सत्यमेव जयते

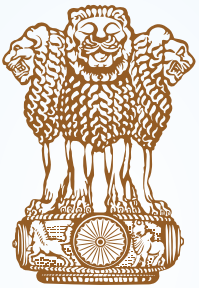
Government of India
Ministry of Earth Sciences
Earth System Science Organisation

Annual Awards 2016

Celebration of 10 Years of Ministry of Earth Sciences (2006-2016) & Foundation Day Function

27th July 2016, Vigyan Bhawan, New Delhi

Annual Awards - 2016



Government of India
Ministry of Earth Sciences
Earth System Science Organisation
Prithvi Bhawan, Lodhi Road,
New Delhi - 110 003

July, 2016

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About the Ministry of Earth Sciences

The erstwhile Department of Ocean Development (DOD) was created in July 1981 as a part of the Cabinet Secretariat directly under the charge of the Prime Minister and came into existence as a separate Department in March 1982. The erstwhile DOD functioned as a nodal Ministry for organizing, coordinating and promoting ocean development activities in the country. In February, 2006, the Government notified the Department as the Ministry of Ocean Development (MoOD).

The Government of India further reorganized the Ministry of Ocean Development and the new Ministry of Earth Sciences (MoES) came into being vide Presidential Notification dated the 12th July, 2006 bringing under its administrative control India Meteorological Department (IMD), Indian Institute of Tropical Meteorology (IITM) and National Centre for Medium Range Weather Forecasting (NCMRWF). The Government also approved the setting up of Earth Commission on the pattern of Space Commission and Atomic Energy Commission.

The Earth System Science Organization (ESSO) operates as an executive arm to implement policies and programs of the Ministry of Earth Sciences (MoES). It deals with four branches of Earth Sciences, viz. i) Ocean Science and Technology ii) Atmospheric and Climate Science iii) Geoscience and iv) Polar Science and Cryosphere. The ESSO has been addressing holistically various aspects relating to earth processes for understanding the variability of earth system and for improving forecast of the weather, climate and hazards. The ESSO was established in October, 2007 as a virtual organization, subsequent to the setting up of the MoES, which was formed in 2006 by bringing all the agencies of meteorological and ocean development activities under one umbrella, recognizing the importance of strong coupling among various components of the earth, viz. atmosphere, ocean, cryo-sphere and geo-sphere.

The prime mandate of the Ministry primarily aimed to develop and improve capability to forecast, weather, climate and hazard related phenomena for societal, economic and environmental benefits including addressing aspects relating to polar and climate change science and services. The ESSO is also responsible for development of technology towards the exploration and exploitation of marine resources in a sustainable way.

On 1st January 2014, the Ministry of Earth Sciences took over the Centre for Earth Sciences Studies, Thiruvananthapuram, from the Government

of Kerala and it has been registered as an autonomous body named as "National Centre for Earth Science Studies".

The current year, being the 10th year of the Ministry's creation since 2006, a technical session is being organized in the forenoon of 27th July 2016 to take stock of the professional achievements so far and to seek guidance from the distinguished leading lights of this fraternity, both from the MoES family and outside in academic, R& D institutes , to build most relevant activities in the years to come.

The following is the administrative set up of the Ministry of Earth Sciences.

Headquarters
Government of India
Ministry of Earth Sciences
PrithviBhavan,
Lodi Road, New Delhi – 110003
(Website: www.moes.gov.in)

Attached Offices
Centre for Marine Living Resource and Ecology,
6th Floor, Block-C, KendriyaBhawan,
P.O. Kochi Special Economic Zone,
Kochi – 2682037
(Website: www.cmlre.gov.in)

National Center for Seismology,
IMD Campus,
Lodhi Road,
New Delhi - 110003

Autonomous Bodies
National Institute of Ocean Technology,
Vellacherry-Thambaram Road,
Pallikaranai Village,
Chennai - 600 100.
(Website: www.niot.res.in)

National Centre for Antarctic & Ocean Research,
Headland Sada,
Vasco da Gama,
Goa – 403 804

(Website: www.ncaor.gov.in)

Indian National Centre for Ocean Information Service,
Ocean Valley, Pragathi Nagar BO,
Nizampet - PO Hyderabad – 500055
(Website: www.incois.gov.in)

Indian Institute of Tropical Meteorology,
Homi Bhabha Road, Pashan,
Pune – 411 008.
(Website: www.tropmet.res.in)

National Centre for Earth Science Studies,
Post Box No.7250,
Akkulam, Thiruvananthapuram – 695 011
(Website : www.cess.res.in)

Project Office

Project Directorate,
Integrated Costal Marine Area Management,
NIOT Campus, Vellacherry-Thambaram Road,
Pallikaranai Village,
Chennai – 600 100
(Website: www.icmam.gov.in)

Subordinate Offices

India Meteorological Department,
Mausam Bhawan, Lodhi Road,
New Delhi – 110003
(Website: www.imd.gov.in)

National Centre for Medium Range Weather Forecasting,
A-50, Sector-62,
Noida UP – 201309
(Website: www.ncmrwf.gov.in)

About the Awards

The Earth System Science Organization has Instituted the following Awards from 2013 onwards:

S. No.	Name of Award	No. of Award	Award Amount
1.	Life Time Excellence Award in the sphere of Earth System Science	01	Rs. 5,00,000/-
2.	National Awards in the field of • Ocean Science & Technology • Atmospheric Science & Technology • Geoscience & Technology • Polar Science & Cryosphere	01 each	Rs. 1,00,000/- each
3.	Young Researcher/Achiever Award in the field of Earth System Science	02	Rs. 50,000/- each

These awards are open to all residents of India. An individual is eligible for these awards only once during his/her lifetime. The nominations for these awards are normally recommended by the Head of Universities, National Institute and Scientific Departments of the Government of India. The selection for these awards are made by a High Level Committee of distinguished scientists and given on the occasion of the foundation Day Celebration i.e. 27th July every year.

Certificate of Merit for Scientists/Engineers in (i) Ocean Science & Technology and (ii) Atmospheric Science & Technology;

These awards are open for Scientists working in Autonomous organizations and attached/project/subordinate offices under the administrative control of this Ministry. These awards are given in recognition of their scientific contribution towards achieving the tasks/goals assigned to these organizations. An individual is eligible for this award only once during his/her lifetime.

From 2013 onwards, it has been decided to increase the cash prize from Rs. 30,000/- to Rs. 50,000/- each in addition to trophy and citation.

Award for Best Employees

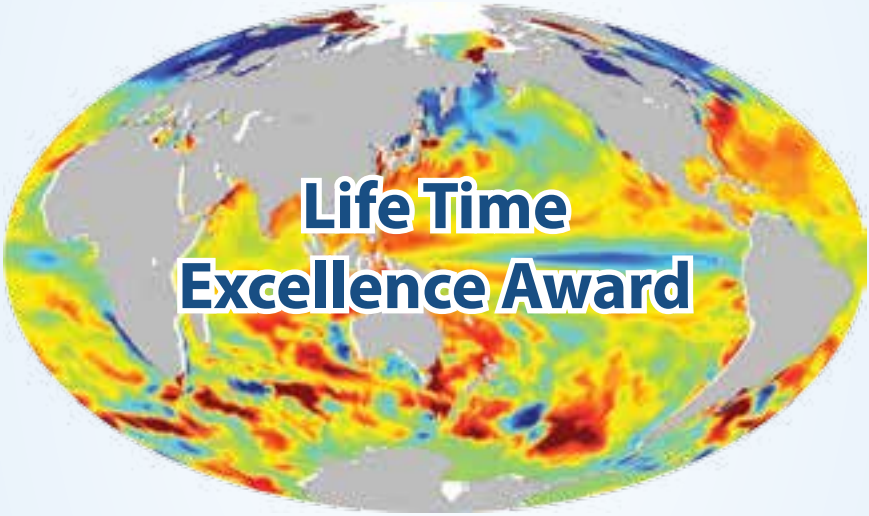
Erstwhile Ministry of Ocean Development introduced this award in the year 2006 to be given to the "best employee" one each in Group B (Gazetted as well as Non-Gazetted), Group C and Multi Tasking Staff (MTS) employees of the Ministry and its attached/project offices. The award carries with a citation and a cash prize to each category of employees as under:

Group "B" Employee	:	Rs. 10,000/-
Group "C" Employee	:	Rs. 7,500/-
Multi Tasking Staff	:	Rs. 5,000/-

With the setting up of new Ministry and keeping in view the fact that there is a tremendous increase in the number of employees as the Indian Meteorological Department and National Centre for Medium Range Weather Forecasting have come under its purview it was decided that from the year 2007 the number of awards in each category should be increased keeping the performance of employees every year.

From 2013 onwards, it has been decided to increase the cash prize as under:

Group "B" Employee	:	Rs. 15,000/-
Group "C" Employee	:	Rs. 10,000/-
Multi Tasking Staff	:	Rs. 7,500/-



Life Time Excellence Award

Prof. Sulochana Gadgil

Prof. Sulochana Gadgil is one of the world's leading monsoon meteorologists, having made significant contributions to our understanding of the Indian monsoon and its variability, its links with atmospheric convection over tropical oceans and the relationship of such convection with the sea surface temperature (SST). Her excellent training, with a Ph. D. in Applied Mathematics from Harvard and a post- doctoral with Prof. Jule Charney at MIT, and the vibrant atmosphere of the Indian Institute of Science which she joined in 1973, made it possible for her to carry out cutting edge research in India, conducted in collaboration with scientists from different institutions in the country.

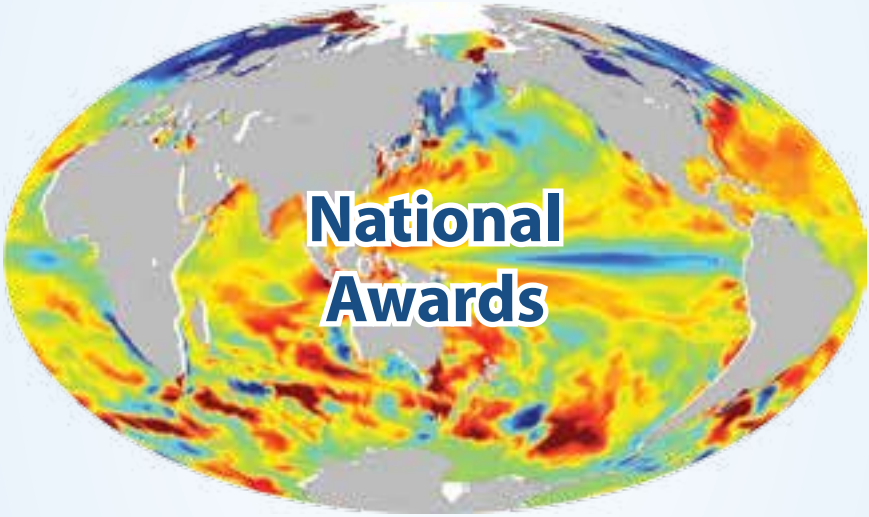
She began her work on the monsoon with a landmark paper reporting the discovery of the important role played in the Indian summer monsoon by the formation and northward propagations of the cloud band over the equatorial Indian Ocean. Her studies demonstrated that the monsoon is not a gigantic land-sea breeze but instead is a manifestation of the seasonal migration of a planetary scale system which is seen over non-monsoonal regions as well. She was amongst the first to analyze satellite- derived cloudiness over tropical oceans and demonstrate the presence of a SST threshold of about 28°C for organized convection. Her studies of the inter-annual variation of the Indian monsoon have shown that there is a strong link with the equatorial Indian Ocean Oscillation (EQUINOO), in addition to the well- known link with El Nino and southern oscillation (ENSO), which has important implications for improving the monsoon variability simulation in models.

One of her significant contributions has been bringing together perspectives and data from disparate fields. No economist had quantitatively assessed the impact of the monsoon on agriculture and the GDP; so Sulochana Gadgil did that and showed that despite a substantial decrease in the contribution of agriculture to the GDP over the last five decades, the impact of droughts on the GDP has remained large (2 to 5%) throughout.

She has taken the lead in organization of interdisciplinary research engaging in collaboration with agricultural scientist, ecologists as well as farmers, and to identify farming strategies tailored to rainfall variability so as to maximize long-term average returns.

Prof. Sulochana Gadgil played a key role in the establishment and nurturing of the Centre for Atmospheric and Oceanic Sciences at the Indian Institute of Science. She has spearheaded the development and execution of the Indian Climate Research Programme with major programmes over the Bay of Bengal, the Arabian Sea and Indian monsoon zone. She is a Fellow of the Indian National Science Academy, the Indian Academy of Sciences, the Indian Meteorological Society and has received several awards including the Norman Borlaug Award.

In recognition of her outstanding contribution to Earth System Science, the Ministry of Earth Sciences honors Prof. Sulochana Gadgil with "Life Time Excellence Award in Earth System Science" for the year 2016.



National Awards

National Award for Ocean Science & Technology

Dr. M. Dileep Kumar

Dr. Dileep Kumar is at present serving as an Honorary Scientist at National Institute of Oceanography, Visakhapatnam. He completed Ph.D. in Chemical Oceanography in 1988. His main area of interest has been the biogeochemistry of the Northern Indian Ocean. The other research areas he contributed are Global Change, Air-Sea exchange of gases, estuarine chemistry, and control of seawater composition. Dr. Dileep Kumar was a Visiting Scientist at the University of Hawaii for six months in 1990 under Raman Research Fellowship, where he researched on regeneration of silica and radium in the Indian Ocean, and later at the University of Tokyo (Ocean Research Institute) as a JSPS Fellow (2004-05) to conduct studies on aerosols.

Dr. Dileep Kumar's contributions helped advance the understanding of carbon and sulphur biogeochemical cycles and significantly brought out the contrasting patterns between the Arabian Sea and the Bay of Bengal. His pioneering studies showed the Arabian Sea to be a source of atmospheric carbon dioxide, whereas the Bay is a seasonal sink. Strong stratification at the Bay of Bengal surface and organic carbon decomposition processes account for differences in carbon deposition rates and emissions from the North Indian Ocean. In 1988, Kumar initiated precision measurements of dimethyl sulphide (DMS) in waters of the Indian Ocean. His pioneering detection of DMS and DMSP in marine aerosols contradicts the notion that sea-to-air fluxes occur only through degassing of DMS and significantly influence atmospheric sulphur budget.

In 1988, he received the CSIR Young Scientist Award in Earth Sciences. Dr. Dileep Kumar is a Fellow of all the three science academies, the National Academy of Sciences, Indian Academy of Sciences and the Indian National Science Academy. He has won several prestigious awards and membership of professional bodies and has published several research papers in journals of repute.

In recognition of his outstanding contribution to Ocean Science & Technology, the Ministry of Earth Sciences honors Dr. M. Dileep Kumar with "National Award in Ocean Science & Technology" for the year 2016.

National Award for Atmospheric Science & Technology

Prof. P.V. Joseph

Prof. Porathur Vareed Joseph was born in Kerala on 29 December 1932. He completed Master's degree in Physics in 1953 from the University of Madras. In 1957, he joined the India Meteorological Department (IMD). During the first five years he was posted at Colaba and Alibag Observatories, Bombay where he did research in geo-magnetism. Subsequently, he carried out operational weather forecasting during the following sixteen years at several centres in India, in the fields of aviation meteorology, cyclone warning etc. In the next ten years he was Director of the Meteorological Training School of IMD / WMO at Pune, where he taught Tropical Meteorology and Weather Prediction to over 500 persons from India and the neighbouring countries. In 1983 he obtained PhD degree in Physics from the University of Poona for research on monsoon variability, done under the guidance of the eminent scientist and scholar Prof. R. Ananthakrishnan. After taking voluntary retirement from IMD in 1989, Joseph took up various assignments in India and USA. During the recent 18 years, Dr Joseph was also UGC Visiting Professor / Emeritus Professor at the Department of Atmospheric Science of the Cochin University of Science and Technology where he did teaching of MSc and MTech courses and research in collaboration with the faculty and PhD students.

His important research contributions included the discovery of a low level Jetstream in monsoon, role of north Indian ocean on monsoon onset and active-break phases, SST-Convection relationship, development of a model for dust-storm (called locally Aandhi), role of mid-latitude westerlies and Rossby waves on monsoon variability, role of the ocean mixed layer depth in the intra-seasonal variability of Asian summer monsoon and on the mechanisms of the decadal variability of Asian summer monsoon and instability in the ocean-atmosphere system that is responsible for frequent monsoon droughts.

Joseph has done original research for five decades in Tropical Meteorology (Monsoons, Cyclones and Thunderstorms), Climate Change and Ocean-Atmosphere interaction. He has 70 research publications (40 of them in peer reviewed scientific journals). In 1978, for original research in Atmospheric

Physics and Hydrology, he received the Hari Om Ashram Prerit Dr. Vikram Sarabhai Research Award. In 2012 Joseph was the recipient of the Swadeshi Science Puraskaram and also of felicitations on the IMD Foundation Day. Dr Joseph was an active participant of several meteorological working groups and field experiments, both national and inter-national. Dr Joseph is a Fellow of Indian Meteorological Society, Member and two term President of Ocean Society of India and an Emeritus Member of the American Meteorological Society.

In recognition of his outstanding contribution to Atmospheric Science & Technology, the Ministry of Earth Sciences honors Prof. P.V. Joseph with "National Award in Atmospheric Science & Technology" for the year 2016.

National Award for Geoscience & Technology

Prof. Shyam Sundar Rai

Shyam Sundar Rai is a Professor, and the Chairperson of the Department of Earth and Climate Science at the Indian Institute of Science Education and Research (IISER) Pune. Dr Rai came to IISER Pune from the CSIR-National Geophysical Research Institute (NGRI) in Hyderabad, India, where he worked as a scientist from 1978 to 2014 and also as the leader of the Seismic Tomography Group. Prof. Rai studied Physics Honors (BSc, 1973) at the Banaras Hindu University at Varanasi, India; Geophysics at the Indian Institute of Technology at Roorkee (MTech, 1977) and at the Indian School of Mines at Dhanbad (PhD, 1988).

Prof. Rai's research provided a new view of the causes and explanation for the deforming of the Indian and Himalayan crust and lithosphere. The research objectives have been accomplished by working cooperatively with a large number of researchers in India and across the globe. His research has been disseminated through 100 research papers published in international peer-reviewed journals and has resulted in 15 students earning their PhDs.

Shyam Sundar Rai's early work made notable analytical contributions to interpretation of geo-electromagnetic exploration data, mathematical modelling of Geophysical fields, and a creative application to the exploration of diamond bearing Kimberlites in the eastern Dharwar Craton of South India. Later, he brought to bear his competent blend of theory and practice to explore the evolution of the Indian continent by imaging the crust and upper mantle structure of the varied terranes of the Indian continent using broadband seismology. His approach to the problem is distinguished by the focus on bold experimental design aimed at maximizing the information content of anticipated data using the largest instrument arrays used in India. Some of the significant results from his research include : (a) Evidence for the earliest operation of the global plate tectonic process, 3.4 billion years ago, from a directed enquiry in the structure of the deep crust in South India , (b) First work on the underthrusting of the Indian crust beneath Himalaya and Tibet right up to the Karakoram, providing significant constraint on to the mechanism of Indo-Tibetan collision process .This is critical to understanding the Himalayan dynamics and its earthquake cycles. (c) First image of the seismic pattern and

the localised flexing of the Indian crust beneath the central Himalaya (d) Evidence for self-sustained dynamic triggering of small local earthquakes in the Central Himalaya.

Prof. Rai has been closely involved with promoting academic scholarship in Earth System Science in India at all levels. He is Fellow of all the three Indian Science Academies. He has served on the council of the Indian Academy of Sciences (2013-15), and the sectional committee of the Indian Academy of Sciences (2008-09; 1999-2002) and of the Indian National Science Academy (2011-13). Prof. Rai is honoured with JC Bose National Fellowship (2010), Distinguished Alumnus Award of IIT-Roorkee (2011), SS Bhatnagar Prize (1996), National Geoscience Award (2004), Senior Associate of the Abdus Salam ICTP Italy (1994-2008), Krishnan Medal of Indian Geophysical Union (1991) and CSIR Young Scientist Award (1988).

In recognition of his outstanding contribution to Geoscience & Technology, the Ministry of Earth Sciences honors Prof. Shyam Sundar Rai with "National Award in Geoscience & Technology" for the year 2016.

National Award for Polar Science & Cryosphere

Dr. S. Shivaji

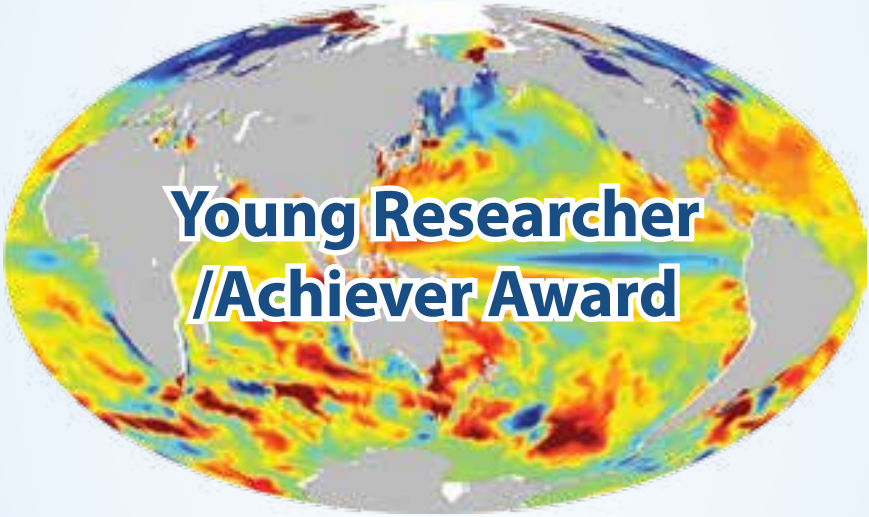
Dr. S Shivaji after his M.Sc. from BITS, Pilani in 1973 obtained his Ph.D. from University of Delhi in 1978. He worked as a scientist and retired as Director-grade Scientist at the Centre for Cellular and Molecular Biology, Hyderabad, in 2012. He was co-founder and Scientist-in-charge of LaCONES (The laboratory for the Conservation of Endangered species) between 2005-2012. Presently, he is the Director of Prof. Brien Holden Eye Research Institute and L V Prasad Eye Institute, Hyderabad.

Dr.Shivaji's research (1985-2015) focused on the microbiology of the cryosphere and included some of the coldest regions of the world like Antarctica, Arctic, Himalayan glaciers, deep sea and the stratosphere.

Dr. S Shivaji's persistent studies on the microbiology of the Polar Regions and the cryosphere over 3 decades (1984-2015) have lead to identification of more than 1000 species of bacteria including 80 new species of bacteria with unique biotechnological potential. Very few microbiologists in the world have achieved this feat of identifying 80 new species. His significant contributions in Polar Sciences and Cryosphere are: (1) Identification of 8 new genera and 80 new species of bacteria from Antarctica, Arctic, Himalayan glaciers, deep sea and the stratosphere (2) First evidence of seven new species of bacteria from the stratosphere including Bacillus isronensis, Bacillus stratosphericus and Bacillus aryabhataii in honor of ISRO, Stratosphere and Aryabhatta respectively, (3) Discovered a new fatty acid desaturase gene essential for the survival of life forms at low temperature, (4) Established that genes aspartate aminotransferase and tRNA modification GTPase are required for survival of life forms at low temperature, (5) Established that differential synthesis of polar and non-polar carotenoids is crucial for low temperature survival, (6) Several bacterial isolates from the cryosphere produce cold active proteases and lipases with applications in biotechnology industries, (7) Research on the biodiversity of psychropjhilic bacteria has attracted recognition and collaborations both within the country and countries abroad, (8) Genome sequencing has been completed for about 20 bacteria from cryosphere to identify genes involved in growth and survival at freezing temperatures.

Dr. S Shivaji has published about 160 peered reviewed papers in Polar Science & Cryosphere related to bacterial diversity, survival strategies and biotechnological potential of cold loving microrganisms. He is a fellow of National Academy of Sciences, India, Indian Academy of Sciences, India, TelanganaAkademi of Sciences, India, and Fellow of the Association of Microbiologists of India. In recognition of his work in the area of Antarctic Microbiology the government of India awarded him the Antarctica Award in the field of Biological Sciences in 2002. He is a recipient of the first Carl Woese Memorial award, 2014, by the Association of Microbiologists of India.

In recognition of his outstanding contribution to Polar Science & Cryosphere, the Ministry of Earth Sciences honors Dr. S. Shivaji with "National Award in Polar Science & Cryosphere" for the year 2016.



Young Researcher /Achiever Award

Dr. Anoop Kumar Mishra

Dr. Anoop Kumar Mishra is working as a Scientist D at Centre for Remote Sensing and Geoinformatics, Sathyabama University, Chennai, India. After completing M.Sc. (with honors) in Physics from University of Allahabad, he joined Space Application Centre (SAC), ISRO, Ahmedabad as a Research Scholar. During this period he developed precipitation estimation algorithms which are operational at SAC and India Meteorological Department (IMD). For his extensive work on Precipitation Estimation over Indian tropics from Satellite Remote Sensing, he was awarded a PhD degree by Gujrat University.

He was awarded Eco-Frontier Fellowship (EFF) by Environmental Ministry of Japan to pursue his postdoctoral research at Research Institute for Humanity and Nature, Kyoto under prestigious "APHRIDTE Project" lead by Dr Akiyo Yatagai in 2010. He had developed precipitation product over South Asia by merging rain-gauge and satellite observations at fine scale (0.25 degree). After that, he joined Divecha Centre for Climate Change, IISc, as a postdoctoral fellow under Prof. J. Srinivasan in 2011. He contributed in developing rainfall algorithm for Indo-French satellite "Megha-Tropiques". He developed rainfall monitoring algorithm using SAPHIR data from Megha-TROPIQUES. He was awarded fellowship from National Science Counsel to pursue his postdoc at Research Centre for Environmental Changes, Academia Sinica, Taipe. He worked there during 2012-2014 and explored changes in Precipitation extremes and cloud cover in the context of global warming. For this purpose, he used data from ISCCP (International Satellite Cloud Climatology Project), NOAA HIRS, GPCP, TRMM, IMD Rain gauge, CPC Rain gauge, ERA-Interim etc. During this period he examined risk of drought over different parts of Indian region in the context of climate change. He has published about 28 research papers in international and national peer reviewed journals having high impact factors and great number of citations. He is also working as Editor and reviewer of few International and national journals. He has been conferred with prestigious "Hind Ratan Award-2014" by NRI Welfare Association of India.

In recognition of his outstanding research contributions in the field of Earth System Science the Ministry of Earth Sciences honours Dr. Anoop Kumar Mishra with "Young Researcher Award in the field of Earth System Science" for the year 2016.

Dr. Kunal Chakraborty

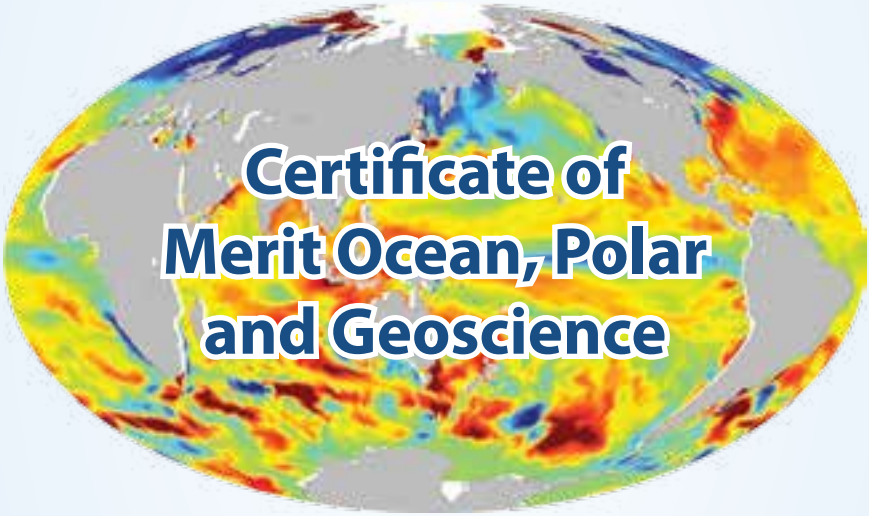
Dr. Kunal Chakraborty is presently working as Scientist-D in ESSO-Indian National Centre for Ocean Information Services, Hyderabad. After completing his B.Sc. and M.Sc. degrees in Mathematics from the University of Burdwan, West Bengal, he joined Ph.D under the guidance of Prof. T. K. Kar in Indian Institute of Engineering Science and Technology, Shibpur. His research had been at the interface of applied mathematics and ecology. For his extensive work on the bioeconomic modelling and development of solution techniques for the management and conservation of fisheries, Dr. Chakraborty was awarded a Ph.D degree by Indian Institute of Engineering Science and Technology, Shibpur in 2012.

His current research interest includes ocean modelling, in particular, numerical modelling of ecosystem. Dr. Chakraborty has been working on a project leading to the development of an end-to-end model for the Indian Ocean basin which includes investigation of the distribution and the processes controlling major biogeochemical tracers that are relevant for both ocean physics and biology. The specific objectives of his research is to explore the environmental conditions, driving force controlling variability in fish populations through reproducing the observed spatial and temporal variability of both physical and biological variables in Indian Ocean (including coastal region) using a coupled bio-physical model.

He has successfully employed a coupled bio-physical model with an average resolution of ~2.25 km using Regional Ocean Modelling System (ROMS) and integrated with an ecosystem model for the west coast of India to predict its evolution in both short and long term which has further relevance to support potential fishing zone advisories of ESSO-INCOIS.

Dr. Chakraborty has published more than twenty five research articles apart from his thesis papers in the international peer reviewed journals having high impact factors and good number of citations. He proved himself to be an able mentor. Two students have been awarded Ph.D degree under his guidance.

In recognizing of his outstanding research contributions in the field of Earth System Science the Ministry of Earth Sciences honours Dr. Kunal Chakraborty with "Young Researcher Award in the field of Earth System Science" for the year 2016.



Certificate of Merit Ocean, Polar and Geoscience

Shri N. Kiran Kumar

Shri N. Kiran Kumar obtained his Master's degree in Computer Science in 2004 from Osmania University, Hyderabad. He joined Indian National Centre for Ocean Information Services (INCOIS) in April, 2006 and contributed significantly towards the design, development and maintenance of multi-lingual, dynamic WebGIS enabled INCOIS Website & Ocean Data Portal.

Currently, he is Scientist-C & In-charge of Web Based Services. He played a key role in restructuring the INCOIS website making it easier for the users to navigate, and enhancing the existing features through in-house development and implementation of software & web based applications. The latest geospatial technologies adopted using responsive web design framework made the website accessible through a wider range of web browsers and devices, including mobiles and tablets. He automated the end-to-end data flow mechanism to web services including data acquisition, processing and publishing on INCOIS website.

He had also developed and implemented various web applications/ websites for national & international symposium, workshops, conferences, meetings like IO50-NIO Symposium, Second International Indian Ocean Expedition (IIOE-2), Sustained Indian Ocean Biogeochemical and Ecological Research (SIBER), ISPRS WG VIII/1 Workshop, Argo Data Management Team (ADMT)-13th Meeting, Pan Ocean Remote Sensing Conference (PORSEC-2012), etc.

He was actively involved in setting up of the state-of-the-art Indian Tsunami Early Warning Centre. He played a pivotal role in website integration and development of geospatial applications for various components such as tsunami warning system, Standard Operating Procedure (SOP), Decision Support System (DSS), etc. He made significant contribution in automating the dissemination of national and regional tsunami bulletins.

He is also involved in the development of Visualization and Analysis System for 2D and 3D Geospatial data (3DVAS), a comprehensive coastal risk assessment and disaster management application.

Shri N. Kiran Kumar is awarded Certificate of Merit for his outstanding contributions in the field of Ocean Science & Technology.

Shri Abhishek Tyagi

Shri Abhishek Tyagi received his M.Sc. (Applied Geology) from Kurukshetra University and M.Tech. (Remote Sensing) from Birla Institute of Technology. Shri Tyagi has been associated with the National Centre for Antarctic and Ocean Research (NCAOR), Goa since 2004.

Shri Tyagi, currently working as Scientist-C, has more than 12 years of experience in all facets of marine topographic surveys and has participated in more than 40 cruises totaling nearly 1000 days at High Seas in Arabian Sea, Bay of Bengal, Central Indian Ocean, Southern Ocean and Antarctic region. He has successfully led and coordinated 18 expeditions for International Collaborative and major National programmes.

Shri Tyagi has significantly contributed to all scientific endeavors of NCAOR, involving marine topographic surveys, such as the Geoscientific studies of the Exclusive Economic Zone (EEZ) programme, Hydrothermal Mineralisation programme, CLCS programme, Cobalt Crusts programme etc. He took a lead role in successful implementation of the scientific and technical aspects of the EEZ and Hydrothermal Mineralisation programmes including survey planning, data acquisition & QC, data processing, integration, analysis and interpretation. He also has proven experience in vessel management and related logistics activities.

He has 5 publications in national and international journals, 3 articles in books/manuals, 14 papers in national and international Seminars, workshops and invited lectures etc. He is also involved in training manpower in marine acoustic surveys and well appreciated for Young Researchers training in oceanographic research.

Shri Abhishek Tyagi is awarded Certificate of Merit for his outstanding contributions in the field of Ocean Science and Technology.

Shri Prasad Vinayak Dudhgaonkar

Shri Prasad Vinayak Dudhgaonkar obtained his Bachelor of Engineering in Mechanical discipline from Shivaji University Kolhapur and Master of Technology in Energy Systems Engineering from Indian Institute of Technology Bombay. Shri Prasad is presently working as Scientist D in Energy and Fresh Water Group in National Institute of Ocean Technology. In NIOT, Prasad is engaged in development of technologies related to harnessing ocean energy forms namely wave energy, kinetic energy in ocean currents and ocean thermal energy conversion (OTEC). In particular, he is responsible for development of various types of turbines required for these energy forms. He has led the design team in developing several computational fluid dynamics (CFD) based models in order to simulate performance wave energy turbines, ocean current turbines, OTEC turbines and floating wave energy devices. He has also guided several post-graduate students in carrying out small scale model testing of floating wave energy devices.

Recently Shri Prasad led a team in successfully carrying out open sea trials on a small ocean current turbine in Andaman. Prasad's team developed all components of this turbine in-house by carrying out extensive CFD studies, laboratory experiments and constant speed seawater channel testing before taking the turbine to open sea. This turbine outperformed the expectations during the sea trials.

Shri Prasad also significantly contributed to development of floating wave energy device backward bent ducted buoy (BBDB) by planning and supervising extensive laboratory testing of wave energy turbines, several open sea trials of BBDB and designing a new turbine for BBDB. BBDB with the new turbine performed well in the subsequent open sea trial off Chennai coast and the Turbine matched BBDB's characteristics very well. The results of the work carried out by Prasad and the team have been presented and appreciated in many national and international conferences.

Apart from the technical work, Prasad is keenly interested in music, travelling, reading and photography.

Shri Prasad Vinayak Dudhgaonkar is awarded Certificate of Merit for his outstanding contributions in the field of Ocean Technology.

Dr. D.S. Suresh Babu

Dr. D. S. Suresh Babu has post graduated from the University of Kerala in 1984 and received doctoral degree from the Moscow Geological Prospecting Institute, Russia in 1990. Dr. Suresh Babu joined CESS in 1994 as Scientist and continuing till date. His thirty years of professional experience in different fields of coastal zone research pertains to tropical, subtropical and arid environments. During his career, he worked abroad for about a decade, in Russia (1986-90), Brazil (2000-02) and Saudi Arabia (2008-12) and carried out R&D projects in the fields of mineralo-chemical investigations of placer minerals, water resources evaluation, groundwater modeling, coastal zone management and EIA studies. During his tenure in the institute, Dr.Babu has compared the three major beach-placer deposits of India and brought out their key differences, primarily for characterizing and grading raw minerals in the value addition process. Further, he initiated investigations on the phenomenon of 'Submarine Groundwater Discharge' in the west coast of India and computed quantum of discharge in selected segments. He organized three national level conferences, one 10-day long International workshop (IGCP-514 in 2007), and a three week long training program on Groundwater modelling in 2006, sponsored by DST, Govt. of India.

Dr.Babu completed fifteen R&D projects funded by various agencies in India and abroad as Principal Investigator. He participated in two multi-institutional international projects including the programs supported by TWAS, Italy and ILTP, DST, Govt. of India. He was instrumental in establishing two laboratories namely XRD (2004) and SEM (2016) in the institute and collaborated as Investigator in various in-house and externally funded research programs.There are over thirty publications in referred journals to his credit. He has edited two books and presented several conference papers in India and abroad. He is a recognized research guide of University of Kerala as well as Cochin University of Science and Technology and has supervised four candidates for the award of doctoral degree. He was also a Member of National Working Group (NWG) of IGCP-523 on "Global ground water network for best practices in groundwater management in developing countries". He is Life Member of Nuclear Track Society of India, Bombay (LM-115), Indian Institute of Remote Sensing (L-1442) and Indian National Cartographic Association (LM-1641).

Dr. D. S. Suresh Babu is awarded Certificate of Merit for his outstanding contributions in the field of Geosciences.

Dr. Shivaji Are

Dr. A Shivaji received his M.Sc. (Tech) and Ph.D. degrees in Exploration Geophysics from Osmania University, Hyderabad. While teaching at Osmania University, he participated in 15th Indian Antarctic Expedition in 1994-95 and successfully undertook the challenge of delineating geological contacts covered by the glaciers in the Schirmarcher Oasis region using VLF EM techniques for the first time in Antarctica. After joining the Antarctica Study Centre, an attached office of the then Department of Ocean Development (now MoES) at Goa in 1997, Dr. A Shivaji was associated with the management and co-ordination of Indian Antarctic Expeditions and gained rare and valuable experience in the management of multi-institutional R&D affairs at national and international level. Dr. A. Shivaji had also participated in the 20th Indian Expedition to Antarctica as observer and streamlined functioning of the Seismic Observatory in particular and Maitri Station management in general. In addition to this, Dr. A Shivaji contributed to the establishment of the National Centre for Antarctic and Ocean Research, an autonomous institution of MoES at Goa. He also acquired ADPM, MFC and MBA degrees in Project Management, Finance & Accounts and Corporate Law respectively to gain academic insights to better equip himself in the field of R&D management.

Later in 2009, Dr. A Shivaji joined the Centre for Marine Living Resources and Ecology in Cochin; the other attached office of the MoES and took over the Vessel Management Affairs of the FORV Sagar Sampada, the only deep sea fishery research vessel of India. Dr. A. Shivaji has so far organized more than 80 scientific cruises on board FORV Sampada, successfully. The valuable scientific data and samples acquired during these scientific cruises enabled the Indian scientists to publish more than 200 papers in Indian and International Journals. It also lead to the discovery of many new deep sea marine species in Indian EEZ waters for the time. In addition to this, more than a dozen scientific and technical books, exclusively on marine living resources of Indian EEZ were also brought out. He also contributed in organizing an International Seminar on the Achievements of FORV Sagar Sampada in 2010 and in bringing out a publication on the same, which is now one of the most sought after publication by the oceanographic community.

Dr. A. Shivaji is awarded with Certificate of merit for his outstanding contributions in the field of Ocean Science and Technology.

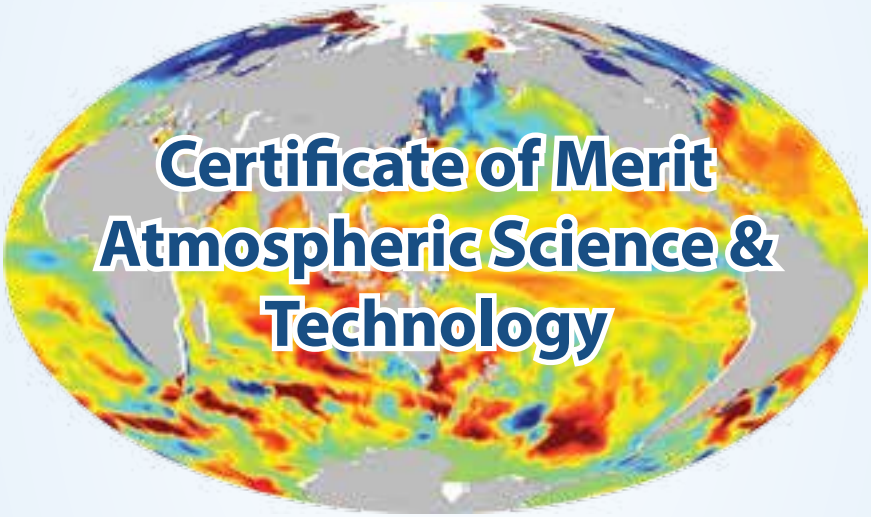
Dr. Karri Ramu

Dr. Karri Ramu completed his post-graduation in Fisheries Science from the Central Marine Fisheries Research Institute, Kochi, in 1997. He started his research career as a Biological Oceanographer at National Institute of Oceanography, Kochi, where he worked as a Researcher from 1998 to 2001. As a recipient of Japanese Government Fellowship, he obtained his PhD in Environmental Sciences from the Center for Marine Environmental Studies, Ehime University, Japan, in 2007. He continued working at Ehime University as a Post Doctoral Fellow of the Japanese Society for Promotion of Science until 2009. His research at Ehime University was focused on the distribution and fate of anthropogenic contaminants in the marine environment. From 2009 to 2013, he worked as a Scientist at the International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, where the area of his research was on the quantification of nitrous oxide fluxes from agricultural soils.

Dr. Karri Ramu joined Integrated Coastal and Marine Area Management-Project Directorate (ICMAM-PD) in June 2013 and is presently working as Scientist-D. He is currently working with an interdisciplinary program on "Ecosystem Modeling for South West Coastal Waters of India" with an objective to understand ecological functioning and to develop a mathematical model for water quality and ecosystem management. His research aims at understanding the biogeochemistry of carbon and nitrogen dynamics along the coastal waters and estuaries. Under this program he has developed coefficients related to plankton metabolic activities to be used as inputs for the ecosystem model of the coastal waters of Kochi and established strong baseline data for the biogeochemical parameters for the model validation.

He has authored around 30 scientific publications in peer-reviewed scientific journals. He serves as a reviewer for the scientific journals Chemosphere, Marine Pollution Bulletin and Environmental Geochemistry and Health.

Dr. Karri Ramu is awarded with Certificate of merit for his outstanding contributions in the field of Ocean Science.



Certificate of Merit Atmospheric Science & Technology

Smt. Sunitha Devi. S

Smt. Sunitha Devi is working in the Weather Forecasting Development Division in the office of India Meteorological Department, Pune. She completed her M.Sc. in Meteorology and then obtained an M.Tech in Atmospheric Sciences. She is In-Charge of Weather Section, Pune and works for short and medium range weather forecasting. She is also involved in capacity building in weather forecasting. She is responsible for documentation of weather in the form of reports and summaries including the routine publications viz., All India weather Summary (Daily), Indian Daily Weather Reports, Weekly Weather Reports, Monthly and Seasonal Weather summaries, etc. She is also a team leader of WMO working group on weather services –RA-II (Asia**),** in 'Operational forecasting process and support'. In addition, she is the Chairperson of working group on Meteorology – WMO / ESCAP panel on Tropical Cyclones. She has won the Indian Meteorological Society Award on monsoon research (formerly known as the B.N. Desai Award). She has delivered over 40 lectures and has more than 15 research publications to her credit.

Smt. Sunitha Devi is awarded with Certificate of merit for her outstanding contributions in the field of Atmospheric Science.

Dr. Vijay Kumar Soni

Dr. Vijay Kumar Soni obtained his M.Sc. (Physics) from Indian Institute of Technology - Roorkee (formerly University of Roorkee) and PhD in Atmospheric and Space Science from University of Pune. He joined the India Meteorological Department in 1999 as Meteorologist. He worked in Air Pollution Division, IMD, Pune till March, 2011. During his tenure at Pune, the air pollution laboratory for monitoring chemical composition of precipitation was augmented and atmospheric turbidity measurement programme was modernized. Since April, 2011, he is working as Scientist, Environmental Monitoring and Research Centre, IMD, New Delhi. He contributed significantly to establish aerosol monitoring network in India called Skynet-India for measurement of aerosol optical properties and estimation of aerosol radiative forcing. Recently, Black Carbon Monitoring Network of 16 stations and Multi-wavelength Integrating Nephelometer Network of 12 stations were set up under his guidance. He is taking a lead role in developing a high altitude observatory at Ranichauri in Uttarakhand.

Dr. Soni has contributed immensely in setting up a modern meteorological observatory at Bharati station in Antarctica. He was actively involved in establishment of GPS based Ozonesonde system at New Delhi and Bharati, Antarctica. Dr.Soni is serving as a committee member/reviewer for various national and international agencies/journals. He is member of Expert Appraisal Committee for environmental appraisal of mining projects of the Ministry of Environment, Forest and Climate Change.

Dr. Soni has been prolific in his scientific efforts, publishing 26 research papers in peer reviewed journals, 4 Meteorological Monographs on various subjects and 4 chapters in books. His recent research work on global dimming and brightening has received wide appreciation. His research interests include Aerosols, Solar Radiation, Air Quality and Precipitation Chemistry.

Dr. Vijay Kumar Soni is awarded Certificate of Merit for his outstanding contributions in the field of Atmospheric Sciences.

Dr. Swapna Panickal

Dr. Swapna Panickal received M.Sc in Oceanography and M.Tech. in Atmospheric Sciences from Cochin University of Science and Technology, Cochin, Kerala. She joined National Institute of Oceanography (NIO), Goa as Senior Research Fellow under the project Indian Ocean Experiment (INDOEX) and worked on the dynamics of large scale circulation of Indian Ocean using Institute of Numerical Mathematics (INM, Russia), Ocean General Circulation Model. She received her Ph. D degree from Goa University in 2006. She joined IITM as Research Associate under INDOMOD project and worked on the Indian Ocean Monsoon coupled interactions. She was selected as Post-Doctoral Research Associate at Hong Kong University of Science and Technology (HKUST), Hong Kong during 2007-2008. Dr.Swapna joined Indian Institute of Tropical Meteorology (IITM) as Scientist-C during 2009 and is actively involved in climate research and Earth System Model (ESM) development at Centre for Climate Change Research (CCCR), IITM.

Dr. Swapna Panickal played a key role in developing the first Indian Climate Model, IITM-ESM which would be taking part in the upcoming Coupled Model Intercomparison Project Phase-6 (CMIP6) experiments. To address the long-term critical need in India for a climate model that would provide reliable future projections of Indian monsoon rainfall, Earth System Model (IITM-ESM) was developed at CCCR, IITM. The development of IITM-ESM has emerged through transformation of a seasonal monsoon prediction model from the National Centre for Environmental Prediction (NCEP) Climate Forecast System (CFS) into a long-term climate model at CCCR, IITM. Dr. Swapna Panickal was instrumental in incorporating a new global ocean component (Modular Ocean Model version 4p1, MOM4p1) having better physics and an interactive ocean biogeochemistry in the CFS coupled model. The IITM ESM shows major improvements in simulating mean SST and exhibits better skills in capturing the South Asian monsoon rainfall, the dominant modes of climate variability such as El Niño-Southern Oscillation and Pacific Decadal Oscillation and their links with monsoon. The development of IITM-ESM is a landmark achievement in climate modeling from India. She has published 20 papers in peer reviewed national/international journals.

Dr. Swapna Panickal is awarded Certificate of Merit for her outstanding contributions in the field of Atmospheric Sciences.

Dr. Abhijit Sarkar

Dr. Abhijit Sarkar did his M. Sc in Physics from University of Calcutta. He completed his M. Tech. in Atmospheric Science and Technology and Ph. D. from Indian Institute of Technology, Kharagpur. During his Ph. D, he developed a three dimensional mesoscale model and studied the effects of an urban heat island and its growth on local weather and air quality over Indian region. He joined National Centre for Medium Range Weather Forecasting (NCMRWF) as Scientist 'D' in 2011.

During last three years he has been working on "Ensemble Data Assimilation and Forecasting". He has played a lead role in the successful implementation of a state-of-the-art Unified Model based ensemble prediction system with 45 members at NCMRWF and the same is generating real-time probabilistic forecasts. Various software packages have been developed for visualization of ensemble forecast products. He has also implemented a cyclone tracking system based on this EPS to generate the forecast products like (a) Tropical Cyclone mean track, (b) Tropical Cyclone strike probability. He also worked under the "Development of High Impact Severe Weather Forecasting System" program and studied composite characteristics of various Nor'westers. Currently he is actively involved in implementing hybrid 4DVAR data assimilation at NCMRWF.

He has published nine research papers in journals of national and international repute. He has played a key role in capacity building. He has delivered several lectures and imparted hands on training on numerical weather prediction for the trainees of various organizations and students of various educational Institutes.

Dr. Abhijit Sarkar is awarded Certificate of Merit for his outstanding contributions in the field of Atmospheric Science.

Award for Best Employees

Group "B" (Gazetted& Non-Gazetted)

Shri. Satendra Kumar

Shri Satendra Kumar is presently working as Assistant Meteorologist Gr-II in the Numerical Weather Prediction Centre, India Meteorological Department. He took initiatives in the installation of WDSS-II (Warning Decision Support System - Integrated Information) software including the configurational setup and operationalisation of the product generation and uploading it on website at Regional Meteorological Centre, Nagpur, Meteorological Centre Jaipur, Patna and Chandigarh. This is a very significant contribution towards improving Nowcast Service of IMD. He is also responsible for operational maintenance of WDSS-II running at Head Quarters, New Delhi. He has been Involved in the NWP data and products management, this includes coordinating and keeping archival & retrieval of the raw & processed data for post diagnostic studies and analysis to be carried in-house. The post processed data is being catalogued and maintained and initiative has been taken to make a query based retrieval system for the products, based on time, period and events for all the models (nowcast to extended range). Additionally, his work also includes writing scripts and generating products customized in the format and resolution as per the requirements of the users for research & development. His knowledge has been put to good use on High Performance Computing System in running the various models and developing utility scripts.

Shri Ashim Kumar Majumder

Shri Ashim Kumar Majumder is a Junior Analyst in National Centre for Medium Range Weather Forecasting (NCMRWF). He has completed his B.E. (Electrical) from Bengal Engineering College (Under Calcutta University). He supervises the functioning of 33/11 KV Sub-station at NCMRWF. He co-ordinates with service providers for proper functioning of Transformers, Electrical Panels, Diesel Generator Sets, DG Synchronising Panels, UPS, Capacitor Bank and AC Plants, so that uninterrupted power supply is always maintained. He also checks the electrical infrastructure of Bhashkara HPC installed at NCMRWF.He also supervises the functioning of Audio Video systems and co-ordinates for arranging various training programmes on NWP and seminars.

Smt. Kanta Sanhotra

Smt. Kanta Sanhotra performs all duties of DDO, NCMRWF such as payment of salaries to employees, payment of contingency, medical, LTC, TA & other bills & arrears, Return filling of TDS & WCT despite having additional charge of S.O. in MoES. She discharges all the duties of DDO in efficient & time bound manner.

Smt. Sobhana S. Nair

Smt. Sobhana S. Nair has been entrusted the work of CDDO of CMLRE. She has thorough knowledge of official work and related rules and regulations. She ensures the drawing and disbursing of all payments related to CMLRE staff, projects staff under MLR-Programme and contingent bills. She also ensured the timely payment of membership fee (Annual contribution) to The Commission for the Conservation of Antarctic Marine Living Resources. She has functioned as member of the Purchase Committee of CMLRE. An official always ready to assist her superiors, colleagues and subordinates.

Smt. R. S. Salunke

Smt. R. S. Salunke is at present working at IITM Pune in the Establishment Division. She is in charge of personnel Section and Service Benefit Unit. She is responsible for all Personal Files, Pension files, and Service Book and dispatch of letters. She is also dealing with the files of all categories of promotion cases, deputation files, RA/RF Contract employees and correspondence with MoES.

Dr. Hari Singh Sisodia

Dr. Sisodia presently working in NCS was Involved in multidisciplinary activities related to technical & scientific aspects and management under the Seismic Hazard Microzonation of NCT Delhi, wherein, a large program of Geotechnical/ Geophysical field survey coordination, sites identification, lab investigations, data interpretation and analyses at more than 550 sites, spread over Delhi was taken up. During the lab investigations, data interpretation,

analyses etc., quality of data was ensured by his active involvement. During the compilation for final report, he enthusiastically worked for review, corrections, preparation of revised report and its printing, publication on websites and report release function on 22.02.2016, by HMoES and HMoS(ES) in NCS. During the year, he actively contributed in preparation of arguments a matter of arbitration case in which, NCS won the case on 27.10.2015 and saved Rs.4031 Crores approximately. In addition to his routine duty of Science-techno management, he successfully handled all additional duties of Caretaker, Store, supervision of renovation work of Conference hall and Computer rooms and so many other administrative responsibilities.

Smt. Neelam Garg

Smt. Neelam Garg is working in the ministry with two officers who are in-charge of IFD, Vigilance, ICC, Parliament, Hindi and IMD. She coordinates with various Division of the Ministry on official matters, handle various confidential papers carefully and timely submits the files/papers marked for a particular day. There were instances where she took extra initiatives and responsibilities. The officer is sincere, obedient, intelligent, industrious and conscientious, systematic in work, eager to learn new things and accepts additional responsibility.

Smt. Preetha A. Menon

Smt. Preetha Anil Menon, Scientific Assistant, joined IMD on May 1997, and is presently associated with hydrometeorological services in Climate Application Group of IMD, Pune. She has made significant contribution in the preparation of daily/ monthly rainfall normal's which are being used by IMD and other state government agencies. She has also contributed in the important IMD publications viz. "Rainfall Atlas of India" and "100 years monthly rainfall data series of IMD" which are widely used by research bodies for undertaking studies on climate variability. She has also developed software for computation of Standardized Precipitation Index (SPI) for the districts, which are used for drought monitoring in monthly and weekly scale. These products are being used by IMD for National Agromet Advisories. She has also developed a program for generation of SPI district forecast (weekly) using IMD GFS/MME district rainfall forecast as the input. She is also engaged in research activities mainly on observed climate changes, extreme rainfall analysis, flood risk analysis. She has five research publications including one in an International Journal.

Shri Awadhesh Prasad

Shri Awadhesh Prasad is presently working as SA in IMD. He is actively associated with works related to release of Grant-in-Aid to 130 AMUs under Gramin Krishi Mausam Seva (GKMS) Projects. Shri Prasad, efficiently handles all the proposals for timely release of the grants by verifying the statutory requirements and obtaining approvals of the Competent Authorities. He also participates in Annual Review Meeting of GKMS and training to Nodal Officers of AMUs for preparation of Utilization Certificates & Statement of Expenditure and Budget requirement.

Shri R.D. Nair

Shri R.D. Nair is at present working at IITM Pune. He assumed the charge at the Director's Office in March 2015, and carried out the following work which involves management of administrative activities at the Director's office: (i) Notes and dictations for the Director's office,(ii) Letter drafting and correspondence with various Ministry/Institutions, (iii) Record Keeping and maintenance at the Director's office, (iv) Handling of utility bills for the Director for reimbursements,(v) Arrangements of Director's proposed tours/deputation programs.

Smt. Poonam Chauhan

Smt. Poonam Chauhan is presently working in NCS. She is actively associated with checking the State of Health of servers of Real Time Seismic Monitoring Network & associated field stations and takes appropriate necessary action in case of problem with reception of data. She is also involved in the following work: (i) Retrieval of continuous one hour SEED files from archive of RTSMN server to external disk and to retrieve the missing data files during normal transmission, (ii) Retrieval and storage of event waveform data of North East telemetry Network and RTSMN Network for the analysis of events for preparation of seismological bulletin, (iii) Making duplicate copies of the above data for redundancy of data, (iv) supply of event waveform data of various network to different organizations and Scientists/RA/Project Scientist of NCS, (v) processing & timely payments of bills of various mobiles used for dissemination of earthquake information through SMS. She has improved the quality and efficiency of job by introducing her skills of programming in retrieval and storage of seismic data. She is also

assigned the work of Women Cell of NCS.

Shri A. Vadivelan

Shri A. Vadivelan works in NIOT and his duties include: (1) Significant role in realization of PROVe vehicle, data telemetry system and deck control unit and its testing for polar conditions, (2)Participation in 34th scientific expedition to Antarctica, support role for system integration, trouble shooting and deployment during the expedition with PROVe, (3) Incorporation of spectral radiance and irradiance sensor with PROVe telemetry system for coral reef expedition in Andaman Islands, (4) Support role for up keeping and up gradation of ROSUB 6000 telemetry system. He has 3 publications to credit.

Shri Ganesh M. Chandvale

Shri Ganesh M. Chandvale Joined NCAOR on 21.10.1999. His duties include Research Vessel Management & Maintenance, Implementation of scientific cruises, launching Southern Ocean expeditions and scientific data archival/uploading, coordination with scientists/institutes and shipping agents in connection with cruise plans and logistics requirements, processing of AMC and shipping agency dues. He was involved in collection of several tons of polymetallic nodules from deep sea in Central Indian Ocean needed for their analysis and bulk collection for metallurgic uses. Besides Research Vessel management, he was also active in outreach activities of NCAOR, Goa.

Smt. Lavanya G.

Smt. Lavanya G. presently working in NCESS has very good grasp over financial matters. Her duties predominantly relate to supervision of all matters relating to the Finance and Accounts section comprising of correspondences with the Ministry, budget preparation, timely submission of expenditure, submission of financial statements to the Ministry, ensure adequate availability of funds and settlement of accounts. She is capable of conducting both statutory and AG audit independently. She is efficient in verification of purchase and payment bills, all financial vouchers, and service tax matters, projects and salary and Income Tax matters. She is very efficientand sincere at her work.

Shri Salaj S. S.

Shri Salaj S.S. joined National Centre for Earth Science Studies (NCESS) in June, 2006 and working as Scientific Assistant Gr.B. After completing Bachelor of Engineering In Electrical & Electronics, he obtained M.Tech in Remote Sensing and also completed his M.Sc. in Computer Science. He is currently doing PhD in Remote Sensing applications on coastal zone. He has primarily been entrusted with the duties in the Deployment of Ocean Survey Instruments, Lab-in-Charge of SEM-EDS Lab, Support services for the functioning of X-Ray Diffractometer (XRD) Lab, Web Administrator of NCESS, Maintenance and content updation of NCESS Website. He also assists in the operation of telepresence studio, recruitment process and other such regular requirements in the Administration. He also works as Nodal Officer for Procurement and Training & Documentation (PT&D) Group. Shri Salaj S.S. is a hardworking and responsible employee with high amount of technical skills in IT field and shows exemplary professionalism in executing time-bound activities.

Shri Jeyakumar

Shri Jeyakumar presently working in INCOIS has taken a lead role in setting-up a network of real-time automatic ocean observation systems which measure the ocean parameters and transmit them to INCOIS in real-time to facilitate the real-time validation for forecast and analyzed products. Several instruments such as wave rider buoys, ship mountable automatic weather stations and remote wave height meters were deployed as part of Ocean Observation Programme at INCOIS. These instruments report the observations to INCOIS in real time through India's geosynchronous satellite, INSAT. Indigenous development of the INSAT communication system and sea trials were coordinated by Shri Jeyakumar and team. During the short tenure at INCOIS , their team had managed to install 33 Automatic Weather Stations and 13 Wave rider Buoys making it biggest ocean observation network in India. The amount of data collected from these observatories are of enormous help in climate research, forecast assimilation, alerts and warnings. The management skills and enthusiastic coordination by his team in the project earned INCOIS with long term time series data and increased trust stake holders in forecast products.

Group "C"

Shri Rattan Singh

Shri Rattan Singh has been working as junior assistant in the library of Ministry since 1983. Apart from routine library activities he has taken initiative and very much involved in the stock taking of the library. He records the issue and receipt of Magazines, journals to/from the officers/users of the Ministry. He caters to the needs of all officers/users regarding their demand for book, reports Journals News Articles etc. He has been always willing to extend the service required from library to all officers/users of the Ministry.

Shri Suresh Mishra

Shri Suresh Mishra has been working as Photo Copy Operator in the Ministry since 1982. . He does the photocopy of lengthy documents of the Ministry like Cabinet Note, Report of the expert Committee, SFC/EFC note, note for supplementary of starred question of Parliament. He puts in late hours during the parliament Session and other several occasions. He handles various confidential papers carefully.

Smt. Chhaki Eden Bhutia

Smt. Chhaki Eden Bhutia joined India Meteorological Department in 1990 and is currently working as Upper Division Clerk at Meteorological Centre, Gangtok. She efficiently handles all cash related matters of the office. She is dynamic and discharges her duties promptly. She carries positive attitude and always ready to take additional responsibility and has the capability to carry them out. Her relation with the office superiors/ colleagues/ subordinates is excellent.

Shri M. Rathinavel

Shri M. Rathinavel presently working in CMLRE joined Sagar Sampada Cell under the erstwhile Department of Ocean Development in March 1994. During the tenure, he has participated in about 200 cruises including 3 international cruises which include one cruise to Southern Ocean namely First Indian Krill Expedition (FIKEX). He was out at sea about

3000 days and thereby helped successful collection of sampling required for all the MLR Projects since IX plan period onwards. He also puts sincere efforts during the Dry dock of the vessel both in India and abroad. Besides the regular duties, he actively participates in organizing in high level committee meetings.

Shri S.A. Sayyed

Shri S.A. Sayyed joined IITM in June 1984 and is presently working as driver for the Director, Secretary MoES & various VIP's visiting the Institute. He also undertakes driving duties outside Pune & Maharashtra during official tours (Mahabaleshwar, Karad, Mumbai, Goa, Gujarat, Andhra Pradesh, Tamilnadu Bangalore and Jaipur). He has other duties like Caretaker of Phase I and II Buildings, LIP, HPC Buildings, Canteen and IITM colony, in addition to his driving work. He is extremely sincere and performs his duties with utmost devotion.

Shri Rajeev Kumar

Shri Rajeev Kumar is working in Delhi telemetry, North-East telemetry Networks and OSG unit of NCS. He looked after the maintenance of various Digital type of instrument installed under unmanned observatories and efficiently managed their functioning without any major breakdown. He has undertaken tours to various seismological observatories towards maintenance, inspection, site selection and installation of various seismic equipments. He downloads the data of different stations and archives them. His dedicated and sincere efforts have generated valuable data archives. He has good technical skill in diagnosing the faults and complete overhauling of the digital seismographs. He has learned the maintenance of equipments by his own efforts through his experiences. He is always willing to take additional responsibility.

Shri J.A. Rajan

Shri J. A. Rajan works in NIOT and is involved in (i) onshore and offshore soil sample collection from various sites along TN, (ii) assisting scientist during vibrocoring, (iii) carrying out Laboratory Analysis of samples collected and (iv) assisting the survey team during RTK Survey. He is hardworking and sincere in carrying out the assigned work in a time bound fashion. He is always keen in improving his working knowledge.

Shri Mohammad Sayeed

Shri Mohammad Sayeed is working in the Administration Section of NCAOR and is involved in all the administrative works viz. Personnel recruitment, contractual staff outsourcing, Guest house, Gymnasium and Housekeeping management. He also coordinates with the MEA in timely clearance of official passports/VISA etc. for the officials going on foreign deputation. His sincerity and commitment to work is really commendable.

Shri Dasari Prasad

Shri D Prasad has completed M A (Economics) and joined as Sr. Executive in INCOIS in 2006. He is instrumental in implementation of SAP Modules in INCOIS, more particularly, Material Management Module benchmarking as per the relevant rules provisions of GFR. He has also taken active part in implementation e-procurement Module (Central Public Procurement Portal) by interacting continuously with NIC, Hyderabad. Currently, Shri Prasad is working as Assistant Manager in Finance and Accounts and taking care of SAP FICO module and Payroll Module in INCOIS. He has contributed significantly in preparation and timely submission of Annual Financial Statements as per the Accounting standards applicable to the Central Autonomous Organizations in SAP environment. He is meticulous in his work and is also an avid learner.

Multi-Tasking Staff

Shri Hari Om Sharma

Shri Hari Om Sharma, MTS is a diligent official who has been working in Ministry since May'1996 as daily wager and thereafter from April'2007 on regular basis. After joining MoES (erstwhile DOD), he also worked in O/o Secretary, MoES to the entire satisfaction of his superiors. For the last 8 year he has been working in Estt. Section and entrusted with dak distribution, photo copying, taking ID card application to MHA and CGHS application to M/Health and bringing them back etc. He is very much committed and completes the assigned work efficiently.

Shri R. Namrath

He works at MC Bangalore, IMD as a Driver. He also works in PBO/RSRW section covering MTS Vacancy and works in PBO/RSRW covering SA vacancy. He has toured for preventive maintenance/servicing of AWS/ARG stations as a driver and assisted in servicing of AWS/ARG stations. During his work period no complaints has been received during the tours from officers and he has accomplished accident free driving. He is very polite in reception of touring officials and ready to receive and send off officials even in odd hours. He knows the computer operations and useful in general works.

Shri E.M. Botla

Shri E.M. Botla works in the Director's office at IITM. He manages the work relating to file movement from Director's office to various other divisions/sections/units. He also looks after the operation of water pumps in IITM Campus and colony in addition to his regular office work. He is extremely sincere and performs his duties with utmost devotion.

Shri Madan Singh

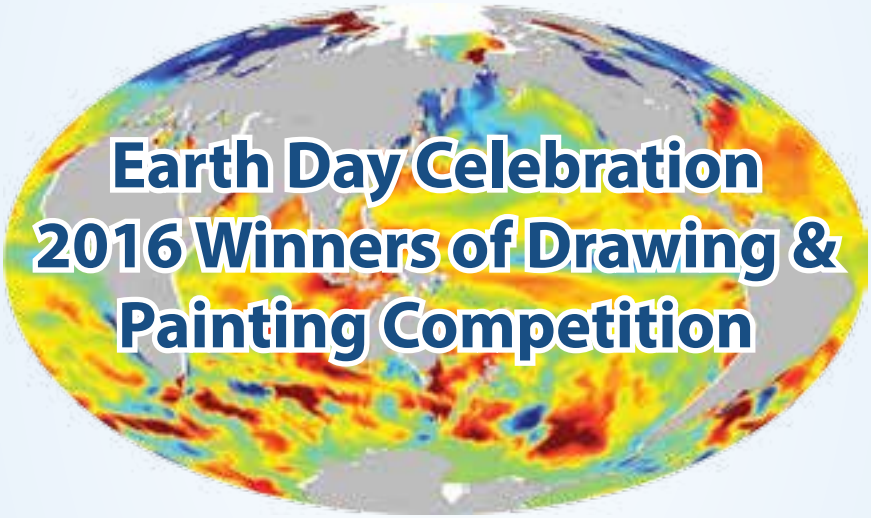
Shri Madan Singh's works in NCS, New Delhi. He manages the work relating to file movement and undertakes other multi tasking duties. He is always willing to take additional responsibility.

Shri P. Jayaprakash

Shri P. Jayaprakash is presently working in NIOT. His duties include assistance to the technicians and scientist for laboratory testing of soil samples, soil sample collection from Kadalur Periyakuppam site and local purchase of various project related item. He is very sincere in carrying out the assigned work and very good in timely completion of jobs assigned.

Shri Y. Srinivas Rao

Shri Y. Srinivas Rao is working as Multi Tasking Staff in Procurement section of National Centre for Antarctic and Ocean Research. He manages dispatch section in very efficient manner. He is handling all the work related to distribution of Dak/Files, operation of photo copier, fax. He also assists in Procurement works such as Indents registration, preparation of Minutes of the Meetings, Uploading the tenders on Central Public Procurement Portal, maintenance of various registers and records. He is very sincere, meticulous, performs his duties with full dedication and always ready to shoulder additional responsibilities.



Earth Day Celebration 2016 Winners of Drawing & Painting Competition

Earth Day Celebration 2016 Winners of Drawing & Painting Competition

Level – I (Class V and below)

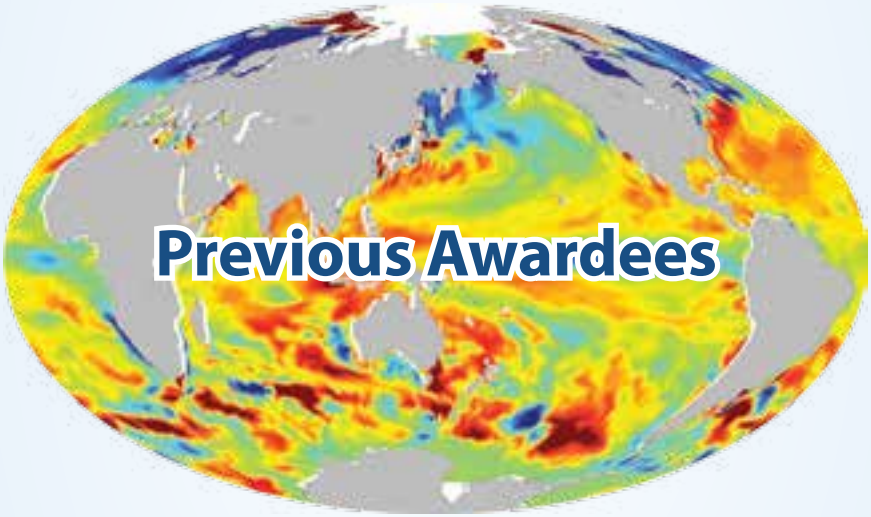
Ist Prize	Shri Navaneeth Krishnan, Vth Standard, Dr. Z H M Bharathiya Vidya Vihar, Changanacherry, Kerala.
IInd Prize	Shri Atul Kimothi, Vth Standard, T C A, Pokhari, Uttarakhand.
IIIrd Prize	Ms. Shreya Choudhary, Vth Standard, Ursuline Convent Sr. Sec. School, Greater Noida.

Level – II (VIthto Xth Standard)

Ist Prize	Shri Suraj Manjhi, VIIIth Standard, Sarvodaya Bal Vidyalaya Rouse Avenue, DDU Marg, New Delhi.
IInd Prize	Ms. Suman Praveen, Xth Standard, MET Hr. Sec. School, Sopore, Jammu & Kashmir.
IIIrd Prize	Shri Athul S. Raj, IXth Standard, M D Seminary Hr. Sec. School, Kottayam, Kerala

Level – III (XIth to Graduation)

IInd Prize	Ms. K. P. Oshin, B.A IIIrd Year, St. Teresa's College, Ernakulam, Kerala.
IIIrd Prize	Shri Samir Mahishal, XIth Standard, Chakundi High School, Dankuni, Hoogly, West Bengal.



Previous Awardees

Previous National Awardees

Life Time Excellence Award in the Sphere of Earth System Science
(Started from the year 2013)

Year 2013	:	Prof. Roddam Narasimha
Year 2014	:	Prof. Vinod K. Gaur

National Award for Ocean Science & Technology

Year 2004	:	Dr. S.Z. Qasim
Year 2005	:	Prof. M. Ravindran
Year 2006	:	Dr. B. L. Somayajulu
Year 2007	:	Dr. A.E.Muthunayagam
Year 2008	:	Dr. Harsh K. Gupta
Year 2009	:	Dr. George Joseph
Year 2010	:	Prof. S. Krishnaswami
Year 2011	:	Dr. B.L. Deekshatulu
Year 2012	:	Dr. Satish Ramnath Shetye
Year 2013	:	Dr. S. W. A. Naqvi
Year 2014	:	Prof. T. Balasubramanian
Year 2015	:	Prof. C.P. Vendhan

National Award for Atmospheric Sciences& Technology
(Started from the year 2007)

Year 2007	:	Shri D. R. Sikka
Year 2008	:	Prof. Sulochana Gadgil
Year 2009	:	Prof. Shishir Kumar Dube
Year 2010	:	---
Year 2011	:	Prof. R.N. Keshava Murthy
Year 2012	:	Prof. J. Srinivasan
Year 2013	:	Prof. U.C. Mohanty
Year 2014	:	Prof. Bhupendra Nath Goswami
Year 2015	:	Prof. O.P. Sharma

National Award for Geoscience & Technology
(Started from the year 2013)

Year 2013	:	Dr. V.P. Dimri
Year 2014	:	Dr. Rishi Narain Singh
Year 2015	:	Dr. G.R. Ravindra Kumar

National Award for Polar Science & Cryosphere
(Started from the year 2013)

Year 2013	:	Dr. Rasik Ravindra
Year 2014	:	Dr. Anil Vishnupant Kulkarni
Year 2015	:	Shri Arun Chaturvedi

Young Researcher/Achiever Award
(Started from the year 2013)

Year 2013	:	Dr. Nilanjan Saha
Year 2014	:	Dr. Vijayakumar S. Nair & Dr. Rambichar Singh Yadav
Year 2015	:	Dr. Ashish N.Dongre

Awardees of Certificate of Merit and Best Employees - 2015

Certificate of Merit for Scientists/Engineers in Ocean, Polar and Geosciences

1. Dr. Sisir Kumar Dash, PD-Integrated Coastal and Marine Area Management, Chennai.
2. Dr. N.V. Vinithkumar, National Institute of Ocean Technology, Chennai.
3. Shri R.S. Mahendra, Indian National Centre for Ocean Information Services, Hyderabad.
4. Dr. Shailendra Siani, National Centre for Antarctic & Ocean Research, Goa.
5. Dr. V. Nandakumar, National Centre for Earth Science Studies, Thiruvananthapuram.
6. Shri J.L. Gautam, India Meteorological Department, New Delhi.
7. Dr. Sumer Chopra, Ministry of Earth Science, New Delhi.

Certificate of Merit for Scientists/Engineers in Atmospheric Sciences and Climate Change

1. Dr. P. Mukhopadhyay, India Institute of Tropical Meteorology, Pune.
2. Dr. Raghavendra Ashrit, National Centre for Medium Range Weather Forecasting, Noida.
3. Dr. Ashim Kumar Mitra, India Meteorological Department, New Delhi
4. Shri K.N. Mohan, India Meteorological Department, New Delhi

Best Employees:

Group B (Gazetted& Non Gazetted):

1. Smt. Shardha Vilas
2. Shri Sudip Banerji
3. Smt. Latha Sridhar
4. Shri Ram Kumar
5. Shri Ashok Kumar Sarkar
6. Dr. Deevan Singh Bisht
7. Shri Madhu Madhavan. M
8. Shri P. Abdul Basheer
9. Shri Jyotirmay De
10. Shri Dinesh Khanna
11. Ms. D. Latha
12. Shri G. Vengatesan
13. Shri B. Krishna Prasad
14. Ms. Sahina Gazi
15. Dr. Omkar Nath Shukla
16. Shri Nishanth N

Group C:

1. Shri Hemant Kumar
2. Shri Laxman Singh
3. Shri S.B. Prakash
4. Shri Sudip Majumder
5. Shri Mahendra Singh
6. Shri K.K. Sikdar
7. Shri Ashok Ranga
8. Shri S. Guruprasad Rao
9. Ms. C. Easwari
10. Shri Junaid Ahmed H
11. Shri Dilip E. Shinde
12. Shri Jayapal N.

Multi Tasking Staff

1. Shri Yogesh Kumar Sharma
2. Shri Chhote Lal
3. Shri Sushil Kumar
4. Shri Rajan Daniel
5. Shri Dinesh Kumar
6. Shri P.G. Pradeep
7. Shri UttamVir Navso
8. Shri G.E. Dhongade

Winners of Drawing Competition in Earth Day Celebration – 2015

Level One (1st to 5th Standard)

1st Prize -- Shri Tamim Molla, IInd Standard, Jnanpith Sikhyatan, Joynagar Mozilpur, West Bengal.

2nd Prize -- Ms. Srishti Verma, IVth Standard, Ryan International School, Sector-40, Gurgoan, Haryana.

3rd Prize -- Shri Soham Arora, Vth Standard, Venkateshwar International School, Dwarka, New Delhi.

Level Two (6th to 10th Standard)

1st Prize -- Shri Ambik Guin, IXth Standard, Begampur High School, Hooghly, West Bengal.

2nd Prize -- Ms. Mansidque Kaur, VIIIth Standard, Mount Abu Public School, Rohini, Delhi.

3rd Prize -- Shri Tashi Tundup, Xth Standard, Army Public School, Leh, Jammu & Kashmir.

Level Three (11th to Graduation)

1st Prize -- Ms. Farzana, Master of Arts, Kainat Institute of Technology, Sambhal, Uttar Pradesh.

2nd Prize -- Shri Harsh Aman Arya, Ist Year, NIFT, Bhopal, Madhya Pradesh.

3rd Prize -- Shri Robin Kumawat, XIth Standard, Jhun Jhun Academy, Jhun Jhnu, Rajasthan.

सत्यमेव जयते

Government of India
Earth System Science Organisation
Ministry of Earth Sciences