3rd Annual Lecture of the
UPSC Lecture Series on Governance

New Delhi

1 December 2011

Creative Leadership: Essence of good governance

"Before you do anything, stop and recall the face of the poorest most helpless destitute person you have seen and ask yourself, "Is what I am about to do going to help him?"
...Mahatma Gandhi

I am delighted to give the 3rd Annual Lecture on Governance and Public Service organized by **Union Public Service Commission (UPSC)** to this audience who are part of the governance system of our great Nation. During the last six decades of Independence, India has established that her core competence is in providing leadership to over one billion people of a democratic country with multi religious, multi lingual and multi cultural characteristics. UPSC has played an important role in selecting and recommended the most talented persons for appointment to various segments of our National governance system. Over the last six decades UPSC has selected nearly quarter of a million candidates, after examining over forty-six million applicants which is equivalent to the entire population of South Africa or England. UPSC has inspite of various factors affecting societal dynamics, has conducted examinations, interviews, personality tests and recommending suitable candidate for various Services,

particularly Civil Services dealing with district administration, Law and Order, Agriculture Services, Communication Services, Medical Services, Railway Services and Engineering Services under this intense competition. I would like to congratulate you for having a clean record of selecting the candidate for the required task insulated from societal turbulence. Today I would like to talk on the topic **"Creative Leadership: Essence of good governance".**

Problem cannot be our master – We Japanese will become the master of the problems

On 29th November night, I was returning from Seoul, Republic of Korea to Delhi on a non-stop seven and half hours flight after attending the Eminent Persons Group meeting organized by the President of Republic of South Korea prior to 2012 Seoul Nuclear Security Summit. This meet was attended by top experts in the nuclear field from different countries. The mission of EPG is to establish safety and security guidelines for 539 nuclear power plants spread all over the world. I am not going to talk about the details of that meet, *but I would like to mention* one incident which was narrated by Prof. Shinichi Kitaoka, a Professor of Faculty of Law, University of Tokyo to *me and the EPG members*. The professor was narrating the whole scene, the combination of highest intensity earthquake and the tsunami which affected the 40 years old Fukushima nuclear power plant. He said, the world has gone through so far three major nuclear power plant accidents. One in USA,

one in former USSR and the latest in Japan. He said, in the Japan accident, even though the Fukushima plant experienced a major natural havoc leading to the major accident of the nuclear power plant, there was no single radiation induced casualty and there was no radiation leakage. Of course, it has generated within Japan and also many parts of the world, a fear about the type of safety in the present and future shore-based nuclear power stations situated in various parts of the world. The most profound statement of Prof Kitaoka, was *"two cities of Japan were attacked by nuclear weapons in 1940s. It was a painful tragedy, but Japanese citizens withstood boldly, challenged the problem and within three decades, Japan got transformed into the most industrialized nation in the world. Now, Fukushima nuclear power plant problem is in front of us. We the Japanese will not allow this problem to become our master. With international cooperation, we the Japanese will become the master of the problem, defeat the problem and the world will see clean-green nuclear energy flourishing all over the place."*

Leadership is the essence of good governance

How to make the governance system of the country most effective and ensure development of the nation which will make and sustain the nation as an economically developed, prosperous, happy and peaceful society in the world? For that

what you need is to have creative leadership at all segments of the governance of the nation.

Friends, I have seen three dreams which have taken shape as vision, mission and realization. Space programme of ISRO (Indian Space Research Organization), AGNI programme of DRDO (Defence Research and Development Organization) and PURA (Providing Urban Amenities in Rural Areas) becoming the National Mission. Of course, these three programmes succeeded in the midst of many challenges and problems. I have worked in all these three areas. I would like to convey to you what I have learnt on leadership from these three programmes:

a. Leader must have a vision.
b. Leader must have passion to realize the vision.
c. Leader must be able to travel into an unexplored path.
d. Leader must know how to manage a success and failure.
e. Leader must have courage to take decisions.
f. Leader should have nobility in management.
g. Leader should be transparent in every action.
h. Leader becomes the master of the problem, defeats the problem and succeeds.
j. Leader must work with integrity and succeed with integrity.

Let me illustrate these characteristics through our national programmes.

Vision for self-sufficiency in food

The vision for the First Green Revolution emanated during the 1970s from the political leadership of Shri C. Subramaniam. With the Visionary leadership of Shri C. Subramaniam, the team with the scientific leadership of Nobel Laureate Dr. Norman Borlaugh and Dr. M.S. Swaminathan, with the active support of Shri B. Sivaraman, Secretary Agriculture, Dr. M.S. Swaminathan in partnership with agricultural scientists and farmers liberated India from the situation of what was called "ship to mouth existence". Through an effort of historical magnitude, India attained near self-sufficiency in food through "Seed to Grain" mission. As part of this first green revolution, the country has been able to produce over 236 million tonnes of food grains per year now. Of course, farmers played a pivotal role in working with agricultural scientists in farm itself.

The political leadership and the scientific leadership has been able to build the capacity among our scientists, researchers and farmers to take up the mission of "***second green revolution***" which is indeed a knowledge graduation from characterization of soil to the matching of the seed with the composition of the fertilizer, water management and evolving pre-harvesting techniques for such conditions. The

domain of a farmer's work would enlarge from grain production to food processing and marketing.

India has now embarked upon the Second Green Revolution which will enable it to further increase the productivity in the agricultural sector. By 2020 India would require to produce over 340 million tonnes in view of population growth and increased purchasing power. The increase in the production would surmount many impeding factors such as reduce availability of land, shortage of water and reduced availability of agricultural workforce. Our agricultural scientists and technologists in partnership with farmers have to work for increasing the average productivity per hectare has to be increased three times compared to present productivity. The type of technologies needed would be in the areas of development of seeds that would ensure high yield varieties even under constraints of water and land.

Passion to realize the vision

Now let me describe to you an example of how passion to realize the vision has facilitated the successful and on-time implementation of a two billion dollar metro-rail project by the Managing Director of a public sector organization.

The Delhi Metro Rail Project has given to the nation the potential of executing a fast transportation system using high technology with reliability through a time bound mission mode operation. Delhi, the Capital of the country with over 20

million population, has the distinction of having a world class metro rail with frontline technologies. The work on the metro rail commenced on 1st October 1998 and the first phase with three lines covering 66 kms has been completed by December 2005. Today over all route length created by Delhi Metro is around 190 Kms. Everyday, metro handle minimum movement of 2 million passengers.

Delhi Metro Rail Corporation has brought to the country, the most advanced rail technologies for the first time. Here is a leader who has passion and passion for excellence. The notable gains to the country are, light weight stainless steel, sleek, modern trains with pneumatic springs, regenerative braking, public information display, wide vestibules and automatic doors. The sophisticated coach technology which was not available in the country so far, has been transferred to M/s. Bharat Earth Movers Ltd., Bangalore, which is now assembling these trains with progressive indigenization. BEML is now in a position to supply train sets needed for Phase-II of Delhi Metro Rail Project and meet the requirement for Metros coming up in other cities of the country.

Mr. E. Sreedharan, the Managing Director of Delhi Metro Rail Corporation has ensured that, all the scheduled sections were completed by their target date or before and within their respective budgets through his programme management skills. The dedicated and transparent leadership backed up with professional competence of Mr. Sreedharan has given to the

nation, one of the best transportation systems of the world at the most economic cost. He is a recipient of many national and international awards. Also, he is in demand for undertaking the development of metro system in different countries of the world which he has politely declined due to pre-occupation with committed Indian programmes.

Now I would like to talk about a leader who ventured to travel in an unexplored path.

Traveling in unexplored path

I was fortunate to work with Prof. Vikram Sarabhai for seven years and while closely working with him, I saw the dawn of the vision for the space programme in a one page statement. Witnessing the evolution of this one page by a cosmic ray physicist, a great scientific mind and be a part of the team which has been working ceaselessly for many years to realize the vision have been of really great learning for me. Also I am thrilled to see the famous vision statement of Prof Vikram Sarabhai made in the year 1970 which states *"India with her mighty scientific knowledge and power house of young, should build her own huge rocket systems (satellite launch vehicles) and also build her own communication, remote sensing and meteorological spacecraft and launch from her own soil to enrich the Indian life in satellite communication, remote sensing and meteorology. The projects selected in space programme, are designed to meet the societal needs"*. Total 150 transponders are there in the geo-synchronous orbit for

providing connectivity to the nation. If I look at this vision statement today, I am overwhelmed to see the results of this statement. Today India can build any type of satellite launch vehicle, any type of spacecraft and launch them from Indian soil. India also has launched Chandrayaan and has successfully placed the satellite in Lunar Orbit and now it is preparing for manned missions to other planets. India has proved that through space science and technology, we can provide effective communication, resource mapping, disaster predication and disaster management systems.

Now, I would like to give an incident which demonstrates the characteristics of Dr. Vikram Sarabhai for traveling in an unexplored path.

Purpose of life: It was during early 1960's, the founder of Indian Space Research Programme Prof. Vikram Sarabhai with his team, had located a place technically most suited for space research after considering many alternatives. The place called Thumba in Kerala, was selected for space research as it was near the magnetic equator, ideally suited for ionospheric and electrojet research in upper atmosphere.

The major challenge for Prof Vikram Sarabhai was to get the place in a specific area. As was normal, Prof. Vikram Sarabhai approached the Kerala Government administrators first. After seeing the profile of the land and the sea coast, the view expressed was that, thousands of fishing folks lived there; the place had an ancient St Mary Magdalene Church, Bishop's

House and a school. Hence it would be very difficult to give this land and they were willing to provide land in an alternative area. Similarly the political system also opined that it would be a difficult situation due to the existence of important institutions and the concern for people who were to be relocated. However there was a suggestion to approach the only person who could advise and help. That was "Rev Father Peter Bernard Pereira" who was Bishop of the region. Prof Vikram Sarabhai approached the Bishop on a Saturday evening, I still remember. The meeting between the two turned out to be historical. Many of us witnessed the event. Rev Father exclaimed, "Oh Vikram, you are asking my children's abode, my abode and God's abode. How is it possible?" However, both had a unique quality that they could smile even in difficult situations. Rev Father Peter Bernard Pereira asked Prof. Vikram Sarabhai to come to church on Sunday morning at 9.00 AM. Prof. Vikram Sarabhai went to the church with his team again on Sunday. At that time the prayer was progressing with the recitation of Bible by Father Pereira. After the prayer was over, the Bishop invited Prof. Vikram Sarabhai to come to the dais. The Rev Father introduced Prof Vikram Sarabhai to the people, "Dear children, here is a scientist, Prof. Vikram Sarabhai. What do sciences do? All of us experience, including this church, the light from electricity. I am able to talk to you through the mike which is made possible by technology. The diagnosis and treatment to

patients by doctors comes from medical sciences. Science through technology enhances the comfort and quality of human life. What do I do, as a preacher? I pray for you, for your well being, for your peace. In short, what Vikram is doing and what I am doing are the same - both science and spirituality seek the Almighty's blessings for human prosperity in body and mind. Dear Children, Prof Vikram says, he would build within a year, near the sea-coast, alternative facilities to what we are having. Now dear children, can we give your abode, can we give my abode, can we give the God's abode for a great scientific mission?" There was a total silence, a pin drop silence. Then all of them got up and said **'Amen'** which made the whole church reverberate.

That was the church where we had our design centre, where we started rocket assembly and the Bishop's house was our scientists' working place. Later the Thumba Equatorial Rocket Launching Station (TERLS) led to the establishment of Vikram Sarabhai Space Centre (VSSC) and the space activities transformed into multiple space centers throughout the country. Now this church has become an important centre of learning, where thousands of people learn about the dynamic history of the space programme of India and the great minds of a scientist and spiritual leader. Of course, the Thumba citizens got the well equipped facilities, worshiping place and educational centre in an alternate place at the right time.

When I think of this event, I can see how enlightened spiritual and scientific leaders can converge towards giving reverence to the human life. Of course the birth of TERLS and then VSSC gave the country the capability for launch vehicles, spacecraft and space applications that have accelerated social and economic development in India to unprecedented levels.

Today, among us, Prof Vikram Sarabhai is not there, Rev Peter Bernard Pereira is not there, but those who are responsible for creation and making flowers blossom will themselves be a different kind of flower as described in the Bhagwat Gita: ***"See the flower, how generously it distributes perfume and honey. It gives to all, gives freely of its love. When its work is done, it falls away quietly. Try to be like the flower, unassuming despite all its qualities".*** What a beautiful message, to the humanity on the purpose of life reflected the spiritual component.

Managing success and failure

Three decades ago while I was working at ISRO, I had the best of education which won't come from any university. I will narrate that incident. I was given a task by Prof. Satish Dhawan the then Chairman, ISRO to develop the first satellite launch vehicle SLV-3, to put ROHINI Satellite in orbit. This was one of the largest high technology space programmes undertaken in 1973. The whole space technology community, men and women, were geared up for this task. Thousands of

scientists, engineers and technicians worked resulting in the realization of the first SLV-3 launch on 10th August 1979. SLV-3 took off in the early hours and the first stage worked beautifully. Even though all stage rockets and systems worked, the mission could not achieve its objectives, as the control system in 2nd stage malfunctioned. Instead of being placed in the orbit, the Rohini satellite went into Bay of Bengal. The mission was a failure. There was a press conference at Sriharikota, after the event. Prof. Dhawan took me to the press conference. And there he announced that he takes responsibility for not achieving the mission, even though I was the project director and the mission director. When we launched SLV-3 on 18th July 1980, successfully injecting the Rohini Satellite in to the orbit, again there was a press conference and Prof. Dhawan put me in the front to share the success story with the press. What we learn from this event is that the leader gives the credit for success to those who worked for it, and leader absorbs and owns the responsibility for the failure. This is the leadership. The scientific community in India has the fortune to work with such leaders, which resulted in many accomplishments. This success generated great happiness among all my team members. This is an important lesson for all youth who are aspiring to be tomorrow's leaders. The great lesson we learn: the leader in any field, political, administrative, scientific, education, industry, judiciary, or any other human activity, should have

the creative leadership capacity and courage to absorb the failure and give the successes to his or her team members. This I learnt and learnt all the way.

Leader has the courage to take decision

Friends, I still remember a scene during May 1996. It was 9 O'clock at night. I got a call from the then Prime Minister's House that I should meet the Prime Minister Shri PV Narasimha Rao immediately. I met him just 2 days before the announcement of General Election results. He told me "Kalam, be ready with your team for the N-Test and I am going to Tirupati. You wait for my authorization to go ahead with the test. DRDO-DAE teams must be ready for action. Of course the election result was quite different from what he anticipated. I was busy in Chandipur missile range. I got a call saying that I must meet immediately the Prime Minister designate Shri Atal Bihari Vajpayeeji with Shri Narasimha Raoji. I witnessed a unique situation. Shri Narasimha Raoji the outgoing Prime Minister - asked me to brief the details of N-programme to Shri Vajpayeeji, so that a smooth take over of such a very important programme can take place. This incident reveals the maturity and professional excellence of a patriotic statesman who believed that the nation is bigger than the political system. Of-course after taking over as Prime Minister in 1998, the first task given by Shri Vajpayeeji to me was to conduct the nuclear test at the earliest. Both these leaders had the courage to take difficult decisions boldly, even

though the consequences of such a decision have great national and international significance.

Nobility in management

Friends, the next leader I would like to discuss is Prof Brahm Prakash. When I was the Project Director of SLV3 programme, Prof. Brahm prakash – a great scientific leader with nobility, was the Director of Vikram Sarabhai Space Centre (VSSC), which integrated multiple institutions based on the advice of Prof. Kamala Chowdhuri, a management guru from IIM. Prof Brahm Prakash took hundreds of decisions for the growth of space science and technology. One important decision which I will always cherish was once a programme such as SLV3 is sanctioned the multiple laboratories of Vikram Sarabhai Space Centre and also the multiple centres of ISRO including the Space Department have to work to realize the stated goals of the programme as a team. Particularly during 1973 – 1980, there was a tremendous financial crunch and competing requirement from many small projects. He converged all scientific and technological work to be focused towards SLV3 and its satellite. When I say that Prof. Brahm Prakash is famous for the evolution of management with nobility, I would like to give a few instances. He enabled for the first time evolution of a comprehensive management plan for SLV-3 programme towards the mission of putting the Rohini satellite in orbit. After my task team

prepared the SLV3 management plan, in a period of 3 months time, he arranged nearly fifteen brainstorming meetings of the Space Scientific Committee (SSC). After discussion and approval, this management plan was signed by Prof Brahm Prakash and became the guiding spirit and working document for the whole organization. This was also the beginning of converting the national vision into mission mode programmes. During the evolution of the management plan, I could see, how multiple views emerged and how, many people were afraid of losing individuality due to the main mission, thereby throwing anger in the meetings. I could also see how Prof. Brahm Prakash radiated with smile in the midst of continuous smoke coming from the cigarette continuously being lit one after the other. The anger, fear and prejudice have all disappeared in the presence of his nobility in thinking. Today, the space programme, launch vehicle, spacecraft, scientific experiments and launch missions all are taking place in the centres of Indian Space Research Organization in a cohesive and cooperative manner. I learnt the hard way from this great mighty soul *"before starting any programme, it is essential to have the project management plan with the details of, how to steer the project during different phases of the project and foresee the possible critical paths and possible solutions and keeping time, performance and schedule as key factors."* I thank this great mighty soul who evolved the concept of management with nobility and was a very famous professor in

metallurgy at the Indian Institute of Science. He was also a pioneer for giving the country – nuclear material by establishing the Nuclear Fuel Complex (NFC).

Transparency in leadership

The actions to be taken by the government does not reach the citizens in-time because of the complexity of the decisions, length of implementation path and lack of transparency. For this I would suggest a unique model which is being practiced in Gujarat. Under this program, approximately one lakh government officials, from the Chief Minister to Taluka level staff from 15 Departments, along with about 1582 agricultural scientists, and several other stakeholders like civil society organisations, elected representatives, farmers and women spend a month during April/May in rural areas demonstrating the best of technologies to farmers. Such initiatives indicate a strong administrative will to ensure development reaches the rural sector. Krushi Mahotsav tours all 18,600 villages of the state, providing information and counselling on soil health, organic farming, technology and inputs, irrigation, etc., besides infusing a new spirit of change and mass mobilization. In addition, the Gujarat Govt has instituted an e-governance system linking the panchayat level, district HQs, and the state govt leading to transparency and speed with the decision making process.

Work with integrity and succeed with integrity

On 22nd Nov 2011 I went to Jorhat for addressing the World Tea Science Congress. Their I addressed the Administrative and police officers of Jorhat and Dibrugarh district which was organized by Mr R C Jain, DM Jorhat on 21st November evening. There I administered an oath to the participants *"I will work with integrity and succeed with integrity"*. The decibel level was very high when they said "**work with integrity**" and decibel level went down when they were repeating "**succeed with integrity**". But next day, I saw a very beautiful situation in the World Tea Science Congress in the presence of CM of Assam and the Jorhat Adminsitrative team. I saw in front of me the Chairman of Tea Board Mr MGVK Bhanu an IAS officer, giving the introductory speech to the participants of World Tea Science Congress. Mr Bhanu said, "Yesterday, Dr.Kalam administered an oath to all the IAS and IPS officers including myself". *I would to like to assure you Dr Kalam that I have worked with integrity and succeeded with integrity during the last 24 years as an IAS officer in different parts of the State and the Centre.* Now I am in the Tea Board. I was Secretary to the CM of Assam". *I would like to assure Dr. Kalam that I have tried to create a brand of moral uprightness in all my tasks".* Shri Bhanu also mentioned that he was thinking for the whole night **"what he should be remembered for"** he said he would like to be remembered for making India the largest producer of tea, and largest exporter

of tea in the world. I am very happy to share this unique experience. If every functionary of Govt of India has such a vision and mission I am confident that we will get transformed into a developed nation well before 2020.

Friends, so far I have discussed with you nine unique dimensions of creative leadership for the governance. Here, let me recall a profound saintly message to all of us by Maharishi Patanjali 2500 years ago.

"When you are inspired by some great purpose, some extraordinary project, all your thoughts break their bounds. Your mind transcends limitations, your consciousness expands in every direction, and you find yourself in a new, great and wonderful world. Dormant forces, faculties and talents come alive, and you discover yourself to be a greater person by far than you ever dreamt yourself to be."

Conclusion: Vision for the nation and governance

India has to transform into an economically developed nation by the year 2020. This means our citizens can live in a green clean environment without pollution, having prosperity without poverty, peace without fear of war and a happy place to the live for all citizens of the nation. I am sure, with nine dimensions of creative leadership quality which will be the foundation for our talented human power, that will transform India into a performing nation. Indeed UPSC is a partner in

this transformation by equipping the nation in multiple fields with the best human power with the great quality “what can I give” and “I will work with integrity and succeed with integrity”.

Once again let me greet all the participants of this “**UPSC lecture series on governance”.** My best wishes to all the members of the UPSC success in their mission of providing the best talent who will use their ideas and mind power for a better India and the better world.

May God bless you.