The following are examples of previous EMOY applications which addressed sustainability in diverse ways.

1. **Applicants**: Charlotte Evans and Millie Sutton (Runners-up of the 2019 Award)

**Module/School**: GG1002 ‘World in Crisis?’, School of Geography

**Themes**: Sustainability, Environment, Climate Change, Environmental Education, Social Responsibility

**Proposal:**In our first year, second semester, we took the Geography GG1002, “World in Crisis?” module. This module was fascinating because it explained the science, and the social, economic and political implications of climate change. Then, we received lectures on the philosophy of crisis, and the existential imperative to act on climate change. We built on the idea of the Anthropocene, learning that Homo Sapiens are the drivers of our climate, disrupting and fundamentally re-altering the biology, physics and chemistry of the earth – causing us to delve into deep ethical debates about climate justice. This module was fascinating, but we both felt crushed and disempowered. We felt like the problem was existentially intractable, and too big for normal people, students and activists to solve. This module was eye-opening because it made us understand the widespread implications of our daily lives.

After further extra-curricular research we felt encouraged by grassroots movements making positive, incremental behavioural changes to people’s daily lives. We felt like this gave us purchase on the issue and academic thinking-space to create our own solution. Our ethos became – “everyone, everyday, can make a big difference”; we flipped around the dominant narrative, and felt empowered to make a small contribution towards a solution. We used our Global Challenges Programme 2018/2019 3rd place prize money to run our project (18 months and counting) to develop a St Andrews, University and personal approach.

Creative Solutions

Our project has two strands: Training in Good Environmental Practice (TGEP); and an eco- lifestyle app called ROOTS.

TGEP is a mandatory environmental educational scheme, run via Moodle, which all first-year students must complete on matriculation. It will take an hour to complete, and it aims to educate students with basic environmentally-friendly behaviour, orientate students to Transition Initiatives – as well as boosting wellbeing with good walks, gardening opportunities and food. We have written and divided the module content into five topic areas; Food, Energy, Resources, Biodiversity and Water. Our module is in alignment with the University’s bold sustainability strategy (2018-2023). We recognised an amazing opportunity to develop an innovative initiative, which will help the University meet its environmental and carbon targets. Our eco-lifestyle app, ROOTS, encourages sustainable daily actions to develop longer- term behavioural change amongst its users. Daily reminders, carbon counters, and leadership boards work together to make sustainability manageable, competitive and enjoyable.

We assembled a team, consisting of: mentors and academics affiliated with the Global Challenges Programme, University Environment Team, University Transition Team, and CAPOD. Our TGEP initiative is supported by Principal Mapstone, Professor Sir Ian Boyd, Associate Dean Dr Ian Smith, the Sustainability In The Curriculum Board (SITC). We have the support of Professor Gentry to trial run in the school of IR. On the recommendation of SITC, we aim to present TGEP to the Environmental Sustainability Board, once it has convened in March.

Skills Gained and Demonstrated

During the Global Challenges Programme, and subsequent work towards TGEP and ROOTS, we have shown and developed our capacities to think beyond the curriculum. Innovation is at the heart of the GCP, which encourages students to work “collaboratively, effectively and creatively”. We have demonstrated these 3 qualities by collaborating successfully together, and across our inter-disciplinary team. Our solutions to climate change provide creative ways to deal with the present crisis, empowering students to act. We observed the despair amongst our defeatist peers as we left our “World in Crisis?” lectures; recognising this limitation, we based our ethos around positive and manageable actions – everyday, for everyone. At each stage of the process, we have reflected on our strengths and limitations, which has led to our team increasing in size, but we continue to drive and direct TGEP’s course. Managing a growing team has required effective communication between disparate parts, as well as a clear strategy for implementation. In our recent presentation of TGEP to the SITC board (January 30th), we laid out the timeline for TGEP’s content completion, trial run and mandatory roll-out. Thus, from the moment of GG1002 inspiration, to TGEP’s snowballing support, we have gained and demonstrated creative skills to address the current climate emergency.

Unique

When TGEP is endorsed by St. Andrews as a mandatory online training module, the University will be aligning with its commitment to Social Responsibility, embedded in its 2018-2023 Strategy: to “ensure our students graduate with a clear sense of their environmental responsibilities”. Our concept of TGEP provides the means for the University to fulfil this aim. Moreover, St Andrews will be the first University in Scotland to implement such a scheme, providing the “beacon for the change, creativity” that the Principal wills our university to be for others. Furthermore, ROOTS will reach far beyond university institutions, and into the public realm. Climate change affects all, and requires all to act, and we are providing solutions to make this possible.

The world is in crisis, and our innovative solutions are urgently needed to address the global climate emergency. Whilst St Andrews is affectionately known as “the bubble”, it is in fact a highly-interconnected global institution, in which our actions have consequences far beyond our seaside town. It is known that ‘crisis breeds innovation’ – and hence this time of environmental uncertainty calls for scholars and activists to think outside the box, and design innovative ways to engage the whole population in this pressing issue – the “single greatest issue we face as a community, and as individuals” (Sally Mapstone, 2020). The world needs creative solutions at every scale, and thus schemes such as TGEP provide the guidance for every student here at St Andrews to be educated on sustainability, and then contribute positively through local actions. Should we be the lucky recipients of this prestigious award, we would put the prize funds towards the implementation costs of TGEP, and the technical costs of developing ROOTS. We believe that the climate crisis presents a time for opportunity, not despair, and we hope that soon the whole university will share our ethos.

2. **Applicant**: Eden Ezinne Igwe

**Module/School:** SD1001 and FM1001, Schools of Geography and Film Studies

**Themes:** Sustainable Development, Filmmaking

**Proposal:**

In my first year and first semester of undergraduate study at St Andrews, I chose the modules SD1001, What is Sustainable Development?, and FM1001, An Introduction to Film Studies. Despite being admitted for English degree, film and environmentalism had become two passions of mine during the summer of my A-Levels, and I was determined to develop these interests in and out of the classroom.

Using the knowledge from these modules, during the Christmas break I developed a film/serial television concept with a sustainable world at the centre of the narrative. My idea was based around the idea of intersectoral partnership, Goal number 17 of the United Nations Sustainable Development Goals and the topic of a series of SD1001 lectures. The message of my film is that by being aware of your actions on others, there is less incentive to maintain livelihoods that are destructive to other people and planet.

The film follows 18-year-old Cassandra Gardner, who lives in an alternate Britain. It’s a society which aims to provide happy lives for its members in a way that does not infringe upon the rights of others to do the same. Community is built on partnership, and money has been long discarded in place of a subsistence-based circular economy. Cassandra, on the verge of leaving home to embark on higher education, is markedly disenfranchised from this society. She keeps to herself, neurotically tending to a private garden, clinging to an old £5 note she finds in her attic.

Conflict arrives as Cassandra discovers the primary condition of her higher education offer: she must partner with a local orphanage, assigned to an 8-year old boy as his part-time guardian. Through the comedic interactions between Cassandra, the boy Arthur, and other characters in the seaside town she moves to, the film encourages the viewer to leave behind the wealth-accumulating, insular view of living today and embrace the collaborative planetary consciousness needed for a sustainable and fulfilled humanity.

I ensured to utilise many of the concepts I learnt in my Film Studies module. I drew upon lectures on film narrative, to create both fabula (wider implied story) and syuzhet (primary filmic plot) narratives in my concept.

I also produced a short trailer to communicate/visualise my idea. I made sure to piece together the short trailer carefully, having experienced the attention to filmic detail expected of essays in the Film Studies module. I used a template from a Film Studies coursework exercise in my planning. The exercise consisted of a table where every shot in a minute-long clip is separated and analysed in terms of sound, effect on the viewer, and mise-en–scéne. The ethos of this exercise is to view film as a culmination of production choices where every shot has a purpose in reinforcing overall themes. I made myself a modified version of this table and used it to plan every shot in my short video, ensuring that every image shown would clearly communicate my concept to the viewer.

Although I am not currently able to afford any film equipment of my own, I showed enterprise in borrowing a camera from a friend, a tripod from a close family friend and recording dialogue and other sound on my mobile phone’s microphone, later synching audio and visuals in editing. I convinced another friend to star as Cassandra; and shot the film in a series of locations around my hometown in south west London.

Furthermore, through FM1001 I learned of the St Andrews Filmmaking Society, and as a result attended a Society workshop on film editing using a free program called DaVinci Resolve. Using the knowledge from this workshop, I was able to edit and colour grade my video on my own, to a standard I was proud of – even though I will admit I still have much to learn in video editing.

I submitted a page-long synopsis of my idea, alongside a cut of my trailer, to Flickers of the Future, an environmental filmmaking competition ran by the organisation Global Action Plan. A competition for entrants aged 18-29, they aim to nurture new media which promotes a sustainable world to audiences.

Ultimately, I knew after hearing Sustainable Development lectures about the ecological benefits of partnership and collective action that I wanted to express this ethos in a medium that could reach others. This urge was heightened by comments in Film Studies tutorials about the need for diverse on-screen perspectives, and the ability of film to connect people from different parts of society. I was determined to use my new knowledge to develop a concept of a high standard, refusing to let my limitations in experience or equipment prevent me from expressing my idea.

I have recently received the news that my entry has been shortlisted, with I and 29 other entrants invited to an industry workshop with writer and director Richard Curtis (the competition patron) on the 28th of February. I will be gaining vital insight into an industry I hope to break into, while learning more about the power of narratives in the race to mitigate our current climate crisis.

I hope that as a recipient of Enterprising Mind of the Year I can encourage others to pursue their passions both academically and creatively.

3. **Applicant**: Sophie Nettesheim

**Module/School:** SD1001 and FM1001, Schools of Geography and Film Studies

**Themes:** Sustainable Development, Filmmaking

**Proposal:**

According to the laws of quantum chaos, climate induced panic often results in the most productive form of action. The looming impacts of the climate crisis have been significantly put into perspective in my modules this year. My Aquatic Ecology module, in particular, shed light on the creative efforts scientists are taking to combat the climate crisis. The syllabus covered a broad range of engaging topics including marine mammal acoustics, microplastics and anthropogenic impacts on marine and freshwater systems. Our main piece of coursework consisted of a seminar on a topic of our choice, accompanied by a handout which was distributed to the audience during the seminar.

I chose to give a seminar on the topic of coral reef restoration, specifically human assisted coral evolution, as this field has always been particularly alluring to me. Assisted coral evolution is a novel approach to reef restoration which is becoming increasingly popular in tropical areas threatened by coral bleaching. Scientists are essentially planting new corals in areas devoid of healthy reefs and breeding hybrid corals in places predicted to be affected by future sea temperature changes. While coral bleaching is not necessarily a new phenomenon, the alteration of coral genomes arose with excessive bleaching events in recent years as a result of anthropogenic activity.

My seminar was designed to inform an audience that had close to no knowledge on the topic, emphasising the incredibly innovative techniques scientists are employing to breed hybrid super-corals that are resistant to increased thermal conditions. During my research, the concept of ‘tackling a drastic change in climate with even more drastic scientific techniques’ stood out to me, and I grew very aware of the irreplaceable role of coral reefs in marine ecosystems. I concluded my seminar by introducing various coral reef restoration projects globally and summarising their diverse funding opportunities including the “Adopt a Coral” foundation organised by coralgardeners.org.

The importance of assisted coral evolution became a shocking reality to me when I traveled to Raja Ampat, located in northern West Papua, Indonesia in January. The area is termed a ‘hot spot’ for coral reef biodiversity and is located in the heart of the coral triangle. After diving many reefs in the area, I was quickly exposed to the dramatic climate related threats to the area, putting coral reefs at risk in the event of just 1ºC sea temperature increase. The extent of climate induced stress was evident in some areas where the reef had turned a pale colour; an indication of bleaching.

The research center at which I stayed embodied the concept of eco-tourism and prioritised the education of the island locals and guests. I was particularly fascinated by their ongoing reef restoration research, the Yaf Keru Project, launched by a University of St Andrews alumni several years ago. The main aims of the project involved restoring reefs that had endured significant bleaching and other human induced damage by planting coral fragments onto vast cable structures. Over the course of my stay on the island, I went on ‘conservation dives’ and planted coral fragments, significantly restoring the condition of the house reef. It was inspiring to see areas of where planted coral structures were thriving, having established a healthy reef with abundant fish activity. I discussed the goals of the project with the local marine biologists and it was sobering to hear their perspective on the increasing tourism in the area and how that would affect the future of coral reefs.

Essentially, the breeding of hybrid corals for warmer seas is an incredibly novel approach that is still in development. I suspect that new breeding methods will continually be developed to keep up with the unpredictable progression of climate change and will only be a temporary method of avoiding species extinction. Engaging in this type of research not only demands enterprising challenge, but has also triggered my commitment to the reef restoration project. After some reflection, I look to gain further hands-on experience in labs that breed hybrid corals and promote such projects with a sense of urgency on social media platforms. With the help of my friends on the island, I am motivated to monitor the progress of the Yaf Keru reef restoration journey and communicate the importance of such efforts through my writing on various environmental commentary platforms including the environmental subcommittee newsletter at St Andrews. Finally, in light of the irreversible effects of climate change, it is my hope that generations after me will be able to experience the reefs in a similar condition.