

The ESD Imperative

Centre for Environmental Education and Research



L-Università ta' Malta
Centre for Environmental
Education & Research

Contents

- 2** Introductory words
- 4** CEER - Championing ESD in Malta and beyond
- 9** ESD in academia
- 12** Developing a sustainable society one school at a time
- 15** Peer mentoring in ESD
- 16** The mess we have created
- 20** Latest publications
- 22** Growing food for sustainability
- 24** The Fawwara ESD centre
- 26** A breath of fresh air
- 28** Introduction to permaculture
- 30** Alumni voices
- 33** Teacher education for sustainability
- 34** Sustainability trails for families
- 36** Student voices

Introductory Words

Prof. Carmen Sammut
Pro-Rector for
Student and Affairs and
Outreach
Chair, CEER



It is a privilege and a pleasure to chair the Board of the Centre for Environmental Education and Research (CEER). In the coming years I look forward to support the work of this highly committed team to advance Education for Sustainable Development (ESD).

CEER engages in research locally and internationally with the result that the Centre places fourth (out of 13 centres at the University of Malta) in terms of research output. The Centre is also involved in internationally-funded projects with partners within the EU, as well as in Africa and the United States of America.

CEER is active in the drafting of policies and its members often support state structures, including the ministries responsible for the education, the environment and sustainable development. The Centre is also leading the design and eventual implementation of the National Strategy of Education for Sustainable Development, which is crucial for the accomplishment of the European Green Deal. The Centre is also one of the founders of the European School of Sustainability Science and Research (ESSSR), a higher education entity that actively pursues applied research and participates in pan-European projects.

Outreach and community engagement feature high on CEER's agenda and this is an area that the Centre intends to further develop in the coming years using new interactive media technologies, legacy media and forging closer collaborations with critical stakeholders. The main thrust is to empower the Maltese community and to develop citizens who are committed to sustainability.

I augur that CEER will continue expanding its sphere of activity and strengthen its influence in the pursuit of sustainability, both locally and internationally.



Dr Mark Mifsud
Director, CEER

“
**Our vision
is to have
enough,
for all,
forever**
”

It is a privilege to introduce this booklet, which highlights the Centre for Environmental Education and Research's (CEER) vision and offers an overview of its wide-ranging activities. CEER fuses together two terms that feature often in national and international fora: Sustainable Development and Education.

Sustainable development is development that is about making life better for everyone. Sustainable development forms the core of the 2030 Agenda (UNESCO) and the economic, social and ecological dimensions of sustainable development have now been balanced and visualised through the 17 Sustainable Development Goals (SDGs), which place the fight against poverty and sustainable development on the same agenda for the first time.

Our vision is to have enough, for all, forever.

One way to achieve this is through education. The formation of pro-environmental values, the changing of behaviour and individual and collective action are the overarching themes of Education for Sustainable Development (ESD). CEER does research on the best ways to foster change agents and cultivate change. It is also involved in policy formulation with government entities and private industry. The Centre also spearheads a number of initiatives in education, both in formal settings, like schools, and within the community.

My youngest son sometimes asks me if it is too late to save the planet. No Jacob, it is not too late. We can still save the planet for you and the generations that will come after you. And ESD is one way to achieve this.



It all started in 1991, when the Environmental Education (EE) Unit at the Faculty of Education was commissioned by UNESCO to embark on a research project to explore ways of infusing Environmental Education (EE) in the primary school curriculum. The project was structured on educational concepts that, back then, were relatively novel to the Maltese educational system: an interdisciplinary approach, a learner-centred pedagogy and an emphasis on the process rather than the product. Unfortunately, this approach never really took off, mainly due to the prevailing monodisciplinary structure of the predominant exam-oriented pedagogy at the time.

Aware of these challenges and believing in the crucial role that teachers have as change agents, the Environmental Education Unit sought to address the lacuna in Environmental Education provision in schools through a strategy that (i) provided pre- and in-service courses promoting Environmental Education principles and methodology; (ii) developed teaching and learning EE resources that addressed the local context and provided concrete examples of how EE could be infused in various curriculum subjects; and (iii) proposed effective methodologies for the promotion of

EE. This semi-official supportive infrastructure provided teachers with the support needed to effectively infuse EE in the curriculum and heralded the way to a broader perspective of EE – a perspective promoted by the 1992 Rio Earth Summit’s emphasis on sustainable development.

The University of Malta officially established the Centre for Environmental Education & Research (CEER) in 2004, in preparation for the launch of the UN Decade of Education for Sustainable Development (ESD) (2005-2014).

Besides offering study units and research opportunities for students, CEER also extended its remit to initiate and facilitate community-based sustainable development in various ways. Amongst them, by (a) preparing individuals from various sectors of society to specialise in ESD provision through its Master in ESD; (b) by consolidating the educational

“ Besides offering study-units and research opportunities for students, CEER also extended its remit to initiate and facilitate community-based sustainable development ”

component, facilitating resource transfer and capacity building of Non-Governmental Organisations and Civil Society Organisations; (c) by offering training programmes for personnel in governmental, business and industrial organisations about sustainability practices that emphasize behavioural change rather than through technological upgrades only; (d) by networking with local, regional and international organisations to initiate joint sustainable development and ESD projects; and (e) by participating in local and foreign policy-making fora that seek to explore and enhance opportunities for ESD provision and implementation.

Most notable amongst the latter include the successful inclusion of ESD in major national policy documents, particularly the inclusion of ESD as a cross-curriculum theme in the National Curriculum Framework (NCF); the coordination of the National Strategy for Education for Sustainable Development (NSESD); and active participation in the development and revision of the UNECE Strategy for Education for Sustainable Development.

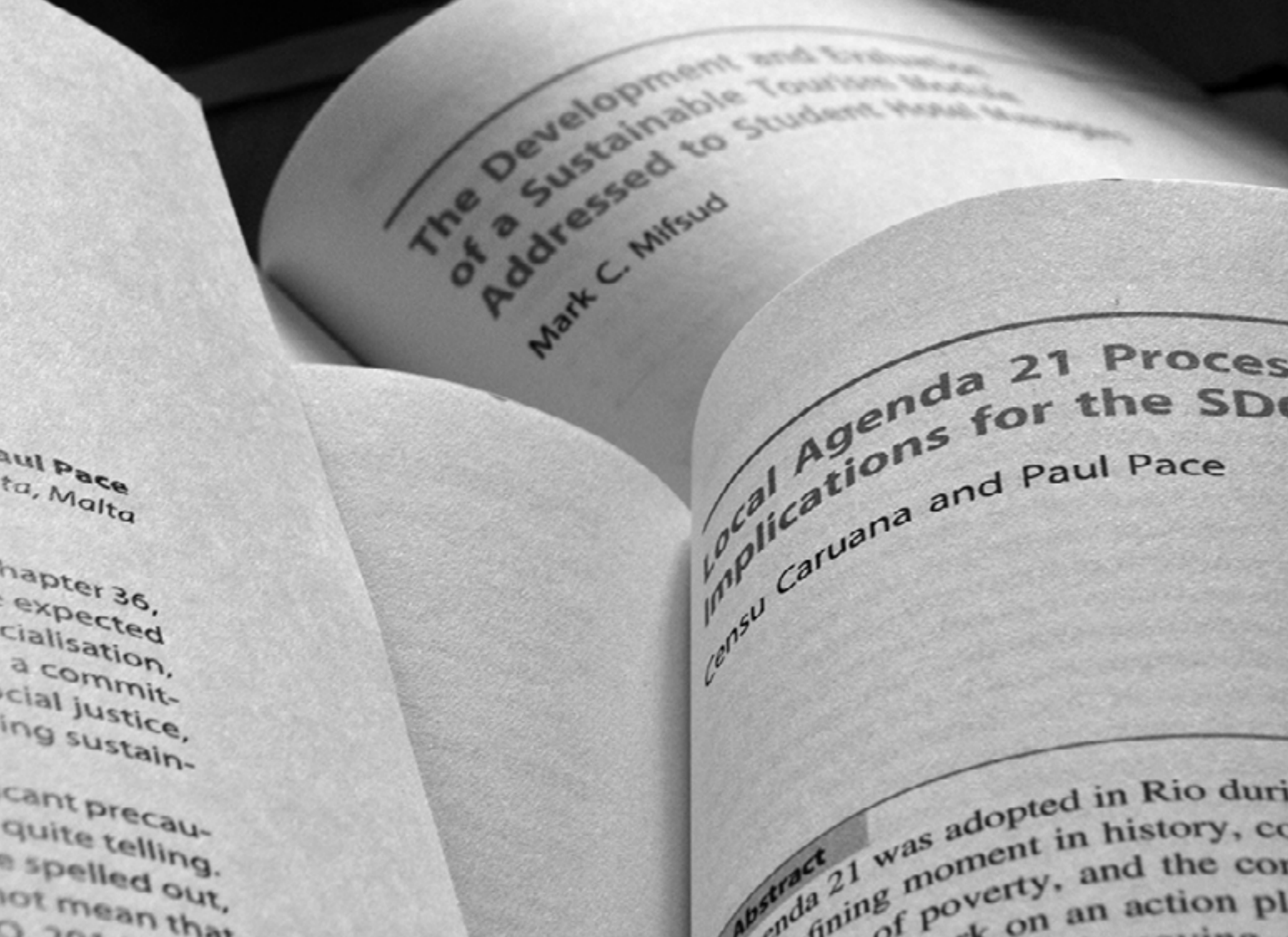
Owing to the wide coverage of its field of activity, which is in line with the general ESD

“**CEER has become the main ESD agency and reference point in Malta, offering the necessary expertise whilst serving as a central connecting node between different stakeholders and actors in the fields that are relevant to ESD**”

principles and recommendations of the UN, CEER has become the main ESD agency and reference point in Malta, offering the necessary expertise whilst serving as a central connecting node between different stakeholders and actors in fields that are relevant to ESD.



“Sustainable Development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs” - Brundtland Report, 1987



ESD in Academia

Dr Mark C. Mifsud,
Senior Lecturer, Director, CEER

As an academic entity, CEER has been at the forefront in promoting ESD and expanding related knowledge through research and teaching in academic fora and beyond

From its inception, CEER has focused its activities on three main pillars: teaching, research and outreach. The Centre aims to become a Centre of research excellence through enhanced collaboration with internal staff, with international networks, such as the European School of Sustainability, Science and Research and Inter-University Sustainable Development Research Programme, and through increased participation in projects and research of the highest standard. The Centre developed its research base in a way that feeds directly into its courses. For example: the flagship course of CEER, the Masters in Education for Sustainable Development was developed through contextualised applied research that highlighted the areas that needed to be rigorously understood and evaluated.

Although being composed of a small nucleus of staff, CEER has a successful track record of publications in refereed academic journals, peer-reviewed monographs and academic conference proceedings. At the time of publication CEER places fourth out of the present 13 Centres at the University of Malta with more than sixty peer-reviewed publications to its name. CEER staff have also been awarded Best Paper Awards at a number of meetings including the World Symposium of Environmental Education. CEER's research output is broad, uses mixed methodologies and focuses on such diverse areas as ESD in formal, informal and non-formal settings; advocacy; international comparative studies; ESD and youth; ESD and the community and the formulation of pro-environmental behaviour models.

In addition to acting as deputy editors to the highly acclaimed International Journal of Sustainability in Higher Education (IJSHE), CEER staff are also members of the editorial boards of around ten other peer-reviewed journals in the field. CEER staff members also review papers in several other thematically relevant academic journals. Editorial duties have also been undertaken in a number of different books and encyclopaedias including the prestigious Encyclopaedia of Sustainability in Higher Education

“

Although being composed of a small nucleus of staff CEER has a successful track record of publications in refereed academic journals, peer-reviewed monographs and academic conference proceedings

”

by Springer and the Sustainable Development Goals book series by Emerald. CEER has mobilised both national and international researchers and practitioners in the field through symposia and conferences including the 'Lifelong Learning and Sustainable Development' conference, which also resulted in the publication of a Handbook in the World Sustainability Series in 2018.

Securing EU funds in a number of projects has also become a priority at the Centre. Staff have participated in more than fifteen different EU projects including MarinERA, 3EMI, PEERMENT, UE4SD, EduChange 1.0, TEDS and EduChange 2.0.

In this scenario of increased research, outreach and empowerment are imperative and formative as they help to build CEER's capacity and that of the wider local and international community. Outreach activities in the form of popular articles in newspapers and social media, programmes on TV and Radio and face-to-face meetings, discussions and targeted training courses have been carried out in order to deliver insights from research outcomes out to the community.

CEER's commitment to fuse research into outreach initiatives can be seen in CEER's pivotal role in the creation of the National Education for Sustainable Development strategy which provides a way forward for the country in terms of ESD. Said strategy aims to:

- nurture a sustainable society;
- devise new ways of organising educational processes using different educational actors, resources and learning environments to educate the various sectors of the population; and
- make education for sustainable development more accessible to all citizens.

CEER's research and project activities are thus aimed at improving the quality, relevance and effectiveness of Education for Sustainable Development and draw up policies and set up structures that can best foster and support ESD.



Dr Mark C. Mifsud,
Senior Lecturer,
Director,
CEER

Dr Mifsud's main research interests include Environmental Education, Sustainable Development and Education for Sustainable Development.



Developing

a Sustainable

Society

One School at a Time

Prof. Paul Pace, Associate Professor, CEER

Implementing Education for Sustainable Development (ESD) requires the adoption of transformative and participatory pedagogies that conflict with the dominant paradigm of educational institutions. Initially CEER sought to promote change in schools by providing ESD study-units in teacher education programmes. However, albeit based on research and the latest developments in the field, these study units were still distant from school subcultures and teachers were being left alone

to resolve the day-to-day issues posed by the multifaceted realities of the classroom.

Consequently, CEER changed its approach and rather than remain in the safe confines of the University sought to create a space for pedagogical transformation directly in schools. This entailed turning schools into hubs for community transformation by actively engaging and empowering citizens to make decisions towards sustainability. The design methodology

was essentially bottom-up, structured around specific contextual needs as opposed to conventional ‘textbook’ needs. More specifically, this involved meeting teachers in schools, understanding the teaching and learning needs of their school and collaboratively finding feasible ways to incorporate ESD in their programmes and school policy.

Achieving this synergy necessitated partnering with an environmental NGO (Nature Trust – FEE Malta) and adopting a flexible non-formal methodology that helped to bypass bureaucratic hurdles to implement the Eco-Schools programme in schools. The Eco-Schools programme (locally referred to as EkoSkola) is the largest global ESD network run by the Foundation for Environmental Education (FEE). The programme focuses on student-led action aimed at promoting sustainable lifestyles and choices in the school’s day-to-day functioning and the surrounding community. EkoSkola’s methodology provided the ideal tool to allow CEER to access and work with schools on common sustainability goals.

CEER’s ‘new’ methodology involved: (i) widening the notion of the environment to include sustainable development themes, which

“ **EkoSkola focuses on student-led action aimed at promoting sustainable lifestyles and choices in the school’s day-to-day functioning and the surrounding community** ”

in turn created more opportunities for the infusion of ESD themes across the curriculum; (ii) promoting participatory pedagogies that empower learners to take action to improve the school’s quality of life; (iii) inducing schools to introduce sustainable development practices in their School Development Plans (SDPs); (iv) developing schools into catalysts for social transformation through community-based ESD initiatives; (v) providing professional development training of school teachers and the EkoSkola teachers (tasked with supporting schools in the implementation of EkoSkola); and (vi) conducting research on the impact of EkoSkola on the educational community.

In a few years, EkoSkola became the main ESD programme in Malta, catering (in 2020)

for 85% of the total student population, from kindergarten to post-secondary in both state and non-state schools. Research has shown that EkoSkola encouraged personal, institutional and communal sustainable behaviour as well as active participation in local, national and international decision-making fora about sustainable development. Throughout its presence in Maltese schools, EkoSkola has become a brand name for quality education providing the context for the implementation of curriculum development principles like inter-disciplinarity, active learner participation, critical thinking and community interaction. Moreover, the inclusion of ESD as a cross-curricular theme in the National Curriculum Framework was heavily influenced by the positive impact of the EkoSkola experience in schools.



Prof. Paul Pace,
Associate Professor,
CEER

Besides Education for Sustainable Development Prof. Paul Pace's research interests include Science Education, Teacher Education; and Curriculum Development

“ EkoSkola has become a brand name for quality education providing the context for the implementation of curriculum development principles like inter-disciplinarity, active learner participation, critical thinking and community interaction. ”

Peer Mentoring in ESD



PEEERMENT was a 3-year Erasmus + project that ended in 2020. The project was coordinated by Dr Ćensu Caruana for the University of Malta through the Centre for Environmental Education and Research.

One need of educators is to build their capacity in Education for Sustainable Development (ESD). According to UNESCO, as powerful agents of change in the educational response to sustainable development, educators must first acquire the necessary knowledge, skills, values, motivation, and commitment to introduce ESD

into teaching and institutions, make education relevant and responsive to global challenges and help society transition to sustainability. PEERMENT was designed on the conviction that mentoring is an effective methodology to build the capacity of teachers to be more effective in the teaching and learning of ESD. Peer-Mentoring is a way to use the potential existing in schools to guarantee the continuous personal and professional improvement of the teaching staff and to turn schools into “learning communities”.

Reflecting on the sustainability of the project, the partners

came up with the idea to create a Community of Practice through EPALE (Electronic Platform for Adult Learning in Europe) to continue using and disseminating PEER-Mentoring as a tool to unleash the transformative power of ESD.

For more information on PEERMENT visit: <https://peerment.eu/>



With the support of the Erasmus+ Programme of the European Union



THE MESS WE

HAVE CREATED

Dr Ćensu Caruana

Lecturer, CEER



I am writing this article on the last day of the Trump administration and I cannot stop thinking of the mess we are in. The disengagement from the Paris accords and the stripping away of environmental regulations, the ruthlessness of the separation of immigrant parents from children at the border, and the Capitol insurrection that provided the biggest stress test on American democracy since the civil war. However, I am not just perturbed by the mess left by Trump, who will surely go down in history as the worst president of the USA. I am also still pondering on the news I read that in Malta, over two years, 443 individuals have been imprisoned over passport-related illegalities. While the news article gave a breakdown of the country of origin of those imprisoned over passport offences, it gave no insight of the stories of the people behind such numbers. I could not stop thinking of why such persons took such a risk, what possible

horror story they were living to risk imprisonment for a better life, and the cruelty of organised crime that preys on vulnerable people. These are fresh in my mind and I am aware that there are so many other global and local issues I could have picked upon, but the

“ What more can I do as an educator and what more can we do as a university to help humanity out of the mess we are in? ”

question that keeps churning in my mind is: “What more can I do as an educator and what more can we do as a university to help humanity out of the mess we are in?”

I remembered when I was doing my doctoral thesis and the case studies I documented, where I met several unsung leaders, not famous, but respected, who were at the forefront of a reasonable revolution in their daily lives and communities. Perhaps deep down in my work as a lecturer, I would like to inspire my students to take on leadership roles and be change agents in whatever job they land themselves in, and in their communities.

A core strand of Education for Sustainable Development is what we call Values Clarification, which essentially is about challenging ourselves so that our behaviour is more coherent with our stated values. I am deeply aware of my responsibility as a role model, and for me to position myself as a searcher and re-searcher that meaningfully engages with the major challenges and crises the world faces.

I understand that each person is responsible for his or her own

behaviour and we cannot force personal, social, or political engagement on anyone. Yet I am very much aware of the privilege I have in being able to use the classroom to initiate new discourses that sometimes jar with the dominant paradigm of development, and to create spaces for new conversations. It is these new conversations that I hope will catalyse my students to think critically about their roles as change makers, and where to best position themselves to do better what they can do best.

One of my inspirations remains the great Paolo Freire, who in an education hegemonic system built

on valuing the cognitive over the heart, had the guts to talk about a pedagogy of love. Perhaps here lies the secret to start emerging from the mess we are in. It was Derrida who exclaimed that the future of the political becomes the future of friends, "which, furthermore, bind together; in their very essence, friendship and democracy".



Dr Ćensu Caruana,
Lecturer, CEER

Dr Caruana's research interests include Adult, Youth, and Community ESD, Civil Society, Permaculture, Mentoring and Social Enterprise

A visual representation of the main concepts and phrases that appear in the titles of CEER staff publications.

Latest

Publications

Andrade, A.I.; Araújo e Sá, H.; Batista, B.; Carlos, V.; Caruana, V.; Costa, N.; Dauksiené, E.; François, D.; Gonçalves, M.; Häkkinen, M.; Juuti, K.; Lavonen, J.; Lebouvier, B.; Lopes, B.; Loukomies, A.; Lourenço, M.; Machado, J.; Martins, F.; Mendes, A.; Mifsud, M.; Moreira, A.; Philippe, T.; Portugal, G.; Sá, C.; Sá, P.; Silva, F.; Tereseviciénė, M.; Vieira, R. & Voisin, C. (2021). Framework for education for sustainability: Enhancing competences in education. EU Editora, Universidade de Aveiro.

Cefai, D. & Mifsud, M. (2021). Linking biodiversity and human health to achieve sustainability. In W. Leal Filho; A.L. Salvia; L. Brandli; U. Azeiteiro, U. & R. Pretorius, R. (Eds.), *Universities, sustainability and society: Supporting the implementation of the sustainable development goals* (pp. 35-54) . Springer International Publishing.

Mifsud, M. (2021). Balancing sustainable livelihoods and conservation in the marine environment. In W. Leal Filho; A.L. Salvia; L. Brandli; U. Azeiteiro, U. & R. Pretorius, R. (Eds.), *Universities, sustainability and society: Supporting the implementation of the sustainable development goals* (pp. 19-34) . Springer International Publishing.

Zahra, J. & Mifsud, M. (2021). Moving towards sustainable agriculture through higher education. In W. Leal Filho; A.L. Salvia; L. Brandli; U. Azeiteiro, U. & R. Pretorius, R. (Eds.), *Universities, sustainability and society: Supporting the implementation of the sustainable development goals* (pp. 3-18) . Springer International Publishing.

Leal Filho, W.; Frankenberger, F.; Salvia A. L.; Azeiteiro, U.; Alves, F.; Castro, P.; Will, M.; Platje, J.; Lovren, V. O.; Brandli, L.; Price, E.; Doni, F.; Mifsud, M.; & Ávila, L. V. (2021). A framework for the implementation of the sustainable development goals in university programmes. *Journal of Cleaner Production*, 299. <https://doi.org/10.1016/j.jclepro.2021.126915>

Leal Filho, W.; Price, E.; Wall, T.; Shiel, C.; Azeiteiro, U.M.; Mifsud, M.; Brandli, L.; Farinha, C.S.; Caeiro, S.; Salvia, A.L.; Vasconcelos, C.R.; de Sousa, L.O.; Pace, P.; Doni, F.; Avila, L.V.; Fritzen, B. & LeVasseur, T.J. (2021). COVID-19: The impact of a global crisis on sustainable development teaching. *Environment, Development and Sustainability* (2021). <https://doi.org/10.1007/s10668-020-01107-z>

Leal Filho, W.; Wall, T.; Salvia, A.L.; Frankenberger, F.; Hindley, A.; Mifsud, M.; Brandli, L. & Will, M. (2021). Trends in scientific publishing on sustainability in higher education. *Journal of Cleaner Production*, 296. <https://doi.org/10.1016/j.jclepro.2021.126569>

Leal Filho, W.; Levesque, V.R.; Salvia, A.L.; Paço, A.; Fritzen, B.; Frankenberger, F.; Damke, L.I.; Brandli, L.L.; Ávila, L.V.; Mifsud, M.; Will, M.; Pace, P.; Azeiteiro, U.M. & Lovren, V.O. (2020). University teaching staff and sustainable development: An assessment of competences. *Sustainability Science*, 16, 101-116. <https://doi.org/10.1007/s11625-020-00868-w>

Leal Filho, W. & Mifsud, M. (Eds.) (2020). *Climate action: Combatting climate change and its impacts - SDG 13. Concise guides to the United Nations sustainable development goals*. Emerald Publishing Limited.

Leal Filho, W. & Mifsud, M. (Eds.) (2020). *Ensure access to affordable, reliable, sustainable and modern energy - SDG 7. Concise guides to the United Nations sustainable development goals*. Emerald Publishing Limited.

Leal Filho, W. & Mifsud, M. (Eds.) (2020). *Reduce inequality within and among countries - SDG 10. Concise guides to the United Nations sustainable development goals*. Emerald Publishing Limited.



Growing Food for Sustainability



Cynthia Caruana
PhD Student,
CEER

I first graduated as a Biology teacher and taught Biology for 10 years at a state secondary school. This was followed by a Master's in Islands and Small States Studies at the University of Malta, and later a Master's in Intercultural and Environmental Management in Schools (Ca' Foscari University, Venice Italy). The latter was a collaboration between several universities, including the University of Malta, through the Centre for Environmental Education and Research (CEER). In 2010, I entered the field of Education for Sustainable Development and have now been an Eco-Schools teacher for 11 years, offering support to schools and empowering students and the school community to create sustainable schools.

I have now embarked on a Ph.D on a part-time basis with CEER, which felt like a natural home for furthering my studies. CEER boasts a number of experts in Education for Sustainable

Development (ESD), and I feel truly supported by my tutor Dr Ćensu Caruana.

My research involves promoting individual and community-based Grow-Your-Own-Food programmes through ESD. The inspiration for this theme came from recent experiences in an EU project called 'We Eat Responsibly', where I witnessed abandoned areas in schools being turned into vibrant spaces where students grow fruit and vegetables.

I aim to study the motivations and challenges that might be encountered, as well as the opportunities and strategies that are available to address these challenges. Underlying all this, I will be studying the role of ESD in supporting people and communities to grow their own food. I hope to see the creation of more community gardens that encompass principles of social and environmental justice while providing health and well-being to members of the community.



I witnessed abandoned areas in schools being turned into vibrant spaces where students grow fruit and vegetables





The Fawwara ESD Centre

Located in the picturesque surroundings of Fawwara, CEER's Fawwara ESD Centre is a multipurpose centre for research and practice in Education for Sustainable Development (ESD). Since ESD can take innumerable guises, CEER has ensured that the Fawwara ESD Centre is a flexible and inclusive enough space to be able to respond effectively to different ESD-related scenarios. CEER believes that it can act as an important bridge between academia and the wider community, and in this respect the Fawwara ESD Centre is an ideal node for linking these worlds. To this end, the Centre has been developed as a space for ESD-related research, practice and encounters.

The Fawwara Centre is a base of operations for CEER's academic staff, offering space to get away from distractions and focus on research endeavours. The Centre has a highly specialised ESD library, which also includes dissertations, as well as material on other specialised areas like permaculture and organic gardening and agriculture. The library is open for reference to the public. It is also at the disposal of post-graduate researchers, who can use it and the rest of the Centre as a working space during their research.

The Fawwara Centre is also able to host various educational activities be they formal, non-formal or informal. The Centre is used for formal learning activities like lectures and research seminars as well as for less formal exploration of ESD themes and issues in collaboration with youth agencies, schools and community organisations.

The idyllic setting of the Centre makes it an optimal space for meetings and encounters. Indeed, the Centre also functions as a physical place of contact between different entities, helping to connect people with similar research and educational interests, facilitating the cultivation of new networks and serving as a breeding ground for new ideas, initiatives and collaborations in ESD.

On the outside, the Fawwara Centre is surrounded by two stretches of land that are also under CEER's care. At the front of the building is a small stretch of land that has been turned into an educational edible garden inspired by permaculture principles. This is used to explore different techniques that aim to create food harvests that protect surrounding ecosystems and enrich long-term soil fertility.

A Breath of Fresh Air

Mr Patrick Galea

Senior Administrator, CEER



I have now worked at the Fawwara Centre long enough to half-expect the opening remarks of new visitors. It is like an improvised script exalting the tranquility of the place and the beauty of the surrounding landscape.

It is understandable. The rhythms of contemporary life and the lifestyles that come interwoven with it contrast greatly with the surroundings of the Centre, which are as idyllic and remote as one could expect on the island. Perhaps it makes instantly palpable that which has been traded off in the last decades of collective trundling towards urban consumerist lifestyles. That, or it is just small talk that gives the weather a break from having to be the perennial conversation starter. Maybe “*kemm għandek kwiet*” and “*kemm hawn sabiħ*” are just convenient ice-breakers, and seeing in them a hidden commentary on the

relationship between people and their environment in the 21st century may be reading too much into things. It’s hard to know for certain.

What I do know is that some months after I started working at the Fawwara Centre I began experiencing a sense of discomfort whenever I was in urban areas, particularly on busy roads. I could not put my finger on it initially. I have waited for buses on busy roads all my life without a problem. Soon enough it dawned on me that spending days in the Fawwara countryside had reset my senses to a new baseline; one that made obvious the foul urban air that I had breathed before for many years without notice.

Admittedly this is just an anecdotal observation. But it is one that speaks to a certain disconnection from nature that has come to define our increasingly urbanised lives. A disconnection

that may not be readily discernible until there’s a semblance of reconnection. Like new lenses in a pair of glasses that suddenly bring into focus how much was previously concealed in the blurry periphery.

I may not care much for inane small talk, but the reactions of first-time visitors as they leave their cars behind, pulled by the magnetic views of Filfla is not something I think I will ever tire of. It gives me hope that although our lives are generally greatly disconnected from nature and its processes, visitors are seldom indifferent to its charms. This is arguably the best thing about the Fawwara Centre. It is embedded in an environment that lends itself greatly to slowing down and getting away from the noise, making it an ideal space for engaging with issues of sustainable development.

A visit to the Fawwara Centre comes with an implicit invitation,

open to whoever is willing to hear it, to pause, reflect, engage and reconnect with nature, of which we are part of, though we often forget, and on which we ultimately all depend. And that, if you ask me, is an impeccable position from which to approach CEER and its Education for Sustainable Development mission, as well as the urgent and mammoth imperative that hangs on us all: of building a socially just and sustainable future for everyone.



Patrick Galea,
Senior Administrator,
CEER

Introduction

to

Permaculture

a new study unit at the University of Malta



There is a pressing need to provide alternatives to practices that contribute to ever-growing and urgent environmental crises. Equally urgent is the need to initiate changes at multiple levels that create more sustainable alternatives. In this light the Centre for Environmental Education and Research is offering a new optional study-unit to students of the University of Malta. The study-unit is being developed as part of the Erasmus+ “PERMA+” transnational project.

Permaculture is a set of principles that integrates land, resources, people and the environment through mutually beneficial synergies. It aims to imitate and recreate natural ecosystems through the use of closed-loop and no waste techniques. This study-unit provides students with biodiversity knowledge and high level skills in entrepreneurship, leadership, decision-making, environmental assessment, autonomy and creativity. The students following this study-unit will be provided with a set of theoretical and practical tools

that will enable them to apply permaculture principles to any field of work.

The unit also has a strong practical element to it, and is tied to the sustainable management of a small piece of land at the University. This offers students the opportunity to put in practice the methods and techniques they discover when following this unit.

perma⁺
module¹



Alumni

Voices

Amanda Zahra

The seed for my Master in Education for Sustainable Development (MESD) was sowed when I lived in Canada. I always loved nature and the environment but being in Canada helped me understand more how we, as citizens, can become more involved in safeguarding the planet. When I returned to Malta I was on the lookout for things I could do to raise awareness on sustainability issues. Then one day I received an email with a poster for a new MESD at the University of Malta. It did not

take long for me to decide. The next morning I applied to join the course. The course was everything I expected and more.

After finishing the course I wanted to sustain the momentum I had gathered from the course and was on the lookout for job opportunities related to my studies, until one day I found that the Energy and Water Agency had a vacancy. The Energy and Water Agency is a Government Agency within the Ministry for Energy, Enterprise and Sustainable Development. It is tasked with formulating and implementing Government's national policies in the energy and water sectors, aimed at ensuring security, sustainability and affordability of energy and

water in Malta. This position offered the perfect combination for me because I could continue with my original profession, that of teaching, and apply what I had learnt in the course to promote sustainability issues.

Apart from leading the educational part of EU projects within the Agency I am also an



educator at the Ghajn Centre with specific specialisation on Education for Sustainable Development. I teach both Primary and Secondary school students on water management and water conservation. I also coordinate a sustainability training courses developed and offered by the Energy and Water Agency, namely Energy, Water & Waste Solutions: Supporting Malta's Corporate Sector.

Jessica Zahra

In 2016 I came across an advert for the Masters course in Education for Sustainable Development (MESD), offered by CEER at the University of Malta. My passion for education, nature and sustainable development led me to apply for this part-time course.

This three-year journey helped me enrich my knowledge of Environmental Education and Sustainable Development, both locally and globally. Being taught by the local experts in this field helped me gain deeper insights into the different areas of Education for Sustainable Development (ESD). In the first lecture we were asked to write



down what ESD brings to mind. I remember I wrote about the importance of environmental protection. Completing this course helped me understand that ESD is not just about the environment, but rather about a well-balanced arrangement between environmental, economic and social aspects.

For my dissertation I carried out research with local farmers. The research was conducted using both quantitative and qualitative methods. The main aim of the study was to learn

about local full-time arable farmers' perceptions on issues relating to sustainable agricultural practices. My research helped bring to light farmers' concerns and highlighted issues they face daily in their work, identifying perceptions and attitudes towards sustainable agriculture, and exploring the most viable means of adopting such strategies.

ESD plays a crucial role in helping farmers integrate and adopt more sustainable farming practices, which can simultaneously help improve their social and economic status and offer better environmental care. Farmers need to be empowered to help them feel acknowledged within society. Adult education for sustainable development, can, if done well, using the right communication tools, language and atmosphere, yield more sustainable farming practices.

Working as I do in the local education sector, the MESD has

helped me develop new skills and opened new opportunities to further develop my career. The MESD offered me new insights and helped to foster different mindsets within the domain of ESD.



Teacher

Education for

Sustainability

a new study-unit



Teacher Education for Sustainability – Environment and Natural Resources is a new study-unit being created as part of the Erasmus+ co-founded project TEDS (Teacher Education for Sustainability). The unit is being developed in the context of five European countries and different teacher education institutions.

The study-unit is structured around the major local, regional and global land, water and air resources. Fundamental biological, chemical and physical principles will be explored for each resource. The systemic approach adopted will relate socio-economic and political considerations to the biophysical processes so

that teachers can appreciate the intricate nature of sustainable development issues.

The study unit aims to help teachers to identify inter-relationships in environmental systems, describe the complexity of environmental issues, think critically and analytically about different environmental scenarios, and appreciate that practical solutions often entail attitude and behavioural change that is coupled with the scientific recognition of such problems.

This study-unit is currently being piloted and will be formally offered for the first time in the academic year 2021-2022.

Sustainability

Trails for Families

Clinton Cassar
Amanda Zahra

What started as a collaborative idea between students for one study-unit's assessment during the Master in Education for Sustainable Development, evolved into a fully fledged resource, called STEPS, which stands for Sustainability Trails amongst the Environment, People and Surroundings.

There are two main reasons which contributed to the creation of this initiative, mainly: youngsters' detachment from the natural environment, also known as the Nature Deficit Disorder, as well as the limited educational material targeting family involvement for sustainable development.

This resource promotes Education for Sustainable Development through 20 different trails. Unlike many nature trails published locally in the past, these walks do not only provide information about the selected sites, but most importantly, aim at engaging families in sustainable practices. It also encourages youngsters' sense of ownership towards the urban and rural environment. The novelty of this resource is that it can be used both as an activity book and a journal. Each trail presents:

- general information of the area selected;
- a sustainability viewpoint, which gives insight about the sustainability of the location, together with the Sustainable Development Goals tackled;
- a learning viewpoint, which covers the learning objectives of the trail chosen, focusing on the knowledge, attitudes and skills;
- the map of the area, which shows the start and end of the trail, and
- four diverse educational activities related to the area, which help families

to think and ponder about various sustainable issues.

Back home, this resource also provides some space where families can practise journaling and metacognition, by analysing and evaluating what they experienced during the trail.

This resource has now become even more relevant in light of the current COVID-19 pandemic, as it can be the perfect way for Maltese families to appreciate their surroundings in a holistic and sustainable manner, away from the crowds.

The Master's in Education for Sustainable Development has not only helped in the attainment of the knowledge, skills and attitudes pertaining to sustainable development, but it also provided us with the opportunity, to research and create the required content to disseminate sustainability amongst different members of society.

The STEPS resource is currently in production and will be published in due course



Mariosa Caruana, MESD Student

Student Voices

Mariosa Caruana

I consider myself an educator by profession, a volunteer and an active citizen by duty and passion. The reason I decided to follow the Master in Education for Sustainable Development (MESD) is that I deem education to be the key to unlock the changes we need to see. ESD empowers people by not only making them knowledgeable on current challenges but also equipping them with the skills needed to participate in overcoming them.

This course has helped me broaden my theoretical grounding and knowledge of all four pillars of sustainability. Throughout the course I focused mainly on social justice, addressing such topics as community development, discrimination, racism and poverty. All these are crucial for the

attainment of the Sustainable Development Goals. The course also provided the opportunity to not only learn about, but also design advocacy plans, policies and seminars targeting stakeholders like local councils, NGOs and education institutions.

My interest in sustainable development owes itself also to my involvement in the volunteering scene, which goes back to my teenage years. Then in 2014 I volunteered in Kenya with the local NGO Right to Smile and have been part of this organization ever since. I am now part of its volunteer development team and my studies have proven very helpful in communicating with youth and adults on sustainable development. As for my last year in this course, I plan to work on a research study that interlinks my passion for active citizenship with transformative learning through ESD, focusing on youth and adult learning.

On the whole, I feel that this Master course has given me the right theoretical background and helped me formulate new perspectives and innovative ideas how to empower and guide the community towards a better and more sustainable way of life.

Fiona Vella Ciangura

I am a geography teacher in a secondary state school and have been an Eco-School link teacher for more than 14 years. I have also been a part-time Geography lecturer at the University of Malta, a Geography Teaching Practice Examiner and have also coordinated some Erasmus+ school exchange projects.

I have always gravitated towards things that are related to nature appreciation, environmental protection and geographical understanding. When I learnt about the Masters in Education for Sustainable Development (MESD) being offered by CEER, I felt that it was the right step to take to fulfil a personal dream and also deepen my understanding of things that I enjoy working on.

Being a full-time teacher, a mother of two young children and reading for a Master's degree is not easy. However, the support of my husband and some personal sacrifices have made it possible. I have now successfully completed the first two years of the course

and also participated in EduChange, an international project that culminated in a Science Jam session in Norway.

For my dissertation I chose to focus on something I am passionate about: helping students to love nature through work in the school garden and other out-of-class activities. The idea evolved out of personal experience, having noticed that many teenage students I have met know very little about their surrounding natural environment. On the other hand, I also witnessed how often times, when given the right opportunities they become empowered to take care of their surrounding environment and spontaneously act to improve it. Literature, in fact, shows that school gardens are an example of Powerful Learning Environments that lend themselves beautifully to Education for Sustainable Development.

Through this study I hoped to get a deeper understanding of student learning processes experienced during out-of-class activities and how these relate to ESD. This was done through interviews and observations of six students who regularly and voluntarily participate in these out- of class activities.

Through the use of concept maps I explored the role that out-of-class activities play in the development of students' cognitive, affective, interpersonal/social, physical/behaviour domains.

ESD can be practiced at different levels. I believe that traditional teaching is not enough to have transformative education. My hope is that by sharing the challenges and successes of these personal and educational journeys I can demonstrate how being emotionally engaged students gain awareness, are empowered, and become committed to act and make positive changes in their surroundings, which are all crucial traits of ESD.



“We are called to be architects of the future, not its victims”

-R. Buckminster Fuller



L-Università ta' Malta
Centre for Environmental
Education & Research

This booklet is published by the Centre for
Environmental Education and Research (CEER)

Copyright, 2021 CEER, University of Malta

Design: Patrick Galea

Illustrations: Patrick Galea

Photography credits:

pgs 8, 9, 15, 18, 22, 24, 25, 32: Patrick Galea;

pgs 7, 39: Mark Mifsud

Contact:

www.um.edu.mt/ceer

ceer@um.edu.mt

www.facebook.com/um.ceer

