



ECOSF NEWSLETTER



BTBU-ECOSF Joint Training Center on Science, Technology and Economic Cooperation under the Belt and Road Initiative (BRI) organized its 2nd Training Program on “Low Carbon Development and New Energy Vehicles”

BTBU-ECOSF Joint Training Center with support of China Association for Science and Technology (CAST) organized the 2nd joint Training Program on Low Carbon Development and New Energy Vehicles on July 6th and 7th, 2021. This training was hybrid event where participants in Beijing joined the workshop onsite at BTBU campus, while rest of the participants joined virtually through Zoom. The training attracted over 200 participants from some 20 countries, particularly from the ECO Member Countries. This training workshop was moderated by Dr. Di Yuna, head of the BTBU-ECOSF Joint Training Center and Engr. Khalil Raza Scientific Officer – ECOSF.



Prof. Dr. Zheng Wenhong, Vice President, Beijing Technological and Business University (BTBU) opened the training program. Prof. Wenhong in his message highlighted that Chinese government has incorporated the “Dual Carbon Target” into the outline of China’s 14th five-year Plan this year. China is actively engaged in various fields, and has been actively working with other countries in the world to address the challenges of climate change. He further shared that China adheres to the principle of “joint consultation, co-building and sharing”, adheres to the concept of “openness, green and integrity”, and cooperates with relevant countries to promote the construction of a green Belt and Road Initiative (BRI).

At the same time, countries around the world are facing the crisis and challenges brought about by climate change, thus actively promote low-carbon development, and hope to learn from China's development experience in related fields. Prof. Wenhong was confident that this program could promote exchanges and cooperation among countries, facilitate the building of a community with a shared future for mankind, and achieve global sustainable development.



Prof. Dr. Manzoor Hussain Soomro, President ECOSF in his welcome remarks emphasized that Science, Engineering, Technology and Innovation (SETI) play a critical role in providing policy instruments that are essential to develop strong base of countries in addressing the climate change impacts and boosting socio-economic growth and sustainable development. Prof. Soomro underscored that BRI of China commits to foster the industrial development with strong technical cooperation in many fields, including sustainable energy, infrastructure development, emerging technologies, and smart cities or transport etc. To achieve these massive goals, it requires a robust commitment to support science and engineering, including the capacity building and human resource development, Prof. Soomro remarked.



Prof. Soomro further elucidated that BRI offers a tremendous potential to spur a new era of trade, economic and industrial growth for countries in Asia and beyond. In order to maximize the benefits of BRI, the participating countries require to develop adequate technological workforce and engage in an alliance for promotion of cross-border cooperation in the Science, Technology and Innovation (STI) sectors.” Prof. Soomro highlighted.

The training workshop addressed three focused areas of low carbon development;

- (a) Renewable and clean energy development
- (b) Smart and resilient power transmission and distribution grid infrastructure and
- (c) Latest electric mobility practices in the emerging markets, including China

Renowned experts and market leaders in low carbon development technologies participated as resource persons. The intended outcome of this training was to support policy development facilitating south-south cooperation, creating relevant knowledge and building capacities in the BRI countries.



Since climate change and its adverse effects are the serious threat to human civilization and one of the greatest global challenges of the 21st century, it needs to be addressed through international cooperation in the context of sustainable development. A number of countries have pledged to reach net-zero emissions by mid-century.

China has emerged as global climate leader with its announcement in 2020 that it would aim to achieve “carbon neutrality” before 2060. In so doing it joins the European Union, the UK and dozens of other countries in adopting mid-century climate targets, as called for by the Paris agreement.



China already leads the world in the clean technologies and it is by far the largest investor, producer and consumer of renewable energy. One out of every three solar panels and wind turbines in the world are in China. It is also home to nearly half the world’s electric passenger vehicles, 98% of its electric buses and 99% of its electric two-wheelers.¹ The country leads in the production of batteries to power electric vehicles and store renewable energy on power grids. By 2025, its battery facilities will be almost double the capacity of the rest of the world combined.

¹ Barbara Finamore, What China's plan for net-zero emissions by 2060 means for the climate, the Guardian (2020) <https://www.theguardian.com/commentisfree/2020/oct/05/china-plan-net-zero-emissions-2060-clean-technology>



Hence, it was important to understand and share best practices and experiences amongst the countries towards promoting low carbon development initiatives. This training workshop provided an opportunity for trans-disciplinary approach to facilitate knowledge exchange and dissemination to support policies and programmes through collaborative research and engagement. Hence, it is imperative for China to bring its extensive expertise and best practices in renewables and energy efficiency to Belt and Road Initiative (BRI) countries.

Experts underlined that promoting low-carbon development in BRI countries would require collaborative efforts from both within China—by leveraging finance and overseas investments in green projects—and participating countries—by promoting stronger clean energy and environmental policies that provide favorable market environments for China and other countries to make green investments in clean energy and sustainable transportation infrastructure.²

Resource Persons for the Training on Low Carbon Development

Xiong Wanpeng,

Chief Executive Officer, China Overseas Holding Group

Qin Yuyi,

Deputy General Manager, State Grid Sichuan Integrated Energy Service, CO., LTD.

Liu Wei,

Deputy General Manager & Chief Technology Officer -
State Grid Oman Company, State Grid International Development CO., LTD.

Liu Daizong

Program Director/ Communication
World Resources Institute (WRI) China Sustainable Cities, WRI China.

² Fuqiang Yang, China Has Every Reason to Promote a Green and Low-Carbon BRI, NRDC (2018), <https://www.nrdc.org/experts/fuqiang-yang/china-has-every-reason-promote-green-and-low-carbon-bri>

Zhang Xuming,

Deputy Secretary General, Society of Automotive Engineers (SAE) -China

Xiang Jin,

Deputy General Manager, Beijing WeiLion New Energy Technology CO., LTD

Zheng Junyi,

Vice President - Wanbang New Energy Investment Group CO., LTD., Expert of the National Standard Committee on Electric Vehicle Charging Facilities in the Energy Industry

Li Yanze,

General Manager,

Global Business, INFRAMOBILITY-Dianba GmbH, JV of Aulton NEV Technology Corporation Limited

Zeng Tao

Chief Analyst in New energy, Executive General Manager, Research Department, China International Capital Corporation Limited (CICC).

Key takeaways of the workshop

Policy support towards electric mobility is the key driver

- The role of policy makers is central to the evolution of electric vehicles. China has taken a massive lead over the rest of the world in EV adoption, with strong backing from its New Electric Vehicle Policy.
- China's vigorous promotion of new energy vehicles is an important measure for the low-carbon development of the automotive industry.
- Policy makers around the world are trying to support the electric mobility with the primary objective of combating climate change. The policies are largely focused around financial support to make EV economics favourable for adoption by customers.
- EVs are being encouraged with favourable policies like capital expenditure assistance, tax and permit exemptions, protection for domestic manufacturers.
- Lack of economic parity is a major hurdle in adoption of EVs today. Policy makers are trying to bridge this gap through subsidies to encourage EV adoption. Policy makers need to simultaneously adopt other levers also to encourage EV adoption further.
- China's New Energy Vehicle policy has taken a number of positive steps and aggressively pushing and promoting EV adoption, and NEV policy is a significant leap among those.
- Mandated adoption targets, localization of key components, clear guidelines on regulations and standards and EV adoption in public transport are some of the key levers that policy makers in developing countries need to leverage.

China has established a robust manufacturing base for New Energy Vehicles

- China is both the largest manufacturer and buyer of electric vehicles in the world, accounting for more than half of all electric cars made and sold in the world in 2020.
- From 2011 to 2015, China began to promote new energy urban buses, hybrid cars and small electric vehicles.
- From 2016 to 2020, further popularization was carried out for new energy vehicles, multi-energy hybrid vehicles, plug-in electric cars, hydrogen fuel-cell cars, etc.

- In 2021, new industry players in cross-industry cooperation in car making have emerged one after another, and pure electric vehicles have gradually become the mainstream.
- Among the three core technologies of electric vehicles, namely battery, motor and electronic control, the most disputed difficulty which is also most difficult to break through lies on battery safety, battery cost and battery driving range.
- On supply side, China continues to improve and produce technology, provide high-quality green building materials, reduce material consumption from the source, and reduce carbon emissions.
- The rise of electric vehicles has caused upheaval in the Lithium ion battery industry. As of 2020, the global Li-ion battery manufacturing capacity was about 500 GWh per annum. A large part of this capacity is currently concentrated in China.
- China currently dominates the world in production of all four major components of Lithium ion Batteries (LIB): Cathode, Anode, Electrolyte, and Separators. After 2015, the market share of all four major components has continued to increase, and the supply share of Chinese LIB material in each component category has exceeded 60% in 2020.

Grid Expansion and Charging Infrastructure placement is critical to uptake of electric vehicles

- Charging infrastructure is the key enabler towards accelerated adoption of electric vehicles.
- The EV adoption and charging infrastructure is fundamentally a chicken and egg problem. On one hand, without good infrastructure, owning and operating an EV is not convenient for users, hence, they would want to wait till such infrastructure is available. On the other hand, low adoption of EVs drastically impacts the economic viability of any public charging infrastructure project.
- This requires robust policy support from the government to put up charging infrastructure. China has put up massive charging infrastructure that is denser than all major (EV adopted) countries.
- There is need for integrated development of grid, load and storage. Power load, transmission, and distribution network would have to be planned synchronously to meet charging infrastructure needs.
- Currently, the driving range of electric vehicles has not reached the same level as that of gasoline and diesel vehicles, which is also the core problem hindering the rapid development of new energy vehicle industry. With shorter range of current battery technologies require more charging infrastructure to be put in place to reduce the range anxiety. In future, the large capacity batteries can eliminate the pain point of low driving range.

Conclusion: The "Chinese experience in new energy vehicles and low carbon development" can certainly help the energy and transport industry in the ECO Member Countries and beyond in the BRI members towards integration, strengthening the connectivity between upstream and downstream sectors, and to drive the infrastructure development and related industries in the course of greening belt and road initiative. The strategic proximity of ECO Member Countries with China and with emerging initiatives such as ongoing development of Special Economic Zones in Pakistan, Iran and Kazakhstan provide tremendous opportunities for the Member Countries and China to develop manufacturing base for electric vehicles.

UNDP and NEECA in collaboration with ECOSF co-organized a consultative workshop on ‘Scaling Up Electric Mobility in Pakistan’

United Nations Development Program (UNDP) and National Energy Efficiency and Conservation Authority (NEECA) in collaboration with ECOSF organized a consultative workshop on ‘Scaling Up Electric Mobility in Pakistan’ on July 29, 2021. The core objective of this meeting was to provide critical insights into the future of mobility and global trends in the electric mobility space, and what Pakistan needs to do to effectively develop the local eMobility market. The primary audience in this meeting were political leaders, policy makers at the government entities/ministries and industrial players.

Mr. Hamad Azhar, the Federal Minister for Energy of Pakistan was the chief guest at the event. Mr. Hammad Azhar said that Government is fully supportive to bring down the emissions and improve efficiency in the road transport sector. To achieve these goals, Government has recently introduced the policy for electric vehicles and provided many incentives in terms of reduced customs and sales tax to improve the economics of EVs in Pakistan. He emphasized over the immediate need for establishing the regulatory framework to streamline the development of EV charging stations across the country. He urged the NEECA and other relevant entities to expedite work on regulation, standardization and licensing policy for development of charging infrastructure.



UNDP Deputy Resident Representative, Aliona Niculita, said that transport and energy were priority sectors for UNDP. She hoped that wide scale adoption of electric mobility would help Pakistan in achieving its climate goals. She assured that UNDP would provide full cooperation to the government in this regard.



Dr. Sardar Mohazzam, the Managing Director - NEECA in his remarks gave an outline and objectives of the meeting. Dr. Mohazzam said that role of NEECA remains central in improving energy efficiency in the road transport sector with accelerated adoption of electric vehicles in the country. He said the findings of this work would be critical to enable evidence and information based policy decision making to help promote the accelerated transition towards eMobility in the country.

Earlier Engr. Khalil Raza, Scientific Officer of ECOSF who has been assisting the UNDP and NEECA as the lead technical expert on Electric Mobility presented the findings or outcomes of the study undertaken by the ECOSF with key stakeholders during the meeting.

ECOSF Participated in Pakistan Water Conference on Emerging Water Challenges 15th July 2021

Pakistan Council of Research in Water Resources (PCRWR) in collaboration with the International Water Management Institute (IWMI) and UNESCO Pakistan organized a National Conference on 15th July 2021. On behalf of ECOSF, Engr. Khalil Raza, Scientific Officer virtually participated in the event.



Speaking on the occasion, Syed Shibli Faraz, Federal Minister for Science and Technology said that despite being blessed with immense resources, Pakistan is facing grave challenges in the shape of climate change and water scarcity. He emphasized that the outcomes of this conference shall be promulgated to international stakeholders in order to translate research into tangible development for the public benefit so that the coming generations can have a water-secure Pakistan.



Ms. Patricia Mc'Phillips, UNESCO Country Director said that once a water-abundant country, Pakistan has now become a water-stressed country. UNESCO, in collaboration with PCRWR, has taken several initiatives on a pilot scale. However, to achieve SDG Goal 6 immense efforts are required amidst the emerging issues of climate change and unregulated exploitation of groundwater.

International Water Management Institute (IWMI), Country Representative, Mr. Mohsin Hafeez highlighted that the policymaking is being done with noble intentions, but without evidence-based knowledge and data. Therefore, there should be a mechanism to develop a central database in collaboration with all national stakeholders and sectoral institutions.



Dr. Muhammad Ashraf, Chairman (PCRWR) while addressing the conference, stressed the importance of setting research priorities according to the emerging issues. He added that the lack of a data warehouse of the water sector in Pakistan is an issue that needs to be addressed on an urgent basis for sustainable management of water resources

The conference was attended by professionals and researchers from national and international organizations. Mr. Nadeem Irshad Kiyani, Secretary, Ministry of Science and Technology concluded the conference.



President ECOSF Participated in the 2nd Open Science Conference

The three-day conference organized by the Department of Global Communications, Dag Hammarskjöld Library and the UN Department of Economic and Social Affairs (UN-DESA), Division of Sustainable Development Goals brought the global discussion on open science and climate action to the United Nations and highlight national and IGO policies and Open Science initiatives from around the world on July 21-23, 2021.

During the 2nd Open Science Conference, key Intergovernmental Organization and publishers, and research practitioners engaged in a public dialogue on tackling the pandemic to addressing climate change, and policymakers. The conference deliberated on Open Science – what lessons can be learnt from COVID-19 and how this can be applied to actions addressing the

global climate crisis, at the interface of science, technology, policy, and research. On behalf of ECOSF, President ECOSF Participated in the event.

The Conference was opened by Ms. Maria-Francesca Spatolisano, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs of UN-DESA and Mr. Thanos Giannakopoulos, Chief of Dag Hammarskjöld Library. The Keynote addressed by Dr. Shamila Nair-Bedouelle the Assistant Director General of UNESCO. Dr. Nair-Bedouelle said that we need science for peace to bring science to the doorstep of everyone, we can only do so through open science and open access.



The First day of discussion was based on **Policy Makers and Open Science**

The first Day of the Open Science UN virtual Conference closed on recognition: “We should remember the creators of the Web at CERN did not patent it, allowing us to benefit from it; an example we should follow for open science innovations.

The second day of the conference was opened by Ms. Astra Bonini, Senior Sustainable Development Officer, DESA a Keynote addressed by Professor Geoffrey Boulton, International Science Council. The discussions were based on Science-Policy-Society Interface and Open Science and Equity in Open Scholarship

The third day of Conference Introduced by Mr. Thanos Giannakopoulos, Chief, Dag Hammarskjöld Library and the Keynote address by Dr. Jean-Claude Guédon, Professor of Comparative Literature (retired), University of Montréal. The Discussion was based on Academia and Open Science Infrastructure and Scholarly Communications.

President ECOSF Participated in PIDE & CAREC (Azerbaijan) Joint Webinar, Presentation of Dr. Vusal Gasilmi's book "Economic Growth", & "The PIDE Reform Agenda for Accelerated and Sustained Growth"

PIDE & Center for Analysis of Economic Reforms & Communication (CAREC), Azerbaijan organized a joint webinar during the launch event of Dr. Vusal Gasilmi's book on "Economic Growth" & "The PIDE Reform Agenda for Accelerated and Sustained Growth" on 28 July 2021.

The webinar was moderated by Dr. Naadeem ul Haque – the Vice-Chancellor of PIDE. On behalf of ECOSF, President Manzoor Soomro participated in the webinar and also asked questions/discussed ECO Cooperation for sustainable economic growth.

Dr. Vusal Gasilmi gave an outline on his book "Economic Growth" and the underlying situation before & after Covid-19 in low,



middle- & high-income countries. There is no limit to growth, as there is no limit to human intelligence, he said.

Dr. Idress Khawaja, Researcher at Pakistan Institute of Development Economics (PIDE) said that the government is aware of the local context, country's strengths, and challenges. Often a times, international consultants lack local and deeper knowledge study the surface and offer non-pragmatic recommendations. Dr. Nadeem Ul Haque, VC said that Growth is a local phenomenon & should be driven by the government not by consultants. The government has to be a critical agent in economy & growth.

President ECOSF Participated in 4th Breakfast Chat with Past Winners of AAET Green Award

4th Breakfast Chat with Past Winners of the ASEAN Academy of Engineering and Technology (AAET) Green Award was held on 17 July 2021. The event was moderated by Ir. You Chau Fong, AAET Fellow, Member of the Steering Committee of AGA 2021 and the speakers of the event were Ms. Liaw Lin Ji, Brunei, Dr. Tonni Augustino Kurniawan, Indonesia, and Engr. Dr. Francis Dave Comun Siacor, Philippines. A large number of AAET Fellows, researchers, scholars, experts, linguists, academia and students, attended the event. The Awardee Experts talked about their winning projects; Mainstreaming biodiversity, Adding value to unused liquid waste for wastewater treatment and Recovery processes of high-value products from waste mango seeds.

4th AAET Green Award
Virtual Breakfast Chat with Past Winners

AAET Green Award 2021 (AGA 2021)

Zoom link
Meeting ID: 916 8950 2506
Passcode: 952792

Date: 17 July 2021 Saturday
Time: 10:00 am - 11:30 am Malaysia Time

Moderator: Ir. You Chau Fong, AAET Fellow, Member of the Steering Committee of AGA2021

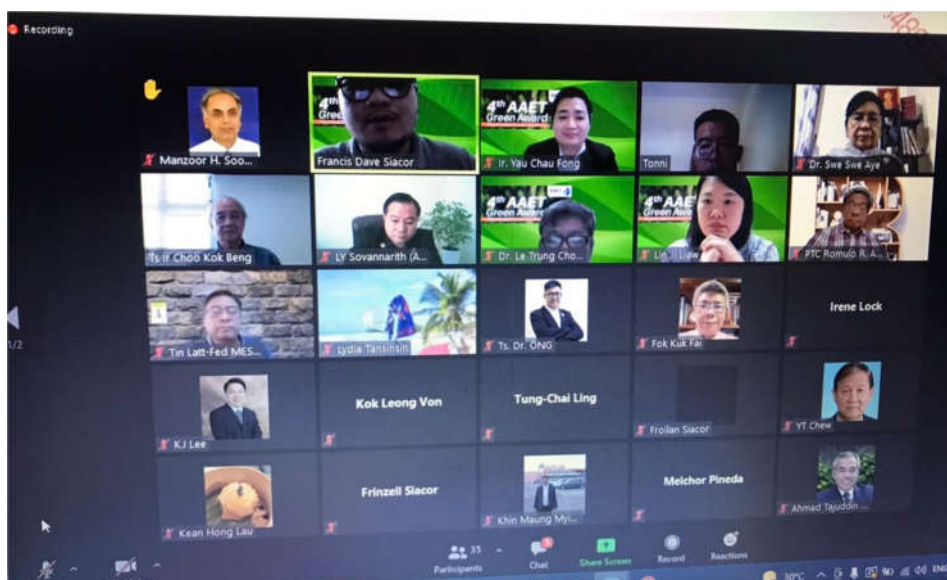
Topic: *BruWILD: Mainstreaming Biodiversity*
Ms. Liaw Lin Ji, Brunei
Grand Winner of MCCC-AAET Green Award 2015; President of the Biodiversity and Natural History Society (BruWILD); the Country Manager of DHI Water & Environment, an international environmental consultancy company in Brunei.

Topic: *Adding Value to Unused Liquid Waste for Wastewater Treatment*
Dr. Tonni Augustino Kurniawan, Indonesia
Country Winner of MCCC-AAET Green Award 2015; Visiting Professor at Polytechnic of Health (Indonesia); PhD from the Hong Kong Polytechnic University (China).

Topic: *Recovery Processes of High-Value Products from Waste Mango Seeds*
Engr. Dr. Francis Dave Comun Siacor, Philippines
MCCC-AAET Green Award 2015; Project Manager, School of Engineering, University of San Carlos- Technological Center, Cebu City, Philippines.

more info: bit.ly/3yJtk0j

From ECOSF, President Prof. Manzoor Hussain Soomro as a Foreign Fellow of AAET attended the event and contributed to the discussion during the event.



UNESCO Jakarta Organized Let's Talk DRR - the Futures of Disaster Risk Governance in 2045

UNESCO, UN office on Disaster Risk Reduction (UNDRR), UNDP Accelerator Lab, and U-INSPIRE Alliance are implementing a series of activities on Future Thinking on Disaster Risk Reduction and Resilience. UNESCO Jakarta office in collaboration with other partners organized the virtual dialogue on the Futures of Disaster Risk Governance in 2045 on 30th July 2021.

The series of activities consist of webinars, Futures Literacy Laboratory on DRR (FLL-DRR), and Let's Talk DRR that will be organized throughout 2021. The objective of this virtual dialogue was to leverage on the collective intelligence and frontiers thinking of the youth and young professionals to challenge, create and negotiate concepts and frameworks for disaster risk reduction and resiliency in 2045. On behalf of ECOSF, President Prof. Soomro participated in the event.

Young experts were invited to share their insights and views on the discussion result based on the current issues, concerns, challenges, gaps, and future trend of the particular DRR topic. Futures Literacy and Foresight experts engaged in the discussion with emphasis on the absence of hierarchy of expertise: nobody has been to the future, which is as frightening as liberating for all of us.

Creation of the Central Asian Higher Educational Area: Prospects for Regional Internationalization

Albina Muratbekova, Eurasian Research Institute, Kazakhstan

On June 18, 2021, an agreement to create a unified higher education area in the Central Asian region – the Turkestan Declaration was signed by the ministers of education of Kazakhstan, Kyrgyzstan, Turkmenistan, and Uzbekistan. By establishing the Central Asian Higher Educational Area (CAHEA), Central Asian representatives aspire to enhance cooperation in the field of higher education through developing joint educational programs and joint research projects, supporting regional mobility of students, and academic staff, ensuring the recognition of educational documents and procedures, as well as providing specific grants for enrollees from the region. The Declaration is based on the principles of the Bologna Process, and has four major areas of cooperation, including the creation of Alliance of Central Asian Universities; Association of Qualifications Recognition Organizations; Central Asian Education Quality Assurance Network; and Student's Alliance.

Against the backdrop of the resurgence of regional integration in the field of higher education, further, ERI discusses the existing framework of cooperation and its prospects. The post-Soviet common structural legacy, similar socio-cultural and educational background, alongside with Russian as a second language that majority has a good command and potentials enabling the expansion of intra-regional educational integration processes.

The Central Asian higher education system endeavors harmonizing education processes in accordance with the European framework. All Central Asian states at a different extent are integrated with the Bologna Process. Kazakhstan pioneered adopting the Bologna Declaration in 2010 and became a full member of the European Higher Education Area. Kyrgyzstan, Tajikistan, and Uzbekistan are reforming their education systems to correspond with Bologna principles, while Turkmenistan cooperates in mobility programs. All but Turkmenistan transferred to the three-cycle Bachelor's-Master's-PhD degree system within the Bologna Process. Besides the common degree system, Bologna Process implies a common grading system - ECTS credit points (European Credit Transfer and Accumulation System) that allows transfer of students and provision of exchange programs. In order to participate in the EU supported mobility programs, Central Asian universities

Read more: <https://www.eurasian-research.org/publication/creation-of-the-central-asian-higher-educational-area-prospects-for-regional-internationalization/>

Upcoming Events posted on ECOSF website and Facebook page**DRR Talk 1: “The Futures of Disaster Risk Governance in 2045”**

Forty-two (42) young professionals of 12 countries in Asia from government and intergovernmental agencies, non-governmental organizations, universities, entrepreneurs and practitioners discussed the probable, desirable, and reframed futures of disaster risk governance 2045 as part of their involvement in first Futures Literacy Labs on Disaster Risk Reduction (FLL-DRR-1).

<http://ecosf.org/DRR-Talk-1>

Call for Applications: Creative Resilience - Art by Women in Science

UNESCO is organizing an exhibition to showcase the artistic works by women of science, on the reaction to and fight against the pandemic of Covid-19. The artworks capture both pain and hope and provide a new reading of societies that are slowly emerging from the pandemic.

<http://ecosf.org/Art-by-Women-in-Science>

TEKNOFEST Take Off International Summit

Turkish Academy of Sciences (TÜBA) is one of the leading partners of TEKNOFEST (Aerospace and Technology Festival) which is organized by the Turkey Technology Team (T3 Foundation) and the Republic of Turkey Ministry of Industry and Technology.

<http://ecosf.org/TEKNOFEST>