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AFFAIRS AND SCIENCE & TECHNOLOGY, GOVERNMENT OF  
HARYANA. DELIVERED AT THE ‘SCIENCE CONCLAVE’ AT  
CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL  
UNIVERSITY AT HISAR ON 30<sup>TH</sup> JANUARY, 2012.**

Let me thank Vice Chancellor of Haryana Agricultural University, Dr. K.S. Khokhar, his entire Faculty and my colleagues in the Department of Science & Technology for organizing the present ‘Science Conclave’. We began this humble effort in 2010 on the Birth Centenary of one of the most illustrious sons of India – Dr. Homi Jahangir Bhabha – Father of Indian Atomic Programme. We have moved from step to step since then. Last Science Conclave on ‘Basic Sciences’ was addressed by Dr. APJ Abdul Kalam at Maharshi Dayanand University Campus at Rohtak on 2<sup>nd</sup> December, 2011.

In the first ‘Science Conclave’ of this year, we are privileged to have today among us the man, who has led India’s Space Programme in the 21<sup>st</sup> Century – Dr. Krishnaswamy Kasturirangan. Dr. Kasturirangan has overseen the development of INSAT 2 as also Indian Remote Sensing Satellites 1A and 1B. He launched and operationalized India’s prestigious Launch Vehicles i.e. Polar Satellite Launch Vehicle (PSLV) and Geosynchronous Satellite Launch Vehicle (GSLV). He has led the initiative for India to enter the planetary exploration by his extensive studies leading to conceptualization of ‘Chandrayaan-I’. Sir, all of us are, indeed, delighted to have you here.

Today’s harsh reality is that interest in Science is on the decline – across India and across the world. Every young man and woman want to be a successful engineering graduate, a management graduate, a doctor, a post-graduate or a financial wizard on account of their inherent potential in making a successful career. More often than not, students feel that study of Science is too dogmatic and correct, i.e. there are no shades of grey about Science for them to question.

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They also find learning Science as school subject to be relatively difficult. Students also find school Science disconnected from their own lives where there is no space for themselves and their ideas.

Of course, they find non sciences career more rewarding financially. This is, indeed, alarming for one of the youngest countries of the world with 52% of population below 40 years of age and a quest for knowledge and ideas of the future. Onus and responsibility lies upon us – academicians, teachers, universities, governments and every one interested in India's future as a leader of Nations to rekindle the fire of basic science, research and innovations.

### **SCIENCE – A DRIVER OF EQUITY AND EQUALITY**

Scientific developments have great importance for humanity, quality of life, sustainable development of our planet and peaceful co-existence among people. Starting from our basic needs of life, such as access to water, food and shelter and moving on important issues like management of agricultural production, water resources, health, energy, bio-diversity, conservation of environment, transport, communication – all have a strong science component to which every individual must have access to take part in local, regional, National or Trans-National decisions in a meaningful way.

We live in a world today where poverty and riches live side by side and where gap between them increases by the mili-second. Science is the greatest leveler. We must remember that 'Poverty is ignorance'. Ignorance means the basic principles of Science and its uses remain unknown to the poor and underprivileged. Science must and does respond to the needs of the society to improve quality of life of the majority of population living in poverty. As our noble laureate, Amartya Sen has said that there is a link between poverty and freedom, liberty and education, there is also an indelible link between poverty and benefits of scientific knowledge. I stand here today to say that let's use Science and scientific principles together to root out poverty, illiteracy, hunger and ignorance.

## **PROGRESS IN 20<sup>TH</sup> CENTURY**

Science has shown us the way in 20<sup>th</sup> Century by its innovations as a leveler and harbinger of equalities and opportunities. In the 21<sup>st</sup> Century, we need to propel it manifold.

In many ways, 20<sup>th</sup> Century was Century of innovations and equitable distribution of its benefits among the masses. Benefits of these innovations were largely universal affecting large number of people at all economic levels. Technologies evolved were diverse and dependant upon timely accomplishments of science i.e. quantum theory (which is being challenged again in the 21<sup>st</sup> Century), Nuclear Physics, Theory of Relativity to name a few. Devices that enabled these innovations were – telephone, airplanes, computers, electronics, internet, laser and fiber optics, electronics, electrification, imaging, agricultural mechanization, highways, radio/television and they were made affordable to a large number of people.

## **CHALLENGES OF THE 21<sup>ST</sup> CENTURY**

In the 21<sup>st</sup> Century, Science must become a ‘good’ shared by all, for the benefit of all.

World’s economy is transforming itself into a knowledge economy. In this new knowledge economy, success of Nations rests more than ever before on first class human resources. More and more knowledge link to these abilities is mathematical, scientific and technological. Thus, knowledge – scientific and technological- is the principal driver and Science is at the heart of this knowledge growth.

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You are the generation, which will drive India and the world in this Century – overcoming challenges and setting new courses to tread upon. You have miles to go. I take this opportunity to list a few challenges of 21<sup>st</sup> Century:-

- Energy Conservation
- Resource Protection
- Food and Water production for all
- Waste Management
- Education and Learning
- Medicines and prolonging life
- Newer technologies
- Genetics and Cloning
- Nano-Technology and Bio-Technology
- Global Communication
- Knowledge Sharing
- Speed Travel
- Interfaces and Robotics
- Virtualization
- Teleportation
- Preservation of Species
- Civilizational Contact

My young friends, these challenges are only illustrative and not exhaustive. Please remember that Science runs through it all. It is at its heart, its soul, its body, its foundation and its top. Till you strive to overcome these challenges, future of mankind would itself be under a cloud. Responsibility, obligation, onus and a sense of purpose lie on your young shoulders, my young friends, to make this State, this Country and the World a place to live and co-exist happily and mutually, a place where human dignity and equality would be predominant, a place where poverty – ignorance – illiteracy – will be trampled upon by the forces of scientific discovery – truth – and innate human goodness.

I wish a prosperous and scientifically enlightened future for you all.

**JAI HIND !**