



COST

**European Network on New Sensing Technologies for Air Pollution
Control and Environmental Sustainability - *EuNetAir***

COST Action TD1105

WG3-WG4 JOINT SCIENTIFIC MEETING

Duisburg, Germany, 4 - 6 March 2013



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WG3 Member

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IDAD – Institute of Environment and Development

- Interface unit of the University of Aveiro, Portugal
- Funded in 1993
- 3 main areas of activity
 - Sustainability
 - Impact Assessment
 - Air Pollution
- **SME**



Current activities of IDAD

- **Impact Assessment**

- How can we contribute to better decision making?
- How can we have/reach better decisions?
- Is Impact Assessment a technical tool with social input? Or vice-versa?

- **Main projects:**

- Site selection for the new airport of Lisbon
- Strategic Environmental Assessment of the high speed rail network in Portugal
- New industrial facilities
- Air quality Plans and Programs for the Northern region

Current activities of IDAD

- **Air Pollution**
 - **Monitoring**
 - Municipal Solid waste incinerators:
 - Comprehensive monitoring programs (since 1999)
 - Porto, Lisbon, Madeira
 - Regulatory pollutants, dioxins/furans, metals, PAH
 - Refineries
 - BTEX
 - Industrial complexes
 - BTEX, metals
 - Airports
 - Regulatory pollutants

Current activities of IDAD

- **Air Pollution**
 - **Modelling**
 - From meso to microscale
 - Close cooperation with the Department of Environment and Planning of the University of Aveiro
 - Portugal, Ghana and Mozambique

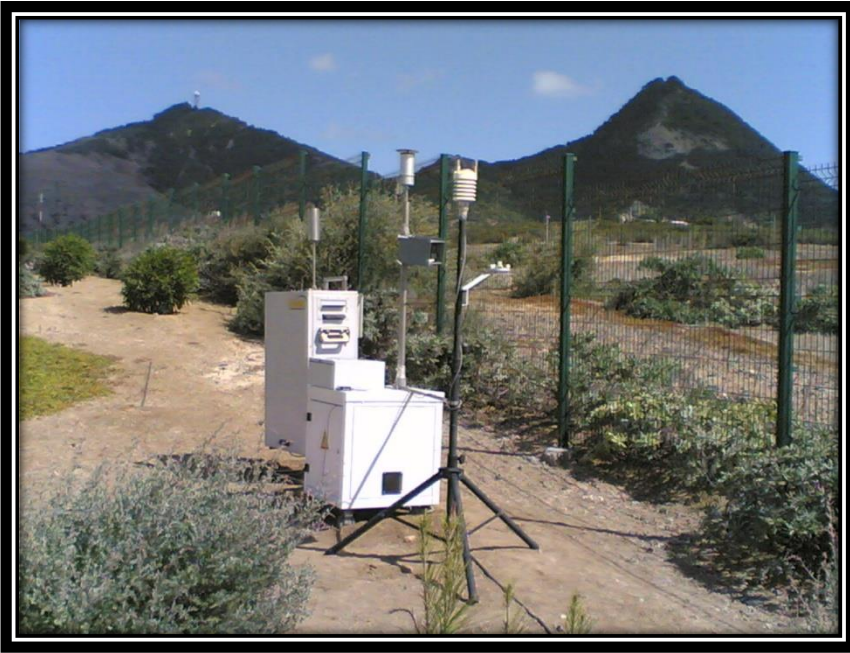
- **Home of EURASAP**
 - European Association for the Science of Air Pollution



Research Facilities



Research Facilities



Research Facilities





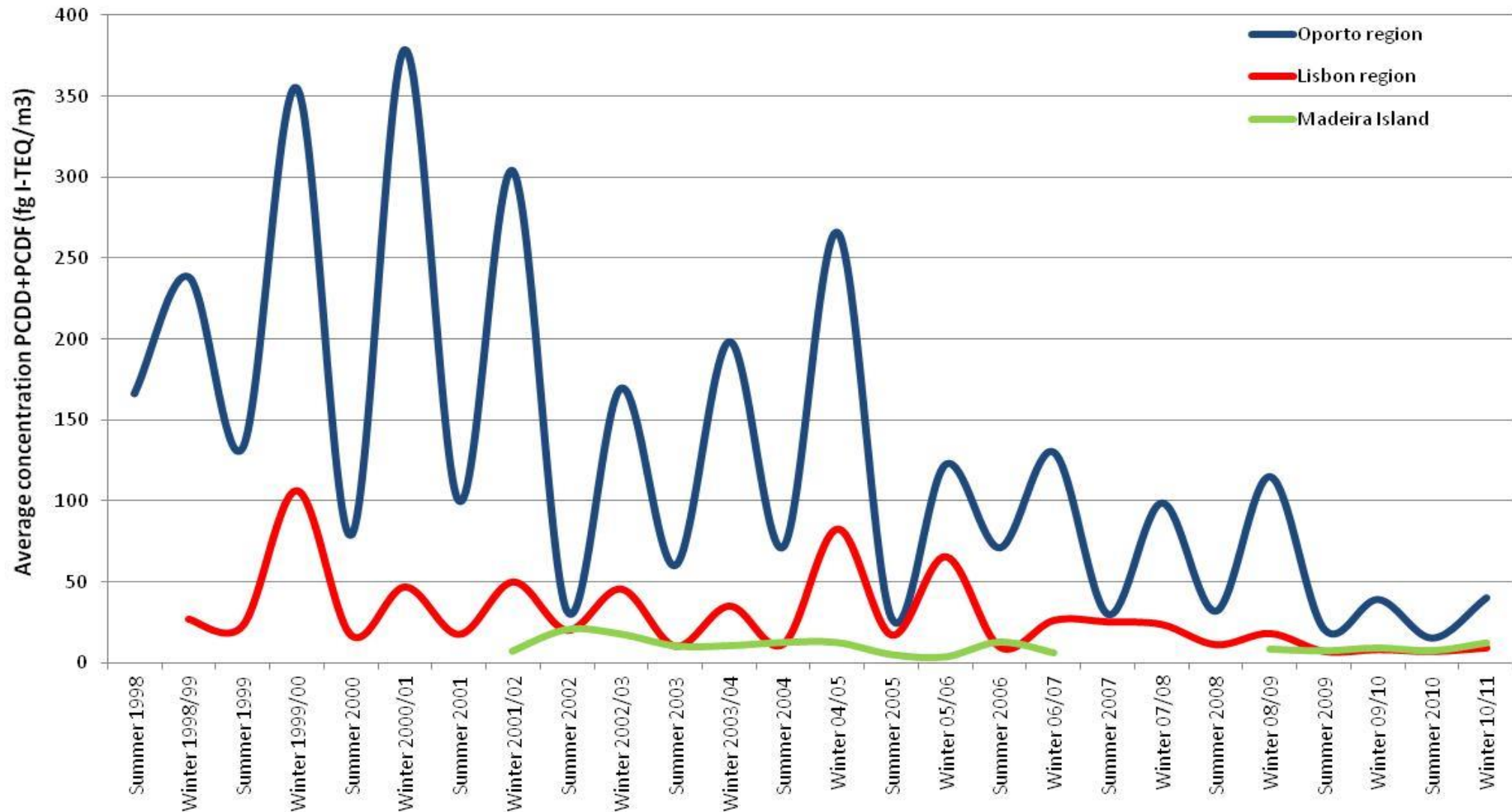
AIR QUALITY IN PORTUGAL



Achieved Results

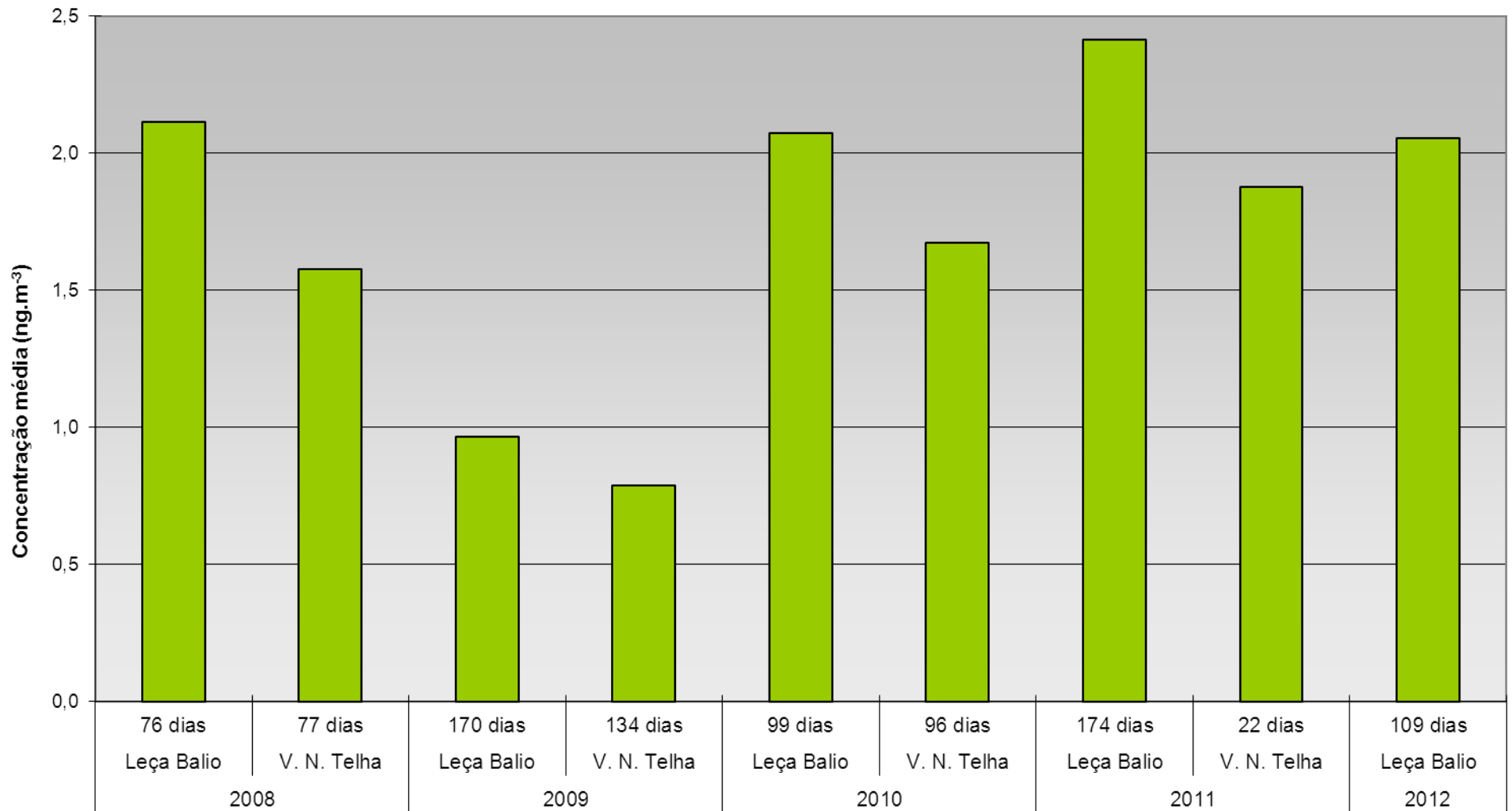
- Comprehensive monitoring of waste-to-energy facilities:
 - From air quality to public health

Atmospheric levels of PCDD/PCDF



Atmospheric total gaseous mercury

Níveis de Mercúrio Gasoso Total (MGT)



Overall characterization of air quality in Portugal

- Particulate Matter
 - Frequent exceedances of limit values
 - Traffic emissions
 - Natural sources
 - Sea spray
 - Geological dust
- NO₂
 - Occasional exceedances in urban areas
- O₃
- Benzene and metals
 - Industrial areas

Suggested Priorities for future research

- In-house on-going
 - Interaction between out-indoor air quality
 - Fireplace standardization
 - LexAir:
 - World air quality legislation database website
- How to expand air quality monitoring network
 - Low-cost
- Social innovation
 - How to disseminate air quality information
 - App style
 - From air quality to behavioural change

IDAD's contribution to EuNetAir

- provide **contexts** to test new sensor technologies against conventional techniques.
 - application of new sensors side by side with standardised equipment:
 - assess reliability of sensors
 - accurate detection of pollutant concentration → peaks?
 - full understanding of the air quality monitoring standard methods
- evaluation of air quality **modelling** results against a wider network of air monitoring points based on new sensing technologies
 - contribution to the assessment process of new sensor technologies.

Obrigado

