



FONDATION
La main à la pâte

CAPACITY BUILDING WORKSHOP ON INQUIRY BASED SCIENCE EDUCATION (IBSE)- LA MAIN A LA PATE FOR ECO REGION

(Astana- Kazakhstan, 23-25 June, 2015)

INTRODUCTION

ECO Science Foundation (ECOSF) established in Dec 2011 at Islamabad- Pakistan, is a Specialized Agency of the 10 member states- the ECO (Economic Cooperation Organization). As the name indicates, ECO aims at economic development and cooperation in the region and also engages/collaborates with other international agencies. The ECO signed MoU with UNESCO in 1995 for cooperation in Education, Science and Culture etc. The ECOSF has signed MoU for S&T and IBSE Cooperation with International Science, Technology and Innovation Centre (ISTIC), a UNESCO Category-II Centre at Kuala Lumpur- Malaysia.

ECO Science Foundation's mandate is to promote and popularize science and technology in the region leading to economic development [www.eco4science.org]. ECOSF considers "inquiry based science education (IBSE)" and *La main à la pâte* approach as a key component of a long term plan for development of nations and has thus initiated the activity in collaboration with other internationally reputed institutions mainly; *La main à la pâte* Foundation (LAMAP), France and the ISTIC, Malaysia. Both, LAMAP Foundation and ISTIC have been organizing training workshops and have the support of their National Academies of Sciences as well as from the Inter-Academy Panel (IAP) under its Science Education Programme (SEP).

The Ministry of Education and Science of the Republic of Kazakhstan is the central executive authority in the Government of the Republic of Kazakhstan carrying out management and to the extent provided by law, cross-sectoral coordination in the fields of education, science, protection of the rights of children and youth policy.

Regulations of the Ministry of Education and Science of the Republic of Kazakhstan approved by the Amending Resolution of the Government of the Republic of Kazakhstan on October 28, 2004 1111 "Issues of the Ministry of Education and Science of the Republic of Kazakhstan

The current Minister of Education and Science is Mr. A.Sarinzhapov (from 2013).

The official site of ministry <http://www.edu.gov.kz>

The ECO Educational Institute (ECOEI) based in Ankara- Turkey was established in April 2012, it is another Specialized Agency of ECO with the aim to promote education at all levels in the region using formal as well as non-formal methods of education in collaboration with other agencies of ECO and the world.

La main à la pâte is an inquiry-based science education programme that was introduced in France in 1996 by prominent academicians, namely, Georges Charpak (Nobel Laureate), Pierre Lena and Yves Quéré. The programme was later launched by the French Ministry of Education in primary schools and since then, the number of schools adopting this approach has multiplied. In 2011, *La main à la pâte* became a Foundation for Scientific Cooperation with the Academy of Sciences, the Ecole normale supérieure (Paris) and the Ecole normale supérieure de Lyon as its founding members. Through the *La main à la pâte* approach in science learning, children are led to discover and learn science spontaneously and naturally, as they construct knowledge using materials and equipment familiar to them. Students are exposed to situations that arouse their curiosity towards natural phenomena, stimulating them to ask questions and discover the answers as they move through the process of scientific investigations. The *La main à la pâte* Foundation not only encourages active participation in science lessons but also develops the spirit of teamwork among children. By introducing children to argumentation, the *La main à la pâte* Foundation purports to give a better understanding of words that are spoken, written and read. By encouraging children to debate among themselves when they solve problems, *La main à la pâte* also encourages constructive citizenship. Details are available at: www.lamap.fr

International Science, Technology and Innovation Centre (ISTIC) for South-South Cooperation under the auspices of UNESCO is based in Kuala Lumpur, Malaysia. It was created as a follow-up of the Doha Plan of Action, which adopted by the Heads of States and Government s of the Group of 77 and China, during the meeting in Doha, Qatar, in June 2005 on the occasion of the Second South Summit of the Group of 77. As reflected by its name, the Centre acts as an international platform for South-South cooperation in science, technology and innovation and makes use of the network of the G77 plus China and the Organization of the Islamic Conference. The overall goal of the Centre is to increase the capacity for management of science, technology and innovation throughout developing countries. Detail on ISTIC is available at: www.istic-unesco.org

ECOSF in collaboration with ECOEI, *La main à la pâte* Foundation and ISTIC aim to:

- Get more students studying science and mathematics at the primary and secondary school levels;
- Improve science literacy and understanding in the community;
- Prepare students to engage with science ideas and be knowledgeable about the way science and scientists work;
- Raise awareness of opportunities in science and technology-related careers;
- Increase the number of students choosing science and engineering careers to address the shortage of science and engineering graduates;
- Improve the quality of science classroom teaching practice; and

- Link primary, secondary and tertiary (higher) education, scientific research and industry building on the strengths of each sector leading ultimately to knowledge based economic development in the ECO Region.

Thus the ECOSF with international collaborators and the Science Committee of the Ministry of Education and Science (MES) of the Government of Republic of Kazakhstan has planned to organize the three days **Capacity Building workshop on Inquiry Based Science Education (IBSE)- *La main a la pate* for ECO Region** at Astana- Kazakhstan on 23-25 June 2015.

OBJECTIVES

At the end of the workshop, participants should be able to:

- Recognize the philosophy and ten principles of *La main à la pâte*;
- Experience the process of inquiry-based science teaching and learning through various *La main à la pâte* lesson examples and activities;
- Gain insights into activities that not only can encourage and motivate students in science through the hands-on activities but also convince decision makers to pursue *La main à la pâte* approach for education;
- Develop a national action plan for disseminating and sharing of experiences on *La main à la pâte* with colleagues and teachers in their respective home countries;
- Define the roles of trainers and resource persons in operationalising *La main à la pâte* in home countries; and
- Liaise and feedback on the developments, with ECOSF and ECEI joint programme

TARGET PARTICIPANTS

Participants should be the Focal Points for ECO Science Foundation and ECO Educational Institute and/or those science teacher trainers/curriculum developers/science supervisors/national trainers and/or decision-makers from ECO member countries, that will subsequently coordinate the implementation of IBSE in respective countries. About 25 participants (two from each country- one from science sector and the other from education) and representatives of ECO Secretariat are expected to attend the workshop.

VENUE: Astana- Kazakhstan

ORGANISERS

- ECO Science Foundation (ECOSF) [www.eco4science.org],
- The Science Committee, Ministry of Education and Science (MES), Republic of Kazakhstan,
- ECO Educational Institute (ECOEI), Ankara-Turkey ,
- The *La main à la pâte* Foundation France [www.lamap.fr], and
- International Science, Technology & Innovation Centre for South-South Cooperation under the Auspices of UNESCO (ISTIC) [www.istic-unesco.org].

EXPECTED SUPPORTERS:

- Embassies of France in ECO member states
- Embassy of Pakistan in Astana
- Islamic Development Bank
- The UNESCO Science Bureau for Asia and Pacific Jakarta- Indonesia and the UNESCO Office in host country is likely to join as partner since it works as a laboratory of ideas and a standard-setter, disseminates and shares information and knowledge, and promotes international partnerships, in the fields of education, science, culture and communication in the world. The activity is considered directly related to the MoU signed between UNESCO and ECO in 1995.
