

Address by the General President of the SLASS at the Induction Ceremony in 2023

I consider it a singular honour and privilege to be elected as the General President of the Sri Lanka Association for the Advancement of Science (SLAAS) – one of the oldest premier scientific institutions in Sri Lanka established in 1944 (almost 80 years ago) with a present membership of over 11,000. My memories of the early days at the SLAAS are still vivid and fresh in my mind and I can remember how excited I was, and how elated I felt, when I received the SLAAS programmes of annual sessions carrying my name, affiliation and titles of presentations. As a young man then at the beginning of his career, it meant a lot to me, and the stimulus it provided grew from strength to strength through my regular participation at its annual sessions. Thus, the SLASS provided the much-needed platform and conducive environment for me to attain “academic puberty”, so to speak, which contributed in no small measure to my career progression and to my becoming what I am today.

Hence, when Prof. Sumeda Jayanetti, the General President of the SLAAS in 2021 sought my consent to nominate me as a candidate for the General Presidency in 2023, I gave consent even though I would be of a relatively advanced age in the event of being elected, since it would afford me an opportunity to repay the kindness and benevolence of the SLAAS which has made a profound impact on my academic life and professional development.

I am fully cognizant of the duties and responsibilities of this high post, particularly at a time when the country is facing unprecedented economic, social and environmental challenges and issues and the general public is increasingly turning to and looking to scientists, technologists and professionals to turn around the current situation and usher in a better and secure tomorrow. Therefore, the obligation of scientific institutions such as SLAAS to the community and the nation is much greater now than ever before. However, I am confident that with the passionate commitment and utmost dedication and devotion of the members of the Council and statutory committees of the SLAAS, we as a team will be able to respond to the needs of the hour in keeping with the mandate of the SLAAS.

Today people in the country are demanding systematic change with one voice. French novelist and poet Victor Hugo said, “**Nothing is more powerful than an idea whose time has come**”. Unarguably, S&T is the prime driver of and the key to development. Being members of an apex S&T hub institution in the country, it is, therefore, incumbent upon us to seize this opportunity to provide leadership, guidance and support to address the crisis and rebuild the economy.

They say, institutions languish when their critics are unloving, and their lovers are uncritical. We need loving critics or critical lovers and I think I belong to this category. During my address, I wish to briefly articulate my vision in this spirit for your kind reflection and feedback which I greatly value and look forward to in order to firm up my agenda for 2023.

Today we are living in an era that demands bringing down walls and building bridges, for walls have always been a hindrance to man's progress throughout history. The Berlin Wall is a striking example. Now, the world has become borderless and globalized, facilitating free diffusion of ideas, talents, capital and resources across territorial boundaries. This has opened up immense opportunities for growth and development. Consequently, countries in the world are connected by innumerable supply and value chains that account for about 70% of international trade. For instance, Apple phone designed in the USA is assembled in China and made in 31 countries with over 785 suppliers.

When such a sea change is taking place across the globe, can we remain impervious to it? Shouldn't we make our institutional and disciplinary boundaries also more porous and permeable, enabling free diffusion of ideas, talents and resources across such boundaries so as to provide for synergy and complementarity? Presently, the SLASS has 8 discrete sections, and we all know the degree to which lack of interaction and collaboration between sections is found in almost all our academic and R&D institutions.

If we look at what made Macintosh great, it was the diversity of its team which surprisingly comprised no computer scientists, but a historian, a zoologist, a musician, a poet and an artist, all of whom finally turned themselves into world-class computer scientists. The Medici Effect – a term coined by Frans Johansson in 2004 - is another case in point. This brought about a renaissance in Medieval Europe when the wealthy Medici family in Florence brought poets, philosophers, scientists, painters and other artisans from around Europe to Florence, Italy between the 15th and the 17th centuries. Bringing these talented people together and encouraging them to collaborate had kicked off the Renaissance Period, a period of human history marked by great innovation - one of the most creative eras of Europe. Shouldn't we introduce such a cultural 'ecosystem' at the SLASS, blurring sectional boundaries to achieve greater innovative performance and impact through interdisciplinarity? I will leave it with you for reflection.

It is disconcerting that despite phenomenal advances and remarkable accomplishments in S&T today, conflicts, terror, violence, disquiet and unrest are mounting, and the world is becoming increasingly more chaotic, more insecure and more dangerous by the day. Hence, it is imperative to come to grips with a myriad of formidable man-made challenges and threats such as climate change, loss of biodiversity, pandemics, natural hazards, high-tech terrorism, drug trafficking, arms trafficking, cybercrime and air and marine pollution.

These global challenges are complex, multi-faceted and multi-dimensional and they demand a transdisciplinary and transnational approach where cooperation, regardless of territorial boundaries, between specialists with diverse backgrounds in both the natural and social sciences is essential. Besides, there is growing recognition that new approaches and different types of expertise are needed to renew science. Therefore, I propose to introduce a session on **"Interdisciplinary and Transdisciplinary Studies"** at the Annual Sessions and wish to see more and more people working in a multi-disciplinary setting, and even engaging in fields such as Music Therapy where the Humanities and Medicine are brought together. This would add a new dimension to the SLAAS.

As you are aware, music can have a beneficial effect on brain chemicals such as dopamine, which is linked to feelings of pleasure, and oxytocin, the so-called "love hormone". Music therapy can help decrease pain, stress, anxiety, fatigue and depression and may also help to

overcome substance abuse disorder. Research has also shown that it can increase motivation and self-esteem, and strengthen coping skills. Given the far-reaching benefits and wide applications of music therapy, particularly in the present context, isn't it appropriate to include humanities under Section F so that the SLAAS become inclusive? Now the much talked of STEM Education has been changed to STEAM Education, embracing Arts as well!

I wish to lend further support to my proposition by sharing with you how a well-reputed university in the UK responded to change. Until 2003, undergraduate as well as postgraduate teaching and research at Sheffield-Hallam University in the UK were managed by eleven different schools. These schools operated very much in their own silos, and opportunities for collaboration were limited. The university took a bold decision to re-structure itself in response to the changing higher-education landscape in the world whereby they merged four different schools, namely Engineering, Computing & Management Sciences, Sciences and Cultural Studies, to create a Faculty of Arts, Computing, Engineering and Sciences. This led to creating "**Arty Sciences**" by Sheffield-Hallam University which became a trail blazer and a trend-setter. Needless to add that there are many such HEIs in the world now. In his book entitled "The Little Prince", Antoine de Saint-Exupery, French writer, poet and journalist, said "**It is with the heart, one sees rightly; what is essential is invisible to the eye**". Thus, Sheffield-Hallam University today produces graduates equipped with not only "hardware", but also with "heartware", so that they can see not only with their eyes, but also with their heart, for the Humanities can have a profound humanizing and civilizing influence on humankind.

Now let me turn to the SLAAS theme of the year. We know that S&T has contributed immensely to human civilization and development of the world, and we cannot think of any sphere that has not been impacted and benefitted by it. Even the classification of countries as developed, developing, underdeveloped or even as third world designates the level of development of S&T in those countries. We are also acutely aware that it is S& T that led to the horrors – including the Holocaust – of two World Wars which resulted in the death of around 100 m people. There have been many other such horrors in the world, including Sri Lanka, though lesser in magnitude. Indiscriminate and injudicious use of S&T has also contributed to the climate change that is now wreaking havoc in the world.

Hence, though man has been able to conquer the world through technological feats, he has failed to conquer the human mind. Therefore, despite all the technological marvels, the world is fraught and rife with mounting disquiet, conflict, tension and violence, and war. However, it is comforting and reassuring to learn that even during the height of the second WW, amidst fierce fighting between Adolf Hitler's armed forces and British and American troops, German scientists were continuing their collaborative research with their British and American counterparts. The war could not drive a wedge between them or make enemies of them. We have thus far neither recognized nor harnessed the profound unifying, bonding and healing power of S&T to bring about unity, harmony and friendship among communities and nations. This powerful force hitherto remains almost untapped and under-exploited, whether for the benefit of humanity or in order to make this planet a more pleasant place to live in.

Moreover as mentioned before, formidable global challenges such as climate change, loss of biodiversity, pandemics, natural hazards, drug trafficking, arms trafficking, cybercrime, air pollution and marine pollution can be effectively tackled only through a transdisciplinary and transnational approach where cooperation between specialists with diverse backgrounds in both the natural and social sciences across territorial boundaries is a sine qua non.

Therefore, I wish to propose “**Science Diplomacy as a powerful force for national unity and friendship among nations**” as the theme for 2023. This theme is of great topical relevance and significance, and if pursued prudently and diligently, it could make a huge difference to ethnic harmony in Sri Lanka and international relations with other nations. The databases developed by the NSF, namely STMIS with nearly 3,000 senior local scientists, and the Global Digital Platform with over 1,300 Sri Lankan expatriate scientists and professionals, can be utilized in this regard, and I am confident that Dr. Sepalika Sudasinghe, the affable and amiable Director General of the NSF, will extend her fullest support and cooperation in this regard.

In 1944, President Franklin D. Roosevelt sent a letter to his science advisor, Dr. Vannevar Bush, posing the question of how science and technology could best be applied to benefit the nation’s health, economic prosperity, and national security in the decades that would follow the Second World War. Similarly, on January 15, 2021, then-President-Elect Biden (even before assuming duties) sent a letter to Dr. Eric S. Lander, his appointee as the President’s Science Advisor and nominee as Director of the Office of Science and Technology Policy (OSTP), posing five questions of great topical significance for the USA. The President tasked Dr. Lander and his colleagues to consult diverse scientific and professional bodies as well as the broader American public to refresh and reinvigorate the US national science and technology strategy. However, in our country so far scientists and professionals have not been able to make their voice heard at national level. On the contrary, politicians hardly look to the scientific and professional bodies for advice and guidance. There is a need to create a culture in Sri Lanka in which S&T experts are routinely consulted on matters relevant to the nation’s progress, prosperity and well-being.

Georges Benjamin Clemenceau, Prime Minister of France during the 1st WW, said “**War is too important a matter to be left entirely to the generals**”. Similarly, without fear of contradiction, I could say, “**Development is too important a matter to be left entirely to politicians**”. However, in the same breath, I should state that scientists and professionals collectively did precious little to address the ethnic conflict and post-conflict reconciliation. Moreover, their contribution and engagement as a professional force to resolving the current socio-political and economic crisis is far from adequate and it leaves much to be desired. Therefore, I propose to establish a consortium of relevant scientific and professional bodies and associations such as National Science Foundation, National Academy of Sciences, IESL, SLMA Institute of Architects, Sri Lanka Veterinary Association, and such like under the umbrella of the SLAAS. They would form a cohesive and robust professional body able to serve as a guiding force, a lodestar, of the nation in proffering objective advice and guidance to the Government, public sector institutions and industry in matters of national interest. I am hopeful that objective and dispassionate advice and guidance from such a reputable

professional body, reinforced and enriched by world-class Sri Lankan expatriates, in an actionable and pragmatic manner would be listened to and reckoned with rather than trifled with.

However, in order for the SLASS to serve as a pedestal for such a formidable body, its base needs to be strengthened, and its stature and visibility enhanced with a greater international profile. Hence as per the provisions already created, I propose to establish regional chapters of the SLASS in each province so as to strengthen the membership and increase presentations at annual sessions, thereby extending its footprint across the country. Forging partnership with the counterpart S&T institutions in the region, strengthening international cooperation, the establishment of an endowment fund and promoting PPP are other plans on the drawing board. In fine, while pursuing the initiatives of the past General Presidents in earnest, we, the Council of 2023, will embark upon novel initiatives, adopt innovative approaches, open more doors, and remove hurdles. These initiatives will facilitate the greater growth and impact of the SLASS in line with its mission and Rules and Regulations by effectively responding to existential national challenges and issues.

I would be failing in my duty, if I do not express my profound gratitude to the past Presidents and Council members who have created not only enabling provisions, but also have prepared a wonderful pitch for the 2023 team to perform on, and I continue to look for their mature guidance in discharging my duties as the General President of the SLAAS in 2023. I also wish to record my deep appreciation to Prof. Narada Warnasuriya, Chief Guest and Professor Emerita Ruchira Cumararatunga, Guest of Honour, for gracing this occasion and my friends and colleagues of the SLASS and its staff for their unstinted support and cooperation in organizing this event in a fitting manner.

I wish to conclude my address with a quote from George Bernard Shaw which is quite relevant in the present context. That is “**All reasonable men adapt themselves to the world and only a few unreasonable men persist in trying to adapt the world to themselves. All the progress in the world depends on those unreasonable men and their innovative and often non-conformist action**”. I am blessed with a disproportionate number of such unseasonable men and women in the council and I look forward to working hand in hand with them to advance the cause of S&T for national development and common good. May the SLAAS grow from strength to strength and emerge as a guiding star of the Nation!

**Professor Emeritus Ranjith Senaratne,
General President of the SLAAS - 2023**