



Organised by
Department of Science, Technology & Waste Management,
Government of Goa.

The Government of Goa vide Department of Science, Technology & Waste Management organized an event to honor the Hon'ble Ex-Chief Minister of the State of Goa, late. Shri. Manohar Parrikar. The event was held on 13th of December 2020, at the National Institute of Oceanography at Dona Paula.

Background:

The State of Goa, hosted a three-day successful event on Nobel Prize series in the year 2018 in collaboration with the Nobel Foundation, Sweden, Sweden Embassy in India, and Department of Bio-technology (DBT), Govt. of India. Four Nobel Laureates namely Dr. Christianne Nusslein-Volhard, Dr. Searge Haroche, Dr. Tomas Lindahl and Dr. Richard J Roberts participated in the event and interacted through lectures, panel and round table discussion with wide range of stakeholders including students, researches, academicians, industry and general public.

As part of this, a one-month exhibition on Nobel Prize series was also organized by Nobel Media Sweden AB along with DBT and Department of Science and Technology (DST), Govt. of Goa at the Kala Academy, Panaji. Information panels and working modules on scientific inventions by Nobel Laureates as well the life and scientific contribution of Indian scientists were displayed. The Department of Education, Directorate of Higher Education, Goa University and various research and academic institution helped facilitate visitors to go through the exhibits. Daily special lectures on life of Indian Scientists was also organized as part of Exhibition. Around thirty thousand participants were benefitted.

The event was inaugurated by the then Chief Minister of Goa Late Shri. Manohar Parrikar, a scientific visionary who himself was a graduate from the Indian Institute of Technology (IIT), Mumbai. In his inaugural address, he opined that the Nobel Prize series is an excellent opportunity to meet and interact with

scientific luminaries across the globe and learn from them and their research inventions. He announced in his inaugural speech, that Nobel series would be an annual feature in Goa and his government would support organize the same.

Honoring his commitment, and taking his scientific vision forward, the Government of Goa, decided to organize a two-day scientific event to commemorate his birth anniversary on the 13th of December, 2019 under the banner ‘Manohar Parrikar Vidnyan Mahotsav’. The event was managed through the Department of Science and Technology.

Lecture Seminars and interactive sessions were held at four different location across the State on the 13th of December as part of enlightening school children across the State on Various Scientific topics:

- 1) Ravindra Bhavan, Margao
- 2) Govt. College of Arts & Commerce, Pernem
- 3) Ravindra Bhavan, Sanquelim
- 4) Govt. College of Arts, Science and Commerce, Quepem

The event was proudly supported by the following organisations:

- 1) Directorate of Higher Education
- 2) Directorate of Education
- 3) Directorate of Technical Education
- 4) Department of Information and Publicity
- 5) Department of Protocol
- 6) Goa State Pollution Control Board
- 7) Goa State Innovation Council
- 8) Goa Waste Management Corporation
- 9) Goa Tourism Development Corporation
- 10) Centre for Environment Education

11) Goa University

12) VIBHA

The following organizations were also appointed as the Technical advisors for the event:

- 1) CSIR-National Institute of Oceanography
- 2) Indian Institute of Technology, Goa
- 3) Birla Institute of Technology & Science, Pilani-Goa Campus
- 4) National Institute of Technology, Goa

Various Corporate Houses came forward to partly support the event as was done in the year 2018. The event Associate Sponsors were as below:

- 1) SFC Environmental Technologies – Rs. 5 Lakhs
- 2) Deccan Fine Chemicals India Pvt. Ltd. – Rs. 5 Lakhs
- 3) Dempo Industries Ltd. – Rs. 3 Lakhs
- 4) V. M. Salgaocar & Bro. Pvt. Ltd. – Rs. 3 Lakhs
- 5) Cipla Limited – Rs. 1 Lakh

Similarly, The Government of Goa vide Department of Science, Technology & Waste Management organized an event to honor the Hon'ble Ex-Chief Minister of the State of Goa, late. Shri. Manohar Parrikar in the year 2020. The event was held on 13th of December 2020, at the National Institute of Oceanography at Dona Paula.

Due to the On-going COVID-19 Pandemic the Event was conducted virtually in order to follow safety protocols in place during the Event. The event was streamed live on Youtube and Facebook Live for the viewership of audience all across the State.

Event Details:

The event was set into motion with the inaugural session on 13th December 2020 at 10:00 am in the Auditorium of the National Institute of Oceanography, Dona Paula. The Esteemed guests which included the Hon'ble Chief Minister of the State, Shri. Pramod Sawant, the Hon'ble Minister for Science, Technology and Waste Management, Shri. Michael Lobo and the Hon'ble Chief Secretary of the State, Shri. Parimal Rai arrived at the Venue and were warmly welcomed into the auditorium.

The esteemed Guests were cordially escorted to their designated seats in the Auditorium. Upon taking their respective places the event was set rolling with Lighting of the Lamp Ceremony to mark the auspicious beginning of the event in memory of the Hon'ble Ex-CM towards a bright and intelligent future of the State. The dignitaries such as Hon'ble Minister for Science, Technology and Waste Management, Hon'ble Chief Secretary, Secretary-Science Technology and Environment & Director – NIO to name a few joined the Hon'ble Chief Minister in lighting of the Lamp.





Lighting of the Lamp at the auspicious hands of Dr. Pramod Sawant, Hon'ble Chief Minister of Goa.

The Dignitaries then assumed their respective places on the Dais and Shri. Jose Maneul Noronha, Chairman Goa Public Service Commission and Goa State Innovation Council and also the Chairman of the executive committee extended his warm welcome to the Dignitaries on the Dais and followed the welcoming of dignitaries with a brief address note about the Manohar Parrikar Vidnyan Mahotsav. He spoke about the Charismatic and visionary personality of late Shri. Manohar Parrikar, Hon'ble Ex-Chief Minister. He also elaborated on how Manohar Parrikar Vidnyan Mahotsav was envisaged and that it was being organized in honor of Late Shri. Manohar Parrikar. He then requested to play a commemorative video on Late Shri. Manohar Parrikar to give a jist of his Achievements. He also stated how this event will be a regular fixture and expressed his gratitude to the Technical Advisors of this event in helping to identify Speakers, Technocrats who would participate in the event and deliver meaningful, scientific and quality talks to the young minds of the State. He also expressed his gratitude to all speakers and a special thanx to Sunil Singh (Director- NIO) and also Thanked the Govt. of Goa for promoting and organizing such scientific events and ended his welcome note by urging the Young minds of the State to take advantage of such opportunities.

This was then followed by the Launch of Biographical book on late Shri. Manohar Parrikar written by Shri. Nitin Gokhale bearing the name Manohar Parrikar: Brilliant Mind, Simple Life. He then briefed the audience about the book and shared a few candid memories he has with late Shri. Manohar Parrikar and also spoke about his hard work and dedication towards the State and also briefed that his book elaborates on how late Shri. Manohar Parrikar used his natural brilliance to serve the country, first as a committed grass-roots volunteer, then as four-time popular Chief Minister of Goa and finally contributed to strengthening India's national security as Defence Minister between November 2014 and March 2017 and also elaborates on the three major achievements late Shri. Manohar

Parrikar in his Stint as the Defence Minister of the Country. He ended his address note expressing his gratitude to the Govt. of Goa for providing this auspicious occasion as a platform for the Book launch.



Launch of Biographical book on late Shri. Manohar Parrikar written by Shri. Nitin Gokhale bearing the name Manohar Parrikar: Brilliant Mind, Simple Life

Dr. K. VijayRaghavan, Principal Scientific Adviser to the Government of India and Dr. Shekhar C. Mande, Director-General of the Council of Scientific and Industrial Research (CSIR) and Secretary of the Department of Scientific and Research (DSIR), then joined the gathering virtually.

Dr. Shekhar C. Mande extended his warm welcome to everyone present at the Dais and proceeded with his address note. He spoke about the very Scientific and Charismatic personality of Late Shri. Manohar Parrikar, and how we all are proud of his achievements. He also proceeded to say that such scientific events are very significant in molding the young minds of the State and urged everyone to make the most of this opportunity and expressed gratitude to the Govt. of Goa for organizing this event in honor of late Shri. Manohar Parrikar. This ended his address note.



Dr. Shekhar C. Mande, addressing the audience



Dr. K. VijayRaghavan, Principal Scientific Adviser to the Government of India addressing the audience

Dr. K. VijayRaghavan, Principal Scientific Adviser to the Government of India then began his virtual address note by welcoming the esteemed guests on the Dais and followed by stating the importance of such Scientific events and also spoke with great approbation towards the Manohar Parrikar Vidnyan Mahotsav. He also briefly recapped the events of the Noble Prize Series and then also spoke with great endearment about the Manohar Parrikar Vidnyan Mahotsav 2019 edition. He then briefed the audience on the Nobel Museum also the efforts of late Shri.

Manohar Parrikar in the Noble Peace Prize event and how he made an effort to interact with all speaker's scientific minds, young students, etc. HE then expressed that Goa although being a very small State geographically, is a scientifically very important as in Goa we have NIO, IIT, NIT, etc. Goa with its welcoming nature can be very important in conveying this Scientific knowledge to the youth of this Country he said as he concluded his address.



Hon'ble Minister for Science, Technology and Waste Management, Shri. Michael Lobo
delivering his Inaugural address

Hon'ble Minister for Science, Technology and Waste Management, Shri. Michael Lobo was then welcomed to the Podium to deliver his address note to

the audience. He welcomed all the guests and organizing team of the event. He began by saying how the Department of Science Technology and Waste Management is organizing this event which is a befitting tribute to late Shri. Manohar Parrikar and also recalled the Manohar Parrikar Vidnyan Mahotsav 2019 edition and stated that he is extremely proud to have been part of this event. He then also briefed the audience on the various schemes and initiatives taken by the Department of Science Technology and Waste Management to encourage young minds of the Country also spoke about Goa State Innovation Council helping young innovators to gain momentum. He then expressed his gratitude to both the guest speakers for taking time and effort to deliver lectures to young minds despite the on-going COVID-19 Pandemic. He ended his address note by recalling the efforts of Mr. Parrikar to overcome major hurdles set-up the Integrated Solid Waste Management Facility (ISWMF) in Saligao, thus assisting in keeping the North Goa District clean and hopes that a similar ISWMF comes up soon in the South Goa District as it was a part of late Shri. Manohar Parrikar's Vision.

The Hon'ble Chief Minister of Goa, Dr. Pramod Sawant was then called upon the Podium to address the Audience. Dr. Sawant welcomed all guests and Dignitaries on the Dais and began by stating the significance of 13th December as a visionary was born. He further stated that Mr. Parrikar was a great man and wanted to make Goa the most progressive State of the Country and wanted it to be known as the land of Visionaries. He further expressed grief of losing Mr. Parrikar at an early age but said that his vision and legacy shall guide us through the State's Development. He then stated some of the various initiatives taken by Mr. Parrikar such as setting up of the Integrated Solid Waste Management Facility at Saligao to tackle the major waste problem, building better road network and also envisaging and executing the Atal Setu boosting better traffic movement in the State with large number of Tourists, providing various grants to teachers,

researchers and students alike to encourage exchange of scientific ideas and research being undertaken. On a closing note, he mentioned in that late Shri. Manohar Parrikar will always remain in the minds of the Goans.



The Hon'ble Chief Minister of Goa, Dr. Pramod Sawant delivering his inaugural address.



Shri. Jose Maneul Noronha presenting the Dignitaries at the Dais with a Memento.

The conclusion of the Inaugural event was marked by Shri. Jose Maneul Noronha presenting the Dignitaries at the Dais with a Memento.

The technical session commenced with the start of live lectures. The moderators assumed their respective places on the Dais and Dr. G. Raghurama, Director – BITS Pilani, Goa, welcomed the 1st Speaker Dr. Randeep Guleria.



Prof. Dr. Randeep Guleria, Director – All India Institute of Medical Sciences, New Delhi, is Professor and Head, Department of Pulmonary Medicine

and Sleep Disorders at All India Institute of Medical Sciences, New Delhi, where he has been working since the last 23 years. Dr. Guleria is the first Indian to get a Doctorate of Medicine (DM) in Pulmonary and Critical Care Medicine. He joined AIIMS in 1992 as Assistant Professor in the Department of Medicine and in the subsequent years he has been promoted to the post of Associate Professor, Additional Professor and Professor. He has done pioneering work in respiratory medicine. The Department of Pulmonary Medicine & Sleep Disorders has been created under his dynamic leadership in 2011 and has been ranked as the best department in Pulmonary Medicine in 2014, 2015 and 2016 by the NIELSEN survey published in WEEK. He was instrumental in starting DM course in the discipline of Pulmonary, Critical Care & Sleep Medicine was started at AIIMS in 2011.

Dr. Guleria was conferred with the prestigious “Padma Shri” Award in 2015 by the President of India and recently with “Dr. B.C. Roy Award in the category Eminent Medical Person” for the year 2014. In addition to these, he has several awards and honours to his credit, notably, Himachal Gaurav Award in 2011, Zee

TV and LIC “Swasth Bharat Award” in 2010, “Lung India Award” for the best original article in Lung India by the Indian Chest Society in 2014, Dr. Reddy’s Chest Oration by the National College of Chest Physicians (India) 2013, Association of Physicians EMerck award for research in Chest Diseases in 2008, Raj Nanda and Royal College of Physicians Joint fellowship in Pulmonary Diseases in 2007-08, Dr. Mahinder Narain Oration in 2005, Indian Chest Society, Dr CV Ramakrishnan Oration award for his outstanding contribution in Respiratory Diseases in 2011 by the Academy of Respiratory Medicine, Dr P S Shankar Oration in 2011, Humanity (India) Oration at 6th UKAPICON 2015 by the Association of Physicians of India and the CRS Oration award 2015 at TAPPCON 2015 by the Coimbatore Respiratory Society.

He has been invited as an expert in several National and International forums including the Center for Disease control (CDC), USA to their influenza division study tour, Advisor to WHO, Scientific Advisory Group of Experts (SAGE), Geneva, on “Influenza Vaccination and Immunization” from 2010 to 2013. He has been a consultant to International Atomic Energy Agency (IAEA), Vienna, on Radiation Protection in Medicine since 2007. He has been invited by the European Commission and the IAEA to their International Workshop in Brussels in 2009. He has been invited by the Government of Germany, WHO and IAEA to attend their International Conference on Radiation Protection in Medicine: “Setting the stage for the next decade” in 2012. He has also worked at the prestigious Royal Brompton Hospital, London as a Clinical Research Fellow.

Dr. Guleria started his talk by talking about how Mr. Parrikar was a charismatic personality and explained how he was a person with a strong resolve and still dedicated himself to the State and his job as the Chief Minister of Goa despite his growing illness. He appreciated Mr. Parrikar for his dedication and string resolve. He then began his lecture on Covid-19 and how it is a smart virus, he explained

he virus in detail, he spoke about how it spreads, how it can be diagnosed and that non-infectious/non-symptomatic person can be positive as the virus resides in nasal mucosae.



Dr. Guleria presenting his lecture live through video conferencing.

He then briefed the audience on the treatment of the Virus. He then spoke of Various medication such as steroids, stating their benefits and also their drawbacks. He then compared it to SAARS, and other viral diseases. This live session was then followed by a Question-and-Answer Session moderated by Dr. Gopal Mugeraya, Director, NIT-Goa. Dr. Guleria then concluded his session by expressing gratitude to the Govt. of Goa for organizing this event and inviting him to be a part of this Scientific event.

Shri. Jose Maneul Noronha expressed gratitude to Dr. Guleria for taking time and effort to be part of this event and for his brilliant talk. Dr. Sunil Singh, Director, NIO-Goa, then welcomed Prof. Padmanabhan Balaram, former Director, Indian Institute of Sciences, Bengaluru to present his lecture.

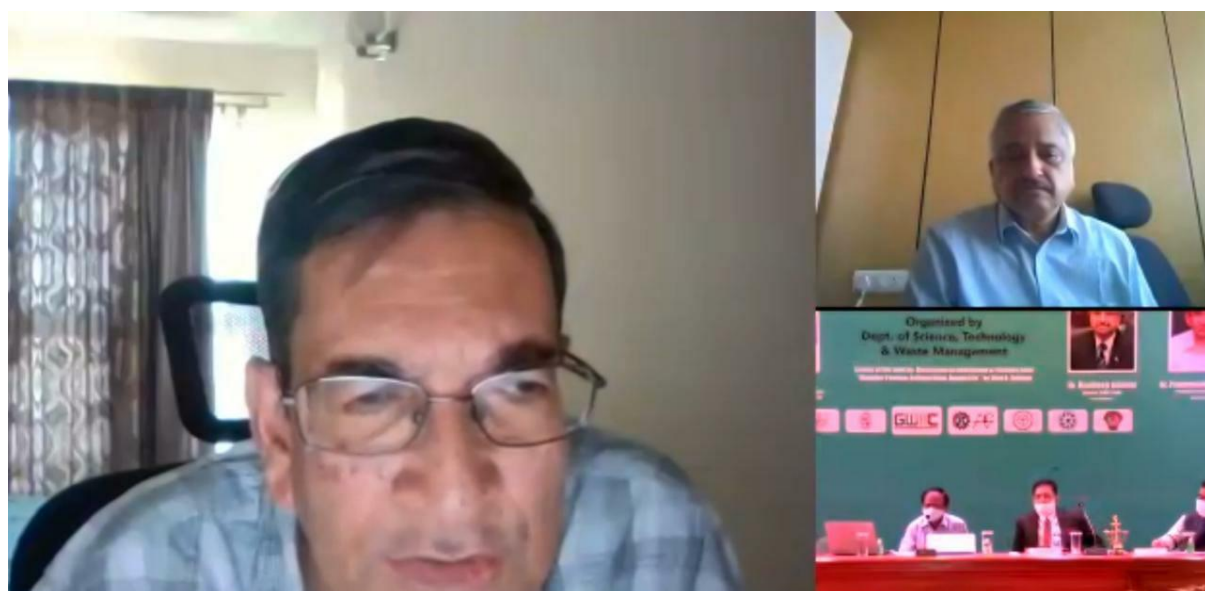


Prof. Padmanabhan Balaram is an Indian biochemist and a former director of the Indian Institute of Science in Bangalore, India. He is a recipient of the third highest Indian civilian honour of Padma Bhushan (2014) as well as the TWAS Prize.

Prof. Balaram graduated in Chemistry from Pune University, Pune (1967), and he joined the IIT Kanpur for his Masters in Chemistry (1969). He did his Ph.D from Carnegie-Mellon University, Pittsburgh (1972) and underwent Post-Doctoral training at the Department of Chemistry in Harvard University, U.S.A. On return to India, he joined the Indian Institute of Science (IISc), Bangalore as a Lecturer (1973), and then became Assistant Professor (1977), Associate Professor (1982) and finally a Professor in 1986 and then as a Director of IISc.

Balaram has made outstanding contributions towards the understanding of the structure and function of voltage gated transmembrane peptide channels. His major contributions may be classified into three areas: (i) studies on transmembrane peptide channels, (ii) conformational models for peptide folding and (iii) biophysical and chemical studies on membranes and model systems. He has elucidated the structural chemistry of γ -aminoisobutyric acid peptides related to alamethicin. He has carried out detailed studies on synthesis, conformational analysis and biological activity of channel peptides and has provided the basis for postulating the helix dipole model for these channels. Dr Balaram has made valuable contributions in the general area of design and synthesis of model

peptides, particularly disulfides. These studies have provided a means for developing bioorganic models for redox proteins containing active disulfide loops. Balaram's contributions in the area of biological membranes and in developing fluorescent probe methodology for examining membrane structure are highly significant. This aspect is exemplified by work establishing regional differentiation of sperm plasma membranes. In his most recent work, he has demonstrated the use of disulfide crosslinking as a means of thermally stabilizing multimeric proteins, using thymidylate synthase as a model. Prof. Padmanabhan Balaram was conferred with the Distinguished Alumnus Award, 2000 from IIT Kanpur.



Prof. Padmanabhan Balaram presenting his lecture live through video conferencing.

Prof. Padmanabhan Balaram began by expressing his gratitude to the organizers of the event and also stated how this was an important event in molding young minds by grasping their attention and with scientific events like so. He then started his lecture about biology and chemistry and evolution of life and chemistry around the biological life on Earth. He explained how Carbon is an essential element in organic chemistry. He then explained the Harber-Bosch process. He also spoke about DDT (Dichlorodiphenyltrichloroethane) and how the creator of

DDT was awarded Noble Prize. He further described that DDT is an essential in both Fertilizer and Pest Control Industry and has a huge impact on Chemistry as we know it. He also expressed that Modern Biology has led to various innovation such as Fodder preservation. He then spoke about three pillars of Modern Biology:

1. Genetics
2. Chemistry
3. Evolution

He then spoke about the two technology of his time InfoTech and Bio-Tech further stating Red Chilli having a large number of protein catalysts as an example of Bio-Tech. He then elaborated on Anandamide an enzyme that affects human emotions and the human pain receptors. He then addressed the Audience on the timetable of Evolution. He explained how life evolved on our Planet and how this evolution had an effect on Biology & Chemistry as we know it and how Bio-Technology has evolved with progression of Time, he also said that this evolution has also widened our knowledge on Science. He then concluded his informative and enlightening lecture by stating Cultural evolution such as Lactose intolerance. He lastly thanked the Govt. of Goa and expressed gratitude to the organizing team for making him a part of this Scientific Event. This live session was then followed by a Question-and-Answer Session moderated by Dr. B K Mishra, Director, IIT-Goa.

Shri. Jose Maneul Noronha, then took to the podium and summarized the technical session recapping the two live lectures and further expressed his gratitude to both the speakers for taking time and effort to make this event successful. He then proceeded to thank the Hon'ble Chief Minister of the State, Shri. Pramod Sawant, the Hon'ble Minister for Science, Technology and Waste Management, Shri. Michael Lobo and also the Guest Speakers for the day. He also thanked Dr. Sunil Singh, Director, NIO-Goa for making the premises

available for organizing this event and also thanked the NIO staff and the organizing team for fruitfully organizing this Event. The Vote of Thanx marked that successful conclusion of the Manohar Parrikar Vidnyan Mahotsav 2020 edition.



Organising team

Thank you