

## Presidential Address

### Innovative Programmes for Economic Development Launched: Key Activities of the Institute of Chemistry Ceylon during Presidential Year 2022/2023

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#### Importance of the Year 2022 to the Scientific World

The importance of 2022 to the scientific world was considerable due to several significant international events, and it was also a year for commemoration of several important scientific findings in history. The United Nations declared the year 2022 as the International Year of Basic Sciences in Sustainable Development (IYBSDD 2022). The purpose of the Year was to highlight and disseminate worldwide, the vital role of mathematics, physics, chemistry, and biology for the application of new research results that promote the development of each sector of the economic and social life of a nation.

Year 2022 also marks a number of benchmarks in history of basic sciences: 200 years since the presentation of the “Difference engine” - automatic mechanical calculator designed to tabulate polynomial functions, 150 years since the beginning of the first oceanographical expedition, 90 years since the discovery of neutrons, 60 years since the presentation of the first visible light emitting diode, 50 years of the first extraction of the anti-plasmodial drug artemisinin, 40 years since the discovery of the first lunar meteorite on Earth. 2022 also marked the centenary of two important international scientific unions IUPAP and the International Mathematical Union (IMU), 200<sup>th</sup> Death Anniversary of Rene-Just Haüy (1743-1822) a distinguished Professor at the French Museum of Natural History, a French Scientist who had contributed immense to Mineralogy, Crystallography,

modern Gemology and metric system in France.

However, 2022 was a very challenging year where the whole world as well as our own country was passing the worst ever economic crisis which has affected all levels of society. The activities of the Institute too were affected with no difference although some positive actions could be taken to mitigate the situation and achieve a considerable success.

#### Educational programmes of the Institute

##### Diploma in Laboratory Technology

The Institute, since its establishment in 1972 has made considerable advancements towards its contribution to the increase of the number of chemistry professionals required for the country. The first educational programme of the Institute, Laboratory Technicians Training Course was initiated (LTTC) in 1973 to train middle-level technicians in chemistry for laboratories. After completion of 25 years, the LTTC was upgraded to Diploma Level and renamed Diploma in Laboratory Technology in Chemistry (DLTC), in May 1988. The course was renamed as Diploma in Laboratory Technology (DLT) in 2020. So far it has been possible to produce 1,677 Laboratory Technicians and presently we have the 51<sup>st</sup> batch of students. Thus, I am proud to say that our Institute still generates the largest number of laboratory technicians required for the country.

##### Graduateship programme (GIC)

Graduateship Programme could be commenced in May, 1979 due to untiring efforts of a group of enthusiastic chemists who had an extensive commitment and dedication to chemical profession with a vision for the future. It continues to contribute significantly towards human resources development in Chemistry in Sri Lanka. As you all are aware, IChemC is the largest

provider of professionally qualified Graduate Chemists in Sri Lanka since 1996 and most of our graduates comprise over 60% of the IChemC membership today. The GIC programme has been recognized both nationally and internationally. So far 1931 Professional graduates have been produced and we have currently the 45th batch of students.

### **BSc Hons Degree Programme in Chemical Science**

In March 2020, the Institute of Chemistry Ceylon was recognized as a degree awarding institute by the Ministry of Education (MOE). Having considered the need in the country to produce graduates with special training in advanced aspects in Chemistry together with thorough research capabilities and management knowledge, we introduced the BSc (Hons) Degree Program in Chemical Science in 2020. Presently, we have the 6<sup>th</sup> Batch of students and so far we have been able to produce 41 graduates through this new programme.

### **Malabe Campus of the Institute**

The Institute initiated action in to expand its physical facilities by developing IChemC Educational Complex at Malabe on a land about 1 acre in extent, which has been allocated to us by the UDA. Construction work were commenced in the end of 2021. The project will cater to the ever increasing demand for our educational programs: GIC and DLTC, and newly commenced BSc program. With the addition of more space, we will be able to provide much more facilities to the students and staff to engage in educational and research programs. The biggest challenge for us would be to meet the increasing cost of material and services in the construction of Malabe campus. We wish to complete the construction work by the year 2024.

### **New Innovative programmes**

In my Induction Ceremony as the 85<sup>th</sup> President of the Institute, which was held on 24<sup>th</sup> June 2022 at Golden Rose, Boralesgamuwa, I presented my work programme in brief and mentioned that I will embark on activities with innovative thoughts based on the Corporate Plan of the Institute. I could embark on all the planned work which were short term, medium term and long term as

expected by me with the fullest support of the Council and respective Sub Committees and we were able to advance forward with much enthusiasm, courage and dedication throughout the year.

### **Establishment of a National Secretariat**

As a novel approach towards quality control of chemical products imported or exported, action was taken in June 2022, to establish a National Secretariat, under the provision of IChemC Act by formulating by-laws. The National Secretariat thus formed is responsible for the Professional Practice of Chemistry which covers the performance of a service related to public interest, public safety, and legal or regulatory matters. There is a need to take necessary steps to for the registration of Chemists, proper development of ethics and streamlining of Continuous Professional Development programme which will provide current knowledge, skills, hands on experience and good practices in chemical analysis, and quality assurance, which will support Accreditation of Chemical laboratories. I have taken action to increase awareness on these matters amongst the policy makers so that, we can make a distinct and positive contribution to enhance the professional status of our Chemists and the profession of Chemistry in Sri Lanka.

### **Establishment of Clodagh Nethsinghe Memorial Chemical Laboratory and Training Centre (CNMLTC)**

The land donated by Clodagh Nethsinghe to the Institute which is 40 perches in extent and located at No 40, C. V. Gunarathna Mawatha in Dehiwala is an ideal site for the establishment of a Chemical Laboratory and Training Center (CNMLTC). The land has a good accessibility and it is located in close proximity to transport facilities such as bus stands and railway station, and other facilities such as commercial centres, communication centres and Banks in Dehiwala township.

Plans were prepared for an analytical laboratory, an auditorium, Consulting rooms and a parking lot, with a total floor area of about 21700 ft<sup>2</sup>. I am confident that the proposed centre will boost the chemical industry through various services that it will render.

### **Celebrating the International Year of Basic Sciences in Sustainable Development (IYBSSD 2022)**

In celebrating the IYBSSD 2022, the Institute joined over 110 national science academics, scientific networks and associations across the world who have set up thousands of events during the international year which will inspire greater engagement with science, encourage young people towards careers in the field, and highlight the value of fundamental research for society.

The programs organized by the Institute included a Grand Virtual Trade Fair and Exhibition ('VCHEMEX 2022'), seminars, workshops, publication of a special issue of 'Chemistry in Sri Lanka' (the triannual publication of the Institute) dedicated to IYBSSD 2022, publicity programs through press and electronic media, and public awareness programs with the participation of chemists, academics, industrialists and representatives of public and private sector organizations. It was for the first time in the history of the Institute that we could organize a Virtual Exhibition.

### **Implementation of Sustainable Development Goals of the United Nations**

Being a member of the IUPC and a professional organization of Chemists in Sri Lanka, we recognize our responsibility towards contributing to the Sustainable Development Goals (SDG) that have been declared by the United Nations. We have launched several programmes to contribute to the SDGs.

As you are aware, the first few Goals have been designed to achieve Reducing poverty, Zero hunger, Good health and well being, and Quality of education. Therefore, with a view to discuss the role of chemists we conducted a National Conference on the Role of Chemists in Achieving Sustainable Development Goals on 1<sup>st</sup>, 2<sup>nd</sup>, 5<sup>th</sup> and 9<sup>th</sup> June 2023 at the Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI). It was jointly organized by our Institute and the Sustainable Development Council with the participation of eminent Chemists, University Academics in chemistry and related fields, industrial representatives as well as the representatives of relevant Ministries, Departments, and other Statutory Bodies. The outcome of this National Conference will be used to formulate a proposal for the consideration of the Government in order to introduce

policies in the relevant fields, as applicable.

The subjects discussed at the Conference were Day 1: Achieving Health and Wellness for Sustainable Development: Role of Health Sector Policy Makers Day 2: Sustainable agriculture, food security and food safety: Role of Agriculture/Nutrition and Food sector Policy Makers, Day 3: Industrial Development for Sustainable Development: Role of Industrial Policy Makers, and Day 4: Chemical Education and Research for Sustainable Development: Role of Educational Policy Makers. A special mention has to be made by me about the representatives of the Wyamba University among others who contributed immensely to the success of the Conference through their active involvement as resource persons.

### **Master's Degree programme in Chemical Analysis and Quality Assurance.**

We have developed a Master's Degree programme in Chemical Analysis to provide opportunities for undergraduates who have completed the honors degree in Chemistry/Chemical Sciences to gain knowledge and experience in chemical analysis along with quality assurance. Those who are already employed in the industry, analytical services laboratories and research laboratories would also be benefitted as they will be able to upgrade their expertise in chemical analysis and quality assurance through this programme. The programme has been submitted to the Ministry of Education for necessary approval.

### **Continuous Professional Development Programme**

With a view to improve the quality of chemistry graduates employed in the industry we initiated a CPD programme titled "Knowledge, Skills and Standard Practices in Chemical Analysis" to improve the capacity and quality of chemistry graduates who are engaged in chemical analysis, research and development. The objective is to update and enhance the existing knowledge and laboratory skills based on new developments in the field of chemical analysis and also to provide hands on experience in instrumental methods. The first workshop was organized from 16<sup>th</sup> March 2023 and conducted for 12 days. Good laboratory practices, quality assurance, and quality control as applied in industries in Sri

Lanka, ISO 17025:2017 requirements for laboratory accreditation, statistics and chemometrics in chemical analysis are included in the programme.

### Finance and Management

I have developed a new finance management system and a mechanism to review the statements of accounts quarterly, with a view to ensuring an efficient financial management and control for the Institute. Focus is mainly on cost reduction measures and improved efficiency in service delivery

### New Recruitment Policy and MIS

A recruitment policy was also developed for the Institute for implementation which became operational with immediate effect. A Management Information System MIS was also developed for the benefit of students, staff, and the members.

### Membership of the Institute

In regard to membership, we have several categories of them. I am pleased to mention that, most are actively involved in their professions in the chemical industry as researchers, senior managers, administrators and academics. Strength of any organization such as ours depends on the membership and their active involvement in the affairs of the Institute. At present, we have over 3,480 members and some are doing a valuable contribution to the development of the Institute. As my predecessors, I too wish to appeal again and again, to provide their support and assistance to the work of the Institute by serving on its numerous bodies and sub committees and in any other way they think appropriate. It will enable our Institute to go from strength to strength and enhance the professionalism in Chemistry in Sri Lanka.

Finally, I would like to express my feelings of gratitude for the unconditional cooperation and support

given by the members of the Council in providing an opportunity for me to lead our Professional Institute and contribute to its progress, following the path and vision of our past presidents, whom I remember with great respect and gratitude. During the period of my tenure, I could accomplish the tasks planned by me due to the extensive support given by the Council and its Members, Dean of the College of Chemical Sciences and Academic Staff, Non-Academic Staff, External Organizations, Government and semi Government agencies, international organizations, university academic staff, industrial sector and other good friends and well wishers .

I am confident that the incumbent President and the new Council will continue the work commenced by me and in this connection, I will give every possible support at personal level and through the National Secretariat. I take this opportunity to thank the Council and its members, two Joint Secretaries Chairpersons and members of over 20 Sub Committees, Dean of the College of Chemical Sciences and Academic members, Registrar and the Non-academic staff including the staff including those brilliant staff of the Accounts Division and the Library who did a wonderful job. Mr NINS Nadarasa, our Senior Administrative Officer, contributed much to the publicity of our programmes which contributed immensely to their success.

I also wish to extend my sincere thanks to the Government and semi Government agencies including the Ministry of Education, Sri Lanka Sustainable Development Authority, Universities, especially to the Staff of the Wayamba University, Industrial sector, President and Registrar of the Dietitians Association and all other well wishers for their immense support in a multitude of ways to accomplish the tasks I had undertaken.

I wish the Institute a great success in all its future endeavors.

*Mr. N M S Hettigedara graduated from the Institute of Chemistry Ceylon. He is a Senior Nutritionist and Dietitian at the Sri Lanka Police Hospital, Colombo having the rank of Senior Superintendent of Police (SSP). He obtained a BPharm (Honours) degree, MSc in Food Science and Nutrition and currently reading for his PhD. He is a Chartered Chemist. He is a Fellow of Institute of Chemistry and a Fellow of Dietitian's Association of Sri Lanka. He is also a registered pharmacist and a member for life of Pharmaceutical Society of Sri Lanka and Nutritional Society. and a Member of the American Society of Nephrology.*