

1<sup>st</sup> Prize / Grand Prize Winner

## **Learning Agroecology through School Vegetable Gardens**

by Sapna Pramjee, aged 16 (South Africa)

“All the SDGs come down to education...”- Malala Yousafzai.

Here is the reality: many poverty-stricken South African schoolchildren do not have nutritious food that can sustain them for one day. Relating to the above quote, teaching schoolchildren how to create food systems sustainably creates a lasting impact through to their adult life. This essay discusses why and how the youth can use agroecology to achieve Sustainable Development Goal (SDG) #15, the United Nation’s goal to sustainably manage and restore land and biodiversity.

In South Africa, agriculture is important to the economy; however, 73% of Africa’s agricultural drylands are degraded. Poor farming methods result in land degradation and biodiversity loss, putting terrestrial ecosystems out of balance, producing failing food chains and slower natural resource cycles. Soil is critical for food, clothing, paper, medicines and decomposition; therefore, land degradation must be avoided. This is why SDG #15 is important.

There are two problems. Firstly, students without lunches have lower concentration and higher absenteeism. The South African government is addressing this issue through a nutrition programme which includes schools maintaining a vegetable garden to feed students. Secondly, non-sustainable gardening may kill the soil organisms, reduce land productivity, increase resource wastage etc., interfering with SDG #15 progress.

Growing school vegetable gardens with agroecology is the win-win solution. It improves interactions between all organisms and the environment using the least amount of resources to bring about food security and sovereignty. Agroecology is scientific, but uses local knowledge to offer organic and highly nutritious produce, conserve water, improve the soil’s fertility and become more resilient to climate change.

The youth are also familiar with social media– it can spark innovation and share useful content and offer support. Ultimately, the youth will be inheriting the land; therefore, it is important for them to take responsibility for caring for the planet.

Here is my plan for helping schools to achieve SDG #15 by growing vegetable gardens to meet nutrition needs and replacing alien vegetation with indigenous vegetation in schoolyards:

My school has a Rotary Interact Club that uplifts poorer communities through service projects. It can start a SDG #15 project called “Love Living Lands Project (L<sup>3</sup>P).” Interact can learn agroecology basics from YouTube videos, communities and the local municipality’s garden department. My school could create a drama production (that introduces the reason for agroecology and demonstrations) and a free app (that provides a market link between schools and restaurants that are looking for surplus organic produce from school gardens).

The L<sup>3</sup>P could be launched by the Premier of our province followed by a workshop for selected students from rural and urban areas who wish to become the leaders in organizing other schools in their regions within the province to run school vegetable gardens using agroecology and to replace alien vegetation in their schoolyards. As part of the workshop, my school could perform the drama production and demonstrations and share the free market link app.

To go national with L<sup>3</sup>P in our nation of over fifty million people, our school could travel to one school in each of the other eight provinces to enlist them to roll out the L<sup>3</sup>P in their respective province.

Through the L<sup>3</sup>P, the youth learn essential life skills: producing nutritious food, running a business and leadership skills. The agroecology transition is crucial for protecting Nature's assets- life on land.

Let us take inspiration from the lyrics of a Stevie Wonder song:

"...we have taken from her (Mother Nature) for so many ages

Will there be a time when taking stops and giving starts?"

Let us start with the L<sup>3</sup>P.

2<sup>nd</sup> Prize (joint)

**Join us**

by Anastasiya Yevgenyevna Bashlykova, aged 14 (Kazakhstan)

That day began as usual. After leaving the house early, I went to school, enjoying the warm spring weather. Everything here was familiar to me from childhood: our yard with a small sandbox and a low slide, bright benches, lawns with green grass. I walked past the kindergarten, smiling to the children's ringing voices and laughter; passed by the little bakery, smelling the freshly baked bread and cinnamon. Everything around was so clean, sunny and peaceful. One more turn and I will see my favorite alley with a large blooming lilac bush. It may seem funny to you, but this bush was my old friend. He met me there since I went to school, rejoiced at my successes and shared my school problems. Everyone in our neighborhood loved that bush. Often, people had a rest in its shadow, listening to the tweets of cheerful sparrows.

I turned round the corner and stopped, unable to say a word. In the place of a beautiful bush there was a huge pit, my old friend lay nearby, helplessly stretching out its bare roots to me. In despair, I rushed to the workers near the pit. They explained that the heating main, to be repaired, ran just under the bush and it had to be dug up. Holding my tears back, I came up to my old friend: the withered leaves and flowers still gave a wonderful scent. I realized that I had to save him.

That day none of my classmates and teachers were concerned about our classes as everyone was obsessed with the idea to save the bush. We didn't expect that so many people would care about it, but as we were working more and more volunteers joined us. Soon our bush was replanted and was fed up with love and water.

Inspired, we got the idea to plant more lilac bushes in the city and make it more comfortable and green. Together, we developed a plan for the campaign "Clean and Green" and divided into groups. The first group got the task to make a motivating video convincing people to clean our city and plant new trees. The second group designed the map showing where lilacs should be planted. The third group issued the leaflets appealing to bring young lilacs from summer houses.

When the video was ready, we turned for help to the city authorities and with their support it was shown on local television and in all city schools, which made a lot of schoolchildren and teachers join our movement. As a result of our activity, three streets were cleaned up and about two hundred lilacs were planted.

We continued to take care of our old lilac bush, three weeks later its leaves turned yellow and fell down, the flowers died out but we did believe it would manage and it did! And now its photo is in our class as a symbol of life, it gives us hope that we can make the difference and change our city for the better.

We live very far from South America and, unfortunately, we cannot affect the deforestation of tropical forests, but we can change the world in a place we live. I would like people in all the cities and towns of my country to follow us. It doesn't

require a lot of money, just goodwill and love and care to your people and to your country. And it really works. I am sure that only together we can change the world and make it a better place for all creatures living on earth.

2<sup>nd</sup> Prize (joint)

### **Last Land Theory**

by Proud Thamrongrat, aged 15 (Thailand)

Trying too hard to seek for what we don't have, we often forget about what we already had. Seeking for life sources in space but often forgetting to sustain the earth's ecosystem; developing new technologies but often forgetting to develop people's care for nature and land; educating students to understand maths and sciences but often forgetting to educate them about how to live a happy and sustainable life. I can understand why life on land are facing such common virulent events, why thousands of lives are ending in violent disasters and why many species of animals and plants are driven to the brink of extinction. But believe me, we are not too late to save this world. And believe me, the greatest source against this crisis rests in hands of the youth.

First, to understand the importance of why the youth are crucial in this process, I will give you three significant reasons: They are independent thinkers, they are remarkably creative and they are extremely energetic. Second, we must educate them in the right way in order for them to understand the problem that life on land is facing with their heart and brain; we have to make it their passion to protect and sustain nature in our world.

To do so, I would like to suggest a website that will allow young people from every nation to meet each other and exchange their ideas about how to sustain nature and animals through this platform. The website itself will be separated into different sections, such as for young people who are interested in sports to youngsters who have a great passion towards academic learning; in each section there will be a range from daily to weekly to monthly challenges for young people to try to solve or address problems about life on land with their creative visions. In addition, if the organisation would like to sponsor the most feasible and exciting children's ideas, this website would be able to support them to make their vision a reality and make progress towards the goals of SDG 15. This method might be a small step to encourage the thinkers to be doers, and if we continue encouraging them continuously to protect nature in a gripping way, eventually one day they will make this become their generation's true value.

To extend this even further we could set up contests in each category and have the winning candidates in each section work together to find solutions to the world's life and land problems as a team. Creating a mini web-series about them while they are working on tackling these problems could then spread the word to people worldwide, making people see how important it is to solve life on land problems, how much

talent the youth of our kind hold, and how important the youth are in solving global issues.

Lastly, for those young people who are not interested in taking part in addressing SDG 15, but are more interested in idols and Youtubers, I would suggest the site hires those celebrities with a huge youngster fan-base and encourage them to express their ways of saving nature or make a video to inspire their followers to do so.

To conclude, young people's efforts and understanding about SDG 15 are crucial for this project. Furthermore, creating a platform where they can express themselves is one of the best ways to make them create new value in the world. With the help of modern social media and social media celebrities, the plan is sure to be successful.

3<sup>rd</sup> Prize (joint)

### **Young People for a Sustainable Future**

by Thwin Than Thar Nway, aged 15 (Myanmar)

In almost every moment we pass in our lives, we are surrounded in the comfort Earth itself has provided. Yet, despite the fact that it is all around us, we turned a blind eye to it. We take advantage of every workforce and sacrificed lives that reassured us with easier ways to get through our days.

Young people have a lot of social influence on the public. As the backbone of society, their actions have the ability to create far-reaching movements. So, what kind of changes could teenagers possibly bring about?

Young people can give funds and endowments to influential conservation organizations that have an international impact. Such organizations include the Conservation International which has more than 2000 partners in over 30 countries, The Nature Conservancy which has helped to protect more than 119 million acres of land and the IUCN which has 219 states and government agencies as members. These organizations create big impacts on a global scale, and they need all the help they can get. Young people can also set up public awareness campaigns in their neighborhoods and to draw the public's attention, teenagers can also come up with fun slogans, banners and posters. With enough support and cooperation from the adults, these campaigns can turn out to be extremely successful!

School can also play a major role in helping the environment and conserving natural resources since they have a lot of influence over young people. For example, our school holds a special assembly on the third week of every month to spread environmental awareness. The responsible group of students has to put together a presentation that would encourage the students, staffs and teachers to take actions against the weighing factors harming our planet. This practice plays a huge role in making our school an environmentally friendly place to be in. For instance, our school used to have a stack of one time use plastic cups beside the water coolers for several years. With a student body of over 2000, hundreds of plastic cups were disposed of as garbage every day. However, in October 2018, we successfully put a stop to this by banning the use of all plastic cups and encouraging students to bring their own water bottles instead. To help biodiversity, our student council also decorated the school with several plants. Such changes in our school make the families and relatives of the students be aware of the damage some of their actions do to the Earth and eventually students and their families are encouraged to start applying these changes into their homes as well.

Students can also give up their free time to carry out community services such as planting trees, cleaning parks, etc. This not only benefits the environment but also help students in their college applications.

Even little things such as making short videos that spread environmental awareness and uploading on social media or growing small gardens in their backyards to spread biodiversity help the environment in many ways.

In conclusion, young people can contribute to Life on Land(SDG#15) by applying their energy, fresh ideas and enthusiasm to activities such as hosting public awareness campaigns, doing community services, joining charity organizations and even through individual acts. Setting a limit and stopping the exploitation of nature is a duty our generation should prioritize at all costs and young people are the key to do so.

3<sup>rd</sup> Prize (joint)

**New technologies guarding the forest**

by Alexandr Marchenko, aged 17 (Russian Federation)

Ladies and gentlemen!

Before I continue, let me tell you something about myself. I am Alexandr, I am 17 years old, I am a Muscovite. Education in our time is an important factor, but, besides studying in college, I study English. I am sure that knowledge of the English language will help me in the future to improve business relations with partners and colleagues from abroad. By nature, I am an initiator, a responsible person, and I think, a person interested in many aspects of modern life. I am especially interested in environmental issues. I love forest since childhood, I used to go out with my parents for mushrooms and with friends in campaign, and I know well the forest and its problems are.

I want to say a few words about the state and future of Russian forests. Now everything is not so good with forests in Russia: there are many illegal logging and landfills, tourists and hunters do not always control the cleanliness of their camps. There is little information among young people about the state of forestry. The restoration and preservation of forest lands, in our opinion, is an important problem of modern society, which can be solved only by the joint efforts of the young generation.

Now, together with our student team, I participate in environmental and biological education, activities in the field of environmental protection and forestry, in order to promote respect for nature and the development of younger skills in the proper use of natural resources. Our goal is to create an ecological culture among students, as well as: - to teach students the proper use of forest and its restoration; - participate in activities aimed at the conservation and expansion of forest resources; - preservation of the species composition of plants and animals in the regions; - Use of UAVs in forestry.

The College of Business Technologies specializes in training specialists in economics and information technology, so our team developed a project on the use of UAVs for forestry. This project allows monitoring and protection of natural

resources with the help of quadrocopters, surveying the earth's surface with its subsequent demonstration.

Participation in the Open Championship of professional skill "Moscow Masters" in accordance with the standards of Worldskills Russia 2018 in the sphere of competence "UAVs" brought me the 3rd place. The acquired knowledge, skills and abilities allowed me to implement my own project.

These measures make it possible to identify hotbeds of fire, illegal logging, to create illegal dumps and landfills, to respond in a timely manner to the actions of representatives of forestry and wildlife defenders.

The launch of the project was decided to make in the Moscow region, as during the summer holidays, we are faced with the problems of illegal dumping of garbage and cutting down trees near the holiday village, where we live in the summer. The weight of our quadrocopter does not exceed 30 kg, so it is not subject to state registration, for its launch we had to obtain permission to fly and make photos the local government territories, which we did. Filming from the quadrocopter allowed us to assess the scale of the illegal landfill and detect illegal logging. The information obtained allowed us to go to the forest. The garbage was sorted by us and sent to the enterprise for recycling.

Restoration and conservation of forest lands, in our opinion, is an important problem of modern society, which we can solve only through joint efforts. This will help us not only better understand each other, but also to participate together in environmental activities in different countries.

4<sup>th</sup> Prize (joint)

### **A Case For Educational Sustainability**

by E Wen Wong, aged 17 (New Zealand)

For almost all of my life, I have lived and grown up in New Zealand; a nation known for its breathtaking scenery. In this time, I have run in the lushest of parks and forests, looked up in awe of Mount Cook and watched the rivers braid like no other. Yet, in having these experiences, I have lacked exposure to one of the biggest challenges facing our planet: SDG 15. Desertification, land degradation and biodiversity loss are all ideas central to Life on Land. Nonetheless, so many of us have only a basic understanding of their implications. How can we think to achieve a goal that we barely understand? Young people are key to achieving SDG 15 and this is why I call for educational sustainability. Because, in countries like ours, education of the issues which escape our physical view can so easily be lost and ignored. Because, without a sustainable education, we have no hope of tackling the biggest issues that the world throws at us.

Firstly; in New Zealand, we are fortunate enough to be shielded from the worst of the Life on Land issues. However, our location not only distances us from the problem, it also shifts our responsibilities away from the solutions. In Williams' famous poem, *The Red Wheelbarrow*, he writes with rich imagery of a seemingly mundane object. However, if we think of the red wheelbarrow as a metaphor for our land, and the rain a metaphor for our actions, the white chickens must be us, the 1.6 billion people dependent on forests for their livelihoods. Education for Sustainability is key to achieving SDG 15 as it reconnects traditional subjects, such as Literature and the Sciences, with the environment at the very heart of these subjects. Without this varied and multifaceted view on education, we can easily pass through our education systems oblivious to threats such as soil degradation, despite its impact on 52% of the land we depend upon. Educational sustainability empowers us to realise and act on environmental threats, even beyond our physical view.

Secondly; having been born in Malaysia, but bred in New Zealand, I am in a fortunate position to view both sides of several coins. Malaysia has the world's highest deforestation rate, for reasons such as palm oil plantations; while in New Zealand, deforestation is largely a thing of the past, with legal protection placed on native forests. Examined through an economic lens, Malaysia's economy relies on these palm oil plantations, while New Zealand's depends on its forests for tourism. Having this view on Life on Land leads to an understanding of one principal idea: environmental, social and economic sustainability all rest upon education. The disillusionment I have had from the environment of my birthplace reminds me that, in our communities, our limited understanding of SDG 15 means that we fail to prioritise it accordingly. As the future leaders, citizens and inhabitants of this land, young people are key to achieving SDG 15 and, through incorporating sustainability into the curriculum, we are equipping them with the tools they need to tackle this problem.

We are quickly losing the diversity in biodiversity, leaving only BIO. At our school, BIO is a course code for Biology; however, without educational sustainability, it may

never be more than a course code, nor reap the results of our learnings. In magazines, a BIO is a biography; however, without educational sustainability, can we really be proud of what we have written, photographed and documented? It's time to piece the puzzle back together, to put the diversity back into biodiversity and the sustainability back into education.

4<sup>th</sup> Prize (joint)

**Young people are the key achieving SDG#15**

by Keziah Bahadur, aged 17 (South Africa)

Soon another year will begin. Another year filled with ignorant politicians, disregarding the environment and putting financial gain first.

However, as the youth we say no to empty promises, corruption and an overlooked environment. As a South African youth member, I Keziah Bahadur firmly believe that our youth is the key to accomplishing SDG 15.

If not us, then who? If not now, then when?

Recently I attended a SAIIA (The South African Institute of International Affairs) Youth conference. This event shone a light on the innovative thinking of South African youth members. It gave us the opportunity to discuss environmental issues and present our solutions for achieving the various Global Sustainable Development Goals. In terms of accomplishing SDG 15, I was inspired by Pretoria Girls High School, who brought seed banking to the forefront of our discussion.

They introduced the initiative of seed banking at their school, by storing seeds in specialised concrete benches. The youth wants to contribute, and seed banking at schools is an innovative way to do so. Seed banking at schools allows for education on the topic, and empowering communities through these local seed reserves.

Internationally seed banking is flourishing, the Global Seed Vault in the Svalbard archipelago is a long-term seed storage facility, built to withstand the test of time. The Seed Vault represents the world's largest collection of genetic crop diversity. It includes seeds from North Korea to the Congo. This vault conveys the message that food security is a global issue that effects all countries, cultures and societies.

A wise man once said, give me 100 Indian teenagers and I can change India by tomorrow. This is an inspiring proposal and it led me to believe that with the right "I can do it attitude" anything is possible.

Summits like COP 24 highlights the voices of our generation. In fact, two South African Youth members attended the conference. They took giant steps in combating climate change and creating a sustainable future.

Growing up in the technological era has meant access to a world of information. The usage of social media outlets has created Generation Z and has consequently shaped our mindset.

As a youth I believe our voice, thanks to social media is more prevalent than ever. We can ignite action and force government to take environmental issues more seriously. Such as implementing conservation laws about alien invasive plants.

Danville Park Girls High School is active in participating in school environmental projects. Our Eco School theme is biodiversity. As the Environmental Prefect for 2019 I want to ensure that our youth is informed and involved in the preservation of life on land. Some of my plans include starting a social media presence on Instagram and Facebook to ensure our environmental messages have the greatest reach, growing and selling indigenous seeds to support our fund raiser for the year which is CROW. This organisation is the centre for rehabilitation of wildlife. They are committed to the rescuing, rehabilitating and releasing of injured wildlife.

Danville Park Girls High has already established an environmental society, and a team of diligent monitors who take care of our organic waste worm farm, vegetable gardens and recycling. The integration of sustainable living into the curriculum allows the youth to be more educated about the impact of land degradation.

My vision is to ignite passion in fellow young people. Whether it be beach clean ups, the Water Explorer programme or taking the initiative to remove alien invasive vegetation. I want to see a drive for change amongst the youth.

5<sup>th</sup> Prize (joint)

### **Sustainable Use of Terrestrial Ecosystems**

by Lal Zeynep Erdemet, aged 12 (Turkey)

When our English teacher mentioned about the essay competition about 'Life On Land (SDG# 15)', I didn't understand anything. I needed to search and after reading resources from the TSL website I realised that United Nations has set 17 sustainable development goals to create a better world till 2030. The name of this action is 'The World's Largest Lesson'. 'What can my role be in this activity?' was the first question came to my mind.

I live in a house with garden. Two years ago my mum mentioned about permaculture and she designed a permaculture garden. Permaculture means growing food with natural resources to keep the balance in ecological system. There are three ethics in permaculture; Earth care, people care and fair share. After a brief explanation I want to write about our sustainable agriculture adventure. First we started to collect food waste to compost them. At the same time we set up worm farm to create natural fertilizer. My mum and dad designed the garden to collect rain water. We sat together, searched, discussed about plants to be planted. After planning we began to plant our seeds. We learnt that it is crucial to plant hazelnut tree and lavender to take attention bees. As you know bees carry pollens to your garden. For the last two years we haven't bought any vegetables from the market, we have eaten what we grow naturally. From this sample if we think bigger, Turkey is an agricultural country so if we use permaculture in national agriculture, we can use less water for irrigation, we do not have to use chemical fertilizers which is poisonous for insects and animals, we have more natural food for people. That means we save natural habitat and spend less money for agriculture. what do you think?

In my country there is a foundation called TEMA which fights against degradation and deforestation. It has some projects about deforestation. According to TEMA statistics nearly 12 million square meter soil is affected from degradation. Moreover 1.5 billion people in the world are affected as well. One of TEMA's Project is about planting oak trees to prevent desertification and degradation. The sponsors of this project is Turkish People not a company or foundation. There are 18 different types of oak trees in Turkey. Oak trees benefits vary; one of them is the roots of Oak trees go to deep into soil and spread wide so they protect soil from degradation; the other one is acorns of the oak trees are favourite food for squirrels and birds so it keeps the food chain balanced in ecosystem. To protect the natural value of my country, TEMA delivers seedling to be planted and you donate some money for more seedling. Therefore we can share the details that kind of campaigns to our local community to create awareness about reserve degradation and deforestation. We can make posters and projects about this TEMA action at school. We can start a campaign about TEMA Oak tree project to donate money and plant trees in our school garden.

According to World Bees Organization bees are a keystone species and pollination is a keystone process in both natural and human managed ecosystems. Bees are critical to the future of the world's 7.6 billion people and the future of the planet. Turkey is one of the well-known honey producers. From that point we can found Technical Schools to protect bees and natural honey production. I think it will also help to protect biodiversity.

My final words are 'Protect nature for your future'.

5<sup>th</sup> Prize (joint)

## **Young people are key to achieving SDG#15 Life on Land**

by Rhea Bhoola, aged 17 (South Africa)

The sustainable development goals are a worldwide action plan to protect the planet, end poverty and ensure that all people enjoy peace on this earth. There are 17 goals in total. Sustainable development goal 15 aims to protect, restore and promote sustainable use of terrestrial eco-systems, fight deforestation, stop and repair the damage caused by land degradation, sustainably manage forests and stop biodiversity loss. I believe that young people are the key to achieving this level of development.

First and foremost, young people have access to thousands of social media platforms to bring forward awareness and different techniques to promote sustainable living. An example of this would be: Instagram. Instagram works via a system of hashtags to navigate through thousands of posts to bring you a feed that you would like to see. This way we can target individuals and businesses who want to partner up. Through this we can join other schools to fund projects such as gardening around South Africa, cleaning up the beaches, even implementing Eco-Clubs into less privileged schools. This would create a wider following for our cause. Followers have become such an important part in the daily lives of teenagers, why not manipulate it to help our cause.

Around 6 billion people depend directly on agriculture, but more than half of this land is affected severely by soil degradation. One of the targets for goal 15 is to restore the degraded land and soil by 2030. Just under 75% of the earth's land has been degraded and reports state that it could be over 95% by 2050 if we do not do something now. Young children should be made aware of this because they are the next generation of adults. This will become their problem growing up. If school children are being made aware of the dangers of this (arable land, clogged of polluted waterways, increase of flooding) it will become a more personal matter. In Eden College Durban (South Africa), we have Eco-Clubs which raises awareness to problems like these and finds ways in which children can combat them. We have vegetable gardens that children maintain, in an upcoming project we aim to restore land on a slope. By learning these techniques, these young children could be the key to finally changing the world for the better

Unfortunately, life on land cannot be achieved without our animal life. Of the 8300-animal species known by humans, 8% are already extinct and 22% are at high risk of extinction. The main cause for endangered species today is poaching. Target 15.7 is to put an end to trafficking and poaching as well as the buying and selling of illegal wildlife products. In recent years, Rhinos have been hunted almost to the point of extinction. In South Africa, schools have become more active in the race to save the Rhinos. Young people around South Africa have put on plays, shows, concerts and held fairs to raise money for the Rhinos. In our school, Eden College Durban, we call this fund Acting for Rhinos. Our Drama departments have taken shows overseas to perform and collect funds. Young children are no longer made to believe that the keratin in the rhinoceros horn has medicinal properties and are carrying their value along for generations to come.

I fully believe that the world should place their trust on the new generation. We, as young people, are the key to achieving the 15th sustainable development goal: Life on Land.