



ECOSF NEWSLETTER



Science Education Policy Forum: “*Role of Science Museums and Centers in Public Science Literacy*” co-organized by IAP SEP and NSM Thailand- ECOSF contributes to the Forum

The National Science Museum (NSM) of Thailand in Bangkok and Inter Academy Partnership Science Education Program (IAP SEP) with the support of Ministry of Higher Education, Science, Research and Innovation (MHESI) of Thailand organized an Science Education Policy Forum entitled; “Science Literacy: Role of Science Museum and Science Centre”. This Forum was held as a part of the National Science and Technology Fair 2019 (NST-2019) of Thailand which opened on August 16th and concluded on August 25th 2019. The Science Education Policy Forum was held on 20-21 August 2019 in Bangkok, Thailand.

The aim of this Science Policy Education Forum was to discuss the possibilities of the collaboration between science museum/centers and the national museums in the promotion of science literacy for the sustainable development in the region under the aegis of IAP SEP. The NST Fair 2019 of Thailand provided a platform to encourage and inspire young students and the general public to adopt Science, Technology, and Innovation as guide to improve quality of life, appreciate the value of science and technology, and strengthen the economy.



Prof. Rawin Raviwong, President of the National Science Museum (NSM), Thailand opened the Forum and congratulated the organizers, where he highlighted the importance of interactive learning through Science Museums and Science Centers.

Opening ceremony was chaired by **Dato Lee Yee Cheong, the Interim Chairman of the IAP SEP Global Council and Commissioner, UN Broadband Commission for the Sustainable Development**, who shared the goals and objectives of the forum. **Prof. Wang Xiouming, Director General of Shanghai Science and Technology Museum** delivered his Keynote Address in

the opening ceremony. Prof. Xiouming stressed that Science Museums play a critical role in developing scientific spirit and culture while providing a space for interaction among the government, scientists and the general public.

During this two days Forum, a number of sessions were organized to highlight and discuss the important role of science museums and centers in promoting science literacy.

President ECOSF Prof. Dr. Manzoor Hussain Soomro- a member of IAP SEP Global Council chaired the session on “Global and Regional Perspectives”. He introduced the session and speakers and then delivered his presentation on “*The Role of Science Centers and Museums in Public Literacy and the Status of ECO Region*”. He said that the science museums and centers have significant potential to develop positive attitudes towards science and technology, strengthen science learning and influence career choices by young people. Dr. Soomro further discussed the important role, the science museums and centers can play to bridge the gap between science and society. In the end, he also highlighted the status of science museums in the ECO region.

Other notable speakers of the session were:

- **Dato Ir. Lee Yee Cheong**, Commissioner, UN Broadband Commission for Sustainable Development
World Bank Africa Digital Infrastructure Moonshot
- **Carol O’ Donnell**, Director, Smithsonian Science Education Center, Washington DC.
Science Education and Literacy for Global Goals (SDGs)
- **Prof. Daniel Rouan**, Chairman, LAMAP Foundation, France
LAMAP: The Next 10 Years
- **Susan Stockmayer O.A.**, Science Communication Expert at Australia National University.
Latin American and African Perspectives



On the second day of Forum, the concluding session was chaired by a living legend of Science promotion- Prof. Mohammad Hassan, President of Sudanese National Academy of Sciences and founder Executive Director of The World Academy of Sciences (TWAS); where the all the Session Chairs, including Prof Soomro were invited to present brief summary of their respective sessions. Prof Soomro shared the outcome of the session on “Global and Regional Perspectives” and concluded that Inquiry Based Science Education (IBSE) is essential for understanding the world dynamics, especially in the context of emerging technologies and promotion of global peace and harmony. He underlined the importance of developing effective networking linkages amongst the stakeholders to better achieve the shared goals and promote scientific culture through science museums and centers.

It is pertinent to mention that the National Science and Technology Fair is the largest annual fair of Thailand to promote Scientific Literacy and Science, Technology and Innovation. This year (2019), the Fair attracted more than a million visitors including children, parents and youth who actively participated in many interesting scientific experiments, exhibits, interactive displays and activities. This year, the theme was; “Science, Technology and Innovation: Inspiring Creativity for Better Living and Sustainability for the Nation” with subtheme of the United Nations’ Sustainable Development Goals (SDG), and to celebrate the International Year of the Periodic Table of Chemical Elements (IYPT 2019).



IAP SEP Global Council Meeting 2019 hosted by the NSM of Thailand held in Bangkok

The 2019 meeting of the Global Council (GC) of InterAcademy Partnership Science Education Programme (IAP SEP) was held on August 21, 2019 in Bangkok; it was hosted by the National Science Museum (NSM) of Thailand. The main focus of IAP SEP is the promotion of Inquiry-Based Science Education (IBSE) and also the improvement of science literacy among the general population through national academies of sciences as well as science museums and centres.



The meeting was chaired by Interim Chair of the Global Council- Academician Dato (Ir.) Dr. Lee Yee Cheong of Malaysia, who welcomed all the members of the Global Council and appreciated their continuous support to the Science Education Programme of IAP. Prof. Dr. Manzoor Hussain Soomro, President ECOSF who is a member of IAP SEP Global Council in his personal capacity, participated in the meeting.

During the meeting, various administrative and strategic decisions including adoption of the minutes of the last meeting were made. The meeting also sought the progress made on the global science education programmes by regional IAP networks including the Asian, African and South American and discussed the future plans. Dato Lee shared a proposal for establishment of a “Virtual Nobel Science Museum” that he has sent to the President of Royal Swedish Academy of Sciences that manages the Nobel Prizes. Prof. Manzoor Soomro proposed a “Belt and Road Virtual Museum of Science and Technology” under the patronage of China Association of Science and Technology (CAST)- a strong collaborator of ECOSF and IAP SEP. Dr. Soomro as a Vice President of the Belt and Road International Science Education Coordinating Committee (BRISECC) has already written to CAST and the Secretariat for discussion on the proposal in the forthcoming meeting of the BRISECC in Nanning China in the last week of September 2019.

In the end, the Chair (Dato Lee) especially thanked National Science Museum of Thailand for hosting the meeting and for wonderful arrangements and facilitation. After concluding the agenda of the



meeting, the Interim Chair of IAP SEP Global Council- Dato Lee handed over the Council Chair to Prof. (Mrs.) Wafa Skalli of Moroccan Academy of Sciences. Prof. Skalli after taking over the Chair, appreciated and thanked the Global Council and its Secretariat for their trust in her and assured of her sincere efforts to further the objectives of IAP SEP. She also thanked the hosts of the meeting- NSM Thailand for excellent arrangements and the great Thai hospitality.

ECOSF participated in an International Conference on Nonproliferation and Dual Use Awareness in Ypres, Belgium

International Science & Technology Center (ISTC) in Kazakhstan and Science & Technology Center in Ukraine (STCU) with financial support of European Union (EU), and in collaboration with In Flanders Fields Museum organized an International Conference on “Non Proliferation and Dual Use Awareness (CONDENSE)” on August 29-30 in Ypres, Belgium.

The core objective of holding this conference was to critically engage natural scientists in a debate on dual use issues due to inherent nature of science and technology and to raise awareness among research community regarding the non-proliferation of dual use materials, knowledge and technologies that could be used for hostile purposes. The conference attracted over 30 participants from 16 different countries, including scientists from ECO member countries viz- Azerbaijan, Pakistan, Kazakhstan, Kyrgyz Republic and Tajikistan.



The conference was opened by Mr. Curtis “B.J.” Bjelajac, the Executive Director of STCU. Mr. Bjelajac paid deep gratitude to the organizers, especially the EU for their continuous financial support and encouraged all participants to make most out of this conference on this important topic. It is important to share that the concept of dual-use refers to the misuse of civilian technology for hostile purposes. Scientists are the key stakeholders in the context that their knowledge or technologies could potentially be used by third parties for both benevolent and malevolent purpose.

ISTC Kazakhstan is a strong collaborator of ECOSF; thus the Foundation was invited to join the conference and contribute. On behalf of ECOSF, Engr. Khalil Raza Scientific Officer participated in the conference and presented a paper on; “*Science & Technology Ethics and Promotion of Non-Proliferation of Dual-Use Materials/Technologies: Learning from the Ancient Civilization*”¹. Mr. Raza outlined that the science education has a very focused nature; which usually lacks the interdisciplinary studies - where



science students rarely get opportunities to study other subjects, such as arts, history, culture or international politics. Thus, natural scientists often remain outside of non-proliferation and dual use debate, Mr. Khalil added. However, this challenge could be addressed if social sciences (history, culture and arts) could be integrated with science education to focus more on creating social values towards harmony to live together in global peace. Such an integration could possibly attempt to create a culture of responsibility, safety and security amongst the natural scientists, he further added. Mr. Raza demarcated and introduced the

¹ Soomro, M. H., & Raza, K. (August 2019) ‘Science & Technology Ethics and Promotion of Non-Proliferation of Dual-Use Materials/Technologies: Learning from the Ancient Civilization’ *International Conference on Non Proliferation and Dual Use Awareness*. Ypres, Belgium.

concept of “Fusion of OBOR Civilization Science Education Curriculum Design (FoCEd)”, which could be a step in the right direction to follow this pursuit of creating a world where young kids (future generations) could appreciate the mutual respect and harmony to live together in peace. FoCEd is an innovative curriculum aimed at young children with an intent to enhance their understanding of current scientific knowledge and discoveries in ancient civilizations and developing a wisdom to inculcate global peace and harmony. The FoCEd has been developed under the aegis of InterAcademy Partnership Science Education Programme (IAP SEP) jointly by China Association of Science and Technology (CAST), ECOSF, ISTIC Malaysia and Chinese Academy of Sciences Institute of History of Natural Sciences Beijing. The curriculum is in pilot testing phase.

The conference concluded on the second day with a conviction that scientists can and should play their important role and take on responsibilities at their individual level to create a culture of responsibility, safety and security for the peaceful future of the planet earth and human species.

International Year of Periodic Table 2019 celebrated at the University of Karachi-Pakistan with 2nd International Conference of Chemistry and its Role in Sciences under the theme "Chemistry Today"

Celebrating International Year of Periodic Table 2019, 2nd International Conference of Chemistry and its Role in Sciences under the theme "Chemistry Today" was held at the University of Karachi- Pakistani from 2 – 4 August 2019.



The Conference was opened by the Vice Chancellor of University of Karachi Prof. Dr. Khalid Iraqi and the President ECOSF Prof. Dr. Manzoor H. Soomro was the Chief Guest in the Inauguration Ceremony.

The Vice Chancellor in his opening remarks welcomed the Chief Guest, distinguished delegates and the participants. He shared his wisdom for uplifting the University and appreciated the organizers of the Conference i.e., Department of Chemistry of the University for celebrating the year of Periodic Table and organizing the 2nd International Conference. He hoped that conference would provide an excellent opportunity for a fruitful dialogue and discussion, and bring meaningful outcomes in the field of Chemistry.

Prof. Soomro in his remarks as Chief Guest said that during its 74th Plenary Meeting, the United Nations General Assembly



proclaimed 2019 as the International Year of the Periodic Table of Chemical Elements (IYPT 2019) on 20 December 2017. Based on UN's proclamation in 2017, the IYPT2019 was adopted by the UNESCO General Conference at its 39th Session. The IYPT 2019 also commemorates the 150th anniversary of the establishment of the Periodic Table of Chemical Elements as 1869 is considered to be the year of discovery of the Periodic System by the Russian scientist, Dmitri Mendeleev. The International Year aims to recognize the importance of the Periodic Table of Chemical Elements as one of the most important and influential achievements in modern science reflecting the essence not only of chemistry, but also of physics, biology and other basic sciences disciplines. Thus the IYPT 2019 is an opportunity to reflect upon many aspects of the periodic table, including its history, the role of women in research, global trends and perspectives on science for sustainable development, and the social and economic impacts of this field.

As an ordinary citizen, I may not have any interest in the organization of the periodic table even though as per Wikipedia, it can be used to derive relationships between various elements and their properties, and also to predict chemical properties and behaviors of undiscovered or newly synthesized elements; but the real appreciation of the society would develop only when you the chemists elaborate and highlight this relationship between elements in a common language to be understood by the public at large; said Prof. Soomro.

Dr. Soomro also said that the modern periodic table now provides a useful framework for analyzing chemical reactions, and continues to be widely used in chemistry, nuclear physics and other sciences. However, the ordinary members of the society have no knowledge of importance of periodic table, or Chemistry for that matter. Thus if you as chemists wish the importance of Chemistry to be more popular, please develop linkages with Industry and the Public, he said. And for interaction with public and the young generation- the future of any nation, you need to give some time to development of exhibits in your institutions and in schools around you. He further said; "I strongly feel that students from universities can help school teachers in explanation of chemical concepts and reactions to the pupils in schools. Realizing the importance of public awareness about science including chemistry, I have personally been pursuing the education of school teachers and children through what we call the Inquiry Based Science Education (IBSE) and for public, I have been organizing thematic travelling exhibitions- one has been exclusively on Chemistry!"

At the end, he thanked once again the University of Karachi and the Department of Chemistry, especially Dr. Rafia Azmat and Professor Iraqi for inviting and giving him the opportunity to have spoken in the Conference. The participants discussed the trends and latest research being carried out world over. They also shared their experiences, wisdom and developed networking for future collaboration in the field of chemistry.

Technology Incubation and Commercialization Centre (TICK) of University of Engineering and Technology, Lahore visits ECOSF

A two member delegation of Technology Incubation and Commercialization Centre (TICK) of University of Engineering and Technology (UET), Lahore visited ECOSF on 23 August 2019. A preliminary meeting was held between ECOSF and TICK. TICK was briefed about aims/objectives and ongoing programmes of the Foundation whereas, Mr. Farhan Riaz, Programme Manager of



TICK gave a brief presentation about TICK programmes and activities. The potential areas such as development of online material/assessment module for IBSE programme of ECOSF, development of STEM labs, learning management system, market outreach for TICK in ECO Countries and possible up-gradation of TICK into S&T Parks were came under discussion.

It was agreed that the discussion may continue in future to develop collaboration.

AASSA-PAS Joint Workshop on Complementary Medicine held at Islamabad

The Pakistan Academy of Sciences (PAS) and Association of Academies and Societies of Sciences in Asia (AASSA) supported by InterAcademy Partnership (IAP) jointly organized a workshop on “Complementary Medicine as an Answer to Challenges Faced in Achieving Sustainable Goals in Health” at the Pakistan Academy of Sciences, Islamabad Pakistan on August 19-21, 2019.



The Workshop deliberated upon the vital role of medicinal plants/complementary medicines in treating health care issues and to arrive at possible strategies. The workshop was inaugurated by Ms. Zartaj Gul Wazir, the Minister of State for the Climate Change of Govt. of Pakistan.

Prof. Zabta Khan Shinwari, President National Council for Tibb and Fellow of PAS was the coordinator of the workshop who delivered his presentation and outlined the objectives of the workshop to the

participants. Medicinal plants are a key reservoir of therapeutic chemical nutrients, which can yield massive health care benefits, Prof. Shinwari stressed.

Ms. Zartaj Gul Wazir in her address highlighted the importance of research and development in biotechnology and health sector, particularly the need for revival of traditional medicine with introduction of regulatory framework to provide adequate and cost effective medical solutions. She further appreciated the Pakistan Academy of Sciences and other collaborating institutions for coming together to organize this workshop on this important theme and subject. Ms. Gul underlined that the world, especially Pakistan is facing serious challenges of climate change and all stakeholders need to work together to address this challenge.



Prof. Dr. Atta-ur-Rehman FRS, Chairman of Pakistan’s Task Force on Science and Technology and the Vice Chairman of the Taskforce on Technology Driven Knowledge Economy delivered his keynote address. Prof. Atta-ur-Rehman underscored that adequate investment in Science, Technology and Innovation can be “the game changer” to help alleviate poverty, reduce inequalities, increase income and improve economic health of the country. Traditional knowledge of complementary medicine can not only save resources by providing cheaper treatment but can be a major source of foreign exchange earnings, he further added.

In the inaugural ceremony of the workshop, President of Pakistan Academy of Sciences (PAS), Dr. Qasim Jan, Academician Prof. Dato' Dr. Khairul Anuar Bin Abdullah President-elect AASSA from Malaysia; Prof. Zuopeng Li; China; Dr. Deegendra Khadka, Nepal and Prof. Dr. Yoo Hong Kim the President of AASSA from Korea also spoke in the inaugural ceremony of the workshop.

On behalf of ECOSF, President ECOSF Prof. Dr. Manzoor Hussain Soomro and Engr. Khalil Raza Scientific Officer participated in the inaugural session of the workshop.

ECOSF mobilizes teams from 7 ECO Countries for “3rd Belt and Road Teenager Maker Camp & Teacher Workshop”

The countdown has begun for “3rd Belt and Road Teenager Maker Camp & Teacher Workshop” being held from 24-30 September 2019 at Nanning of Guangxi Zhuang Autonomous Region, China. It is pertinent to mention that the Camp is being hosted by the Ministry of Science and Technology, People’s Republic of China (MOST), China Association for Science & Technology (CAST) and the People’s Government of Guangxi Zhuang Autonomous Region, organized by Children & Youth Science Center (CYSC) of CAST, the People’s Government of Guangxi Zhuang Autonomous Region and Guangxi Association for Science and Technology (GAST) while supported by InterAcademy Partnership Science Education Program (IAP SEP), ECOSF and Network of African Science Academies (NASAC). It is aimed to strengthen cross-cultural exchange, promote international understanding and inspire innovation in young generation. ECOSF has been sending teams of children and their teachers ever since the B&R Teenager Maker Camps began in China.



This year the teams comprising of students, teachers and officials/coordinators from 37 countries of the World are participating in the camp and workshop. This year, ECOSF has mobilized teams from seven (07) ECO Countries and a total of 32 high school students and 17 teachers/officials are participating as under:

No.	Country	No. of Students	No. Teachers/ Coordinators
a.	Azerbaijan	05	03
b.	Iran	05	02
c.	Kazakhstan	05	02
d.	Pakistan	05	04
e.	Tajikistan	03	02
f.	Turkey	05	02
g.	Uzbekistan	04	02
	Total:	32	17

Upcoming Events posted on ECOSF website and Facebook page

4th International EISA Summit, Nov. 9-10, 2019

The 4th International EISA (Exposure of Industries to Scientists' Achievements) summit, with a focus on the three fields of Water, Health and Energy, is to be held alongside the Mustafa Prize 2019 Award ceremony in Tehran, Iran, on November 9th and 10th. EISA is a commercial platform assembled to bring The Islamic World's scientific community and academia closer together, enabling technological achievements in products and services to be introduced to new markets, industries and investors

For Registration: <http://eisa.mstfdn.org/download/Invitation.html>

For further information: <http://eisa.mstfdn.org/>

Brochure: <http://eisa.mstfdn.org/download/ex.pdf>



Call for nominations of experts to assist with the scoping of a thematic assessment of the interlinkages among biodiversity, water, food and health

The Multidisciplinary Expert Panel (MEP) invites Governments and other stakeholders to nominate experts to assist with the scoping of a thematic assessment of the interlinkages among biodiversity, water, food and health. This assessment will use a nexus approach to examine the strong interlinkages among the Sustainable Development Goals related to food and water security, health for all, protecting biodiversity on land and in the oceans and combating climate change, among others. Interlinkages take various forms, including synergies, co-benefits and trade-offs.

Importantly, nominated experts should have expertise in one or more disciplines within **natural science, social science or humanities, or in indigenous and local knowledge systems, or be policy experts or practitioners**. We strongly encourage nominations of experts to reflect this broad range of expertise and encourage nominations of experts with inter- and multi-disciplinary expertise. We would like to stress that expertise beyond the natural sciences is essential given the fact that this assessment would identify and assess the full range of multi-sectoral response options.

All Governments and relevant organizations or institutions are encouraged to submit nominations. Organizations or institutions wishing to nominate are not required to have the status of an observer to the Plenary of IPBES to make a nomination. IPBES would encourage the readers to disseminate this call for nominations of experts widely.

Interested experts wishing to be nominated by a Government are encouraged to contact their IPBES National Focal Point (<https://www.ipbes.net/national-focal-points>) regarding any country-specific processes or deadlines and are requested to fill out their application form by **15 October 2019**. Nominators (Governments or organizations) should approve the applications and submit their nominations by **29 October 2019**. Early nominations ahead of the deadline are encouraged.

Read more: <http://ecosf.org/Nexus-Assessment>

IPBES seeking experts for the first external review for the sustainable use assessment

IPBES has also opened the External Review for the first order draft of the chapters of the thematic assessment on the sustainable use of wild species - reviewers can now register online. The period for this first external review is from 27 August to 20 October 2019. If you would like participate as an expert reviewer in this external review of the sustainable use assessment, please register online.

Read more: <http://ecosf.org/sustainable-use-assessment>

IPBES calls for participation in online conferences to seek input for the scoping process for the nexus and the transformative change assessment

IPBES plans to hold two online conferences as part of the scoping processes for the thematic assessment of the interlinkages among biodiversity, water, food and health (“nexus assessment”) and the thematic assessment of the underlying causes of biodiversity loss, determinants of transformative change and options for achieving the 2050 vision for biodiversity (“transformative change assessment”). They are tentatively scheduled as follows:

- 30 September - 2 October 2019: Online conference to seek input for the scoping process for the **nexus assessment**
- 9 - 11 October 2019: Online conference to seek input for the scoping process for the **transformative change assessment**

Read more: <http://ecosf.org/IPBES-nexus>