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LINK TO WEBPAGE: <http://environment.inoe.ro>

#### TITLE OF PRESENTATION

inDust: International network to encourage the use of monitoring and forecasting Dust products

#### ABSTRACT OF PRESENTATION

Sand and Dust Storms (SDS) are extreme meteorological phenomena that generate significant amounts of airborne mineral dust particles. SDS play a significant role in different aspects of weather, climate and atmospheric chemistry while they represent a serious hazard for life, health, property, environment and economy. Understanding, managing and mitigating the risks and effects of SDS requires fundamental and cross-disciplinary knowledge.

Over the last few years, numerical prediction and observational products from ground- and satellite platforms have become prominent at several research and operational weather centres as a result of growing interest from diverse stakeholders, such as solar energy plant managers, health professionals, aviation and policy makers. Current attempts to transfer tailored products to end-users are not coordinated, and the same technological and social obstacles are tackled individually by all different groups. The usage of data is therefore slow and expensive.

The EU-funded COST Action InDust has an overall objective to establish a network involving research institutions, service providers and potential end users on airborne dust information. Airborne dust transport has multi- and trans-disciplinary effects at local, regional and global scales; InDust involves a multidisciplinary group of international experts on aerosol measurements, regional aerosol modelling, stakeholders and social scientists. Moreover, InDust searches to coordinate and harmonise the process of transferring dust observation and prediction data to users as well as to assist the diverse socio-economic sectors affected by the presence of high concentrations of airborne mineral dust.

Cooperation with institutions from near-neighbouring and international partner countries in Northern Africa and the Middle East will be essential and of mutual benefit, because dust concentrations are markedly higher while the adverse effects more severe near the sources than far downwind. Moreover, the participation of South African, American and importantly Asian partners brings the possibility of extending the application of the developed products, protocols and tools well beyond the European borders, including areas like Asian regions where dust particles play a significant role in the air quality and meteorological processes.

#### BIOGRAPHICAL NOTE

Mrs. Anca Nemuc is working as a senior scientist at National Institute of Research and Development for Optoelectronics, Romania since 2005. She holds a PhD in Physics from Faculty of Physics, University of Bucharest, Romania and a Master of Science in Marine Environmental Sciences from Marine Science Research Center, Stony Brook University, Stony Brook, New York, USA. Dr. Nemuc is involved in several European Space Agency and EU projects related to atmospheric monitoring from ground based and satellites (e.g. Principal Investigator of ESA project SAMIRA –ctr no.4000117393/16/I-NB Satellite based Monitoring Initiative for Regional Air quality (2016-2019). She is also Site Manager of AERONET (Aerosol Robotic Network) since 2007 and of MWRnet - An International Network of Ground-based Microwave Radiometers since 2009. In the last years Mrs. Nemuc was the country representative in several COST actions as follows:

- ES0702 European Ground-Based observations of Essential Variables for Climate and Operational

Meteorology (EG-CLIMET); •ES1303 Towards operational ground based profiling with ceilometers, doppler lidars and microwave radiometers for improving weather forecasts (TOPROF); •A16109-Chemical On-Line cOmpoSition and Source Apportionment of fine aerosol (COLOSSAL). She is also involved in organizing summer schools, supervision of graduate and undergraduate students for research work and thesis writing. Her main scientific interests are in active and passive remote sensing data correlations, microwave radiometry, sunphotometry and mass spectrometry systematic measurements and data analysis and processing. She is co-author of over 20 ISI papers related to aerosol, lidar, atmospheric dynamics and composition.