



## YOUNG SCIENTIST PROGRAM 2014-2015

# EARTH HOUR

ON 28<sup>TH</sup> OF MARCH, 2015

REPORTED BY,

**GBY ATEE**

**S. DANI ROVAS**

**J.M. MERESHIYA**

**R.J. RESHMA**

REPORTED BY,

**GBY ATEE,**

**GREEN TEAM LEADER.**



We the young scientists of the year 2014-2015 planned for the 15<sup>th</sup> meet to be an awareness program. Followed by the selection process the first meet of the chosen students' was held at LMS Boys Hr. Sec. School Marthandam on 26/10/14. It was a meet of advice. Then was the scientific awareness camp at CSI college of Technology, Thovalai. Here we were made aware of the need for sustainability. The next meet was at MACET on 22/11/14 which was the Management Concept in Thirukkural. It emphasized the role that Thirukkural plays in our life. Then the fourth meet was held at Govt. Medical College, Asaripallam on 29/11/2014. It trained us to become young doctors and the thought of becoming doctors sprung up in our mind. The next camp was a Study on Sustainable Environment on 6<sup>th</sup> and 7<sup>th</sup> of December. It was a two days camp which was held at various

places like Thirukurumkudi Nambikovil then PSN College and then finally at Vivasaya Seva Sangam, Puliyanakudi. It was on this camp we contributed to the Swachh Bharat Mission and we also got a live experience of the true beauty of nature. Then was the Coastal Environmental Study Camp which took us around most of the coasts in our district. Here we became aware of the life of coastal people and we were exposed to a new place and the life of new people. Then a common team meet was organized on

04/01/2015 at Hindu Vidhyalaya School, Marthandam through which we realized the true potential of our team members. The next meet was at Government Library, Pienkulam on the 17<sup>th</sup> of January. It was the Arivial Tamil Muzhakam, and this meet highlighted the importance of Mother tongue Tamil. The next program was a peculiar one at IIST and this was indeed a great experience for us. Then was the Technical Presentation on Science & Technological Innovations held at Maria College of Engineering and Technology, Attoor on 14<sup>th</sup> of February. To make us realize the role of science in our life and its development in India the National Science Day Celebration on Scientific Development in India, on 28<sup>th</sup> of February at SIGMA College of Architecture, Moododu. Then was the most awaited program, the Biodiversity camp on 7<sup>th</sup> and 8<sup>th</sup> of March. It was a unique and exclusive program which made us aware of the prosperous biodiversity of our nation and the need for protection of our affluent biodiversity. To extent our skills in presentation part a common team meet was organized at NVKS School, Attoor on 15<sup>th</sup> of March. After the parents meet held at SIGMA College on 22<sup>nd</sup> of March a team meet was organized at Vpro Technologies on 28<sup>th</sup> March. The next program was organized on the very day that is the Earth Hour Program at Rotary Community Center, Nagercoil.

**“The first step toward change is awareness. The second step is acceptance”. - Nathaniel Brandon.**

**“The Earth does not belong to us: we belong to the Earth”- Marlee Matlin**

**“Climate change is a terrible problem, and it absolutely needs to be solved. It deserves to be a huge priority”- Bill Gates**

It is clear from the words of Nathaniel that ‘Awareness is the first step towards a change’. To bring in awareness of our responsibilities towards Mother Nature, Kumari Arivial Peravai organized the **Earth Hour Program on 28<sup>th</sup> of March, at Rotary Community Center, Nagercoil**. With so much of zealous and gusto I assembled at the Rotary Community Center at around 5: 30pm. Once the hall was full with young scientists the organizer Mr. Velaian, gave a brief introduction about the program of the day. He cited that Earth Hour was first started in the year 2007. We were issued a self evaluating sheet and we marked us on our own. He then mentioned that on this special day people walk with candles without electricity as an act of conserving energy. He added that the final presentation will be at Central University of Tamil Nadu. We would be questioned more and so we need to get trained for it. The final presentation has brought great fame to Kumari Arivial Peravai. The team meet that happened that morning went on well in the presence of Mr. John Rabi Kumar he added. Only if we correct our mistakes we can see great results and so we must accept and correct them without any hesitation. On 18<sup>th</sup> of April we would have a mock presentation at Annamal Nursing College he cited. There we would be questioned that would give us the confidence to present at the university. He then welcomed Er. Benziga Rajan to converse with us.

Er. Benziga Rajan, Scientist ISRO was with a happy news to all the Indians. It was a news that would bring fame and pride to our nation. A satellite namely IRNSS was launched successfully that evening. It stands for Indian Regional Navigation Satellite System. It has been launched with an aim to fulfill and improve our navigation system. At present we use GPS (Global Positioning System) to locate and find place i.e. navigate us. GPS is an invention of the Americans and we Indians use GPS to

get navigated. The main purpose of a GPS is to navigate ships and airplane. One of the major drawbacks of GPS is that its accuracy is only about 20m so that the synchronization is not very efficient.

To locate a person on Earth 4 satellites are necessary. A latitude satellite, Longitude Satellite, Altitude satellite and a time tracking satellite is needed. In the new design of India 4 navigation satellite will revolve in 4 sides of India in the shape of no. 8. 3 other satellites would revolve near the equator. Our earth rotates at a speed of 454 ms-1 and our satellite also rotates at this same speed as the earth rotates. It is above 35,576 Km high. The plan for IRNSS began in 2013 and by 2016 all the satellites would be launched. The presence of IRNSS makes us depend only on our nation for navigation which would be more accurate as well. This system can also be shared with our companion nations as well.

Then it was over to Mr. John Rabi Kumar. He cited that he reprimand only for the good of others. All in KAP are open minded and no one is partial to others. KAP only aims at developing and improving the caliber of the students. He added that the intensity of our voice tells the other about the purity of our words. During the selection phase all members were very strict and then they all were very liberal. Now it is time for them to be a bit strict he added. We must do what we feel as important. The final presentation shows the real capability of the students. Only if we practice we can do well at the university so it is very important for us to attend all the practice sessions. KAP wants to prove to others that all the 56 students of KAP are gems so they offer all these training. He advised us to be a master in the entire chapter in our research work. KAP never wants to see any student being a loser instead it wants all to be champions and leaders of the future. He cited that it is very difficult to satisfy him so we should work harder and harder for our betterment.

Lekshmi, the former young scientist stated that though all students presented well the team effort in them was less. Whatever we do we should do it whole heartedly and with full of gusto. Parents should guide the students and motivate them in the positive way. We should put our continuous effort to be successful. We should be ready to answer any question asked regarding our topic so we must practice and make our self a master in our work. She added that 'A person who uses the opportunity is winner not the people who get opportunity'. We should not overlook the word afraid and we should move on confidently. Then official meet began.

I had to compare the meet so I felt that it was my ultimate duty in making the program a successful one. I welcomed the dignitaries on to the dais and they included; *Rtn. PP. Adv. G. Aji Kumar*- President, Rotary Club of Aasramam, *Shri. G. Arul Jerald Prakash*, Director, Kerala State science and Technology Museum & Priyadarsini Planetarium, Trivandrum, *Rtn. MPH. J. Navamani*, District Governor Elect, *Mr. Mullanchery M. Velaian*, Organizer of KAP, *Er. Benziga Rajan*, Scientist ISRO, *Dr. Jopprakash*, headmaster, Govt. Hr. Sec. School, Naloor, *Rtn. P. Vijayakumari* - President, Rotary Club of Nagercoil, *Rtn. PP. Oomen Babu*- President, Rotary Club of Thuckalay, *Rtn. PHF. Er. M. Albert Nelson*- President, Rotary Club of Nagercoil Town, *Rtn. PHF. Er. K. Ganesh Kumar*- President, Rotary Club of Yarn City Nagercoil, *Rtn. Dr. Nirmala Manuel*- President, Rotary Club of Golden Flowers, *Rtn. Bala Johnsel Raja*- President, Rotary Club of Nagercoil Queens, *Rtn. PHF. Brig*

*Chandra*- President, Rotary Club of Marthandam Queens and Rtn. PHF. S. Prabhakaran, Asst. Governor – Zone II.

After welcoming all to the dais the president called the meeting to order. Followed by that was the Rotary prayer and the Tamil Thai Vazhthu. Then I gave a brief introduction about the program of the day. **Nature will protect us only if we protect the nature.** From this it is clear that saving Earth is the most essential thing for our life. Earth Hour is a global climate change initiative. It is an event that aims to create awareness of our responsibility towards a sustainable future by conserving energy in a simple way of turning off the lights. Millions of people turn off their lights for Earth Hour on the last Saturday of March between 8:30 pm and 9:30pm and this year it is being celebrated on 28th of March. Earth Hour first started in Australia, in the year 2007. It has been a habitual practice of KAP and the Rotary Club to celebrate the Earth Hour Program and create awareness about this to the unaware people.

This program is all about giving people a voice on the planet's future and working together to create a sustainable future for planet earth and for the future generation. In the special hour of Earth Hour, all lights are turned off as an act of conserving the exhausting energy. A lot of energy is being conserved, when this is practiced worldwide. At present, we humans greatly depend on electricity. When the need for electricity amplifies, a situation would rise in which we should use electricity prudently and also find some alternative sources to meet the electricity demand of the huge increasing population.

In order for us to make our life memorable, eventful and joyful, electricity has become part and parcel of our day-to-day needs. We have become so addicted to the usage of electricity that a single day hardly passes without having to switch on luxurious gadgets. In this process, we sometimes miss to realize the fact that everything has its own limitations in terms of its availability on the Mother Earth. With a view to sustain the quality of life, it is mandatory that every one of us does realize the scarcity of electricity and make judicious use of it. It is necessary for us to keep the words of Gandhi in mind, **“Man has everything for his need but not for his greed”**. Being students, we must realize and shoulder our responsibility to conserve energy. It is the prime responsibility of alerted people like us to aware other people about the importance of energy conservation. This awareness can stimulate new inventions and also pave a way for a more sustainable future. It is vital that we pass on a clean, healthy and safe environment to future generations also by starting it today by conserving energy in every single aspect.

Next the organizer, Mr. Mullanchery M. Velaian was welcomed by me to give the introductory address. He in his talk mentioned that from the year 2007 when Earth Hour Program started worldwide, it is also being celebrated by Kumari Arivial Peravai along with the Rotary club. It was a news that made us proud; that Kumari Arivial Peravai and Rotary club are the only organization in Kanyakumari that celebrates the Earth Hour Program in a productive way. Today in this era many regions keep destroying every day. It is indirectly by our actions. The past generation has left this world in a wonderful condition for we people to live. In the same way it is very important for us too to

leave this planet in a better way than it was for our future generation. The future generation should enjoy the environment and ecosystem that we are enjoying in the present. So all our activities should be sustainable so that the future generation can benefit the ones we enjoy now. All in Rotary club take continuous effort in creating awareness and they are to be appreciated for their hard working and tireless heart. He welcomed all dignitaries to the special occasion and then it went on with the next program.

Rtn. PP. Adv. G. Aji Kumar- President, Rotary Club of Aasramam welcomed all once again a felicitated the gathering with a few words that boosted us with energy. I then welcomed **Dani Rovas** of Maroon Team to give a talk on **Sustainability Overview**. The three pillars of sustainability are Economy, Society and the most significant one, the Environment. Moving towards sustainability is the major challenge that we face today. Sustainable Environment consists of practices that stress on conserving the environment. To make sure that future generations will not experience worse, we need to be aware of the ideas and requirements of sustainability. According to sustainability principles environmental management involves managing the land and forest. Forests moderate the local climate and the global water cycle. They also conserve biodiversity, protect water quality, preserve soil and soil quality, provide fuel and purify the air. By implementing Sustainable Land Management methods long-term productive potential of the land resources can be ensured and the environment can be sustained. The usage of fertilizers, pesticides and insecticides has possibly increased the yield of the crops but has impaired the quality of agricultural land and making it unsustainable. Almost all the 38% of the Earth's land surface is getting degraded due to the addition of fertilizers. Sustainable Agriculture is capable of maintaining productivity while having minimal effect on the environment.

Water covers 71% of the Earth's surface. The population is increasing and so there is an increase in the demand of water. The most suitable way for using water sustainably is the construction of green buildings in which the overall water consumption is reduced by activities like fixed usage and increases in wastewater reuse. Science and technology benefit society in a variety of ways. New technology allows increased productivity. The major role that sustainable technology is most likely to play in our life is solving problems that are caused by the activities of humans. Energy is an important aspect of our life. The world population is growing and increasing number of people aspire to higher standards of living: we need more and more energy. Thus it is very important for us to minimize the consumption and maximize the conservation. Sustainable energy is the energy source which can meet the growing demand of today's people without compromising the future demand. Finally she concluded by saying that sustainable use and management of land and forest, water resources, agricultural practices, energy resources and technology are all the stepping stones behind creating a sustainable environment. So as young scientists we must come up with innovations that would lead to sustainable environment.

Then it was the turn for **Abina** to converse and share with us her views on the theme **Land Protection**. Land is the area that is covered with natural resources. Land is only resource which offers other resources to mankind. Humans should not misuse land and its resource. A large portion of the land has been degraded due to the activities of humans. Land conservation is the process of protecting

natural land and returning the land to its natural state. Land can be conserved by *preservation, restoration, remediation, and mitigation*. For the treatment of land we need to use biological process. We should make people aware of the consequences of using artificial techniques and must turn their mind towards using biological processes. Restoration is the conversion of arable lands and barren sites to a land that can be of use to the community and helps in sustaining life. Preservation is the protection of those sites by forces and awareness. Remediation is clearing the polluted region with the assistance of biological products that makes it worth. One of the best examples for this is the Oil Spill in Mexico that was cleared using bacteria that were developed naturally. Those bacteria's digested that oil and thus the impacts were reduced to great extent. Mitigation is compensating a degraded site with a healthy site. Following all these methods can protect land.

**Sabrina** then spoke on the theme **Forest Conservation**. **“The woods are lovely dark and deep. They are our respite. Our place of peace. Our natural air filters. Our medicine cabinets. We literally can't live without forests”- Robert Frost.** Those words of Robert emphasize the value of forest. Area that is covered with trees and plants is called a forest. Due to the expansion of agriculture lands forest lands have been cleared. More destruction has been done after industrial revolution and urbanization. One of the major impacts of forest depletion is soil erosion and decline in the level of ground water table. Trees have the ability to hold water and soil but when they are being cut the ability is lost. It is not possible for us to live without using the forest for its abundant natural gift like food, shelter and fodder but it is our duty to protect and preserve them. Afforestation is the best method to combat the destruction of forests. Whenever we cut a tree we must plant a tree and this is the only best method towards using the forest sustainably. The forest act aims at the practice of afforestation and develops it into a green one. Many aren't aware of this and so being young scientists we must make aware the people about it.

The next talk was by **Mereshya** on **Water Resource**. Water is a natural resource in the Earth. Water is essential for our life. Water is used in two major sectors; residential and industrial. Industrial sector consumes more amount of water. 97% of the water is in sea and the water is not fit for drinking. Removing the salinity makes the water suitable for drinking and it can be done by distillation or reverse osmosis. Distillation is the heating the water to form its vapor and then condensing it to get pure water. Reverse osmosis is converting the impurities. 0.8 % of the Earth's surface is covered by fresh water bodies. They include glaciers, ice sheets, rivers ponds and lakes. 90% of the world's glaciers are in Antarctica. 98% of the surface water is used by the industries. Groundwater is the water located beneath Earth's surface in soil pore spaces and in the fractures of rock formations. This unit of rock deposit is called an aquifer when it can yield a usable quantity of water.

Then was the turn of **Reshma** of Maroon team to discuss with us on an important theme '**Agricultural Challenges**'. 'Without Agriculture there is no culture'. Agriculture is the main occupation in India. Sustainable agriculture is a type of agriculture that focuses on producing crops and livestock while having minimal effects on the environment. This type of agriculture finds a good balance between the need for food production and the preservation of the environment. Climate change, green house gasses and drought affect the agriculture. Global temperature has gone up considerably.

Farmers now add fertilizers to the plants which increase the yield but this makes the agricultural land unsustainable. We the humans are indirectly affected by this. Using natural fertilizer is the best way to prevent the effects of fertilizers. The next major problem is the improper irrigation system. Nearly one third of the crops are not irrigated properly. Inadequate storage system has led to the farmers selling the harvest early and as they are greatly being disturbed by other organisms that feed them on. Soil erosion due to water and air is also affecting the agricultural lands.

**Jereshya** then shared her views on the topic **Organic Agricultural Practices**. Organic farming is an agricultural method that makes the soil livable by bacterial organisms in the soil. Organic farming relies on crop rotation, green manure and compost to maintain soil productivity. Organic farming aims at producing high nutritious food. In this method soil is of great value. The soil mustn't be toxic and it must be only composed of organic compounds. The crops are most likely to be affected by insects. So organic pesticides are used. Crop rotation is a most effective means to control insect pests. Crop rotation helps to prevent soil reduction, maintain soil fertility, reduce soil erosion, control insect pests and help control weeds. Water needs to be maintained and supplied in the right proportion. Organic fertilizers make the soil rich, transform unhealthy soil to healthy soil, correct imbalances and is cost efficient. Production of vermin compost can also be used as manure. Earth worms, farmer's friend, are in danger due to the addition of artificial fertilizers as these fertilizers are salts. The wastes from the earth worm have all the essential nutrients for plant growth. The humble earth worms plough the soil and make it fertile for the crops to grow.

The world today is nothing but technology. To share some of the facts with us on **Sustainable Technology** I welcomed **Jefin** of blue team. Technology benefits the society in various ways. Technology is the collection of paraphernalia used by humans. It can also be defined as the application of scientific knowledge for practical purposes. Technology is being implemented in every part of our life, may it be business, education, transportation, communication or even in agriculture. Technology plays a significant role in all the activities. The increase in technology has created bad impacts on the environment like increase in air pollution and has led to the rise in global warming. Therefore there is a quick need for Sustainable Technology today to sustain in the environment. Sustainable technology is defined as technology that provides our current needs without sacrificing the future needs. Sustainable Technologies share the common goal of improving the environment by developing sustainable energy solutions for industrial and agricultural applications. The major role that sustainable technology is most likely to play in our life is solving problems that are caused by the activities of humans. The steps involved in solving problem with sustainable technology are; identifying a technological problem, developing a solution, evaluating the solution and communicating the solution. Some of the technologies include;

**Zero Emission-** Zero emission refers to an engine, motor, process, or other energy source, that emits no waste products that pollutes the environment. Understanding the importance of Zero Emission, September 21 is celebrated as Zero Emission Day. Zero Emission Day provides opportunity to benefit everything and everyone on our planet. **RoHS-** RoHS aims to restrict certain dangerous substances commonly used in electronic equipment. RoHS restricts the use of Lead, Mercury,

Cadmium and etc...Finally he concluded by saying that ‘**Every part of the world will be green when every heart of human is green**’. So it is our prime duty to contribute to sustainable technology by our innovations.

Then was the turn on **Abhirami** of Yellow team to converse on the topic **Water and Climate Change**. Water is life and climate change is threatening the sustainability of water. Water scarcity is expected to become a mounting problem. The major reason is the jagged sharing of rain. For example, the Atacama Desert receives no rainfall when Assam receives 450inch of rainfall annually. As parts of the country get drier, the amount of water available and its quality will decrease. If an area gets less amount of rain over months or years then the moisture in the soil dries up and creates cracks on the land mass. This condition is known as drought. Drought is caused not only by the lack of rainfall and high temperatures but by overuse and overpopulation as well. As temperature rise and rainfall decreases, water quality can be devastated. Another impact is the flooding of water bodies. Now in some regions flooding has become very common that people have changed their life style for it.



The next was a fascinating and different part, the issue of the awareness bag. Er. Benziga Rajan, Scientist ISRO issued the awareness bag to the team leaders. This awareness bag was issued for reducing our dependence on plastic and to move towards sustainability. Then Shri G. Arul Jerald Prakash felicitated the gathering. He cited that pollution is the major problem that we face today. Earlier the milky

way galaxy was visible but today due to the pollution the atmosphere has gone murky which makes those special scenes invisible. The intensity of light has an impact on our health is a statement that is scientifically proved. Over lighting is hazardous to our health. We the modern people turn on light to warm up the room and then turn on the air conditioning to cool the room. This is the way we think and all these action of ours are contributing to the destruction of the world. Everything we learn from our books has something unique in it. Only when the teaching system differs we can realize it and learn it through the interesting message that it has got within it. The best example for this is; when taught about a jackfruit we are shown the thorny outer layer instead of the juicy fruit inside. Our educating system must change in order for having better results. The development in us is not much because of our education system. We should not learn for the sake of learning but when we learn with a true interest towards it then the understanding aptitude will also increase. His talk was enlightening and thought provoking. Each and every word he spoke made us go into a deep thought that made us all feel great.

Then Rtn. MPH. J. Navamani, District Governor Elect honoured the former president and then he lectured the gathering. Rtn. MPH. J. Navamani asserted that this is the 7<sup>th</sup> Earth Hour Program that KAP and the Rotary club is celebrating. The aim of this program is to create awareness about leaving this planet in a better way than it was for our future generation. He congratulated the effort of KAP and also the students who boldly, confidently and heroically shared their views on their respective topic. We must be responsive towards our nature and work hard on preserving it. “Change is the only

thing constant in this world”. We must change our attitude and then try to change others. Change should start within us. One of the gifts of nature, trees, take in nearly 1 tonne of Carbon dioxide and convert them into usable oxygen. But we people out of our greed and attitude cut them. Global warming is something that we deserve as it is all because of our actions. After the mind opening talk of his mementoes were given which was followed by the vote of thanks by Rtn. PHF. Er. K. Ganesh Kumar- President, Rotary Club of Yarn City Nagercoil.

After the appetizing dinner we all prepared and set off for the awareness walk. Each of us had a candle lit in our hands as an act of conserving energy. Some also walked with a placard and the others followed them with the candle. It was the candle that was lighting our path. The whole crowd were looking at us with full of amazement and surprise. They all were wondering what those kids and great people are doing with this candle. All the vehicles stopped for us and we all felt proud. This made them all aware of the need for conserving energy as well. There is too much energy conversation instead of energy conservation. Keeping this in mind we were walking the talk which made us all fell great. “Small things that we do everyday bring great change in the future”. We were sure that this small initiative that we did on Earth Hour would bring great change in the community. I was sure that the thought of the people would also change by our simple action. We walked from the Rotary Community Center till the Collectrate and dispersed from there. The whole crowd melted away in different direction.

This meet was the fine of the finest and the joy of having contributed towards the conservation of Mother Nature filled our hearts. My joy knew no bounds. I became more courageous and felt very grateful to KAP for its initiative in creating awareness through we kids. I really enjoyed the day. I extend my deep sense gratitude to KAP and the Rotary club for arranging the meeting. Thanks to all members of KAP especially to Mr. Velaian the organizer, Mr. John Rabi Kumar, Mr. Sahajan, Mr. Shubin, Mr. Johnson, Mr. Sajeeve, Mrs. Krishnakumari, Er. Benziga Rajan, Dr. Joprakash, Mr. Thiruvengadam and the members of Rotary Club Rtn. PP. Adv. G. Aji Kumar, Rtn. MPH. J. Navamani, Rtn. P. Vijayakumari, Rtn. PHF. Er. M. Albert Nelson, Rtn. PHF. Er. K. Ganesh Kumar, Rtn. Dr. Nirmala Manuel, Rtn. Bala Johnsel Raja, Rtn. PHF. Brig Chandra, Rtn. PHF. S. Prabhakaran and finally Shri. G. Arul Jerald Prakash for their presence in making this program a grand fete.

**Hats Off to KAP !!!!!!!!!!!!!**

**REPORTED BY,  
S. DANI ROVAS,**

## MAROON TEEM CO- LEADER.



Electricity is one of the fast-growing demands of human community. The use of electricity creates a need for fuel that affects the environment in some devastating ways. However, the fuel necessary to produce electricity can be incredibly detrimental to the environment, creating a range of issues to the environment. The continued increase in electricity consumption is the core cause behind the increase in this problem. Understanding the environmental issues of electricity consumption, the best thing to decrease the impact is to use less electricity. As a contribution towards this, the Worldwide Fund for Nature introduced earth hour. This event is held worldwide annually encouraging individuals, communities, households and businesses to turn off their non-essential lights for one hour, from 8:30 to 9:30 p.m. on the last Saturday of March, as a symbol for their commitment to the planet.

**Every part of the world will be green when every heart of human is green.** So it is necessary the all the individuals of the world are aware of the event. Similarly for enabling the Young Scientists be aware of it and let them contribute for the establishment for a greener globe with efficient consumption of energy, Kumari Arivial Peravai conducted **EARTH HOUR 2015** on 28<sup>th</sup> of March in Rotary Community Hall, Nagercoil.

The meeting instigated with the words of acumen from the organizer of KAP, Mr.Mullanchery M.Velaian. He said that Kumari Arivial Peravai creates students for the society so that they develop into a triumphant being. He also stressed on the point that, **“Though education is the most powerful weapon that can change the world, educating the mind without educating the heart is no education at all”**. He also mentioned about the perfection of work and informed us about the next meet.

Next Er.Benzigarajan enriched us with information on IRNSS that stands for **‘Indian Regional Navigation System Satellite’**. The main use of IRNSS is for navigation purpose. This is the alternate for GPS (Global Positioning System) with technology imbibed in it for the better usage. GPS positions the place we are at, the speed at which we are travelling and at the direction we are moving in. It is mostly used by the fisherman and assisted the support of a satellite. This global positioning system was developed by the Americans. It works by using four satellites for human tracking, calculating altitude, latitude, longitude and time. Positions the landing of aircrafts, positions fleet and aircraft carrier and assistance in the configuration of city are some of the benefits of using a GPS.

Though GPS has so many uses, they too have some negatives. The main drawback is that it has a precision level of only 20m, making synchronizing a tough one. To overcome the disadvantages, India developed IRNSS. **India is the forth country to send navigation satellite.** IRNSS will have seven satellites (3 in geostationary orbit and 4 in synchronous orbit), out of which four are already placed in orbit. The forth satellite was launched successfully on 28<sup>th</sup> March successfully. Due to the

launch of IRNSS Indians could be benefited as they don't have to depend on Americans, track aircrafts of India in Ladak and also position the Indian fleet. Though India has developed this new satellite for navigation, it has also planned for using the GPS.

After that Shri. John Rabi Kumar gave an overall view about KAP. Kumari Arivial Peravai aims at developing the hidden potentials of the children. The talents of the students are being well-recognized and developed by various eminent personalities who have great experiences. He also said that all the young scientists are the gems of KAP. He also gave some tips for presenting our research topic in a better way. We should read all the information in it, understand it and practice it. We should give more priority to practice because **knowledge is of no value unless you put it into practice.**

Miss. Lekshmi gave tips for the better presentation on research topic. She said that all presented well but we should not be satisfied about it because **satisfaction does not lie in attainment.** All the team members should be thorough in all the contents. She also said that we should be able to answer all the questions asked. She finally concluded her talk stating that **KAP is an opportunity provided to us to get better so don't waste it.**

Then the Energy Conservation Awareness Program began with Prayer, followed by an invocation to Goddess Tamil in the presence of; **Rtn. MPHF. J. Navamani**, District Governor Elect, **Shri.G.Arul Jerald Prakash**, Director, Kerala State science and Technology, **Mr. Mullanchery M. Velaian**, Organizer of Kumari Arivial Peravai, **Rtn. PP. Adv. G. Aji Kumar**, President, Rotary Club of Aasramam, **Mr.Jopraksh**, Headmaster, Govt. Hr. Sec. School Nalloor, **Rtn. PP. Adv. K. Muthuraman**, Secretary, Rotary Club of Aasramam, **Rtn. P. Vijayakumari**, President, Rotary Club of Nagercoil, **Rtn. Er. K. Ponniah** , Secretary, Rotary Club of Nagercoil, **Rtn. PP. Oomen Babu**, President, Rotary Club of Thuckalay, **Rtn. Dr. M. Murugan**, Secretary, Rotary Club of Thuckalay, **Rtn. PHF. Er. M. Albert Nelson**, President, Rotary Club of Ngl. Town, **Rtn. PHF. A. V. Andrew**, Secretary, Rotary Club of Nagercoil Town, **Rtn. PHF. Er. K. Ganesh Kumar**, President, Rotary Club of Yarn City, **Rtn. D. Valar Ahilan**, Secretary, Rotary Club of Yarn City Nagercoil, **Rtn. Dr. Nirmala Manuel**, President, Rotary Club of Golden Flowers, **Rtn. Er. R. Shalini**, Secretary, Rotary Club of Golden Flowers, **Rtn. Bala Johnsel Raja**, President, Rotary Club of Nagercoil Queens, **Rtn. Latha Ramaswamy**, Secretary, Rotary Club of Nagercoil Queens, **Rtn. PHF. Brig Chandra**, President, Rotary Club of Marthandam Queens and **Rtn. PAG. MPHF. Premila Devadas**, Secretary, Rotary Club of Marthandam Queens

Gby Atee anchored the session. She gave a brief idea on Earth Hour program. Earth Hour is a global climate change initiative. This event goal's at conserving energy in an easy way of turning off the lights. On the last Saturday of March, many people across the world turn off the lights for an hour, between 8:30 pm and 9:30pm, as an act of conserving energy. Earth Hour began in Australia, in the year 2007. According to WWF, there is a decreased electricity usage by 73.34 megawatts, over one hour, is equivalent to 41.6 tonnes of carbon dioxide. To improve our living standard and quality, we should conserve electricity as it is scarce nowadays.

Subsequently Mr. Mullanchery M. Velaian gave the Introductory Address. He said that Earth Hour is an event being celebrated worldwide. Its main aim is to create awareness to the people

regarding energy conservation. It is a routine practice of KAP and the Rotary Club to celebrate the Earth Hour Program and create awareness to the unaware people. He also proudly said that many institutions have also come forward to celebrate it because of the awareness given to them by KAP. And this year being here to celebrate the Earth hour program is something that we all are gifted with. As young scientists we should shoulder our responsibility in conserving energy because it is very important that we pass on a clean, healthy and safe environment to future generations by starting it today by conserving energy in every single aspect. Then Rtn. PP. Adv. G. Aji Kumar acknowledged the presence of the eminent personalities.

Then began the theme talks. I gave an overview on **Sustainable Environment**. Ways of living more sustainably can take many forms from reorganizing living conditions like land and forest, reappraising work practices including sustainable agriculture, using science to develop new technologies, using energy efficiently and conserving natural resources like water. The land is badly contaminated and polluted due to human activities. By implementing Sustainable Land Management methods long-term productive potential of the land resources can be ensured and the environmental functions can be maintained. The usage of fertilizers, pesticides and insecticides has probably increased the yield but has impaired the quality of environment. Sustainable Agriculture is capable of maintaining productivity and does not affect environment.

The most suitable way for conserving water is the construction of green buildings in which the overall water consumption is reduced by activities like fixed usage and increases in wastewater reuse. Sustainable technology enables sustainability by developing products and processes that are environmentally preferable, resource-efficient, and cost-effective. Sustainable energy is the energy source which can meet the growing demand of today's people without compromising the future demand. It is an energy source which can be renewed. It is all about using energy judiciously.

Abina gave a talk on **Land Protection**. Land conservation is the process of protecting natural land and returning developed land to its natural state. Due to the fact that some land has only had minor disturbances and other land has been completely destroyed, a variety of techniques are needed to carry out land conservation. To conserve land organic farming should be encouraged, garbage disposal should be encouraged properly, usage of herbicides and pesticides should be reduced, wastes should be reduced and land resource should be utilized properly. The most common method for land conservation is the plating of trees, afforestation. Soil erosion can be prevented by planting more trees. Some of the most common techniques include preservation, restoration, remediation, and mitigation. **Restoration** is a technique in which the degraded site is being replaced with a good site. **Remediation** is the technique in which the contaminated areas are being cleaned. **Mitigation** is the process in which the degraded site is reintroduced in another site.

Sabrina said about **Forest Conservation**. Afforestation is the process of establishing a forest on land where there is no forest, by planting trees or sowing their seeds and caring until the trees grow collectively as a whole into a forest as planned. Only by planting trees and creating forests many of the commercial needs of human beings can be fulfilled. Therefore afforestation is a must to stop over-exploitation of nature. **Only when the last tree has died, the last river has been poisoned and the**

**last fish has been caught, will we realize we cannot eat money.** Afforestation helps in addressing the environment issues of the world, especially in preventing further global warming and reversing its effects. It also helps in avoiding desertification and maintaining the fertility of soil. Forests, the renewable resources of nature, are soon becoming non-renewable. The rate of deforestation can be controlled by afforestation. Underground water table can be maintained enabling to regain the constant groundwater table which is being destroyed by human activities these days. The precious process of afforestation can prevent and lessen flooding. Afforestation helps in building the lungs of the Earth. The deforested forests can be reforested using this process. So afforestation is of urgent need these days. The Act of 1927 and Act of 2001 aims at developing a forest into a greener one.

Mereshiya shared information on **Water Resource**. Water is mostly used in agriculture and industry. Water resource is classified into two types: Salt water and Ground water. Source of salt water is the ocean and the sea. 97% of the water is salty. Since salty water cannot be used for fulfilling our needs, salinity is being removed by the process of distillation which removes the salt or by reverse osmosis which kills the bacteria. The main source of ground water is surface water and the aquifers. 3% of the water is pure and is usually in the form of ice sheet and ice berg. Canada has more ground water when compared with the others.

Reshma gave an outline on **Agriculture Challenges**. There are many challenges faced in agriculture. It challenges at bringing sustainability in agriculture. Some of the challenges include; *Bio-sites*: Many degraded land is left behind. So biological substances are added to it to regain its fertility. *Irrigation*: Only one-third of the land is irrigated properly. Many lands are not well-irrigated leading to an unhealthy growth of crops. *Soil Erosion*: Top soil which has the ability to regain water and nutrients is being carried away. It takes nearly 300 years to form one inch of agricultural top soil and the soil lost is usually irreversible. *Agricultural Lenders*: It should be in such a way that it is a remedy for agricultural marketing. *Inadequate Storage Facility*: No proper storage facility to store the grains. *Inadequate Transport Facility*: No proper transport facility from agricultural land to the markets. Those can be considered as the major challenge and if we overcome that agriculture can be sustained.

Jereshea gave a talk on **Organic Agricultural Practice**. It is all about organic farming. It makes the soil a livable one by using bacteria. It aims at high nutritious food. Organic farming has many practices that include; *Organic soil*: Synthetic fertilizers should not be added to the soil. Only neutral fertilizers and less toxic fertilizers should be used. Water management, Bio-diversity should be maintained, *Crop rotation*: periodic change in planting of crops in order to maintain the fertility of soil and the use of *Vermi-compost*: excrete of earthworms. It has many nutrients essential for the plants like nitrogen, calcium, magnesium, phosphorous, potassium

Jefin shared information on **Sustainable Technology**. Modern technology is said to be unsustainable and inappropriate because it causes air, land and water pollution and even deforestation. So to overcome this, technology is made sustainable and is known as Sustainable Technology. Sustainable Technology does not harm the environment in any way. It has plenty of environmental benefits. Even the toughest problems of today can be overcome through sustainable technology by the following steps like 'Identify the problem, Solve the problem, Evaluate the solution and Communicate

the solution'. Some of the concepts include; Zero Emission, Restriction of Hazardous Substances, Recyclability and Green Technology.

Abirami gave a short introduction to **Water and Climate Change**. As the earth's temperature continues to rise, we can expect a significant impact on our fresh water supplies with the potential for devastating effects on these resources. As temperatures increase, evaporation increases, sometimes resulting in droughts. In addition, rising temperatures are melting glacial ice at an unprecedented rate. Glaciers are an important source of freshwater worldwide and are in danger of disappearing within the 21st century. Once these glaciers have melted away, they can't be restored.

Complicating this potential outcome is the prediction that in a warmer environment, more precipitation will occur as rain rather than snow. Although more rain than snow may seem like a plus, it could mean more frequent water shortages. When snow and ice collect on mountaintops, water is released slowly into reservoirs as it melts throughout the spring and summer. When rain falls, reservoirs fill quickly to capacity in the winter, which can also result in excess water runoff. Areas that rely on snowmelt as their primary freshwater source could increasingly experience water shortages, like having low water supplies by summer's end. This will eventually lead to water scarcity. Conserving water is an important step towards reducing overall energy use. With this the theme talk session came to an end and the bag issuing ceremony began.

Plastic is loading up the planet with toxic chemicals. Chemicals contained in plastic migrate into the environment when the plastic products containing them are discarded. These chemicals are building up in our bodies and in our environment. When it comes to the impact on public health, the widespread use of plastics is a contentious issue. Millions of plastic products are manufactured each year throughout the world. Many of the damages are caused by plastics on living organisms. It is also said that it takes thousands of years for plastic to degrade. The Clean India Mission will be successful only if the usage of plastic is minimized. Sustainable Environment can be created with a big step of reduced usage of plastic. To do so, what should we do? Plastics should be replaced with reusable bags, typically cloth bags. Keeping this in mind Dr. Joprakash gave all the young scientists cloth bags. These bags were issued in the Bag Issuing Event by Er. Benzigarajan.

Followed by the event Shri.G.Arul Jerald Prakash gave an enlightening and edifying talk. He first said the specialty and on-going activities of KAP. He then spoke on one of the prime problems of today, dust pollution. On his way to Nasik and Lakshadweep, he looked into the sparkling night sky across those infinite night sky. It made him realize how significant they are. But the same sky in the morning is dull with its clarity gone. It is all because of dust pollution.

He then stated the need for a program like Earth Hour. In olden days, street lights were kept vertical. Vertical street lights were of no use, it only wasted more amount of energy. Only after the street lights were kept slanting, there was a judicious use of the electricity consumed by it. He also positioned a similar problem like this in our dwelling itself. A normal hall is having nearly 5 lights nowadays. Also the usage of the lights is not so efficient. So to create awareness about conserving energy, an event like Earth Hour is an obligation. It is all about using light to the required amount.

He then asked a question to us. Are we really enjoying studies? Almost all the answers were NO. He gave a solution to us to make our studies interesting. We should relate all the concepts we study with lifetime. All subjects are related to life only, he said. He also gave an application of Pythagoras Theorem, which was so odd to hear but at the same time fascinating too. He said all of us to be different and do things differently because **Leaders don't do different things but they do things in a different way**. Doing things in a different way means doing stuffs in an innovative way. He concluded his talk thus saying: Be CREATIVE & INNOVATIVE.

Rtn.Premnayagam was recognized with a badge. After that Rtn.MPHF. J. Navamani gave a talk. He began with a question. **Is our environment sustainable enough to pass to our future generations?** The answer to this is NO. One of the barriers to this is Global Warming. There are more talks on it, but have we taken any actions to stop it? Nothing yet. If we want to make our environment sustainable, we should **be responsible** first. Since we are responsible for the harmful effects in the environment, we should take the responsibility to put an end to these effects. Everything begins at home. We should consume energy only to the required amount. As technology is increasing, energy use is also increasing drastically; proportionally energy production is also increasing. The simplest thing we should do to bring the greatest difference is the switching off of electrical gadgets when not in use.

Trees are of tremendous value to us. It takes 1 ton of carbon dioxide in 1 year and gives out more oxygen, which keeps us all alive. **Nature has everything for man's need but not for his greed**. Even after knowing this, what are we doing to the trees in return? Just taking their life. One of the reasons for which the trees are being cut, is for fulfilling the growing demand for paper. The estimated consumption of paper is projected to reach 13.95 million tons by 2015 - 2016. If this need wants to be fulfilled soon we should adapt the process of recycling. According to The Public Recycling Officials, for every ton of paper that is recycled, 17 trees are saved. The environment lies in the hands of the future pillars of the world. Just as how our forefathers passed on a healthy environment to us, we too should pass on a much healthier and greener environment to our future generation. He concluded by saying **Change should come from within**.

Next mementoes were given to the students who gave the theme talks and to the distinguished dignitaries. Rtn. PHF. Er. K. Ganesh Kumar gave the vote of thanks and thanked all the people gathered. Next we had a delicious dinner after which we went on a procession with candles. Earth Hour kicked off with a large candle light procession from Rotary Centre to District Collector's Office. All the young scientists, their guides and parents took part in the procession. The procession also **arose all the sleeping mind in the name of mother earth**. Among the places non-essential and others lights were put off. At the final spot, our ears were lent to few Earth Hour key notes given by Mr.Velaian.

Earth Hour Program made all the young scientists understand that in wilderness is the consumption of energy and in boondocks is the preservation of the world. The meeting provoked me in contributing my utmost for the conservation of energy in order to make Earth a greener globe with the well-organized use of energy. I even strongly-mindedly swear worded that **I will serve as a warrior to**

**Mother Earth.** I thank KAP and the Rotary Club for giving me such a great opportunity and understanding on Earth Hour and Energy Conservation rather than energy conversation. THANKS.

REPORTED BY,  
**J.M. MERESHIYA,**  
**YELLOW TEAM**

“Earth provides enough to satisfy every man’s need but not every man’s greed”.

-- Mahatma Gandhi



An Energy Conservation Awareness to celebrate Earth Hour was conducted by **Kumari Arivial Peravai** (KAP) on 28<sup>th</sup> March 2015 at Rotary Community Hall, Nagercoil. We arrived there around 05:30 in the evening. The objective for celebrating Earth Hour was to preserve the planet earth and to give awareness regarding energy conservation. When we entered the hall we were given a form named as ‘Self test’. We were asked to mark our self for our

obedience, documentation, English knowledge, report writing skill, presentation skill, time management, and punctuality.

**Mr. Mullanchery. M. Velaian**, the organizer of the KAP gave a mind opening talk. He told about the aim of that day’s meeting. He said that the Earth Hour was first launched at Sydney in 2007. From the time the Earth Hour was launched, KAP never skipped a year from celebrating Earth Hour. Then he said about safeguarding energy resources for various purposes. He then said about the final power point presentation of KAP students. All the five colored teams of KAP would be asked to present a Presentation on this year’s thesis “Sustainable Environment”. And they will perform their final presentation before the faculties, research scholars and scientists of Central University of Tamil Nadu, Thiruvarur. He informed us about the venue where the rehearsal of that presentation was to be held on 18<sup>th</sup> April 2015. Moreover he said energy conservation is very important in our day to day life. He welcomed Er.A.Benzigar Rajan to deliver a speech.

Er.A.Benzigar Rajan said about the recently launched satellite of ISRO named Indian Regional Navigation Satellite System (IRNSS). He said that this is the fourth navigation satellite that we have just launched. Then he said India successfully put its fourth navigation satellite into orbit bringing the country a step closer to having its own satellite navigation system. At the rocket mission control room, Indian space scientists at ISRO were glued to their computer screens watching the rocket escaping the earth's gravitational pull. He continued saying that the system is similar to the global positioning system (GPS) of the US (24 satellites), Glonass of Russia (24 satellites), Galileo of Europe (27 satellites) and China's Beidou (35 satellites).

He also said about the functions of IRNSS. He said the IRNSS will provide two types of services - standard positioning service and restricted service. The former is provided to all users and the latter is an encrypted service for authorized users. From four navigation satellites up in the sky, we will get the signals which would prove the concept on which the whole IRNSS has been designed. Saying thus he concluded his speech.

Followed by him Shri. M. John Rabi Kumar was asked to give a talk. He told that KAP selected talented students only with strict evaluation during the selection process of Young Scientists Programme. Once the selection process was over students are left liberal with slight monitoring. But from now on they will be strict towards the students because we need appreciation for the final presentation in that reputed university. Students should be serious and take attention towards attending the meeting. He advised us to be sincere in presenting our final presentation and should ignore lame excuses. Saying all such he concluded his talk.

After his talk, A.S.Lekshmi gave her talk. She said that the consultative talk of Shri. John Rabikumar was motivating. Then she said students always have a vigorous team effort and we can accomplish more with the help of parents' support. Educational forums like KAP can provide only opportunities to students but the participating students should take their own responsibility to utilize those opportunities.

Afterwards the program started at 06:50 pm. Miss. Gby Atee, leader of Green team compered the session. She welcomed Rtn. PP. Adv. G. Aji Kumar, President of Rotary Club of Aasramam, Rtn. P. Vijayakumari, President of Rotary Club of Nagercoil, Rtn. PHF. Er. K. Ganesh Kumar, President of Rotary Club of Yarn City, Rtn. Er. K. Ponniah, Secretary of Rotary Club of Nagercoil, Rtn. PP. Oomen Babu, President of Rotary Club of Thuckalay, Rtn. Dr. M. Murugan, Secretary of Rotary Club of Thuckalay and others. She also welcomed the chief guest Rtn. MPH. J. Navamani, District Governor Elect and Shri. G. Arul Jerald Prakash, Director of Kerala State science and Technology Museum & Priyadarsini Planetarium, Trivandrum. Finally she welcomed consultants, team motivators, team coordinators and resource persons of KAP.

After the welcome address several students of KAP were asked to give a short talk on topics regarding sustainable environment and about Earth Hour. Initially Miss. Gby Atee, leader of Green team gave a talk on '**Earth Hour**'. She said Earth Hour is a global campaign with a simple message to conserve energy. On the last Saturday of March between 8:30 and 9:30 pm lights are turned off as an act of conserving energy. This movement unites millions of people across the world as they partake in a spectacular show of support to raise awareness about climate change. It was launched in Sydney in 2007. Earth Hour has grown to become the largest environmental campaign in the history of our planet. It has led to extraordinary outcomes for the environment in countries like Russia, Argentina, Madagascar and our own. The event is held worldwide encouraging individuals, communities' households and businesses to turn off their non-essential lights for one hour as a symbol for their commitment to the planet.

She also said that Earth Hour embraces technology to spread the message of positive environmental action across the world, and to replace more inefficient means of living our lives. From LED lights, hybrid vehicles, to developing replacements for unsustainable use of resources, Earth Hour has encouraged the development of many useful technologies technology.

After her talk Mr. Mullanchery. M. Velaian was welcomed to give away his introductory speech. He first gave a greeting address that felicitated Mr. G. Arul Jerald Prakash, who was invited to give away a Key Note Address in that meeting, Mr. G. Aji Kumar, President of Rotary Club of Aasramam and other guests. He said KAP is the only organization that celebrates Earth Hour along with Rotary Club in Kanyakumari district. He also mentioned many features and activities of Rotary Club and appreciated it, for its contribution towards educating school children.

Following him Miss. S. Dani Rovas, Co-leader of Maroon team gave a speech on ‘**Sustainable Environment, an overview**’. Environmental sustainability involves making decisions and taking action that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the environment to support human life. Environmental sustainability is about making responsible decisions that will reduce negative impact on the environment, she said. She continued saying that our infrastructure systems are overburdened by increased demand, extreme weather and shrinking public budgets. The urgency and opportunity behind this challenge is driving us to look at our past grant making efforts around smart growth, climate and energy, and green economies through a lens of next generation infrastructure. Then she said for sustainable environment we should follow,

- Promotion of meaningful collaborations and an integrated approach to infrastructure solutions.
- Focus on infrastructure decisions that better meet the needs of historically underserved communities including low-income communities.
- Promotion of long-term solutions and leverage strategic infrastructure investments.
- Highlight awareness through communications, the multiple benefits of next generation infrastructure.

In conclusion she said sustainability is important to make sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment for the present and the future generations.

Followed by her talk her Miss. S. Abina, Leader of Red team gave a speech on ‘**Land protection**’. She said one of the biggest challenges Earth faces is deforestation, which strips the soil of minerals, engrave the trees, reduces water supply, and threatens food security in a region largely dependent on small-scale agriculture. It also contributes to climate change, which impacts our planet’s weather patterns. Meanwhile she said some essential methods for conserving land resources. By educating, informing and sensitizing all landholders about various aspects of this precious resources and their sustainable use we can maintain the sustainability of the land and its resources. By terracing method: A series of wide steps are made along the slop following the contours. This method is very

common in rice growing regions. Under the afforestation and reforestation programs, planting of trees, bushes and grass must be enacted. Strict actions should be taken to check reckless falling of trees and overgrazing. Then she said in India out of the total geographical area of 329 million hectares, over 150 million-hectares area is suffering from different kinds of degradation such as erosion, salinity and alkalinity and water logging. Wind and water erosion alone contribute 83% to total degraded area.

Miss. M. Sabrina Lynette Fernando, Member of Red team gave a speech on '**Forest conservation**'. She said Forests are influenced by climate, landform and soil composition and they exist in a wide variety of forms in the tropical, temperate and boreal zones of the world. Forests are rich in biological resources. The sustainable production of forest goods and services and the conservation of biological diversity in forest ecosystems, as well as the equitable sharing of benefits arising from the utilization of the genetic resources would require concrete actions at both the national and international levels.

She said that the Enhancement of forest cover is to be viewed as a proactive measure taken to arrest and reverse the current trend of forest decline and degradation. Maintaining and enhancing forest cover, reforestation or afforestation will benefit the forest. She described the roles of forests. She said a well-managed forest is a constantly self-renewing resource and provides a wide range of benefits at local, national and global levels. Forests are also important repositories of biological diversity. The commercial use of forests nowadays has reached such an extent that it has become a threat to the environment in the form of Temperature Increase, Lesser Rainfall, Increased rate of soil erosion, Loss of soil productivity and Imbalance in ecosystem. She also included some steps for the conservation of forest. Regulated and Planned Cutting of Trees. Cutting should be regulated by adopting methods like Clear cutting, Selective cutting, and Shelter wood cutting. Control over Forest Fire Practice of afforestation. Checking over Forest Clearance for Agricultural Purposes. Protection of Forest and proper utilization of forest products and forests.

Following her I, Miss. J.M Mereshiya, Co-Leader of Yellow team gave a speech on '**Water resources**'. I said Water resources are defined as the sources by which we get water for different types of uses. We use water resources mainly for agricultural, industrial, household, entertaining and environmental activities. Among all the water resources humans mainly need fresh water for their daily consumption and daily activities. Oceans & Seas comprises of Salt water resources. Oceans cover most of the Earth, and contain about 97% of the water on the planet. This water has a high salt content and is unfit for human use. Saltwater resources are useful for hydroelectric generation but it requires tidal water. Saltwater can be converted into usable fresh water by a process named Desalination.

Fresh water is naturally occurring water on the Earth's surface in Ice sheets, Ice caps, Glaciers, Icebergs, Swamps and marshlands, Ponds, Lakes, Rivers and streams, Underground water as groundwater in aquifers and Underground streams. The remaining 3% water on earth is fresh water. About 69% of fresh water is locked up in glaciers and icecaps. 90% of that frozen water is in Antarctica and about 9% covers Greenland. Remaining 1% is in surface and underground. Surface water is the water present in the rivers, ponds, lakes, lagoons, streams and reservoirs (manmade lakes). Surface

water is naturally filled by precipitation (rainfall). I also said that estuary is also counted as surface water. Estuary as a body of water in which salt water from the ocean and fresh water from rivers and land drainage meet and mix, producing intermediate salinities.

Ground water is a type of freshwater source comprised of different types of water resources that are fresh in nature. These waters are located in the void spaces of soil and rocks under the ground. It is also defined as water that is flowing within aquifers below the water table. Water table is the level below which the ground is saturated with water. An aquifer is an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using water wells. The ground water makes the soil fertile and increases its productivity. There is significant interaction between surface water and ground water. Groundwater feeds surface water through springs. One among eight people in the world are not having access to safe water. It is important to use this resource in a careful manner. Making the best use of water provides the best solution for sustainable fresh water conservation and consumption.

Following her Miss. R.J. Reshma, Leader of Maroon team gave a speech on ‘**Agriculture Challenges**’. The main challenge of agriculture is to increase the productivity of agriculture in a sustainable manner. Therefore it is important to address the needs of small-scale farms in diverse ecosystems and to create realistic opportunities for their development where the potential for improved area productivity is low and where climate change may have its most adverse consequences. Ploughing or digging the soil breaks up the soil, making it easy to create a fine tilt into which crops can easily be sown. The invention of the plough made it possible for farmers to mechanize agriculture. Then she said the problem is that the rapidly growing demand for food has been pushing up the frequency with which land is cropped. Periods of fallow allow the organic matter content of soil to recover. When this happens, inversion tillage systems become a leading cause of soil degradation. With each movement of earth, soil particles become finer, allowing less moisture to enter the soil surface and less to be retained for uptake by crop roots.

Following her Miss. J.M. Jereshea, Member of Maroon team gave a speech on ‘**Organic Agricultural practice**’. She said Organic farming means maintaining a living soil with the help of micro and macro soil organisms. A common phrase used to for organic growing “Feeding the soil, Not the plant”. Organic matter is fed to the soil through the addition of compost, animal manure, and green manures and the avoidance of excess tillage and nitrogen applications. The goal of Organic Agricultural practice is to keep people and the environment as healthy and happy as possible. Organic farmers maintain the health of their soil by using manure or compost and other organic material instead of synthetic fertilizers. Some organic farmers introduce beneficial insects such as, Ladybugs, Soldier beetles, Green lacewings, Big-eyed Bugs and Beneficial Roundworms that eat harmful insects.

Organic farmers do not grow the same crop on the same field year after year instead they practice crop rotation which naturally replenishes the soil. Different plants help increase nutrients to the soil. Farmers can disrupt the habitats of insect pests and farmers can control weeds growth because of crop rotation. And she then said about the Cover Crops that prevents soil erosion. Cover crops such as

clover, rye, and wheat are planted between food crops help replenish the soil with nutrients and prevent soil erosion. Vermicompost is nothing but the excreta of earthworms, which is rich in humus and nutrients. Vermicomposting is the process of turning organic debris into worm castings.

For the preparation of vermin compost a compost pit is made. First the bottom of the pit is filled with broken bricks and coarse sand. Vermibed is formed with a layer of good moist alluvial soil placed at the bottom, about 1 foot thick above the broken bricks and sand layer. Earthworms like African earthworm, Red worms and composting worm are introduced into the loamy soil about 15 to 20cm thick. Handful lumps of fresh cattle dung are then placed at random over the vermibed. The compost pit is then layered to about 5cm with dry leaves or preferably chopped hay or biomass. For the next 30 days the pit is kept moist by watering it whenever necessary. The harvested material should be placed in a heap in the sun so that most of the worms move down to the cool base of the heap. Vermicompost is free flowing, easy to apply, handle and store and does not have bad odor. It improves soil structure, texture, aeration, and water holding capacity and prevents soil erosion. Vermicompost is free from pathogens, toxic elements, weed seeds etc. Vermicompost minimizes the incidence of pest and diseases. It enhances the decomposition of organic matter in soil. It contains valuable vitamins, enzymes and hormones like auxins, gibberellins etc.

Following her Mr. Jefin R. Wensely, Leader of Blue team gave a speech on ‘**Sustainable Technology**’. He said Sustainable technology in the energy sector is based on utilizing renewable sources of energy such as solar, wind, hydro, bioenergy, geothermal, and hydrogen. He said that the term “Sustainable Technology” describes technologies that enable more valuable use of natural resources and greatly reduced ecological impact among other technological benefits. In Substitution the technology enables a shift from: Non-renewable resources to renewable ones, Non-biodegradable or persistent chemicals to bio-degradable ones and Ecosystem consuming extractive systems to renewing and restorative ones. In India the Centre for Sustainable Technologies established as Centre for Application of Science and Technology for Rural Areas in 1974, is an inter-disciplinary research and technology development centre for providing sustainable solutions to host of global concerns. Subsequently he said in his conclusion that we are into energy conservation, developing environmental friendly, economic and safe technologies for the conversion of waste materials into value added products, Processes.

Following her Miss. B.Abhirami, Leader of Yellow team gave a speech on ‘**Water and climate change**’. She said as the earth’s temperature continues to rise, we can expect a significant impact on our fresh water supplies with the potential for devastating effects on these resources. As temperatures increase, evaporation increases, sometimes resulting in droughts. In addition, rising temperatures are melting glacial ice at an unprecedented rate. Glaciers are an important source of freshwater worldwide, and some are disappearing within the 21st century. By carpooling, using public transportation, driving less, and reducing our consumption of food and consumer goods, each individual can make an impact on curbing greenhouse gases. When rain falls, reservoirs fill quickly to capacity in the winter, which can also result in excess water runoff that can’t be stored. Because rain flows faster than melting snow,

higher levels of soil moisture and groundwater recharge are less likely to occur. We use water we also use energy and contribute to climate change. So we should maximize our energy consumption.

Then Er.A.BenzigarRajan gave a bag as a gift to all the teams of KAP. Team leaders were asked to collect gifts from him. After providing gifts the invited keynote speaker Mr. G. Arul Jerald Prakash, Director, Kerala State science and Technology Museum and Priyadarsini Planetarium, Trivandrum was called upon to deliver his keynote address. He appreciated KAP for nurturing the skills of students. He instilled the significance of cleanliness and energy conservation in us through his enthusiastic talk. He was astonished by the natural beauty of coastal areas during his trip to Lakshadweep Islands. Then he motivated us to learn with understanding by describing that with a short story to apply what we study in schools in our life. For example he quoted Pythagoras theorem.

Following him the Rtn MPHJ J. Navamani, District Governor Elect was called to deliver his speech. While beginning his talk he welcomed everyone and said for seven years from the launch of earth hour KAP have been celebrating Earth Hour to create awareness on energy conservation. He said we are responsible for our future and we should have a goal how we should help our future generation by sustainably using the environment. Saying thus he concluded. Prizes were give to the KAP students who performed their presentations and to the dignitaries as well.

Eventually in order to give vote of thanks Rtn PHF Er K. Ganesh Kumar, President of Rotary Club of Yarn City was called upon the stage. He thanked each and everyone present there. He said a special thanks to KAP and Rotary club for their good work towards the country by contributing the growth of future citizens of this nation. He also thanked the parents of KAP students, faculties of KAP like consultants, team motivators, team coordinators and resource persons. After the program we were provided dinner. After dinner we were given shimmering candles and asked to go for an awareness walk. I felt a pleasant experience when we walked from Rotary community hall to Collectors office at that night along with KAP faculties, Rotary club members and our parents.

Through this meeting I was able to know about energy conservation and its importance via the speeches of dignitaries invited for the meeting. I got helpful thoughts, views and ideas from the talk of the students about the details of water resources, forest and land conservation, sustainable environment, sustainable agriculture and technology. It was a good experience to hold a candle and being a part of awaking the society on energy conservation. I offer my appreciation to KAP and Rotary club who spent their precious time with us for celebrating Earth hour.

**“A good teacher can inspire hope, ignite the imagination, and instill a love of learning”.**

**!!!! Thank you KAP!!!!**

REPORTED BY,  
**R.J.RESHMA,**  
**MAROON TEAM LEADER.**



An important programme of KAP, the Earth hour 2015 was held at Rotary Community hall at 5:30 pm on 28<sup>th</sup> of March. All the KAP students along with their parents took part in the programme. The mottoes of the programme bring awareness among the masses to preserve planet Earth through energy conservation. A self evaluation paper was given to all the KAP students. We were told to allot marks ourselves. There were ten areas in which we were supposed to allot marks. The total mark was 100 and each category was for 10 marks. We returned the papers after allotting the marks.

First the speech was delivered by **Shri.Mullanchery M.Velaian, the organizer of KAP.** He emphasized the importance of the Earth hour programme. This programme began in the year 2007. In Kanyakumari district, KAP celebrates Earth hour each and every year with young scientist students. The last Saturday of March is chose to celebrate this day. The programme is jointly organized by Kumari Arivial Peravai and Rotary club. He said that we all have come there with great difficulties as morning we had team meets. The team meets are being conducted for molding the students. It helps them to find answers for all the questions raised by the people present in the university, he added. KAP has got fame through the students when they did their research topic presentation at various universities like Kamarajar University, Kerala NI University, IIT in Chennai and also a university in Thindukkal. This year, we have planned to take the students to Central University of Tamil Nadu, he said. Conducting team meets increase the confidence level is students. Then will be able to prepare more about their research topics. He glorified Shri. M.John Rabikumar for his dedication to make the team meets successful and productive. He then told about the next meeting which will be held at Annammal College of Nursing, Kuzhithurai on 18<sup>th</sup> April. It's a meeting for the students to present their PowerPoint on the research topics. It will give us more confidence to present at the Central University of Tamil Nadu, he said. KAP training will make students bright in their future, he added.

He welcomed **Er.A.Benzigar Rajan,** Deputy Manager, ISRO Propulsion Complex Mahendragiri to gives some information about IRNSS satellite. He cheerfully said that PSLV C27 has launched IRNSS satellite that minute in space. It was a great milestone of India. IRNSS Stands for Indian Regional Navigational System Satellite. This satellite is used for navigation purpose. Navigation refers to locating our location, direction we travel and the speed we travel. GPS refers to Global Positioning System. It is being used for navigation purposes nowadays. The fishermen use this system to find the distance from the shores and also the direction in which they travel. This system was found by Americans. America launched 66 iridium satellites for the navigation purpose. We people use these

satellites for our navigation. GPS system is used to control the flight's take off and landing and also used for the navigation purpose of ships carrying flights.

There are some difficulties for us to use the American GPS system. They are able to watch our nuclear ships through the system. China and Soviet Russia have launched their own satellites for their purpose and do not depend on these GPS systems. Now, India has also launched satellites for finding our location and so we can be free from the control of Americans. Parameters like attitude, latitude, longitude and time can be used to track a person using four different satellites. The Americans launched 66 satellites in a height of about 600 km. India launched satellites 36,000 km high. Three satellites have been launched in the stationary orbit. Other four satellites which travel in an eight shaped path has to be sent and one among them was sent that day, he said. Earth's rotation and satellite's rotation will be equal due to the force and orbit in space. We watch television and use our cellular phones by using the INSAT communication satellite which have been launched at a height of about 36,000 km. Launching the navigation satellites has made India independent from America. We can see the route maps clearly using this. The nuclear ships and flights will be watched and will be under the control of Indians. The plan to send the navigation satellite was made in the year 2013. Four satellites among the seven satellites have been successfully launched in the beginning of the year 2015. Other three satellites will be sent in the beginning of the year 2016. India can provide signals from its navigation satellites to its neighboring countries, he said. We Indians should be proud to say that India stands in fourth place to have its own navigational satellites.

The next talk was given by **Shri.M.John Rabikumar, ISRO Propulsion Complex Mahendragiri**. He told that KAP aims at improving and developing students. The word partiality is not found in KAP. KAP's members were very strict during the selection processes. But after that, they became liberal to the students. Again from that day, they are going to be very strict, he said. He said that they want to show that the KAP students are capable and are highly potential to present a PowerPoint and have more talents in them. He requested the parents to cooperate with KAP to bring out their wards as a successful persons. He instructed us to avoid lame excuses because we are the people who are going to be affected. The motto of KAP is to show that all the 56 students are geniuses. He expected full support from both the parents and students side. All the contents in a PowerPoint should be well prepared by the student, he added. We have come to the end of the one year journey and so he expected all of us to cooperate with KAP till the end of the journey.

**Former young scientist, A.S.Lekshmi** spoke. She gave few remarks about the team meets. Team effort and spirit were lacking, she said. The meanings of each and every word in our PowerPoint must to known to us, she instructed. She requested the parents to guide their children to prepare well for the presentation. She concluded her talk by saying that more opportunities will be provided to us in future if we dedicate ourselves to KAP.

The Earth hour programme began at 6:45 pm. The compeering was done by Gby Atee, the leader of green team. She first welcomed all the dignitaries to the Dias. The dignitaries include President Rtn G.Aji Kumar, Rotarian J.Nava Mani, Shri.S.Prabakaran, Shri.G.Arul Jerald Prakash,

Rotarian Brigarian Chandra, Shri.Velaian, Dr.Joe Prakash, Er.A.Benzigar Rajan, Rotarian Shri.Albert Nelson, Rotarian P.Vijaya Kumar, Rotarian Umman Babu, Rotarian Er.K.Ganesh Kumar and Rtn Dr. Nirmal Manuel. She also extended a hearty welcome to all the secretaries of Rotary Club. The programme began by seeking the blessings of God. The Rotary prayer was offered to God Almighty by Rotarian Brigarian Chandra. The Tamil Thai Vazhthu was sung by the KAP students to praise Tamil Nadu.

A small introduction about the programme Earth hour was given by Gby Atee, the leader of green team. Earth hour is a global climate change initiative organized by WWF (World Wide Fund for nature). The last Saturday of March is celebrated as Earth hour. Millions of people turn off the non-essential lights for one hour as a symbol of commitment to the planet Earth. It was started in Sydney, Australia in the year 2007. Today, the Earth hour has been celebrated worldwide. Earth hour aims to encourage an interconnected global community to share the opportunities and challenges of creating a sustainable world. Earth hour embraces technology to spread the message of positive environmental action across the world and to replace more inefficient means of living our lives. KAP celebrates the Earth hour day each and every year with a motto to save our planet Earth. She concluded her talk by saying all of us to join our hands to protect our Mother Earth.

Gby then welcomed **Shri.Mullanchery M.Velaian**, the organizer of KAP to give the introductory address. He believed that only KAP celebrates the Earth Hour day in Kanyakumari district. He glorified all the dignitaries present on the Dias. He credited Shri. G.Arul Jerald Prakash. A ‘ponnadai’ was given to him by Shri. M.John Rabikumar. He then said that we have done research related to coastal areas, forest areas and mountain ranges. Our ancestors protected the Earth for us. So it’s our duty to protect the Earth for our future generations. The increase in global temperature has been destroying our planet. Fossil fuels are being depleted. The Earth hour programme creates awareness to the people to protect our Earth. A reminder about the Earth hour programme would be given to him by Rotarian Suresh Kumar, he said. So every year, the programme would be a successful one.

The presidential address was given by Rotarian Aji Kumar. First, he welcomed all the dignitaries on the Dias. He then wished the programme to be a successful one. S. Dani Rovas, the co-leader of maroon tem gave a talk on the topic of the year ‘Sustainable Environment an overview’. The Earth is destroying due to human activities. We are in a condition to make everything from agriculture to technology a sustainable one. Forests provide and moderate climate. They also provide us with food, fodder and fuel. They purify the air and enable us to breathe fresh and unpolluted air. They provide us many products. But we have been cutting down these forest for our own uses. Deforestation has resulted in very bad impact on our Earth. Many birds and animal species have lost their habitats due to this. Sustainable practices and remedies for all the issues have to be found to protect our Earth. Excessive usage of fertilizers and pesticides has made the soil infertile. The food that we intake today consists of chemicals. We have lost our health due to this. Modern agriculture uses modern techniques and produces more yield but the effect of this is very bad on health of humans and other species. The good techniques from ancient agriculture and the modern agriculture should be linked to bring out sustainability in the field of agriculture. About 71% of the Earth’s surface is filled with water. Water

has been polluted nowadays. It's very hard to find fresh water for us to drink. All this is because of human activities. The whole world is filled with technology from agriculture to astronomy. Technology has both positive and negative sides. Technology has also to be made sustainable. Energy is used by us in all aspects. The fossil fuels and other minerals from underground are being depleted. We should use the renewable energy in large amount than non-renewable energy. Thus, agriculture, energy, land and forest, energy and technology have to be used in a proper manner. The only way to protect this Earth for our future generations is by making everything in a sustainable manner.

A talk on '**Land Protection**' was given by the leader of red team, S. Abina. The Earth is covered  $\frac{1}{4}$  by land. Buildings are constructed on land and people survive. She listed for method to preserve land. Preservation, Restoration, Remediation and Mitigation are the steps involved in protecting the land in a sustainable way. Afforestation helps us to make our Earth clean and green. Land and soil are different. She explained about the oil spill incidents in Gulf of Mexico in the year 2010. It's our duty to preserve the land. We are the inhabitants of the land are therefore should find remedies for all the problems associated with it.

The next talk was given by M. Sabrina Lynette from red team. Her topic was '**Forest conservation**'. Forest is a large area which is fully covered with trees. Deforestation refers to exploitation of forests. Forests provide us fuel, food and fodder. Deforestation causes soil erosion and there is also a decline in the level of ground water. This erodes the topsoil. Indian forests act of 1927 and 2010 were introduced to protect forests from dangerous consequences.

A speech on the topic '**Water resources**' was given by the co-leader of yellow team, J.M.Mereshiya. Water resources are been used by us in our day to day life. The groundwater resources are the water resources found under the ground. These water resources give us water when we dig bore wells. Ground water resources are in the form of Aquifer. Salt water refers to oceans and seas. The salt water resources contain about 97% of the world's water. Salinity is found in these water resources and they are not suitable for drinking purposes. It is mainly used for hydroelectric power plants and other industries. This water can be desalinated to make them suitable for drinking.

Her talk was followed by the talk given by me, R.J.Reshma, the leader of maroon team. The topic was '**Agriculture challenges**'. The overriding challenge in agriculture is the sustainable and profitable growth. The unimpeded growth of greenhouse gas emissions is raising the earth's temperature. Higher temperatures eventually reduce yields of desirable crops. Although there will be gains in some crops in some regions of the world, the overall impacts of climate change on agriculture are expected to be negative, threatening global food security. By 2050, the world will have nine billion mouths to feed. Facing drought, floods and changing rainfall patterns, dishing up enough servings to meet growing demand will become increasingly challenging. In a word, climate change has become one of the most important and complex challenges in agriculture. The biggest challenge a farmer has to face when moving from conventional to minimum/no-tillage is weed and disease control. To be able to manage this new situation, a farmer has to have specific knowledge on herbicides, weeds and application technology. The main challenges in Indian agriculture include;

- Manures, Fertilizers and Biocides
- Irrigation
- Soil erosion
- Agricultural Marketing
- Inadequate storage facilities
- Inadequate transport

Indian soils have been used for growing crops over thousands of years without caring much for replenishing. This has led to depletion and exhaustion of soils resulting in their low productivity. There are practical difficulties in providing sufficient manures and fertilizers in all parts of a country of India's dimensions inhabited by poor peasants. The country has a potential of 650 million tonnes of rural and 160 lakh tonnes of urban compost which is not fully utilized at present. The utilization of this potential will solve the twin problem of disposal of waste and providing manure to the soil. Although India is the second largest populated country of the world after China, only one-third of the cropped area is under irrigation. Irrigation is the most important agricultural input in a tropical monsoon country like India where rainfall is uncertain, unreliable and erratic. India cannot achieve sustained progress in agriculture unless and until more than half of the cropped area is brought under assured irrigation.

Large tracts of fertile land suffer from soil erosion by wind and water. This area must be properly treated and restored to its original fertility. In most of small villages, the farmers sell their produce to the money lender from whom they usually borrow money. In order to save the farmer from the clutches of the money lenders and the middle men, the government has come out with regulated markets. This market solves all the disputes and enables the farmers to sell their farm produce at a good rate. Storage facilities in the rural areas are either totally absent or grossly inadequate. Under such conditions the farmers are compelled to sell their produce immediately after the harvest at the prevailing market prices which are bound to be low. Such distress sale deprives the farmers of their legitimate income. One of the main handicaps with Indian agriculture is the lack of cheap and efficient means of transportation. Even at present there are lakhs of villages which are not well connected with main roads or with market centers. Linking each village by proper road is a gigantic task and it needs huge sums of money to complete this task. So some steps have to be taken to overcome all these agriculture challenges. We humans should too join hands to cooperate with government to eradicate all the problems.

My talk was followed by J.M.Jereshea from maroon team. She spoke on the topic '**Organic agriculture practices**'. The fertility of the soil plays an important role in organic farming. We should make soil a livable one. Less toxic manures should be used to increase the fertility of the soil. Encouragement of biodiversity both inside and outside the farms will pave way to organic farming. A method known as crop rotation can be practiced. This method involves the periodical change of crops in the field. Natural manure like azola and vermi compost should be added to the plants rather than chemical fertilizers and pesticides. The vermi compost has five times more nitrogen, seven times more potassium and some amount of calcium. She explained the method of preparation of vermi compost. First we should place a plastic sheet or a jute sack. A layer of coconut husk should be kept above it. Agriculture wastes and organic wastes should be put above it. After two days, earthworms should be

placed on it. It should be closed with jute bag. Water should be sprinkled at regular intervals both morning and evening for moisture. After the compost has developed, we should stop pouring water. Then we should remove the earthworms and then can utilize the compost for plants. She concluded her talk by saying that practicing organic agriculture is good for our health.

A talk on the research topic of blue team '**Sustainable technology**' was given by the leader of blue team, Jefin R. Wensely. Technology is seen everywhere. They are seen in transportation, business, education and every other place. Sustainable technology is a technology which improves the quality of lives of mankind in such a way that it doesn't harm the environment in any manner. He listed out four steps to solve a problem. They are:

- ❖ Identify the problem
- ❖ Find out the causes and reasons
- ❖ Communicate and solve
- ❖ Evaluate the task

The zero emission refers to the releasing of no harmful gases. September 21<sup>st</sup> is celebrated as the zero emission day. ROHS refers to Restriction of Hazardous Substances. The world is filled with technology. Technology has both positive and negative effects. So we should see that the technology is in a sustainable manner to protect the Earth for our future generations.

The last talk was given by the **leader of yellow team, B. Abhirami**. Her topic was '**Water and climate change**'. Water is liquid gold. Water sources are being threatened by climate change. Depletion of water sources affects the food production. The rate of evaporation has been increasing due to the sun's heat. The rate of evaporation varies a great deal, depending on temperature and relative humidity, which impacts the amount of water available to replenish groundwater supplies. Depletion of groundwater sources causes dryness to the land. Water quality degradation can be a major source of water scarcity. The hydrological cycle begins with evaporation from the surface of the ocean or land, continues as the atmosphere. Then it forms clouds, and then returns to the surface as precipitation. The cycle ends when the precipitation is either absorbed into the ground or runs off to the ocean, beginning the process over again. Changes in rate of evaporation may cause the seasonal distribution and amount of precipitation. Therefore it's our duty to understand the value of water.

**Shri. Arul Jerald Prakash** gave us an inspirational talk. He first congratulated the Rotarians for hosting the Earth Hour programme 2015. He credited KAP for inculcating the right temperament in right topic. He raised a question to us- **Have you ever enjoyed darkness?** He shared some of his past experiences. Once he travelled to Lakshadweep. He stayed alone in a guest house. He decides to go to the sea shore at midnight to have a cool breeze. He went to the shore by scratching the ground to find whether any creatures or creepers were on the ground. After reaching the shore, he lifted his head and saw the beautiful night sky. He kept a stone as his pillow and was admiring the dark night sky. After this, he shared another experience. He was once traveling to Mumbai. It was dark at that time and the road was polluted. Pollution had reduced the clarity of the sky. He just told his driver to stop the vehicle and gazed at the sky for some time. He said that the army people use only four or five small

bulbs for their uses to conserve energy. But we people light the entire hall. If we do so, we get headache and several other health disorders. We only require lightning for specific purposes and that too in a small amount. Implementing each and every point of science in our life gives us wonderful things, he added. He shared an experience of a diploma holder. His message to the KAP students was **“Think out of the box. Be creative”**. He also gave small message to the parents. **“Don’t be happy when your child is receiving state first. But be happy when you child innovates something”**. He ended his talk by wishing us all the very best for our future carrier.

His talk was followed by the talk of **Rotarian J.Nava Mani**. That was the seventh Earth Hour programme being conducted at Rotary community centre, he said. He thanked KAP for conducting this programme and Rotary club for hosting the programme. He appreciated the KAP students who gave talks on various topics as they went to the depth of the topics. He emphasized the result of global warming on Earth. His message to us was **‘Be responsible’**. It’s our duty to contribute something to bring pout sustainability in nature, he stressed. One tree takes in about one tone of CO<sub>2</sub> and gives out fresh O<sub>2</sub> to breathe. Our love and care for our environment is very important. Our required needs should be fulfilled but unwanted and unrequired needs should be avoided. He ended his talk by saying that the change should begin from us.

After his talk, the mementoes were given to the KAP students who spoke on the Dias. The students were Gby Atee, S.Dani Rovas, S.Abina, M.Sabrina Lynette, J.M.Mereshiya, R.J.Reshma, J.M.Jereshea, Jefin R.Wensely and B.Abhirami. The mementoes’ were also given to the dignitaries present on the Dias. The vote of thanks was proposed by **Rotraian Er.Ganesh Kumar**. He thanked all the dignitaries on the Dias, the students, all the secretaries and presidents of Rotary club and the parents. After the programme, dinner was provided to all of us. After diner, we were given candles and began a walk from the Rotary community centre to the collector office of Nagercoil. We took an oath to protect our Mother Earth and then dispersed from there.

The Earth Hour programme instilled me felling to contribute something to this nature. If **‘A small drop in the ocean’** is done by everyone then we can surely bring out a big thing. The programme has created awareness among the people to save our Earth for future generations. I express my deep sense of gratitude to KAP and Shri.Velaian for conducting this programme. I also extend my thanks to Rotary club for hosting this programme.

**THANK YOU KAP!!!!**