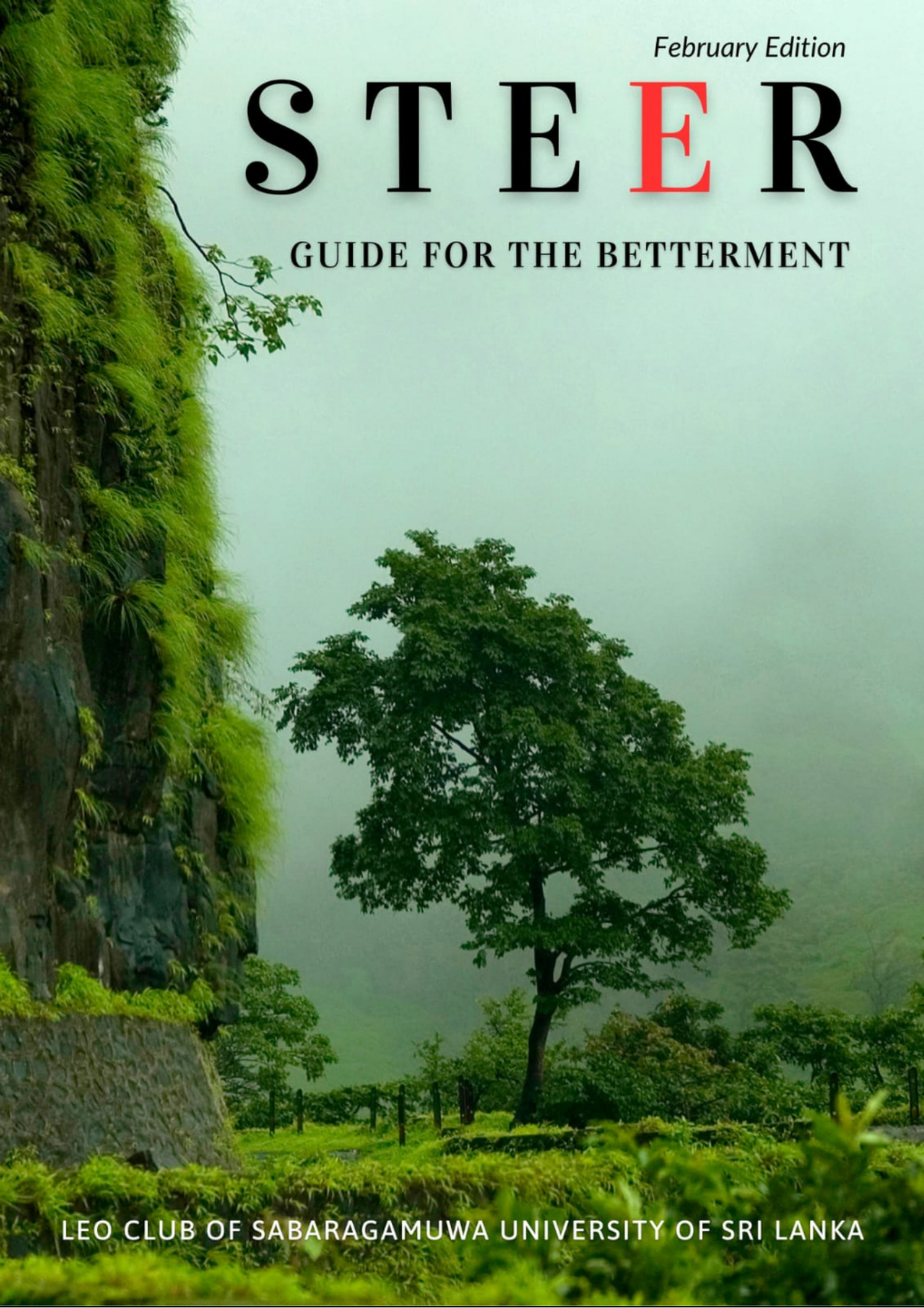
February Edition

STEER

GUIDE FOR THE BETTERMENT



LEO CLUB OF SABARAGAMUWA UNIVERSITY OF SRI LANKA

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THEME OF THE MONTH

For the third edition of the magazine, in accordance with our STEER monthly theme of the Lions Global Causes Awards, we selected the theme "Environment," which is the second award category that comes in the aforementioned award category. The topic "Environment" is broad and has a wide range of potential discussion topics. As a result, we came up with our monthly creations, which this month included a poem, two drawings, and few articles.

In addition, to provide our readers a deeper understanding of Hortain Plains, as part of the "Let's Talk" series, we interviewed Professor E.P. Kudavidanage, a lecturer of the Department of Natural Resources, Faculty of Applied Sceinces, Sabaragamuwa University of Sri Lanka. An article by Mr. R.A.D.C. Ranathunga, a lecturer of the Department of Tourism Management, Faculty of Management Studies, Sabaragamuwa University of Sri Lanka is included in the Educators Corner.

This month's "Entertainment Review" is a review of the movie Avatar: Enter the World. This edition's fun episode includes lots of other enjoyable items as well. We hope you will notice our February STEER edition interesting.

Zonal Director's Message

It’s my privilege to pen down a few words for the monthly newsletter of the Leo Club of Sabaragamuwa University as the Zone Director of Region 2.

The dedication of the Sabra Leos is highly appreciated and their projects are impressive. As the Zone Director, it was much easier work with you and your support is truly outstanding. Since the logistic year started, you have done unique projects and all the reporting as well.

If I say a few words about the President, Leo Ashen, he is a multi- talented person who could be able to lift the club to a higher position than in past years.

I wish all the best for Sabra Leos to have the determinationand dedication to do more valuable projects in the future.

Leo Kavidu Bopitiya,
Zone Director,
Region 02.

THE EDUCATORS CORNER

From linear to Circular

The architecture of the global economy is predominantly linear. The linear economy model can simply be identified as a take make waste economy (Figure 1). This traditional mode of economy encompasses extraction of resources, production of goods and services and disposal of waste and emissions. In simple terms, the bio-physical resources being taken up into the economy continuously to serve the ever-growing societal needs and wants. As of today, the economy should serve nearly 8 billion people and by 2050 it should be capable to serve nearly 10 billion people. According to recent calculations, in 2022, the global economy is about 92% linear in which 92% of all the resources are taken up into the economy are wasted or emitted into the environment.

So, what is wrong with this mode of economy?Why it should give much attention?

There are two main aspects of it. The continuous extraction of resources from nature's limited budget will exceed the biocapacity of our ecosystems. Second one is the emission of waste and pollution back into the nature will result in deteriorating productivity and the assimilative capacity of the ecosystems. As a result, availability and accessibility to the natural resources by human societies will be hampered.

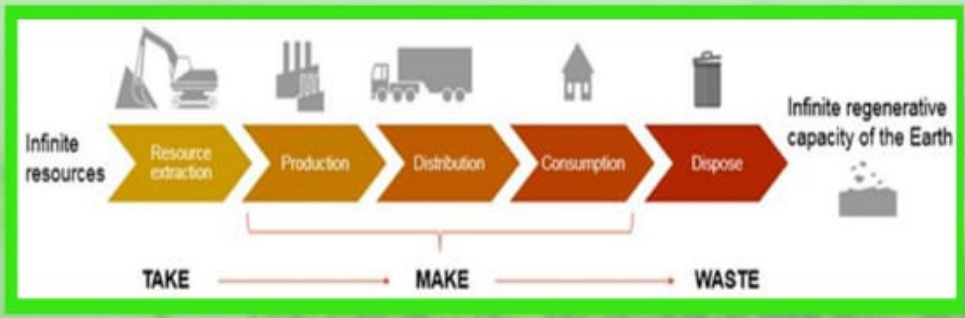


Figure 1: The Linear Econimic Model

The linear nature of the economy encompasses greater threat to the global sustainability. From the climate change to the loss of biodiversity and environmental pollution. Recognized as triple planetary crisis. Majority of the scientific evidences support the argument that the triple planetary crisis is predominantly driven by human action.

So, it is high time to rethink global paradigms, redesigning the economic landscape while respecting the limits of our planetary resources. Learning from nature, learning from the functionalities of the ecosystems, we have come up with an alternative to the predominant take-make-waste economy, "The Circular Economy" (CE), where resources are recognized as nutrients. And the nutrients in our ecosystems being circulated indefinite number of times. And whole functionality of the ecosystems is energized by solar energy which is a sustainable energy source.

As shown in the diagram (Figure 2), the Circular Economy interlinks between the biosphere and the Technosphere. Always the inner circles are more viable in terms of technical and economic feasibility. Nearly all outputs either become inputs to other manufacturing processes or are returned to natural systems as unharmful emissions rather than as pollutants.

The circular economy is based on three principles, driven by design:

1. **Eliminate waste and pollution**
2. **Circulate products and materials (at their highest value)**
3. **Regenerate nature**

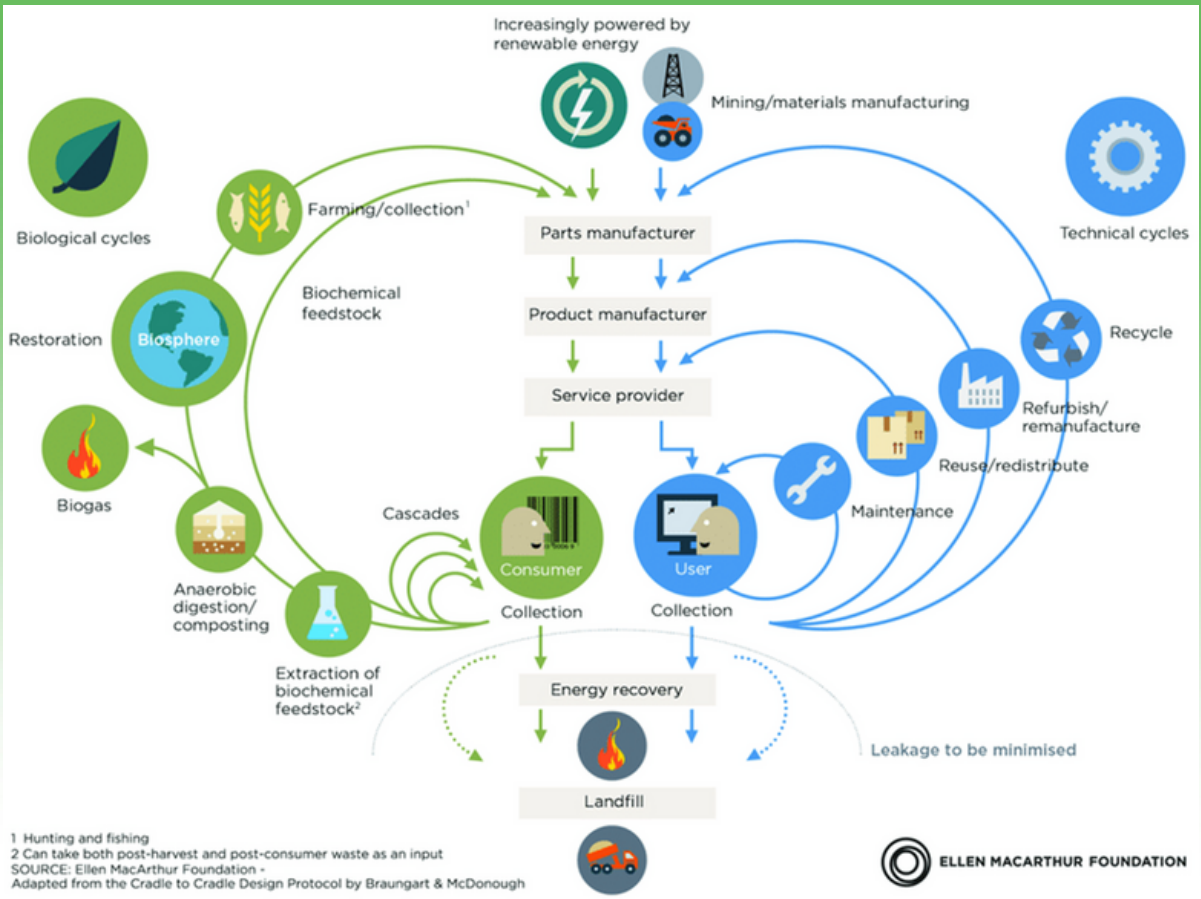


Figure 2: The Circular Economy Model (The Butterfly Diagram)

The CE is underpinned by a transition to renewable energy and materials and decouples economic activity from the consumption of finite resources. It is a resilient system that is good for business, people and the environment.

Going circular will help us to tackle down most of the planetary challenges. Not only the environmental but also the societal and socio-economic challenges. Yet there are transformational challenges such as cultural, technological, regulatory, and market which need to be identified and treated thoroughly.

Transitioning to the circular economy is not easy. It requires greater commitment and attention of the entire globe. It's about streamlining 8 billion perspectives. Yet we need to accelerate the transition in order to reduce the worst effects of ecological and climate breakdown.

Mr. Chandimal Ranathunga
Lecturer (Probationary)
EcoBusiness Management
Department of Tourism Management
Faculty of Management Studies
Sabaragamuwa University of Sri Lanka

UNKNOWN FACTS

Fact 1: The oldest wooden wheel in the world has existed for more than 5,000 years.

It was discovered in 2002, some 12 miles south of Slovenia's capital city Ljubljana, and is presently kept in the museum there. The age of the wheel, which is probably between 5,100 and 5,350 years old, was established by radiocarbon dating. These are the oldest tourist destinations in each state that are located close to home. The oldest wooden wheel in the world has existed for more than 5,000 years.

Fact 2: McDonald's once produced broccoli with a bubblegum flavor.

Your taste senses will be crawling after reading this bizarre McDonald's fact. It should come as no surprise that the effort to encourage children to eat healthier failed since the young testers were "confused by the flavor."

Fact 4: Technically, peanuts are not nuts. They are beans.

A hard-shelled dry fruit or seed with a detachable rind or shell and inside kernel is what Merriam-Webster defines as a nut. As a result, nuts including walnuts, almonds, cashews, and pistachios are also ineligible. Are seeds.

Fact 3-Some fungi produce zombies and then have control over their minds.

The tropical mold The central nerve systems of ants are harmed by ophiocordyceps. After nine days within the host insect, it gains full control over the host's motions. The ant is compelled to climb trees, when it collapses and falls into the cool, wet earth below, where fungus flourish, according to National Geographic. When the fungus gets there, it waits until precisely solar noon to make the ant bite a leaf and wait to die.

THE ENTERTAINMENT REVIEW

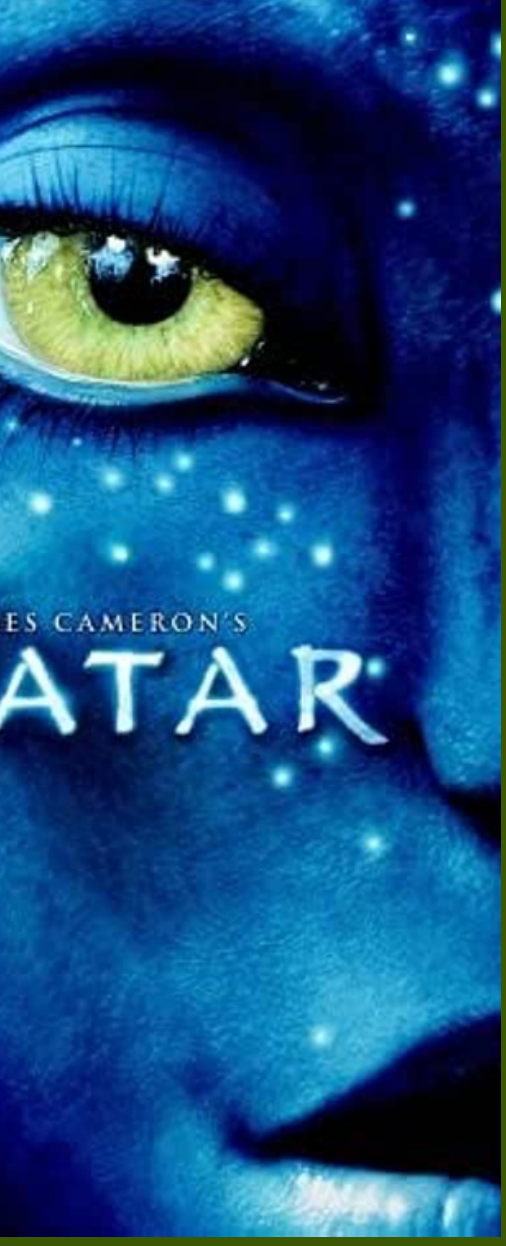
AVATAR ENTER THE WORLD

Trending

"Only when the last tree has died and the last river has been poisoned and the last fish has been caught will we realize that we cannot eat money."

- Chief Seattle -

Avatar, directed and written by James Cameron is an action, adventure, fantasy, and sci-fi movie . The movie is based on a paraplegic Marine dispatched to the moon, Pandora on a unique mission is torn between following his orders and protecting the world that he feels is his home. The movie was released on 17th December 2009, in the United Kingdom.



After destroying their own planets' nature humans move to a planet called "Pandora" for finding "Unobtanium" which is priced at 20 billion per kilo but their major issue is the native people (Na'vi) who live in Pandora. Different strategies are used to explore this planet and its natives. One such strategy used to find details on Na'vi is the ability gained with the advancements in technology letting humans share their minds through their bodies. The main character's mission is to report all details to headquarters about what he learned from native people but when he learns more about culture and nature he slowly starts to change. He realized the value of nature and how the environment is connected with those who live.

The movie shows, the destruction of the environment for power, environmental pollution, the ferocity of war, love, and conscience, never giving up, unity, courage, and the difference between simple and complex lives. Intimating the environment by making us see it differently.

These are the main characters of the Avatar movie, Sam Worthington (Jake Sully), Zoe Saldana (Neytiri), Sigourney Weaver (Dr Grace Augustine), and Stephen Lang (Colonel Miles). With their best performance, Avatar won many Academy Awards in 2010, including Best Achievement in Cinematography, Best Achievement in Visual Effects, and Best Achievement in Art Direction.

Avatar: Enter the World was released in 2009 and 13 years later second movie, Avatar: The Way of Water was released on 16th December 2022. It has earned $2.2 billion worldwide and is now the fourth-biggest movie of all time. Avatar (2009) is ranked number one biggest movies ever followed by Avengers: Endgame at second and Titanic as third. James Cameron owns two of them. According to Forbes Cameron earned $95 million in Avatar: The Way of Water.

-Leo Thilina Munasinghe-
Club Member

The Beauty of Horton Plains

1. What makes Horton Plains special and unique in terms of natural beauty?

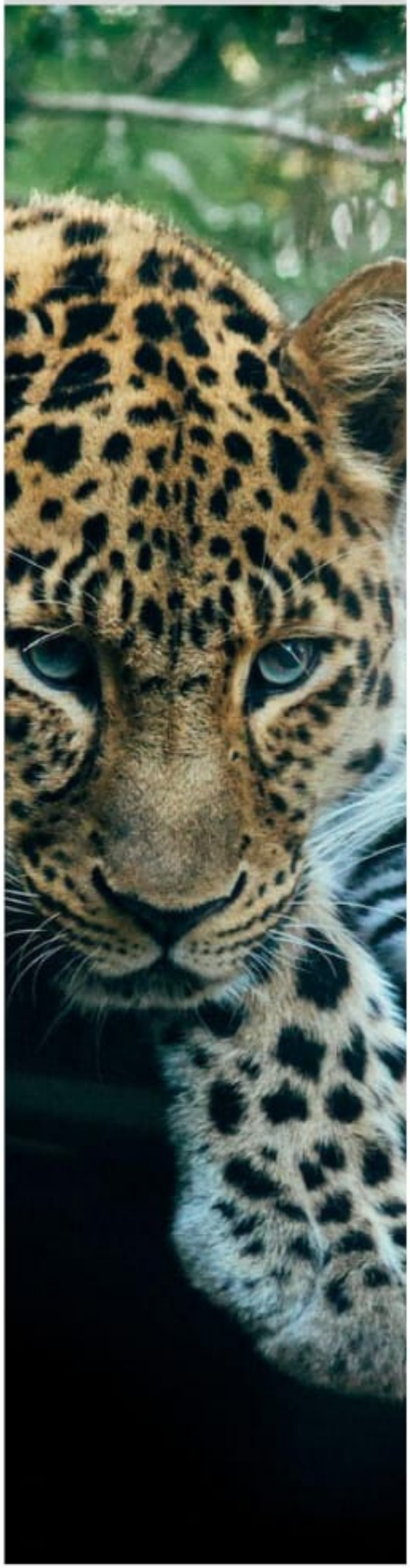
Part of the central mountains, the world heritage site has taken together with the peak wilderness and all. It's a very small national park. It's a wildlife national park. You know that the protected area system in Sri Lanka is managed by the Wildlife Department and the Forest Department. So Horton plains come under the Wildlife Department. It's a very small park, just 32 km2. It is very small in a capacity relevant to other parts. But having said that, it is pretty much, I would like to say, the heart of Sri Lanka. Because it's up there, right in the middle of a catchment that provides water to the entire country it's like a sponge. So Horton is unique in terms of its location, where it is. We don't have that many montane national parks like Horton, as in the 1st place. If you take the ecosystem services, it's the catchment, water catchment, and vegetation that is really unique. You have this, like the montane hill country vegetation, the forest with grasslands. And the other interesting thing is it's actually partially man-made, unlike other national parks. So if you are interested in Horton, I recommend you to read this book by *Dr Pethiyagoda*, "A Horton Plains". This is the best work if you want to get information about Horton Plains. So, once upon a time, it was actually in 1800, the patch of Montane forest, but it was sort of cleared for potato cultivation and then eventually protected. But what you see today is a mix of natural forests and grasslands that are a result of human intervention. But these grasslands attracted a lot of *Sambar Deers*, a lot of herbivores and today you don't get such a herbivore population anywhere in Sri Lanka. It's a huge population. And following the *Sambars* and other herbivores, you have leopards. So this mix of human and manmade habitats together has created such a unique sort of wilderness. And because of that, we have a healthy population of leopards and *Sambars* here. So that makes Horton really unique. So I would say the location, the ecosystem services, the vegetation and the wildlife taken together make Horton really unique.

"So the most important thing is going to a place with the knowledge, even if it is Horton Plains or wherever it is"

2. Can you share a personal story or experience that showcases the charm and beauty of Horton Plains?

For me, it was amazing every time I go. I've been there so many times. But every time I go there, the park offers something new. A lot of people who go to Horton Plains go after World's End. You just go there, you take this walk. It's also the only protected area, only wildlife protected area as in the national park in Sri Lanka, where you can walk. In other national parks, you have to drive. You have to go in a jeep and get up only at selected points. But Horton, you have to walk because of the sensitive sort of soil structure and all. You really can't take your vehicles. Every vehicle that goes in adds to environmental pollution. Shouldn't be the case. A lot of people go off to World's End. It's like you just walked and peep down the escarpment, take selfies and come back. But Horton has so much to offer beyond that escarpment, beyond just peeping down and taking selfies. I mean, for me like the grass. I was there two weeks back and the early morning temperature was four-degree Celsius and there was frost everywhere. It's totally white frost. And the birds and everything is really amazing every time go there. But if you ask me now, my primary work has something to do with the leopards. Before this leopard research, I have never, ever seen a leopard in Horton Plains through my eyes. So nice. Suppose we see leopards in Horton Plains it is something real, I mean very fascinating. So we started our field course in 2014 for some students from the National University of Singapore. We had a camera trapping exercise for students to sort of look into the wild-

life. And we set up these cameras a little bit away from the main road overnight. And the following day, I can actually show you the video we have three leopards kind of nosing the camera. They're coming and just rubbing their nose at the camera to see. My student who set up the camera has just eaten *salmon curry* and she has not properly washed her hands. So you have the smell on the camera and the leopards were sniffing it. So that's how we start the Horton leopard research. We showed that to Park Warden and he said, hey, why don't you start proper research to look into the ecology? And then there have been so many sorts of beautiful experiences we have encountered through cameras. Our team members have encountered leopards on the way. But primarily for me, the camera trap images are fascinating. You have a tiny bit at the camera and the mother's gnarly. We have seen a mother sort of hunting *Sambar Deer* down and then chomping like really chewing the meat on the body and leaving it intact there so, that the baby will know how to pull it off the body. She would feel the baby. She would just chew it and leave it there and the baby would come and just eat out of it. He's so tiny. We saw a *rusty-spotted cat* with a tiny baby. First-time red caught Sri Lanka in Horton Plains likewise so many interesting things. We saw the peacock, which has never been there in Horton Plains. And it's probably due to climate change we don't know. It's spreading all over the country. And you see this peacock, known to be in the dry zone, proudly walking across the Horton terrain. It's kind of a shock. There are so many interesting things to see when you go there. Every little thing. My husband had his cap forgotten once on a pole where we set up the camera, he had totally forgotten it and we have records on the other camera where the leopard is coming down, leaping at the cap and bringing it down and tearing it apart. It was funny. So many beautiful things about Horton Plains. And it is one park where I never get tired of going again and again.



3. What are some hidden gems in Horton Plains that visitors might not know about?

If you are interested in plants, it's an amazing place for people who want to start with plants. There is an amazing part of orchids there and lichens. Right now what you call the red flush has started. Red flush means in Horton you have a lot of plants that sort of bear red young leaves. This is actually because the red leaves help you to absorb sunlight in an area where you have limited light and at the same time they are the sort of plant that easily produce young leaves that are red in colour than producing green ones. The young ones take more sunlight to do more photosynthesis. But the best thing is when you have the red flush up and especially the *caladium species* the Horton has various shades of reds, oranges, like bright red, amazing shades of red and when you go there, you would be amazed. Right now it's starting. I was there two weeks back, it was just starting. But if you go in another week's time you will see Horton with sort of so many reds and oranges that's one thing you have the *Nelu*. *Nelu* is like a unique sort of flowering plant. And during certain years you have something called you can read online actually about mass flowering are right where all the *Nelu* species flowered together and the Horton is like sort of heaven covered with all the beautiful flowers. And you have birds everywhere, *jungle fouls* feeding, and animals getting drunk on these *Nelu* flowers' nectar. So that's a different thing. Then the other thing is the animals. People who want to sort of observe the *Bear monkey* which is a very unique one. It's one of the subspecies of the Sri Lankan *Leaf monkey*. And you have troops, especially just past the *Kirigalpotta Thotupa-*

la hike on the right-hand side you have a couple of nice troops. And the bird you have in Sri Lanka, the *Aranga*, one of the rarest birds in Sri Lanka, you could site it near the *Aranga pool*. Then you have a lot of the bird flocks, big foraging bird flocks. The scenario happens pretty much in a lot of forests in Sri Lanka. But the flock composition is different. In Horton Plains, you have the *Yellow-eared Bulbul* and you have the *Dusky blue flycatcher*. That composition is this Sri Lankan *white-eye*. So for a bird that's really interesting, if you go really early in the morning and start spotting the bird flocks gathering, that's interesting. Even the *Sambars*, their behaviour and then talk about the leopard, there are a lot of leopard sightings now. During our period, leopards were actually quite shy. They were in the forest. But very recently, there was one leopard, one female leopard that came out, that was years back with her cubs, three cubs. They were sighted and eventually she brought these cubs into the main road. And even today you have these cubs now, they are all grown up. The male cub is huge when he's standing on and it covers the road. It is two years old and is like a bull. So these cubs are actually walking around and they frequent the roadside. So you get to see the leopard. But you have to be very careful not to harm them, not to spoof them out, and especially not to walk around. Like you are supposed to walk only on the trail. We see these things happening all the time, lighting your cigarettes or walking on the grasslands. There are a lot of rules that you shouldn't be breaking. You have to remember it's a national park area where animal sites, and their territory and you have to be a responsible tourist. You are allowed to walk inside this habitat. You have to be a responsible tourist. And how can you listen to bird calls when you are screaming or you having your music? You don't have to bring your music set into the park. I see that happening all the time. I'm going away from your question but something that we have to tell is to take every bit of garbage you bring to the park away, especially your lunch sheets.

Don't leave a single piece of paper, and don't feed the wild animals. You feed the *Sambar Deer* and these animals die of diabetes and all the other complications when you feed them human food. So there are little things, but for people who are interested in looking at wildlife, at vegetation, it provides beautiful scenery. Those are the hidden gems of Horton Plains and even the potato ploughs sort of beds. I find it very interesting when you look at certain places, you see these onion ring-shaped ridges. Those are the remnants of the potato beds that were there a long time back. Especially if you take a photograph from a high place, you can actually take these potato beds. It's the way we look at how beautiful it would be if you go there without knowing what is it. I mean, you can't appreciate what you don't know if you don't know the existence of something you definitely do not appreciate. So the most important thing is going to a place with the knowledge, even if it is Horton Plains or wherever it is before going be aware of the place that you are going to go with and understand and then you will have so many options. We just blindly go there and waste our time and resources. If you don't see below or like Worlds's End, and if you don't see the Nonpareil estate, if it's misty, you come disappointed. And during that disappointing journey, you miss so many other good things.

"It's not for the people who rush"

4. How does Horton plains stand out from other natural attractions in Sri Lanka?

Due to its unique location, its sensitivity, and its unique wildlife. And it stands out, especially in this fragile nature. You have this peak soil. If you drop a match in a dry season, it's going to catch fire and just burn like nothing. It's very sensitive. If you damage the forest there, you are going to lose the water downstream. The water we are drinking at Belihuloya right here. The clean water is a result of Horton Plains and the central catchment up there. So it's very unique. It provides habitat too. I think it's almost the last big population of leopards. Now, during my study, I recorded 23 individuals during my period, individually identified Leopards. This is apart from the cubs. Now, the person who just spoke to me, *Sanka wanniyaarachchi,* he's doing really well he's a photographer and he's in the private sector. He's a businessman, but he's doing photography. He's doing citizen science by combining my work with his work by using normal cameras, and professional cameras to identify Leopards and to see what is changing over time. So now he has identified individuals, their babies, and their offspring. We're putting up the family tree. So when I go back in another few months' time and start my research again as a gap producer, this is a very good sort of scientific information being used by citizens and people to make something out of it. That is what we are missing in science. We do publish papers, and they stay put somewhere, but these things should be taken out and used for conservation, so that is happening. So Horton is an ideal place as I said for tourists, for scientists, for students, to understand the importance and fragile nature of the environment. It's unique in that way. And it's one of the second most visited national parks in Sri Lanka. I go on a Sunday and you'll see like vehicles all the way down and my heart breaks and I see that all the pollution and there's so much to talk about.

5. What are some top sights and activities in Horton Plains that first-time visitors should not miss?

As I said, when you come here, if you can read a little bit and come, then you can just spot these things right. The grasslands, the rolling plates, undulating plates are beautiful and photographic. You have a different type of carpet grass, the *dwarf bamboo* that is endemic to Sri Lanka. Then you have the streams, the mountains, all these things. Scenic wise it is unique. And then the bird life, I would say you have to start spotting from the pipe bushes to the *Dusky-blue flycatcher* to *Aranga* to *Yellow-eared bulbul.* You have to know other places that there are certain places where you get to see them and the monkeys. So wildlife-wise it's not Yala. You don't get to see elephants and leopards walking around. You are lucky if you see elephants and leopards out and it's relatively easy to spot. But you really can't just rush and see a leopard. You have to have patience, with that stopped and wait. And some tourists are more interested in sort of making this what you call the hike which is interesting. It's a seven to eight-kilometre hike altogether. And throughout the hike, you get to see a lot of things. The vegetation, you get to see these *drazella carnivores* plants, the orchids, the bakers fall and then you come to World's End, the Mini World's End and all these scenic wise important at the same time. Once the way you get to spot if you stop at you has the *Horned Lizard* or *Pygmy Lizard.* The only thing is you have to stop and take your time. You really can't rush if you are in a comfortable pair of shoes. And if you are taking your walking stick you don't have to be 60 years old to use a walking stick. Even a 15-year-old can use a nice walking stick that will help him

to balance and relax more on the pathway. And stop and look there are so many things the place has to offer. So for the first time travel as I said the key thing be a related bit about it. Carry it on your phone so you can compare the pictures. Carry a bird identification app. So you see a bird, you take a photo and upload and identify it. If you don't know how to identify, take time, and go slow. Limited sound and Horton Plains will offer you a lot. It's not for the people who rush.

Professor E.P. Kudavidanage
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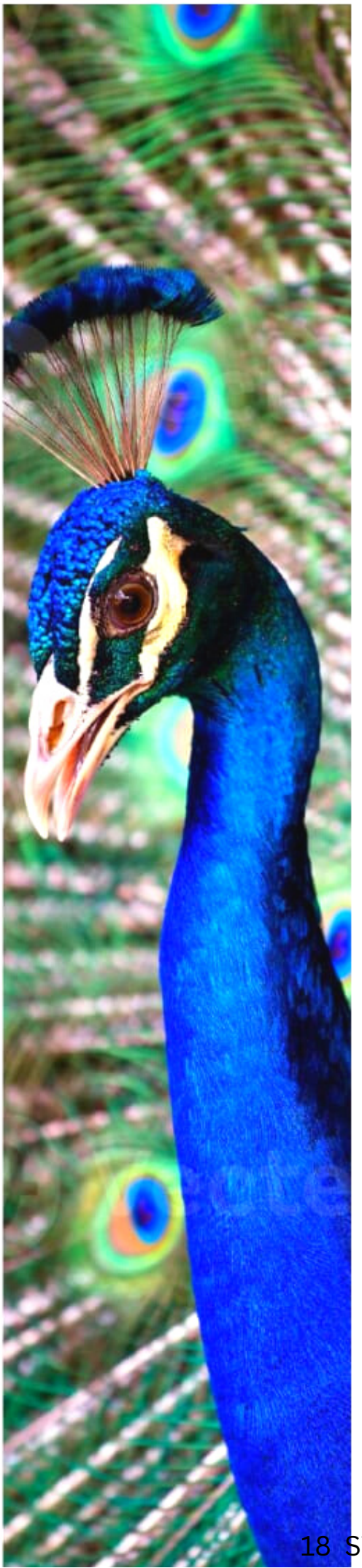
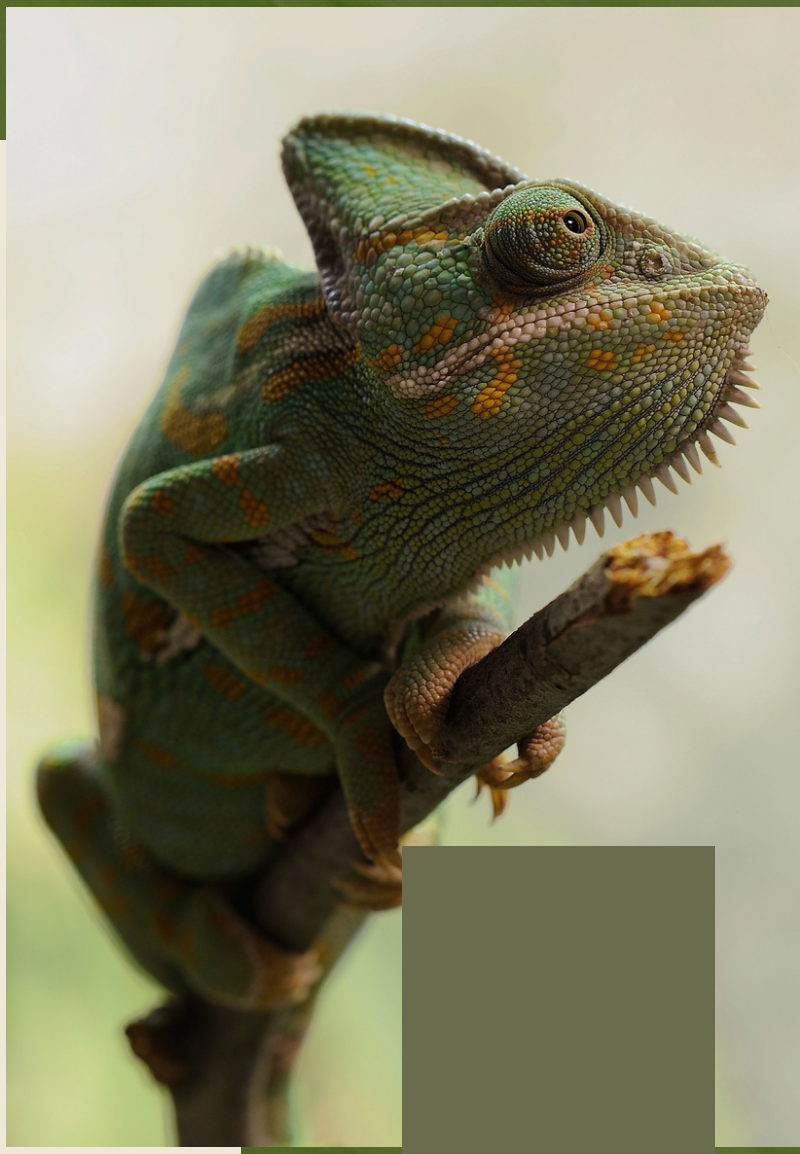




MONTHLY CREATIONS

WAS COVID 19 THE BLESSING SENT TO SAVE NATURE?

tAt the end of 2019, the COVID-19 pandemic was beginning. Within a short time period, it spread all over the world. With that, all people face enormous fear and sadness. As a result of the spread of Covid 19, thousands of people died and got infected. It seemed like the end of the world and destroyed the world. To prevent that destruction, the World Health Organization and other health authorities introduced health protective methods to people. Use of face masks, use of sanitary gel, washing hands, social distancing and vaccination are the protective methods against the spread of COVID-19.

Although there are positive consequences of saving nature from COVID-19. There are more environmental issues before the pandemic, such as waste disposal, the greenhouse effect, global warming, and gas emission from industries and vehicles. After the spread of COVID-19, most of the environmental issues were reduced and the earth is recovering. As a result of the lockdown, .

we have seen reductions in gas emissions, air pollution and global warming all over the world. It was the biggest benefit of COVID-19 to protect the ecosystems and human and animal health.

Apart from those natural activities, human activities also cause direct consequences of the pandemic. With the aim of "staying at home", people give their attention to making the garden and planting activities. With those human-made activities, deforestation has been reduced. Also, it leads to reduced health hazards. By considering all the changes after the COVID-19 pandemic, we can clearly identify whether it had a more positive impact on the environment. After the pandemic, we must have the responsibility to save nature, avoid repeating harmful and bad habits, as well as to move on to a sustainable environment and economy.

-Leo Gishmi Himasara-
Club Member

BE A GREEN CONSUMER

It is our collective and individual responsibility to preserve and tends to the world we all live in. Have you ever considered your contribution as a consumer to protecting the environment?

A green consumer is a customer who wants to buy things that have been produced in a way that protects the natural environment.

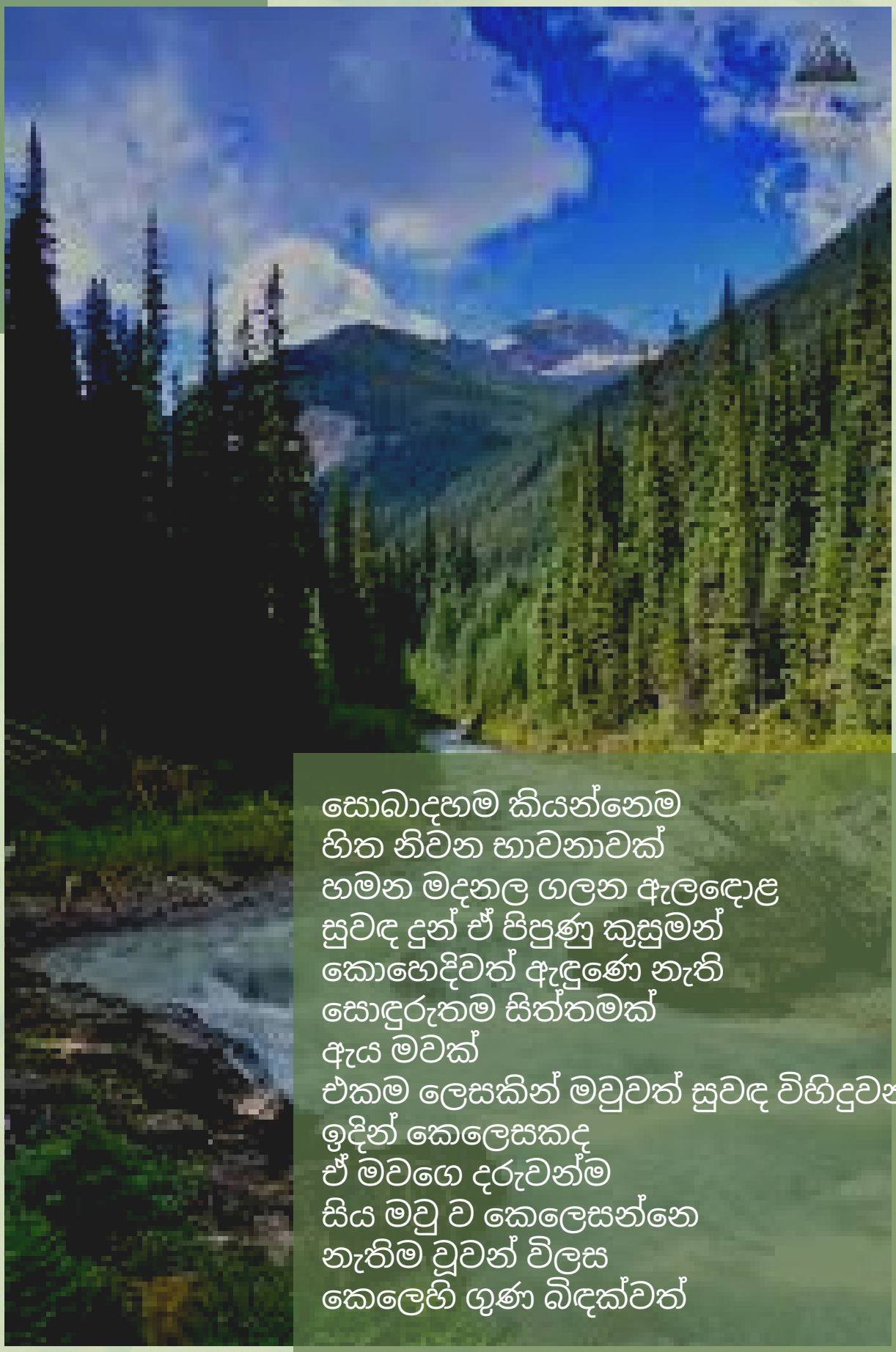
In the face of environmental changes as well as due to new social trends, that means green concept. Consumers think they have to choose products or services that are eco-friendly. Along with new social trends, the concept of buying green things or natural products is automatically embedded in the consumer's mind.

But, we have to know, what is exactly contained in the concept of green consumerism. If you go to the market and buy something green, it does not make you a green consumer at all. You can see, people go to the CDM machines for their transactions. After going there, most of the people are in the habit of taking the receipt and dropping it on the floor, even if the receipt is not needed to get. You have to think whether it is correct or wrong.

If you want to be a green consumer, you want to change your mindset. Changing your mindset about sustainability or green products will help you learn more about environmental changes. Also, you can buy local food products. Usually, green consumers prefer to buy that product have a less ecological footprint. You can find such products by referring to the internet. You can recycle and reduce energy consumption. Taking public transportation also helps to reduce congestion and carbon emissions.

If you want to give something back to the environment, become a smart green consumer. It will make the world beautiful.

-Leo Chathurika Kulathilaka-
Club Member



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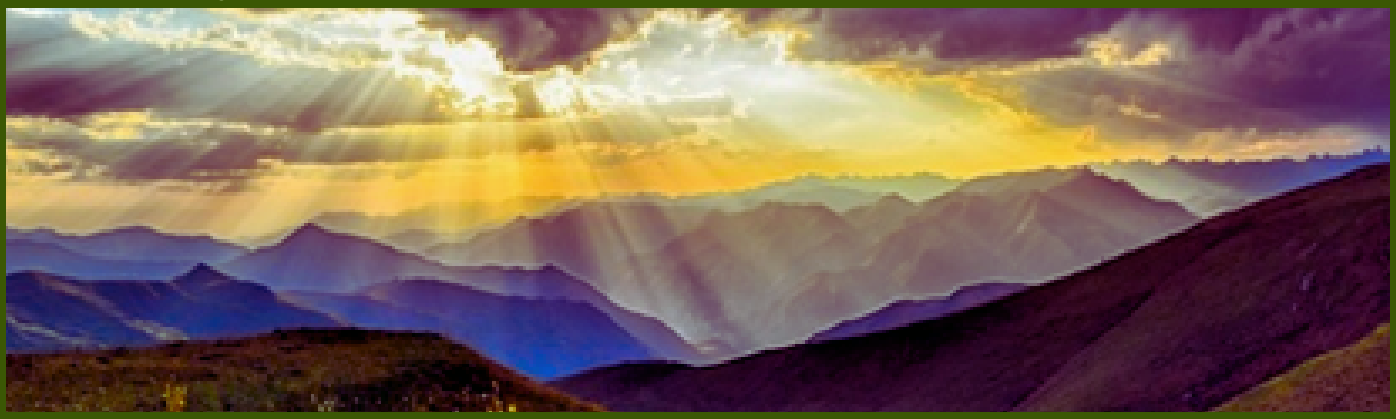
-Leo Kalpanee Hansika-
Club Member

TECHNOLOGY A SOLUTION FOR THE ENVIRONMENTAL ISSUES

Chief Seattle once stated, “the earth does not belong to man; man belongs to the earth”. The planet is the creator of the human being. All the necessary living requirements, including fresh air, water, food, and shelter facilities are naturally granted to everyone living on this earth. People are breathing, cultivating, mining, educating, transporting, providing a variety of services, and manufacturing by utilizing those freely granted resources on this planet. These unlimited caring and compassionate characteristics of nature demonstrate where the only place life can exist.



The principle of nature is people must consume resources to fulfil life requirements while protecting the ability of future generations to consume those resources to fulfil their life requirements without having any difficulties. This equity and equality principle is called sustainability. The concept of “Triple Bottom Line (TBL) is introduced to ensure balanced achievement between the planet, people, and profit through every economic activity in which people engaged. There are mainly two types of resources available for producing food and forages. Namely, renewable resources, “resources that have the potential to be replaced over time through natural processes”, and non-renewable resources, “resources whose stocks are limited or fixed in nature”. Trees, grass, solar energy, soil, and groundwater are some of the renewable resources while aluminium, coal, phosphates, oil, and steel are examples of non-renewable resources. Today the world’s attention goes toward protecting non-renewable resources that are subjected to depletion over time.

The national and international level environmental laws, non-governmental organizations, international funds, and corporate-level strategies work together to achieve sustainability. This means though routine economic activities of people there is an environmental cost associated. The following briefly explains key environmental issues;

1.Climate change – occurs as a result of increasing the number of Greenhouse gases (Carbon Dioxide, Methane, Nitrous Oxide, and Fluorinated Gases) in the air. The melting of glaciers and the change in seasons are the adverse consequences of it.

2.Global warming – adding Greenhouse gases (Carbon Dioxide, Methane, Nitrous Oxide, and Fluorinated Gases) to the air through the burning of fossil fuels and chlorofluorocarbons lead to an increase in the temperature causing warming oceans, drought, storms, heat waves, and rising sea levels.

3.Ozone layer depletion – chlorofluorocarbons used in industries (e.g. aerosol cans) cause to create a hole in the ozone layer. This allows the sun's harmful ultraviolet rays to enter the earth causing skin diseases.

4.Solid waste management – involves generating, collecting, transporting, processing, and disposing of solid waste such as tires, furniture, toys, appliances, vehicles, garbage, and latex paints.

5.Deforestation – elimination of trees, plants, and wild animal species from forest lands. This may harm biodiversity by affecting oxygen levels, and temperature, and reducing the availability of raw materials for day-to-day usage.

6.Marine pollution - poor waste management practices, discharging of chemicals and trash blown to the ocean, and extreme natural events cause pollution of the ocean. Oil covers the gills of fish, skin and eye irritation, and lung and liver problems are the result of marine pollution.

Today, to overcome these harmful issues there are practices and actions are introduced nationally and internationally. 4R practice including reducing, recycling, reusing, and recovering is one of the popular practices followed by every organization. Today the world shifts its focus from industry 4.0 practices to industry 5.0 practices. In other words, focusing on ways of improving the benefits of the planet and society for well-being while introducing technological innovations for welfare. That's why technological innovations take place as solutions for environmental issues.

According to Rogers (2019), the following are some of the technology-based solutions to mitigate the adverse impact:

1. **Carbon storage facilities**

The technology allows the capture of carbon when it is generated from its sources, compressing it, and moving it to permanent storage sites. That stored carbon dioxide is used by different industries to produce alternative products profitably such as plastics (polyurethane). According to the research done by Stanford University, this captures carbon dioxide from the air and can convert into synthetic fuel at the cost of less than $100.

2. **Use Hydrogen to transits energy**

Manufacturing vehicles including cars, ships, and buses with a battery having hydrogen-powered fuel cells store more energy with less weight. Which is ultimately a solution for reducing carbon dioxide emissions approximately by 60 percent. Not only that but also, Hydrogen provides a long-term transport and storage solution for renewable electricity.

3. **LED bulbs**

LED bulbs apply in homes and workplaces to reduce energy consumption instead of traditional incandescent bulbs.

4. **Accessible solar power**

Solar energy power is used to bring energy quickly and inexpensively to the people who are living in unelectrified areas. For instance, sub-Saharan Africa and the Caribbean.

6. Public electric transport and electric trucks

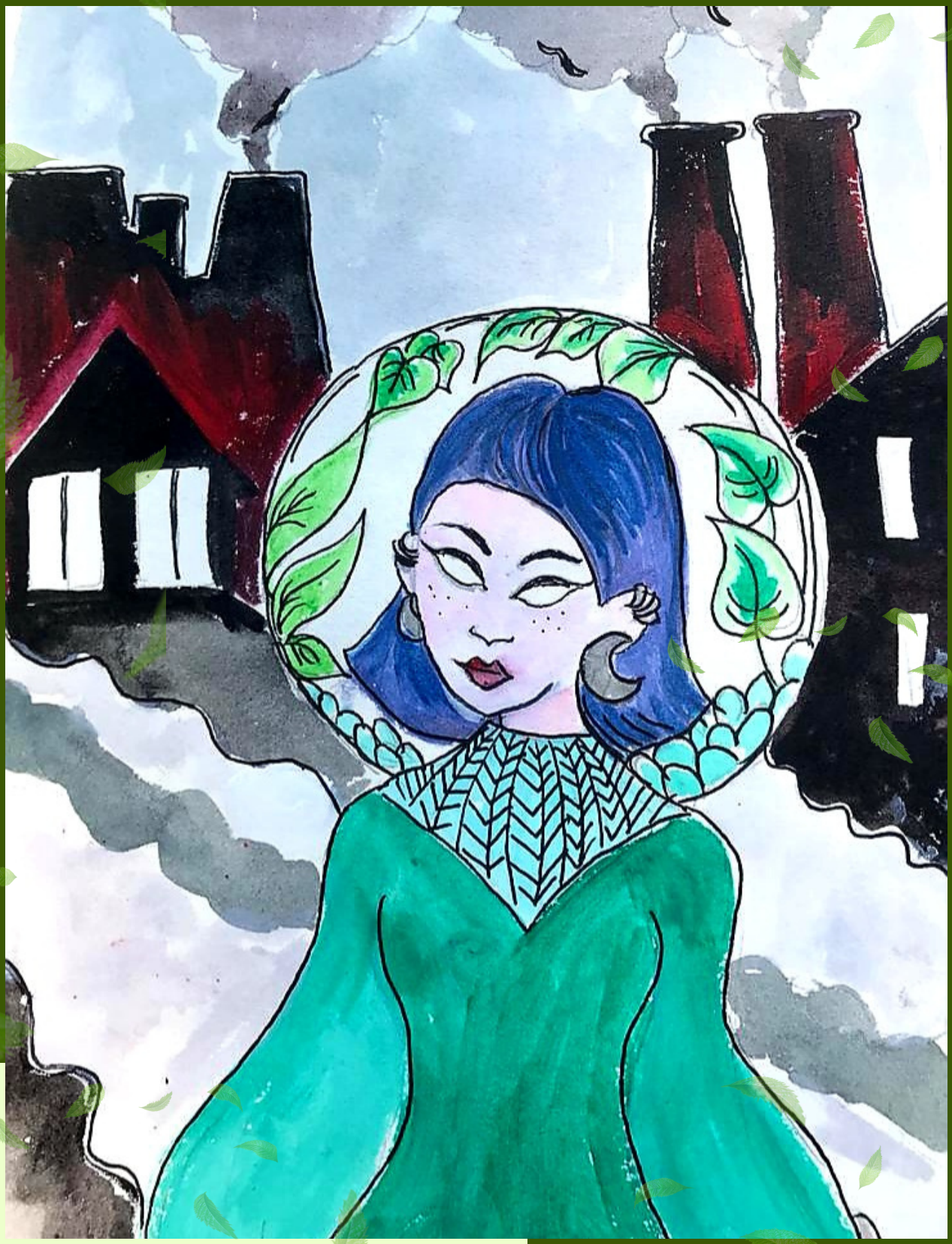
Electric vehicles in the form of electric and hybrid vehicle models are the innovative solution for eliminating, SOx, NOx, and CO2, all major issues in most cities today. In China can be seen e-Buses use upfront batteries with high-cost diesel usage limiting to lower cost of ownership.
Moving on to battery electric commercial vehicles (BECVs) is a new trend in the truck industry.

7. Plastic recycling

According to the statistics 260 million tons of plastics are wasted across the globe every year. Therefore, the circular process for recycling plastic is a novel solution. Pyrolysis uses heat and the absence of oxygen to convert plastic waste back to liquid feedstock and is one example of a circular process. Ultimately, this benefited the economy, society, and to the environment.

Mother of nature is the only place all living creatures can survive and develop themselves. When people engaged in economic activities by recreating the structure of the environment it is our responsibility to think about sustainable practices. Because of climate change, deforestation, marine pollution, air pollution, water pollution, global warming, and so on are the key issues yet to be addressed. Where the industry 5.0. focusing on. So, to create a win-win situation for both living creatures and the planet technological innovations can play a vital role now and in the future.

-**Leo Chamudini Jayarathna**-
Club Member



Leo Sayuri Bhagya
-Club Member-

Global Warming and Earth's Changed Environment

(With global warming the environment has changed, through its geography, temperatures and more)

Global warming and environmental changes or climate changes are two phenomena that go hand in hand and are inter dependable in many aspects. Global Warming is increasing the earth's surface mainly due to human activities. This is a result of the continuous occurrence of these activities even way before the pre-industrial period. Human activities like fossil fuel burning and the release of industrial gases which increases the green-house gases which trap the heat inside the atmosphere of the earth's surface can be mentioned as the main culprit of global warming. With the industrial revolution, this phenomenon drastically escalated.

According to the Climate report of NASA "since the pre-industrial period, human activities are estimated to have increased Earth's global average temperature by about 1 degree Celsius (1.8 degrees Fahrenheit), a number that is currently increasing by more than 0.2 degrees Celsius (0.36 degrees Fahrenheit) per decade." It says the current global warming trend has increased at an unprecedented rate after the 1950s and with the start of the new millennium.

Climate change is a change in the average weather patterns which tends to be long-term such as the global warming we are discussing above. This long-term trend differentiates climate change from natural weather variabilities. Signs of global warming are everywhere nowadays without specifically affecting a certain geographical region, but affecting the whole earth as a one. Also, the effects of global warming are getting more complex than just increasing of temperatures.

This Climatic change leads to complex shifts in the earth now affecting our planet's weather and climate systems which we are talking about here as environmental change. The most significant effects of climate change that affect our environment are Glaciers melting in the Earth's poles which also gives rise to the water levels in the oceans & seas. It is stated in the national geographics that global sea levels are rising 0.13 inches every year which has become more fast rate in the past decade.

Also, global warming leads to wildfires apart from the melting of Ice which also affects the wildlife and the habitats of the terrestrial animal as well as species that live in arctic environments such as penguins. Extinction of some animal species such as butterflies, foxes as well as plant species is also endangered. Significant climate changes are the precipitation has changed and increased across the globe with global warming which leads to droughts, wildfires, lost crops and shortage of drinking water issues which significantly affects humankind.

What we have highlighted here are a few of the major hazards and environmental changes of global warming, which can bring rather massive consequences to mankind hence we as children of this mother nature need to understand we can't live in this world in our own way but we have to live harmoniously with the nature around us while protecting and preserving them.

-Leo Isuru Thisara-
Director in Club Networking

ECONOMIC DAMAGE FROM CLIMATE CHANGE

As Sri Lanka is a small country surrounded by sea, It is prone to frequent cyclones and sea level rise.
A recent report released by the World Bank revealed that the gradual rise in temperature and changes in rainfall patterns may severely impact Sri Lanka's gross domestic product and living standards.
This information is included in a report on the areas most affected by climate change in South Asia. According to the report, Sri Lanka, India and Bangladesh are the most threatened countries.

The report prepared for Sri Lanka shows that by the year 2050, the ambient temperature in Sri Lanka may increase by 2 degrees Celsius.
According to the report, two main factors affect Sri Lanka's constant exposure to climate change.

01. Changes in climate conditions
02. Changes in carbon release

The biggest impact can be on the Northern and Northwestern provinces. Even now, the people living in those provinces are facing dangerous weather conditions such as low rainfall and high temperature due to climate change. Poverty and a decline in the standard of living are already seen in the Northern Province, where a large number of poor women who have become displaced and widowed due to military actions live.

Apart from this, North Central and Western provinces are also under this threat. The World Bank warns that the standard of living in these provinces will drop by about 8% in the future due to rising temperatures, changes in rainfall patterns, and carbon emissions. How will climate change affect the economy and living standards? Agriculture in Sri Lanka is likely to be severely affected by rising temperatures and changing rainfall patterns. In particular, the gross domestic product will fall due to crop damage, failure to cultivate at the right time, crop destruction due to floods etc.
In addition, there are warning that the standard of living may further decline due to the increase in deaths from various diseases and infections.

Due to this situation, educational activities may also be affected. As well as that due to the threat of climate change, there is a risk that per capita consumption will decrease and poverty and income disparities will increase.
By identifying the areas most likely to be affected by climate change and taking appropriate measures, it will be possible to reduce the damage.

-Leo Maduhansi Pemarathna-
Club Member

SAY GOODBYE TO OCEAN POLLUTION

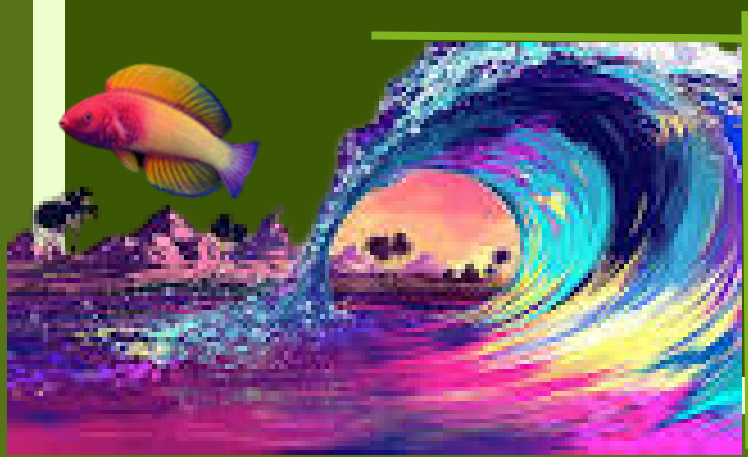
Causes of plastic waste in the ocean when we dispose of plastics that we no longer use they can follow several routes. They can be incinerated recycled and end up in a landfill or anywhere else if we don't dispose of them properly. Those that are not recycled or incinerated even those that are still in the yellow container can be washed into the sea or the ocean due to the wind or the rain. In addition, we also find plastic in the sea that originated from the delivery ate dumping of garbage. Accidental dumping from ships or due to sewage treatment plants. None of this would happen on such a large scale if we didn't manufacture this amount of plastic we do in the first place.

Types of plastic in the ocean more than 80% of marine litter are plastic. Of this percentage, we can confirm that 49% corresponds to single. Single-use plastic is an alarming quantity. Another 27% corresponds to the plastic used in fishing equipment and the remaining 6% is other plastic. The most common single-use plastics that have been found on beaches and seabed are lids. Bottles, cigarette butts, cotton buds, snack wrappers, hygiene items, plastic bags, Tupperware, straws, plates, glasses, balloons and food containers. These products represent 86% of single-use plastic or 43% of all marine litter. Some have even been found 10 000m in depth. However, some areas which are called plastic, islands have been identified. Where they have a great concentration of plastic.

Consequences of plastic in the ocean, on one hand, plastic waste causes entanglement in certain marine animals. Hindering their development and even causing their death. Some of these animals mistake pieces of plastic for their usual food. Something that can block their stomach and also lead to their death. Human beings also ingest these materials as a consequence of the food chain. In addition in the long process of decomposition, microplastics and nanoplastics release chemicals that are harmful to life in ocean water. On the other hand, there are some species of bacteria that developed on plastic. Which moves freely and takes them to ecosystems that they are not adapted to lastly plastic waste in the ocean, also has a negative impact on our economy especially, the tourism and fishing sectors.

The solutions must involve producers, consumers and those who manage waste. But of course, it has to be supported by the government. The main solutions we propose are reducing the consumption of plastic and avoiding using single-use plastic. In fact, the European parliament has approved a ban on single–use plastic in 2021. By foods that are sold in bulk. So you can avoid buying plasticized and packaged foods in excess. Avoid using cosmetics and microplastics and opt for biodegradable clothing.

If you already have plastic products try to reuse them as such as possible recycle. Leave the plastic in the right place to be properly processed. So it doesn't end up in our ocean. Demands that efficient recycling methods be available as there are still types of plastic that cannot be recycled. Lastly, another solution that can help is to create taxes for the most polluting plastic. This way companies will make an extra effort to opt for plastic that can be recycled or biodegradable options which are even better. There are also solutions for the plastic that is already in the ocean. Such as the ocean clean-up project. This is a mechanism that collects the garbage from the sea with the help of structures designed properly so as to not cause damage to the fauna and flora. Another project device by the Norwegian tycoon is the launch of a large research vessel. That will pursue novel solutions for cleaning plastic from the oceans. Finally, recycling can be improved with the help of bacteria that ingest. In our sea and ocean, there are 150 million tons of accumulated plastic. In fact, it's estimated that no less than 4.8 to 12.7 million tons of plastic end up in the oceans each year.



-Leo Liyamini Ishara-
Club Member

ARE THE CREATORS THE RESOLVERS?

The environment exists as man is based on the environment and the environment is based on man. That is why there is no mistake in calling man the creator of the environment. But the problem lies in the fact that the designer himself wears his own creation to the mouth of destruction. The various behaviourpatterns of human beings are doing great harm to the environment without them knowing. Unnecessary disposal of garbage, misuse of water, cutting of trees, use of polythene, etc., all these things have a negative impact on the environment.

"The development of a country can be measured according to how a tree grows." Shri Jawaharlal Nehru has said. A truly growing tree is a living symbol of a country's development. Commenting further on the environment, Mr Nehru has also said:
"The forest is important for many reasons. Since we have destroyed the forests to an unnecessary extent today, we should not allow them to continue to do so and should be protected. Although we need to develop products to meet the increasing population, if we do not use the most effective production methods, the economy will not survive. Indiscriminate destruction of forests is not the solution."

It has been decades since Nehru came to the idea that forests should not be destroyed. But even today it is happening on the other side. That means deforestation is happening fast. If forests are the lifeblood of the economy, cutting them means cutting the economy.

If the environment is destroyed, man will also be destroyed. If so, what should be done? Only man, the creator, can prevent the aforementioned adverse effects. Because man is the primary cause of this disaster that the environment has become today. And it won't be long before that situation becomes a challenge to the survival of living beings. By loving the environment and protecting the environment, both the environment and human beings will flourish for a long time.

-Leo R.A.T.N. Wijepala-
Club Member

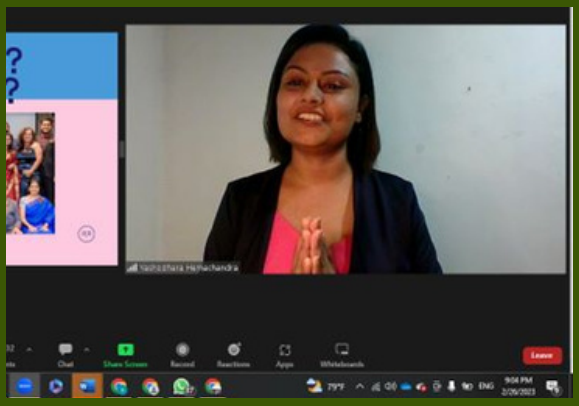
Leo Aruna Madhusanka
-Club Member-

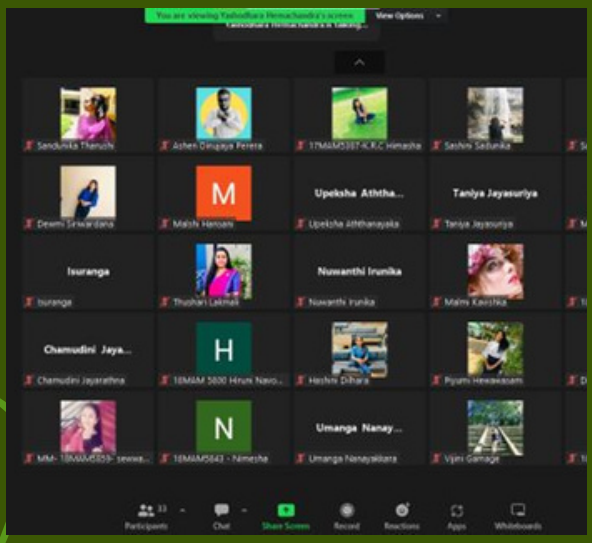
PROJECTS

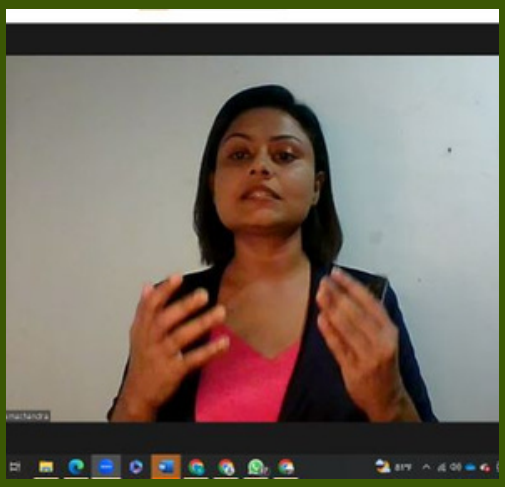
The Project Acquiry

Under the continuous project, “The Project Acquiry” with the theme of Mastery to Unshackle the Hidden Self Creator was started from the month of November with the purpose of improving and enhancing the 21st-century skills among the Members in the Leo Club of Sabaragamuwa University of Sri Lanka and preparing them for the working environment.

After the completion of three skill development sessions including Project Management, Designing with Canva and Advanced Email Handling Skills, the professional development team successfully conducted the fourth Session - “The Art of Public Speaking” on 26th of February in order to help members learn how to speak fluently on and off the stage with more conviction, confidence and important tips to create a fluent and powerful public speaker.



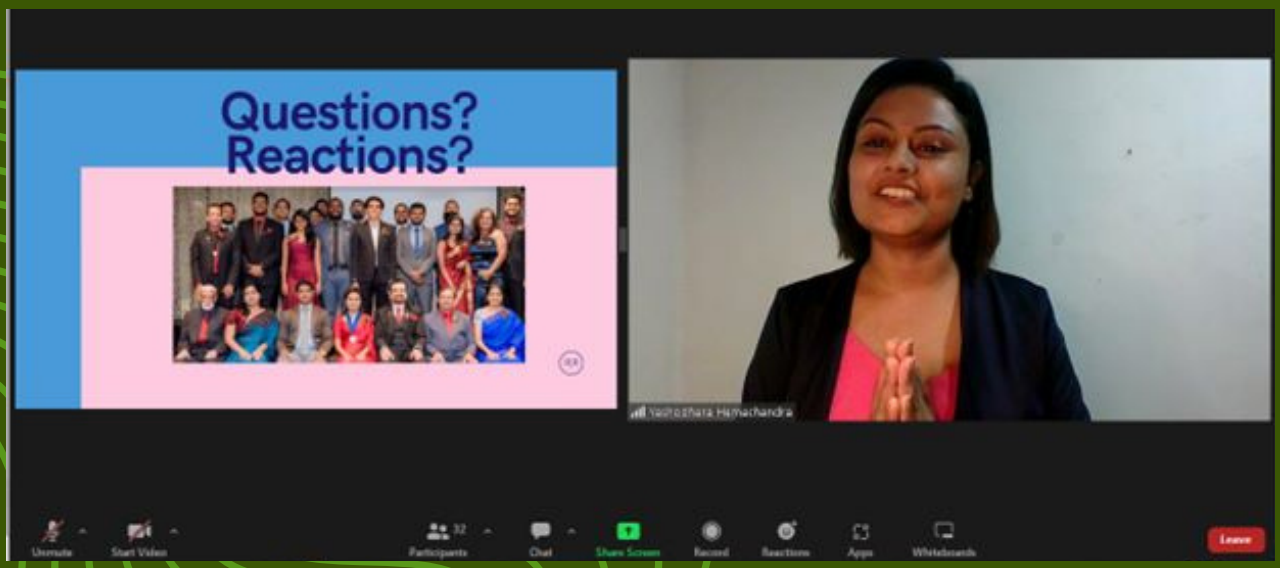




The Keynote Speaker was Ms. Yashodhara Hemachandra, Lecturer in Hospitality and Tourism Management,Head of Academics- Kensley Graduate School and also she is the president of the Marketers Toastmasters Club.

After the session we received many positive comments as she did a great, inspirational session in a more attractive manner.

So as the Project Acquiry is a continuous project we look forward to conduct more exciting sessions like this which are tailored to members in the coming months, focusing on the skill areas they need to develop.



FUN EPISODE

1.Why do watermelons get upset so easily? They're melondramatic!

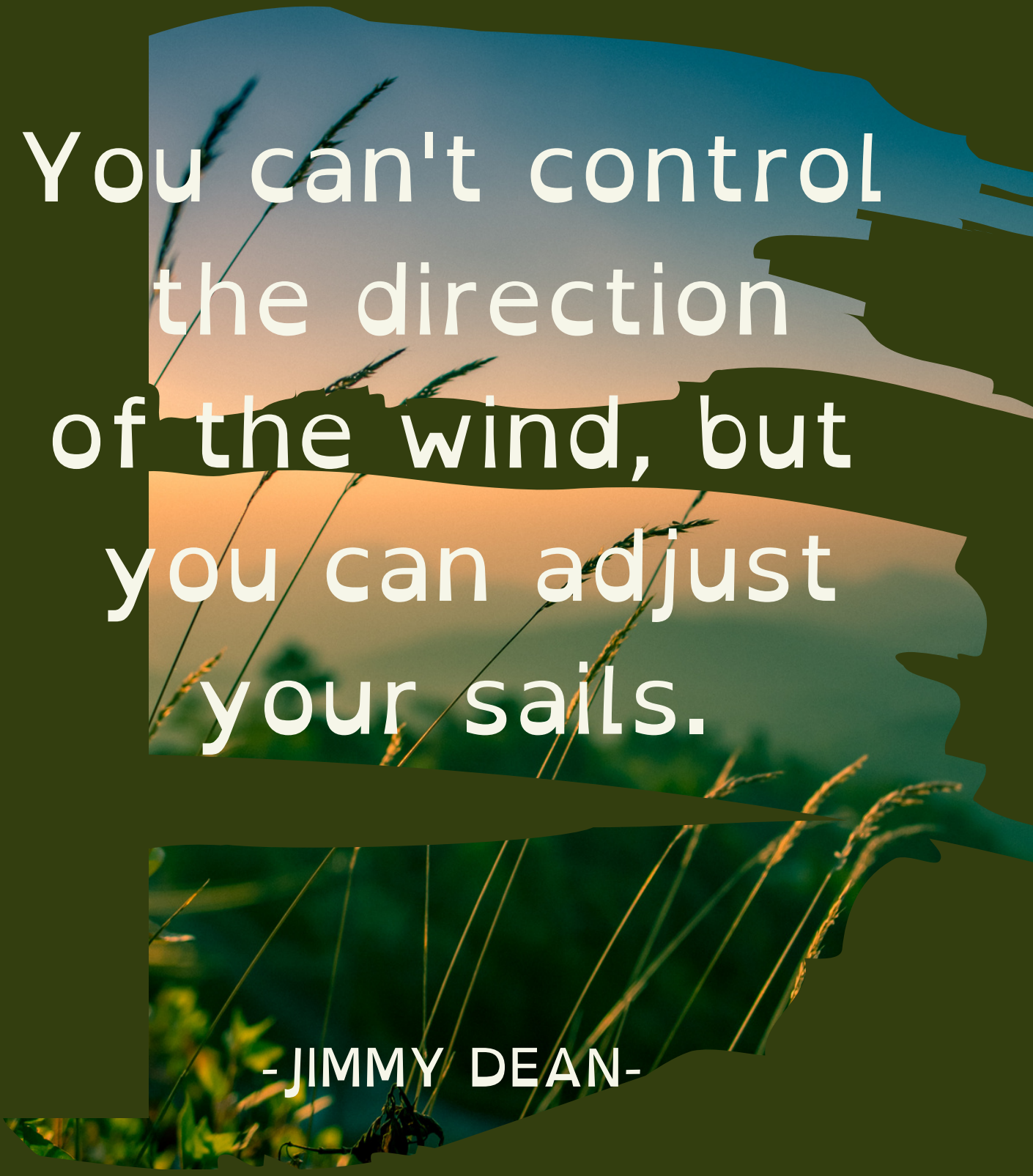
2.What did the egg say after it was ghosted? Why the shell are you egg-noring me

3.What do you call a worm with no teeth?
A gummy worm!

4.What is a whale's favorite candy?
Blubber gum!

5.***What kind of bird works at a construction site?***
A crane!

Leo Sayuri Bhagya
-Club Member-



You can't control the direction of the wind, but you can adjust your sails.

-JIMMY DEAN-

Editorial Note

"We have forgotten how to be good guests, how to walk lightly on the earth as its other creatures do"
-Barbara Ward-

The environment itself is a magnificent feeling, but at present severe damages have been done to destroy the environment itself.
The main purpose of the February edition of our magazine, which focuses on the theme of "Environment" is to create awareness among the public to educate them how to enjoy the environment while take necessary measures to protect it any cost.

I would like to express my heartfelt gratitude to Professor E.P. Kudavidanage, professor in the Department of Natural Resources, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka for her valuable contribution to the "STEER". Your interview on the beauty and significance of Horton Plains has added immense value to our publication and I hope it will help to make a real difference in raising awareness, understanding and inspiring our readers about Horton Plains. We are truly thankful for your valuable contribution.

A special thank goes to Mr R.A.D.C. Ranathunga, lecturer in the Department of Tourism Management, Faculty of Management Studies, Sabaragamuwa University of Sri Lanka for his insightful article and I hope that it will provide our readers with a unique perspective on the importance of environmental education. I appreciate the time and effort that you put into creating this content, and it has undoubtedly added value to our publication.

Team steer believes that all of you readers will enjoy this issue and add something valuable to your life.

Thank you

Leo Thathsarani Wijesundara
Chief Editor

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