compost tea. The grains were then cultivated in hydroponic trays and/or agar dishes containing the aforementioned nutrient solutions. Four growth indicators were measured: grain germination rate, radicle length, shoot length, and amylase activity.

The results indicated that soaking the wheat grains in citrus compost tea and almond sesame compost tea led to a

higher germination rate under both normal and salinization conditions. Additionally, soaking the wheat grains in a “humic acid and calcium” solution not only promoted the germination rate but also increased the radicle and shoot lengths of the germinated wheat grains and enhanced the activity of amylase. When wheat grains were grown hydroponically with humic acid, they exhibited the highest increase in germination rate, radicle length, and shoot length compared to other nutrient solutions. It is suggested that farmers consider applying the methods studied in this project to improve plant growth on salinized farmland and increase crop yields.



Hong Kong
China

School/ organization

Queen Elizabeth School Old Students' Association Secondary School

Delegation leader/ teacher

Thomas Chi Fai Wong &
Amy Man Wai Ling

Students

Yuen, Lam, Yiu, Ching

Cooperation Between our Schools and ZalaZONE*



In our project we wanted to emphasize the social engagement and educational role of a technical and scientific server company in the field of automotive developments. ZalaZONE* took an active part in our project implementation. From the beginning, they provided not only generous financial support but also an active contribution to our fieldwork. We want to demonstrate the environmentally responsible attitude of both the company and our participants through our project activities.



First, we planted berries under a solar panel, at a location where huge solar panel areas are currently planned. This planting will mean that the panels will grow in tandem with green vegetation. Secondly, our group planted organic willows on the hilly border area of an industrial plant.



We also inspected the daily processes of testing vehicles on track fields, making calculations about the CO₂ emissions of a Ford Ranger (and how these vary when it is driven with different driving styles). The company has cooperated with the students and teachers of two Technical Universities in Hungary for years and it has connections to international European universities too to become more green. Through these activities, our students gained a good example of how corporations can minimize their eco footprint.



*ZalaZONE is a Scientific - Technical Company in the Automotive Developments for the Sustainable Future in Hungary.



Zalaegerszeg
Hungary

School/ organization

Zrínyi Miklós High School of
Zalaegerszeg & Petőfi Sándor
Hungarian-English Bilingual School

Delegation leader/ teacher

Tamás Szlávecz

Students

Zsófia, Rebeka, Laura, Boldizsár,
Ágoston, Boglárka, Blanka

Partner organization

ZalaZONE

Eduterra: an action to build younger generation awareness of waste solutions for a greater future



Indonesia has a massive population, which can lead to a high rate of trash pollution. If we could manage the amount of trash produced, there could be a large positive impact for Indonesia's future. The problem which has existed for a long time is a lack of awareness in Indonesian communities about the issue.



In our surrounding environment, we discovered that the community has a lack of awareness about the trash pollution surrounding them and possible actions to solve this problem. This kind of situation occurs as a result of the insufficient education about environmental awareness in the community.

Our solution was to provide environmental education to children which aims to educate them about the importance of being aware of trash pollution from an early age. We wanted to promote children's awareness of waste segregation. We implemented the project by monitoring elementary school

students over a specific timeframe to evaluate shifts in their waste sorting behaviours. Utilizing an interactive book as the primary learning tool, it integrated educational content on trash pollution awareness and solutions with entertaining elements such as games, comics, and appreciation stamps. There were several heroes for the students to look up to: Ed, Terra, and Revan. To make all of this happen, we actively sought environmentally-conscious sponsorship, with the goal of integrating our program into local government policy.



Bogor
Indonesia

School/ organization

SM Sekolah Alam Bogor

Delegation leader/ teacher

Okwan Himpuni

Students

Priyarsya, Nadya, Galuh

Partner organization

JSAN & SalamAid

Mini Magazine Educational Project on the Environment



To raise student awareness about waste management and environmental cleanliness through a creative medium, we created a mini magazine containing educational comics and information related to the environment. This project is a collaboration between three schools that combines educational comics on waste management, information about the local environment, and project activities related to the comic's theme. The magazine will also be published in collaboration with an additional school.

Mini Magazine Components:

1. Educational Comic

- Features illustrated stories that educate on proper waste management.
- Engaging characters and storylines for children, delivering moral lessons on the importance of maintaining cleanliness and environmental health.

2. Environmental Information

- Short articles about the environmental conditions around the schools.
- Interesting facts about the local ecosystem and the impact of waste on the environment.

3. Project Activities

- Documentation of student-led projects by Sekolah Alam Indonesia related to waste management.
- Coverage of collaborative efforts among schools in executing environmental projects.



The magazine is distributed to students at the four collaborating schools. A digital edition is published on the programme website of our partners. Through this mini magazine, we hope that students will become more aware of environmental issues, develop good habits in waste management, and be inspired to take concrete actions to keep their surroundings clean.



Bekasi
Indonesia

School/ organization

AB Home-Sekolah Alam Bekasi-Lab School

Delegation leader/ teacher

Ika Roseliyana

Students

Rahmazkanio, Maahirah, Hadiyan

Partner organization

Sabutta – Sampah Butuh Kita

One day no Single-Used Plastic in Street Food Vendors



Out of all global plastic waste, only 9% is recycled! 12% is incinerated with the rest filling up landfills or polluting nature. We want to tackle the issue of the production of plastic waste itself rather than the management.



As the use of plastic packaging for street food is a prevalent problem in Indonesia, we designed the campaign: "One Day No Single-Use Plastic in Street Food Vendors" for the students of SDN 1 Mampang, a local elementary school near a street food spot. We intend to educate and campaign to them about the dangers of plastic and to also invite them to bring their food container for street food snacks for one day.

The objective is to show them how easy it is to not use plastic and build healthy habits. The students who are part of the program will be given a pin and the title of 'Anti-Plastic Rangers'. They are members of the Anti-Plastic Force, which also consists of

the street food vendors who will be exchanging their plastics for telobags (biodegradable plastics), recycled cups, and papers for the day.

For this project, we have spoken to and discussed with the Subdistrict Head of Pancoran Mas and gained support. We have also spoken to the local leader about the street food vendors and planned to have a meeting with the vendors, with the intention of appealing to them to stop using harmful plastics.

"...They are members of the Anti-Plastic Force..."



Depok
Indonesia

School/ organization

Sekolah Alam Indonesia

Delegation leader/ teacher

Ainun Nurul Fitriyah

Students

Faith, Fayza, Shula, Jian

Partner organization

Pancoran Mas District & SDN 01
Mampang Depok

Ecoquest: increase student awareness about waste segregation



We carried out this project because there is still a lack of environmental practices in schools for sorting waste and most students still do not know how to sort their own waste. If mixed waste is dumped, it can cause greenhouse gas emission, namely the methane gas (CH₄).

“...environment which is affected by waste that is not sorted...”

Meanwhile, organic waste mixed with inorganic waste will rot and produce dangerous methane gas. In addition, inorganic waste pollutes the soil and can contain dangerous substances that seep into groundwater and endanger human health and the environment.

Piled up rubbish can become a nest for rats, mosquitoes, and flies, which can carry diseases such as dengue fever, malaria and typhoid. Sorting waste is a small action that can have a big impact on the environment, health and economy. Sorting organic and inorganic waste can reduce the air pollution caused by mixed waste. We used a stop motion video to communicate this message.

Based on a questionnaire survey we conducted, as many as 76% of our sample of 50 students chose stop motion as an effective educational medium. The stop motion video that we made tells a story about a school environment which is affected by waste that is not sorted. This causes an unpleasant smell that makes students uncomfortable. So they devise a way to process the waste. We hope that through this project, students will become more aware of the importance of waste processing.



Depok
Indonesia

School/ organization

Sekolah Alam Indonesia

Delegation leader/ teacher

Mr. Rusdyansyah Mansyur

Students

Cahaya, Elina, Calista, Faliha, Ratnifa

Partner organization

Indonesia 6 delegation

The Power of Everyday: Embracing Sustainability in Everyday Life



Our daily activities, as simple as turning on a light, can contribute to environmental problems like air pollution and climate change. This project aims to inspire the public to become more aware of the environmental impact of their everyday actions.



For example: using conventional soap in the shower can pollute waterways and cause eutrophication. Turning on fans and lights requires electricity, which is often generated from fossil fuels, contributing to climate change and air pollution. Every action counts, and together we can make a big difference. That's why we created a short film called "The Power of Everyday: Embracing Sustainability in Everyday Life" to educate and inspire people to take action.

The film uses relatable examples of everyday activities to illustrate their negative environmental impacts and offers solutions to reduce them. Our goal is to encourage viewers to evaluate their habits and adopt a more eco-friendly lifestyle. This project is not just about providing information; it's about driving real action. We want viewers to become part of the solution by implementing changes in their own lives and spreading the message about the importance of protecting the environment.

Together, we can make a difference and create a more sustainable future for our planet!



Depok
Indonesia

School/ organization

Sekolah Alam Indonesia

Delegation leader/ teacher

Hanan Nurrohman

Students

Abdul Aziz, Mujahid, Danish, Kenzie, Nabril

Partner organization

Jaringan Sekolah Alam Nusantara

Food Waste for Maggots



One of our school's biggest concerns is our food waste problem. For those of us who live in the school dormitory, we have to keep our school and dormitory clean whilst we cook, eat and produce waste and trash daily.

“...we bred a few of those maggots to eat our food waste...”

During cooking, we create a lot of waste including fruit skins, eggshells, plastic packs of seasonings, etc.

During mealtime, we leave out chicken bones, fishbones, and other inedible seasonings and leave aside uneaten. Afterwards, it is also common to see extra portions of vegetables as leftovers that easily spoil overnight.

When cleaning the dishes and cooking utensils, we are also guaranteed to find inedible parts of fruits, vegetables, chicken, fish, and all of this waste easily piles up in no time.

Fortunately, our school has already implemented trash classification as an obligatory cleaning duty. By taking out the inorganic waste either to be recycled or disposed of, we are left with mostly food waste. Our school dormitory, thankfully, has a garden where edible plants thrive and are harvested for our cooking ingredients.

To complete the cycle and ‘give back’ to nature, we proposed turning our food waste into compost, acting as a natural fertilizer for the plants. For efficiency, we found out that BSF maggots help make this process run smoother and faster. Thus, in this project, we bred a few of those maggots to eat our food waste and create compost that we can harvest and distribute to the plants.

Our project is in line with SDG #12 Responsible Consumption and Production and #15 Life on Land.



Jakarta
Indonesia

School/ organization

ABhome

Delegation leader/ teacher

Afif Rabbani

Students

Naufal, Fabian, Kalyca

Waste to fuel



The problem we tackle with our project is plastic waste and the problem of using petroleum vehicle fuel. The reason we chose this problem is because there are many associated negative problems such as the death of marine animals, global warming, climate change and the increasing use of plastic waste, especially in Indonesia.

“...polar ice is slowly melting...”

The problem of plastic waste is causing a large number of deaths of marine animals as the plastic is eaten or because the animals get trapped in the waste. Plastic waste is also not easily decomposed. In fact, it takes hundreds of years to decompose.



The problem with petroleum-fueled vehicles is that petroleum fuel produces pollutants which contribute to global warming, climate change and environmental pollution. The high number of petroleum fuel users is driving global warming causing sea levels to rise as polar ice is slowly melting which can lead to a loss or depletion of resources.



Air pollution from these vehicles also makes the air unclean, creating dangers for respiratory health. So our project aims to turn plastic waste into gasoline. This is an alternative to processing plastic waste which takes a long time, and is also a good solution to reduce plastic waste quickly. It can also be used as fuel for cars and motorbikes.



Bogor
Indonesia

School/ organization

Sekolah Alam Bogor

Delegation leader/ teacher

Eneng Destiani

Students

Auliya, Skyla, Zakiyah, Nabil, Fathiriva

Partner organization

SalamAid, Jaringan Sekolah Alam Nusantara

Recycle trash



Waste is a problem faced by many people in the world, especially plastic straw waste. According to data from the Ministry of Environment and Forestry, Indonesia produces 93 million tons of plastic straw waste per year.

“We decided to make straws from recyclable materials.”

Many people use straws for drinking without considering the resulting impact on the environment. Plastic straws are one of the most common items found in marine debris, posing a significant threat to marine life who can either ingest it or become entangled in the waste. The SDGs we target with our project are 12 (Responsible Consumption and Production), 14 (Life Below Water) and 15 (Life on Land).

We decided to make straws from recyclable materials. We chose to make the straws from sago starch. We chose this material because the manufacturing process is short, only lasting about 2-3 days. The sago starch is mixed with other natural materials and shaped like a straw.

By switching to biodegradable or reusable alternatives, we can substantially reduce the volume of plastic entering the ocean. This change not only helps protect animals, but also promotes a more sustainable lifestyle.



Bogor
Indonesia

School/ organization

Sekolah Alam Bogor

Delegation leader/ teacher

Eneng Destiani

Students

Syifa, Gia, Khanza, Kayra

Partner organization

SalamAid, Jaringan Sekolah Alam Nusantara

EoN project



According to the Ministry of Environment and Forestry, Indonesia produces more than 19 million tons of trash annually and more than 6 million tons of trash are left unrecycled.



"...learning seems more fun and engaging..."

Our project, Project EON supports the goals of SGDs:

- 11 Sustainable Cities and Communities
- 12 Responsible Consumption and Production
- 15 Life on Land.

This project aims to reduce the production of trash in the environment in various educational ways and spread awareness so communities can also make an impact on this issue themselves.

Project EON educates others on the problem of waste through media that are fun methods to learn and engaging for the audience to consume, our primary target audience is students or children between 3rd grade to 7th grade. One of our media for education is fun board games that show the impact of garbage and how they can change the problem if they take action.

The objective of the media like the board game is to create a situation where learning seems more fun and engaging instead of repetitive ways that make it seem forced.



Bogor
Indonesia

School/ organization

Sekolah Alam Bogor

Delegation leader/ teacher

Paramudhika Swarnadinata
Sunarya

Students

Ahmad, Rayana, Damara

Partner organization

Jaringan Sekolah Alam Nusantara

The Healthy Plants: Good Habits Change My Future



The Healthy Plants project aims to address issues that Don Bosco orphanage which serves children from kindergarten to junior school students faces. Based on survey results, we found that Don Bosco orphanage faced certain challenges.



Their financial resources are limited, causing difficulty in meeting daily needs and they were not able to fully utilize their land sustainably. There was available land that hadn't been effectively used yet. Therefore, our project introduced the Don Bosco orphanage community to hydroponic planting. This can address their needs in aspects such as education, sustainability, and health. Children also had the opportunity to learn the role of hydroponics in sustainable agriculture.

Hydroponics promotes efficient food production by using minimal resources, and its fresh vegetables can improve overall

well-being. Our activity started with a visit and interviews with an experienced hydroponic farmer at Hydroponic DBB Surabaya, one of our partners, to assess our current knowledge about hydroponics. A survey was then conducted towards the Don Bosco orphanage community to understand their concerns. Next, our school team learned how to set up the hydroponic system and planted the plants while also taking care of them. The hydroponics we set up were harvested and sold to further fund our projects, and we also presented our project in front of some sponsors to support our budget needs.

We set up a hydroponic system at Don Bosco orphanage and taught the children how to maintain it. We also encouraged the Don Bosco orphanage community to utilize hydroponic plants as a long-term sustainable food source and as a potential income source through their sale. This project aligns perfectly with the SDG "Responsible Consumption and Production". By promoting

hydroponics, we are helping Don Bosco become more self-sufficient. Ultimately, our project will not only improve the lives of the children at Don Bosco but also influence others to be environmentally responsible.



Jambu Bangkong
Indonesia

School/ organization

Cita Hati Christian Senior School

Delegation leader/ teacher

Indah Anggraini

Students

Cherine, Melisa, Quinneth, Cherish

Partner organization

Don Bosco Orphanage Surabaya,
Kebun Percontohan Hidroponik
Surabaya & Jawara Farm

Open My Book, Unlock My Future



The Open My Book, Unlock My Future project's primary goal is to assist individuals in need by providing easier access to books, whilst additionally fostering their love for reading. Books are one of our primary sources for attaining knowledge, but not everyone has access to them due to the high cost of quality books and also not having libraries open in their area.

As a result for this reason, we reached out to a specific community that required our assistance: the SiDolan community. SiDolan is a small community of children that are trained to be environmental caretakers by the CMC Tiga Warna community. However, they have limited resources including books.

As internet usage surged during the pandemic, a significant number of students in particular began accessing the internet. It is worth noting, however, that not all content available on the internet is educational and excessive internet usage can have detrimental effects on students' academic performance, personal growth, and behavior. It can ultimately result in distractions, sleep deprivation, poor time management, and a decrease in academic progress.

We initially visited the SiDolan and CMC Tiga Warna community to observe and inquire and to fit our plans for their needs. Additionally,

we administered a questionnaire to gather specific data about their reading habits and book preferences. Subsequently, we organized a book donation competition among classes in junior and senior high to collect books still in good enough shape to fill our library with. We also wanted to ensure our books were educational, enjoyable, and appropriate before approving them.

We wanted to make sure individuals, specifically students, can learn in a way that doesn't require resources that could be difficult to find or potentially harmful to their well-being, by encouraging them to use books. Finally, following extensive hours of sorting, labeling, wrapping, and organizing the books, we delivered the books and assisted in building a small library in close proximity to their area. Furthermore, we provided guidance on library management to the community members.



Jambu Bangkong
Indonesia

School/ organization

Cita Hati Christian Senior School

Delegation leader/ teacher

Indah Anggraini

Students

Neria, Elaine, Jessica, Sally, Josefine

Partner organization

SiDolan - CMC Tiga Warna

The Magic Composter



In December 2023, our team decided to utilize our project to assist the Don Bosco Orphanage, which sometimes struggles financially and often faces malnutrition among its children due to insufficient funds for food.



The orphanage relies heavily on sponsorships and government funds to cover essential expenses such as bills, tuition fees, and food. While there are times when those funds are sufficient, there are also periods when the orphanage struggles financially. They have a good management in the non-organic waste processing, the same cannot be said for their organic waste processing. To address this issue, our team proposed composting as a solution to manage their organic waste and create a stable food source and potential income.

The orphanage has a large yard with plant waste that can be turned into compost. We experimented with composting at our school, collaborating with

gardeners to collect dried leaves and using a composter, liquid bacteria (EM4), and brown sugar to speed up decomposition. Every week, we checked on our compost, adding more leaves and EM4 solution as needed to expedite the process. Our composting experiment appeared to be successful. Our next step is to visit the orphanage to teach the children and staff how to make their own compost. This initiative aims to provide them with a stable food source and a potential means of generating income, thereby improving their nutrition and financial stability. By educating the Don Bosco community on composting, we hope to empower them to utilize their resources effectively and sustainably.

Ultimately, this project not only aims to improve the children's well-being but also to enhance the overall self-sufficiency of the orphanage. To acquire the budget required, we conducted fund-raising through sale of foods and drinks in our school and also by finding some sponsors.



Jambu Bangkong
Indonesia

School/ organization

Cita Hati Christian Senior School

Delegation leader/ teacher

Ermie S Motik

Students

Xavier, Emily, Kimberly, Abigail, Danzell

Partner organization

Don Bosco Orphanage Surabaya

Environmental Videogame



The objective of this project is to create a video game with themes related to the environment, with the purpose of raising awareness about environmental problems and their roots. In the first stage we referenced some classic civilizations and their environmental problems such as deforestation, water diversion or massive mining. In later stages we expanded the game through time until we reached the present day.

We started by investigating the needs of civilizations and the resources that they have used for their subsistence, as well as the problems that they have generated and that they have faced, including those that caused their disappearance. The player's challenge is to expand their civilization and make it survive as long as possible using the resources that are available for them, without depleting them, misusing them, or contaminating them.

The work is complex and requires the correct integration between the generation of a script, knowledge about sustainability and electronic technology to put together the video game. For this CEI conference, we will present a sample of the game, but the idea is to continue to expand it in the future.



Video games are widely used today and can be used as an effective tool for dissemination and communication of ideas, as well as to raise awareness of the way in which we affect nature and how we can save resources and use them sustainably. We have enlisted the help of family and close friends who understand the technology and programs to create video games and are developing the game with their help.

*“...save resources
and use them
sustainably..”*



Mexico City
Mexico

School/ organization

Instituto Escuela del Sur

Delegation leader/ teacher

José Antonio López Tercero Caamaño

Students

Konrad, Sabina, Liam

Bees



Bees are hymenoptera insects: invertebrate animals that include species such as sawflies, bees, bumblebees, ants, and wasps. Pollination is an ecological process, through which pollen grains are transferred from the anther (male part of the flower) to the stigma (female part of the flower) so that the plant becomes fertilized. This can be done in many ways, such as wind and water, but the vast majority of pollination is done by pollinating animals that feed on nectar or pollen.



Worldwide there are 20 thousand species of bees. Mexico has approximately 1,826 and in Mexico City, which is where we live, there are 80 types. Native bees in Mexico have been displaced by European bees (*apis mellifera*) in the years since the Spanish conquest, largely due to the production and marketing of honey. The objective of this project is to raise awareness in our community of the importance of native bees as pollinators and their permanence, to plant plants that attract them and build a shelter for them since, with this, we will help reestablish the local ecology.

To learn more about bees we have been investigating on our own, we went to the botanical garden of the Autonomous University of Mexico (UNAM) for advice and to an apiary in the chinampas of Xochimilco. Later we bought materials to make a shelter for bees and plant native plants that attract them in our school.



Mexico City
Mexico

School/ organization

Instituto Escuela del Sur

Delegation leader/ teacher

Carmen Larrondo Sayavedra

Students

María, Soren, Sabina, Cora, and Tristán

The Sun and Us: Solar Panels



This project addresses, in detail, the manufacturing process of homemade solar panels and their integration into the electrical system of our school in Mexico City. We explore what solar energy is and its importance in the Mexican energy context, highlighting its use as a renewable energy source and its environmental advantages.



“...in the transition towards a more sustainable energy future...”

We investigated the historical and current situation of the energy sector in Mexico, from its beginnings in the 19th century to recent reforms that seek to promote clean energy.

We reviewed and described the steps for manufacturing solar panels, providing a detailed overview of the technical process involved. Additionally, we analyzed current trends and efforts in Mexico to promote the transition to clean and renewable energy. We explored the advantages and disadvantages of solar energy, including economic and environmental aspects, and present a comparison between the efficiency of gasoline

and electricity. Our project also discusses the viability of manufacturing homemade solar panels using recycled materials while proposing recommendations for their implementation in school environments. The project provides a comprehensive vision of solar energy in Mexico, from its manufacturing to its practical application, highlighting its importance in the transition towards a more sustainable energy future.



Mexico City
Mexico

School/ organization

Instituto Escuela del Sur

Delegation leader/ teacher

Magali Sarmiento Fradera

Students

Iker Santiago, Regina Sophia, Nayar, Chelsea

Partner organization

CFE. Mexican Electricity Federal Commission

Mining and my cell phone



Mining has been present in Mexico since pre-Hispanic times. After the Spanish conquest and the creation of New Spain, mining became a fundamental economic activity for Spain.

After independence in 1521, mining was conceded to foreign companies until the Mexican Revolution in 1910, when the government established that all subsoil rights belong to the state and that natural resources must be used for the benefit of the Mexican people.

Since 2023, lithium and other resources were declared as strategic resources by the state, so they can only be exploited by individuals of Mexican nationality. We understand the social and economic benefits of mining, but we also know about the environmental damage it generates. To raise awareness of how this affects us, we take the example of cell phone use. Our objective is to make better use of cell phones. If we know the environmental and social implications of irresponsible cell phone use, driven by this consumerism that causes environmental deterioration, we can generate a change of attitude by different actors in society (individuals, communities, companies, governments) and promote responsible consumption.



Mexico City
Mexico

School/ organization

Instituto Escuela del Sur

Delegation leader/ teacher

Magalí Sarmiento Fradera

Students

Lucía, Javier Alejandro, Joan, Sofía

Partner organization

Secretaría de Energía (Mexican Energy Ministry)

How can we keep aquifers?



Aquifers are geological formations consisting of one or more layers of rocks capable of storing and transmitting water. Aquifers feed various bodies of water such as rivers and lakes before the water ultimately ends up in the ocean. Without aquifers, potable water, and life as we know it wouldn't exist.



We are facing a scenario of overexploitation of aquifers because of two main reasons:

1. limited management of these systems which lacks a science-based method and
2. an exponential increase in groundwater extraction and water demand due to various human activities.

International junk food companies extract 133 billion liters of water annually to produce food and beverages, affecting not only the health of consumers but also causing serious environmental damage in Mexico.

There are some commissions that sometimes do not correctly supervise extractions and fail in their oversight capacity, which is widely denounced by activists and experts. Aquifers can be restored in different ways, with solutions and alternatives proposed including avoiding cement or cobblestone patios and by preventing the disposal of contaminated water, and reducing water wastage in general.

Further improvements can be made by implementing protective measures and regulations for water resources, including prohibiting construction in aquifer recharge zones.

We created a campaign for young people explaining how to keep and maintain these aquifers and practical solutions that we could use to take care of them.



Mexico City
Mexico

School/ organization

Instituto Escuela del Sur

Delegation leader/ teacher

Balkis Castillo Blanco and Carmen Larrondo Sayavedra

Students

Mariana, Ana, Hanna

Partner organization

Comisión Nacional del Agua (CONAGUA)

Exploring the Beauty and Efficiency of Wind Farms



In this project we seek to show the importance of the study and management of wind energy in Mexico as an example of a responsible energy resource. We consider it important to show the advantages that it provides by reducing emissions that damage the environment, it can help us to combat the greenhouse effect and can stimulate change towards a more sustainable energy model.



However, it also has disadvantages that we must consider. In addition to the cost of manufacturing wind plants, we must consider the variability of wind speed depending on the geographical area (affecting efficiency and supply). We also should consider other drawbacks, including the fact that some of the population sees it as a visual intrusion in the landscape, there are problems with the retention of energy and it modifies the migratory process of birds and bats.

Trusting that knowledge and education about all these aspects is the basis for a conscious and responsible society, we prepared dissemination days on wind energy for Mexico's basic

education. Our team gave a brief conference about eolic energy to a couple of basic education schools in Mexico City, accompanying the talk with activities that allow them to understand how we can use this kind of energy. We would like children to understand how electricity can be generated using the power of the wind.

“...it can help us to combat the greenhouse effect..”



Mexico City
Mexico

School/ organization

Instituto Escuela del Sur

Delegation leader/ teacher

Gabriela Pérez Aguirre, Abraham Pita Larrañaga, Alejandra Lomnitz Soto

Students

Evelyn Valeria, Ana Regina, José María, Francesca, Salma

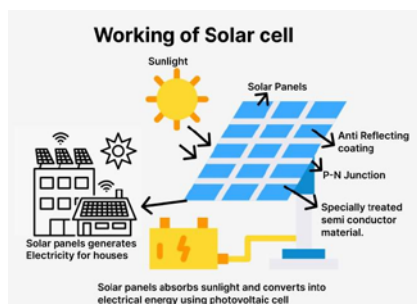
Partner organization

Asociación Mexicana de Energía Eólica, División de Ciencias Básicas e Ingeniería en Energía, Universidad Autónoma Metropolitana, Unidad Iztapalapa

Harnessing the Sun: A Sustainable Initiative for Our Outdoor Classroom



In an era where environmental sustainability is paramount, integrating renewable energy sources into educational environments is both practical and educational. Our proposal seeks to install solar panels in our school's outdoor classroom, not only to power the space but also to cultivate a culture of eco-consciousness among students.



Firstly, the installation of solar panels aligns with our school's commitment to sustainability. By utilizing clean, renewable energy, we reduce our carbon footprint and demonstrate responsible energy practices to our students and the broader community.

Secondly, the outdoor classroom serves as an ideal location for solar panels. With ample sunlight exposure, the panels can efficiently convert sunlight into electricity, powering phones and laptops, even providing surplus energy to the main school grid.

Furthermore, incorporating solar technology into the curriculum offers valuable learning opportunities. Students can engage in hands-on activities, such as monitoring energy production and analyzing data. This fosters a deeper understanding of renewable energy systems and encourages students to become active participants in sustainable practices.

Conclusion:

In conclusion, the installation of solar panels in our school's outdoor classroom represents a multifaceted initiative. Not only does it promote sustainability and provide practical benefits, but it also enhances educational experiences by integrating renewable energy concepts into the curriculum. Embracing this project signifies our dedication to shaping environmentally conscious leaders of tomorrow.



Skopje
North Macedonia

School/ organization

Orce Nikolov

Delegation leader/ teacher

Katerina Hadji Iloska Spirovska

Students

Viktor, Jana, Tijana, Marija, Irina

Partner organization

Public Enterprise Macedonian
Forests

Keep it cool (and warm)

The wonder of heat exchangers

SWEP's technology makes things hotter or colder, and uses very little energy in the process.

What is a Heat Exchanger?

Heat exchangers are devices that help transfer heat from one place to another, while saving energy. They keep buildings warm in winter and cool in summer.



In homes and offices, heat exchangers keep the temperature just right by moving heat or cooling where it's needed.



They are used to heat the water in your house and for keeping food cool in supermarkets.



Schools use heat exchangers to make sure classrooms are comfortable, so students can focus on learning.

Gyms get hot when people exercise, but with a heat exchanger the air stays fresh and cool.



Benefits of heat exchangers

Heat exchangers help us save energy and reduce pollution. We're proud that our technology makes a positive environmental impact when we send it out into the world.



SWEP heat exchangers come in many sizes

www.swep.net

SWEP
A DOVER COMPANY

Bubbly way to improve the school environment



In a world where we are increasingly aware of the ecological footprint left by our daily actions, the quest for sustainable alternatives has become more important than ever. When it comes to daily essentials, soap and other hygiene products are quintessential, however their environmental impact often goes unnoticed. That is why our team decided to take action.

When we realized that conventional soap relies on ingredients and processes that put a strain on our environment, we thought that something needs to change. Our goal is to make a soap, which contains only natural ingredients, in both liquid and bar form. We also aimed to create a natural antibacterial gel used for cleaning hands without water. This would mean that there would also be a natural product which can be helpful in assistance of outdoor environments, such as outdoor classrooms or other various nature environments. Our products will not only reduce the usage of harmful chemicals, but also the need for unimportant but polluting packaging material. The project is applicable in all households because it is an easy process which can even be undertaken with no prior experience or knowledge required.



Creating these types of products serves as an interesting activity which can be implemented in bigger communities such as schools and other institutions. The ingredients are of minimal cost and can easily be found in a local pharmacy, which means that the idea is both achievable in daily life and of benefit for environmental preservation.



Skopje
North Macedonia

School/ organization

Orce Nikolov

Delegation leader/ teacher

Dragica Jankulovska

Students

Ema, Filip, Stefan, Mila, Anja

Partner organization

Faculty of Natural Sciences & Mathematics

Breathing Better, Learning Brighter: The Power of Plants in Schools



Planting plants in schools is a fantastic way to improve air quality and create a healthier environment for everyone. By introducing more greenery, we can reduce air pollutants and increase oxygen levels. Our project: “Breathing Better, Learning Brighter: The Power of Plants in Schools” aims to transform our school into a lush and vibrant green space.



We collaborated with students, teachers, and local organizations to create indoor and outdoor gardens filled with various plants that are known to purify the air. To kick off the project, we organized a planting day where everyone can get their hands dirty and contribute to the green transformation. We provided a variety of plants, such as snake plants, peace lilies, and spider plants, which are known for their air-purifying properties.



Throughout the project, we have educated students about the importance of plants in improving air quality and the benefits of having green spaces in our school. We also set up a maintenance schedule to ensure the plants are well taken care of, involving students in watering, pruning, and general plant care. By the end of the project, our school will be filled with fresh air, vibrant colors, and a sense of pride in our green initiatives. Let's make our school a healthier and greener place to learn and grow together!



Skopje
North Macedonia

School/ organization

Orce Nikolov

Delegation leader/ teacher

Elizabeta Popovska

Students

Martina, Hristos, Simona, Kalina

Partner organization

Parks and Greenery

Biological vs. Chemical Fertilizers Cultivating a Sustainable Future



With the help of chemical fertilizers in agriculture, it's possible to produce the large quantity of food needed to feed the world's population. But along with these benefits for food production, comes the negative effects of pollution in our rivers, lakes, and seas.



Fertilizers contain nitrates and phosphates, which after their application to agricultural fields, are subsequently washed away by rainwater into rivers or seep into the soil, polluting water resources. These compounds, when presented in water, significantly increase the population of algae and plants, which can result in the eutrophication of lakes and ponds and a decrease in biodiversity in these ecosystems. Composting yields a natural fertilizer that can be easily absorbed by plants, providing numerous benefits for gardens and vegetable plots. The compost improves soil structure, increases water retention capacity, and reduces erosion. Practicing home composting avoids sending

valuable waste to incineration and promotes circular economy practices by returning the nutrients absorbed by food during its production back to the soil in the form of compost.

The objective of our project is centered on promoting home composting as an environmentally friendly solution to organic waste management. We aim to raise awareness about the benefits of composting and encourage individuals and families to implement composting practices in their daily lives. By doing so, we strive to reduce the environmental impact of organic waste, minimize pollution from chemical fertilizers, and contribute to the sustainability of our ecosystems for future generations. Through education, outreach, and providing resources on composting techniques, our goal is to empower communities to take proactive steps towards environmental stewardship and waste reduction.



Lisbon
Portugal

School/ organization

High School José Gomes Ferreira

Delegation leader/ teacher

Teresa Reis

Students

Beatriz, Maria

Partner organization

Lisbon Municipality

Regulations and planning ahead in Landskrona (Sweden 1)



Due to climate change, many cities in the world need to adapt to stronger storms, heavier rainfall and rising sea levels.

Landskrona is situated right at the coast. Since the landscape surrounding the city is flat, the negative effects are projected to be quite serious in the future. This will affect farmers, companies situated around Landskrona and people who live in the city. Some effects are already here. Climate adaptation is necessary, something the Swedish delegation presented in their project in CEI 2022.



Our group, Sweden 1, will continue investigating our city's efforts of climate adaptation and how a city can work to spread knowledge of climate change. We interviewed a climate strategist at the municipality explained facts about what Landskrona will look like in 100 years, with most parts being under water (1 m deep). The city has built barricades, inspired by German solutions, rainwater basins and trenches but we need to do more. We will come up with further solutions in studies based on solutions made by other cities in high-risk countries.

We also investigated current regulations at a local level, national level and international level. Sweden is a part of EU and many important decisions concerning how to reduce greenhouse gas-emissions as well as efforts concerning climate adaptations will be considered at the EU-level. We also studied smart climate adaptation methods done abroad that could be useful in our city and aimed to come up with creative ideas for our city.



Landskrona
Sweden

School/ organization

Öresundsgymnasiet

Delegation leader/ teacher

Karin Warlin

Students

Emilio ,Marina, Maida

Partner organization

Environmental department & municipality of Landskrona

The Green Spectrum: Exploring Football and Golf Fields



Join us as we explore the green landscapes of football and golf fields, comparing natural grass and artificial turf. We'll look at how these surfaces impact the sports we love. Natural grass, with its classic appeal, has been the traditional choice for both football and golf. It represents outdoor recreation at its best.

However, artificial turf is becoming popular due to its durability, consistency, and year-round usability, though it has its own downsides.

Our project examines the pros and cons of natural and artificial turf. We consider the environmental impact of natural grass, such as water use, chemicals, and habitat preservation of golf courses and football fields. We also explore the production and disposal processes of artificial turf to understand its sustainability.

We studied how each surface affects gameplay, player experience, and injury rates through interviews with athletes, coaches, and turf experts.

Additionally, we analyzed the economic factors, looking at the long-term costs and benefits of natural versus artificial turf in football stadiums and golf courses.



“...Our project examines the pros and cons of natural and artificial turf...”

By gathering a variety of perspectives, our project aims to promote informed discussions and encourage innovation in the design and upkeep of sports fields. Whether playing on a beautiful fairway or a lush pitch, join us in exploring turf choices and envisioning a future where both nature and performance thrive.



Landskrona
Sweden

School/ organization

Öresundsgymnasiet

Delegation leader/ teacher

Karin Warlin

Students

Mendim, Simon, Linus, Hugo, Viggo

Return to Sender: Glass bottle recycling



Landskrona
Sweden

School/ organization
Seminarieskolan, Landskrona

Delegation leader/ teacher
Kristina Helg

Students
Davud, Edvin, Gabriel, Linus

Solar Energy Initiative Landskrona



The SOLAR group aims to establish community-owned solar power based lighting/charging stations in public areas in order to provide the public with affordable and clean energy sources. These stations aim to help ensure public safety in the dark hours, promote sustainable development, and enhance quality of life for the local population.



Landskrona
Sweden

School/ organization

Seminarieskolan, Landskrona

Delegation leader/ teacher

Kristina Helg

Students

Derrick, Francesca, Aleeza



Climate action-Strengthen resilience and adaptation capabilities to climate disasters



Our project focuses on “Enhancing the Capacity and Adaptability to Climate Change” within SDG 13: Climate Action. Taiwan has been hit by more frequent extreme weather lately, causing lots of problems and even fatalities. But most people don’t know how to stay safe during disasters. So, we wanted to make people more aware of what to do when disaster strikes through our campaign.



“...everyone can help in disaster response and recovery...”

During our project, we explored the top four weather disasters in Taiwan: typhoons, floods, water shortages, and hailstorms. We discussed how bad they can be and talked about some big ones that have happened here before. We also shared ways to make these disasters less severe.

But it’s not just about scaring people. We also want to show how everyone can help in disaster response and recovery. So, we’re planning to make short videos for our community. These videos will break down the important information in a way that’s easy to understand and share. Our goal is to get everyone thinking about how we can all pitch in to be better prepared for when the weather gets rough. With a bit of know-how and teamwork, we can tackle extreme events that are increasing due to climate change together!



Hualien
Taiwan

School/ organization

Stella Maris Ursuline High School

Delegation leader/ teacher

Shawn Huang

Students

Licca, Paris, Winnie

Free-ranging Dogs



Free-ranging dogs (FRD) cause some problems that Taiwanese people are worried about. For example, wildlife can be hurt by these animals, some are even killed by FRD. The streets can also become dirty due to the excrement they leave behind.



As a result, our group members wonder why the FRD appear on the street and try to find the solutions to their associated problems.

In our project, we address the main problems associated with FRD in Taiwan and possible effective methods that have been used in some countries around the world to minimize FRD problems. According to our research, we identify the main problems which FRD cause are the overpopulation of street dogs and the dissemination of disease (rabies). We found that the most common way to address these issues is to TNVR (trap, neuter, vaccinate and release).

However, TNVR cannot thoroughly solve the FRD problem. There is a lot of information on the internet about TNVR, which we learned only works on a closed scope (defined, controlled environment). Therefore, we have discovered a new method called TNSA (trap, neuter, shelter, and adopt). Through adoption, FRD can reintegrate into the domestication, leading to a decrease in the FRD numbers. Additionally, TNSA is now being promoted by the wildlife conservation field as a safe option to decrease FRD numbers.

After the CEI conference, we hope to educate the public about the correct way of keeping pets by showing the result of not managing pet dogs in an appropriate way. Dogs are meant to be in human houses. Moreover, we want to call for the public to “adopt, don’t shop” to give FRD a chance to have a home.



“adopt, don’t shop”



Hualien
Taiwan

School/ organization

Stella Maris Ursuline High School

Delegation leader/ teacher

Shawn Huang

Students

Jasmine, Vera, Robin

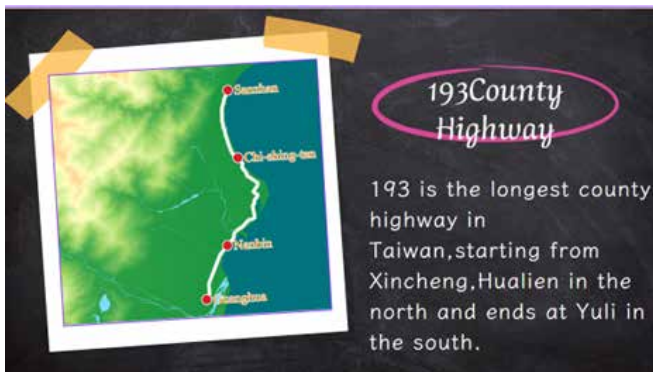
Partner organization

Jiaxin Veterinary Hospital

A road along the seaside and SDGs



Our project focused on the environmental impacts of the County Road 193 widening project and envisioning alternatives that could reduce negative impacts on the environment. The main purpose of the 193 County Road widening project is to improve the quality of the 193 County Road and improve navigation as the path is winding and narrow.



Goal Of Expansion	
Year	Reason Of Expansion
1999	Hualien Port cargo transportation
2015	Alleviate the tide of Suhua lane traffic
2018	Disaster relief and disaster prevention

The purposes of development constantly change...

As a result the Hualien government has been creating plans to change the road, but the public and the environmentalists disagree with the widening plan which will take its toll on the environment and the economy.

Therefore, the plan has been delayed for many years until recently when the government ultimately started with their widening plan. Faced with a plan that has more negative impacts than positive impacts, our group decided to create an appeal to the government which includes proposing tolls and increasing public transportation, discussing

the environmental consequences of their plan, and requesting the government to send out a questionnaire to the public. We also take advice from SDGs 12 and 15 to see if we can do more to conserve the environment.

Finally we propose a plan that could improve the economy and tourism while minimizing the harm to the environment caused by road widening and be acceptable to the public.



Hualien
Taiwan

School/ organization

Stella Maris Ursuline High School

Delegation leader/ teacher

Shawn Huang

Students

Hsuan-Che, Yan Sheng, Cian-Yun, Yen-Fu

SJ ECOFEST



On April 22nd 2021 (during the COVID-19 pandemic), we celebrated Earth Day for the first time. This was initiated by the teachers and students of Permaculture, Animal Protection and Environment Clubs at our school with the aim of finding alternative thinking and attitudes to consumerism.



“...We have donated 2000 olive saplings...”

We also wanted to become more aware of the items we do not use and yet constantly buy more of and to instead experience the happiness of sharing them with someone who will find more use for them. Since all members of our school (approximately 1000 people) were impressed by that first awareness day, we have added the “SJ EcoFest” to our academic calendar in October every year.

We have donated 2000 olive saplings to the garden of an earthquake victim in Hatay (province in Turkey) with the income obtained from the event, which included various activities, conferences, sales tables and auctioning of teachers’ special belongings. Thus, through the ecofest, we experienced the happiness of contributing to the family income of our farmers affected by the earthquake.



Istanbul
Turkey

School/ organization

Saint Joseph Private French High School

Delegation leader/ teacher

Şükran İnce Toy

Students

Arda G, Arda K, Alp

Partner organization

Directorate of Agriculture and Forestry

Value for the Bosphorus: Istanbul Bosphorus Restoration Project



The purpose of our project is to analyze the pollution in the Bosphorus Strait of Istanbul and propose sustainable solutions to mitigate pollution impacts. Istanbul, a city of over 15 million residents, faces significant environmental challenges due to its dense population and heavy maritime traffic. For our study, we began by collecting water samples from various points along the Bosphorus and analyzing them in our school laboratory to assess pollution levels.

Subsequently, we researched the data published by the Istanbul Metropolitan Municipality on the number of transportation and cargo ships that traverse the Bosphorus. This data is critical in understanding the contribution of maritime traffic to water pollution levels. Our findings indicated a strong correlation between high-traffic areas and elevated pollution levels, which include chemical contaminants, plastic waste, and oil residues.

A major consideration in our project was the proposed Kanal Istanbul project, which aims to create a new artificial shipping channel parallel to the Bosphorus. While Kanal Istanbul is intended to reduce congestion in the Bosphorus, the construction of the canal also raises concerns about potential environmental impacts, including changes to water quality and marine ecosystems. We evaluated these potential impacts by comparing them with our findings and the measures taken by other cities.

To address the immediate issue of water pollution, we designed a prototype named "SuTip". SuTip is an innovative water filtration device that purifies contaminated water, making it safe for drinking. This device uses advanced filtration technologies to remove pollutants and can be deployed in areas with high water pollution levels. SuTip demonstrates a practical solution to water contamination and raises awareness about the importance of clean water.

Our project not only highlights the current state of pollution in the Bosphorus but also suggests actionable solutions. These include enhancing waste management systems, imposing stricter regulations on ship emissions, and increasing public awareness about the importance of preserving our waterways. We are collaborating with the Istanbul Metropolitan Municipality and TURMEPA to advocate for these measures and promote long-term sustainability.



Istanbul
Turkey

School/ organization

Üsküdar American Academy

Delegation leader/ teacher

Sedat Toy

Students

Ece, Efe, Irmak, Arda, Emre, Duru

Partner organization

Istanbul Metropolitan Municipality & TURMEPA

The Sustainability Days in TED Istanbul



Our project, which roughly translates to “The Sustainability Days in TED Istanbul” , was over a week between 19th - 22nd of February. We aimed to raise awareness about the importance of a sustainable life throughout various grades/different year groups at school. We organized this project in the light of the Sustainable Development Goal 4: Quality Education.

“...we aimed to increase the awareness of students at a young age...”

On the first day, we invited an educator from the TİDER (Basic Needs Association): Melih Duman to our school to present the overall aim of this association. TİDER is a non-profit and non-governmental association that establishes food banks to battle poverty and excess waste. After the talk, we started a campaign to make food donations to their food bank.

On the second day, we hosted Mrs. Simge Gediz, a coordinator at the LaSalle College Istanbul campus. She gave a presentation about sustainable fashion in the context of UN SDG 12: Responsible Production and Consumption.

Additionally, our high school students, Caretakers Sustainability at School Group, played a game with middle schoolers about Sustainable Development Goals called “Global Goals game for Sustainable Development Goals”. By making them play this game, we aimed to increase the awareness of students at a young age.

We also invited other various NGOs and speakers in the following days that we will further talk about in our presentation at CEI 2024.



Istanbul
Turkey

School/ organization

TED ISTANBUL COLLEGE

Delegation leader/ teacher

Didem Demirci Çiçek

Students

Ayça, Ezgi, Binnur

EcoSip Istanbul: Clean Water, Clear Conscience



The prominent water supplier in Istanbul, ISKI, claims that tap water in Istanbul is perfectly drinkable. However, we see many households using large water jugs, (up to 5 gallons) to meet their daily water needs.



“We want to address people’s concerns about drinking water...”

ISKI asserts that the belief in tap water contamination is psychological and that if apartments carry on the necessary procedures to clean their water tanks, tap water is even better than bottled water due to its mineral content. Conversely, citizens believe tap water is unhealthy, with some reporting illness after drinking it. This perception has led many people to opt for alternative water sources instead of drinking from the tap. But these alternatives also have drawbacks. In addition to inconsistent evidence that the quality of the water in the plastic bottled waters is better, quality measurements are not always made properly. In addition, the pollution that bottled water causes to the environment cannot be ignored.

Many people use filters for tap water, and the certification documents of such devices are uncertain. Thus, there needs to be more awareness about access to clean water in Istanbul. We want to address people’s concerns about drinking water with the research and scientific data we conducted in our project. We offer solution-oriented suggestions for accessing drinking water in the healthiest and economically friendly way. In this way, we also aim to reduce the damage caused to the environment by plastic jugs and by the exhaust gases released from the vehicles used when distributing these jugs to homes.



Istanbul
Turkey

School/ organization
Robert College

Delegation leader/ teacher
Erol Şahin

Students
Eren, Mehmet, Can, Mira, Zeynep, Nil

Refilla



Goal 12 of the United Nations Environment Programme targets is ensuring sustainable consumption and production patterns. In order to work on achieving this goal, we introduce to you: "Refilla". First, Refilla reduces large waste plastics with the help of a shredder to obtain granules. Then, it melts these granules and extracts them with the help of pressure to produce filaments which can be used by 3D printers.



This transformation of materials is important because nowadays, 3D printers have become indispensable. They are no longer expensive machines owned by big businesses, they have become a necessity in homes. When plastic is left decomposing in nature, it takes thousands of years to fully dissolve. Since the PLA used in 3D printers is organic, when it is left in the soil, it dissolves under the influence of enzymes secreted by bacteria, fungi, algae, yeast and other microorganisms. Eventually it is converted into environmentally friendly carbon dioxide and water, but this takes a long time.

Recycling reduces the need for raw materials and the amount of waste going to landfill, which contributes greatly to the national economy and local businesses. Refilla directly contributes to the economy. In today's market, 1kg PLA filament costs around \$25. In our project, 3D plastic waste will be converted into filament without cost. If 3D printers continue to grow in usage, the resulting 3D filament waste will grow like an avalanche. Refilla can reuse all this potential waste leading to zero waste.



Ankara
Turkey

School/ organization

Nermin Mehmet Çekiç Anatolian High School Ankara

Delegation leader/ teacher

Emre Şişman

Students

Yiğitalp, Kaan, Şimal, Sümeyra, Deniz
(Team Tulpar)

Nurturing in Nature: Outdoor School



For our project, we focused on one of the main themes for this year's conference: education; and the sub-themes (SDGs) of quality education, climate action, and life on land. We continued our project from last year and hosted an Outdoor School for the 6th grade class at our school.



We started planning for this event by reflecting on what worked last year and what we could improve. From there, we began researching hands-on learning activities, connecting with new local people to join us and speak to the group, and creating a bonding experience for the students.

When it came time for Outdoor School, our school bused us, the sixth graders, a few teachers, and the CEI "camp counselors," to the same State Park we used last year called Willamette Mission. During this Outdoor School, we taught the kids various things, including the cultural importance of the land, the value of the environment, and how to use critical thinking to solve problems in our environment today.

We did icebreakers, scavenger hunts, and inquiry projects, helping them to connect and learn to challenge their assumptions about what they think they know. We also listened to a horticulturist and a local Native American tribe member speak, tested the lake's water quality, studied flora and fauna, and did fun, engaging activities that will help the sixth-graders cement all they learned about caring for the Earth at our CEI Outdoor School.



Salem
USA

School/ organization

Blanchet Catholic School

Delegation leader/ teacher

Dr. Micki Halsey Randall

Students

Denavae, Sophie, Raquelle, Ben, Rieve, Carter, Jacqui, Rafael

Elementary Earth Day



For our project we focused on the theme of education, and the sub themes (SDGs) of quality education, responsible consumption and production, climate action, and life on land. We created an event at our school in honor of Earth Day.



This event was attended by two local elementary schools. During this event we educated the students on climate issues and taught them how the earth works, we also showed them how to make upcycled bird feeders, mini gardens, and many other fun and educational activities. After weeks of research and organization we were able to put on a fun, thought-provoking and memorable experience for these elementary schoolers.



To start the event, we met with the elementary students in our school gym. Our day began with a presentation and discussion from a local environmental advocate. Then, we played an icebreaker game and split the students into smaller groups. Afterwards we put them into a circuit with five different activities that taught them different pieces of knowledge about the earth and its environment. Overall, our Elementary Earth Day events helped to educate these kids on the importance of taking care of the earth and gave them an experience they won't soon forget.



“...gave them an experience they won't soon forget...”



Salem
USA

School/ organization

Blanchet Catholic School

Delegation leader/ teacher

Dr. Micki Halsey Randall

Students

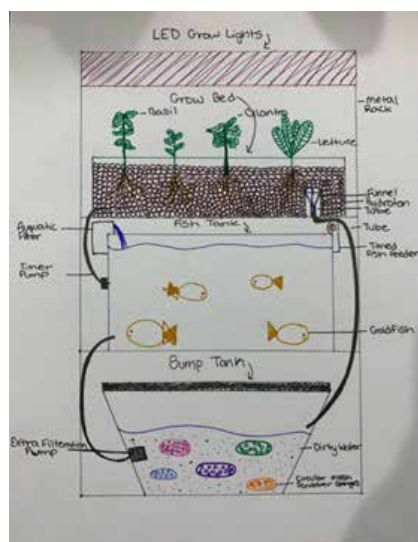
Denavae, Sophie, Raquelle, Ben, Rieve, Carter, Jacqui, Rafael

Community aquaponics



We set up an aquaponics system to maintain a portion of our community garden with mostly leafy greens (such as lettuce) and herbs (such as cilantro). In the system, waste from fish is used to provide nutrients for the plants to grow.

“Waste from fish is used to provide nutrients for the plants to grow...”



We also did work to renew the garden, which was not maintained after the COVID-19 lockdown fully lifted in 2021. We involved local elementary and middle schoolers in the installation of the aquaponics system, which is an easy-to-make and easy-to-maintain vertical system running on one fish tank, to get them excited about the garden and teach them about sustainable environmental practices.

Our project falls within the conference subthemes of quality education and responsible consumption and production.



Chicago
USA

School/ organization

Walton High School

Delegation leader/ teacher

Wayne Schimpff

Students

Grace, Madeline, Anthony, Vidya



The Tycho Brahe museum

In the center of the small island of Ven in the strait between Sweden and Denmark, the eccentric nobleman and astronomer Tycho Brahe built an impressive research center with castle and underground observatory in the end of the 16th century.

Tycho is today seen as one of the most important persons in the history of science and right on the spot where he studied the starry sky more than 400 years ago, the Tycho Brahe museum is situated. It was here Tycho questioned the thousand-year-old laws that were said to govern the universe. It was here he performed calculations that would remain valid for three hundred years.

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Caretakers of the environment 2024
Landskrona, Sweden

*He said he was doing better.
I just didn't expect this.*
Annie - CEI Scotland

*Sadness and regret filled
my heart this morning.*
Antoni - CEI Poland

*Very sad and very sudden. I didn't
know Dan was so ill. He was a
great friend and we Caretakers
will always remember him.*
Ali Lin - CEI Taiwan

These were the messages circulating in the Caretakers' WhatsApp group when we heard that Dan Hoynacki had passed away. All of the Caretaker's family were incredibly sad when, early this year, CEI lost one of our key figures.



Dan Hoynecki, the esteemed president of Caretakers of the Environment International, left us on January 18th, 2024. Dan's legacy is one of unwavering commitment, boundless enthusiasm, and transformative impact in the field of environmental education. Through the programmes he developed at Oregon State University Extension in USA, Dan involved his local youth in learning about ecological principles, leadership and community service. Dan believed that education was the key to lasting change, and he worked tirelessly to ensure that future generations would have the knowledge and tools needed to address the pressing environmental issues of our time. His legacy endures through the many lives he influenced. Those who had the privilege of knowing Dan will remember his relentless passion for the environment, his insightful leadership, and his remarkable ability to connect with people

from all walks of life. His genuine warmth and approachable nature made him a beloved figure in the environmental community.

The first time I met Dan was in Hong Kong at the CEI 2007 conference. He immediately confirmed his attendance when I extended an invitation to the Environmental Teacher International Conference the following year in East Java, Indonesia. His support and visits to Indonesia continued in 2010, 2020 and 2023. He helped CEI Indonesia prepare for our conferences, review the venue and all the planning, as well as supporting us during the ups and downs of the conference. During the CEI 2023 conference, even though he was struggling with shoulder and knee issues, he kept sending us messages, and joined the conference virtually. I believe all conference hosts and Caretakers members will never forget his warmth, guidance and his jokes.

He was not just a leader, but a mentor and a guide.

When my brother passed away in 2021, Dan texted me: "Joyce and I send our condolences and hope at some future time you are able to smile with fond memories. It may help to view death as a transition, not an ending but a new beginning and adventure for those we lose from this existence". I kept this message on my phone and reread it when I received the sad news about his passing. As Dan considered death as a new journey, I hope and believe Dan will enjoy his new adventure. We mourn the loss of Dan, however we also celebrate his life and the indelible mark he has left on our world. Dan's spirit will live on in the hearts and minds of those who continue to care for our planet, especially his beloved Caretakers.

Stien Makaputan
CEI Indonesia

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To establish a new CEI branch or revive a dormant branch, visit caretakers4all.org

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