Solid Waste Management Seminar to Draft National Plan

The management of solid waste has become a major environmental issue faced by our country and lack of not obtaining the contribution of responsible institutional sectors and authorities is the decision-making processes of officials and lack of proper coordination among organizations and institutions working in connection with solid waste management have become impediments to work to solve this problem.

In such a background, the Minister of Science, Technology and Research, Prof. Premalal Jayasuriya, made preparations to compile the National Solid Waste Management Action Plan in collaboration with the Ministry of Provincial Councils & Local Government and participation of stakeholders in a broad spectrum including over 250 scientists and researchers, seeking solutions to the abovementioned problem.

To achieve this, a two-day seminar participated by Sri Lankan scientists, researchers and other stakeholders was held during the two days last 23rd – 24th.

Intel International Science and Engineering Fair

Winners of Excellence feted

This year, three school students who participated in the Intel International Science and Engineering Fair (Intel ISEF) held at Los Angeles, United States of America, were able to achieve two awards of excellence and one special award. The Intel International Science and Engineering Fair is the world’s largest competition based on science projects with the participation of over 1700 school students from 78 countries of the world. Shehan Kanishka and Sanalpasa Paranawitharne

SLAB marks World Accreditation Day 2017

Sri Lanka Accreditation Board for Conformity Assessments celebrated World Accreditation Day 2017 on 14th June 2017 in Hotel Galadari for the 9th consecutive year. The chief guest of the event was R. Wijesundera, Secretary, Ministry of Science Technology and Research.

World Accreditation day has been jointly announced by the International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC) and the theme for this year is “Accreditation: Delivering confidence in construction and the built environment.”

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In the month of September of the year 2011, a Programme of Co-operation (PoC) was signed between the Ministry of Technology and Research of Sri Lanka and the Science and Technology Department of India for bilateral scientific collaboration. Under this PoC, allocations were made for two joint workshops and nine joint research projects. By now, Sri Lankan researchers have completed those joint research projects. The joint workshops were held in the year 2012. On agreement of the Ministry and the Department in Sri Lanka and India, the First Indo-Sri Lanka Joint Research Conference including the finished joint projects was held in Sri Lanka on 29th and 30th May. The symposium was launched under the aegis of the Minister of Science, Technology and Research Basil Preston and the participation of the High Commissioner of India in Sri Lanka Tharanathja Gunasekera and the participation of the High Commissioner of India in Sri Lanka Tharanathja Singh Sandhu at the Water’s Edge Hotel, Colombo. At the opening ceremony of this symposium, Prof. Priyankar Jha from Sri Lanka and Mr. Subratanat Jha from India made important lectures. The main objective of this symposium was disseminating the knowledge and findings of the completed projects for which the allocations were made by both countries among Sri Lanka’s scientific community. A large number of people including the Secretary of the Ministry of Science, Technology and Research R. Wijesundera, officials of the Ministry of Science, Technology and Research of Sri Lanka and the Science and Technology Department of India, researchers of research organizations, University lecturers, scientists and collaborating researchers participated in this symposium.

The symposium was conducted under three themes and they were:
1. Food, nutrition and health
2. Preparing for consequences of sea level rise
3. Gondwana geology of Sri Lanka and India

The above themes were chaired by Prof. Nanda Wannasiriya, Prof. W.L. Sumathipala and Dr. A. Wijesundera respectively. Six Sri Lankan and Indian research projects were presented on the theme 'Food, nutrition and health,' five research projects under the theme 'Preparing for consequences of sea level rise' and three research projects were presented under the theme 'Gondwana geology of Sri Lanka and India.'

The above research projects were carried out by researchers of Industrial Technology Institute, National Institute of Fundamental Studies, University of Peradeniya, University of Ruhuna and University of Colombo. As the final item of the symposium, an important discussion about issues and challenges at India – Sri Lanka research collaboration, how to mitigate them and ways and means of further enhancing the collaboration between the two countries took place. Researchers, government officials and scientists of both countries participated in this discussion. It was decided to utilize the results of this discussion next. At the end of this symposium which was held most successfully, researchers of both countries pledged to further enhance the collaboration among themselves and their institutions in the future.

SLAB marks...

Importance of improving quality and safety in constructions has been discussed frequently in with the recent accidents of the buildings (e.g. Wellington building collapse) happened in Sri Lanka. Further, with the massive constructions projects happening in Sri Lanka currently it is really important to emphasize the importance of improving quality and safety aspects of the construction sector. Hence, World Accreditation Day theme for this year is very important to Sri Lanka.

The opportunity to participate in the international competition arose when they won the award at the Sri Lanka Science and Engineering Fair (SLSEF) 2017 competition organized by the National Science Foundation operating under the Ministry of Science, Technology and Research. Further to that, G.K.N.M. Gangodawila from Nineacre Mayurapada Central College won the fourth award in the Engineering Mechanics category at the Grand Award Ceremony for his project titled ‘Systematic Wall Constructing Tool’. These three school students that have secured international victories came into the appreciation of the Minister of Science, Technology and Research Suriy Premajayantha. The Minister, while wishing them, presented them with a modern laptop computer each.

Furthermore, teacher Gayani Samaratunga, of S.D. S. Jayasinghe Central College, Dehiwela, who was in charge of the science project of students Shehan and Sanka and Dr. Methithka Wijeratne who was the Chief Supervisor who guided them to upgrade the project also came into the Minister’s appreciation. School children being drawn to inventing is very important and students who are not from National Schools.

**While some students at present are just wasting their school time, students like these directing their hearts and minds to this sort of school projects can be shown as a major reason for the future of the country being excellent.** The contributions of institutions such as the National Science Foundation under our Ministry to select such students, train them and take them to the international level should be appreciated. But, the endeavours of their parents at home, and the Principal and the staff at school to generate such bright students should not be forgotten. In students who are stepping into the world of tomorrow being armed with inventiveness will have an influence on more and more students being directed towards it. The attention of the Ministry has been drawn towards modernizing all the laboratories in the school system of the island in collaboration with the Ministry of Education to generate more bright students filled with new ideas.

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**National Workshop on “Sri Lankan Lichens”**

The 4th National Lichen Workshop 2017 was held at the National Institute of Fundamental Studies (NIFS) from 24th to 26th of May 2017 with the collaboration of Dilmah Conservation in creating a deeper understanding about lichens among young scientists encouraging them towards new areas of study and exploration. The three day workshop was conducted by an eminent team of scientists which consisted of Dr. Pat Wolfeley (Natural History Museum of UK), Dr. Gothamie Weerakoon (Visiting Scientist, NIFS) along with Prof. Sril Whijesundara (Research Professor, NIFS) shared knowledge for a better understanding of the unexplored world of lichens. Moreover, International Documentary artist of the National Geographic Society, Matthew Cianese, and Erika Reiter gave their contributions to fulfill the goals of the activity.
Let’s win the world with Nanotechnology

Shiva Shankar

We know that in the modern age of information technology, a single tiny chip can connect the entire world. Technology is now being used in every aspect of daily life, from healthcare to transportation. Without technology, we would not have access to the vast amount of information available today. Technology has revolutionized the world, and it is only going to get better.

Technology is everywhere in our daily lives. From smartphones to computers, from cars to airplanes, technology has made our lives easier and more convenient. It has also made the world a smaller place, allowing us to connect with people from all over the globe.

The importance of technology cannot be overstated. It has played a crucial role in shaping the world we live in today. From the rise of the internet to the development of artificial intelligence, technology has made a significant impact on our society.

Without technology, the world would be a very different place. It is hard to imagine what life would be like without technology, but it is clear that it has brought about many positive changes.

We must continue to embrace technology and use it to solve some of the world’s greatest challenges. The future belongs to those who believe in the power of technology to change the world.

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Without New Technology and Research Development cannot be achieved

Prof. K.M. Nalin De Silva, Science Team Leader, Sri Lanka Institute of Nanotechnology

Sri Lanka is in a race against time to keep up with the latest developments in technology and research. The Sri Lanka Institute of Nanotechnology is at the forefront of this race, working tirelessly to develop new technologies and bring them to the market.

The institute is focused on developing new technologies in areas such as energy, healthcare, and information technology. These are areas where Sri Lanka has the potential to make significant contributions.

One of the key areas of focus for the institute is nanotechnology. This is a rapidly growing field, and Sri Lanka is well-positioned to benefit from its potential.

The institute is currently working on a number of projects, including the development of new materials for electronic devices, the creation of new medical treatments, and the creation of new energy technologies.

The institute is striving to create a world-class research environment in Sri Lanka, where researchers can work together to develop new technologies and bring them to market.

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Promote Realism Palmers W.B.A. Wayamba University of Photo - Suren Pushpika

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National Research Development Framework joins Sri Lankan University System

The Ministry of Science, Technology and Research announced the National Research Development Framework to be activated in collaboration with the Sri Lanka University System. President Maithripala Sirisena, Minister of Science, Technology and Research Sajith Premadasa and consisting of the Ministry Secretary and Additional Secretary and other officials participating in the discussion held about it. Under this, program will be activated in the University of Sri Jaywardena Prasadaya, Wayamba University, University of Kelaniya, University of Ruhuna, University of Peradeniya, University of Moratuwa, University of Maduwa, University of Moratuwa University of Jaffna.

Without New Technology...

● Can you tell our readers about research and development work? The pride of place in our Institution is given to research. We have world-class laboratories and research equipment of the highest quality for that. We have over Rs. two billion worth of equipment at present. Accordingly, we have the ability to conduct research. All our research projects are operating through five areas. We are conducting only research needed by the country. One of our basic research areas is the textile and apparel industry. Furthermore, research on fertilizer, natural resources, rubber and nutraceuticals can be identified among them. At present we are conducting research on deriving Titanium from ilmenite. We are exporting ilmenite at $200 a ton. But, a ton of Titanium Dioxide is imported to Sri Lanka at $4000. Furthermore, 99.99% pure graphite exists in Sri Lanka. But, it is exported at $200 a ton. After it is turned into Graphene in Europe, a gram of it is sold to organizations such as Nokia and Samsung for $100. Why can't we do this? The necessary research for these products is being conducted at present at the Sri Lanka Institute of Nanotechnology. Our problem is not making these products. Investors are needed to take this research forward. Investors should be encouraged for this. But, those products are exported as raw material due to convenience. This is a great loss for the country. In other countries, capsules with medicinal value have been manufactured from cinnamon. In Japan where tea does not grow, green tea biscuits are being manufactured. Even though we have these resources in our country, we have not identified them. Now we are conducting research on these. Turmeric is a powerful remedy for cancer. Americans have got used to adding a teaspoonful of turmeric to a glass of water and drinking it. It is not shown quantity-wise even in Ayurveda. Science should be added to these. Everything is available in our country. But, value, knowledge and vision are needed.

● Shouldn’t thinking develop on science, technology and these masses of knowledge? Science and technology should be more disseminated. It is very important for us to construct a culture where a separate media time should be allocated for that. The awareness is not sufficient. Science and technology should be introduced to the society in simple terms. The SINTEC Board of Directors consisting of the heads of the most powerful organizations in Sri Lanka. We have about 55 scientists. As a result of the society understanding of a certain level, this has become a suitable place for students to visit. Students and teachers from schools visit SINTEC regularly. There is some understanding in many people. In countries such as Japan, there is always a team from the private sector before a Professor's desk, expecting an invention by that Professor. That culture is not there in our country. But, we are constructing that culture in our country. Now we are being asked for inventions. They have recognized that we are going towards inventions. Our young scientists are leaning towards research that can earn money. What I say is, if you want to become rich, conduct research on inventions. We are always encouraging them for inventions through proper funding. It is possible to become rich by doing science. Professors in Japan and America own companies of their own. Our Professors also should have opportunities to launch their own companies through their inventions. The birth of such a culture is of utmost importance. We have to invent a new product or process in the laboratory and take it to the market. Money has to be spent to take it practically to the large scale. In the laboratory research that conducted with 1 kilogram can go up to five and ten tons. Even after that, it can be relisted at the market. A successful invention at the laboratory can last at any time. That is the danger. In Korea, the laboratory to market success is 5%. The Korean Government granted a huge amount of money for research and development. In our country also three inventors are selected, sent abroad and subjected to appreciation annually. But, what happens after that? There is no investor to take the invention forward. The Korean Government gave loans on minimum interest to students. Once the research - invention culture is established, the Government reduces the interest and the private sector takes up the loan. After the culture is set up, it operates automatically and continuously. This is something with a long term vision. Now even the school students are very keen on this feed. But, it is essential to prepare syllabus under the new vision. If students become bored with the subject, it is useless. The teacher also influences that. Recruitments to the teaching profession should be more powerful. Fulfilling qualifications with First Class and Second class degrees is of utmost importance. The teaching profession needs group conducting research, with updated knowledge and able to transfer knowledge in a simple manner.

Continued from page 05...
The planets and constellations that could be identified in the night sky at that time were discussed in the May issue of the 'Vidya' newspaper. They are the planets Jupiter and Saturn and the constellations Scorpio, Sagittarius and Leo. During these nights also those celestial objects could be observed in the sky and upon observation it will become clear to you that they have shifted towards the west.

In this article, let’s attempt to identify some more constellations that can be observed in the night sky in the present. Accordingly, the largest constellation that can be observed in the northern sky, the Great Bear (Ursa Major) constellation, can be clearly identified. Seven stars are situated in the shape of a plough and by mentally joining those bright stars with other stars in the vicinity you can visualize the Great Bear (Ursa Major) constellation. Furthermore, two bright stars in the Great Bear (Ursa Major) constellation point towards the North Star (Polaris). Accordingly, the northern direction could be identified using the Great Bear (Ursa Major) constellation. These constellations are also identified as “Navigation Constellations.” In the north, along with the North Star, there is another constellation with seven stars. This constellation is named the “Lesser Bear” (Ursa Minor) and it resembles the plough-shaped part of the Great Bear constellation. The Great Bear constellation is larger in size than the Lesser Bear constellation and these two constellations could be differentiated by the positioning of stars. In the Lesser Bear constellation the stars at the end of the "tail" are bent upwards and the stars at the end of the "tail" of the Great Bear constellation are bent downwards.

Furthermore, the North Star (Pole Star – Polaris) situated at the tail end of the Great Bear constellation is a very special star. Although all other stars south in the East and set in the West the North Star can always be observed in the same place in the night sky, the reason being that the axis of the Earth is pointing at the North Star.

Other than these, another "navigation constellation" can be identified in the southern sky. This constellation comprises four stars and is in the shape of a cross. This constellation is called the "Southern Cross." South can be positively identified by lengthening the line joining the two farthest stars in the Southern Cross towards the horizon.

In the past, ancient people have used these constellations to navigate in long desert treks and ocean journeys. Furthermore, various constellations have been used in agriculture to determine times for planting seeds, harvesting and time periods.

In this article, let’s attempt to identify some more constellations that can be observed in the night sky in the present. Accordingly, the largest constellation that can be observed in the eastern sky, the Great Bear (Ursa Major) constellation, can be clearly identified.

Night Sky Observation Camp

Arrangements have been made to hold the next of the series of Night Sky Observation Camps organized by the Sri Lanka Planetarium to develop the astronomy knowledge of the general public on Friday the 30th of June 2017. This Night Sky Observation Camp will be held free of charge for general public from 7.00 pm to 10.00 pm. Please note that the camp will be canceled if the weather conditions are bad or the sky is obscured by clouds. So, if you are expecting to participate in this programme, please confirm the holding of the camp by calling the planetarium after 5.00 pm on that day.

For further details about this programme, please contact telephone numbers 011 - 2566499 or 077 - 2723283.

Presented by
Sri Lanka Planetarium

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SLINTEC signs agreement with British Cosmetics to engage in cosmetics research

British Cosmetics and Sri Lanka Institute of Nanotechnology (SLINTEC) have signed a research agreement focusing on the development of a novel facial care product with scientifically proven benefits. SLINTEC is a public-private partnership between the Government of Sri Lanka and major players in the private sector; namely MAS Holdings, Brandix, Dialog, Hayleys, Lodaastar and most recently Lankem. SLINTEC is committed to support small and medium enterprises to improve and develop their products to meet the demands of the local and international markets using nanotechnology and advanced technology solutions.

British Cosmetics is one of Sri Lanka’s leading skin and beauty care distributors and manufacturers and has been a household name since its inception 16 years ago. The company is a distributor of top international brands and signature products and is also expanding its local manufacturing capability with a view to creating an export brand.

Rs. 48.5 million for Multi Disciplinary Research

The National Research Council (NRC) has awarded a Target Oriented Multidisciplinary Research Grant (Rs. 48.5 Million) to Department of Chemistry, University of Colombo, to develop advanced materials based filters for water purification. Dr. Rohini M. de Silva (Department of Chemistry) is leading this project as the Principal Investigator. The research team consists with Prof. K.M. Nalin de Silva (Deputy Principal Investigator), Prof. Dhammikie Dissanayake, Prof. Ranil Daasanayake, Prof. Nilmini Gunawardena, Dr. N.V. Chandrasekharan and Dr. Gareth Williams from the University College London. Picture shows the NRC Chairman, Prof Janaka de Silva is handing over the agreement to Dr. Rohini and Prof. Nalin de Silva.

SLINTEC Technology Incubation Center

SLINTEC successfully signed John Keells Research, the Innovation and research arm of John Keells Holdings Pte. Ltd., to become one of its tenants at SLINTEC newly opened Technology Incubation Center, located at the Nanotechnology and Science Park in Pitipana, Horamavu. John Keells Research has allocated 10,000 square feet in the Incubation Facility in order to have access to SLINTEC scientific human resource and equipment. In addition to being a tenant in the Incubation Center, it is hoped that the partnership between SLINTEC and John Keells Research will further strengthen future research and development between the two parties. SLINTEC is a public-private partnership between the Sri Lankan Government and major players in the private sector, namely MAS Holdings, Brandix, Dialog, Hayleys, Lodaastar and most recently Lankem. SLINTEC is committed to supporting small and medium enterprises to improve and develop their products to meet the demands of the local and international markets using nanotechnology and advanced technology solutions.

Successors to J.L. Morison Join hands with SLINTEC

Hermes Holdings PLC, successors to J.L. Morison Company Limited, laid the foundation stone for an ultra-modern drug manufacturing facility at the SLINTEC premises at Pitipana, Horamavu, investing over Rs. 2 Billion. The full commercial production of this manufacturing facility is scheduled to start from year 2019.