

## **DR. APJ ABDUL KALAM**

**Former President of India**

28 August 2008, Hilton KL Sentral

### **DYNAMICS OF SOCIETAL TRANSFORMATIONS**

I am very happy to deliver the Khazanah Global Lecture organized by Khazanah to celebrate Malaysia's 50<sup>th</sup> year of Independence in this beautiful city of Kuala Lumpur. I thank His Excellency Dato' Seri Abdullah Bin Haji Ahamad Badawi, Prime Minister of Malaysia for inviting me to deliver this prestigious Lecture. Yesterday night, as soon as I arrived Kuala Lumpur, Khazanah Global Lecture team gave me a book "Khazanah Merdeka series – 2007-2008". I started reading the book, but it went up to late hours till 2 AM in the morning. The message I got from the lectures delivered by the distinguished leaders and experts from multiple walks of life at the Khazanah Merdeka series, clearly brings out the fact that Malaysia is a dynamic society in a progressive environment. It definitely has all the potential with its diverse natural resources and its will of the people; to become an economically developed nation before the year 2020. I would like to greet the founders of Khazanah for organizing the Khazanah Merdeka Series for providing the platform for the people from different walks of life across the globe to have a discussion on Malaysia's development path with a view of mapping a path towards Malaysia Vision 2020 and beyond, to 2057. My greetings to the organizers, intellectuals, academicians, planners, scientists, technologists and other participants.

#### **India and Malaysia – a natural bond**

When I think about Malaysia, I am reminded of its visionary leaders since its independence until now, who were built the robust democratic framework with the will and dedicated commitment of the people of Malaysia. This made the Malaysia progress

towards prosperity, towards achieving equitable growth in a multi-ethnic, multi-culture and multi-lingual society and ultimately gives a unique place in the comity of developing nations. We in India admire Malaysia's remarkable success in transforming itself, within the space of a single generation, from an economy which is based on agriculture and primary commodities into a modern industrialized economy. My greetings to the people of Malaysia.

India and Malaysia share ancient bonds and a proud civilizational heritage. Our multifaceted relationship today is, underpinned by a common commitment to human welfare, democracy, rule of law and free market economy. India and Malaysia are both rooted in a vibrant parliamentary democracy with multi-cultural, multi-religious and multi-ethnic populations. Both value their diversity and should see it as a core source of strength.

Malaysia is a key partner of India within the ASEAN. It is a matter of mutual satisfaction that the ASEAN-India FTA negotiations have been closed successfully and the FTA will be signed in December 2008. The India-Malaysia Comprehensive Economic Co-operation Agreement (CECA) under negotiations will also be an important milestone. Malaysia and India have reached the 10 billion dollar mark this year in bilateral trade and business and we have the potential to double it in 3 years time. What does it mean; we need innovation in thinking and action. National visions for prosperity of the people of our two nations connect us with a unique bond. The unique bond emerges from our democratic tradition of multi-religious, multi-cultural and multi-ethnic societies.

Dear friends, in this context I would like to share with you, the experiences of a billion plus people having the largest democracy in the world with multi-cultural, multi-language and multi-religious background with a vision to become a developed nation before the year

2020. Yes, dear friends, on this occasion, I would like to share certain unique Indian experiences towards our attempt to provide inclusive economic development for equitable societal transformation, so that some of these experiences could be relevant to Malaysia and also for many of the developing nations. With this background, I would like to share my thoughts on the topic “**Dynamics of Societal Transformations**”. First let me talk to you about our vision for the billion people of India.

### **Vision for Billion**

In India, out of the billion people, 700 million people live in the rural areas in 600 thousand village equivalent to 200 thousand panchayats. We are going through a major challenge of uplifting 220 million people (22% of Indian Population). They need a decent habitat, they need work with reasonable income, they need food, they need speedy access to health care, and they need education and finally they need a good life and hope for a better future. Our GDP is growing at more than 9% per annum. Whereas, the economists suggest that to uplift the 220 million people, our economy has to grow at the rate of 10% per annum consistently, for over a decade.

### **Integrated Action for developed India**

In order to achieve the vision 2020, we have identified five areas where India has a core competence for integrated action: (1) Agriculture and food processing (2) Education and Healthcare (3) Information and Communication Technology (4) Infrastructure: Reliable and Quality Electric power, Road and Surface transport and necessary quality Infrastructure for all parts of the country including PURA for sustainable rural infrastructure development (5) Self-reliance in critical technologies. These five areas are closely inter-related and have to be progressed in a coordinated way that will lead to food, economic and national security.

Based on the road map for the developed India vision 2020, the urban India is growing in a rapid pace, our major concern is the sustainable development of rural India. Even though our GDP is growing at the expected growth rate of 8 to 9%, still the benefits of the economic growth have not percolated to the rural people and urban poor in an equitable way. In order to bring an inclusive and sustainable development to the rural citizens, during my Presidency, we evolved a system called PURA (Providing Urban Amenities in Rural Area). There has been large migration of people to the well-developed urban cities/towns leading to additional pressure on the cities and towns. This is a universal phenomenon. PURA is a system that exactly meets an evolution the well balanced habitat that can be cherished for great bio-diversity and greenery, growth of local talent with addition of technology and above all potential of large scale value-added employment generation. And, the by-product of PURA will be migration of people from rural areas to urban area is minimized and promotes reverse migration. This PURA programme has already become a national mission. PURA is programme, which incorporates science, technology, engineering, and management and brings synergy in all the three sectors of the economy and simultaneously promotes harmony with nature and culture. I would like to go into detail since it may meet some of your needs. The major mission is the development of infrastructure for bringing rural prosperity through Provision of Urban Amenities in Rural Areas (PURA) by creation of three connectivities namely physical connectivity, electronic connectivity, knowledge connectivity leading to economic connectivity to the entire PURA Cluster. The number of PURA for the whole of India is estimated to be around 7000. PURA envisages an integrated development plan with employment generation as the focus, driven by provision of the habitat, healthcare, education, skill development, physical and electronic connectivity and marketing in an integrated way for a cluster of villages with critical mass.

In India, we have five operational PURAs such as Periyar PURA, Byrraju PURA, Loni PURA, Chitrakoot PURA and Sakthi PURA. India is in the first phase to start two PURA clusters in each of the 600 districts in the country during the 11th plan period. With this strategy India will be able to transform the rural economy into cluster based economically viable village systems.

### **PURA Mission**

Based on the terrain and climatic conditions there could be four types of PURA in our country. They are plain terrain PURA, hill PURA, coastal PURA and desert PURAs. The population in the Plain terrain and Coastal region PURA may be in the region of 20,000 to 100,000 in a cluster of 20 to 30 villages, whereas in the Hill or Desert PURA may have a population of 7,500 to 15,000 people in a cluster of 30 to 50 villages or hamlets. It is also essential that the rural economy be driven by renewable energies such as solar, wind, bio-fuel and conversion of municipal waste into power. With this approach, the core competencies in the rural sector would be harnessed for sustainable development of the economy as a whole.

Each PURA cluster, apart from concentrating on reinforcing agriculture, will emphasize on agro processing, development of rural craftsmanship, dairy, silk production and fishing and fish processing in those regions having coast lines, so that the non-farm revenue for the rural sector is enhanced, based on the competitive advantage of the region. Once we reach out the 70% of people who are living in the rural areas, certainly we can cross the benchmark of developed India. How do we realize this mission of rural transformation?

### **Engines for Growth**

Emphasis in our societal transformation is on full utilization of our natural and human resources of the nation to meet the demands of the modern society. The natural

resources include management of water, minerals and materials, multiple agro-climatic condition and large bio-diversity. Also, India is attempting to fully utilize the five hundred and forty million youth by empowering them with quality education with vocational skills and value added employment in the Agriculture, Manufacturing and Service sectors.

Technology is the non-linear tool available to humanity, which can affect fundamental changes in the ground rules of economic competitiveness. Science is linked to technology through applications. Technology is linked to economy and environment through manufacture. Economy and environment are linked to technology and it promotes prosperity to the society. We have achieved a global competitive index of 48 through the application of technology. We realize that if we have to become the forerunner in competitiveness index, we should channelize our energy into the application of basic science.

Realization of transforming India into a developed nation before the year 2020 and transforming our rural economy through PURA mission is becoming a reality gradually for the reasons that our economic growth and other developmental indicators are in ascent phase.

### **Ascending economic trajectory**

In Indian history, very rarely has our nation come across a situation, all at a time, an ascending economic trajectory, continuously rising foreign exchange reserves, global recognition of our technological competence, energy of 540 million youth, umbilical connectivities of 20 million people of Indian origin in various parts of the planet, with the potential sharing capacity of knowledge and resources and interest shown by many developed countries to invest in our engineers and scientists including setting up of new Research & Development Centers. The distinction between public and the private sectors and the illusory primacy of one over the other is vanishing. India, as the largest democracy

in the world, has a reputation for its democracy and for providing leadership to one billion people with multi-cultural, multi-language and multi-religious backgrounds. Our technological competence and value systems with civilizational heritage are also highly respected. Foreign Institutional Investors are finding investing in India attractive. Our industrialists are also investing abroad and opening new business ventures. Certainly, increasing rate of inflation is a serious concern for India now due to various economic factors, however we are determined to tackle it in a multiple ways with the will of the people.

### **Distinctive Profile**

With all these dynamic ambience, now, let me give my visualization of distinctive profile of India by the year 2020. Certainly this distinctive profile of India may inspire many developing nations as well as developed nations aspire to achieve:

1. A Nation where the rural and urban divide has reduced to a thin line.
2. A Nation where there is an equitable distribution and adequate access to energy and quality water.
3. A Nation where agriculture, industry and service sector work together in symphony.
4. A Nation where education with value system is not denied to any meritorious candidates because of societal or economic discrimination.
5. A Nation, which is the best destination for the most talented scholars, scientists, and investors.
6. A Nation where the best of health care is available to all.
7. A Nation where the governance is responsive and transparent.
8. A Nation that is prosperous, healthy, secure, peaceful and happy and continues with a sustainable growth path.

9. A Nation that is one of the best places to live in and is proud of its leadership.

This 9 point distinctive profile, what I have suggested may be true for any aspiring democratic nation. I have been addressing this visualization in different parts of my country. I have seen many motivated youth and experienced have determined to give their contribution in many sectors of development, in addition to their professions. Having talked about the societal transformation aspects with respect to our nation let me now come to some global perspectives of development which focuses economic growth and prosperity

#### **A brief look at current global perspectives of development**

While every nation is making efforts to accelerate development process, particularly the gaps between the haves and the have nots, such welfare states are still eluding both nationally and globally. I personally believe that core strengths of nations have to be brought together to make the results of development to reach common citizens faster. The software industry has demonstrated how specialists across oceans and continents can work for common visions. Many universities have strategic alliances with a number of universities in various parts of the world. Technology as a non linear tool has enhanced human potential in ways no one could have imagined in the previous centuries. Globalization has its impact both on the developing and developed countries.

#### **Global Sourcing**

There are several challenges that are faced by the humanity as a whole, whether they are developed or developing. Clean environment, abundant energy, abundant supply of water, empowerment of people with education and health care, availability of globally employable human resources, preservation of human culture and value system are all

global challenges as well as opportunities rather than just national issues. They require thinking globally and acting globally and locally.

Global sourcing has acquired prominence in the last few decades driven by market exploration elsewhere with potential cost advantages, skill utilization and business strategies. The communication revolution has enabled a rapid growth of global sourcing. Innovation in working together can result in global sourcing as a source of benefit to the entire human kind.

Global sourcing should be seen as an activity to create knowledge workers and leaders who are beyond the realm of narrow borders of geography, disciplines and products. Global sourcing should be seen as a methodology to combine the core competence of organizations and nations to design develop products, processes and human resources for solving the major problems facing the planet earth. It should be realized that such working together would not only enable world-class products of optimum performance, cost and time, but also provide a sense of security to the world. Hence, Indian industry and Malaysian industry have to transform themselves from the export oriented domestic enterprises into a Globally Integrated Enterprise using technology, innovation and its core competence in a borderless world. We can mutually think and put into action from the industrial society to become the knowledge system powerhouse.

### **Globally Integrated Enterprise (GIE)**

How to leapfrog into a Globally Integrated Enterprise from the present form is the challenge today before all of us. To achieve a non-linear growth, it is imperative that the enterprises should be globally competitive and should have global presence with competitive products, systems and solutions. When we focus on the transformation towards GIE, we should understand its characteristics such as the following:

- a. Having the same brand worldwide
- b. Having the best leaders from the global talent pool
- c. Adaptation of uniform quality standards and processes worldwide
- d. Global R&D with its research centers worldwide based on the core competence of research and its available potential for the growth of research.
- e. Having a Global mindset

Hence it is essential that the Malaysian and Indian enterprises should adopt the global mindset to spread their wings to further their reach by and should be the key agents of change in dispersing technology widely adopting latest technologies enriching all the sectors of the economy thereby promoting economic progress in the developing world.

In this connection, I would like to present two international cooperation experiences of Global Sourcing, which India was a partner

#### **Pan African e-Network**

During the year 2003-04, I visited African countries such as Sudan, Tanzania, Zanzibar and South Africa. I addressed the Pan African Parliament on 16 Sept 2004, at Johannesburg, South Africa which was attended by Heads of 53 member countries of the African Union. Based on my study of the communication, healthcare and education needs of the African countries, I proposed the concept of Pan African e-Network for providing seamless and integrated satellite, fiber optics and wireless network connecting 53 African countries.

The Pan-African e-Network project is estimated to cost around US \$ 100 million. As part of the project, 12 universities (7 from India and 5 from Africa), 17 Super Specialty Hospitals (12 from India and 5 from Africa), 53 tele-medicine centers and 53 tele-education centres in Africa will be connected. The project on tele-education and tele-

medicine in Ethiopia has already been commissioned. One of our Indian Universities has taken up the MBA Course for 34 Ethiopian students of Addis Ababa and Harmaya Universities. As regards, tele-medicine, the specialists from CARE Hospital, Hyderabad are providing one-hour live tele-consultation to doctors in Black Lion Hospital, Addis Ababa in Cardiology and Radiology since November 2006. The Pan African e-Network will primarily provide Tele-Education, Tele-Medicine, Internet, videoconferencing and VOIP services. It also supports e-Governance, e-Commerce, infotainment, resource mapping and meteorological services. Each remote location will be able to access the Internet through the network by linking the HUB to Internet backbone. Using this network the Heads of the State in all the 53 countries will be connected for instant communication. The network is designed to have 169 terminals and a central hub to deliver tele-education and tele-medicine services. The network will utilize state-of-the-art technology and can be integrated with the latest broadband technologies like Wi-Fi and Wi-Max. The network is scalable to support different applications catering to increased number of users. This e-network programme is an Indian initiative, has established great fellowship and cooperation between India and the African continent. Friends, I am sharing this information to you since a typical co-operation is possible in IT and knowledge system area with multiple nations. Next experience that I would like to discuss is a joint venture between two nations.

### **High-Tech Joint Venture**

One of the significant technological breakthroughs of 2005 is the design, development and production of Supersonic Cruise Missile - BRAHMOS by an Indo-Russian joint venture. BrahMos is the first supersonic operational cruise missile in the world which can be launched from multiple platforms such as ships, submarines, road mobile and silo, and with modifications from aircraft. This is indeed the result of technological co-operation leading to operational system. In successful design, development, production and

marketing of BRAHMOS missile, an innovative way of technology co-operation has emerged between India and Russia for multi-billion dollar business. The message I would like to convey out of this programme is: It is possible for India with core competence in multiple fields to work with many countries in joint venture mode bringing together multiple core competence of partnering nations leading to successful enterprises. I would like to propose a programme based on these two examples.

### **World Knowledge Platform**

During my recent visit to various countries, I have proposed to establish the “World Knowledge Platform”, which will integrate the core competencies of the partner countries to find solutions to the global challenges which facing the humanity jointly. This platform will also enable joint design, development, cost effective production and marketing of the knowledge products and systems in various domains based on the core competence of partner nations to international market leading to prosperity and development. Initially, the mission of World Knowledge Platform is to connect and network the R&D Institutions, Universities and Industries from the partner nations on selected R&D Missions.

### **Missions of World Knowledge Platform**

The convergence of Bio, Nano and IT is expected to touch every area of concern to the humanity. The “World Knowledge Platform” will take up the missions, in some of the areas discussed further, which are of utmost urgency to all of us to make our world a safe, sustainable, peaceful and prosperous place to live:

1. **Energy Independence** : the transformation of global energy dependence on fossil fuel like oil, gas, coal has to shift towards renewable energy sources like hydro-power, solar power and nuclear power. This has to happen to protect the planet earth from environmental pollution and to meet the situation of non availability of

fossil fuel in few decades and above all to realize economic freedom from high and fluctuating cost of crude barrel. In my country, I have called it as Energy Independence.

2. **Water:** Desalination of sea water using solar energy, channelization, networking of rivers, cost effective safe drinking water.
3. **Healthcare:** Diagnosis, drug delivery system, development and production of vaccines for HIV/TB, malaria and cardiac diseases. The permanent solution has to be found by world wide research through life style change for preventing occurrence and curing diabetic diseases.
4. **Agriculture and Food processing:** Increased production of food grain in an environment of reduced land, reduced water and reduced human-power; preservation of food; food processing; cost effective storage and distribution. High production of edible oil and also leading to multiple application.
5. **Knowledge products:** Hardware, Software and Networking and Storage Products including handheld micro and nano electronic devices. Above all the IT system must graduate to knowledge system powerhouse.
6. **Transportation systems:** Fossil fuel free biofuel based transportation systems using biofuel like ethanol and bio-diesel. Also it is essential to develop transportation system to suit biofuel systems.
7. **Habitat:** Energy efficient, water efficient, pollution free habitat.
8. **Disaster Prediction and Management:** Earthquake forecasting, assessing in advance the quantum of rain for particular cloud condition and predicting tsunami like disaster and its management
9. **Capacity Building:** Quality human resource development for all the above areas including the development of personnel with world class skills.

Number of academic, research and production institutions within India and Malaysia can form a consortium for the vertical missions of the World Knowledge Platform in the above-mentioned areas with the public, private partnership. In short, the Knowledge Platform would be launch pad for many innovations that are waiting to be unearthed only by the combined power of multiple institutions from multiple countries.

### **Conclusion**

Dear friends, economic prosperity alone cannot lead to happy and peaceful society. The society has got to be build around a noble value system based on its civilizational heritage with unity of mind in diversity as focus in a democratic environment. With this in view, in India we have launched a mission to bring unity minds among the multi-cultural, multi-religious and multi-lingual citizens through a foundation called FUREC (Foundation for Unity of Religion and Enlightened Citizenship) in partnership with fifteen prominent religious leaders. As a part of this declaration, we are undertaking four projects and activities, namely (1) Celebration of inter-religious festivals; (2) Multi-religious projects; (3) Education in and with the ambience of unity of religions; and (4) Inter-faith dialogue. This institution is progressing well and promoting unity of minds particularly among the youth of the nation. Hence, we can see that the economic prosperity and the promotion of value system derived from civilizational heritage will lead to a happy, prosperous and enlightened society in the nation. When I said value system, I would like to recall an incident in my young life when I was a 10 year old boy.

Imam Ghazali was a saint teacher who lived in the 12<sup>th</sup> Century. My father narrated me a scene when Imam Ghazali has been tested by Shaitan, the transgressed Angel. One day Imam Ghazali was unfolding his prayer mat for Maharif Namaz. At that time, the Shaitan appears in front of him and said, “Respected Imam Sahib, I am just now coming from heaven where there was a discussion about great human beings and you have been

judged as the best human being living on Earth. As a recognition of your great stature you have been exempted from the trouble of performing Namaz in future. Imam Ghazali was restless as the Namaz time was approaching. So he looked at Shaitan and said, “Shaitan Sahib, first of all performing Namaz is not a trouble at all and when even Prophet Mohammed (peace be upon him), was not exempted from performing Namaz five times a day, how can a poor Imam like me be exempted?. Thank you. He went on to perform the Namaz. When he completed the Namaz, Imam Ghazali still saw Shaitan was standing. Imam Sahib asked him what he was waiting for. Shaitan said, “O Imam you have excelled even the most favoured Prophet Adam, who could not win over my deception and I made him to eat the forbidden fruit. Realizing that Shaitan was flattering, Imam Sahib prayed to Allah, Oh almighty, help me and save me from the deception of the flattery making a disappointed Shaitan finally disappear. His mission failed. But one of the great human being succeeded. Friends, what is the message? The message is, we should not be defeated by the problem, we should defeat the problem with the grace of the Almighty.

My best wishes to all the participants success in their mission of working towards a peaceful, prosperous, happy and safe nation and the world.

May God Bless you.