

Milestones in DELICE lifetime

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- **After Poland, Romania is the largest Eastern European country (21 million inhabitants, 285.000 km²)**
 - impressive research potential
 - important problems in valorizing it within European Union
 - differences between the “old EU 15” and the “new EU 12” in terms of infrastructure, human resources, relations with European partners, etc.
- **GEOSS - Global Earth Observation System of Systems**
 - global coordinated multi-sensor observation of the Earth
 - makes use of all available capacities
 - significant at global/continental scale
 - long-term capabilities
 - need for top-level research centres in atmosphere remote sensing
 - a critical issue for EU
 - opportunity for research groups like ours.

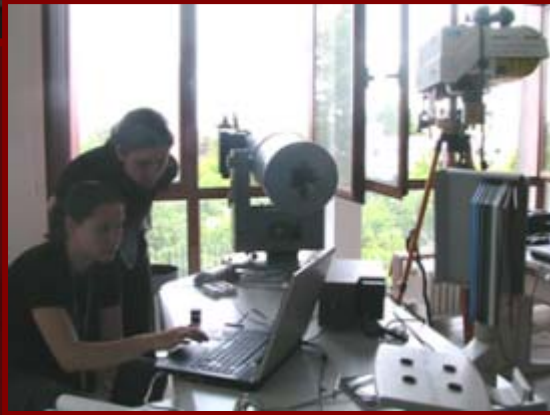


ROLICE before the project

- **ROLICE = first atmospheric facility in Romania for research and monitoring of atmospheric processes in PBL and FT.**
- **Before DELICE:**
 - 7 employees
 - Mean age of 37
 - Several lidar systems (needing upgrades)
 - Several small complementary instruments
 - Mostly national grants - not enough to cope with the real need
 - Unable to get information about meteorological parameters (radiosounding in Romania are sparse and not accurate enough) and aerosols composition
 - Unable to perform complex analysis or even ground-calibration.
 - Active within several important European and global networks for atmospheric science (EARLINET, AERONET, EUSAAR) but without significant contribution
 - Old and inappropriate infrastructure
 - Personnel not properly trained
 - Limited enthusiasm of "important players" towards our products



ROLICE before the project





Set of actions

- **a) *Improving the R&D infrastructure***
 - purchasing new equipments: AMS, MWR, Sodar
 - upgrading the existing ones: lidars
- **b) *Mobilizing human resources***
 - attracting young brilliant researchers and managers
 - train them in an international environment
 - collaborating with diaspora
- **c) *Increasing visibility***
 - web site & portal
 - printed and electronic promotion
 - participation to national exhibitions
- **d) *Strengthening international partnerships* with EARLINET, AERONET and other relevant networks**
 - annual meetings
 - joint communications and scientific papers
 - final conference on "Environmental Remote Sensing"



Technical milestones

- **We had an old and inappropriate infrastructure**
 - No warranty we will find a possibility to upgrade the instruments (especially the Russian lidar)
 - We found an EARLINET partner from Minsk who was able to help us
- **Personnel not properly trained**
 - At the moment when DoW was submitted we had no idea what are exactly our needs
 - We identified the gaps during EARLINET-ASOS workshops and conferences
 - During DELICE, we put the first bricks by preparing our young people in photometry, lidar and mass spectrometry
 - It is now the time to set up a real remote sensing school in Romania
- **Weak connections with researchers abroad**
 - We didn't had much experience in writing scientific papers / presenting our work to conferences
 - We've learn from our partners in Europe and improved our skills by increasing the participation to international events
- **Salaries are not attractive for brilliant young scientists**
 - This is a fact: scientists are not well paid; this is why good scientists are difficult to find in Romania
 - We could not offer too much money, but we managed to attract young researchers by offering a fantastic team and a perspective of a real career



Financial milestones

- **DELICE was our first project under EC's Framework Programme financial rules differ from general national rules – we had to learn fast and adjust our procedures**
 - categories of expenses not clear, e.g. subcontracting (does not exist in national programmes!) – we made mistakes starting from DoW
 - we pointed out "services" as "subcontracting"
 - now we have an important budget that cannot be used because the category is wrong
 - we still don't have any feed-back from EC regarding the first report (submitted in August last year), so we don't know if our current understanding is correct
- **DELICE is not a research but a support project - no co-financing is requested, BUT other funds have to be used because:**
 - the cost of equipments cannot be entirely covered due to the 3 years duration.
 - the purchasing procedures until the delivery can take up to 12 months, therefore the reimbursement represents only 40% of the real cost of the instrument.
 - VAT is not covered



Preliminary results

- **Numbers:**
 - 6 scientists kept their jobs
 - 6 new staff were employed: 2 young researchers, 2 marketing professionals and 2 experts in atmospheric research, one of which from Diaspora
 - 6 complex equipments were purchased and installed or upgraded
 - 6 scientists were (or will be) trained in counterparts laboratories
 - 3 meetings with stakeholders were organized
 - 1 foresight exercise was supported
 - 7 researchers participated to international conferences
 - 5 new proposals were submitted to various scientific programmes
 - 1 intercomparison campaign organized by EARLINET was successfully attended
 - Many promotional and educational actions were organized (website, Researchers night, workshops, open laboratories actions, intensive trainings, participation to exhibition, press conferences, interviews etc.)
- **Behind numbers:**
 - State-of-the-art laboratories
 - A promising group of young scientists
 - Improvement of working conditions
 - Hopes for real scientific careers
 - Collaborations on long-term at national and international level
 - Recognition of value and potential



Preliminary results





- **Romanian Lidar Network**
 - 4 other research centers in Romania: Iasi, Cluj, Timisoara, Bucharest
 - 4 new lidar stations in Romania
 - 1 original lidar design, manufactured in Romania
- **Romanian Atmospheric research 3D Observatory**
 - First observatory in Romania for atmospheric vertical sounding
 - One Data Center, 5 nation-wide measurement stations
 - Complementary use of:
 - In situ and remote sensing
 - Active and passive remote sensing
 - Measurements and modeling
 - Trans-national access to infrastructure
 - Open for PhDs and MSc
 - Hosting educational programmes for children and scholars inside the Science Center
- **Significant increase of "old players" interest towards collaboration with ROLICE and its partners in East Europe**
 - 4 new international, large-consortiums project submitted to FP7-INFRA, FP7-PEOPLE, LIFE, SEE Cooperation Programme (2009)
 - Contribution to COPAL - COmmunity heavy-PAYload Long endurance Instrumented Aircraft for Tropospheric Research in Environmental and Geo-Sciences
 - 1 new participation to an European Network: MWRNET
 - Contacts with AERONET to include new Romanian stations
 - Joint scientific papers and communications
- **Extension to South-East Europe ??**



To ensure sustainability!

- **Continuous operation inside European networks: EARLINET, AERONET, MWRNET, EUSAAR – GEOSS (FP7-INFRA project)**
 - We now have the instruments and personnel
 - We have to find money for operational procedures and maintenance
- **Define our position as leader in South-East Europe**
 - Transfer knowledge to new groups
 - Support them join European Networks
 - Maintain contacts and organize collaborative work by networking activities
- **Intensify our presence on the scientific market**
 - Increase the number and quality of scientific publications
 - Enlarge the authorships by joint publications
 - Increase the number of participations to conferences and working groups
- **Open more to the civil society**
 - Offer simple products (warnings, forecasts) related to air quality and climate to the public (*LIFE project*)
 - Passive (website, leaflets, bulletins) and active (demonstrative events, presentations, meetings) promotion
 - Doctoral and master programs, lectures to scholars and students (*FP7-PEOPLE project*)



We want to collect your opinion

1. Do you think we made our job and fulfilled DELICE's promises?
 - Unlocking the ROmanian LIdar CEntre (ROLICE) potential for better integration in specific research networks such EARLINET & AERONET
 - Increasing quantitatively and qualitatively the regional capacity to contribute to GEOSS
 - Extending strategic partnerships with other research groups
2. What we should do in the near future in order to develop further our activities and importance on scientific arena?

Please fill in the form and return it at the end of the meeting.



THANK YOU!