

35th Annual Caretakers of the Environment Conference

Global Forum for Environmental Education Volume 32, Number 1, 2021

CEI 2021 sustainable communities

working together locally and globally for a sustainable future



2021 Partners



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Foreword

Caretakers of the Environment International (CEI) is a global, independent organization and network established in 1986, focused on environmental education and cultural exchange among secondary school students, teachers and mentors. Nowadays, Caretakers are active in nearly 50 countries across the world. An annual CEI Conference provides students and their educators with an interactive platform for sharing and accomplishing projects on environmental topics, to discuss relevant and current issues and problems, to look together for solutions for the future and to celebrate the involvement and interest of young and creative students in saving our planet. Each conference also serves as a cultural exchange between all participants. The 2020 and 2021 conferences have been fully virtual and are the first to do so in CEI history. The format of future conferences may change but the enthusiasm and environmental message remain the same.

This 2021 Global Forum was designed and put together by Kazi Talaska with help from the alumni team and the CEI Ireland hosts namely Jana Cox and Andrew Cox with contribution as named through articles and the team of Young Reporters from across the world.

I hope caretakers, wherever you may reside, may feel proud in your work. Your work is celebrated, and your contributions important. Please keep inspiring.

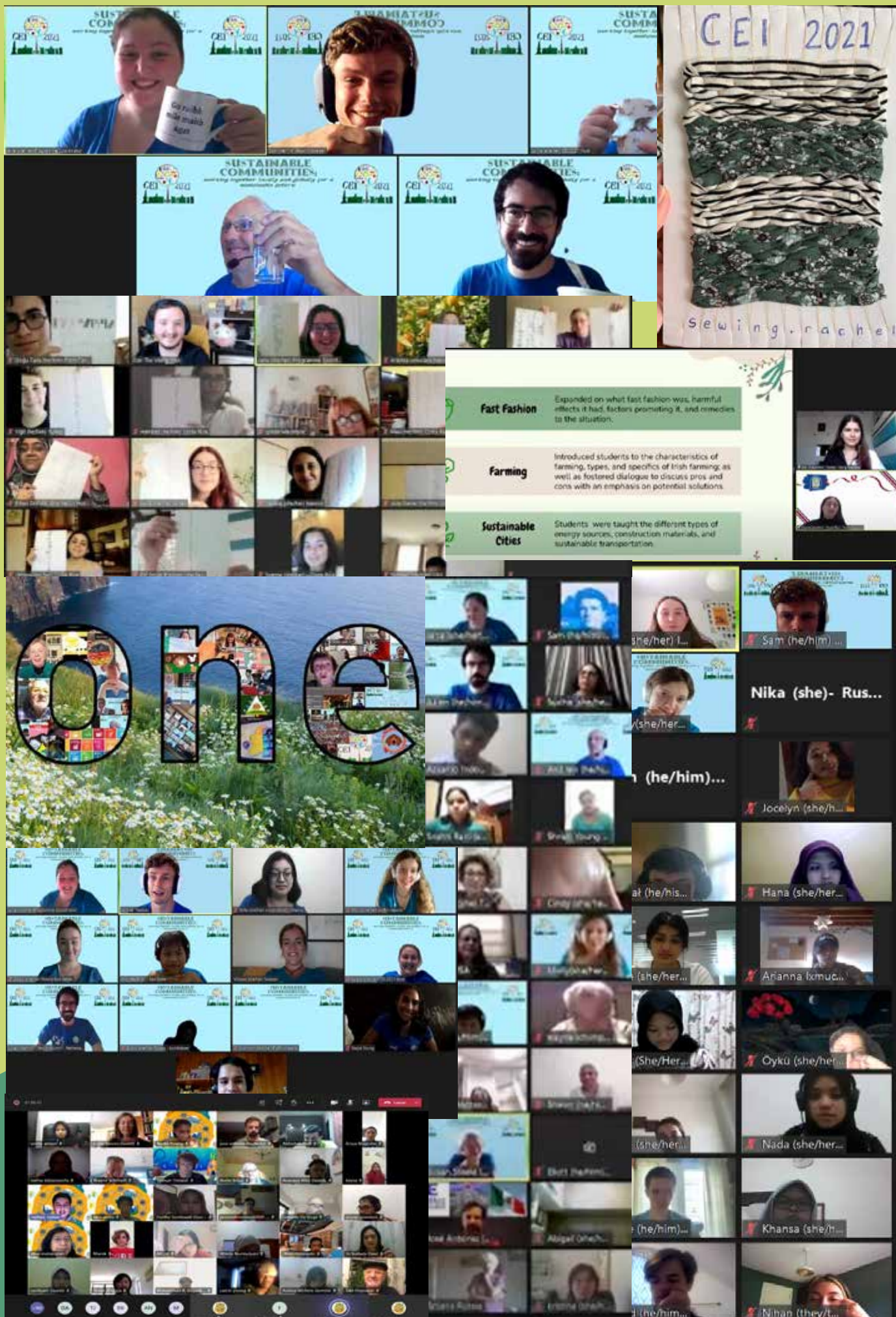
- Kazi Talaska

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Message from the CEI Board



On behalf of the Caretakers of the Environment International Board of Directors, a special thank you to all educators, student delegates, presenters, and alumni for your preparation, participation, and engagement in the 35th annual conference. The board also expresses a profound and enormous gratitude to Andrew Cox and Laura Kelly as conference hosts, for conceiving and producing one of our most dynamic and engaging conferences within the constraints of our inability to connect face to face.

A positive outcome of the pandemic has been that it reinvigorated the resolve of our most prominent, still energized, former youth delegates, our Senior Alumni – a positive and welcoming inspiration to our board. These professional young adults developed a new agreement with the Caretakers Board to work in tandem with our host teams to get creative and force Caretakers to grow rather than recede in uncomfortable times. We are grateful for this fresh, optimistic, and energetic commitment. This virtual conference from Ireland enabled us to welcome nearly twice as many delegates as we could manage at an in-person conference and stretched our skills and imagination as to what can be achieved in an entirely virtual setting.

Once again, this year's Caretakers Conference was where highly motivated youth, educators, senior and junior alumni, schools, NGOs, leaders, communities, and nations of our planet united for several days of shared experience, discussion, inspiration, validation, and celebration.

In my opening remarks at the conference, I shared this harmony vs. conflict parable: Most of you agree that nature thrives in its biodiversity. And through its biodiversity, nature adapts to both extremely rapid change and slow-moving conditions. Nature is our supreme teacher. It is a natural but complex system of many diverse facets but somehow all interconnected.

There was a time, not so long ago, when all entities that exist within nature only consumed what they needed. Then humans thought they could outsmart nature and take whatever they wanted, not in harmony, but despite nature, and therefore in conflict with nature. And doing so with little or no regard for the needs of the plants and animals and fundamental elements of this planet. The driving force wasn't out of a sense of need, but one of profit. Prosperity is important, especially if it serves all needs, and isn't at the expense of our future. If we have learned anything, we cannot abruptly change any system without the compliance of its members. Otherwise, there is conflict. It pleases me that Caretakers has always taken a bottom-up approach that engages its emerging stakeholders – our youth – in a systemic approach.

For reference, here is a reminder of our Caretakers goals:

- To develop a worldwide network of secondary school students and teachers who share environmental concerns and who face environmental challenges.
- To share successful and innovative environmental education programs that engage secondary youth.
- To facilitate joint educational dialogue and projects that encourage international data exchange and interdisciplinary activities; inspire future careers.
- To seek opportunities which enable delegates to act as ambassadors for CEI in their own country.
- To promote environmental awareness and to develop national environmental education networks.
- To encourage the building of trust, friendship, and cooperation among people of different cultural backgrounds.
- To celebrate! the added value of teamwork, making new and often lifelong friendships, and achieving new contextual knowledge and understanding not available from a textbook or website

Whether this was your very first conference, or in my case, my 18th – the Caretakers gift to each of you can be validation of your own values and beliefs, as well as a renewed hope for our planet, especially for our emerging generation but also for future generations. What is expected from you to be able to receive and enjoy this gift? Your commitment, attentiveness, patience, curiosity, sleep, and your presence.

This year, more than 30 past conference teachers and youth volunteers with 4 senior alumni and 2 co-hosts contributed over 3000 hours to create this conference. If each delegate invested just 20 hours in their project, that's another 9000 hours. During the conference, everyone reflected on their own commitment to Caretakers, investing another 10,000 hours minimum into the events and sessions offered over those amazing five days.

A Caretaker's Reflection: A Caretakers conference, mostly in hindsight, can be that place – kind of a Nev erland- where we go in the brief space between being awake and being asleep. It can be a place where you glimpse the future YOU.

It can be a place where:

You can see yourself in others who at first appear to be totally different than you.

Gain new life skillsets that you hadn't imagined you could master.

Acquire the self-confidence to reset your personal goals and your role in securing the future of your community, your planet.

Take a selfie of the future you. Go forth, be present, and make new connections and discoveries, and enjoy!

It is the Caretakers hope that this conference become the motivator for you and your team to double down your efforts to not only contribute creatively to solving the climate crisis, but to also help keep our planet an adaptive and enduring place for all.

Dan Hoynacki

Resources and Development International Board Director
President, CEI USA Branch



Letter from the host

Andrew Cox (on behalf of both co-hosts)



Welcome to the 35th CEI conference from your host, Ireland. This is the second virtual meeting after the successful one held in Indonesia last October.

When I said farewell to delegates in July 1998 after we had hosted the 12th conference jointly with our friends in Northern Ireland, I did not imagine that I would once again co-chair another conference. Since then, I have edited the Global Forum magazine a number of times, been a Board member and President for 6 years, and brought numerous students to the annual conference.

I was lucky enough to be present at the first conference in the Hague, Netherlands in 1987 when the CEI concept of bringing young students, teachers and educators from all parts of the globe together to learn and share ideas about the environment was initiated. We have come a long way from a time when communications meant landline phones and posting letters. Technological advances mean that it is possible, almost normal, to communicate from all parts of the globe at any time of the day. Hosting a virtual conference reduces environmentally damaging airmiles and means that anyone with internet access and enthusiasm can participate. A virtual conference this year was necessary due to the global pandemic of Covid 19 which meant that a face to face conference was not possible.

Thanks are due to so many people who have helped prepare for this conference: my daughter Laura as co-host who first attended as 6 year old in 1998; the Senior alumni team lead by my other daughter Jana plus Julien, Sam, Nadia and their teacher support Vildana who brought their collective years of experience and technical knowhow together to enable the virtual conference happen; the numerous speakers and workshop hosts whose ideas of sustainable communities are reflected in the collective reports; the young students who present their projects, posters, art work and participate in the many activities during the conference; the teachers (both new and long term supporters of CEI) who give of their time to encourage their delegation to take part; the junior alumni, alumni assistants, youth leaders and students from Newtown and St Angela's in Waterford who helped to run the workshops and student activities; the team of young reporters from Costa Rica, Germany, India, Indonesia, Malawi, Turkey, USA, Mexico and their teacher support Cindy and Julia; past pupils Mary and Susan from Newtown school who helped chair the opening and closing ceremonies; and the International Board who supported us at every step of the way.

Post script: thank you to all the delegates who participated. The quality of work presented at and during the conference by the young people was fantastic and gives us great heart for the future.

I think that this virtual conference shows that whilst we would like to return to face to face versions, we must recognise the value of hybrid conferences which would allow a larger number of people to take part, particularly those who cannot afford to travel. We must recognise that not all delegations were able to access the internet as easily as others.

And finally, a huge thank you, to Jana and Kazi for their excellent efforts on this year's global forum.

Now we must hand over the virtual mantle of authority to the 2022 Host COSTA RICA. Good luck, buena suerte.

The first virtual CEI conference –2020 Indonesia

Ali Chou-Li Lin

During CEI 2019 in Turkey, I had promised the 2020 hosts Stien and Mimi that I would visit Indonesia in April before the conference, on behalf of the CEI board, like Stien had visited Taiwan a few months before CEI 2014.

Indonesian schools were very passionate about the CEI 2020 conference. The organizers included many teachers from different schools. In February I was invited to attend one of the virtual Indonesian delegation selections as an international judge. I saw many interesting projects and I was touched by students' enthusiasm. Unfortunately, the physical conference had to be cancelled due to the Covid-19 pandemic around the world.

The CEI 2020 conference took place from September 27th to October 3rd. It was the first virtual conference in CEI's 34-year history. Led by Stien, the conference was well-organized by CEI Indonesia and the senior alumni team who were familiar with social media and technology. Every day we saw different teachers and young volunteers moderate various sessions and activities. Some Indonesian students were nervous but I knew they took their job seriously and were be proud of being part of the host team.

In the workshop "Graphic Recording" I attended, the facilitators showed how to use simple words and images in communication, and participants were encouraged to discuss and practice during the workshop. Like previous conferences, there were many inspiring talks and social events. We enjoyed a virtual tour and learned about the cultural and environmental diversity of Indonesia. A video of the CEI conferences review brought us a lot of wonderful memories. I cried when the memoriam of Fátima Matos Almeida was played. Fátima was my CEI mentor and I missed her a lot. I believe she is in heaven looking after her CEI friends.

I was very impressed and surprised that the conference was more interactive and interesting than I had imagined. The CEI 2020 conference was very successful and remarkable. I really admired the organizing team. Many thanks and congrats to everyone who made it happened!



CEI 2020 in the eyes of a “Tico”:

A love story

Georgina Grillo

Attending Caretakers of the Environment Indonesia 2020 with the Costarrican delegation in a virtual model was the beginning of love at first sight. Our delegation made up of 14 courageous kids and two teachers from Golden Valley School-Costa Rica was ready to wake up at 03:00 in the morning every day for a week. Little did we know that this was just the beginning of a lovely long-term relationship. How can a conference be so impactful you might ask?

CEI 2020 received us with open arms, from the amazing registration team who processed and organized our teams, to the wonderful CEI Alumni who made sure we got to each of our sessions and every activity ran well. Topics were relevant, presentations were interactive and encouraged student involvement and growth. Respect, tolerance, fairness, and love were evident in every interaction. Very soon, GVS-CR students were collaborating with CEI participants from other countries in 48-hour projects, broadening their perspectives and using the power in their hands to change the world one action at a time. Minute by minute our students were allowed to leave a mark, they were not just attending a conference, they **were** the conference, together with the students of dozens of other countries. By this time, we were head over heels with CEI.

FMTV, which runs CEI Costa Rica, was on point when they invited GVS to participate. A school whose vision is to prepare better men and women of tomorrow, global citizens who actively impact their world was the perfect match. CEI 2020 was the setting of our love story. Which will be yours? Our Earth needs you!

CEI is also waiting for you with wide open arms, take the next step!

The love story continues. See you in CEI 2021 Ireland...

Rainbow Hugs



Meet The Alumni Team

The alumni team are made up of senior and junior alumni that work together to help create and facilitate the conference. This year the alumni team is made up of 7 senior and junior alumni, with the support of further assistants and volunteers. Meet the team, their interests, and catch the familiar faces that lead your teams and workshops.

Jana Cox

Chairperson

I'm doing a PhD at Utrecht University in the Netherlands, focused on the response of river deltas to climate change and human influence. I'm the senior alumni chairperson, so I organize and coordinate the senior alumni team. I'm also involved in the tech and graphic design for the alumni team. As of 2021, I'm also coordinating the Young Reporters of the Environment for CEI. Outside of work, I love board games, reading fantasy books and watching TV.



Laura Kelly

Secretary

Currently working in Dublin as an FIT Operations Coordinator, which is basically a fancy way of saying that I work for a tour operator which organises holidays in Ireland and Scotland for American tourists. I'm the Senior Alumni Secretary which means my job is to keep the team on track through lists, deadlines and reminders. I also manage the CEI Alumni Website. When I'm not working or helping with CEI, I enjoy orienteering, video games and reading.

Julien Beuken

Senior Alumni Liason

I'm 28 years old and work for the Dutch Ministry of Foreign Affairs where (amongst other things) I maintain our relationship with the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). In my free time I like to enjoy nature during walks, gardening or sunbathing. I like to read, watch movies and explore new cultures and places. Within the Senior Alumni Committee I am the liaison to the CEI Board. As a board member I make sure the perspective and experiences of the young generation and (former) participants are taken into account.





Samuel Thelaus

Junior Alumni Coordinator

I am studying statistics in London while working remotely for a professor in Sydney, who researches how decisions are made by the brain. I am in charge of the junior alumni, mentoring them throughout the year and helping them prepare for the conference. In my freetime, I play disc golf, go to the gym and play a computer game called DotA 2.

Nadia Young

Social Media Coordinator

I run a natural skin and haircare business while freelancing as social strategist. My title on the senior alumni committee is social media director. This job consists of creating a plan for uploading and strategizing Caretakers social outreach. In my off-time, I enjoy taking my daughter for walks on the lake and trying new food trucks.



Sofia Arriaga Galicia

Junior Alumni

When I'm not at school, I study German, take care of a small orchard, read or simply listen to some music. When going outside was not as dangerous, I also enjoyed taking walks with my dog; forest landscapes are my ultimate weakness. Now that everyone is confined at home, my knowledge on how to knit, sew, stitch, and make small origami figures, has become more useful to spend my time.

Kazi Talaska

Junior Alumni

Hi my names Kazi and I have a Bachelors in Horticulture Science from Massey University in New Zealand. My passion lies the future of food and the challenges the industry faces with pressures like climate change.





Diana Babintseva

Alumni Assistant

Hi, I'm Diana from Russia. I am a high school student with a deep love of learning about IT-technologies. I love programming and playing musical instruments.

Ariq Widjaya

Alumni Assistant

I am currently studying at Universiti Teknikal Malaysia Melaka (UTEM) and majoring in computer science. Now I'm studying and deepening the knowledge of Linux operating system. My hobbies are playing games, reading novels, reading technology articles, and following technology trends.



Vildana

Clan Leader

I am a head teacher in a Swedish compulsory school using transdisciplinary learning to teach about sustainability. I hold a master degree in science education from Stockholm University. For the time being I'm cooperating with Swedish television around a new TV series that aims to inspire students to take action for a sustainable future.



Alberto

Clan Leader





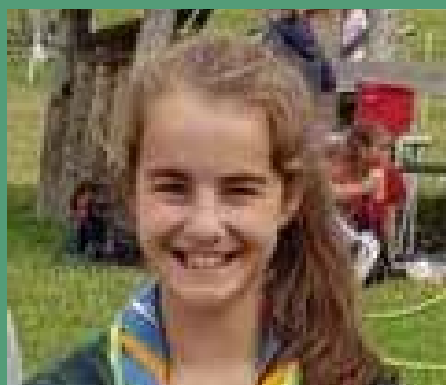
Ellie
Clan Leader



Gosia
Clan Leader



Molly
Clan Leader



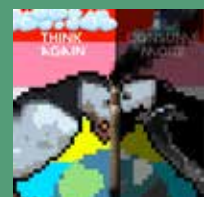
Sadbh
Clan Leader

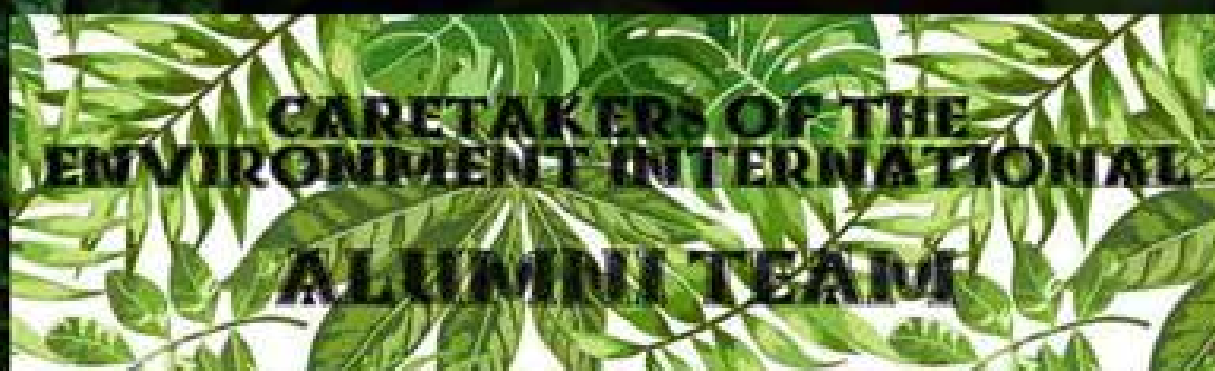
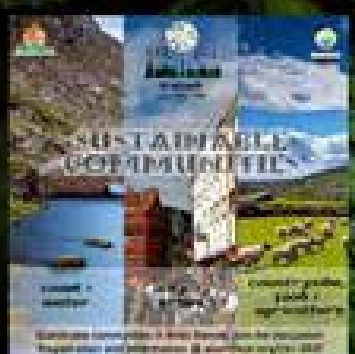
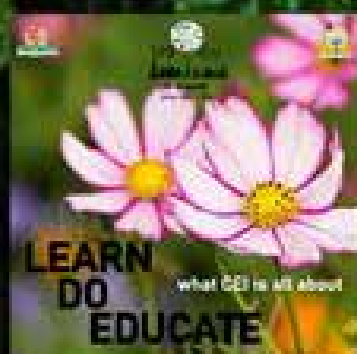
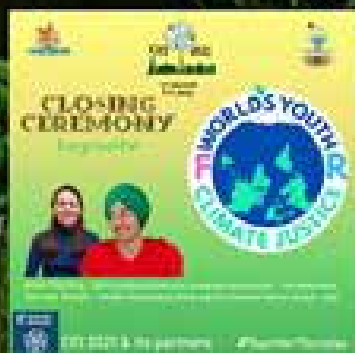
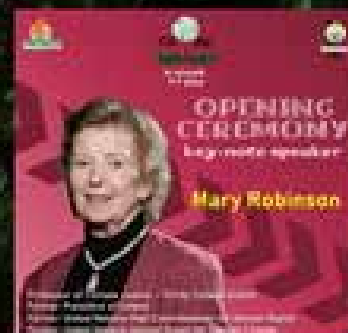


Shannon
Clan Leader

2021 Clans

There were 6 student clans and one teacher clan. The clans members were made up of different delegations around the world and were inspired by Irish animals. Below are the clan logos and the clan flags designed by members. Their names are given in both English and Irish.





CEI Alumni Team

Online presence

be the first to know
about CEI news,
conference updates and
CEI memories!

Join us and follow us:

website

alumnicei.org

youtube

Alumni CEI

instagram

@imacei

facebook

CEI Alumni Team

tiktok

@imacei

Projects

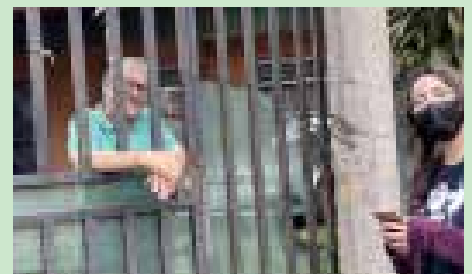
Students and delegations around the world have carried out projects in their communities and presented their outcomes during the conference. In many cases students from different countries have worked together. Projects take on many forms but all address environmental issues with the added challenges to collaboration from the COVID-19 pandemic. This year the conference theme was “Sustainable Communities: working together globally and locally for a sustainable future”. Projects focused on one of the three subthemes: 1. Urban Communities, 2. Coastal and River Communities or 3. Rural Communities.

CRM United

Costa Rica & Malawi Golden Valley School and Boma Community Day Secondary

Sofía, Angelina, Ignacio, Daniela, Lyod, Memory

CRM United is a student-led collaboration project with young leaders from Malawi and Costa Rica. Together, we aim to create awareness and promote sustainable solutions to the problem of Waste Management in the communities of Kasalika, Chilanga and in our local community in Costa Rica. Firstly, CRM United created audio and posters that were translated and promoted in the Chichewa language in Malawi and replicated in Costa Rica in English & Spanish. These audios and posters allowed us to raise awareness in our schools and communities. In the Costa Rican community, we also created a community group where families are able to take their organic trash to the school and add it to the student-led compost system in order to recycle and reduce landfill waste. In the community of Malawi, we played a short 1 minute advertisement 8 times on the radio to create awareness. The script was written and translated in Chichewa so that it could be voiced on the radio in Malawi to help raise awareness. Lastly, we created activities designed for the communities in Malawi that were carried out by the mentor and students from the Boma Community Day Secondary School. These activities were adapted and replicated by the mentor and students from Golden Valley School in Costa Rica. This project aims to unite communities by being inclusive and solving a shared issue with innovative ideas.





Aqua Bits

Costa Rica
Golden Valley School

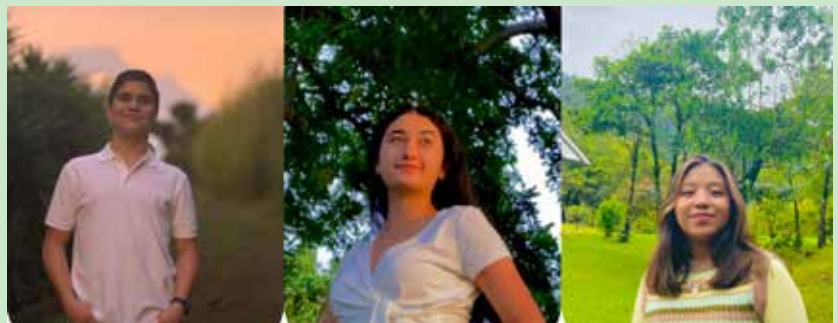
Daniela, Rocío, Max



Every day, tons of plastic are thrown away and eventually end up in water bodies. Some of the most dangerous products for the environment are, in fact, single-use, which, as the name mentions, are designed to be thrown away after solely one use. This is the reason why we developed Aqua Bits, an opportunity to fight

against this life threatening problem. In 2016, scientists in Japan discovered the bacteria *Ideonella Sakaensis*, which has the ability to eat PET plastic (the most commonly used and less recycled type of plastic), but does not have the ability to live in water bodies. Based on research from the University of Indonesia, we plan to genetically engineer the bacteria with *Azotobacter* (specifically species *Chroococcum*), so it can acquire the trait of thriving in water bodies while still being able to eat the PET. After that, we would insert the bacteria in a capsule made of vegan, water-solvent

Softgel capsules that would dissolve when they come in touch with the water, letting the bacteria out and allowing it to do its work. Once the capsule is in the water, it requires no maintenance, and it degrades the PET into unthreatening metabolites, proven to pose absolutely no harm to any environment it is integrated in.



Eco – Masks

Costa Rica

Golden Valley School

Maria Paula, Mauricio, Max

With the ongoing global pandemic, a series of previously existing global issues have been magnified. Two of these issues health and pollution in particular are magnified, specifically the spread of infectious diseases and the increase of pollution due to trash disposals. Many people throughout the world have begun using facemasks every single day in order to avoid getting infected with Covid-19. And while many people purchase reusable masks, many do not have the resources or do not like these masks and purchase disposable facemasks. Facemask pollution has increased tremendously since the beginning of the pandemic started. On the opposite end of the spectrum lie the entire spectrum of low income families and homeless people who have no access to facemasks, they can not protect themselves and are at a much higher risk of contracting the disease. With Re-Mask, we as a team aim to tackle both issues at the same time. The main focus of the project is to produce reusable face masks that are likeable to the customers, and with the purchase of each facemask, donate another facemask to low resource families and homeless people, so they can protect themselves from the virus themselves. At the same time that we provide protection from the virus, we are also directly and indirectly reducing pollution produced from disposable facemasks, since our users are going to purchase and use less disposable facemasks.



Anura

Costa Rica
Golden Valley School

Jimena, Jose Daniel, Daniel and Bianca



Plastic littering is a big problem in Costa Rica that has been increasing in the past few years. In an effort to reduce plastic littering, Anura is a project aimed to implement different strategies to reduce this problem in our country. Anura proposes to create a partnership with the international organization Precious Plastics, an organization that exists to reduce plastic waste in the world. They aim to create an alternative global recycling system, by designing machines that people can build in their own communities. The objective of Anura is to reduce the amount of plastic in the streets of Costa Rica by implementing a precious plastic lab in the country, where a circular economy can function. With the plastic that will be processed in the Precious Plastics lab, Anura will create eco-friendly products made from recycled plastic, for example benches



made from the already processed recycled plastic that the citizens will be able to buy. Moreover, the citizens will also be able to help Anura because it will give them a sense of being a better person helping the environment. It will motivate them to continue giving the plastic they don't use for a better cause. As



mentioned before, plastic waste is an ongoing problem in Costa Rica that Anura is willing to reduce by the medium between Precious Plastics and the community.



City Relaunch

Costa Rica
Golden Valley School

Christopher, Samantha, and Alejandro



CO₂ emissions have increased a lot due to the development of the car industry, and the different types of productions that exist today. Costa Rica is currently working hard on protecting the environment, especially its plants and animals, but there's not that much that the government itself can do to avoid emitting lots of CO₂ and also to get rid of it.

CityRelaunch is a project that's aiming to solve this problem in Costa Rica and it can also be implemented all around the world. CityRelaunch wants to create a cement or concrete formula made out of bio charcoal: Biochar. Bio Charcoal is made out of natural residues that are burned and it can work as a fertilizer. By creating this formula of cement, cities that are developing just like San José are going to be able to construct their new buildings and projects and with these new buildings made out of this concrete the CO₂ emissions are going to be absorbed. This is very important now that the cities don't have lots of trees and now many people are buying cars so this could help to absorb CO₂ and other emissions. This Biochar can also be donated to the local communities that grow crops as a fertilizer so that they can grow healthy crops.



FurNature

Costa Rica
Golden Valley School

Maripaz, Alisson, Arianna



The project addresses responsible consumption and production in a fun and creative way. It mainly focuses on reducing the amount of plastic waste that ends up polluting the oceans, rivers, landscapes, and harming the wildlife living in the area.

According to Cubero. A (2019), about 15 trucks worth of plastic are thrown into the ocean everyday in Costa Rica alone, and 550 tons are discarded in total. An even more shocking fact is that out of the 550 tons of plastic waste being discharged daily, only about 9% ends up being recycled. FurNature brings about a solution which consists of turning reusable waste, like plastic bottles, into durable and elegant furniture pieces. The plastic bottles we use come from different sources, such as schools, firms, recycling centers, etc. This process will make use of several plastic bottles which together can form a strong surface, sturdy enough for someone to sit or just to place their feet! This formation will be covered in fine fabric along with a hard sheet of cardboard to create more firmness. It will also contain a soft cushion at the top for a pleasurable sitting experience. Another one of our goals is to not only help on a local scale but also worldwide. We plan on donating a small part of our overall profits to big organizations including charities or other reliable foundations. Hence, supporting our business also means supporting a bigger cause!

Conservation of Animals

Malawi

Boma Community Day Secondary School

Boma Community Day secondary School is located in the Kasungu District. The Kasungu district has a national park which is a home to many different types of wildlife. Kasungu National Park is the second largest wildlife reserve after Nyika National Park. It is found in Kasungu district in the central region of the country at a distance of 175 km west of Kasungu Town. The size of the wildlife reserve is 2,000 km² and



lies between 1,000-1,330m above the sea level. It borders with Zambia to the west and some poachers also come from this area. The landscape of Kasungu National Park is mainly grassland with some *Brachystegia-Julbernardia* woodland. The area has rolling hills with a small lake and a wide marshy river course.

The knowledge gap between the youth and the current environmental issues is fueling environmental degradation, issues such as poaching of wildlife, habitat destruction and increased wildlife crimes. This is affecting populations of many wildlife species including elephants, pangolins and lions which are mostly targeted. In Malawi, elephants, lions and pangolins are major targets for poachers. This has reduced population of these species. Rhinos were completely wiped out in Malawi. Lions were wiped out in many wildlife reserves. Rhinos and lions have been reintroduced in Liwonde National Park. Pangolin are recently the major targeted species by poachers. Elephants are another target for poachers. Creating environmental awareness and advocacy on conservation of these species to youth and communities around Kasungu National Park will enhance knowledge, understanding and initiate community participation in conservation activities. Our project is aimed at initiating youth active participation in wildlife conservation.

Mystery of soybean

Hong Kong

Queen Elizabeth School Old Students' Association
Secondary School

Chan On Yi, Lam Yin Ka, Wong Yiu Yiu, Zainab Eman



According to Médecins sans frontières (<https://www.msf.org>), five children will die in every minute because of malnutrition. As citizens of the world, we should always keep abreast of the situation of the poor. They do not have enough food and suffer from Kwashiorkor, i.e. a lack of protein.

Inhabitants in developing countries typically have low education levels. Deforestation is often undertaken since the poor want to develop animal husbandry to earn money. Cultivating and eating meat is the only way for them to intake proteins. However, it has its downside.

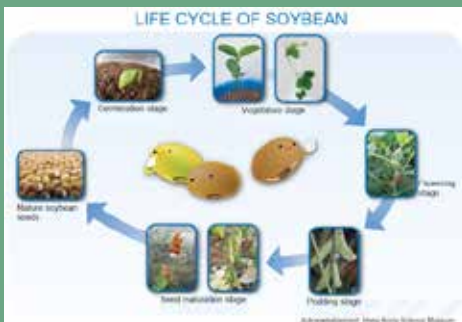
It increases the emission of greenhouse gases simultaneously, for example methane, the by-product of animal production. At the same time, trees have been cut down. Therefore, less photosynthesis will take place to absorb carbon dioxide and to

release oxygen. The levels of greenhouse gases will be elevated. The accumulation of greenhouse gases leads to climate change. Climate change worsens the impacts of extreme weather events.

Our project aims to seek sustainable solutions to this problem. We conducted an interview with Professor Lam of CUHK. During our investigation, we have found different solutions which not only benefit the environment, but also help the poor. Indeed, we have found cultivation of soybean is the most appropriate solution.

There are a lot of advantages to planting soybeans. Soybean is full of nutrients, especially protein. Soybeans can serve as the main source of protein and an alternative to meat. They are much easier to harvest without causing more harm to the environment as less greenhouse gases are released. Moreover, harvesting soybeans can increase income of the poor and improve soil quality at the same time. The poor can make more profit by farming and selling more soybean.

To summarise, planting soybeans is beneficial for sustainable development.



The Utilization of Cacao Rind as Snack

Indonesia

SMP Alam Al Fath

Faadhil S.M.Ziyadatullah, Farwah Atikah Parameswari, Hanif Wasim Aziz, Khansa Ifrah Alifah, M.Rayyan Rukinusavrin, Zahrah Aulia Fa-



The cacao tree has become one of Jambi's leading plantation commodity. Many people are interested in planting cocoa trees as their main livelihood. So, it is not surprising if you find the cacao trees easily in Jambi, Indonesia. From the cacao tree, usually people only use the cacao fruit to take the seeds, either for their own consumption, for sale,

or to process into cocoa powder. Thus, a lot of cacao rind is thrown away and becomes garbage. In our school there are also many cacao trees. We use the fruit to take the seeds for our own consumption and also we sell it for classroom savings. So, we looked for ideas to reduce waste from cacao rind. We are motivated to make snack from cacao rind, so that it can be more useful for us. We can consume or sell these snacks.

First, we have to wash and peel the cacao rind. Then, steam it about 20 minutes. After that we take the yellow-soft rind into the bowl, mix it with the flour, coriander, salt, garlic, and flavoring. Next, blend it. Then, put it into some

banana leaves or plastic bag, then, steam it

again. Dry it under the sunlight for

about 2 days. Cut it into small pieces, before you dry them under the sunlights about 2 days. Finally, fry it, and the cacao snacks ready to be served.



Simple Rainwater Filters for Usable Water

Indonesia

Al Hafidz Nature School

Khoirotul Aisyah Febriani, Kayla Cantika Dwi Sari,
Fathan Faiz AlBaihaqi



Rain is a form of precipitation. It is the deposit of liquids or solid substances that come from condensation which falls from clouds. Rain is grouped according (1) process of occurrence, (2) grain size, and (3) based on the

rainfall. The stages of the rain process are evaporation, condensation, and precipitation. Unfiltered rainwater can contain parasites, harmful bacteria, or viruses that cause disease. Therefore rainwater filtration is very important. The materials used to filter water are very easy to find.

They also have complementary benefits. On a small scale, rainwater filtration can use plastic bottles, while on a large scale filtering can use large containers, such as reservoirs. As a source of clean water, rainwater can be used to overcome clean water problems, reduce the volume of rainwater runoff and replenish groundwater, especially in densely populated urban areas. By utilizing rainwater, clean water supply from PDAM and groundwater can be saved and excess water can be absorbed in infiltration wells so that it can help replenish groundwater.



Making a water filter is also very easy. Just put the aquarium filter and gravel as the base layer into the bottle, then the second layer is filled again with aquarium filter and active sand. The third layer is also filled with aquarium filters and zeolite sand. Then the fourth layer is filled with charcoal. The last layer is filled with limestone and large stones. After the rainwater is filtered, the rainwater can be used in your garden.



Liquid Organic Fertilizer from Onion Peels

Indonesia

Al Hafidz Nature School

Hukma Shobiyya Fail'ain, Yasmin Nur Afifah, Muhammad Rohail Abdullah



Nutrients are various kinds of minerals found in fertilizers or naturally in soil. Plants need nutrients in order to photosynthesize. Nutrients are also useful as a food extract in liquid form. Therefore, the use of these nutrients to fertilize plants is important. In addition to providing water and sunlight to plants, fertilizers are also often required for plants to grow.

Why is that? To grow healthy plants full of nutrients, plants need to make sure they have healthy soil. Without enough macronutrients, plants will become infertile. All plants must have nitrogen, phosphorus, and potassium, plants need them the most. There are also some micronutrients that are needed in smaller amounts. The content of micronutrients contained in fertilizer is good for plant soil to become fertile.

Fertilizer does not have to be bought, sometimes we can use materials at home to make fertilizer. One of them is this liquid organic fertilizer with the basic ingredients of onion peels. Getting the ingredients to make this liquid organic fertilizer is also very affordable making it efficient. The materials we use are very easy to find. Namely, the peels of the onion and also the water used to wash rice. These ingredients are very easy to find. It's good for our environment to reuse these items which would normally go in the trash. By using nonharmful organic fertilizer, it is even to use in heavy doses and it will still not damage the ecosystem. The ingredients we used were garlic skin, rice water, basins, stirrers, water and glasses.



Making this liquid organic fertilizer is quite easy. Add enough garlic skins and rice water to the container and add enough water if rice water is not enough, stirring well and then keeping the pan covered with a mixture of water overnight. Tomorrow, when it is finished stewing it can be used as fertilizer for plants.

Plastic Wastage Management

Indonesia

Cita Hati Christian Senior School

Richelleen Widjaja, Jenova Astan Effendi, Ryan Joseph Lim, Celine Kurniawan



It has now common knowledge that the environment is unnaturally stressed by anthropogenic activities. A plethora of human actions diminish the giving nature of the planet. In particular the use of non biodegradable plastics is a big threat. The functional purpose of plastic has been proven to be very helpful. But since it's infamous emergence and the seemingly unfazed dependence of humans to use it, plastic has now become one of the major pollutants

present in almost all of the parts of the biosphere. This problem is also aggravated by its improper disposal. Because of this, our students reignited the call to properly manage plastic waste. A series of campaign events were made online to achieve this goal. A Plastic Drive throughout the city is also planned. Creating something useful from waste materials was challenge we posed to students in the Waste Rephrased event.



This sustainable project was the result of the students joining in the seminar made by Mr. Dan Hoynacki. Students also made campaign posters and video materials about saving the environment and alternative energy sources, using scientific journals pertaining to local actions that may impact the global environment.

Pawon Show: From Our Garden To Plate

Indonesia

Sekolah Alam Indonesia

Khansa, Hani, Hana



Indonesia has problems in food self-sufficiency and we mostly import our primary foods. This is a concern for us as students in Sekolah Alam Indonesi, so we engaged our school community and also local communities to join our movement to improve food self-sufficiency.

Everyone is encouraged to stay at home during this Covid-19 pandemic which has caused a decrease in people's incomes. This initiated a movement to plant from home to fulfill the nutrition of the family.

We proposed a project called Pawon Show : from Our Garden to Plate.

Pawon Show is a domestic food festival which introduces local products from our gardens and also

serves as a place for business. Furthermore, during the event we plan to hold a sharing session with food experts who will talk about food health and how to enhance the spirit of community to achieve food self-sufficiency. We have several goals: start planting from home, educating the public about the importance of food self-sufficiency, creating a movement with the community by doing green farming and creating Pawon Show as a food festival.

For the first stage, we did a survey in our community. The results indicate the project will last 1 month with 89,6% of success rate and the majority of participants will take part by planting vegetables at home. 75% of respon-

dents produced a main dish from their harvest product. We can conclude that this project can be a solution to fulfill family food needs.



Mask Disposal Wastage Management

Indonesia

Cita Hati Christian Senior School

Victoria Exvan, Diana Angela, Neria Felianaju Widary



Increasing fossil fuel emissions, pollution, climate change, and global warming are environmental problems that are far from being resolved. Resolution of these problems may be a long shot, but it's not impossible. Small efforts are big, relevant steps in accomplishing this goal. Locally, some awareness activities were conducted with the hope that these will help imbibe our students with a genuine and lasting care to our environment. Initially, the school conducted an energy reduction drive. This activity encourages students and teachers to

reduce their use of air conditioning units for at least two hours a day for a couple of weeks. This kickstarted awareness activities for the students. The lower grade students made campaign posters on how they think they can help save our environment. Also a great portion of them virtually delivered campaign speeches about saving energy and shared their innovative ideas on possible alternative energy in the future. The upper grade students participated in the interactive lecture of Mr. Dan Hoynacki, president of CEI-USA chapter. As an end product of the seminar, the students created their own scientific journals. A more specific and sustainable project that the students came up with is a localized mask disposal waste management. This was a result of the brainstorming process after the students participated in the seminar. It is known that since the occurrence of Covid-19, tonnes of masks are improperly disposed of, and the majority of them reach different bodies of water. The severity of improper mask waste disposal is also reflected on the survey made with the students as respondents. It was revealed that most of the students don't know how to throw away masks properly.



These are compelling reasons to push through with the project and to educate students (and citizens) on the importance of properly managing used masks. Initial actions are through campaigns in each class. Future activities will include using social media platforms to reach out to more people. Masks protect us. May this mask be always a protection and not a source of pollution.

The Story of Plastic Puppet

Indonesia

Citra Alam Senior High School

Danta A. Sunandar , Marsya Alfina, Nabiel Yoska



Indonesia is a maritime country which 2/3 of its area consists of oceans. Even though Indonesia is one of the countries with the largest seas in the world, the Indonesian government estimates that Indonesia's marine debris ranges from 0.27 to 0.59 million tons per year. Globally, plastic waste problems have dominated the composition of marine pollution around 60-80 percent (Debris Free Ocean, 2019) for many years.

Garbage comes from many large cities in Indonesia, but garbage in the capital city of Jakarta itself has become one of the serious unresolved problems, including the problem of garbage in the Jakarta sea.



We traveled to five islands (Pramuka, Karya, Patrick, Air, Pari) to carry out conservation actions for important resources in the Park, thousand Islands National Park, planted mangroves, released turtles as protected animals, we also carried out conservation action on coral reef transplants in the smiling coral conservation area, carried out clean-up activities to 5 islands in the thousand islands from these activities we produced



around 42 kg waste, then the garbage we get is recycled into several products that have economic value, one of which is that we make dolls made of plastic waste, then we use these dolls to conduct campaigns on social media to provide education to the public to care for the environment.

Waste-Free School

Indonesia Sekolah Alam Depok

Aisha Mahya Nataneila, Naura Illana Yaffa, William Tureson, Nadrian, Ramadhan, Dzalfaa Raufa Asma Hamiidah, Haikal Fajri Nuryatna, Muhammad Al

Our school has lots of trees and plants for us to explore every day. Unfortunately when the pandemic took place we were not able to enjoy them and without us realizing it a new problem arose. Various types of waste are not segregated and organic waste such as leaves that accumulate a lot every day. It is a pity because many benefits that can be obtained from these leaves. Seeing this happen, we tried to find out what environmental pollution is happening in schools during this pandemic, how it compares to before the pandemic and what solutions exist to reduce this pollution. We formulated some research questions:

- What causes schools to be more dirty?
- How can waste be separated according to its type in schools?
- Who does the sorting activity?
- What can we do to clean the school area?

This project's goal was to find out what environmental pollution is in schools and also to find solutions. In addition, this project is conducted so that schools can be clean as before and become comfortable again.

The project that we carried out used interviews with several questions to find out the causes of waste and environmental pollution that occurred in schools. And we made observations in several areas of the school.

We conducted interviews with teachers and several employees working in the field of hygiene and security. As a result we found that the current situation is dirtier at some points, especially in areas that have a lot of leaf litter than before the pandemic. Every day there are 3 sacks of leaf litter or the equivalent of 6-7 kg of leaves. This happened because of the lack of people to help clean the leaves. Before the pandemic a lot of help came from students who were in school. Waste is also less well sorted. To help overcome this, we did several things: namely making fertilizer and compost from existing leaves, making posters to remind teachers and employees to sort out waste, getting used to not bringing trash to school, using tote bags and bringing their own containers when shopping.



Sea Turtle Learning and Sharing

Indonesia

Sekolah Alam Bengkulu Mahira

Mahira Salimah Gumilar, Nichel Alfathah Saputra, Nabila Anggun Gumilar, Fiana Annisa Liding Kuta, Hanifah Rizki Ananda, Syabithah Iffah Jauhara Rudis



Sea turtles are found in all the oceans. Based on scientific evidence, turtles have existed since the end of the Jurassic period (145–208 million years) and are the same age as dinosaurs. Turtles generally travel a long distance and short time. Now, seven types of turtles are surviving in the world, Recently, the Kemp's Ridley turtle, the rarest species of sea turtle, has been found in Indonesian waters. There are six types of turtles in Indonesia, four types can be found in the Bengkulu Province. Some

people think that a turtle is one of the marine animals with many advantages. Besides its attractive shell for souvenirs, delicious meat, medicinal properties and beauty ingredients have decreased the turtles' population constantly from year to year. Turtles are listed as protected species by national and international laws. The sea turtles in Indonesia are protected based on Law No. 5 of 1990 on conservation and ecosystem. 7 of 1999 and Government Regulation No.8 of 1999 on the use and the preservation of wild animal plants while they are internationally protected in appendix 1 of CITES. To maintain the balance, utilization and preservation of the diversity of protected animals including turtles, Bengkulu Mahira School of Nature collaborated with Alun Utara community which is engaged in turtle conservation on the "Sea Turtle Learning and Sharing" program. The concept of educational sharing through classroom materials, interviews, discussion forums and presentations can produce more active young people to care for the turtles.



Don't Litter from Your Car Campaign

Indonesia

SMA Al-Jannah

Farhan, Reishafa, Azfallah, Agnar

People use the road for vehicular traffic, both motorized and non-motorized vehicles. In addition, the road functions to accommodate the interests of pedestrians including sidewalks, pedestrian bridges, zebra crossings and others. The road is a tool to connect one area to another. The road has a wider, larger size, is paved with asphalt or concrete and can usually be passed from two opposite directions. According to the needs of growing populations, more and more roads were built. But the awareness to maintain cleanliness did not go hand in hand with the road construction. People still throw garbage from inside the car or throw garbage on the road. Garbage that is dumped a lot on the road will result in blockages in the ditches and if there is too much blockages it will cause flooding and the road will become dirty and ugly. To prevent this from happening again in the future, Al-Jannah High School held a project "Don't Litter from Your Car Campaign". This project is done by making various hand-designed posters using the Canva application. The posters were printed, then laminated. After being laminated, posters were pasted on the backs of high school students' cars and school cars to pick up students. This school car is used to take teachers to the Covid 19 vaccine site. Some go to the public health center (puskesmas) or to other places where there is a vaccine location. This car is also used by teachers to travel to other places, but the number of passengers in the car is limited to only 50% of the car's capacity. By using this car, SMA Al-Jannah is trying to make people aware, so the streets will be clean and tidy.

Cooking Oil

Indonesia

Sekolah Alam Indonesia



Cooking oil is often used many times for frying, sometimes until the color becomes dark brown. That dark brown oil is a household waste which is better known as used cooking oil. This used oil has a negative impact on the health of those who consume it, such as increasing the risk of cancer, obesity, and various degenerative diseases. In addition, it also will cause environmental pollution if thrown away.

This is the background for this research which aims to change used cooking oil into something more valuable, useful and something that does not cause pollution. In addition, another objective of this research is to find out whether used cooking oil can be converted into biodiesel that meets

official standards which reduces pollution and other adverse effects.

The methods used in this study are experiments and laboratory tests which calculate the water level in biodiesel. In the first experiment, the biodiesel sample had 0.7% water content with a yield value of 92%. Then in the second experiment the biodiesel sample had 3.4% water content with a yield value of 68%. So, the water content in the biodiesel sample made from cooking oil did not meet the standard value because it still exceeded the general standard value. According to general standards, the water content of biodiesel is 0.05%. So it is necessary to do further research to produce biodiesel that meets the standard value.

Ethano from Organic Waste

Indonesia

Sekolah Alam Indoensia

Fatab, Afif, Zidan



Organic waste is waste originating from nature. It naturally decomposes, but if large amounts of this organic waste are piled up, it will emit methane gas which is harmful to the earth's atmosphere. Bioethanol (C_2H_5OH) is a biochemical liquid created during the fermentation process of sugar from carbohydrate sources using the help of microorganisms. The focus of our research is to find the best bioethanol quality from mixing two organic waste materials, namely banana stalks and

mango seeds. Why banana stalks and mango seeds? Because banana stalks contain cellulose of 60-65% and mango seeds contain 81.3% starch so that it can produce good quality bioethanol.



There are 3 main processes carried out in this treatment, namely hydrolysis, fermentation and distillation. In addition, we performed two types of treatment at the time of the experiment. The first treatment without HCl and the second treatment is by adding 2% HCl. From the first treatment, the highest bioethanol produced was 8.4923% and from the second treatment, the highest bioethanol was produced at 14.65325%. Based on these results, we conclude that the research with the highest percentage was in the study with the addition of 2% HCl, namely 14.6525%.

Organic Fertilizer From Coffee Grounds

Indonesia

Sekolah Alam Indoensia

Rania, Lulu, Fasya



Did you know that coffee powder can be fully utilized and be zero waste? Some use it for facial skin care, aromatherapy in their home rooms and many more uses. There are many unknown benefits of coffee grounds, one of which is coffee grounds as a source of nutrition for plants (organic fertilizer).

Good organic fertilizers ideally have a pH that is not too acidic even better if it is close to neutral pH. Our project proves the benefits of coffee grounds as plant nutrition. Coffee grounds are an economical and environmentally friendly organic fertilizer. Coffee grounds contain 2.28% nitrogen, 0.06% phosphorus and 0.6% potassium. The pH of coffee grounds is slightly acidic, around 6.2 on the pH scale. In addition, coffee grounds contain magnesium, sulfur, and calcium which are useful for plant growth.

An experiment was conducted to determine the difference between liquid fertilizer from Arabica coffee grounds and mixed coffee grounds. We also undertook a literature study to find information about liquid fertilizers.

The pH level of the Arabica coffee grounds was 4, and with the lesser amount it was 3. The pH level of the Blend coffee grounds was 3.5. Arabica coffee grounds are safer to use as organic liquid fertilizer than coffee grounds blended. The dose of coffee grounds does not affect the level of acidity.

Eco-Friendly Plant Pot

Indonesia

Sekolah Alam Indoensia

Naima, Nada, Nida



During this pandemic, the use of masks increased rapidly, particularly disposable masks which caused a large amount of mask waste. We tried to reduce these masks into useful things that are also needed in this pandemic, such as pots for plants because the hobby of gardening is now also on the rise. From April until the end of December 2020, environmental services of DKI Jakarta handled 1,538 kilograms of disposable mask waste from households. Disposable mask waste has a very bad impact on the environment. It's not just spreading viruses, but also polluting the environment.

We did an experiment by sterilizing 6 pieces of disposable mask waste (19 grams) then mixed it with a mixture of 228 grams white cement and 2.407 ml water so that it easy to shape. This method is easy to do by the general public in their household.

Then we did a trial for weather resistance. We tried planting in the pot we made in the ground and we placed it outdoor for two weeks. The results showed that the pot we made is weather-resistant (rain, sun heat, wind) and there is no negative effect to the plant.



Furthermore, we will promote and share our idea with the Sekolah Alam Indonesia community. We hope, after this socialization, the community will be able to make their plant pot using their disposable mask waste.

Pollution Filter Motorcycle

Indonesia

Sekolah Alam Indoensia

Fahim, Faizan, Ivan



A pollution filter is a machine that can reduce CO₂. This research is motivated by the problem of vehicle pollution which continues to be widely spread due to the use of vehicles. In Indonesia, motorized vehicles are very common. The smoke released can produce harmful gases such as CO (Carbon Monoxide), CO₂ (Carbon Dioxide), HC (Hydro Carbons) and NO_x (Nitrogen Oxide). This study aims to reduce this air pollution.



Carbon dioxide is an odorless, tasteless and colorless gas, which is also important in our living ecosystem, because it is absorbed by plants which then emit oxygen as the air that humans breathe. Activated carbon is a material that has many very small pores. Using these many pores, activated carbon has a lot of capacity to absorb

other substances that comes close to it. The number of pores in activated carbon is created by the active process. There are two ways to activate carbon, the first through very high heating, and the second through other chemical processes.

In this study, the researcher's R&D method (Research and Development) was in accordance with ADDIE. Our tools use Activated Carbon as the main material in their manufacture, and various tools such as glue and solder. The results of research on activated carbon are that it reduce odor, smoke and reduce carbon monoxide, hydro carbons and other chemicals in the air.

Water Filtration

Indonesia

Sekolah Alam Indoensia

Syauqi, Abyan, Falih



The problem of water pollution in Indonesia, especially in big cities, has shown to have serious side effects. According to the Central Statistics Agency (BPS) based on 2018 Podes revenue, 16,847 villages in Indonesia were recorded as having water pollution. Already in 2019, 82% of Indonesian rivers were polluted. The purpose of this research is to help the community implement an environmentally friendly waste water recycling system. The research is limited to only recycling household wastewater so that it can later be reused for household needs in the community. We hope that this filter can meet the requirements of clean water in our community.

The first week we determined the title of the research, filtering with a semi system portable communal. the second week we bought tools and also designed the filter. The third week we learned more about how the water filtration system works and start making the filter. The fourth week we did an experiment on the design of our first tool but the results failed and so, we made a new design that was more effective.

Our fifth week we tried to discuss and planned to use container but our experiments failed, due to broken and leaking tools. Result research: we failed because you can see the difference in water clarity from the shape and color, but not by smell which is what we hoped for.

Cikeas River Community

Indonesia

Sekolah Alam Indonesia

Mahira & Axxkiano



Green Plum Saving

Taiwan

Stella Maris Ursuline High School

Hannah, Angel, Yirou



There is a little shop called “Revival of Pomelos” in Hualien, which has found a way to solve the problem of unsalable seasonal fruit, pomelos, by turning them into manufactured food, such as pomelo cake, pomelo juice, pomelo mochi. After visiting the store, we decided to adapt the same approach to green plums. Green plums are immature plums, which can be harvested in only ten days. They are also highly susceptible to bruise damage; as a result, many green plums can’t meet the stand of fruit markets and then be abandoned. Most of the farmers only know how to grow the plums but they have problem when trying to sell them. In this project, we’ve tried different processing method to deal with those unsalable green plums, trying to find a way to help those farmers solve the selling problem.



Go Organic

Taiwan

Stella Maris Ursuline High School

Christin & Teresa



In this project, we’ve collected a lot of information about organic agriculture. It’s easy to find many organic vegetables and fruits in most markets of Taiwan; some supermarkets even have an exclusive area for them. We purchased some and cooked them in an easy way, and found that the meal made from organic farming is no more expensive than the produce of non-organic agriculture.

causes negative impact on the soil, water and even on people’s health, we want to encourage teenagers to buy more organic fruits and vegetables and then try to make a simple meal as we do.

Since non-organic agriculture



The OMIC in the ocean

Taiwan

Stella Maris Ursuline High School

Eliott



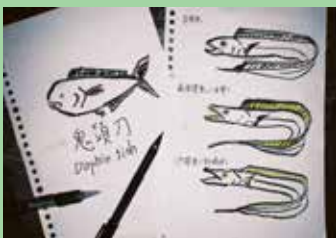
Taiwan is a veritable “sea island” country, for Taiwan is an island surrounded by sea and ocean. The Kuroshio current along the east coast has a deep impact on the Taiwan island, and brings variety of creatures. With the entry of this mainstream sea area, Taiwan has a rich marine culture.

Due to Taiwan’s rich marine resources, most people in Taiwan have the habit of eating seafood. Although the taiwaneaa know how to cook seafood and how to catch fish, they often cannot name the kinds of fish they are eating. To put it simply, although Taiwan is given a rich “seafood” culture, the people in Taiwan do not have a universal “marine” culture.



Therefore, I set up a website with content highlighting the diversity

of marine life. Marine species are not just about fish or food on the plate. In fact, there are numerous types of marine creatures that allow us to appreciate the wonder of lives under the sea. I hope to raise awareness of the waste of fishing, discarded fishing nets for example, so that the public will have a chance to learn the importance of marine culture.



Votebin – a vote for a cleaner environment

North Macedonia

Orce Nikolov High School

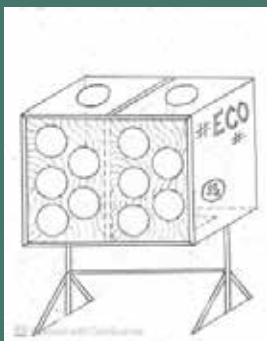
Nina Petkovska, Luka Kadrikj, Eva Stavreva, Simona Zhivkovikj, Dimitar Trajkovski



As the name implies, votebins are bins with their insides separated into 2 parts with 2 separate holes. When a person throws something in the left or the right chamber of the bin, it means they vote for whatever is written on that side. Football teams, names of athletes and celebrities, even ice cream flavors are examples of what could be the topic of the vote. In order for the votes to be actually visible, the front side of the bin has to be transparent. They can be positioned on

walls on the streets, on bus stops, in the parks. With that being said, their size should not be too big. Hence, their purpose would be to collect small waste such as batteries, paper, and cigarette butts which people often throw on the ground. The bins can be made without much effort using recycled plastic and other easily found materials. Even we, as students, could volunteer to help in

the process of making them. The whole idea is that the voting wakes up the competitive spirit in each and every one of us, which will encourage people to select and throw the waste in the appropriate place. Every little piece of garbage thrown in the votebin, is not only a vote for the thing written on it, but for a cleaner environment as well.

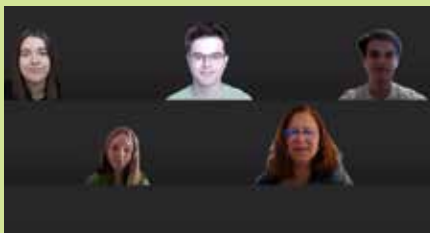


Actions for Sustainable Agriculture

North Macedonia

Grammar School SUGS "OrceNikolov"

Mitko Nedanoski, Lea Georgievska, David Salontaji, VanjaTaseva, Ajla Zilkikj

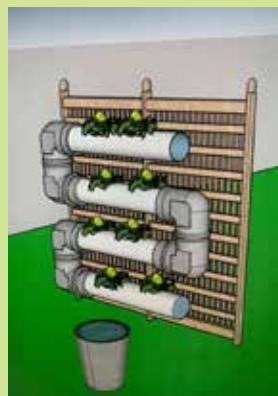
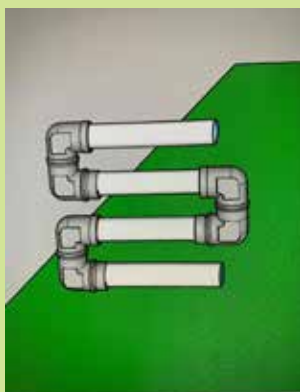


Skopje is one of the most polluted cities in the world. What causes this is the lack of vegetation and plants, and too many buildings, streets and concrete. Skopje has extremely high concentrations of PM10 particles in air, especially during the winter months, and soaring temperatures during the summer. To combat this, we as a group of young students, want to make use of our city's gray walls by turning them green. We will set up vertical gardens, which function as hydroponic systems. This technique allows growers to vegetate plants anywhere and anytime, yielding up to 100 times more per square meter

than traditional planting that uses soil.

We will use pipes, which will act as containers where the crops will grow. With tubes that go through the whole system, nutrient-rich solution will be periodically delivered to the roots. The excess water will travel along the system and back to the reservoir to get filtered and be ready for re-use. The container functions with water and air pump for additional aeration. We can easily manage the pH and make sure plants are getting the exact nutrients they need, which are fed straight to the roots. This way of cultivation uses 10 times or up to 98% less water because these are closed systems that recycle the excess, instead of losing it to the environment.

Hydroponics give us a solution to fight pollution and climate change, where space is limited and a park otherwise could not exist.



Wastewater Filters of the Future

North Macedonia

SUGS "Orce Nikolov" , Skopje

Itan Georgievski, Tomi Bogoeski, Kristina Tanaskovska, Mina Mitanovska



Our country, Republic of North Macedonia, is known for its many fresh drinking water, ranging from small streams to big connecting rivers and lakes. Only 0,6% of the country's population doesn't have drinkable water, which is quite a small number, but many people take that for granted. Often the proper procedures for disposal of toxic waste are disregarded, like building a concrete plant next to Lake Ohrid, a national treasure protected by UNESCO.

Issues like this aren't widely known to many people and are therefore much harder to fix. But what everyone knows and sees is that there are large amounts of trash thrown by individual people. Instead of seeing ducks, and other wildlife living in our rivers, there's a greater chance of seeing plastic bottles floating around. This won't be resolved unless there's greater awareness as well as harsher punishments.

We wanted to find a way to capture that trash as well as find a way to reuse it. We can do this by making a giant net made by none other than the trash itself. We cut the bottles in long strings and



then fuse them together using only a lighter. The more trash we manage to collect the bigger the net can become, making it usable for bigger

bodies of water. The nets will become an obstacle that will stop the flowing of the trash in the water, while letting the fish swim through. With low prices for organization and easy construction, we are building a sustainable community.



Be Aware of Other Creatures Around You!

Turkey

Notre Dame De Sion French High School

Ela Alpagut, Belis Aykac, Beril Ergun, Alara Kayalar, Deniz Acet, Roni Kolukisayan



We are a group of students from Notre Dame de Sion French High School in Istanbul, Turkey. Our country has a diverse range of animal and plant species. We wanted to create a website where we can draw people of all ages' attention to the preservation of biodiversity. During the development process of our project, the question that we came up with was: "What can we do to raise awareness for the extinction of the species in Turkey?".

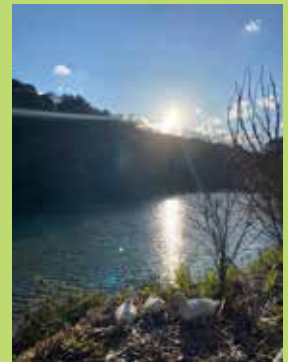
Our website will be formed of 5 parts :

1. In the first part, you will be able to take a test to find out which animal in danger of extinction you are. This will be a fun activity and will mostly draw kids' attention.
2. In the second part, there will be a "Latest News about environment" page. Thanks to this part we will be able to keep up with global trends.
3. In the third part, we will have a page full of reports and theses about biodiversity. This will be an academic page if you want to get more information about biodiversity and extinction.
4. For the fourth part, we will be able to learn how to help species in danger. We will be directed to websites where we can donate and volunteer to help them.
5. In the last part, we have planned to have a compact identification system with the help of exterior premade databases. You will be able to find the characteristics of photographed plant immediately.

It's time to remember that we are not the only creatures in the world and take action.

"If not we, who?"

If not now, when? "



Producing Energy from 0 to 1

Turkey

Ugur College

Aylin Mert, Bora Saglik, Ceren Gungor, Yigit Doyranli, Zeynep Buse Suslu



In this project, we wanted to save energy and prevent wasting of our energy unnecessarily. To ensure sustainability by deriving energy from clothes as our alternative energy source.

Thanks to little chips on our clothes, we can convert the energy that we produce from daily movement to the electric energy. In addition, it is also our goal to support recycling and decreasing the energy that we normally use in our life. The purpose of our project in

the short term is decreasing vehicle usage, increasing the afforestation, decreasing the importation of fossil fuels, directing the money acquired to other sources.

In order to feel comfort in everyday clothes, the chips that are produced will be placed between the two layers of the fabric with the help of wire yarns so that comfort will be provided. The graphene and chips will be produced in Turkey so that the cost will be reduced by not importing raw materials. Sponsor funding will be provided in cooperation with municipalities and local governments. The chips produced will be designed with current protection both in storage and in the transfer of energy. Devices powered by 12v will be designed for use in devices such as water treatment systems, rechargeable handheld brooms, mobile phones, led lamps, light bulbs and power bank, as the energy would not be collected enough from everyday life activities.

The Other Side of Clothes

Turkey

Robert College

Elif Doğa Ergüven, Ceyda Yeşillik, Puren Akbulut, Öykü Erciyes



Fashion may seem luxurious, colorful and pretty, however, the other side of the coin is nothing but ugly, disturbing and dark. The fashion industry has detrimental effects on the human body and the environment. It contributes to roughly 10% of all greenhouse gas emissions and it is the source of 34.8% of global microplastic pollution. 79 billion litres of water is being consumed by the textile industry every year. The damage the fashion industry causes cannot be ignored any longer.

The interviews we had with experts show that producing clothes in a sustainable way is possible and how sustainable clothing actually works. Since sustainable production is possible in the fashion industry, it is important to raise awareness and consider the consequences of production. To do that, firstly, a policy which aims to raise awareness starting from the close people has been followed. Therefore previous projects about sustainable fashion which took place at Robert College have been pursued, and to find out about Robert College community's knowledge and awareness about sustainable fashion and fast fashion a survey has been prepared and analyzed.



Our aim, at the Other Side of the Clothes, is raising awareness about fast fashion, informing people about the ways of sustainable clothing; reducing and searching the environmental destruction, human rights violations, clothes' harms on human health, clothes production and consumption. To implement our aims, our priorities will be to set an example to companies and to pull attention to sustainable fashion.

This project helped us understand how to produce clothes in sustainable ways and how achievable it is to reduce our effects.

Zero Waste in Decoration

Turkey

Istanbul Private Saint Joseph French School

Duru Karadeniz & Defne Catikkas



With the increase in population, consumption amounts increase continuously from year to year. Cotton, which is an industrial plant, is the raw material of weaving, textile and oil industry. Especially in our country, cotton consumption is increasing with the increase of factories in this field. We can reduce our impact on the carbon cycle by making objects with our waste glass and cotton waste.

First, an old piece of clothing is cut into strips in order to form threads. Then, the threads are tied around a circle in a decorative form. Lastly, the final group of threads are put around a used glass jar such as jam jars or tomato paste jars. This decorative jar can be used as a candle holder or a coffee bean container.

This handcrafting technique helps us reuse the clothing and the jar instead of throwing them all away and causing pollution. In this

world of consumption, we need to learn to repurpose our waste.



Clean Water, Healthy Lives

Turkey

Saint Michel French High School

Atabora Gökdeniz, Ali Fuat Ören, İpek Eylül Duman, Duru Kalayci, Lara Gü-zeltürk, Doğu Tuna Topaloğlu



Istanbul is a metropolitan city situated uniquely at the crossroads between Europe and Asia with a population around 13 million. Approximately 95% of the water demands of the city is provided from surface water resources. Considering the geographical status of Istanbul, water pollution is a great threat for the water supplies of the city and to the sealife as well. In fact, water pollution is one of the biggest threats of this era.

There are some public associations alongside government based projects that have a common and important objective: to reduce the effect of litter items like plastics or household materials (wastes) on the seas and so on the sealife. For example, the main goal of the project “Zero Waste Strategy for Good Environmental Status” is to contribute to the reduction of the number of visible (>2.5 cm) litter items including plastic, fishing and sanitary litter items on coastlines mainly located in Marmara and Black Sea.

Specific objectives of this association are marine litter collection and public awareness among the target populations which are: 7-16 age group primary and secondary school students and their teachers, local fishermen and their communities.



In our project, we plan to use statistics to show our local situation. We announce some ongoing results of projects like “Zero Waste Strategy for Good Environmental Status” and propose some solutions that can be undertaken easily and that can have a good impact on the ongoing situation.

We are aware that these objectives aren't likely to be reached without the help of individuals. So one of the main objectives of our project is to encourage people to be a part of this study and to act against the pollution that threatens the life of seas and directly or indirectly, the lives of people.

Nature Motifs For Child Education: Dede Korkut

Turkey

Ted Istanbul College Foundation Private High School

Gence Genceli, Can Berk Kara, Arjin Acar, Yagiz Efe Onut, Selman Emre Cay



Have you ever heard about Korkut Ata? He is one of the major characters from the Dede Korkut stories found in the Turkish culture. Korkut Ata is a legendary hero, a destan among the Oghuz Turkic people, also known as Oghuz-nameh, whose homeland begins in Central Asia, continues through Anatolia, and culminates in the Azerbaijani Caucasus. He also gives his name to these stories which come from a long, long time ago. He narrates the main action in the stories and gives lectures on values. The stories consist of elements of love of nature, societal

peace, living conditions of Oghuz Turks, Turkish nomads, and magical motifs. The historical value of these stories is high due to their authenticity and what they reveal about culture. They are also important in teaching children about the values of respect and love of nature, family and society through education.

In conclusion, storytelling holds great importance for child education.

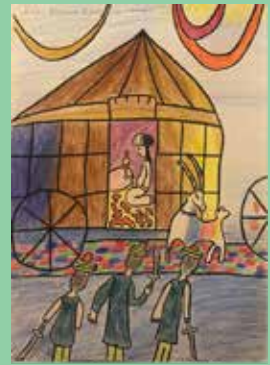
Dede Korkut stories are narratives that can contribute to this cause. Many

studies have shown that through these nature stories, children can learn. To gain the stories' full value and to promote aware-

ness, we as TED Istanbul College students, have conducted many projects including: "The Modernization of Fairy Tales" and "A Tree of Life Collage" as a visual arts project and illustrations done by students. We believe that the proliferation of nature motifs in storytelling such as the ones in Dede Korkut stories will have a great impact on values education for children, thus, contributing to the sustainable development goals for future generations.



Illustration by Selman Emre Cay, TED Istanbul College Grade 9 Student



"How Sair Kazan's House Was Filled"
Illustration by Duru Deniz, TED Istanbul College Grade 8 Student

Deforestation in Istanbul and Its Negative Effects to Both Nature and to Society

Turkey
Robert College

Aslı Çelik, Berkay Kurnaz, Nihan Cedimağar, Demir Kandemir



With a new transcontinental bridge and an international airport constructed in Northern Istanbul, enormous amounts of trees have been cut down to free up space. With the majority of trees of Istanbul located in the North, it is imperative to protect the soil and habitat of many species of life there. Our school, American Robert College of Istanbul, has been furthering its composting efforts and the student involvement with many sustainable activities. Our team is working there to increase student involvement and enrich the school's permaculture gardens.

Through our previous research, we have found permaculture to be great heroes for soil degradation and thus are utilizing such methods in our campus gardens. Composting and permaculture methods in Northern Istanbul have the ability to revitalize the soil even without the trees. Reforestation through slowly planting new seedlings of long-lasting, low-maintenance trees will only strengthen the sustainability of the health of the soil. We also recognize the change-making influence of the involvement of local people and government in matters like this. Therefore, with our previous research and experience, we propose as solutions the use of composting, permacultural methods, and partial reforestation efforts along with municipal and local efforts to undo some of the effects of Northern Istanbul deforestation. With these, we hope to provide a holistic and critical view at the current deforestation and possible future actions municipalities, locals, and/or NGOs can take.



Zero Waste Jar

Turkey

Aselsan MTAL

Furkan Dondu, Gulsu Erbay, Seyma Ecren Erdogan, Ahmet Furkan Gonen, Deniz Kabacaoglu, Melih Bulut, Huzeyfe Emre Boge

The name of our project is “Zero Waste Jar” and our project was inspired by people who only take out a single jar of garbage throughout the year. We conducted eight interviews with people of different age groups. We talked about people living with a zero-waste philosophy, we said that over the years, they aim to remove as little garbage as possible and consume only as many products as they need. We asked the participants to try the ‘zero waste jar’ in their daily lives. We made a sketch (role play) with our team in a virtual environment. Each member of our team chose a role from nature. Our purpose was in this sketch was to raise awareness also make people laugh.

Our project Zero Waste is a movement to reduce the amount consumes and throws away. The goal is, for no trash to be sent to landfills or the ocean. Zero waste is not a lifestyle based completely on recycling as many people think. Of course, recycling is one of the most basic requirements of this lifestyle. But the main purpose of this lifestyle is consuming less which means, if you don’t need the product, don’t buy it.



Transportation For Bird Survival

United States of America
Troop 216

Ryan Barnicle



My project consisted of building ten large bird crates, ten small bird crates, and blueprints for Brookfield Zoo. These bird crates are used to transport the Bali mynah, Guam kingfisher and other birds to breeding facilities. Normally, the Guam kingfisher lives exclusively on the island of Guam in Micronesia, however it is extinct in the wild. As of 2018, there were only 140 individuals alive, all of which were in captivity. The Bali mynah lives in Bali, Indonesia and in 2018 it was estimated that the native population was less than 100 individuals. In that same year, the population's size in captivity was 145 individuals. The crates also follow specific international

travel regulations and are transported (with the birds inside them) all over the world in order to help execute a Species Survival Plan. I built Brookfield Zoo twenty bird crates because many are lost at other facilities or are damaged and cannot be used, and they only had a total of about ten extra bird crates. Furthermore, the carpenters who typically build the crates built them from memory. Hence, I created blueprints for each type of bird crate to allow Brookfield Zoo to continue making them in the future. It cost roughly \$8030.68 less for me to build the crates than if the zoo's carpenters made them.





Pollinating Bee Habitats

United States of America
Scouts BSA

Madeline Painter



Pollinators are crucial to healthy ecosystems. They help flowering plants grow and thrive. Unfortunately, they often do not have safe places to live. Due to deforestation, the pollinating bee population has declined, and something had to be done about it. At local River Trails Nature Center, a team of middle school STEM students built eight bee habitats of two different types. Habitats made of cedar and loam were placed in a pollinator garden to provide homes for carpenter bees, sweat bees, and plasterer bees. Educational outreach programs about these habitats include speaking with nature center visitors and presenting to 50 elementary school students.

A group of those students was inspired by the change made by the middle school team and built their own bee houses using the same designs. It is important to protect our environment, and even kids can make a big difference. This project let students know what they were capable of, and that they could make a big change.



Growing Up Together

United States of America
Blanchet Catholic School

Rieve, Lily, Denavae, Sophie, Tanveer, Tyler, Nhi, Sarah, Raquella, Carter



One of the most important things we can do to support our community is to improve the environment. The multiple aspects of our project, from improving to outreach to growing, focus on sustainable means of supporting our community through improved environments and local food production.

To begin our first ever CEI project, we partnered with a local elementary school to help manage and expand their garden. We worked with some of the younger children to plant trees and vegetables, pull weeds, and make

the school's garden pollinator friendly!

For our next adventure, we toured a local Youth Farm that grows a large variety of fruits and vegetables, all of which are donated to our local food share where it will go to families in need. Another fascinating aspect of this Youth Farm is that it is designed as a pollinator-friendly farm with many bee boxes for mason bees and a variety of cover crops that are constantly swarming with pollinators. While we were there the farm operator told us that CEI had actually been hosted at that exact site! He showed us a pollinator wall that had been the result of a CEI project years back that he had turned into an intricate kiwi trellis. Everything on that farm was organic and grown using sustainable methods. Back on our campus, we began our own growing projects. For the first one, we constructed a planter box on our school campus. We built the planter with repurposed materials. When we finished mixing the soil we planted kale, tomatoes, potatoes, and tomatillos in the hopes that they will bear produce that we can give to our community. We also planted flowers to make the planter box beautiful!

Our new planter box is next to our existing outdoor learning environment (OLE). This area grows native plants and allows for investigations and learning. One of the classes decided to improve part of the OLE by adding a pollinator garden. Our CEI team worked with the class and will now take over care of the pollinator garden. To add to the space, we also planted more fruits and vegetables around the new pollinator garden. The produce grown here will be donated to the community as well. The last major project was removing a large chunk of concrete from our school's parking lot and planting a tree. We did this to add beauty and greenery to the barren concrete scenery of the parking lot and to improve our environment. By building a planter box and planting a tree where it was needed the most, our CEI team is hoping to add a little bit of beauty to the world. This is our chance to make a difference and we are so blessed to be able to do so as a team. We are grateful to be Growing Up Together.



Waste Reuse: Paper Made of Clothes

Mexico
Instituto Escuela del Sur

Abigail González Luna, Adelie López Tapia, Valeria Alejandra Villagrán Pimentel



Fast fashion is one of the biggest problems today as 50 percent of the clothes that fast fashion chains make end up in the trash in less than a year. This is approximately 12.8 million tons of wasted clothing. Therefore, we create a paper made of fabric, so that all those wasted clothes can have a use and not generate any more contamination.

The process we follow to create the paper is: with fabric cut into squares, we decomposed it with baking soda ashes, heating them in water to make pulp, putting the pieces of fabric in a blender after decomposing. When we had the pulp, we put it in a box with water to put a sieve and hold the pulp

until we filled the sieve. With a kitchen towel we removed the excess of water from the pulp on top of the sieve, to place a piece of felt on top with some pressure, turn it over and put another piece of felt. We stuck on the pulp side to the window so that it would dry, and we would have paper.

Results: After one day we were able to have our fabric paper in our hands. It is a somewhat thick paper, but it is quite resistant. Acrylic Paint and thin markers can be used on this paper, it could be a paper for artistic purposes.



Conclusion: You can make use of the fabric that is wasted in fast fashion to be able to help the environment.

Rainwater Harvesting

Mexico

Instituto Escuela del Sur

Nissa Carolina Sánchez Cruz, Shanti Acevedo Hernández, Mariana Regina García Covarrubias



The availability of potable water or clean water for irrigation and human consumption is one of the most serious problems in many rural and urban systems. We generally use water for many activities of daily life, but we do not reflect on where it comes from or the work it takes to bring it to our homes.

A rainwater harvesting system is proposed for rural communities located in mountainous or high areas. The system is made up of roofing sheets with an adequate friction coefficient so that rainwater



drains properly into gutters strategically placed on the sides of buildings.

From the gutters and, through a PVC pipe, the water is taken first to gravel



filters and then to sand filters, to make it drinkable. Simultaneously, part of the water can be stored in a container to be distributed through a bifurcated pipe at angles of sixty degrees, towards lower regions where the towns are located and using gravity, the water would end up in soft soil regions, flooding them in a controlled way and gradually promote the replenishment of aquifers. The bifurcated distribution network has advantages in terms of water flow.

Fabrics Made from Vegetable Waste

Mexico
Instituto Escuela del Sur

Arianna Ixmucané Cruz Carrión, Andrea Fernanda

The fashion industry has glorified leather for decades, claiming the lives of millions of animals, just for the sake of aesthetics. Although today there are many synthetic alternatives, they do not improve much with respect to the negative footprint it leaves on the planet, since most are made with plastics. Not to mention the large amount of water wasted for its production. That is why we want to talk about an innovative alternative that appeared recently: nopal leather. The nopal is an edible cactus native to

Mexico. It is a totally organic, vegan textile.

Solar energy is used in its manufacture, no pesticides or herbicides are used in the plantations, and they are watered only with rain, so no water is wasted. Each plantation lasts 8 years. The objective of our project is to present an investigation that demonstrates the benefits of this textile alternative. We will test its resistance under different conditions to determine which process is the best alternative.



Bees

Mexico
Instituto Escuela del Sur

Sofía Aguilera Andrade, Paola Nicole Carbonell
Anell, Valentina de las Fuentes Zacarías, Sofía López



Bees are essential insects for pollination and survival of many plants. But they are in danger from the abuse of pesticides, deforestation, and the advance of urban centers.

The disappearance of bees can be one of the most serious problems for the biodiversity of many ecosystems, so it is essential to look for mechanisms to protect them and increase their populations.

We will study how to protect groups of bees from their interaction with trees that are in areas contaminated with pesticides. The project is based on reforesting rural beekeeping regions, arranging the trees in a bifurcating network drawn on a Penrose tile, placing the trees at the nodes of this network. We investigated what is the critical probability for the bees to be located on paths connected in the network that eventually led them away from the controlled area. The idea is to establish the conditions of the trees

so that the probability of their occupation by bees does not exceed the critical probability. During the reforestation process, wooden boxes with the appropriate characteristics can be placed in strategic nodes to simulate trees and be inhabited by bees.



Wetland in Xochimilco, Mexico City

Mexico

Instituto Escuela del Sur

Alina Sofía García Mateos, Leonardo Mendoza Silva, Millaray Regina Montecino Ramos, Santiago Morales Kaim, María Fernanda Rodríguez Saro



Wetlands have several functions and benefits for plants and animals, one of which is that they are the habitat for a diversity of aquatic and animal species. Also, they offer a variety of natural resources and environmental services that have a great value such as oxygen uptake, as well as greenhouse gases, atmospheric CO₂ is absorbed by plants and converted into carbohydrates and tissues. However, these have been affected by the fast ex-

pansion of urban spaces and the extraction of resources that have exerted a high pressure thus modifying the wetlands. Added to this, the changes in the uses of soil for agriculture, urbanization and aquaculture have also degraded the wetlands.



In this direction, we aim to work on a campaign for the preservation of the wetlands, starting with offering possibilities for being hired to the inhabitants in need. Also, to offer our help to preserve the wetlands stopping their degradation. As soon as we obtain a certain degree of expertise, we can give conferences and recommendations to certain kinds of business that make use of the wetlands.



There are two types of wetlands: lacustrine and coastal. The former is like small lakes, while the latter are formed with salubrious water. A very saline example are the wetlands of Xochimilco that offer natural resources for the flora and fauna of this ecosystem. It brings benefits for

the local rural inhabitants, as well as for the city, such as the regulation of global warming and regulating floods and river overflows.

Permaculture as an agroecological strategy to agro-industrial production

Mexico

Instituto Escuela del Sur

Javier Vega Sandoval, Natalia Moscoso Lomnitz, Santiago García Martínez



Permaculture as an agroecological strategy for agro-industrial production. Our aim is to present Mexican rural projects that promote permaculture design for the development of sustainable agriculture. These projects include Tierramor -an organic farm settled in Michoacan- San Isidro's Project which foment bioconstruction, permaculture and agroecology and The Cañadas (Veracruz), a self-sustainable community that restored its ecosystem after being used as cattle lands.

Most of Mexico's agriculture uses agrochemical products which have a negative impact on the soil and water. The livestock production causes deforestation and desertification. It is worth mentioning that in Mexico, extensive farming may be the main production-related-activity that has devastated natural ecosystems. Currently around 30 million cattle roam in more than half of the national territory.

Researching for an alternative to industrialized food production, we found agroecology based on permaculture and would like to analyze different projects to evaluate how reliable this is.

Due to the pandemic situation we tried to make a series of virtual interviews to the above-mentioned projects but could only collect the testimony of Marina Ortiz- from Tierramor. In Tierramor, instead of using monocultures they use a concept called "Edible Forest" in which they imitate how perennial plants dominate nature by avoiding planting annual crops. By doing this, agriculture does not have a negative impact on the forest.



With these interviews and with bibliographic research we will make a video showing the information obtained relevant to the permaculture design so we can show more people how it works.

Sustainable Clothing

Mexico
Instituto Escuela del Sur

Natalia Jabneh López García, Sofía Cruz Rojas, Luciano Quintana Celis.



Sustainable fashion is part of the broader design trend that aims to create a product which is made considering the environmental and social impact that it can have throughout its life cycle, including the carbon footprint it leaves. There are many factors that must be considered in determining the sustainability of the material. Two of them are the renewability and source of a fiber: the process of how a raw fiber becomes a textile, the working conditions of the people who produce the materials, and the total carbon footprint of that material. In sustainable fashion, it is key to choose fabrics well, which are not the same as those that are frequently used. Natural fibers are fibers that are found precisely in nature and are not made from petroleum. The natural fibers that are used to make garments in the world of sustainable fashion can be classified into two main groups, cellulose or plant fiber and protein or animal fiber.



Upcycling is a recent term used to describe or encompass techniques that include the transformation of waste or waste for the manufacture of new valuables. It can be ap-

plied to any type of design and manufacture of objects: furniture, clothing, textiles, decorative objects, etc. Historically we are at a key point as a society, in which we cannot continue to function in the excessive and accelerated way in which we have been doing so. Proposals such as upcycling give us action tools to start making these changes in our consumption habits.



Urban Agriculture

Mexico

Instituto Escuela del Sur

Sian David Cerecedo Flores, Antonieta Aguirre Oviedo, Masha Natalia López Lamedá, Joselyn Ghisleine Contreras Hernández



Because of the necessity for agricultural ground there has been a lot of deforestation of woods and jungles, which has caused the liberation of CO₂ in the environment through burning and the loss of its uptake. It modifies the water cycle, increasing problems of droughts and floods. According to the Convention on Biological Diversity (2014), in terms of biodiversity, this problem has caused the loss of more than 70% of the species. It generates greenhouse gases, and it uses fertilizers and

petrochemical pesticides, which might look beneficial at first, but the petrochemical substances contaminate the soil and the water. It is necessary to implement another type of agriculture which is sustainable in ecological terms.

Most of the demand for food comes from the cities, hence the necessity of promoting agricultural activities in the metropolis. Urban agriculture is the type of alimentary production that takes place on land or spaces within or adjacent to cities which try to produce fresh, free of agrochemicals food, working towards a more sustainable and world-friendly lifestyle, and even generating a whole new labor field, which will result in new jobs and employments.



There are many ways to put it in practice, considering the different types of spaces: for instance, we have the orgaponic and the intensive gardening for zones with infertile ground or other limitation; popular orchards and parcels for potentially cultivable common spaces between edifications and streets; in factories, enterprises and schools to supply their diners and even personal planting at home, occurs for self-consumption purposes and in private spaces (whether on balconies, roofs, gardens or common spaces).

People and Town Birds

Russia

LInTech No28 (school No28), Kirov

Ulya, Gleb, Tanya, Nikita



In almost every town and city amazing creatures live – birds. They must be protected. Why?

- Granivorous birds contribute to the diversity of vegetation.
- Insectivores keep the number of insects and rodents under control.
- Bird singing improves the sound environment and has a good effect on people's mood.
- Birds are a convenient object of ecological education.

Our goal is to draw attention to the prob-

lems bird habitats face due to interaction with humans.

While working on our project we completed a number of tasks. We visited the museum of birds of our region, identified the impact of poor nutrition on the health of birds, explained to fellow pupils how to feed the birds properly, created leaflets with information on proper bird nutrition, conducted the quest “Bird Trouble” in a summer camp and contacted local authorities with a proposal to place posters with recommendations on proper nutrition in the parks of our town.



We told pupils that we should feed the birds only in the cold season. The safest food for birds is raw pumpkin and sunflower seeds, oats and nuts. Birds that are regularly fed are more likely to survive until spring and hatch new offspring.

Feeding the birds in the summer is not necessary. During the feeding period, chicks need natural and varied food. We should not interfere with natural processes.

Feed the birds and they will delight you with a cheerful song and respond with kindness - they will destroy larvae and insect pests, save our green world!

Cynobacteria

Russia

Vyatka Orthodox Gymnasium & Vyatka State Agrotechnological University

Nika & Nikita

The experiments were carried out on a hydroponic farm with an FDS irrigation system, where wheatgrass, chard, peas, sunflowers and other crops were grown.

This type of ancient bacteria was used to enrich plants with nitrogen and oxygen, instead of chemical solutions to achieve environmental friendliness of microgreen and salads.

The most common plants for growing on FDS systems are spicy herbs, microgreen and salad crops, which require nitrogen and oxygen for growth.



Eco-toys

Russia

LInTech No28 (school No28), Kirov

Lobastov Roman, Yudnikov Mikhail, Belyaeva Sofiia, Ogoreltseva Kseniia, Buzmakova Anastasiia.



We, as humans, will have to adapt our lives centred on the rules of our environment. Usage of eco- friendly products is one such necessity. That's why this year we decided to investigate the question of eco-toys. Our team thinks it's a very important question because we start to explore our nature from childhood.

Kids are very impressionable. We - as parents - can teach them good things so they will be good people in the future and take

care of our planet. And what can be better than if kids can “save the world” while they are playing with their toys?

In our project we pursue these ideas. Firstly, we found out what materials children`s toys are made from. In our school we conducted a survey among children (age: 6-12). What materials are schoolchildren`s toys made from? Wooden, plastic, knitted, gypsum or vinyl. The majority of children played with plastic toys.



A poll by the British Heart Foundation found that more than a quarter of parents admit to throwing away toys that are in perfect working order. It's not a secret that plastic takes many years to decompose, from 20 to 500, depending on the material and structure.



Our team would like to offer safe alternatives to plastic toys. You can opt for wooden toys, natural art supplies, toys from felt, wooden puzzles or cubes, knitted dolls. Usage of eco-friendly toys is the best way to save our planet. We hope that the eco-toys project will help every parent and child to look over the advantages of eco-friendly toys and make the right decision towards the safety of your child and of our Earth!

The impact of the urban communities on human health

Russia

Lyceum No8 Kirov

Valeria Kononova, Anna Barkova, Kristina Yakimova, Sofiya Mamaeva



The issue of health is greatly important at present. So we decided to study what is happening in the urban communities and how people can keep healthy in towns and cities.

The aim of our project is to show that in any urban community you can lead a healthy lifestyle, be healthy emotionally and physically in spite of all negative factors of towns and cities.

We began with surveys that show that of the 90 respondents:

- 50% are engaged in active activities, such as sports or dancing,
- 23% attend art and music schools
- 10% are engaged in active activities according to their mood, they are irregular,
- 17% of schoolchildren are not engaged in anything.

We inspected and studied that though our lyceum is in the central street with busy traffic, there are several parks nearby. However, people do not go there to breathe fresh air and do not think of their health.

In our town we have some different centers: “Dashing wind”, “Open world”, “Flying ship”, and “Footprint”. They organize a lot of different activities which focus on teaching students to behave in nature, to take care and help the environment and to think about health lifestyle.

Our town provides enough opportunities for development, to keep fit, to be strong, but people do not take full advantage of these opportunities. The members of our group told the students about their hobbies and activities to keep fit and be healthy. Anna also informed the classmates and other students about the influence of weather on students' health and study. Our conclusion: Your health is in your hands and in many cases depends only on YOU.



Plastic waste situation in Landskrona and

Sweden
Öresundsgymnasiet

Dafina Bela, Lina Ahmad, Lirak Gashi



We focus on the problem of plastic waste and how Sweden and specifically our city Landskrona deals with this. Plastic waste is a problem world-wide and in order to solve it, it needs to be dealt with

both by authorities and the citizens in a country. We presented how Sweden has organized waste-management, how garbage-bins nowadays are separated into 4-6 different fractions for recycling, that

plastic bags are expensive and non-reusable plastic straws and mugs will soon be prohibited to sell. Despite all of these regulations, plastic garbage is seen on the pavements of our city every day and it has become worse the last 5 years. We made a survey to find out what kind of trash that was found around our blocks and will present this.

We will also share these results with the climate-strategist of our city and interview him about how the city of Landskrona deals with this problem. In our school, the Green-Flag-group is active in trying to influence the students to become more aware of this problem and to take actions to prevent littering. Some of the plastic litter along our coast come from the city and its inhabitants, but a lot of trash is also brought to our



beaches by watercurrents and come very far away. Finally we also organized a small Beach Clean up on activity May 8th to prevent plastics from reaching the sea and from harming the marine organisms further.

The importance of Wetlands: Restoration of a local creek in Scania

Sweden
Öresundsgymnasiet

Anel Spahic, Lefee Al-Khdedah, Lama Hasan

Our project is about correcting the mistakes that humans have made before us. What we chose to do in this project was to establish a safe environment by helping create healthy creeks, in which living organisms such as aquatic animals can thrive. In many places in Sweden, humans have dried out wetlands and creeks over the last 100 years, in order to get more farmland. The water in these creeks used to meander but now they run straight from the source

to the ocean. This means that nutrients, such as nitrogen and phosphor, leaking from the fields around, will not have time to be absorbed to the nearby plants around the creek. These human created creeks, destroy the former wetlands which used to be rich in biodiversity. With help from our partners, the municipality of the city of Landskrona, we made efforts to make

the creeks healthier by planting trees and creating a place in the water for fish to lay their eggs. The trees serve the purpose of shading the water to prevent unhelpful plants from growing. We also moved 17 tons of rocks, gravel and pebbles into the Saxån-Braån creek which created comfortable and safe places for fish to lay their eggs. Besides

being a home for eggs, the rocks allow air into the water for the organisms to breath. In the future we hope to see small fish by the pebbles in the water and see that our work towards making a more biodiverse creek payed off.





An aerial photograph of a lush green forest. A paved road curves through the upper left portion of the image. In the center, a small building with a brown roof is visible, surrounded by trees. The forest is dense with various shades of green, indicating different types of trees and sunlight filtering through the canopy.

48 Hour Projects

Students create and undertake a project in 48 hours. Together with facilitators, students have chosen a suggested project or come up with their own. Projects focused on achievable goals and the importance of small actions in making a big difference for our planet.

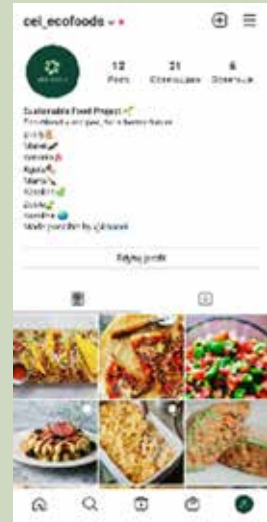
Ecofoods

Poland & Germany
Szramek High School &
Munich International School

Agata Korzeniowska, Marta Czudak, Karolina Put,
Zosia Gródek, Marek Janiec, Emily Hwang, Antonia
Samwer, Karoline Koss

As a group we created an Instagram Blog in order to promote sustainable eating and thereby, reduce the environmental impact of the foods we consume daily. Each of us created two recipes and uploaded 2 posts.

We post them on our Instagram account (name: cei_ecofoods). So far we created an account on instagram and posted there twelve eco-friendly recipes. In the future we are going to continue our work by publishing posts regularly. Posts and recipes will be posted onto the page.

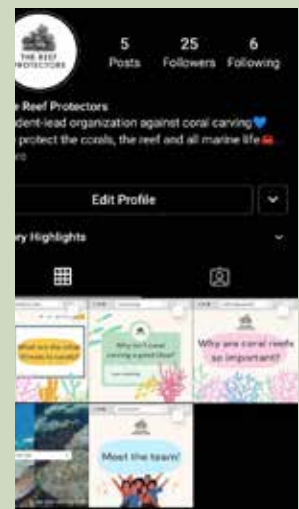


The Reef Protectors

Costa Rica, Indonesia, Turkey, Poland, &
Sweden
Szramek High School &
Munich International School

Banyu, Hamblett, Ifé, Jakub, Zane, Gülce

We helped spread awareness on the subject of coral carving, and many other modern-day threats to coral reefs. We managed to create a social media account, post, get some followers and research a lot. We spread awareness about our main idea. We successfully gave the project a platform and used it to communicate with the people we wanted to reach. We can keep in touch and continue posting on the social media account, maybe even eventually creating a web page for Reef Protectors.



Managing Our Waste

Turkey

Üsküdar American Academy

Selin, Defne, Deniz, Doğa, Esin, Gülce, Miray

We created an Instagram page to inform people about waste on the streets, recycling, solutions to reduce waste and upcycle. We reported the amount of waste on the streets by taking photographs, created two polls to learn about people's knowledge and perspectives on the issue and made educational posters. We raised awareness while educating ourselves. In future, we hope to focus on the waste on the beaches and do a beach cleanup with students from our school to both raise awareness and take an action.



Eco Fashion

Julia Kapala, Shristi Sarkar, Ishanvi Krishana, Michal Sawko, Monika Skibska

Clothes are something that we use every single day. By them we are showing our personalities preferences and taste. But because of living fast we don't know anything about production, fabric and basically the real cost standing behind cheap and easily accessible clothes. It's really important to be aware of how clothes are sewn and by who, connections between fake product and terrorism and your own impact on the textile market. In our project we want to show how you can start your adventure with ecological and ethical fashion.

As activities, every member of our team went to second hand store and tried to find the best pieces. In the future we're planing to start a social campaign and maybe set up our own online shop with secondhand garments. We learned a lot by ourselves but we are also going to share this knowledge with our friends and family. These activities showed us how we can make a small change which will have a lasting impact on the environment.



ART *Competition*

Art was created and submitted by delegates from different countries, voting was then open to all conference delegates.



Winner of the art competition:

Girl Dreams of Better Future
Artist: Celine (Indonesia)

The girl has a dream about when all of the countries unite to create a better earth. The world will be pollution-free, well-maintained, and all human beings can live with fresh air and water. So, future young people can see that the world we left behind is beautiful and clean.



The Night Before Ivan Kupala
Artist: Tatyana (Russia)



Faith in Art
Artist: Sonya (Russia)

Our ancestors believed that nature at the time of this holiday is filled with miraculous and healing properties. Therefore, most of the customs were associated with fire, water and herbs. In the future, I imagine that people will be closer to nature and they will take care of nature and preserve age-old national traditions.

The Garden City

Artist: Azkanio (Indonesia)



It is a garden city made from used goods. A garden city is an example of a small city that is environmentally friendly and uses electrical energy that comes from the sun. The process of making it took 3 weeks from making the city shape to coloring it.



Maggot for Community

Artist: Maahirah (Indonesia)

This digital painting story uses the maggot as a waste decomposer which can bring people to a better relationship with nature. Animals such as poultry and fish have sufficient nutrition, which is good for human health.



Thinking of a Better Future

Artist: Neria (Indonesia)

Mother
Nature
Artist:
Shristi
(India)



Through my art I have tried to present nature in the form of 'Mother' who is nourishing, cherishing, taking care and showering love upon all her children, be it animals, human beings, insects, fish or birds. Like a Protecting Mother, nature is fighting against all the odds like pollution, harmful viruses, UV rays and other destructive elements but she protects all the life forms on the earth with her shielding magical layer.

Nature at its Most
Artist: Ryan (Indonesia)



Nature without destruction and pollution.

All Fish in a Koi Pond
Artist: Nihan
(Turkey)



I wanted to reflect the relation between human and nature in this piece. We are one, and we can only achieve sustainability once we see ourselves as a part of nature and not something apart from it. The name of the piece also reflects that we are all fish in the same pond, so we might as well take care of it.





Poster Competition

There were a total of 49 poster entries all showcasing different projects with an array of designs and colours. The vote was open to the conference participants and two winners were selected based on the most votes in the categories “most inspiring” and “best design”.

Most Inspiring:

Fur Nature

Golden Valley School 5,
Costa Rica



Best Design:

The Other Side of Clothes

Robert College Junior,
Turkey



An aerial photograph of a lush green forest. A paved road runs diagonally from the bottom left towards the center. In the middle of the forest, there is a small, light-colored building with a dark roof. The trees are dense and vibrant green, with some sunlight filtering through the canopy.

Young Reporters

CEI 2021

Students report on their experiences at the CEI 2021 conference, including various aspects of the programme.

CEI Young Reporters of the Environment

by Selin

Young reporters for the environment (YRE) has been one of the highlights of this year's amazing CEI conference, a tradition that has been brought back to life. But aren't you curious as to how this team made such an outstanding contribution? I will now take you behind the scenes of the young reporters of CEI 2021.



The young reporters formed through online applications around April and with the first zoom meeting in May when they officially began to work. The general meetings aimed to inform the reporters about note taking, writing articles and interviewing techniques. After the general meetings, the reporters divided into teams and started to work individually and within their team. Each team had its own responsibilities along with one article that each reporter wrote about a topic of their choosing, concerning the environment and the caretaker's role in it. Although all teams focused on reporting the sessions of the conference, the group with the biggest responsibility beforehand was the interview team. The interview team completed several interviews, recorded and written, and prepared for a live interview in one of the workshops before the conference started. During the conference, the young reporters took notes and photographs in the sessions they were responsible for and wrote a short article summarizing the session afterwards. They used their notes to create the final presentation for the closing ceremony and two members of the interview team presented it on behalf of the whole young reporters team. Overall, it was a lovely and fun experience that the whole team enjoyed being a part of and they made lifelong friendships. Many skills were developed by being part of this team. You can find the pre-conference articles and interviews on the CEI Alumni website under "Blog", whilst the articles about the conference are present in this year's Global Forum. To get notification when new articles, videos or posts are released, you can become a member of the CEI Alumni website. For more information about the YRE, please visit the CEI Alumni website. We hope you enjoy them!

CEI Alumni Blog: <https://www.alumnicei.org/blog>

Young Reporters for the Environment: <https://www.alumnicei.org/young-reporters>

How can we report with limited internet access?

by Andrew (Malawi)

As a new participant in the CEI conference, it has been a wonderful experience to begin from the zoom meeting as a young reporter. Through such meetings I have been able to gain new skills and knowledge and meet new people across the globe. From the conference itself, I have enjoyed many things. The conference was a platform that has exposed me to new culture and get insights into different project views that other people are doing across the globe. This has enhanced my knowledge and I have learnt a lot. I cannot wait to have another conference, where I can fully participate and be able to share different ideas. My time on the conference was limited due to different challenges that I and other participants in Malawi faced. We had challenges with internet connection and the cost of an internet bundle. The other big challenge was access to technological items such as computers and phones to have access to the conference. All in all, we had a fantastic experience for the time despite limited challenges, and we are looking forward to more international activities like these.



Student workshops

Students took place in interactive online workshops focused on a variety of environmental education topics. These workshops, run by experts had the goal of educating students about sustainable communities in Ireland and globally. This is the reflection of the students about those workshops!

Invest for the Best

By Jimena

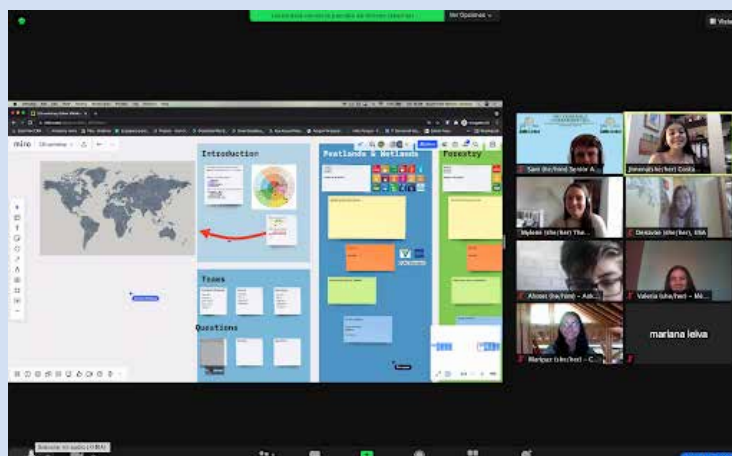
Carbon offsetting specialist Mylène Zambon ran a workshop in this year's conference.

You are probably starting to read this article without knowing what a carbon offset is, but don't worry; I'm going to share with you what I learned in this workshop. Putting it simply and easily, a carbon offset scheme allows you to invest in an emission reduction project around the world with the purpose of balancing your own carbon footprint. A carbon footprint is the amount of greenhouse gases a person generates with the decisions they make, whether it is flying to London or throwing your laundry in the washing machine.

When you talk about buying carbon or offsetting it, you are referring to a carbon credit. One carbon credit is worth one ton of carbon, these are carbon equivalent; this means that even if it is a different gas, it can be calculated back. By purchasing carbon credits, you support mitigation projects. Most of these projects not only help fight climate change but have many other benefits for the planet. (Mitigation = the action of reducing the seriousness of the action)

In her workshop, Mylène taught us about the different emission reduction projects. These are carried out in three different fields: wetlands, forestry, and agriculture. In the activity, I was assigned to the forestry field. Here I had to fulfil several tasks. First, I had to define which country the mitigation project would take place in. I chose Brazil. Then, by doing research: I allocated 200,000 hectares for this mitigation project. Next, I pointed out the benefits that this would bring to the Brazilian biodiversity and its population. After doing all this, I created a backstory for my mitigation project, since people are more likely to invest if they know the purpose of why this project is important. I spoke about how the Amazon is vital to all humanity and how many hectares had been burnt in the wildfires that took place during 2020 and 2019. Finally, I chose a company specialized in emission reduction projects to help me put this into effect.

We are blessed to have a beautiful planet as our home, so why not invest for the best?



Circular Economies and Plastic

By Banyu

A circular economy is a restorative and regenerative economic model that starts at the base of any design. Plastic is one of the major areas in which circular economies are applied and a circular economy allows it to be reduced or substituted. During this workshop, delegates were divided into pairs and tasked to apply a circular economy model to a given scenario: a washing machine, a bicycle, a cell phone, and a baby stroller. This aimed to provide emphasis on the fundamental principles of a circular economy, which include minimizing waste and pollution, constantly keeping products and materials in use, and regenerating natural systems in the environment in order to enhance resources. The surge in single-use plastic consumption is expected to multiply the negative externalities. Further global action and awareness will be required to transition to a new, more efficient plastics economy, and this involves continuing to spread awareness and educate people on the importance of upcycling. Throughout this workshop, I learned that a circular economy is a concept that can be applied in even the simplest of home environments involving the recycling of plastic. Through global commitment, it is possible to work to make plastic waste and pollution a thing of the past.

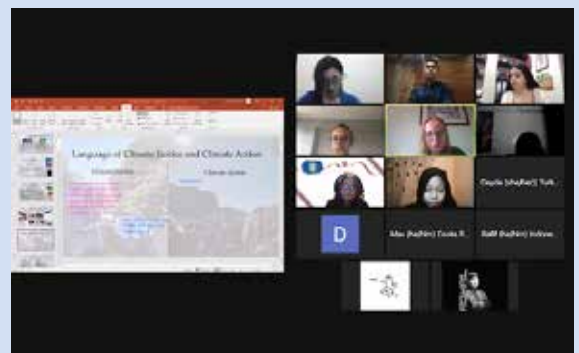
Climate Justice

By Max

with Trinity College Dublin Environmental Society

A workshop that demonstrates that there are no limits in being a Climate Activist.

CEI 2021, an unforgettable conference. I really hope you had the opportunity to attend, but if not, in this article you are going to find a sneak peak of one of the activities that the conference had. Students were assigned to different workshops related to “future leaders” but today I am going to focus on the one called “Climate Action”, a workshop provided by “Becca” from TDC Environment Society. The workshop was focused on informing people on what climate change and climate action are, and all it implies. The workshop had a significant part dedicated to climate action, in which we discussed important people, possible complications in climate action and how to overcome them. All of these different sections were related to the message of spreading awareness on the environment and motivating all students to really become active to fight climate change and emphasizing the idea that both individual and systemic change are important.



Sounds amazing right? I personally attended this workshop and I can assure you that it was! Although you may be wondering what exactly these workshops provided? Well, by informing communities from all over the world, students can leave the conference with a clear idea on different environment situations. In this case, students were motivated to become climate activists, by learning different types of activists and actions to take! To learn more about different workshops or activities that this year's conference had, visit the CEI Alumni website to find related articles and I hope to see you all next year!

10 Minute Neighbourhoods

By Daniela

What's your first thought when you hear "10-minute neighborhoods"? They kind of sound like a "5-Minute Crafts" project, but they are actually a real-life community strategy to optimize living conditions! Students got to learn all about these 10-minute neighborhoods in the workshop led by David Quinn, a very experienced urban planner. Participants were introduced to the topic with an interactive activity centered around sharing views of the different types of neighborhoods that they lived in. During the workshop, Quinn taught attendees about the history of 10-minute neighborhoods, the benefits they have, and the key factors that they require in order to function best.

Apart from a very interesting information session, students also got to break down into groups and brainstorm ideas based on several guiding questions, including how their own neighborhoods could be compared to 10-min neighborhoods and what key factors they would include in a 10-min neighborhood. From this discussion, participants realized that their neighborhoods, despite the great differences, actually had a lot of similarities in their way of functioning, especially regarding possible improvement points. Some of the key points that students came up with were population density, diverse housing options, transportation, recreational spaces, and health-related services. Overall, it was a really insightful and fruitful experience!

EcoArt Workshop

By Ignacio

with Armand Wachelder

This workshop was not quite like the other ones as students took different templates and created memes to raise environmental awareness. There are many creative ways for young people to raise awareness, memes are one of them. An internet meme is a cultural artifact that spreads rapidly, reaching a very large digital audience within a short period of time. The memes had the objective of representing the topics discussed in the conference in a modern way that would appeal to different audiences. Some of the memes talked about climate change, others about ways to combat it, and others made references to other CEI goals and objectives.



My personal favorite meme is the one included in this article where the creator included sustainable development goals. It symbolizes the CEI aims and focuses on these goals with great passion. I think this workshop was really fun for its participants and motivated them to express ideas that we all talked about during the conference in creative ways. Next time you are going to post a meme on social media, consider using this tool to raise awareness about climate change and other environmental issues.

You can look at all the memes here: <https://www.alumnicei.org/post/cei-2021-eco-art-memes-workshop>



Climate Ambassadors

By Sofia

with Grainne and Gary

Learn about how you can make the world a more sustainable place!

One of the most common questions among people who care about climate change is “How can I contribute to change?”. The Climate Ambassadors Workshop led by Gary showed us one of the many answers there is to this important question. This workshop started with a presentation that introduced and explained: what is the Climate Ambassadors program? In this program, they build a network for climate ambassadors where everyone gets to participate in panel discussions, watch climate change related movies, share ideas and try to motivate both the government and the individuals to work together in order to solve global issues.

During the presentation, we heard one testimony from a person who was part of this program. “Only through unity can we achieve climate justice” was one of their phrases that really stood out to me personally. Following this, the presenters took a section of their presentation to talk about “Project drawdown”. This is a project that aims to reach “drawdown”: the point in the future when levels of greenhouse gases in the atmosphere stop climbing and start to steadily decline, thereby stopping catastrophic climate change, as quickly, safely, and equitably as possible. (definition from <https://drawdown.org/>)

The last section of the presentation consisted of explaining ways in which us the viewers can start making our daily lives more sustainable. I appreciate how the presenters took a moment to talk about how even if you can’t join the program, you can still make a difference through other actions. To learn more about the Climate Ambassadors program and sustainability, visit the following links the presenters provided during the workshop:

<https://www.count-us-in.org/en-gb/businesses/count-us-in/campaigns/irish-climate-ambassador-network/>

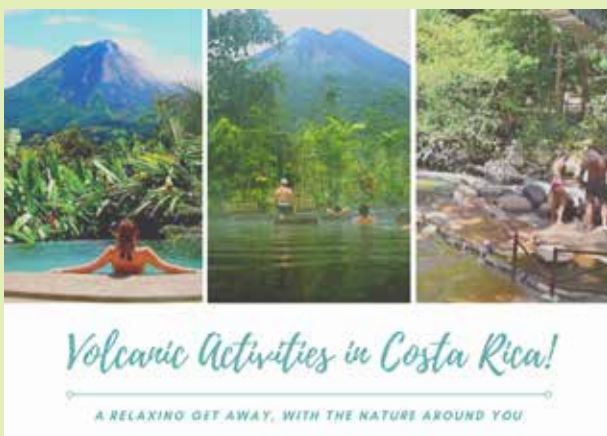
<https://linktr.ee/climateambassador>

Geotourism

By Masha

with Robbie Galvin

This interesting workshop was given by Robbie Galvin, the Copper Coast Geopark's manager. We learned about geotourism and thought of some ways we could put it in practice in our own communities. But, what is geotourism? Geotourism is an eco-friendly kind of tourism which involves the local people, giving them, the landscapes and the environment more importance, thus tourism sustains each place. Geotourism is also exploring new cultures and landscapes, creating connections between the people and the environment. And why is this kind of tourism better? Because unlike the tourism industry, geotourism by prioritizing the landscapes and their people, also avoids mass tourism, unsustainable tourism and it manages to give an incredible experience without exploiting and causing damage to the environment. A great activity part of geotourism are the geoparks. A geopark is an area with a geological heritage of international significance and importance, and with a sustainable development strategy which involves the local communities. There are many geoparks around the world, for example the Copper Coast Geopark in Ireland. This geopark has a large and important geological history and heritage. For the sustainable activities, there are tours about the seashore, surfing lessons, cycle tours, and even more, all involving the local people. Geotourism offers a lot of new experiences, like geoparks, but being friendly with the ecosystem



Geotourism with painting groups!



Millennial Podcast

By Selin

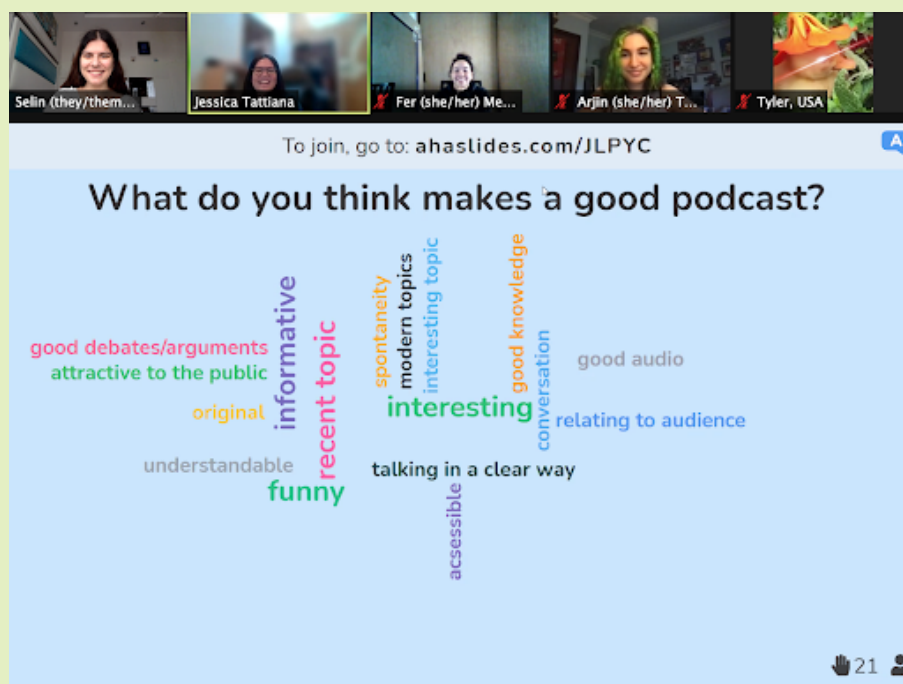
with Jessica Tattiana and Kazi Talaska

Listen to the podcast created by participants of the workshop while learning what makes a good podcast!

The workshop participants first discussed the aspects that make a good podcast and later on picked one or two topics from the ones suggested by the workshop leaders to create their own podcast. The participants thought a good podcast should be about a recent topic, informative, supported by good arguments, understandable, interesting, accessible and conversational. The reliable sources to use in a podcast were also a part of the discussion but this time it was via a poll. Most participants thought academic literature was the most reliable source, followed by news articles. Meanwhile, websites were voted less but still had their place among the possible sources, of course using them requires more attention on what knowledge is presented. Then the participants picked one or two of the three topics: wasting of food, sustainable household items and water quality. After choosing the topics, the participants divided among themselves to find supporting evidence via researching for their ideas. After researching, the ideas were brought together to form a script that is recorded to produce the final podcast. Overall, the workshop was very educational and fun since participants learned the creation of a good podcast by experiencing each step. You can listen to the podcast of both morning and afternoon sessions here:

Morning Session: <https://drive.google.com/file/d/1MI-DkOJbiaALu24wdzMUYMwf-pvSEdSm/view?usp=sharing>

Afternoon Session: <https://drive.google.com/file/d/1XQ9SGn1IkNVi85qCmWus-BlZMgNr-iaNy/view?usp=sharing>



Sustainable Cosmetics

By Shruti

with Nadia Young

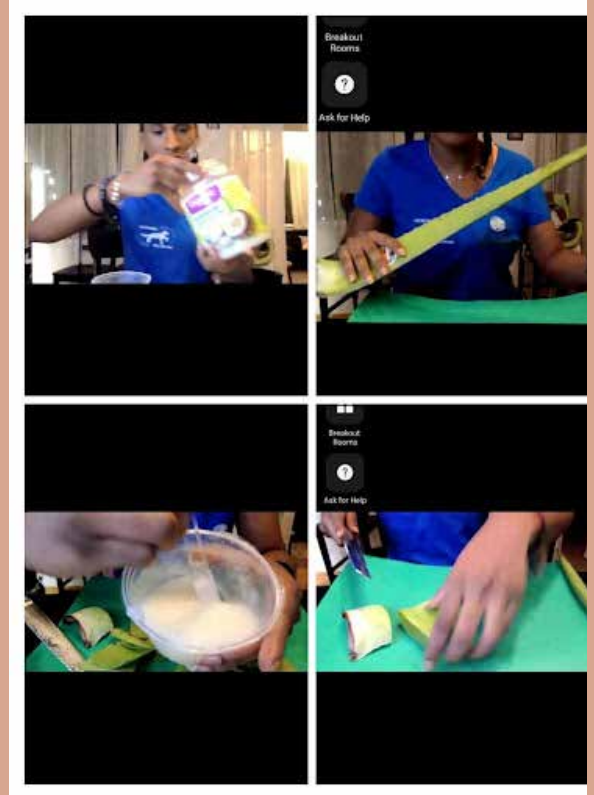
Green Beauty: Be the adorer of true beauty.

Body wash, face wash, scrubbers, face pack, hair colour, lipstick, and eyeliner. Are you well acquainted with these terms? The answer should obviously be Yes. You may be male or female. In today's world of modernization cosmetics have become a top priority in our life. Our beauty habits cover everything from taking a shower to styling our hair to using our post workout makeup wipes. You might be wondering, "What's wrong with this?" I would like to inform you that it is just silently increasing the damage to our health as well as nature.

If we focus deeply on the matter and do some minimum research on it, we can find that most of the chemical cosmetics are containing harmful chemicals like formaldehyde, parabens, and synthetic colours containing carcinogenic compounds etc. Do you know that when you are washing off your makeup in the sink, it's destroying the water life? The harmful chemicals present in the cosmetics don't break down and flow into the ocean, rivers, and other water bodies through the sink water. Because of this, it is leading to a reduction in the reproduction of animal plankton, mutations in amphibians, death to marine animals and many more effects. It is not only destroying nature but also affecting our skin, hair, and our health. It is leading to fatal diseases like Cancer. The cosmetics are also responsible for plastic pollution as they are sold in plastic containers.

Ok! Don't panic on hearing this! Where there is a problem, there are always some solutions. We were informed of such solutions by presenter Nadia Young, who works for Sustainability and has her own business of sustainable, eco-friendly cosmetics. She shared the message that the first step in the field of sustainable cosmetics always "starts with the user". It is obviously our choice whether we will choose the better option of "Green Cosmetics". In the workshop Nadia Showed us how to start our journey for sustainability through easily available kitchen ingredients. She showed how to make Body scrubber by mixing ample amounts of sugar, honey and coconut oil and a makeup remover by mixing aloe vera jelly and coconut oil. We can make many more cosmetics like face packs by mixing turmeric powder and milk, and hair packs by mixing henna leaves. There are alternatives for each harmful cosmetic.

I hope we all will try our best to completely restrain ourselves from using harmful chemical products. We will move forward by using "Green" nature friendly cosmetics.



Sustainable Cosmetics

By Sofia

Eco-friendly cosmetics start with you!

Sustainability is an option for every aspect of your life. Have you ever thought about sustainability in cosmetics? Your makeup and skincare products can help both you and the environment! This workshop led by Nadia Young gave us some insight on what sustainable cosmetics are and how you can make your own with household items. She has a great passion for sustainable cosmetics and even has her own brand of cosmetics called Asili Cosmetics (Definitely go check it out on Instagram by looking up their username nadiva031). After getting to know Nadia a little bit more, we started the activity which consisted of making a hair mask, a sugar scrub, and a makeup remover with natural, household items. We must change our lifestyles to live a more sustainable life so why not start today? Nadia gave a step-by-step tutorial on how to make each cosmetic. While working on our own project, the participants shared more recipes for natural cosmetics common in their countries and cultures. Some recommended rice water for your hair, turmeric for inflammation, raw eggs for your hair, and more! It was so cool to see how in many cultures, there are many sustainable alternatives to chemical cosmetics. People usually go to stores to buy products that achieve the same effect as natural alternatives they probably already have at home.



Sustainable Energy and Climate

By Selin

with Aidan Gray, Aoife Cannon, Suzanne Longmuir and Jessica Kelly

Let's explore "Sustainable Energy and Climate" workshop to learn about sustainable

The workshop consisted of three parts: an introduction to the SEAI and energy, possible sustainable energy sources and an interview with Jessica Kelly who won SEAI's Emerging Sustainable Energy Champion Award in 2020. Sustainable Energy Authority of Ireland (SEAI) works with householders, businesses, companies, and the government on sustainable energy and supports a range of projects expanding from home energy efficiency to ocean energy research. They promote sustainable energy education, create workshops and work with eco schools. The concept of the workshop moved towards the focus of energy with a game of "Say What You See", where the participants guessed the energy sources or words related to energy by using the pronunciation of the given photographs, an example can be seen on the picture. Can you guess what it is? (Answer: Pet + Troll = Petrol)

3. What fossil fuel do these pictures describe?



Then, the renewable energy sources were introduced via a presentation, including their potential to be used. Then there was a group discussion where the participants were divided into breakout rooms to discuss the current usage of renewable energy sources and the possibility to use other sources in their own countries. The conclusion to the discussion was that every country has its own potential for specific renewable energy sources depending on its location and climate. Finally, the interview with Jessica Kelly focused on how her journey to working on sustainability started with her first project of cooling the water bottles during cycling by using the energy from the turning of the wheels and the challenges she faced, the most problematic one being people not listening to her ideas due to her young age. Overall, the workshop was both informative and fun with its interactive presentations, games, discussions and interviews. (You can find more information about SEAI and the projects they do on: <https://www.seai.ie/>)

"You've already done a lot and it might seem like it isn't enough. If you take a step back, every small thing you do is making a positive effect. Do as much as you can but don't be hard on yourself, work slowly, don't lose your passion." - Jessica Kelly



Sustainable Tourism

By Masha

with Laura Kelly

In this workshop we learned how to travel in a responsible and sustainable way!

The tourism industry is one of the biggest in the world and it keeps growing every day. But when it does, it also grows its impact, which produces many negative consequences. This leads to the need for a sustainable and responsible way of planning travels and management of the industry for this to survive, sustainable tourism focuses on the needs of each area and aspect that involves the tourism (tourists, tourism industry, host communities), but thinking in the future of each.

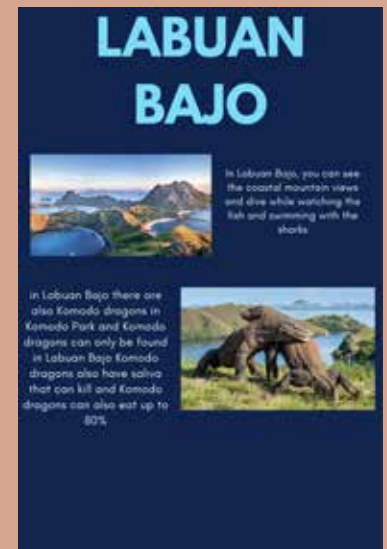
There are many types of sustainable tourism, and in the workshop we learned a few aspects of this. For example, avoid traveling in the peak season so there isn't overtourism. You can also do voluntourism, which means that you get to go on vacations but you help in interesting and amazing community projects. There are more options like slow tourism, slow food, staycations, the use of sustainable methods in your trip, and even more! In the workshop we had a great time coming up with ideas and creating a sustainable trip

Tourism is a key industry for countries all over the world. It produces income and helps boost local economies. There are negative effects of tourism, too, but you can help with a solution. This workshop taught us about Sustainable Tourism in ways that were both easy to understand and interactive! We reviewed slideshows and watched videos which showed places and communities that have embraced Sustainable Tourism in the most creative of ways. I learned that you don't need to have an international corporation or a million dollars to start to make a difference. All you need is commitment.

How you can help (according to The Treadright Foundation):

- Encourage Staycations
- Highlight places off the beaten track
- Promote off-peak travel
- Encourage sustainable methods of travel, including slow tourism
- Feature sustainable suppliers
- Voluntourism (community projects)
- Spotlight handmade local souvenirs and food

These are just a few simple things that you can apply to your next vacation to be sustainable while enjoying the beauty of the natural world. Imagine if everyone followed these guidelines. How much of a difference could we make if every single vacation was enjoyed sustainably? We won't know unless we try.



Sustainable Living

By Ignacio

with Laura Gonzales

During the Sustainable Living Workshop, we explored the question of what the concept was and how can we practice it? Sustainable living is a type of lifestyle that attempts to reduce an individual's or society's use of the planet's natural and personal resources.

It started with a brainstorm where all participants drew what came to mind when thinking about sustainability. This allowed students to

understand how important it is for people to break down their stereotypes of what this concept represents to be able to be part of the change. Then, everyone participated in a discussion using a jamboard where different types of prompts were given and students responded with sticky notes. Lastly, there was an activity where participants were able to use an old t-shirt to transform it into a useful bag. It was a brilliant idea to teach students how they can start to

use everyday items from their households and transform them into more useful objects. This workshop did a great job at highlighting and teaching the importance of sustainable living and how anyone can start to make a change today in their own way. So next time you see an old t-shirt think about all of the great things that could be created from it to help the environment.





Cultural workshops

Students took place in interactive online workshops which provided a taste of Irish culture. These workshops, run by Irish leaders, covered topics such as food, language, songs, music, dancing, history, painting, writing, arts and crafts and more!

Irish Songs

By Selin and Masha

Learn about the history of Irish music while trying to write lyrics to classical Irish tunes!

An important and representative aspect of Ireland is its music, the traditional and the modern. It's beautiful music and dance has always had an important place in history. It is full of different interesting instruments used in Irish music, such as the violin, flute, banjo, guitar, tin whistle, and many more! Irish music is a beautiful combination of many different styles, from pop to classical to rock. Modern Irish music carries the hints of the traditional Irish music inside it. Among many different traditional instruments used, one of the most important is the harp. The harp is known as the symbol of Ireland and its cultural importance became recognised by UNESCO. In the workshop, the participants listened to many clips of Irish music, including the harp, music videos of the pop and rock eras, and the Eurovision performances. By winning 7 times, Ireland holds the record of most wins in the Eurovision.

Irish songs are cheerful and enthusiastic, they have a lot of rhythm, and they transmit such an amazing energy! Irish music is, without a doubt, something you cannot forget. Irish music has a big variety of songs, from the happy ones to beautiful sad ballads. There are different topics, which can be about love, or about places or more. Niall Horan, U2, Thin Lizzy, and Picture This are some well known examples of modern Irish music.

During the activity in the workshop, the participants tried to guess the common aspect among 3 Irish ballads. Can you guess what it is? (Answer: They are all about places)

Towards the end of the workshop, the participants had fun writing CEI related lyrics to one of the three songs with common Irish tunes in breakout rooms: Wild Rover, I Still Haven't Found What I'm Looking For and Nancy Mulligan. Overall, the workshop was very rich and interesting to learn about the history, types, and common aspects of the Irish music and become a part of it by writing their own lyrics. Even though we aren't good writers, we sure had fun trying to write them!



Irish Landscape Painting

*Learn how to paint a beautiful Irish landscape!
with Kathryn Kelly*

In this fun workshop Kathryn Kelly, an Irish artist, art teacher and art therapist, taught us how to portray one of the many beautiful landscapes that Ireland is very well known for, and in a very easy and enjoyable way. All we needed was a piece of recycled cardboard, paints, paintbrushes, a pencil, a ruler, a pen to leave our signature and our imagination. The participants who attended were able to learn a little bit more about this beautiful country, start learning a new skill, and were entertained with a fun and creative activity- First, the students gathered their materials together which included paint, cardboard, pencils, ruler and a sponge. Then students drew figures of the selected image on the cardboard to organize their painting. The image on which all students based their drawings was a picture of Lough Inagh.



This place is a freshwater lake in the Inagh Valley in mountainous Connemara, Galway, in the west of Ireland. Everybody followed the different instructions given by the leader in order to paint the selected image. Once we had the sketch of our painting, we mixed our paints until we had the beautiful colours we needed. Then, we grabbed our paintbrushes and we started painting! Kathryn guided us but it was time to put our creativity to work. Kathryn also showed us how to give our paintings some texture and shadows to bring them to life. Then, the final touch, your signature! At the end of the workshop, each of us had a unique and lovely painting. This activity was very relaxing and let some students try out painting on their own for the first time. If you ever wish to visit Ireland, a cool way to get to know the country without leaving your home might be by exporting its beautiful landscape through creative ways.

Dancing our way to knowledge

By Max and Ife

Learning can also be fun, it's just about the way you do it!
with Ciara Silby

When I say conference, you might think of something boring where you only sit down and listen to somebody else talk. However, CEI was not like that. Instead, this conference provided knowledge through different activities, and for this year's conference, students attending the virtual conference had different cultural workshops so that they could get a little involved with some of the Irish culture. It was a very complete workshop that had information from many different POVs (Points of view),



First, general information on the traditions of Irish dancing and even a video with an example so that everyone could have a sneak peak at professional dancers and their moves. Then they led us to a documentary about an Irish dancer that demonstrated behind the scenes and pressure that the professional dancers have before a presentation.

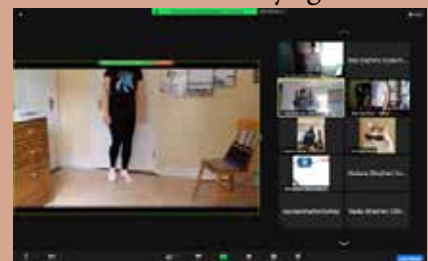
To end the workshop, with the help of a pre-recorded video of a tutorial, we had the opportunity to show off some moves that we learned, it was absolutely amazing!



During the conference, we had many workshops but they all were truly extremely fun. We even learned how to do a few moves with our host explaining step-by-step. In the video, we got to see how truly big Irish dancing is, how competitive it is and how many people actually participate in it, which is so cool. We got to see the costumes and the look the dancers use

for dancing! The costumes are very eye-catching dresses, that were really pretty, the hair was extremely curly and extremely big; but it was fun because it matched well with the whole look.

It was the coolest thing ever, and we had so much fun looking at everyone struggling with learning the dance moves. Having the opportunity to learn a little about some different cultures is always great and is definitely not something that happens every day, which means that as participants with this opportunity, we have to take advantage of these opportunities. This cultural workshop was very enriching in different areas as it can take students out of their comfort zone, and people just like me that are not used to doing activities like dancing, have to face a new challenge. When you are able to accomplish new goals you feel empowered and proud of yourself. So what are you waiting for? Stay tuned in the CEI Alumni social media to find out more information on next year's conference to practice some cultural workshops of a different country, and always remember, learning can be fun and a very enriching experience.



Irish Arts and Crafts

By Selin and Sofia

Get ready to meet Irish weaving while learning how to create a weaving of your own by recycling materials! Arts and Crafts can be sustainable too! with Rachel Smyth (@sewing.rachel)

What's a more creative way to learn about Irish culture than by making actual Irish crafts yourself? Irish weaving is one of the oldest crafts of Ireland that dates back to 1600 BC. The colours and patterns on the weavings, especially the older ones, are a representation of nature. It is very common to see the colors of nature in textiles because people got inspiration from their environment.

One of the traditional weavings is a belt worn by farmers called "Cresh". It used to be handwoven at home by using the colors that represented the family of each farmer. The participants of the workshop created their own weavings, starting from the creation of the loom to the weaving itself. We encourage you to try this relaxing and creative activity at home!



The materials you will need are: Cardboard, Scissors, String/Wool/Twine, Lots of soft recycled materials: eg. fabric, plastic, or ribbons, Stick/twig, and optionally beads, embellishments and a large needle.

The first step was creating a loom that would be later used to make the weaving. After that, participants weaved thread vertically to later support the horizontal strips of upcycled materials.

There was no limit to what you could use. Some were cutting up old t-shirts while others were using plastic bags. The presenters were really nice and took the time to make sure everyone was following the steps correctly.

We all shared our progress in our weaving and reflected on the activity. Everyone expressed how relaxing it was and how they totally loved it!



Irish Story Writing

By Rieve

with Ken Kelly and Shannon O'Reilly

This workshop was definitely one of the highlights of the conference for me. It explored the culture of Ireland through the history of its people and their contributions.

The first person we talked about was Grace O'Malley, or 'Ireland's Pirate Queen.' She was a master seafarer and political leader. Grace's acts were revolutionary because she led and conquered and showed that a woman could prevail in a male-dominated society. For our first activity, we were asked to write a short story involving a pirate. This was so much fun! After everyone was done writing, we had the opportunity to share our work with everyone in the room.

A similar approach was taken with a lesson on Constance Markievicz, who was the first woman to represent the Irish Government. She was put in jail and wrote letters to her followers. Therefore, our next exercise involved us writing a letter as if we were in prison for a just cause.

Finally, we learned about Cu Chulainn, a mythological figure in Irish folklore. Our final task was to write about a mythological character from our country. Overall, I loved the creativity and knowledge I encountered in this workshop. I would do it again!



Learning Irish

By Nhi and Jo

with Chloe Murphy

Dia duit! During the conference, the student attendees were exposed to numerous new learning experiences, which often revolved around the host country, Ireland.

Knowing different languages can be interesting but knowing Irish; can come in pretty handy. The presenter talked a bit about herself, the history of the Irish language, and schools in Ireland. It saddens me that the language is slowly dying down, only certain places speak full Irish.

Various Gaelic words and phrases were taught to students that slowly advanced in complexity. Students learned basic methods of communication

We learned about introducing ourselves: Dia duit! Céard is ainm duit?- Hello, what is your name?

..... we learned how to say our age in Irish.

..... how to say our hair color/texture and describe someone else's hair: e.g. Gruaig fhionn- blonde hair; Gruaig dhonn- brown hair and Gruaig rua- red hair.

.....how to describe our and another person's eye color: e.g. Sùile glasa- green eyes; Sùile gorma- blue eyes and Sùile donna- brown eyes

....how to describe where we live: Cónaím i gcathair/mbaile/sraáidbhaile- I live in (a city/town/village} or Is áit ciúin agus síochánta í-It is a quiet and peaceful place

Hopefully, you guys learned a bit of Irish like I did. I thought it was fascinating to listen to Irish words being spoken, although it was definitely a challenging process for me to remember and repeat them.

Viking Runes

By Jimena and Ignacio

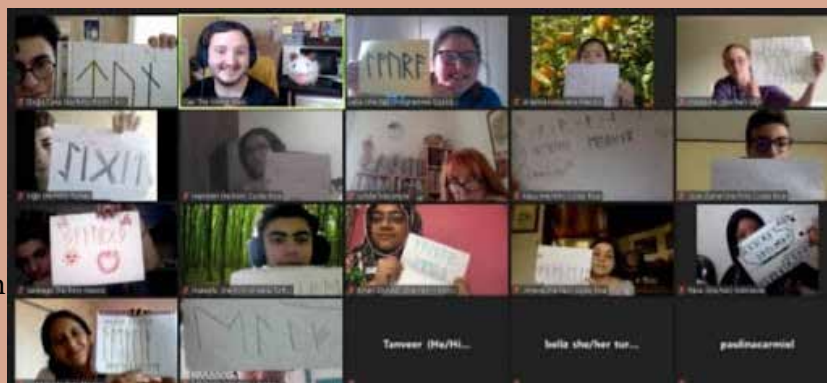
We all love learning new things, right? Well, have you ever heard about Viking runes? One of the coolest parts of Irish culture is their historic relation with Vikings. We had an opportunity to learn about Viking history and their alphabet. Runes were imitations of Latin letters used by Vikings in Europe during the 8th -11th century. This alphabet has 24 letters, and goes by the name “futhark”. Runes are grouped in a set of related alphabets known as runic alphabets. These were used to write various Germanic languages before the adoption of the Latin alphabet and for specialized purposes thereafter. The workshop also explained the Ogham language of Ireland which was used before Vikings arrived.

In Jana’s and Dan’s workshop, we got to learn the basics of such a huge topic. We spoke about the Vikings, who they were, their past, and what happened to them. But here comes the most exciting part!!! We learnt how to write in runic. Yes, you heard that right; write in runic!! Jana and Dan showed



and taught us the futhark first, we got to write it down so that we could have it as a reference for when we start writing. When we were done with this task, we wrote our names. It was very interesting to see how everyone wrote and decorated their names, all the attendees were very creative. Participants were able to make use of what they had just learned in a very fun activity.

After writing our names, we got to write a full sentence; all of us wrote “I am a caretaker”. Workshops like this one are very enriching for everyone, and that is one of the most admirable things about CEI, since we not only learn about the environment; but also about different cultures and their traditions. In this workshop, we learnt about Nordic



traditions and important details of their folklore. Thank you Dan and Jana for teaching us to write in runic and about Vikings, it’s always a lot of fun to learn new things. I enjoyed learning not only about a different language but also a whole different alphabet since it showed how different cultures approach this universal system. Check out our runic writing in the picture.

An aerial photograph of a dense forest of evergreen trees. A narrow dirt road or path runs horizontally across the middle of the image, slightly to the right. The trees are a mix of dark green and lighter green, with some bare branches visible in the upper left. The overall scene is a lush, natural landscape.

Future Leaders

In the Future Leaders session, students debated and discussed topics related to sustainable communities. These sessions were led by our wonderful team of Irish volunteers from Newtown School and St. Angela's School Waterford. As young future leaders, they led other young people through a series of discussions and games focused on: fast fashion, sustainable agriculture and sustainable cities.

Future leaders: a student perspective

By Nhi

After learning about the horrid conditions many have to endure to produce clothes for fast fashion brands, would you stop feeding into the fast fashion pyramid?



Fast Fashion is the mass production of clothing in response to the latest trends. This presentation about fast fashion, choreographed by Molly Swift and Naoise Duffy talked about the five key points on why fast fashion needs to be stopped.

Production: There are two types of production.... markets and supply chains. Consumers thrive on the constant availability of products through markets. There are 2 major aspects: timing & cost. Shortest time possible to keep consumers interested. Big brands take advantage of minimum wage & child labor laws in developing countries which make clothes cheaper to produce. Supply chains are crucial to the creation of fast systems to reduce the cost of the process of moving goods.

Marketing: it is a key driver of fast fashion, it creates people's desire to buy more clothes, instead of new clothes every season they release every 3-6 weeks.

Environmental impact. Fast fashion uses excessive usage of water, 10,000-20,000 liters of water makes 1 kilogram of cotton, dying clothes creates toxic chemicals in seas. Plastic microfibers are made from polyester which releases carbon emissions, plastic microfibers break down in the ocean which releases toxic substances. This can risk the health of humans because we eat the fish in the sea. Excessive consumption of clothing makes lots of items in landfills because of the low quality of clothes. 84% end up in



landfills which causes health & environmental problems for people who live near toxic substances released when burning landfills. The usage of viscose is used as a cheaper alternative to cotton, made of wood pulp with terrible effects on the environment, carbon disulfide leads to health effects on workers.

Overconsumption: fast fashion is cheaper, more affordable, and size-inclusive, compared to sustainable sources, so people have no option but to buy from fast fashion. Social media & fast fashion brands create continuously changing trends, sell clothes for cheap so we can keep on buying, which will end up in the landfill.

Sweatshops: a sweatshop is a workplace that has socially unacceptable conditions, with little payment, small, humid, enclosed spaces, working hours and hours on end, barely allowed to wash themselves, use the toilet, and endures physical, verbal, and sexual abuse, child labor. Fast fashions use sweatshops in developing countries where rights don't exist/aren't followed,



Slow fashion brands are ethical and sustainable fashion. They have found a technology in which there are new ways to dye and produce fibers. After learning about fast fashion, my wish would be to think about the company you're buying from the next time you're buying clothes.

Future leaders: a student perspective 2

By Shruti

The Real Cost

“ Flat 40 % OFF on every shopping “ - Aren't you attracted by this? Obviously most of us will hurry towards that shop with no urgent needs and will come out buying a stack of clothes. Have you ever wondered whether this hurry is having some effects or not ?

Molly and Naoise told us all about the background stories of these flattering offers . Although our wardrobe is full, we never lose the chance of buying new fashionable clothes at a low cost. Here comes the success of devilish Fast Fashion.

Fast Fashion is the mass production of clothes in response to latest fashion trends. Though it is a cheap way to meet up our fashion trends, in reality it is costing a great deal which is being paid off by nature and the helpless workers of the developing countries. Day by day nature is degrading and torturing the poor people physically, mentally and economically. The factors favouring the growth of Fast Fashion include: marketing, supply chain, shortest production time, and low cost. We can look upon it as having devastating effects in two ways: Firstly, towards nature and secondly towards mankind. It's “Contributions “ towards nature are water pollution, land pollution, wastage of water, use of harmful plastic microbeads and viscose . It is degrading nature and the life forms. Now comes the second “ contribution “ of it towards the poor workers .

The brands promoting Fast Fashion like H&M, Zara, Primark, Topshop, and Nike are reported to be doing injustice to their labour force . The workers are not provided with fair wages. Rather, they are given a very low wage so that the brands can make their maximum profit. Such brands are also promoting child labour as they are hiring small children with low or no wages to make the utmost profit . They are also making the labour force work more than 24 hours a day. We can mark it's destructive effects in many more ways. Have you now understood the real price of Fashion ? Will you still go on for “ more and more” ?

You may ask what is the remedy to this problem? The one and only answer is slow fashion. It goes against the present norms of “more and more” and “ faster and cheaper are better”. It can be easily attained by decreasing the number of clothes we buy, recycling old clothes, and buying clothes from second hand shops. We can get the advantage of slow fashion from brands like Veja, Heist, Pangaia, All birds, etc. They use sustainable fibres and eco-friendly colours , and seaweed fibres for the production of the fashion items . Though it's financial cost is a bit high , in reality it's price is much less and does not pose any bad effects on any one .

It is always better to choose less than choosing more harm to nature and every living being . We should control our greed for “ more and more”. We will join our hands together in search of a sustainable future.





Talks and keynotes

Throughout the week, conference participants heard various talks and lectures about topics related to Sustainable Communities. We also heard some excellent keynote speeches at the opening and closing ceremonies. Here, our Young Reporters give a glimpse into just a few of those talks. Don't forget to check out all the talks on the Alumni CEI YouTube page where you can find recordings!

14 Henrietta Street

By Sofia

So much history in the walls of a single building!



We are all used to learning about history through textbooks, but did you know that you can learn the history behind a city in a single building? Architecture is an important part of every nation's history and culture. One of the richest places for history in Ireland is 14 Henrietta Street; a museum in Dublin. When you enter, you experience over 300 years of city life in the walls of one address. By connecting to the personal stories of those who called 14 Henrietta Street home, the building's hidden histories are revealed.

It is not only a place to look at, events take place where people can gather and enjoy the culture of the palace and the performances. If you are looking for your next vacation destination, definitely consider Dublin so you can come to 14 Henrietta Street. Come visit the house, hear its stories and discover the layers of Dublin history within its walls.

Burren Ecotourism

By Banyu

The Burren, located in County Clare on Ireland's southwest coast, features some of the country's most unique landscapes. As a result of its outstanding biodiversity and geological significance, it makes up one of 169 UNESCO Global Geoparks, and in late 2020, Lonely Planet crowned The Burren the winner of the Community Tourism Project. The reason the Burren has been able to achieve such an award is because the Burren Ecotourism Network sees that it is important to keep the Cliffs of Moher sustainable for visitors. From this talk, I learned that the key to ecotourism is that members of a collective collaborate and exchange resources in order to help each other grow. Members of the Burren com-

munity regularly measure waste, water, and energy and from that, ensure they annually become more efficient. Burren ecotourism is all about having an emphasis on environmental preservation and having regard for the landscape that surrounds us. It is said to be an alternative to large-scale tourism, allowing people to learn to appreciate the natural beauty of the place in a smaller, less environmentally exhaustive fashion. This goes to show that when left with minimum human interference, the beauty of nature prevails as exquisitely as ever and it is part of our responsibility to make sure it is protected.



Learn more about it here: https://www.youtube.com/watch?v=vyT84ScPdtw&ab_channel=LonelyPlanet

Climate warrior or worrier? (Colm O'Regan)

By Sofia

Comedian Colm O'Regan gave a meaningful but at the same time funny insight on how to start change.



Sometimes we think we are doing a good job at being environmentally and socially conscious, but many of us make unconscious mistakes. What can we do about it? The first step is realizing what you are doing wrong. What comes next? He provided us with this diagram (see left). He stumbled upon this diagram in a podcast called “How to Save a Planet” by Gimlet. By responding to each question in the outer circles, you will have an answer for the question in the middle, what you should do? We often don’t realize that ordinary people have a huge influence in their local areas. You can achieve

real social or environmental impact in many ways. If you are still underage, this is still possible with the help of your parents or school. “DON’T BE AFRAID OF BEING WRONG”, is what Colm said when referring to taking your first step. Mistakes are inevitable but it’s what we learn from them that makes them an essential part of any process.

As Colm said during the presentation, “the best time to do something about this [global issues] was in the past but the second-best time to do something about this is NOW!” How to Save a Planet Podcast:

https://open.spotify.com/show/1KzrasExlM5dgMYwgFHns6?si=uIa3KIT5ThSMHBbTOqKpjw&dl_branch=1

Go follow Colm for more inspiration <https://www.instagram.com/colmoreganwriter/?hl=en>



Explore Your Shore

By Banyu

Explore Your Shore is a citizen science project dedicated to spreading awareness regarding the importance of marine biodiversity, water quality, and climate change. As shown by the significant data gaps in records of marine species in comparison to land species, Ireland is said to lack the foundation of a strong tradition of marine biodiversity. Marine biodiversity data is vital so that we are able to monitor the scale and impact of our activities on the environment as well as monitor water quality and enrichment. Marine biodiversity data also allows us to monitor the recovery of species and the arrival of invasive species which have the potential to outcompete native species. Despite this talk being only 10 minutes long, it left a strong impression on me about the importance of recognizing marine biodiversity on a global scale. To most people, oceans and shores are majorly unseen and thought to be inexhaustible. However, this doesn’t diminish how greatly it is impacted by human activity. With that, I believe that we as a community should make more of an effort to understand and appreciate the complexity of the systems that make up our shores and beyond in order to help preserve them.

Keynote: Mary Robinson

By Masha

"You are never too young to lead, and you are never too old to learn"

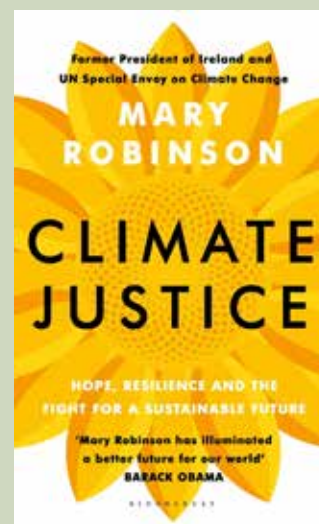
The 2021 CEI conference started with an inspiring talk from Mary Robinson, the first woman president of Ireland. She was a law student, but with time, she started realizing and paying more attention to a really important subject: justice. This word and its meaning became an essential aspect in her life, especially, social justice and justice for the environment. It was so important that she made her way in the world with her voice and her ideals, becoming not only president but also a key voice of climate change around the world.



Now she leaves us an incredible and significant message: our voices, young people's voices, every voice matters. People are starting to care about climate change, especially the young people, but sometimes the oldest people don't listen to us because we are younger. But the message that Mary Robinson gave us is that we, the young people, can make a difference. And she gave three steps to fight climate change: First you have to make the climate crisis something personal in your life, because actually it is. Second, get angry with the people who are not doing enough, because we are not doing enough. And finally, imagine the world it will be when we achieve it. Mary Robinson gave us this amazing phrase: "you are never too young to lead, and you are never too old to learn".

By Jo

The inspiring nature of the 2021 CEI conference was perfectly embodied through a moving talk by former Irish president, Mary Robinson. Not only known as an inspirational figure for her strong feminist ideologies, Robinson pioneered global activism through her role as the UN High Commissioner for Human Rights and Chair of The Elders. Her causes for activism have no boundaries, but Robinson most notably works to advocate for human rights, gender equality, peacekeeping and climate justice.



Throughout the talk, it was immensely clear how passionate Robinson is about combating the climate crisis, which she conveyed through thoughtful compilations of ideas. Firstly, she underscored the importance of listening to youth voices who firmly believe in scientific opinions, and expressed how impressed she is by the actions of young people. Additionally, Robinson highlighted that more thorough communication must be used so that people can better understand the climate crisis, as existing methods are often too technical or remote. I was particularly fascinated by her direct comparison of environmental issues to the COVID pandemic, as I believed this was a clear visualization of what can be done against climate change. Robinson stated that the pandemic proved collective human behavior can make a difference, and would thus be equally proficient in tackling the climate crisis.

Walk Hike Bike

By Jo

Much of the conference lay heavy emphasis on conveying the natural beauty of Ireland to attendees, and a talk by the company “Walk Hike Bike” enticed us into visiting Ireland through sustainable tourism practices. Founder Linda Woods and managing director Maurice Whelan explained how their business encourages environmentally friendly tourism by offering guided hiking and cycling holidays around Ireland in the past 25 years. Because the principal mode of transport is walking and biking, the company can achieve their aim of allowing tourists to experience the rugged beauty of Ireland with little emissions. Moreover, during the talk it was explained how “Walk Hike Bike” limits their impact on the environment through simple measures

such as gifting stainless steel water bottles to guests, and recycling in the office. Over the past five years, such methods have allowed the company to reduce their paper consumption by 90%, and their long-term goal is to offer trips without the use of any plastic. Numerous videos were shown depicting some guides of “Walk Hike Bike” in action, which really showcased the team’s warm and friendly energy. While Woods clarified that their company cannot combat the environmental issues concerning tourism entirely, she finished the talk with the inspiring message: “every small stone causes a ripple in a lake.” Ultimately, “Walk Hike Bike” wants to connect people with nature, and demonstrate how beautiful low-impact tourism truly is.





Student activities

While the conference is focused on educational topics, students also bond and grow through social activities. During the conference, students were placed in groups and took place in fun games and challenges. Some returning favourites adapted for online and also some new fun activities. Check out the summary of the Cultural Performance too!

The Great CEI Bake Off

By Nhi

Some have heard of Sugar Rush, some may have watched Baking Championships, some may have witnessed Gordan Ramsey calling someone an “idiot sandwich” while sticking two pieces of bread on each side of their head but have you heard of The Great CEI Bake Off?!

The Great CEI Bake Off airing on Zoom was a new polarizing show in which one clan leader for each clan bakes a dish-- this year's theme was yeast. They had 40 minutes to bake and the three judges, Cindy, Gail, and Jana judged based on presentation and taste (the bakers have to be honest with how it tastes) But, ultimately the winner is chosen by the audience using a poll. Shall we meet our six lucky, exquisitely skilled bakers?

Representing the Bumblebee Clan we have Sam! The twenty-five-year-old Swedish statistics student made barmbrack. He cooks & bakes daily but is not a professional.



Representing the Squirrel Clan we have Vildana! The Boisan and Swedish head elementary teacher made flapjacks with chocolate on top. She is a moderate baker with no cooking experience.

Representing the Seahorse Clan we have Sadhbh! The sixteen-year-old Irish fifth-year student made soda bread rolls. She is a comfortable baker just not with bread.

Representing the Hedgehog Clan we have Kazi! The twenty-two-year-old Indonesian horticulture science student made scones with jam on top.

She has plenty of experience and is comfortable in the kitchen (I was rooting for Kazi because she was representing my team, it looked like I was fangirling over her).

Representing the Redsetter Clan we have Nadia! The twenty-two-year-old American social marketer and a business owner made farls. She is a good kind of experienced home baker.

Representing the Puffin Clan we have Shannon! The twenty-seven-year-old Irish teacher made boxty. She is a moderately comfortable baker.

The winner was... Sadhbh! Keep an eye out, the next Great CEI Bake Off might air near you.



Flashmob

By Shruti

In the CEI conference 2021, participants were introduced to a variety of exciting events. One of the most prominent events that touched every participant's heart were the Flashmob sessions held over four consecutive days.

The main objective was to provide an ice-breaker for all the participants and provide a sense of unity among all. It included joint clan activities and competitions which helped to enhance enthusiasm of the social activity.

Three groups consisted of the team up of the

six clans, namely: Redsetter and Squirrel; Bumblebee and Hedgehog; Seahorse and Puffin.

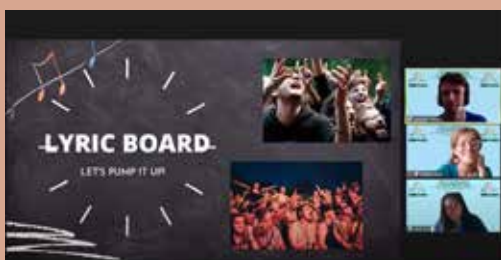
Dance along with melodious songs was chosen as the medium for conducting the sessions. The clan leaders trained their respective groups with the assigned music. Two songs were selected to accompany the dance: On the Loose by Irish Singer Niall Horan and Things are Different by the Irish band Picture This. For the ease of participants, tutorials were done using a pre recorded video whilst the leaders also trained it live.

The best part of these sessions was that they were not done in a strict way rather it ensured all the students to complete the activity with utmost enjoyment. Everyone learned together, made mistakes together, laughed together, enjoyed together... that's how it achieved the objective of the social activity.



The CEI Lyric Board

By Rieve



Everyone appreciates music in one way or another. Some people love the way it can change emotions while others like how it drowns out the world around them. No matter the reason, the Lyric Board event towards the end of the Conference was a great time for everyone.

Lyric Board helped me bond with the people in my clan. It was fun to see the different types of music that were shared throughout the event. This was perhaps the most competitive event, and this encouraged more people to participate in order for the whole team to succeed. There were smiles and cheers each time we would submit an answer, whether it was before the other clans or not.

I am sure I am not alone when I say that I discovered many new favorite songs through Lyric Board. There were many artists and albums that I recognized, and many that I had never heard of. Nonetheless, I found myself making a list of songs that quickly filled up a blank piece of white paper.

No matter what country you are from, it was easy to find joy in Lyric Board!

Virtual Pictionary

By Selin

The pictionary was one of the clan games, in which the participants guessed the words related to the environment and conference the other clans were drawing, meanwhile each clan leader drew the word their clan members chose. Members were trying to guess the words as quickly as possible before the other clans. It is a nice bonding activity since everyone was trying to guess the word altogether and sometimes an idea one person found, gave inspiration to another person who guessed the word correctly. All the clans were racing to be the first to get more points to be the winning clan. Some of the words drawn were Ireland, insect, water, hedgehog, heat and some words given but mostly not chosen due to being very hard to draw were urban and biodiversity. The winning teams were Red Setter and Puffin.



The SDG Quiz

By Ife

I think the main message or theme was to have a fun activity to help understand the Sustainable Development Goals. It had the objective of helping us relate the SDGs to something concrete so that learning about them was easier and more effective in the future. The goal was to interpret, relate and explain some SDGs. There were questions, and we had to relate each question to an SDG as an answer. In the first part we had to relate and recognize different art pieces to the 3 options of SDGs given to us. For the second part, we had to answer questions that were related to the SDGs, for example: SDG number 6 Clean water and sanitation: which of these countries has NO rivers? India, Germany, Mozambique or Saudi Arabia. Anyone participating definitively had to know what the United Nations' sustainable development goals were in order to get it.



Cultural Performance

By Masha

One of the parts of CEI conferences I love and enjoy the most (and I'm guessing I'm not the only one) is the cultural performance. In this activity, each country gets to show us a special aspect about its culture. Every year the performances are really interesting and amazing, everyone has a great time. And this year wasn't the exception.

We got to see some beautiful and amazing dances from Indonesia, Costa Rica, India and Russia. We heard some splendid music from North Macedonia and Sweden. Then we saw some delicious preparations of food from Taiwan, Malawi, Turkey and Germany. Mexico, Netherlands, United States and Ireland showed us some interesting aspects like landscapes and architecture of their countries. All the performances we got to see were amazing, and they make me want to visit each country!



By Sofia

Each country prepared a video that represented their country's culture. Over 20 countries from all across the world presented their culture in creative ways. The show started with a small introduction video from Ireland. It contained clips from Ireland gathered by CEI conference organizers.

After the introductory video, the performances started! The hosts, Oscar and Julien, did an amazing job at introducing each country. After watching all of them, I was amazed by how diverse this year's conference was. The main themes in all performances were:

1. Art: from dance to poems to puppets. Unique dance moves, unique songs, unique gowns, and so much talent!
2. Food: food connects the people in each country. Each country has its own variety of native products so the dishes are always unique.
3. Landscapes: each country has beautiful cities and destinations so it's worth showcasing them with clips and photos.

Anyone who got the amazing opportunity to watch the whole show was so lucky! I can confidently say that I and all the participants can't wait to see next year's CEI Cultural Performance.

Watch the full Cultural Performance here: https://www.youtube.com/watch?v=Pj7x-3FwTS7A&t=945s&ab_channel=AlumniCeI



A close-up photograph of several green leaves, likely from a maple tree, covered in numerous small, clear water droplets. The leaves have serrated edges and prominent veins. The background is dark and out of focus.

Teacher sessions

Teachers experienced different conference elements to students, with specific talks, workshops and discussion focused on environmental education and how teachers can help our young caretakers develop. Our YRE mentors Julia, Andrew and Cindy summarize some of those sessions here.

Clean Up Nepal

By Cindy Leibner

Believing the future of our earth rests in the hands of our children, this non-profit organisation is empowering young people to become a force of change. It works with schools to help educate the students about solid waste management and how to live a more sustainable lifestyle. Karuna Thapa, with this organization, shared their philosophy—if they start in the schools, the knowledge they are sharing will eventually go into the rest of the community. They work with teachers and students in grades 5 to 7. They have determined that this age group is still easily influenced and open to changing their habits. In addition, the students are able to bring their activity-based learning home to their parents. Homework involves family participation which allows for educating the parents and fosters their willingness to learn and adopt good habits because of their children's excitement and requests.

The activities, in five modules, relate to waste reduction, waste segregation, and recycling. The NGO, ABC Sweden, partners with them in their quest to educate the youth of Nepal. They have also created a variety of learning resources such as animated videos, a website for both students and teachers, and toolkits for teachers. They feel confident that they will be able to create lasting changes in their communities through working with young children, the next generation of stakeholders. This presentation touched my heart. I liked that their mission is to educate, engage, and empower youth. I am encouraged by their philosophy and determination.

Citizen Science

By Julia Barnicle

Have you heard the term Citizen Science? What does it mean to you? Citizen Science is the involvement of the public and researchers working together in collecting scientific data. It is a voluntary process used to gather information valuable to certain projects. This is the main reason to use Citizen Science. Karin Dubsky and Dave Wall gave a great presentation of how Citizen Science is being used through case studies. Other reasons to use Citizen Science include allowing the researcher to contain costs by using volunteers thus making the project a cheaper project. It allows a wider range of coverage over an area and for over longer periods of time. This is different from just community engagement because Citizen Science must generate new data. Volunteers can range from all ages allowing everyone interested in a project to participate.

Projects that include Citizen Science can range from finding and mapping specific types of marine life such as crabs like shore crabs and hermit crabs to finding invasive species like sargassum which is a seaweed invasive to Ireland's shoreline. Citizen Science can be used for curriculum development for science, ecology, geography, and used to generate your own resources such as making informational posters for causes of your interest. Even the youngest learners can use citizen science by having workbooks to identify and learn about marine life, plants, and the environment. Think about how you can make things better for the future. What steps are next for you to take in exploring your area of interest? Next time you drink a glass of water, think about what is in it. Will you want to get a field test kit to inspect it? If so, then you are well on your way to using Citizen Science.

Future Earth Ireland

By Cindy Leibner

Combining Research and Collaboration to Meet the SDGs

Future Earth Ireland, an arm of Future Earth Global, provides support in the Republic of Ireland. All four presenters demonstrated that no matter what your career choice and area of expertise, you can use your talents to promote a sustainable future. And can foster sustainability through collaboration with others with different skill sets.

Alison Gough, a law lecturer, and barrister, discussed her role in the organisation using her legal research skills. One important issue she deals with is Brexit, and the environmental difficulties presented by Britain's leaving the EU. Since N. Ireland is part of the UK and the Republic of Ireland is still a member of the EU, the island these two countries share is no longer governed by the same set of environmental laws.

Dr. Diarmud Torney, a political scientist at Dublin City University, focused on the question, "What can Poly Sci teach us about climate change?"

His discussion included a brief look at three questions: What are the political characteristics of climate change? What can the study of environmental politics teach us? How can we teach environmental politics in schools? One key point that he stressed was the use of citizen assemblies in fostering climate change understanding amongst the general public.

Dr. Kelly Thornber, a scientist in the UK, focused on food security and environmental sustainability. She noted that as we intensify our production of more protein based products for the food insecure countries, this intensification means the use of more harmful chemicals that can cause a variety of harmful effects. Her work focuses on sustainable aquaculture in Bangladesh.

Finally, Mary Dobbs, also a law lecturer and barrister, discussed the law's role in a sustainable future. Patenting of genetically modified crops, the seed companies' control over seeds, and this impact on agricultural sustainability were highlighted. Did you know that eight corporations own 90% of seeds bought internationally?

We definitely left with a greater understanding and appreciation for two key points made: that everybody's discipline is part of the problem and part of the solution; and that the synergy created by the collaboration of people with varied skills and talents can make a difference in our quest for sustainability.

I'd never heard of Future Earth before, and I think this workshop was the most powerful for me. To see people with such integrity working so diligently, utilizing their vocations for sustainability, gave me renewed hope that there are caring people in all countries.

Climate Law

By Julia Barnicle

Climate Law, is it a real thing? Just ask Dr. Andrew Jackson who took a climate case in Ireland to the Supreme Court of Ireland in 2020. It is only the second case in the world to successfully challenge a government's overall mitigation of climate ambition.

According to Dr. Jackson, Ireland was the third-highest greenhouse gases (GHG) emissions per capita in the European Union in 2017. Further legal developments were led by supporters and the general public in Ireland, helped to bring about a climate change plan that now has Ireland on a better track of addressing issues and requirements of the Climate Act of 2015. The climate case has led to a more urgent ambitious new climate plan and significantly revised national climate legislation.

Other countries can look to Ireland as a leader in climate change not only in the physical sense but in the legal aspect as well. The role of youth will be important going forward because a need for a brighter future requires changes now. Getting more involved by being aware of groups and information can generate new ideas. What's your new idea?

Marc O'Cathasaigh

By Andrew Cox

Local politician, green activist and trained teacher Marc, spoke about the challenges of responding to the Climate Challenge at the local and national level in Ireland. He presented the opportunities that are possible to switch to more sustainable transport modes. He focussed on how children's travel patterns have changed over time as we became more and more concerned about safety, particularly the increasing dangerous role of the car as a mode of transport. He explained that we are loathe to give young people as much freedom to roam as us or our grandparents had. He introduced the idea that urban design needs to be explained to young people as early as primary school age. We should start giving them the language, tools and concepts they need at an early stage in life. These include terms such as travel nodes, desire lines (where people want to go, see image), permeability (degree to which people and transport modes are permitted to move through the street), sticky streets (encourage people to slow down, more people friendly), sense of place and road legibility (reading the road). Young people need to understand their environs and planners need to see how young people view their place. Marc highlighted the benefits for all parties of active travel with a switch to walking and cycling.

Teachers enthusiastically shared the situation in their own countries, from Costa Rica to Indonesia, from Turkey to Mexico, from Taiwan to Sweden, and from Russia to North Macedonia. There was much focus on safety issues and climate barriers. In many countries it is either too hot or too cold, or even too dark to cycle to school. Many explained that cars are a huge problem in their cities as young people may have to journey long distances from the suburbs to their school. It is key to provide cycle lanes where the distance to travel is not too great. Walking buses in the neighbourhood and improved public transport were highlighted with a reduced need to drive a car with urban living.

Teachers found the workshop inspiring, that the steps were good to teach students at all levels, that they formed good advice for teachers planning to discuss sustainable communities.

As one teacher put it, we need to change the consciousness of young children from an early age and upgrade it in later years.

Future of CEI: Creating a Sustainable Organization

By Cindy Leibner

The veteran teachers and observers of CEI met on the first day of the 35th conference and were challenged with the question, “What can we do to raise the next 35 generations of caretakers?” Recognizing that keeping an organization going for so many years is noteworthy, participants acknowledged that with everything that has changed in those 34 years, changing with the times is critical to remaining relevant, purposeful, and afloat. Nurten Mersinlioglu, as the last physical conference host in Turkey in 2019, presented a recap of her conference. She focused on the key points in organizing a conference, stressing the need for a dynamic organizing team, obtaining sponsors and supporters, and finding the right venue. Next, teachers discussed what they liked the most about physical conferences. It was a long list that appeared on our screens as we submitted our answers. Immersion into the culture of the host country, continuing discussions 24/7, networking, and the sense of unity the physical conference provides were a few of the answers given. Then followed a discussion on CEI branches and how it is easier to communicate with branches rather than individual schools. It was noted, though, that there are many reasons that they work in some places and not others. Reasons for branches being formed and then disbanded were also discussed. One common theme was that branches are often established to host a conference with a more formal structure. Finally, we ended our conversation on the ways to go hybrid for future conferences. Recognizing the benefits of the physical conference, but noting, too, that a virtual component would add a richness to the conference and allow for more participation from countries and delegates unable to attend in person. All the teachers agreed that the virtual participants need to feel valued and an integral part of the conference. Future conference leaders need to keep this in mind as they organize their conference. This workshop caused a lot of reflection—how amazing that a volunteer organization has created such a powerful network of likeminded people that it has even weathered the pandemic when so many businesses and organizations have become defunct. It reminded me of why passionate, caring teachers are some of my closest friends. And why I feel close to so many of the CEI teachers I met years ago, and some that I’ve only met via Zoom and our weekly meetings.

Sustainable Tourism

By Julia Barnicle

What does Sustainable Tourism have to do with the environment? Well, a presentation by Laura Kelly-sponsored by Brendan Vacations informed us that we should be conscious of the environment at all times including when we are on vacation. It starts with us at home and leads to all activities we do when we go places. Sustainable tourism takes into account all aspects of its current and future economics. It is all about balance. If one does not take these things seriously it leads to overtourism. Popular vacation destinations have been dealing with overtourism leading to damage of sites, littering, and lack of respect for the site and people living in the area. How do you combat overtourism when this is a financial industry? The key to overcoming this is to plan and manage by a form of sustainable tourism called Eco Tourism. Eco Tourism is about being environmentally responsible for travel and visitation. It promotes conservation, has low visitor impact, and provides for active socio-economic involvement of local communities. An example of sustainable tourism you may have encountered but did not think about it at the time is using the towels in your hotel more than one time during your stay. Another example is leaving no trace when you go for a walk or bike ride. Put litter in its place. Staycations are becoming more popular in this time of COVID-19. Marketing can be creative and team-building with local businesses brings a better sense of community together in promoting the local businesses. Investigate what is in your own state or country.

Mapping the Local (Ray McGrath)

By Andrew Cox

Ray introduced the concept of place and the need to map what is around you. This has become more evident during the lockdowns of the Covid pandemic which restricted our movement and enabled us to focus on our neighbourhood. Interacting with teachers via whiteboard, Ray completed a SWOT analysis. Teachers identified their community resources and how they could use those resources to their sustainable advantage, map the threats and note areas for improvement.



Ray stressed the importance of identifying and mapping the resource around you. All the time he returned to the focus on a sustainable future for the community in which we live and work. He highlighted the importance of both a healthy and safe environment, and healthy informed engaged and creative people.

Ray explained the mapping process which included: getting to know your place through talking to people in the community and listening to their stories and their concerns; doing a desk top review; carrying out community mapping surveys of landing places, fishing weirs, etc; involving the schools as the next generation; drafting and finalising the map or series of maps. The collection of local stories about the community is vital before they are lost along with other traditions.

Teachers got involved in feedback and we found out that in Russia, museums collect information on local traditions and stories; and that in Costa Rica communities get paid to look after their land (payment for environmental services).

Tramore EcoGroup and Bernadette Guest

By Julia Barnicle

In order to have rich biodiversity, there is a need for many habitats. This presentation by Bernadette Guest and the Tramore Eco Group allowed the audience to learn and discover habitats and how the community can be engaged. They gave examples and discussed projects and collaborations on biodiversity and community engagement. There are a variety of levels of engagement. One could gather information about a protected species and raise awareness through public talks. Others could get involved in the citizen science portal run by the National Biodiversity Survey by surveying mammals and sending in what they see, or by doing beach cleaning.

The key message to take away is what can we do. We can protect the habitat which protects the species. Work locally and collaboratively with others. Having interactive projects can lead to rewards of teamwork, having a shared purpose, contributing to scientific data, and then see the results. It is very important to communicate the science, become a Citizen Scientist, and contribute to the science.

The History of Meade

By Cindy Leibner

Ireland has its first meadery in 200 years, and it's a family run business in Kinsale, Co. Cork. Denis Dempsey, and his wife Kate, operate the company Kinsale Mead. It was Denis who outlined the intriguing history of mead, how it's crafted, and the importance of honey and bees. Known as nectar of the gods, ambrosia, and honeymoon wine, mead is said to have been brought to Ireland by the Welsh monk, St. Molaige, in the 5th century AD when he also brought Christianity to Ireland. Mead is a very global drink since anywhere you have bees and honey, you can have mead. Because honey was so precious and the value of bees was recognized, they were treated like prized cattle. Bee Laws were enacted in the 7th century, and some of the laws required the owner of the bees to give a certain amount of honey to neighbours where his bees foraged, or if you were stung by a bee, you were granted a meal of honey if you did not harm the bee. We were reminded of the many threats to a healthy hive, and Denis went on to detail a long list of environmental issues which included: habitat loss; habitat fragmentation; use of pesticides; colony collapse disorder; disease and migratory beekeeping. Kinsale Mead Co. is committed to crafting mead in a sustainable manner, and as we learned the process of making mead, the variety of meads they produce, and where they obtain their honey, Denis pointed out that a great deal of cleaning is involved in the process. To do it sustainably and conserve water, they have switched from rough floors to very smooth, switched to easily cleaned stainless steel tanks, and instead of using chemicals to clean with, they use ozonated water. Dedicated to fostering sustainability, they're part of two national programs: origingreen.ie and biodiversityireland.ie. Using biodegradable tasting cups for the honey and encouraging their customers to adopt pollinator friendly habits in their gardens and towns are two ways they are contributing to a green culture in their business. Denis left us with the idea that you can do what you enjoy and still use it to spread awareness of sustainability as a means of climate action. This presentation was perfect. As a cultural workshop, it was enchanting. The history of mead was fascinating and quirky. I was so impressed with the business being so willing to work towards sustainability through the organizations they belong to, and the steps they've put in place. Even though it was a virtual presentation, I became invested and would like to visit it when I'm able to travel to Ireland again.



Young Reporters of the Environment: Eoin Heaney

By Andrew Cox



This is basically a global process that hands the baton of responsibility on to students themselves.

This process requires the student to Investigate an environmental issue; research the topic using a range of methods; report to their peers and disseminate their ideas. This may include an annual competition.

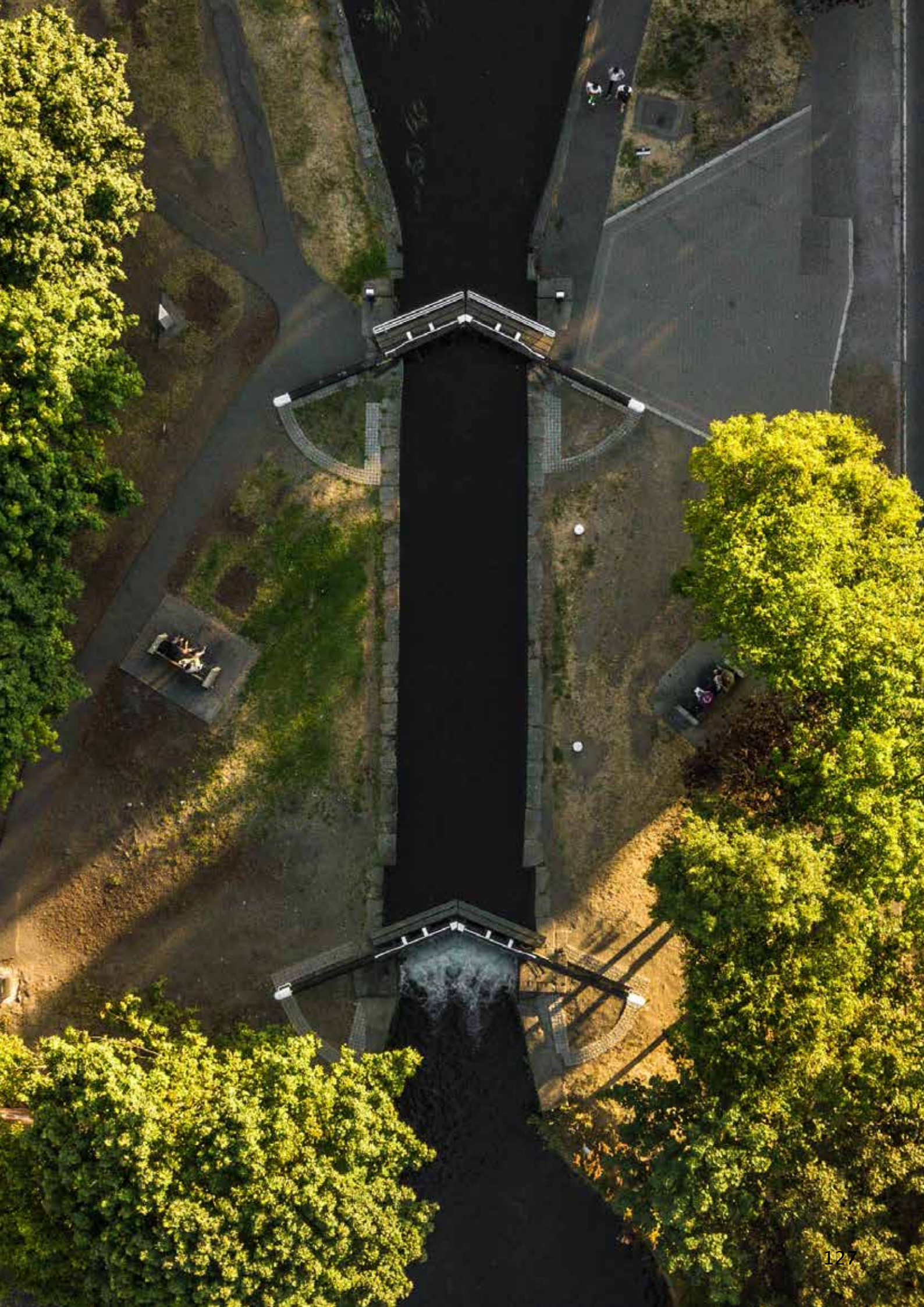
These methods include writing articles, taking photos, and recording video (mobile storytelling). It is a truly interdisciplinary approach.

Caretakers of the Environment have used a

similar process at several annual conferences to enable young people to report back in a structured fashion. It empowers young people to take an informed stand on environmental issues. There are two main resources available to teachers:

www.yre.global/handbook & www.yre.global/yre-lesson-plans

Teachers were grateful for the presentation as it is very important that students do work and share it with their schoolmates.



The CEI International Board 2021–2022

Elisabeth Brun (Denmark)

Isabel Abrams (USA)

Dan Hoynacki (USA)

Anne Marie Begg (Scotland)

Stien Matakupan (Indonesia)

Toni Salamon (Poland)

Ali (Chou-Li) Lin (Taiwan)

Nurten Mersinlioglu (Turkey)

Marina Konopleva (Russia)

Julien Beuken (Netherlands – on behalf of the CEI alumni)

Laura Kelly (Ireland – as CEI 2021 host)

Gerardo de Vega (Costa Rica – as CEI 2022 host)



Read more about the CEI board on their website here: <https://caretaker-s4all.org/>



The CEI International Board

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Read more about the CEI board on their website here: <https://caretaker-s4all.org/>

In memoriam: Hans Faarbaek

By Anne Marie Begg



In 2021, we sadly lost another member of the Caretaker family after a short illness. Hans, husband of Elisabeth Brun, our President, passed away earlier this year. Hans was always a strong supporter of Caretakers, both at the Danish conferences in 2008 and 2016 where he could always be found helping out and offering cheerful advice and at the many conferences he attended as a delegate. His ready laugh, compassion and good nature will be very sadly missed by all who had the honour of knowing him and our best wishes go to his family.

It is also with regret that, following his loss, Elisabeth has taken the difficult decision to step down as President of Caretakers. Elisabeth has been an enthusiastic, hardworking member of the Caretakers' International Board for many years. Her compassion and caring nature will long be remembered by all who know her. Whether it was quietly paying to replace the broken glasses of a delegate who couldn't afford the cost of replacement or escorting an injured teenager to hospital to make sure they got the best treatment, Elisabeth was always on hand to help out and offer advice with kindness and compassion. Her enthusiasm for working with young people and helping to shape their experience of growing to love and protect their environment and her wisdom of how to achieve this goal stands as a beacon for us all. We look forward to welcoming Elisabeth back to the Caretakers family and to conferences in the near future.



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To establish a new CEI branch or revive a dormant branch, see the guidelines here:

<https://caretakers4all.org/about/read/3/national-branches>



“ní neart go cur le cheile”
– there is strength in unity