Dr. Prahlada

Formerly Distinguished Scientist and Chief Controller, Research & Development (Aero & Services Interaction), DRDO, Ministry of Defence, New Delhi And Vice Chancellor , Defence Institute of Advance Technology , Pune.

Dr. PRAHLADA, born on 05 February 1947 in Bangalore, is a Mechanical Engineering Graduate from University College of Engineering, Bangalore University (1969). Subsequently he got his Masters Degree in Aeronautical Engineering Department from IISc., Bangalore, with specialization in Rockets and Missile Systems and Ph.D. in Mechanical Engineering from Jawaharlal Nehru Technological University, Hyderabad. He was holding the position of Vice Chancellor of Defence Institute of Advance Technology, (Deemed University), Pune from 2011 to 2014.

Since 1971 he has served in various ISRO and DRDO Establishments covering VSSC Trivandrum, ADE Bangalore and DRDL Hyderabad. His areas of interest cover aerodynamics, flight controls, guidance, propulsion, system design and system engineering.

I. In his position as Director of the biggest DRDO laboratory, DRDL, during 1997-2005, he has provided guidance and direction to 500 scientists and 1500 staff members of the laboratory and taken the laboratory to high levels of motivation, performance, achievement and recognition internationally.

II. He was holding the position of Director DRDL and Chairman IGMDP (Integrated Guided Missile Development Program) simultaneously during 1997-2005. In the process of achieving various milestones as Chairman IGMDP and Director DRDL, he has pioneered, championed and perfected many world class aerospace technologies and products in the following areas: -

- **Composites for aerospace applications**
- **Rocket propulsion**
- **Onboard avionics**
- **Missile guidance for surface to air missiles**
- **Automatic launcher systems**
- **Missile fire control systems for Army and Navy**
- **C^4I^2SR systems**
- **Hypersonic flight vehicle with scramjet engine**
- **Radar system integration**
- **Flight Test Instrumentation**
- **RF seeker technology**
- **Phased Army Radar Technology**
- **Warheads for missile systems.**
- **Quality assurance of Aerospace products.**

These have been used and being used extensively in all missile projects in the country.

III. He has also configured and established many world class high-tech facilities and infrastructure. Some of them are listed below:

- **Compact Antenna Test Range**
- **Structural Dynamic Test Centre**
- **Supersonic Ramjet Engine Test facility**
- **Subsonic Ramjet Engine Test facility**
- **6 Component Rocket Motor Test facility**
- **Computer Integrated Tomography**
- **CFD (Computational Fluid Dynamics) Centre**
- **Shock Tube facility**
- **High Temperature Material Characterization Facility**
- **High Temperature Structural Testing**
- **Missile System Simulation Centre**
- **C^4I validation Centre.**

IV. As Project Director for the mobile surface to air area defence missile system, AKASH, he has provided the technological and managerial leadership for about 1000 scientists/engineers working at various development centres over 20 years in the country. He functioned as Chief Designer for the entire weapon system ensuring the radars, fire control systems, the missile, the launcher and C^4I work together in an integrated way as a system of systems. This system of systems has been successfully developed, all functionalities demonstrated against flying targets and production line established. For the first time in Indian History, an indigenously developed multi target handling Mobile Surface to Air Missile System has been ordered by our Armed Forces. The weapon system has some of the frontline technologies of world class for e.g. integral rocket ramjet propulsion for the missiles, electronic steering phased array radar for guiding multiple missiles towards multiple targets simultaneously, coded command guidance unit and metric RPF (Radio Proximity Fuze) onboard and networked C^4I system. Indian Air Force has placed order for 8 Squadrons of Akash system worth more than Rs.10000 crores based on 9 out of 9 successively successful guided interception of flying targets by missiles. Further orders from Indian Army worth Rs. 12500 crores has been cleared by DAC. Both the Fire Control Radar and Surveillance Radar have been independently ordered by the three Services. He conceived, shaped, directed and managed India's first Surface to Air Missile System, Akash. Because of his commitment and competence, the missile system including 3D Central Acquisition Radar and multifunction fire control radar were realized and productionised.

Total value of orders by Air Force, Army, Navy and SFC for the missile system and the two radars based on clearances by DAC and impending approvals is expected to reach Rs.25000 Cr. Industry has started serial production. This is the single biggest defence order for a defence system in India, which was developed under Project Cost of Rs.600 crores.

V. He was also leading the Integrated Guided Missile Development Program (IGMDP) as the Chairman of the Program Board. He has demonstrated extraordinary managerial and leadership capabilities in running the Programme spanning 20 DRDO laboratories, 15 academic institutions and 150 industries. The Program has met all objectives with clearing induction of all 4-missile systems (Prithvi, Agni, Akash and Nag).

VI. As Director DRDL he has initiated many new projects like Astra air to air missile system, Long Range Surface to air missile system for Naval application, Joint Venture Project Brahmos Supersonic cruise missile system and hypersonic technology demonstrator.

VII. He was Programme Director for the Joint Venture Project (Indo-Russia) BrahMos and contributed to Project formulation, management and conduct of initial flight trials.

VIII. He was Program Director for the highly classified project – submarine launched long range ballistic missile system for Indian navy.

IX. During November 2005 to Aug 2011, as Chief Controller Research & Development at DRDO Hqrs and Distinguished Scientist, he was heading Services Interactions, International Cooperation, Foreign Offices (UK, USA and Russia), Extramural Research, Intellectual Property Rights Technology Acquisition and Business Development. This being a new cluster of activities at DRDO Hqrs, he has brought in new culture, energy and style of work. He has established close technical and personal links with the 3 Services, Finance, MoD and industry. He has bridged the gap between DRDO and Users in a big way and engineered acceptance and induction of many systems.

X. He was also Chief controller of Aeronautical cluster of Labs and provided leadership and guidance for various manned and unmanned aeronautical systems being developed by DRDO.

XI. He has evolved a roadmap of defence systems to be developed over the next 2 plan periods and technologies to be taken up for development over the next decade by DRDO after elaborate joint consultations with all DRDO laboratories, the Three Services and CIDS.

XII. He has contributed to finetuning of Defence Procurement Procedures 2006 and 2008 and represented DRDO's interests at all levels of interactions and decisions.

XIII. He has taken international cooperation activities of DRDO to new heights and interacted with 20 major countries leading to joint ventures, cooperative R&D, technology development and system realization.

XIV. He has taken new initiatives in the form of <u>DIRECTED RESEARCH</u> to conduct extramural research at various IITs, IISc, universities and other S&T institutions after brainstorming with similar bodies of all S&T departments in the country.

XV. He has spearheaded commercialization of DRDO technologies into civilian products through a customized programme with FICCI.

XVI. He is recipient off following awards :

- **DRDO Scientist of the Year.**
- **He is recipient of HMA – Member of the Year.**
- **He is recipient of IISc Distinguished Alumnus Award.**
- **He is recipient of National Aeronautical Prize.**
- **He is recipient of "Sivananda Eminent Citizen Award 2008" by Sanathana Dharma Charitable Trust, Hyderabad**
- **He is winner of the DRDO Award for Path Breaking Research/ Outstanding Technology Development 2008**

- **He is recipient of Eminent Engineers Award for the year 2009 by Institution of Engineers, Delhi State Centre.**
- **He is recipient of Life Time Achievement Award- 2010 by Hyderabad Management Association.**

XVII. He was awarded honorary doctorate from Sri Venkateswara University in 2006 and by Jawaharlal Nehru Technological University Anantapur (JNTUA) (A.P.) in 2012.

XVIII. He is currently holding position of Adjunct Professor in Department of Aerospace and department of Management Studies at IISc, Bangalore.

XIX. His other areas of interest cover R&D Management, Project Management, Technology Management and Knowledge Management.

XX. <u>India – My Dream Lecture Series</u>

As President, Hyderabad Management Association during the year 2003-04, he took new initiatives to raise the level of activities of HMA to national level. In addition to intensifying the training and management interactions with professionals, he conducted an year long series of "Invited Lectures and Interactions" with the top eminent persons of India under the series titled INDIA-MY DREAM. The grand finale was held at Hyderabad where Chief Minister of Andhra Pradesh, Sh. Nara Chandrababu Naidu presided over the function with Dr. APJ Abdul Kalam, former President of India as the Chief Guest. The book having compilation of all the ten lectures, including interactions with the public was also released during the function.

XXI As Vice Chancellor, Defence Institute of Advanced Technology (DIAT) DU, 2011 – 14, he brought DIAT closer to DRDO, Ministry of Defence and Defence Industry in the country. He was responsible for starting Bioscience & Technology Department, M. Tech. Programs in Technology Management, Biosciences and Defence Electronics Systems.

He took initiative to offer customized training and orientation programs to DRDO, BEL, HAL and Ordnance Factories. All the Science and Engineering laboratories and facilities got upgraded with modern equipment and software tools.

The University got upgraded to Category 'A' University by Ministry of HRD, Government of India. Defence Minister, Shri. A. K. Antony and Honorable President of India, Shri. Pranab Mukherjee graced the 7th Convocation.

XXII. <u>Disaster Management</u>

He has been contributing towards various activities in the area of disaster management since 1999. His contributions cover the following:-

(i) Giving invited talks in conferences on disaster management.
(ii) Spreading awareness among public in public addresses.

(iii) **Publishing articles in journals.**
(iv) **Interacting technically with NDMA.**
(v) **Supporting State and Central government agencies in disaster planning and mitigation.**
(vi) **Guiding and mentoring young Scientists and students for carrying out R&D in disaster management.**

He was the Chairman of Steering Committee for organizing the First World Congress on Disaster Management (WCDM) – 2008 in Hyderabad and is again the Chairman for the 2nd World Congress on Disaster Management scheduled in 2010. About 30 countries and 10 U.N. Organizations participated in the first World Congress which was inaugurated by Dr. A.P.J. Abdul Kalam, the former President of India with participation of Gen. N.C. Vij, Vice Chairman of NDMA.

XXIII. He is Member / Fellow of following Professional Organizations:-

- **Fellow, Andhra Pradesh Academy of Sciences**
- **Fellow, Indian National Academy of Engineering**
- **Fellow, Institution of Engineers**
- **Fellow, Society for Shock Wave Research of India**
- **Fellow, Astronautical Society of India**
- **Fellow, Systems Society of India**
- **Fellow, Institution of Electronics and Telecommunication Engineers**
- **Fellow, Aeronautical Society of India**
- **Donor Member, IISc Alumni Association**
- **Managing Trustee, Trust for Advancement of Aerodynamics of India**
- **Member, CII National Committee on Higher Education to work towards bridging the gap between Industry and Academia in Higher Education.**
- **Member MHRD Task Force on Institution Mechanism for collaboration between Industry and Academia.**
- **Member, Sector Innovation Council for the Ministry of HRD.**
- **Member, FICCI National Committee on Science & Technology and Innovation.**

XXIV. Past President/Chairman of following organizations:

- **Hyderabad Management Association**
- **ISAMPE, Hyderabad Chapter**
- **ISNT, Hyderabad Chapter**
- **INAE, Hyderabad Chapter**
- **President, Society for Aerospace Quality & Reliability**
