Natural sources contribution

Jaume Targa
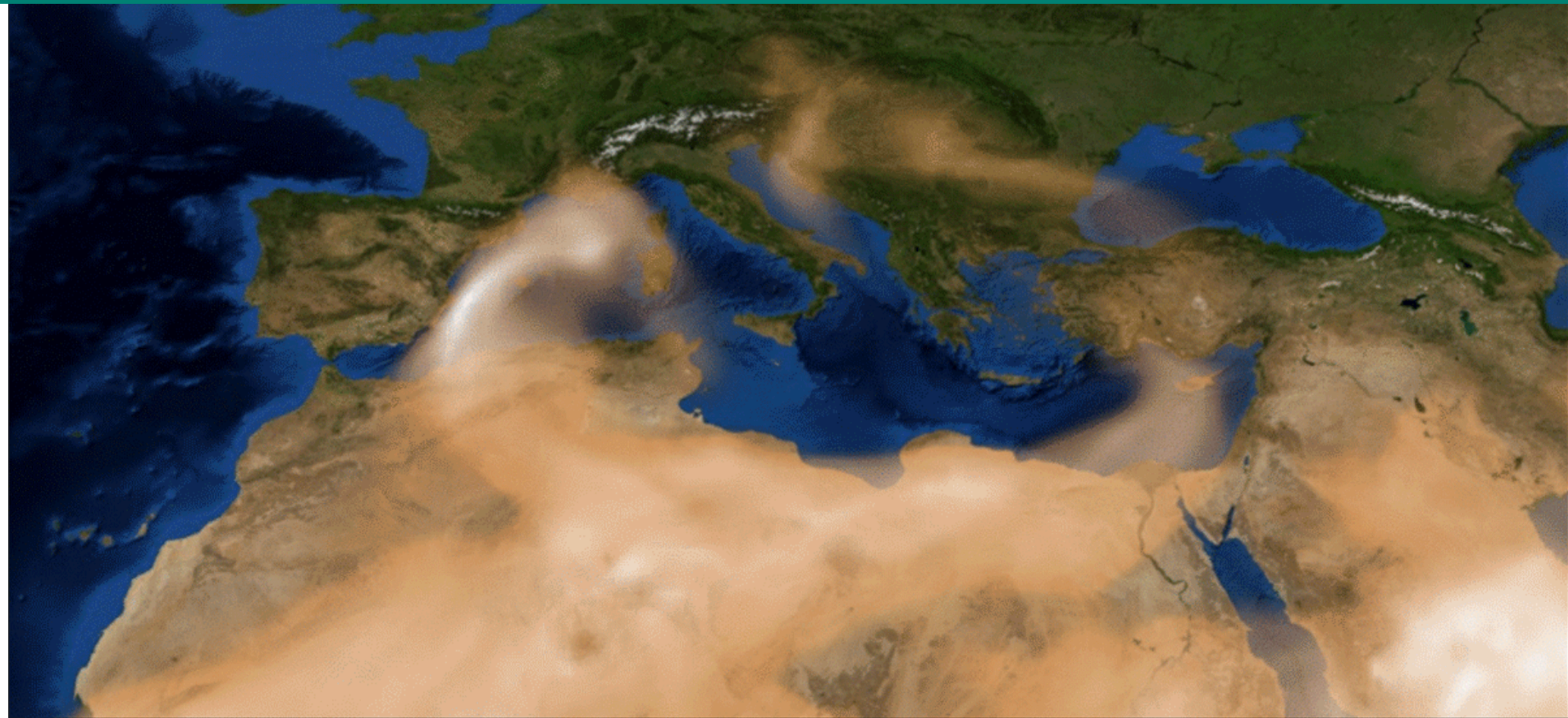
European Topic Centre
*on Air Pollution and
Climate Change Mitigation*

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European Environment Agency

Natural sources contribution

- Should we report corrected data?

- Is it sufficient to quantify correction in G?

- Should we report corrected data?

  - **MUST REPORT CORRECTION VALUES**

  - **NO CORRECTED**

- Is it sufficient to quantify correction in G?

- Should we report corrected data?

- Is it sufficient to quantify correction in G?

  – NO

  – DG ENV REQUIRES DATA TO BE PROVIDED

    UNDER D1B+E1B

Proposal & discussion

- Types of contribution

- Reporting

- Discussion

Type of contribution

- Contribution can be calculated from

  – Direct measurements

  – Modelling

  – A combination of both

- Meta-data D/D1b and data E1a/E1b will depend on how it is calculated

Type of contribution

- However, which ever type…

- We are expecting countries to report **the CORRECTION VALUES** not the ~~CORRECTED~~
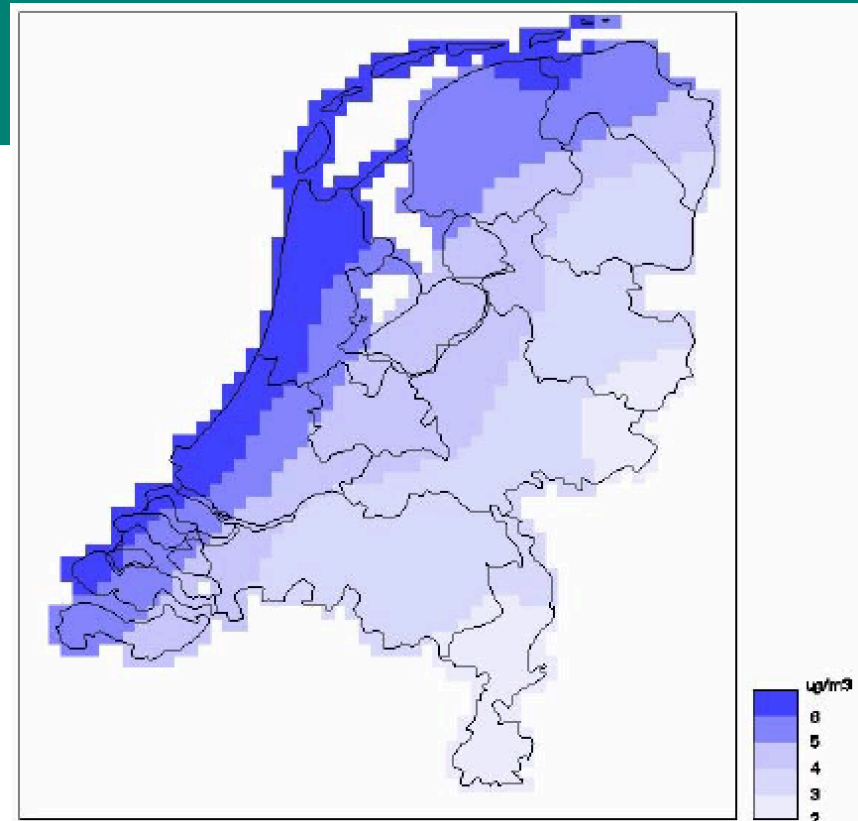
Direct measurements

- **SIMPLE example:**

  – Direct Na & Cl measurements in PM10
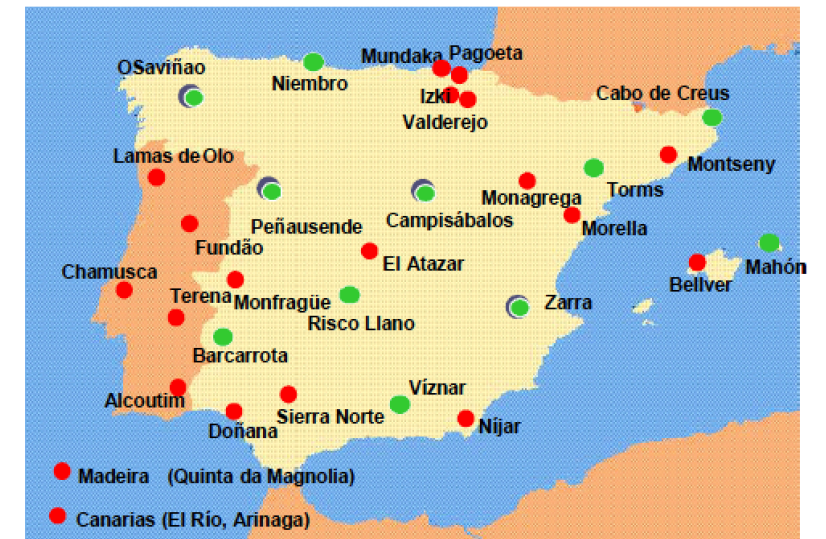
  – Report SPOs in D

  – Report data under E1a

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Modelling

- **"SIMPLE" modelling example:**

  – Modelled NaCl

  – Report Model in D1b

  – Report data under E1b

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Direct measurements + modelling

- **Complex contribution calculation:**

  – Identification of episode days

  – Quantification of daily contribution at background stations

  – Quantification at each SPO level

- Background stations from air quality monitoring networks
- EMEP stations with real time measurements
- EMEP stations with gravimetric measurements
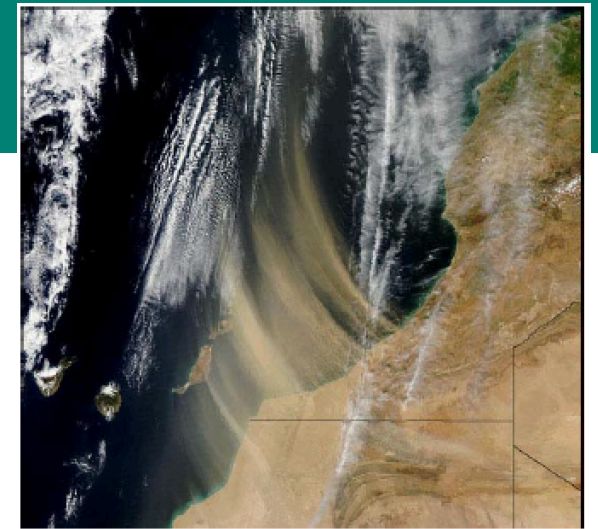
Direct measurements + modelling

- **If contribution looks like a timeseries:**

  – **Data to be reported as timeseries**

    - **D1b**

    - **E1b using swe:array option**

    - **DAILY PM10 CONTRIBUTION**

http://cdr.eionet.europa.eu/pt/eu/aqd/e1b/envw6n
PT-E1B-2017.xml

▼<swe:values>
2017-01-01T00:00:00,2017-01-01T24:00:00,3,1,37.4@@2017-01-02T00:00:00,2017-01-02T24:00:00,3,1,34.3
04T00:00:00,2017-01-04T24:00:00,3,1,60.5@@2017-01-05T00:00:00,2017-01-05T24:00:00,3,1,34.5@@2017-0
07T00:00:00,2017-01-07T24:00:00,3,1,53.0@@2017-01-08T00:00:00,2017-01-08T24:00:00,3,1,51.3@@2017-0
10T00:00:00,2017-01-10T24:00:00,3,1,26.8@@2017-01-11T00:00:00,2017-01-11T24:00:00,3,1,42.3@@2017-0
13T00:00:00,2017-01-13T24:00:00,3,1,23.5@@2017-01-14T00:00:00,2017-01-14T24:00:00,3,1,24.6@@2017-0
16T00:00:00,2017-01-16T24:00:00,3,1,41.9@@2017-01-17T00:00:00,2017-01-17T24:00:00,3,1,54.1@@2017-0
19T00:00:00,2017-01-19T24:00:00,3,1,31.6@@2017-01-20T00:00:00,2017-01-20T24:00:00,3,1,64.1@@2017-0
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20T00:00:00,2017-03-20T24:00:00,3,1,24.3@@2017-03-21T00:00:00,2017-03-21T24:00:00,3,1,21.9@@2017-0
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29T00:00:00,2017-03-29T24:00:00,3,1,37.8@@2017-03-30T00:00:00,2017-03-30T24:00:00,3,1,31.4@@2017-0

Direct measurements + modelling

- ## If contribution looks like a MODEL:

  - ### Data to be reported as MODEL

    - #### D1b

    - #### E1b using external file like:

      - ##### ESRI SHAPE

        ##### ASCII

      - ##### …

https://cdr.eionet.europa.eu/gb/eu/aqd/e1b/envw8h8ia/

- **If contribution looks like…**

- **A) Turn them into timeseries (provide daily PM$_{10}$ Correction)**

- **B) Model data of annual/daily PM$_{10}$ corrections**

Direct measurements + modelling ENSURE

- E1b is reported using aggregation code list

- No hourly data!!!

- Minimum reporting data is DAILY
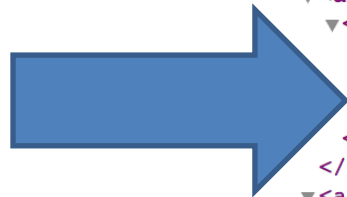
- CORRECTION VALUES

Pollutant

- Internal discussions if we should create specific pollutant code

  list for correction

- HOWEVER, CURRENT GUIDANCE ARE:

- Report data as /1, /5 or /6001

Discussion – identify in D1b & E1b

- Should we identify in D1b & E1b that the assessment method and data are for CORRECTING? - NO

- Is it sufficient to identify these at Assessment Regime & Attainment level?? – YES, FOR NOW!

Discussion – id

- ASSESSMENT

REGIME (C)

```xml
▼<gml:featureMember>
  ▼<aqd:AQD_AssessmentRegime gml:id="ARE-PT3001_00005_H_LV_daysAbove_2017">
    ▼<aqd:inspireId>
      ▼<base:Identifier>
          <base:localId>ARE-PT3001_00005_H_LV_daysAbove_2017</base:localId>
          <base:namespace>PT.APA.AQ</base:namespace>
        </base:Identifier>
      </aqd:inspireId>
      <aqd:pollutant xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/pollutant/5"/>
    ▼<aqd:assessmentThreshold>
      ▼<aqd:AssessmentThreshold>
        ▼<aqd:environmentalObjective>
          ▼<aqd:EnvironmentalObjective>
              <aqd:objectiveType xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/objectivetype/LV"/>
              <aqd:reportingMetric xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/reportingmetric/daysAbove"/>
              <aqd:protectionTarget xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/protectiontarget/H"/>
            </aqd:EnvironmentalObjective>
          </aqd:environmentalObjective>
          <aqd:exceedanceAttainment xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/assessmentthresholdexceedance/aboveUAT"/>
        ▼<aqd:classificationDate>
          ▼<gml:TimeInstant gml:id="ARE-PT3001_00005_H_LV_daysAbove_2017.Date">
              <gml:timePosition>2017-12-31</gml:timePosition>
            </gml:TimeInstant>
          </aqd:classificationDate>
          <aqd:classificationReport>http://qualar.apambiente.pt/</aqd:classificationReport>
        </aqd:AssessmentThreshold>
      </aqd:assessmentThreshold>
    ▼<aqd:assessmentMethods>
      ▼<aqd:AssessmentMethods>
          <aqd:assessmentType xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/assessmenttype/model"/>
          <aqd:assessmentTypeDescription>Description of the modeling for adjusting</aqd:assessmentTypeDescription>
          <aqd:modelAssessmentMetadata xlink:href="PT.APA.AQ/MOD-PT00081"/>
        </aqd:AssessmentMethods>
      </aqd:assessmentMethods>
    ▼<aqd:assessmentMethods>
      ▼<aqd:AssessmentMethods>
          <aqd:assessmentType xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/assessmenttype/fixed"/>
```

```xml
▼<aqd:assessmentMethods>
  ▼<aqd:AssessmentMethods>
      <aqd:assessmentType xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/assessmenttype/model"/>
      <aqd:assessmentTypeDescription>Description of the modeling for adjusting</aqd:assessmentTypeDescription>
      <aqd:modelAssessmentMetadata xlink:href="PT.APA.AQ/MOD-PT00081"/>
    </aqd:AssessmentMethods>
```

```xml
          <aqd:zone xlink:href="PT.APA.AQ/ZON-PT3001"/>
        </aqd:AQD_AssessmentRegime>
      </gml:featureMember>
```

Discussion – identify in D1b & E1b

- G – link to model used for adjusting PM10


```
▼<aqd:exceedanceDescriptionAdjustment>
  ▼<aqd:ExceedanceDescription>
      <aqd:exceedance>false</aqd:exceedance>
      <aqd:numberExceedances>25</aqd:numberExceedances>
    ▼<aqd:deductionAssessmentMethod>
      ▼<aqd:AdjustmentMethod>
        ▼<aqd:assessmentMethod>
          ▼<aqd:AssessmentMethods>
              <aqd:assessmentType xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/assessmenttype/model"/>
              <aqd:assessmentTypeDescription>model</aqd:assessmentTypeDescription>
              <aqd:modelAssessmentMetadata xlink:href="PT.APA.AQ/MOD-PT00081"/>
            </aqd:AssessmentMethods>
          </aqd:assessmentMethod>
          <aqd:adjustmentType xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/adjustmenttype/nsCorrection"/>
          <aqd:adjustmentSource xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/adjustmentsourcetype/G2"/>
        </aqd:AdjustmentMethod>
      </aqd:deductionAssessmentMethod>
    ▼<aqd:exceedanceArea>
      ▼<aqd:ExceedanceArea>
          <aqd:areaClassification xlink:href="http://dd.eionet.europa.eu/vocabulary/aq/areaclassification/urban"/>
          <aqd:stationUsed xlink:href="PT.APA.AQ/SPO-PT03100_00005_100"/>
        </aqd:ExceedanceArea>
      </aqd:exceedanceArea>
    </aqd:ExceedanceDescription>
  </aqd:exceedanceDescriptionAdjustment>
```

Any Questions?

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