

**"SCIENCE FOR GLOBAL SUSTAINABILITY:
INTERCONNECTEDNESS, COLLABORATION,
TRANSFORMATION."**



**WORLD SCIENCE DAY
for PEACE and DEVELOPMENT**

**NATIONAL ACADEMY OF YOUNG SCIENTISTS- PAKISTAN
PAKISTAN SCIENCE FOUNDATION
UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)**



WORLD SCIENCE DAY FOR PEACE AND DEVELOPMENT

We are living in the most advanced age of Science and technology. In the present world torn with nationalism and divided into blocks, Science is the only common denominator. Wherever we go, we carry the torch of science in our hands to light our path. Science thus may be called the religion of the modern world. It has confirmed great boons on mankind. The various aspects of science have brought about a revolution in our lives.

Till the middle of 15th century the great men of letters dominated the world of ideas. Now their place has been taken by the scientists. Scientists may be called as the benefactors of mankind. They have devoted whole life to the service of humanity. They have helped in disseminating knowledge. In fact, the modern civilization is indebted to the scientists for all its glory and splendors.

November 10th is associated with the annual event on the World Science Day for Peace and Development (WSDPD), to raise awareness of the benefits of science worldwide. The WSDPD is also known as World Science Day. It was recommended at the World Conference on Science in **Budapest** in 1999, that there is a need for a new compact between science and society. The United Nations Educational, Scientific and Cultural Organization (UNESCO) works with people, government agencies and organizations to promote the WSDPD each year.

The objectives of World Science Day for Peace and Development are:

- To strengthen public awareness on the role of science for peaceful and sustainable societies
- To promote national and international solidarity for a shared science between countries
- To renew national and international commitment for the use of science for the benefit of societies
- To draw attention to the challenges faced by science and raise support for the scientific endeavor.

The theme for this year, **'Science for global sustainability: interconnectedness, collaboration, transformation'** shines a light on our increasingly interconnected and interdependent economic, social, cultural and political systems, both in terms of the pressure these place on the Earth system and of the potential for solutions that they provide.

This theme first concerns the role of scientific culture, the need and the likelihood of creating and sustaining projects that can lead to transformative processes and to sustainable socio-economic development in the world. These objectives can be achieved through the application of scientific improvement to the real world and life, for example to agriculture, health and economic development policies.

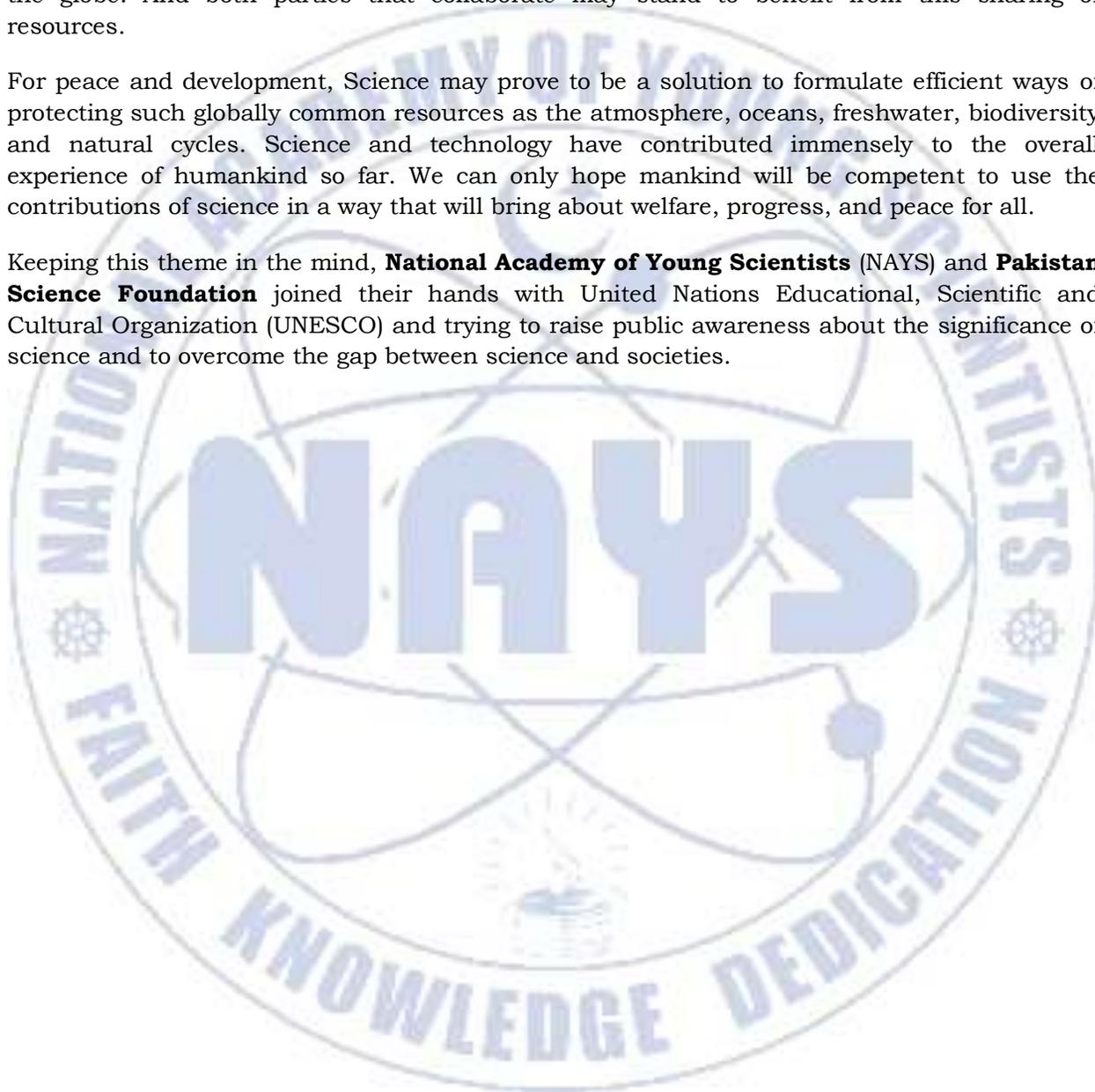
We must open a new chapter in scientific integration. Innovation and social transformation depend on our capacity to combine disciplines and create synergies among all sciences, natural, human and social, including local and indigenous knowledge.

(Irina Bokova, UNESCO Director-General)

Collaborations are a primary method by which young scientists can cultivate their professional networks and develop job opportunities. A successful scientific collaboration almost invariably results in the opportunity to do more work together. We can set up the concept of collaboration and interconnectedness by networking and keeping our eyes and ears open. There are a number of factors driving the trend toward increased collaboration. Most of the identified factors involve addressing a genuine need toward the rapidly changing context of research in the globe. And both parties that collaborate may stand to benefit from this sharing of resources.

For peace and development, Science may prove to be a solution to formulate efficient ways of protecting such globally common resources as the atmosphere, oceans, freshwater, biodiversity and natural cycles. Science and technology have contributed immensely to the overall experience of humankind so far. We can only hope mankind will be competent to use the contributions of science in a way that will bring about welfare, progress, and peace for all.

Keeping this theme in the mind, **National Academy of Young Scientists (NAYS)** and **Pakistan Science Foundation** joined their hands with United Nations Educational, Scientific and Cultural Organization (UNESCO) and trying to raise public awareness about the significance of science and to overcome the gap between science and societies.



COMMENTS:

National Academy of Young Scientists (NAYS) has taken some comments (relevant to the theme) from Professors, lecturers, youth leaders and young researchers. These valuable comments are given below:



Professor Bruce Alberts

Editor-In-Chief
SCIENCE Magazine

Science provides the essential underpinning for every society. Most obvious perhaps is its essential role for stimulating the innovation that improves human well-being and creates new industries that drive productive economies. But the judgments of science about the world are also critical if nations are to make wise decisions about regulations and resource allocations. For example, how dangerous are traces of arsenic in drinking water in my nation, and what should we do about it? How important will it be to develop and employ new sources of energy that do not emit greenhouse gases? What are the most efficient ways to improve maternal and child health in Pakistan? For a nation to answer any of these questions effectively, plus thousands more, depends on generating relationships of trust between local scientists and policymakers. Local scientists must energetically focus on creating a society in which their nations leaders make decisions that are good for the society in the long run, rather than decisions that are expedient for the short-term but destructive for the future. Experience around the world demonstrates that organizations of a nation's best younger scientists, like NAYS Pakistan, can have a special role in building a productive future for their country through such efforts. This is why I am such a strong supporter of the global movement to produce "Young Academies" in every nation (see www.globalyoungacademy.net).

Even more critical than all of the above in my opinion is an urgent need to spread the values of science, which are also the values that must underlie any successful democracy. This need has been elegantly stated in a small book still in print, written by the physicist Jacob Bronowski, with the title *Science and Human Values* (1956). After his scholarly review of the effect of science on societies over the ages, Bronowski writes that:

"The society of scientists is simple because it has a directing purpose: to explore the truth. Nevertheless, it has to solve the problem of every society, which is to find a compromise between the individual and the group. It must encourage the single scientist to be independent, and the body of scientists to be tolerant. From these basic conditions, which form the prime values, there follows step by step a range of values: dissent, freedom of thought and speech, justice, honor, human dignity and self respect.

Science has humanized our values. Men have asked for freedom, justice and respect precisely as the scientific spirit has spread among them."

Bronowski's statement should inspire all scientists to work together across the globe in an intense effort to give science its rightful place in every society, as needed to produce a peaceful and productive world. (<http://biochemistry.ucsf.edu/labs/alberts/>)



Professor Howard Alper

Co-Chairman

IAP: The Global Network of Science Academies

I want to state that Young National Academies, such as NAYS Pakistan, have a major role to play in serving as the voice of young researchers in the Nation. They can forge new alliances with researchers in other countries, encourage interest in science and engineering by the leaders of tomorrow in Pakistan, and act as role models to schoolchildren, as well as to those with even greater experience than their own.



Professor Dr. Anwar Nasim

Visiting Professor and Patron

National Academy of Young Scientists (NAYS)

Pakistan

The role of science is paramount to the objective of global sustainability, in whichever context one might take it, the continued support of human life on earth, long term maintenance of the stock of biological resources, the productivity of agricultural systems, stable human populations, emphasis on self reliance and continued quality in the environment and eco systems. The role of youth is essential in this regard. Their fresh minds that are open to new ideas and motivation to innovate are exactly what is required in this day and age. Collaboration of young minds from all parts of the world, their unique thinking styles, identification of problems and their solutions from rich and diverse experiences will be significant in the transformation of the world. We need the young scientists now more than ever in this age of globalization due to the need for continuous innovation and the speed with which new solutions are required, and who better to provide these solutions than those who are in synchronization with the new dynamics of our world.



Prof. Dr. Darakhshan J. Haleem

Meritorious Professor (Neuroscience)

Dr. Panjwani Center for Molecular Medicine
and Drug Research, University of Karachi

I appreciate the joint collaboration of National Academy of Young Scientists (NAYS), Pakistan Science Foundation (PSF) and United Nations Educational, Scientific and Cultural Organization (UNESCO) for celebrating World Science Day for Peace and Development in Pakistan on 10th Nov 2010. As a nation, people in Pakistan are truly aware of the importance of peace and are looking towards scientific community to let them know what role science can play in producing sustainable peace here and around the world.

The theme of this year's World Science Day, "Science for global sustainability: interconnectedness, collaboration, transformation" is actually what people should be aware of today. We, as part of scientific community have to tell people that science is not for producing mass destruction but for sustainable development, collaborative interaction, sharing scientific knowledge and developing nations on scientific principles. It is only because of advancement of science that people across the globe are connected with each other, differences between societies are disappearing and people are enjoying wealth of knowledge. This is only one aspect of scientific development, a number of other countless developments around us have made our lives really enjoyable. For sustaining these scientific achievements we have to use science for peace and development, for education and producing awareness in our people about all these. We are also observing rapid and complex global interactions between environmental components of the Earth system and there are clear indications of significant shifts in climate, biodiversity, pollution loads and other critical factors. The evidence suggests that we have entered to an era where understanding of resources, food, water and clean air is also very important for the existence of life on the Earth. I think awareness about scientific development, resources, collaborations and transfer of knowledge may play a critical role in sustaining life on the Earth.



Aftab Ahmad

President
National Academy of Young Scientists (NAYS)
Pakistan

This is the age of science and technology and science has totally revolutionized the world with new developments and technologies on almost daily basis. But with this we are also facing many challenges like hunger, diseases, natural disasters, poverty, environmental issues and so on. Science is playing its role to meet these challenges but there is also great need to engage the public at large on these issues. For this a connection could be developed between scientists and general public for better and sustainable world which can be achieved by using social network, media and convincing politicians about importance of science in daily life. Pakistan is fortunate to have a big platform of young researchers in the form of National Academy of Young Scientists (NAYS) Pakistan which has started several projects to promote and popularize science in Pakistan for better Pakistan and world on the whole. Some of important projects include community education and awareness program, science mobility and migration; action against brain drain, science for youth etc. These projects are playing their role in reducing gaps between scientists and common public. In addition they are also important to promote interaction among scientists/researchers and nurturing the young developing minds. NAYS

Pakistan is also participating in World Science Day for Peace and Development on 10th Nov and it will Insha'Allah continue its effort for progressive and prosperous Pakistan with peace and development.



Abdul Majid Qureshi

Lecturer

School of Pharmacy, The University of Lahore,
Islamabad Campus

Science as we know it in Pakistan is today an infant which needs nurturing to provide national solutions arising in the areas of agriculture, clean energy, medicine, waste management and technology. Our goals should be to harness our human resources in the most adequate manner to provide us home grown solutions to our priorities and our problems. Today's youth needs more acquaintance with the power of pie than the power of terrorism which shakes lives instead of shaping them. In the global economy only the nations with the most advanced scientific knowledge stand tall. But we need to understand that science is not a short term commitment it is an enduring cycle of failures and mistakes which leads to products which drive more energy for healthier science. It is a shared responsibility which not only the leadership must realize but which rests heavily in the young scientists of our Nation who are entrusted with scarce resources. It is a platform which enables enlightened linkages globally it is a community which surpasses borders and which derives its own impetus from the efforts of a few. This day should be celebrated with the continued commitment of transforming life on the surface of the planet, beyond biases of race, culture or tradition with a rational commitment to affect every sphere of our life.



Waqas Saleem

Graduate Research Assistant

Sophie Davis School of Biomedical Education,
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Collaboration among researchers, scientists, entrepreneurs, industrial leaders, and stakeholders in field of Science and Technology has transformed this world into a vibrant and dynamic global village. Similarly, without the intervention of Science and Technology, it will be extremely challenging to achieve global sustainability, peace and development. We have already lost ample amount of time to realize the importance of Science and Technology that accelerates the economic wheel of a country. I am encouraged to see practical demonstration of the theme through collaboration of UNESCO, PSF and NAYS.

SOME PRACTICAL ACTIVITIES:

Within Pakistan, four different activities related to world science day have been taken place in different cities. In District Gujranwala, discussion was held in Govt. Primary School Rahwali about science and its advantages (Oct 22nd). A basic concept of biology and Inspiration with science was conveyed to the young primary students. In Lalamusa (Gujarat), event was arranged on 25th October. Students of Govt. High school Lalamusa were motivated to acquire and excel in scientific education by giving various examples. A comprehensive lecture was given in two schools of Bhakkar (Punjab) i.e. DPS & ISC Girls Campus on 2nd of November 2012 and Govt. Degree College for Women on 3rd November. This lecture includes the association of science and societies and progress of any nation with the help of science and scientific education. A short lecture was also delivered to college students about Subject Selection and Career Counseling on their request.

For WSDPD, a report is compiled that have an article along with a poster. This report also contain some comments relevant to the theme (Science for global sustainability: interconnectedness, collaboration, transformation) that has been taken from Professors, lecturers, young researchers and some well-known international names in the world of Science. That report will be send to more than 3000 registered members of our organization; as well as posters will be distributed to the students on the commemoration of the day.

October 22, 2012- District Gujranwala, Punjab



October 25, 2012, Lalamusa, Gujarat (Punjab)



November 2, 2012, DPS & ISC Girls Campus, Bhakkar (Punjab)





November 3, 2012, Govt. Degree College for Women, Bhakkar (Punjab)

