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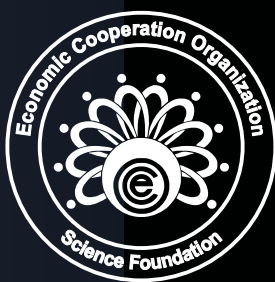
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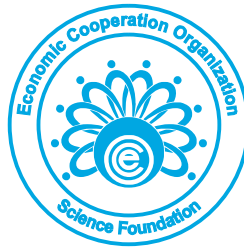
ECOSF

Economic Cooperation Organization Science Foundation



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About the ECO Science Foundation

Economic Cooperation Organization Science Foundation (ECOSF) is an intergovernmental organization and a specialized agency of the Economic Cooperation Organization (ECO). Establishment of the Science Foundation was envisaged in the “Treaty of Izmir”, the Charter of ECO, and the ECOSF Charter was signed in Islamabad in March 1995 by all the 10 member states; **Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan and Uzbekistan.** However, the Foundation was established in Islamabad, Pakistan on 20 December 2011, with holding of the 1st meeting of its Board of Trustees (BOT), the highest decision making body.



1st Meeting of ECOSF Board of Trustees - December 2011

Aims and Objectives

ECOSF aims to promote scientific and technological research with an end goal to raise socio-economic standing of 10 member states. The ECOSF serves as a platform to build a reservoir of highly skilled scientific and technical manpower to carry out scientific and technological research of applied nature and other related activities among its member states in collaboration with International, Regional and National Organizations. ECOSF strives to strengthen the science base of future generation and the region's economy, thus it continues to contribute towards promotion of Science, Technology, Engineering and Mathematics (STEM) education in the region. ECOSF engages youth in all its activities and integrates gender perspective in policies, plans and actions directed towards socio-economic development in line with UN Sustainable Development Goals (SDGs) and the ECO Vision 2025.

ECOSF pursues the goal of promoting research and technological development for sustainable development and economic growth in the ECO region through the following key objectives:

- a. Development of Human Resource Capacity for science, technology and innovation as well as science education in the ECO region.
- b. Strengthening Institutional Capacity in scientific research and technological development among its members.
- c. Scientific, Technological and Research Collaboration and Cooperation among its member states and the developed world.
- d. Exchange (Dissemination) of Information on Scientific and Technological Research and Development through workshops, conferences and meetings etc.



Functions of ECOSF

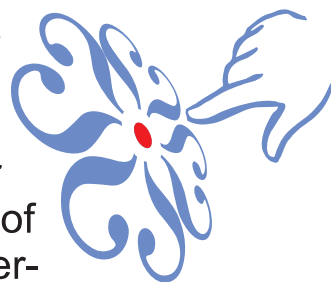
1. Evaluation of existing training facilities in the region and formulation of training programmes for building up highly skilled scientific and technical manpower.
2. Designing of programmes to strengthen the scientific, engineering and research and development institutions.
3. Survey of problem areas faced by member countries in technology, and technology assessment for individual Member States and facilitating technology transfer.
4. Promotion of goal oriented Research Projects, including joint research programmes; promotion of scientific projects of economic and/or commercial values contributing to the development plans or projects of the member countries.
5. Exchange of Science and Technology information through designated Centres and Institutions working as a network.
6. Strengthening of scientific cooperation through institutional linkages, exchange of Scientists and holding of collaborative seminars and conferences on major Science and Technology issues in Member States.
7. Promotion of improved methods in the teaching of science.
8. Publication of quarterly scientific bulletin which will contain the research papers and articles of the scholars of the member countries in the fields of natural and fundamental, social, human, medical and applied sciences and technology.
9. Holding of science and technology fairs and exhibitions in collaboration with Member States.
10. Grant of awards and prizes to eminent Scientists in the field of Science and Technology in ECO region.
11. Identification of elite Science and Technology organizations as focal points in ECO Member States.
12. Strengthening of the Scientific and Technological libraries in the Member States.
13. Emphasizing on collaboration with concerned ECO and national institutions for strengthening and harmonizing regional patents and intellectual property rights regimes and safeguarding the innovations.



Current Flagship Programs of ECOSF

Inquiry Based Science Education (IBSE)

ECOSF in collaboration with La main à la pâte Foundation under the auspices of Academy of Sciences of France, the International Science, Technology and Innovation Center for South-South Cooperation under the auspices of UNESCO (ISTIC) Kuala Lumpur and the Inter-Academy Partnership Science Education Program (IAPSEP) has launched a Capacity Building Program to promote



IBSE Capacity Building Workshop in Astana, Kazakhstan - June 2015

IBSE at schools in the ECO Region. ECOSF launched this Program in 2015 from Astana, Kazakhstan as one of its flagship projects in the region in order to strengthen the science base for advance S&T research and higher education in the ECO member countries.

Inquiry Based Science Education (IBSE) adopts investigative approach to teaching and learning. It is well recognized that IBSE is an effective tool for catalyzing Science, Technology, Engineering & Mathematics (STEM) education. IBSE methodology develops and strengthens students' skills of raising observation, asking questions, planning and conducting investigations, reviewing evidence in the light of what is already



IBSE Hands on Activities

known, which leads to drawing conclusions and communicating the results. The Foundation with the support of its partners and respective Governments has been organizing Capacity Building Workshops in member states of the ECO region.\

Engineering Qualification Standardization, Accreditation and Professional System (EQSAPS)

Engineers play a lead role in ensuring sustainable development by improving the efficient use of energy, transportation systems and natural resources as well as by improving health and use of



Group Photo - Participants of International High Level Policy forum & Workshop on EQSAPS, Dushanbe, Tajikistan - March 2017.

data. Engineers can benefit from gaining work experience in different countries; however, the host country often does not recognize their qualification. Therefore, there is a need for



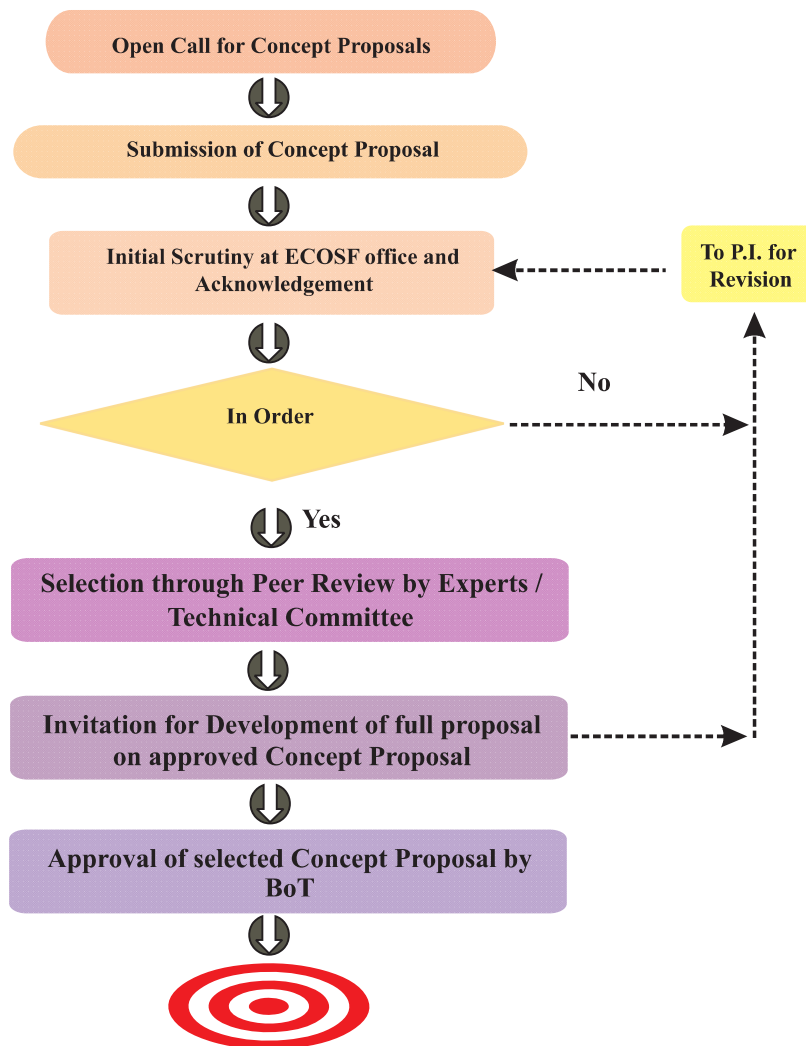
standardization of engineering qualifications. In this context, ECOSF is partnering with UNESCO, Federation of Engineering Institutions of Asia and the Pacific (FEIAP), and the Academy of Engineering and Technology of the Developing World (AETDEW). Under the program, Pakistan through Pakistan Engineering Council (PEC) has been accredited by FEIAP in 2016. Subsequently, PEC is being engaged to mentor other ECO Economies particularly those who lack a national accreditation body, to improve and develop the Standards of Engineering Qualifications in those member states. This initiative is aimed at harmonization and standardization of the engineering curricula within the region in line with the FEIAP qualification guidelines.

Science & Technology (S&T) Fund

Generating new knowledge and turning it into new innovative solutions is crucial to maintain and enhance the competitiveness in today's S&T based global world. Innovation and excellence will positively impact on our lives in very different ways: more efficient and sustainable energy resources, new technological solutions to protect our environment or to guarantee the security of the water and food resources for the world. ECOSF has established a Science & Technological (S&T) Fund to support applied research projects of strategic and commercial value to contribute to the economic development of the region in line with ECO Vision 2020 and the UN SDGs. The fund provides competitive resources to outstanding researchers working in the ECOSF priority research areas of energy, water, food security and climate change.

These research projects are evaluated and selected through a two-stage process. In the first stage, Principal Investigators (PIs) are required to submit concepts proposals, which are evaluated and shortlisted by a Technical Evaluation Committee (TEC). Once the proposal gets accepted by TEC, the PIs are invited to submit full scale research proposal for further evaluation and final approval by the relevant ECOSF Forum as per the flow chart given below. The approved projects are supported for up to three years

of funding, while it is ensured that the undertaken research addresses key common issues/problems of at least three member states.



Prioritized Research Areas for Funding

ECOSF steered a priority-setting process among its member countries to prioritize the focus areas of research for funding with emphasis on applied research to cater to the regional needs. The ECOSF organized a two-day consultative meeting of Eminent Scientists/Experts of ECO Member States in Islamabad; which focused on identifying key research areas that can help in developing innovative solutions to respond to the challenges in



the ECO region.



Meeting of Eminent Scientists/Experts of ECO Member States to Prioritize Focus Areas of Research for Funding under its “S&T Fund”, December 2015.

Following are the priority research areas for funding:

- I. **Priority – 1:**
 - a. Energy - Clean/Renewable Energy and Natural Resources of Energy in ECO Region
 - b. Applied/Basic Sciences – Nanotechnology, Biotechnology and Seismology
- II. **Priority – 2:**
 - a. Water – Water Use Efficiency, Water Pollution and Recycling
 - b. Space Industry
- III. **Priority – 3:**
 - a. Food Security -Agriculture & Food Security
 - b. Climate Change – Global Warming, Environment, Nature, Climatology/Climate Change Assessment and Mitigation, Ecosystems Sustainability, Fossil Fuels use Efficiency, Earth Sciences and Environment Friendly Industrialization

**IV.****Priority – 4:**

- a. Health - Gerontology & Cognitive Science and Health
- b. Natural Resource Management Mining – Exploration of Resources, Industries & Mines, Transportation Construction, Alternative Exploration Methods & Technologies

STI Conference, Workshop and Fair Grants

ECOSF organizes, co-organizes and provides financial support to universities and R&D organizations of the ECO region for organizing conferences, seminars and capacity building/training workshop and STI fairs etc. on applied and emerging S&T topics. In accordance with the goals of the Foundation, the priority is given to events that focus on scientific, technological and innovation areas of applied research, which have the potential to add economic and commercial value to the region.

Travel Grants

Participation of Researchers, Scientists, Engineers and Technologists in the international S&T conferences, workshops, exhibitions and symposia plays a pivotal role in furtherance of their researches and in developing collaboration with peers in other countries. Thus the Foundation encourages participation of ECO scientific community in international events mainly organized within the ECO member countries. ECOSF provides financial support to fund travel expenses of the participants as per set procedure on a prescribed Performa (ECOSF-TG1)

~~<http://www.eco4science.org/TravelGrants.aspx>~~

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Short Term Specific Projects

In addition to regular programs, the Foundation undertakes specific occasional projects on various themes that support the overall goals of ECOSF. For example, in 2017, an “ApplIdea2R” was launched whereby University Students of the region were challenged to develop ideas and solutions to 17 Sustainable Development Goals (SDGs)

Strategic Partnership

Since its establishment, ECOSF has developed strong working collaborations with various International, Regional and National organizations. Some major strategic partners of ECOSF in various projects are highlighted here.



MoU Signing between ECOSF and various International and Regional Organizations to promote STI in the region.



MoU with ISTIC, a UNESCO Category-2 Centre in Malaysia - September 2014



MoU signing with President of EvK2CNR Foundation- Italy - April 2014



ECOSF Signs Agreement with Asian Innovation Forum South Korea - August 2015



ECOSF MoU with LAMAP Foundation Paris- France - April 2016



MoU with TWESCO Astana- Kazakhstan - May 2016



ECOSF & IRIS (Iran) signing MoU for collaboration in ECO Region - April 2017



President ECOSF & ISTIC Team with DG UNESCO - September 2013.