

Infrastructurile de cercetare ca promotor al științei deschise prin accesul la date și servicii

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UN CONCEPT ABSTRACT?

Definitia ESFRI

- Infrastructurile de cercetare ESFRI sunt facilitati, resurse sau servicii cu **caracter unic**, identificate de catre comunitatile europene de cercetare pentru a realiza activitati de cercetare de top in toate domeniile

Definitia conform Regulamentului UE 651/2014

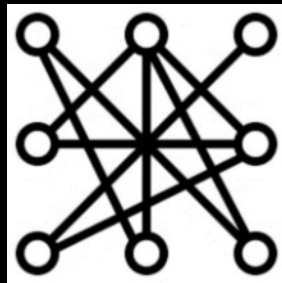
- Infrastructura de cercetare inseamna instalatii, resurse si servicii conexe **utilizate de comunitatea stiintifica** pentru a desfasura activitati de cercetare in domeniile sale respective si cuprinde principalele echipamente sau seturi de instrumente stiintifice, resurse de cunoastinte precum colectii, arhive sau informatii stiintifice structurate, infrastructurile generice bazate pe tehnologia informatiei si comunicatiilor cum ar fi retelele, materialul informatic, programele de software si instrumentele de comunicare, precum si orice alte mijloace necesare **pentru desfasurarea activitatilor de cercetare**.

CARACTERISTICI

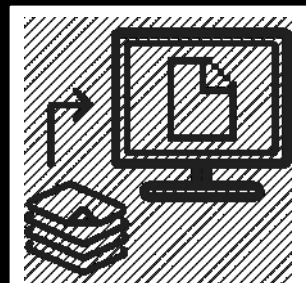
- Sunt organizate / structurate / coordonate
- Au caracter de unicitate la nivel national / European / global
- Potenteaza cercetarea de top
- Sunt operate pe termen lung (sustenabilitate!)
- Oferă acces la facilitati, date, servicii
- Au deschidere internationala si importanta nationala semnificativa



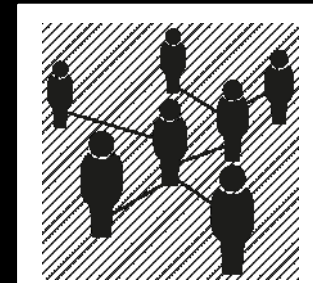
Localizate



Distribuite



Dematerializate



Rețele de experti

Cercetare



- Experimente proprii
- Experimente solicitate de externi

Acces deschis



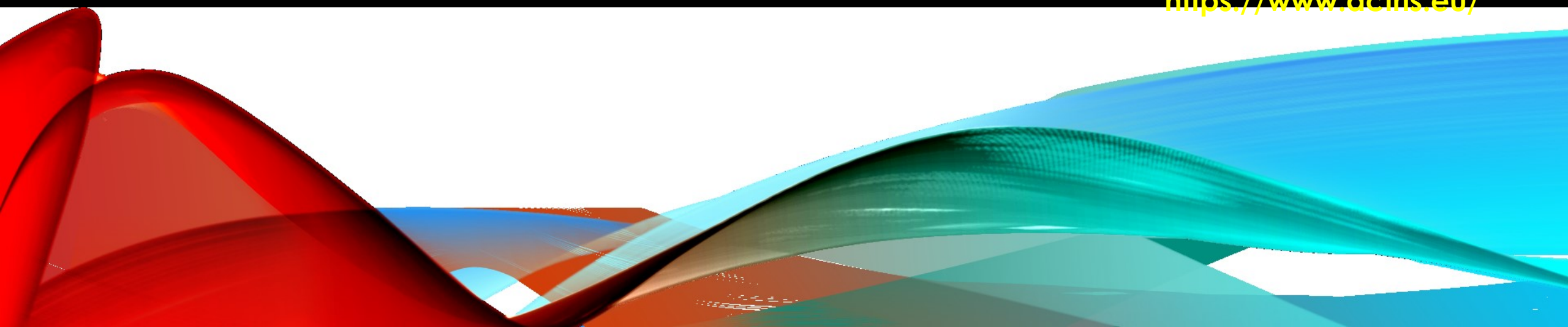
- La infrastructura
- La date
- La training
- La servicii tehnologice
- La informatii

- Deschis nu inseamna intotdeauna gratis
- Dar in general costurile sunt mai mici decat pe "piata libera"
- Infrastructurile de tip ERIC sunt partial sustinute de tarile participante
- Datele si training-ul sunt de obicei gratuite

UN ESEMPLU DE LUAT IN CONSIDERARE

ACTRIS = Aerosols, Clouds and Trace gases Research InfraStructure

<https://www.actris.eu/>



O infrastructură de cercetare

- Distribuită, europeană, de tip ERIC

Compozitia atmosferei

- La suprafată
- În coloana atmosferică
- Profile verticale

Tehnologii in situ si de teledetectie

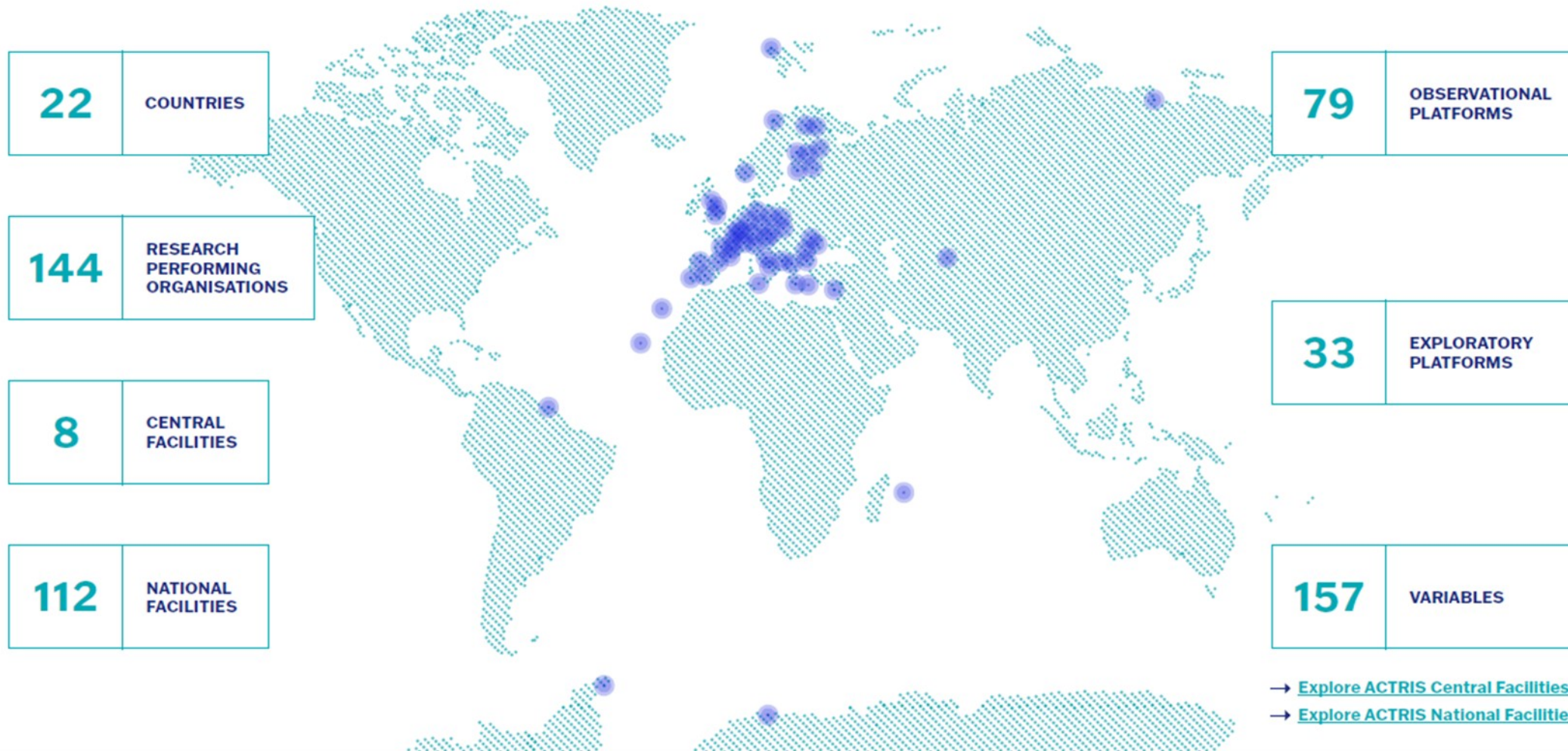




“ACTRIS is consolidating its position in the national, European and international landscapes, expanding its player supporting environment. Quality of services, scientific culture, agility to respond to user communities with trust, integrity and innovation are the strengths of ACTRIS and its partners.”

Paolo Laj, ACTRIS Scientific Chair

RELEVANȚA



ESFRI

Project 2016
Landmark since December 2021

Strategy Report on Research Infrastructures

ROADMAP 2021

ESFRI LANDMARKS

ENVIRONMENT

ACTRIS

Aerosol, Clouds and Trace Gases Research Infrastructure

Website
www.actris.eu

Headquarters
University of Helsinki - FMI
Helsinki, Finland

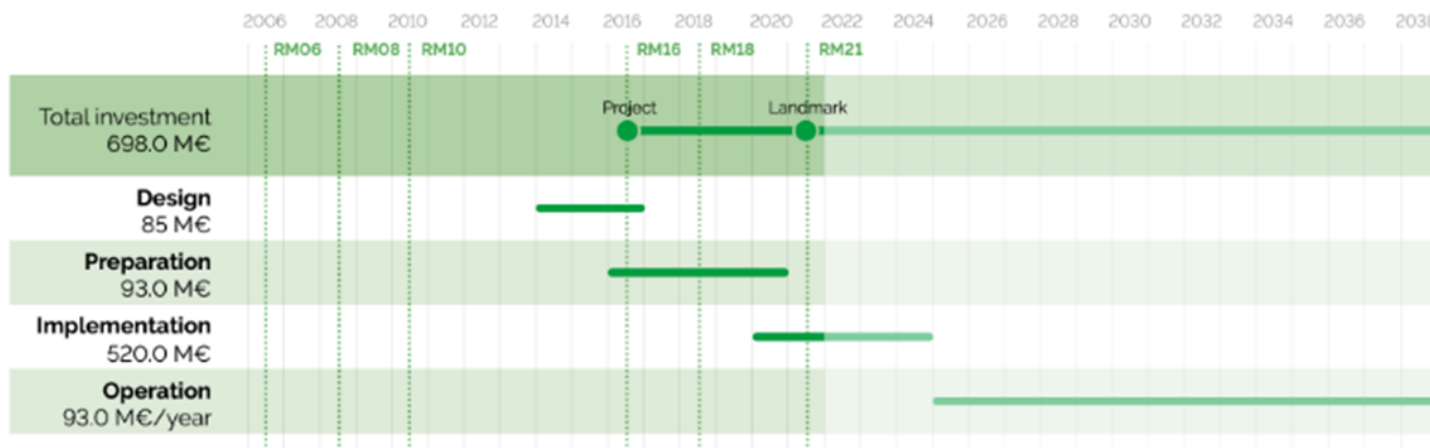
Legal status
ERIC Step2

Type
distributed

— INTERCONNECTIONS —



TIMELINE & ESTIMATED COSTS



POLITICAL SUPPORT



Lead

FI

Member

AT, BE, BG, CY, CZ, DE, DK, FR, IT, NO, RO

Observer

CH

Prospective member

EL, ES, NL, PL, UK

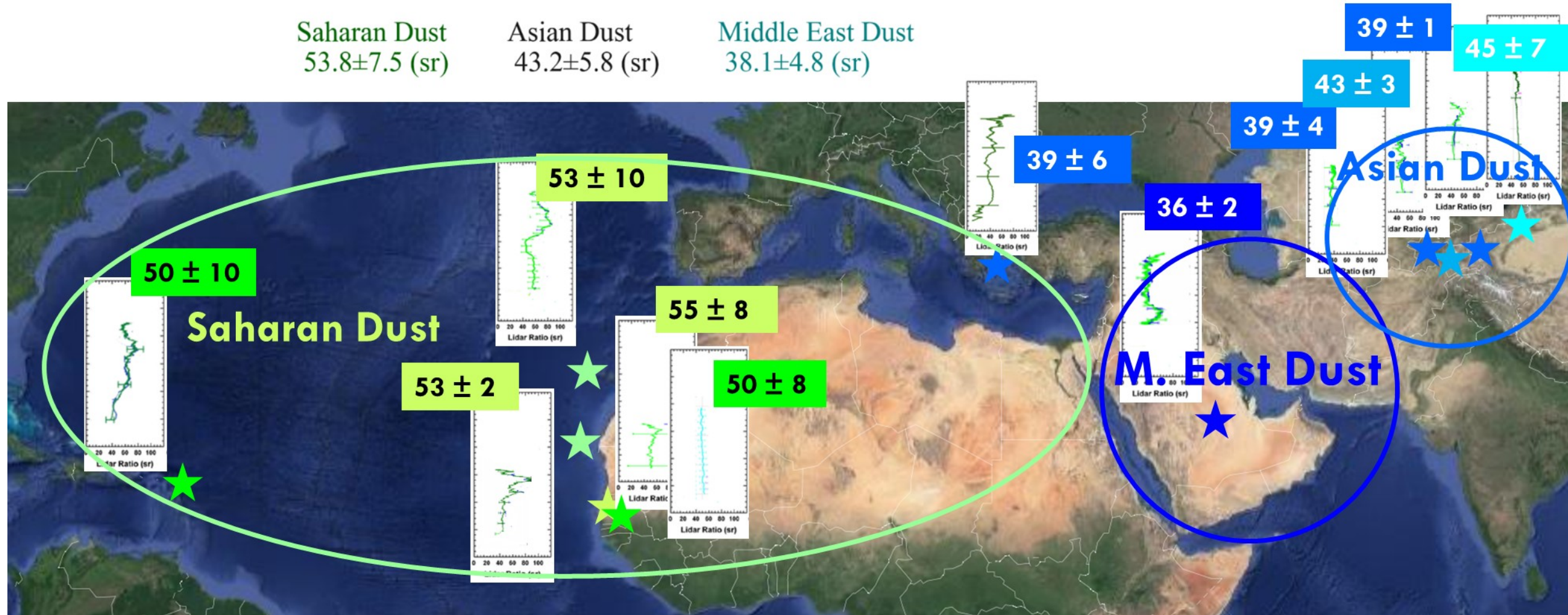
CERCETARE

Proprietățile prafului mineral

Saharan Dust
 53.8 ± 7.5 (sr)

Asian Dust
 43.2 ± 5.8 (sr)

Middle East Dust
 38.1 ± 4.8 (sr)



LR
(sr)

70

60

50

40

Portail de données

ACTRIS Data Centre
- an atmospheric data portal

User Manual | About

Search Search Results Data Products Tools and Services Documents Top downloads during week: G

Variables [136] Only ACTRIS Variables: Check NRT data

Locations [1280]

Database / Network [21] Type [3]

Platform [3] Matrix [29]

Latitude: from [] to []
Longitude: from [] to []
Altitude: from [] to []
Date range: from dd-MM-yyyy HH:mm to dd-MM-yyyy HH:mm

Press the Ctrl-button (while selecting) for multiple selection. Datasets total: 436662

Copyright (c) 2011 - 2023 ACTRIS. All rights reserved. Build version: 2.4.200. This application is using cookies.
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 654109.

Portail de services

ACTRIS
Enriching the Atmosphere

ACTRIS PASS - Platform for managing user access to ACTRIS ServiceS

ACTRIS PASS (Platform for managing user access to ACTRIS ServiceS) is a web tool designed and implemented by the Service and Access Management Unit of the ACTRIS Head Office. It provides a collection of services to all the users involved in the process of submitting, managing and reviewing the requests to access physical and remote services provided by the ACTRIS facilities distributed in Europe and by the other research infrastructures partnering with ACTRIS under specific projects.

How to Apply

ACTRIS offers different options to access physical and remote services, open and limited and with different application process.

Explore the available programs below, and start your application today!

Programs

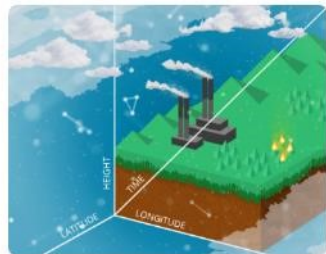
Search programs..

ACTRIS-IMP Third call for proposal to acc...
Accepting applications from Jul 22 2022 12:00 (CEST) to May 31 2023 17:00 (CEST)
The third and last call for proposals in the frame of the ACTRIS IMP project offers limited opportunities for free-of-charge Trans-National Access (TNA) to specific services at 11 ACTRIS facilities comprising Topical Centres (TCs), the Data Centre (DC), National Facilities (NFs), or combined ACTRIS Facilities (NF-TC), located in

ATMO-ACCESS 4th call for Trans-Nationa...
Accepting applications from Feb 27 2023 12:00 (CET) to May 2 2023 17:00 (CEST)
This 4th call offers remote or hybrid access to the most advanced atmospheric research facilities in Europe. The call topic will be open.

ACTRIS training course: Atmospheric observations of aerosols, clouds and reactive trace gases

Home / Events



08 / 14
May / May

This training school is an introductory course focusing on the variables and measurement techniques relevant to ACTRIS.

Course contents: introduction to ACTRIS research infrastructure and data portal, data management and curation, data quality, open data. Basic principles behind the most important variables and measurement techniques in ACTRIS. During the course, the students will formulate their own research questions and use open data to answer them.

Learning outcomes: after the course, the participants know what the ACTRIS infrastructure offers

Hands-on training on aerosol lidar measurement quality assurance procedures and tools

Home / ACTRIS Centre For Aerosol Remote Sensing (CARS) / Announcements & Resources

HOME SCIENCE & TECHNOLOGY NATIONAL FACILITIES PARTNERS & USERS ANNOUNCEMENTS & RESOURCES ←



27 / 29
Jun / Jun

ACTRIS Centre for Aerosol Remote Sensing (CARS) and PROBE CA18235 invite scientists working in the field of aerosol high-power lidars to a training school entitled the "Hands-on training on aerosol lidar measurement quality assurance procedures and tools". The three-days hands-on training session focuses on quality assurance procedures for aerosol lidar measurements, using specific hardware tests and the **ATLAS tool (Automated Lidar Analysis Software)**.

Format: The event will be organized in hybrid format, however only theoretical sessions may be followed online.

Registration: Please register at <http://carport.inoe.ro/forms/index.php/881827?lang=en> by 2nd of May 2023. The workshop is free of charge.

Contact: Doina Nicolae, nnicol@inoe.ro

Many thanks to our supporters!

- National Institute of Research and Development for Optoelectronics
- ACTRIS Centre for Aerosol Remote Sensing
- ATMO-ACCESS project
- PROBE Cost Action
- INOESY SRL



AGORA Aerosol Training Course

Characterization of atmospheric aerosol using in-situ and remote sensing techniques

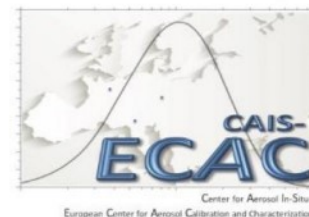
AGORA AEROSOL TRAINING COURSE: CHARACTERIZATION OF ATMOSPHERIC AEROSOL USING IN-SITU AND REMOTE SENSING TECHNIQUES

Dates: June 12-17, 2023

Venue: Andalusian Global Observatory of the Atmosphere, Granada, Spain

ACTRIS CAIS-ECAC Aerosol In-Situ Course

Home / Events



16 / 22
Apr / Apr



ACTRIS CAIS-ECAC Aerosol In-Situ Course: Fundamentals & Methods for Aerosol Sampling and Physical & Chemical In-Situ Measurements

Date: April 16-22, 2023

Venue: National Atmospheric Observatory Kosetice, Czech Republic

Course contents & learning outcomes:

The lecture course provides fundamental knowledge in aerosol sampling & conditioning as well as methods for in-situ measurements of physical and chemical aerosol variables, covering all ACTRIS aerosol in-situ variables. Furthermore, a visit of the National Atmospheric Observatory Kosetice and hands-on training for few aerosol instruments are part of the course. The course will be held face-to-face at the National Atmospheric Observatory Kosetice in Czech

INFORMATII PENTRU SOCIETATE

Rapid response to atmospheric pollution episodes: Request by the

Industrial accident (June 6, 2015)

Atmospheric RIs Expertise & Equipment

Support of informed decision making

Methodology to improve European urban emission inventories

Objectives:

- Exploit credible, open access, generic, contemporary, high-resolution ($\leq 1 \text{ km}^2$) spatial datasets of the European area (namely Copernicus data)
- Optimize coupling between CAMS-REG & UrbEm (independent of version and city): Multiple versions of CAMS-REG (e.g. ri-urbans version) are directly disaggregated at the city level (any European urban area).
- Provide emissions of gaseous and particulate pollutants at spatio-temporal scales relevant to urban areas
- Support city-scale CTM simulations, especially where not exist, or are not open, or are not complete (by combination of some of the above).
- Develop a horizontal methodology, allowing for co

Outcomes:

- Optimized Methodology to exploit regional e
- Spatial disaggregation of CAMS regional inv

RI-URBANS (101036245)
1st Science Meeting, T Barcelona

Method and tool in service of air pollution mapping (available online at: <https://riurbans.eu>)

The UrbEm Hybrid Method to Derive High-Resolution Emissions for City-Scale Air Quality Modeling

Optimization in the frame of RI-URBANS

- Railway and Ship lanes from OSM
- OSM spatial proxy for road transport
- Different spatial proxies per subcategory of mobile machinery
- Other modifications

RI-URBANS (101036245)
1st Science Meeting, 19-20 October 2022, Barcelona

ACTRIS Videos

ACTRIS SCIENCE | How does ACTRIS help in mit... **DANGER**

ACTRIS Teaser

ACTRIS data during the COVID-19 pandemic spring 2020

Cloud remote sensing data (profile inform...)
Aerosol remote sensing data (profile inform...)
Aerosol in situ data (optical, physical prop...)
Trace gases in-situ (VOC and NOx)

21336/gen.682q-8163

ACTRIS data during the COVID-19 pandemic spring 2020

ACTRIS contains measurements of aerosol, cloud and trace gases properties across Europe measured during the Covid-19 lockdown period 1 January 2020 - 31 May 2020. The data is compiled and made available by the ACTRIS Data Centre units, which include In Situ data centre unit (In-Situ), Aerosol remote sensing data centre unit (ARES), Cloud remote sensing data centre unit (CLU) and Data Discovery, Virtual Access and Services unit (DVAS). The site distribution is:

HIGH FOCUS ON UFP

SOURCE APPORTIONMENT OF UFP & UFP SOURCE CONTRIBUTIONS AND MORTALITY

Barcelona, Helsinki, London, and Zurich

Environment International 130 (2023) 103602

Source apportionment of particle number size distribution in urban background and traffic stations in four European cities

Associations between sources of particle number and mortality in four European cities

Four Rivara^a, David C.S. Beddows^b, Fulvio Amato^c, David C. Green^d, Leena Järvi^e, Christoph Hueglin^f, Cristina Reche^g, Hilkka Timonen^h, Gary W. Fullerⁱ, Jarkko V. Niemi^j, Noemi Pérez^k, Miana Azevedo^l, Philip K. Hopfe^m, Andrés Alastueyⁿ, Mirkka Kalmaki^o, Roy M. Harrison^p, Xavier Querol^q, Frank J. Kelly^r

Environment International 130 (2023) 103602

Associations between sources of particle number and mortality in four European cities

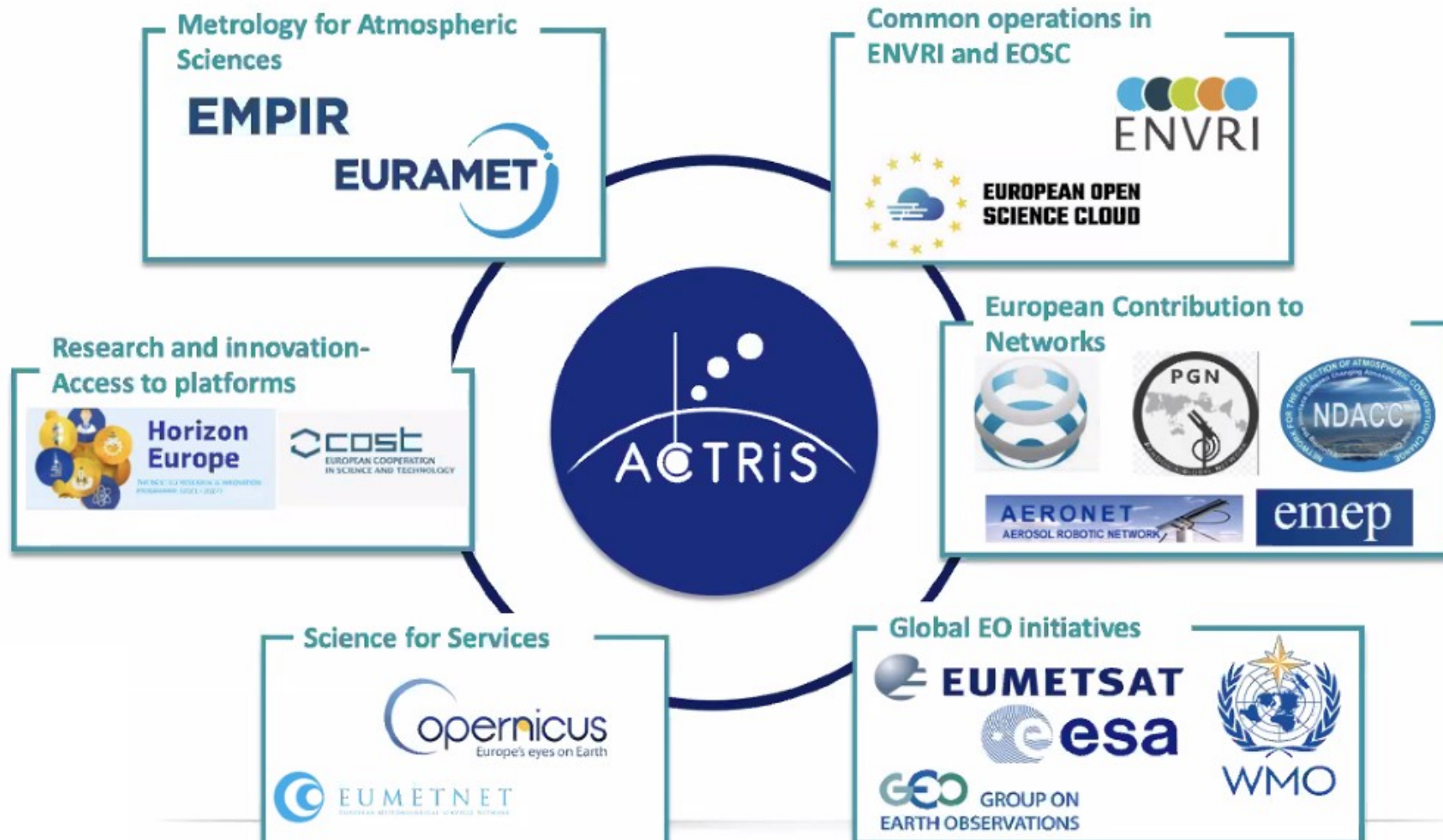
Four Rivara^a, Laila Vicens^{b,c}, Xavier Besagüena^{d,e}, Aurelio Tobias^f, Klea Katsouyanni^g, Heather Walton^h, Christoph Hueglinⁱ, Andrés Alastuey^j, Mirkka Kalmaki^k, Roy M. Harrison^l, Juhka Pekkanen^m, Xavier Querolⁿ, Jordi Sunyer^o, Frank J. Kelly^p

T2.1. Improved evaluation of health effects in epidemiologic time series studies (M02-M36)

Objective: link the time series of new air quality metrics (e.g. nanoparticles, BC, source contributions) to those of daily mortality and hospital admissions and meteorological parameters

WP2 Deliverables
D2.1: Best practices for evaluation of nanoparticles and health for application in pilots (ISGlobal, M12)

RI-URBANS (101036245)
1st Science Meeting, 19th October 2022



Metrology for Atmospheric Sciences

EMPIR
EURAMET

Common operations in ENVRI and EOSC

ENVRI
EUROPEAN OPEN SCIENCE CLOUD

Research and innovation-
Access to platforms

Horizon Europe
THE HORIZON RESEARCH AND INNOVATION PROGRAMME 2021-2027

cost
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

European Contribution to Networks

AERONET
AEROSOL ROBOTIC NETWORK

emep

PGN

NDACC
NETWORK FOR THE DETECTION OF ATMOSPHERIC CHANGING CONDITIONS

Science for Services

Copernicus
Europe's eyes on Earth

EUMETNET
EUROPEAN METEOROLOGICAL SERVICE NETWORK

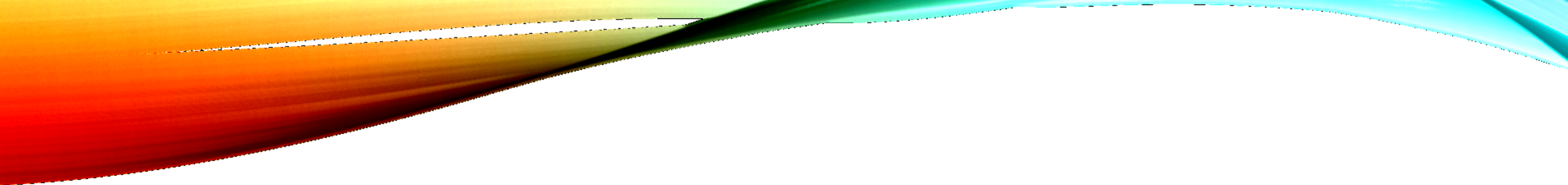
Global EO initiatives

EUMETSAT

esa

WMO

GEO GROUP ON EARTH OBSERVATIONS

- 
- Furnizează date și servicii utilizate apoi în multiple domenii
 - Concentrează expertiză și echipamente de top care deschid calea către inovatie
 - Oferă servicii diverse cu costuri reduse
 - Mediului științific
 - Sectorului privat
 - Agențiilor naționale și internaționale
 - Mediului educational
 - Constituie o sursă de informare sigură și precisă pentru factorii de decizie politică
 - Catalizează comunități și pregătesc resursă umană de valoare

MULTUMESC PENTRU TIMPUL DUMNEAVOASTRĂ.

Răspund cu plăcere la întrebări și
primesc cu drag sugestii.

Doina Nicolae

National Contact Person ACTRIS-Romania

nnicol@inoe.ro

