



**YEREVAN
SCIENCE FESTIVAL**

2010

YEREVAN SCIENCE FESTIVAL



5-8 հոկտեմբեր, 2010թ.

The project title: Yerevan Science Festival-2010

Full or abbreviated name of implementing organization:

The Center for Ecological-Noosphere Studies NAS RA; the Ecocenter.

Chairman of the Festival Organizing Committee /name, surname, patronymic/:

Saghatelyan Armen Karleni, the director of the Center for Ecological-Noosphere Studies NAS RA.

The Festival coordinator /name, surname, patronymic/:

Poghosyan Gayane Sureni, PhD in biological sciences, International expert on UNECE, UNESCO on Education for Sustainable Development, Chief Specialist of the State Committee of Science, Ministry of Education and Science RA.

The project locus and terms:

Yerevan, Republic of Armenia, (Argishti Str.-7, Moscow House), 5-8 October, 2010.

The project partners:

The Ministry of Education and Science RA, the National Academy of Sciences RA, Yerevan's Municipality, Armenia Tree Project, Expomedia CJSC.

Funding organizations:

- **State Committee of Science of the Ministry of Education and Science RA,**
- **Renewable Energy and Energy Saving Programs,**
- **Global Ecological Foundation,**
- **UN Development Programs,**
- **Cambridge-Yerevan Sister City Association,**
- **Center for Ecological-Noosphere Studies NAS RA.**

History of the Festival and goal

The Science Festival was initiated in 2000 in Great Britain and since then has gained wide recognition extending to such countries as Germany, France, the USA. The Festival is an



annual public event dedicated to the science and involving all strata of the population: family members, different-age children, teens, adults, and specialists in diverse fields including representatives from the business sector.



For the past five years a Festival has been convened in Cambridge, Massachusetts, USA as a remarkable event devoted to “novel and grandiose ideas” in science and technology. In 2010 between April 24 and May 2 some 200 events were held in the framework at the Festival,

during which all the attendees could enjoy exhibitions / presentations in the areas of science and technology. The Science Festival is expected to be transformed into a large-scale



international movement that would involve not only different cities in the USA and Asia but also the EU countries, including Armenia.

The Science Festival would become a vigorous impetus to consolidate the world community and guide mankind toward sustainable development underpinned by a “green economy”.

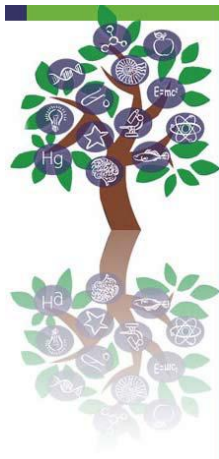
In Armenia there are all the prerequisites— scientific potential, universally recognized achievements in science and technology as well as geographical position –to provide a good rationale for joining in such a movement and becoming a regional centre.

The Festival will be a nice opportunity, particularly for young specialists, to publicize their projects in the area of science and high-tech, and communicate and exchange opinions with attendees, scientists and businessmen.

The objectives of the Festival are:

- Informing wide strata of the population about the frontrunners in the areas of science and technology and highlighting scientific findings and achievements;
- Enabling each member of the community not only to attend but also actively participate in each event and learn that a part of inventions around the world are made in Armenia;
- Assuring parity between groups of different-age specialists in different areas of science to synchronously present the outcomes of their creative thought.

Thus, the Festival will be a special event favoring both visual presentation of research results and their probable commercialization.



PROGRAM

Yerevan Science Festival - 2010

1st Day, October 5

- 10:00** YSF-2010 Opening ceremony (Moscow House in Yerevan, Argishti Str.-7)
11:00-18:00 Exhibition: Presentation of research achievements: posters, models etc.
14:00-18:00 Discussion “Alternative energy”
15:00-16:00 Meeting with distinguished scientists / R.Martirosyan, the president of NAS RA, Yerevan. Marshal Baghramian Av.-24/

2nd Day, October 6

- 10:00-18:00** Exhibition: Presentation of research achievements: posters, models etc. (Moscow House in Yerevan, Argishti Str.-7).
15:00-18:00 A conference “Towards green economy” (CENS NAS RA, Abovian Str.- 68).

3rd Day, October 7

- 10:00-18:00** Exhibition: Presentation of research achievements: posters, models etc. (Moscow House in Yerevan, Argishti Str.-7).
15:00-18:00 Exhibition of artworks in the hall of the UN Office in Yerevan (Yerevan, Petros Adamian Str.-14).

4th Day, October 8

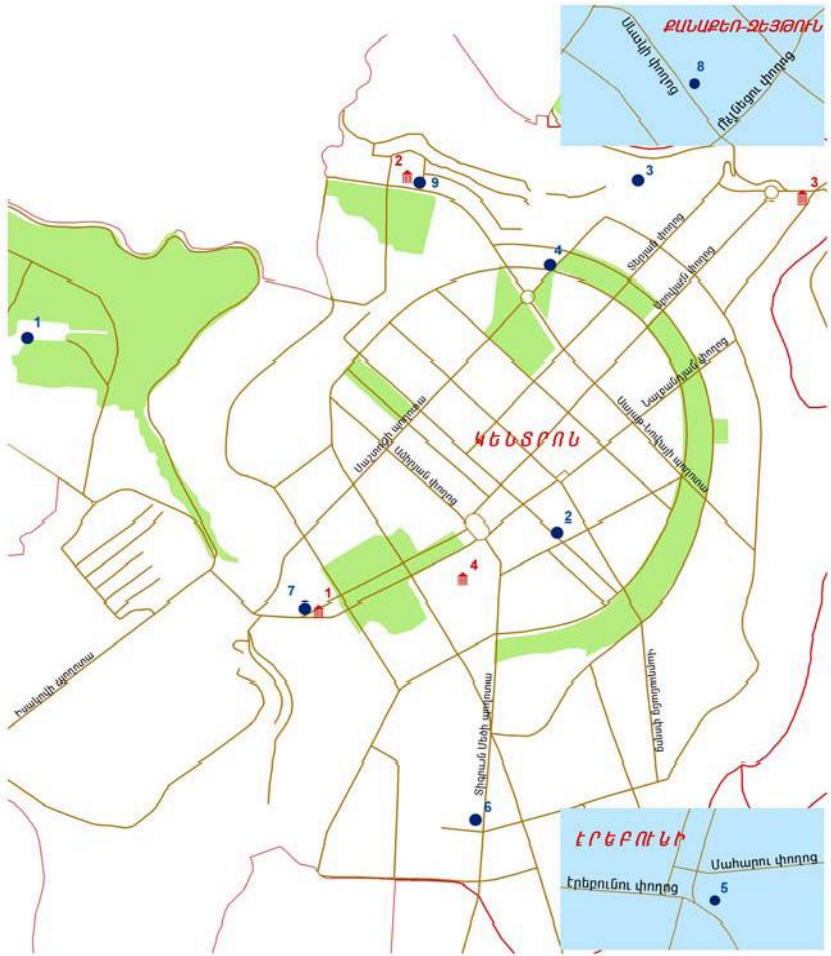
- 11:00-17:00** Visiting museums:
The Institute of Armenian Genocide NAS RA. Yerevan, Tsitsernakaberd, tel.: 39-09-81;
The National Architectural Institute-Museum RA. Yerevan, Governmental House - 3, tel.:52-46-30;
Ye. Kochar’s museum EM RA. Yerevan, Mashtots Str.39/12, tel.: 52-93-26;
A historical culture preserve “Erebuni” EM PA. Yerevan, Erebuni-38, tel.:45-82-07;
Matenadaran –the M.Mashtots repository of ancient manuscripts. Yerevan, Mashtots Av.-53, tel.: 56-25-78;
State Museum of Armenia’s Nature Protection, Tigran the Great -34, tel.:54-25-16;
Museum of Yerevan’s history RA. Argishti, 1/1, tel.: 56-81-85;
Zoological museum NAS RA, the Research Center for Zoology and Hydroecology. Yerevan, P.Sevak-7, tel.:28-59-61;
Geology museum NAS RA, the Institute of Geological Sciences. Yerevan, Marshal Baghramian -24^a, tel.:52-23-44.
15:00-16:00 Presentation “Medieval Armenian architecture: the example of the capital city of Ani”. The National Architectural Institute-Museum RA. Yerevan, Governmental House -3, tel.:52-46-30.
In December, YSF-2010 presentation will be organized to generalize the YSF-2010 results and highlight the derived conclusions and award appropriate certificates to the participants.
The audience of the YSF-2010 presentation will involve the RA Ministry of Education and Culture, the RA Ministry of Nature Protection and specialists from diverse research fields, mass media representatives, scientists, lecturers, teachers, PhD-students, university students, schoolchildren who participated in the Festival.

ACTIVITIES

Included in the YSF-2010 were an exhibition, a conference “Towards a Green Economy”, visits to museums, meetings with renowned scientists, discussions on various topics such as “Alternative Energy”, round-table meetings, presentation of scientific achievements and artwork that comprised an impressive number of pieces of art made of recycled materials.



Map of the Festival activities



Միջոցառումների վայրերը

Թանգարանների այցելություններ

- 1 - Մուսկլայի տուն
- 2 - ՀՀ Գիտությունների ազգային ակադեմիա
- 3 - ՀՀ ՂԱԱ Էկոլոգանոսֆերային հետազոտությունների կենտրոն
- 4 - ՄԱԿ-ի հայաստանյան գրասենյակ

- 1 - Հայոց ցեղասպանության թանգարան-ինստիտուտ
- 2 - Ճարտարապետության ազգային թանգարան-ինստիտուտ
- 3 - Ս. Սաաչուրցի անվ. «Սատենադարան» հին ձեռագրերի գիտահետ. ինստիտուտ
- 4 - Ե Քոչարի թանգարան
- 5 - «Էրեբունի» պատմամիջակառնական արդվոթ-թանգարան
- 6 - Հայաստանի բնության պետական թանգարան
- 7 - Երևան քաղաքի պատմության թանգարան
- 8 - ՀՀ ՂԱԱ Կենդանաբանական թանգարան-ինստիտուտ
- 9 - ՀՀ ՂԱԱ Երկրաբանական թանգարան

Exhibition: Presentation of research achievements: posters, models

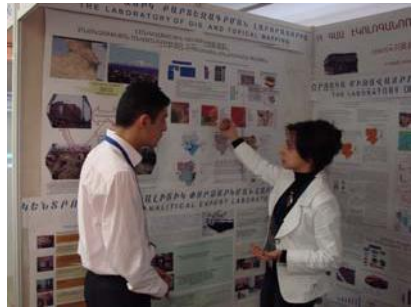
5-8 October, 2010

Yerevan, Republic of Armenia, (Argishti Str.-7, Moscow House)

Exhibitions organized within the framework of the Festival displayed national and international applied and fundamental scientific achievements. The YSF-2010 also provided an opportunity to organize discussions, exchange best experiences and build links.

The greatest achievements of the YSF-2010 were good feedback from the community, attraction of public interest to science; promotion of the event through mass-media and an increasing number of those interested even after completion of the Festival.

Center for Ecological-Noosphere Studies of the National Academy of Sciences of RA



Orbeli Physiology Institute, NAS RA



DEVELOPMENT OF MODERN HARDWARE TO ASSESS THE PHYSIOLOGICAL STATE OF THE ORGANISM

Scientific and technical work performed at the Orbeli Physiology Institute, NAS RA: devices were developed to assess the physiological state of the organism in various biomedical centers. The devices are constructed using modern microprocessor technology; they are compact and can be used in any place. Level of true voltage amplitude reaches 1mV at an interval time sampling of about 200 microseconds. Information can be transmitted to the computer via the USB port as well as with Bluetooth or the Internet.

Institute of Hydroecology and Ichthyology of the Scientific Center of Zoology and Hydroecology



The Institute of Hydroecology and Ichthyology of Scientific Center of Zoology and Hydroecology was founded in 1923 as Fish Farming Station of Sevan Lake and carries out hydroecological studies of lakes, rivers and reservoirs of Armenia. The Institute has three departments: hydroecology, hydrobiology, and ichthyology.

Institute of Biotechnology



- Bacterial melanin – plant growth stimulus
- The universal technology of the asymmetric biomimetic synthesis of nonprotein amino acids
- Comparative study of some properties of isolated lactic acid bacteria, obtaining of antimicrobial preparations based on them.

State Engineering University of Armenia (SEUA)



- Renewable energy devices
- Photoelectrochemical converters
- Technology of preparation of 44W and 80W solar PV (Photovoltaic) modules

Yerevan State University Architecture and Construction

- Reconstruction of the Yerevan zoological garden
- Diploma project for the development of Jermuk city
- Prospects for development of tourism in the Byurakan region



- Reconstruction project for a district and a commercial center
- Reconstruction of rest area near river Hrazdan
- Reconstruction and designing of rehabilitation center in Shorja village
- Karst caves as sites for ecological tourism

Yerevan State Pedagogical University

Effects of copper, zinc, arsenic and iron ions on the body of *Pelophylax ridibundus* (Amphibia, Anura)

The effects of copper(Cu), zinc(Zn), arsenic(As) and iron(Fe) ions on the morphometric measurement of the body and some internal organs of the Eurasian marsh frog “*Pelophilax ridibundus*” from polluted and conventional clean biotopes have been studied. The effects of these metals at concentrations exceeding maximum permissible concentration (MPC) on the 4 morphometric indices of the body ($L.t.c * Lc/L$, $T/Sp.p$, L/T , $L/(F+T)$) and of the spleen and testis development of mature frogs have been determined. We show that the high concentrations of arsenic (As) and copper in the aquatic habitats are a danger for amphibians and lead to the abnormality of skeleton and internal organs.



The Union of Information Technology Enterprises



The Union of Information Technology Enterprises (UITE) of Armenia is IT Association of Armenia. UITE was founded in 2000 as a non-profit, non-governmental association of ICT companies working in Armenia. The mission of the Union of Information Technology Enterprises is to make Armenia an internationally recognized ICT/High Tech leader.

The Union of Information Technology Enterprises implements a variety of projects which mainly tends toward the development and growth of the IT sector in Armenia. Among all the projects UITE organizes are the annual [Digitec Expo](#) and Digitec Business Forum , Armenian robots open championship – Armrobotics, and the “ICT Leaders’ Meeting” forum.

«Stone and Silicates» Scientific-Production and Project Closed Joint-Stock Company

New technology for producing high-clean silicates from rocks

The "Hydrothermal treatment of rocks and glass" laboratory of «Stone and Silicates» Scientific-Production and Project Closed Joint-Stock Company has developed a new wasteless technology of complex chemical treatment of silicon-containing rocks to produce high-purity silicates: liquid glass, different silicates, silicon dioxide, complex glass charge, pigments, thermoregulating coatings, glass flux,



zeolites, catalysts carrier, etc. The developed technology is wasteless, economically profitable and allows for production of expensive materials from cheap raw materials.



Materials based on expanded perlite

“Perlite and physico-mechanical investigation of building materials” laboratory of «Stone and Silicates» Scientific-Industrial and Projecting Closed Joint-Stock Company is engaged in thermal treatment of silicon containing rock,

including, perlites, employing R&D technology of production of expanded perlite and materials based on it.

Depending on the content of expanded perlite and the nature of the binding agent it is possible to create products for different industries- pollution-free insulating materials and wood-substitute products.

Young Biologists Association NGO

Young Biologists Association NGO is a member of Earth Day Network. In 2010, with the assistance of our partners, we have organized several eco-educational events /tree planting, a seminar, a discussion, and a painting competition/ celebrating the 40th anniversary of Earth Day. Representing results of successfully implemented environmental campaign our project encourages us to adopt a large -scale celebration of Earth Day, as an environmental awareness- raising tool.



“Tapan ecoclub” band was playing during the festival.



The project beneficiaries: YSF-2010 brought together not only scientists, researchers, college students and schoolchildren, but also scientific and technical groups, state and private establishments, scientific institutions and NGOs who presented their achievements in the areas of science and high-tech.

The number of beneficiaries was approximately **4000**.

Meeting with distinguished scientists
/ R.Martirosyan, the president of NAS RA/
5 October, 2010



A conference “Towards a Green Economy”
Center for Ecological-Noosphere Studies NAS RA
6 October, 2010



Exhibition of artwork
in the hall of the UN Office in Yerevan
7 October, 2010



An exhibition “**Towards a Green Economy**” was held at the UN office in Yerevan. Students from Yerevan State Academy of Arts, as well as pupils from 18 schools participated in the exhibition. The participants made interesting works of art using different waste products.

Awarded Works

I award



II award



III award



Presentation “Medieval Armenian architecture: the example of the capital city of Ani”

The National Architectural Institute-Museum RA

8 October, 2010



Visiting museums

- **The Institute of Armenian Genocide NAS RA. Yerevan, Tsitsernakaberd;**
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- **Geology Museum NAS RA, the Institute of Geological Sciences. Yerevan, Marshal Baghramian -24^a.**



In December, YSF-2010 held a presentation to disseminate the YSF-2010 results, highlight the derived conclusions and award appropriate certificates to the participants.



The Festival Outcomes:

During the four days the Festival was attended by some 4000 beneficiaries, 2500 of whom were museum visitors, mainly youth and schoolchildren. The best achievements of the YSF-2010 were: good feedback from the community, attraction of public interest to science, promotion of the event through mass-media and an increasing number of those interested even after completion of the Festival.

Exhibitions arranged in the framework of the Festival displayed national and international applied and fundamental scientific achievements. The YSF-2010 allowed for presenting scientific achievements and organizing discussions, exchanging best experiences and building links.

In the framework of Yerevan Science Festival-2010 were printed:

- The YSF-2010 Program: 300 copies
- Badges for attendees: 50
- Banners: 3 (2 –small, 1-big)
- YSF-2010 website
- Certificates: 200 copies
- Catalogue: 300 copies.

Expected results.

- A notable broadening of public vision of the sphere of science. Diverse layers of the population witnessed Armenian science being an integral part of global science and got evidence that our future should be based on scientific achievements,
- That Armenia will join the global festival movement which will help exchange experiences and build links as well as highlight research outcomes and attract potential investors,
- That students will get an opportunity to better manage a professional education continuation process.

We do hope that the Festival will become a good tradition contributing to the increase in the number of those interested in science.



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