H-K Dataflows Overview

*EEA & ETC-ATNI work
compiled by Luca Liberti*

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Presentation Plan

- Overview of H-K
- When and what to report
- How to report
- H-K entities lifecycle
- Special cases
- Papers pitfalls

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Overview of AQ Plans – Definitions

- **What are AQ Plans?**
  AQ Plans report regulatory information on air quality management

- **When is AQ Plans reporting required?**
  Reporting is <u>required within 2 years</u> from the year of first exceedance

- **AQ Plans information is reported in dataflows H-K**

- **Measures for BaP and metals in PM10 can be delivered using only K dataset**

Overview of AQ Plans – Dataflow H-K content

- **Dataflow H – AQ Plan**
  General information on the regulatory measures taken to address one or more exceedances of one or more pollutant. It acts as a container for the rest of the information.

- **Dataflow I – Source Apportionment**
  Quantification of the contribution to the exceedance from various emission sources e.g. Agriculture, Traffic etc.

- **Dataflow K – Measure**
  Detailed information on specific actions taken to address exceedances including economic data.
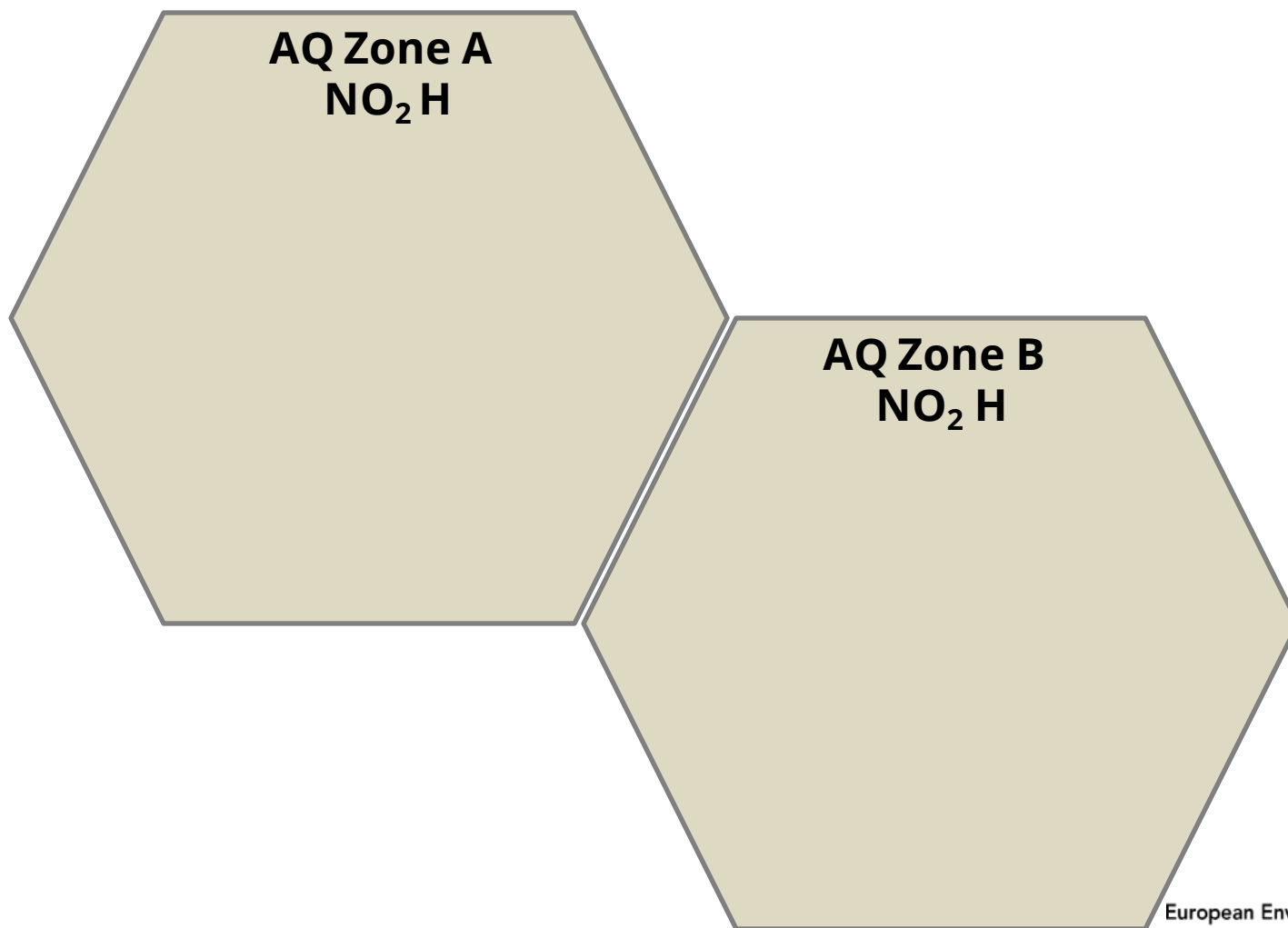
- **Dataflow J – Evaluation scenario**
  Information on the evolution in air quality expected when implementing the measures in K vs a "business as usual" approach.

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- **To understand the logic behind the structure and the links in H-K we follow the process of establishing an AQ Plan**

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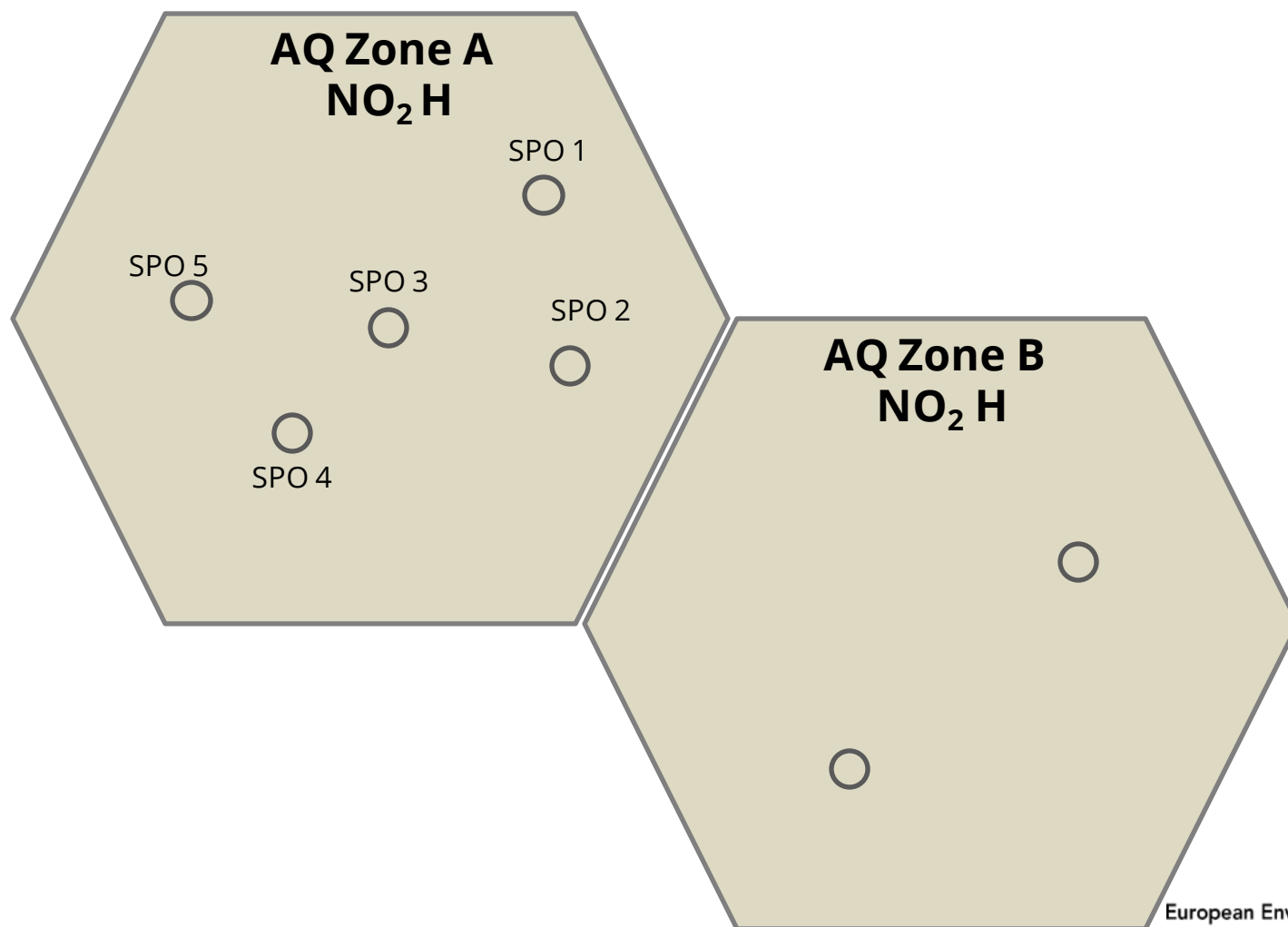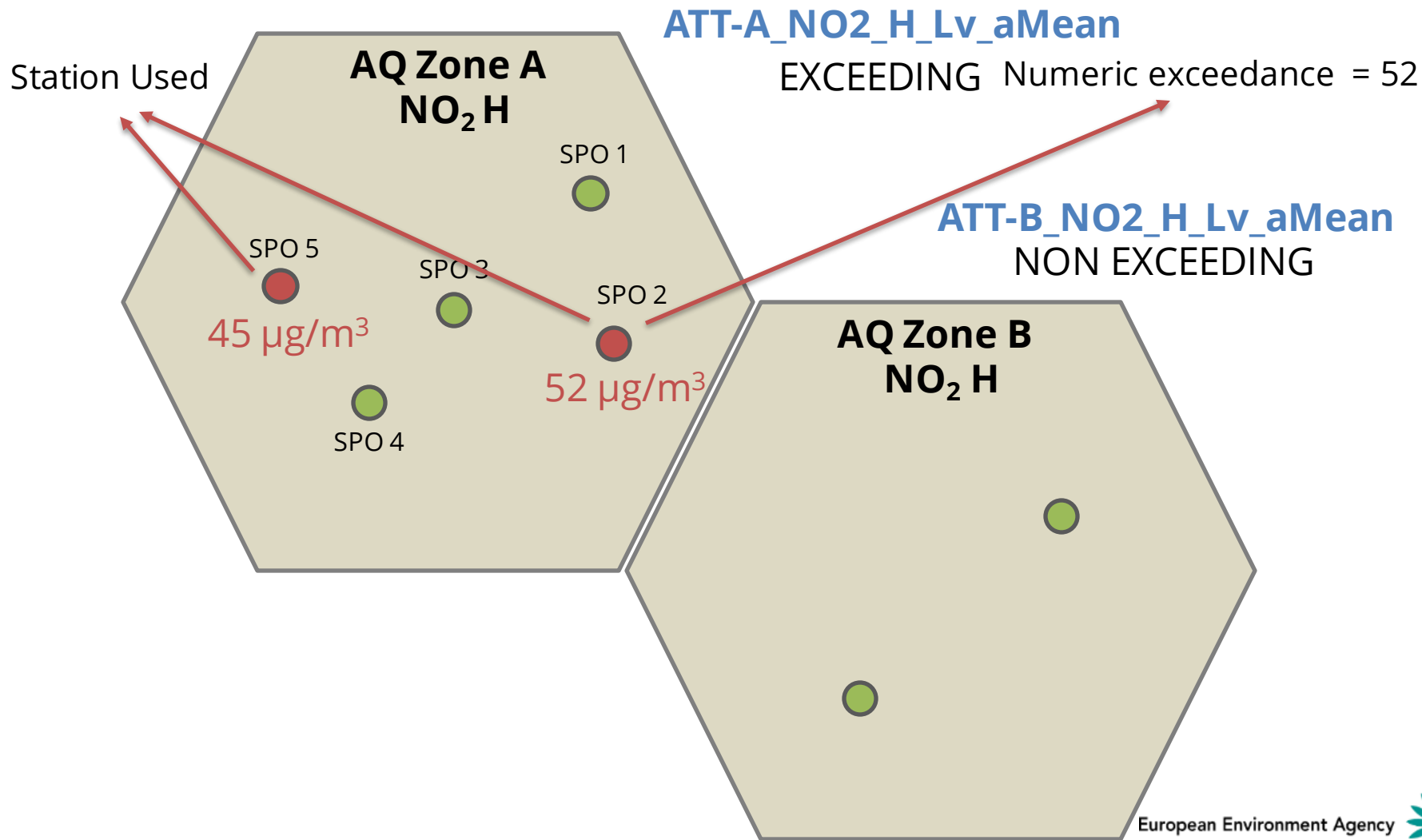
Dataflow B – Zones

Dataflow D and C – Assessment Methods/Regimes

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Dataflow G – Attainments

AQ Zone A
NO$_2$ H

Station Used

SPO 1

SPO 5

SPO 3

SPO 2

45 μg/m^3

52 μg/m^3

SPO 4

ATT-A_NO2_H_Lv_aMean

EXCEEDING   Numeric exceedance = 52

ATT-B_NO2_H_Lv_aMean
NON EXCEEDING

AQ Zone B
NO$_2$ H

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Dataflow H – AQPlans

AQ Zone A
NO$_2$ H

SPO 1

SPO 5
45 µg/m³

SPO 3

SPO 2
52 µg/m³

SPO 4

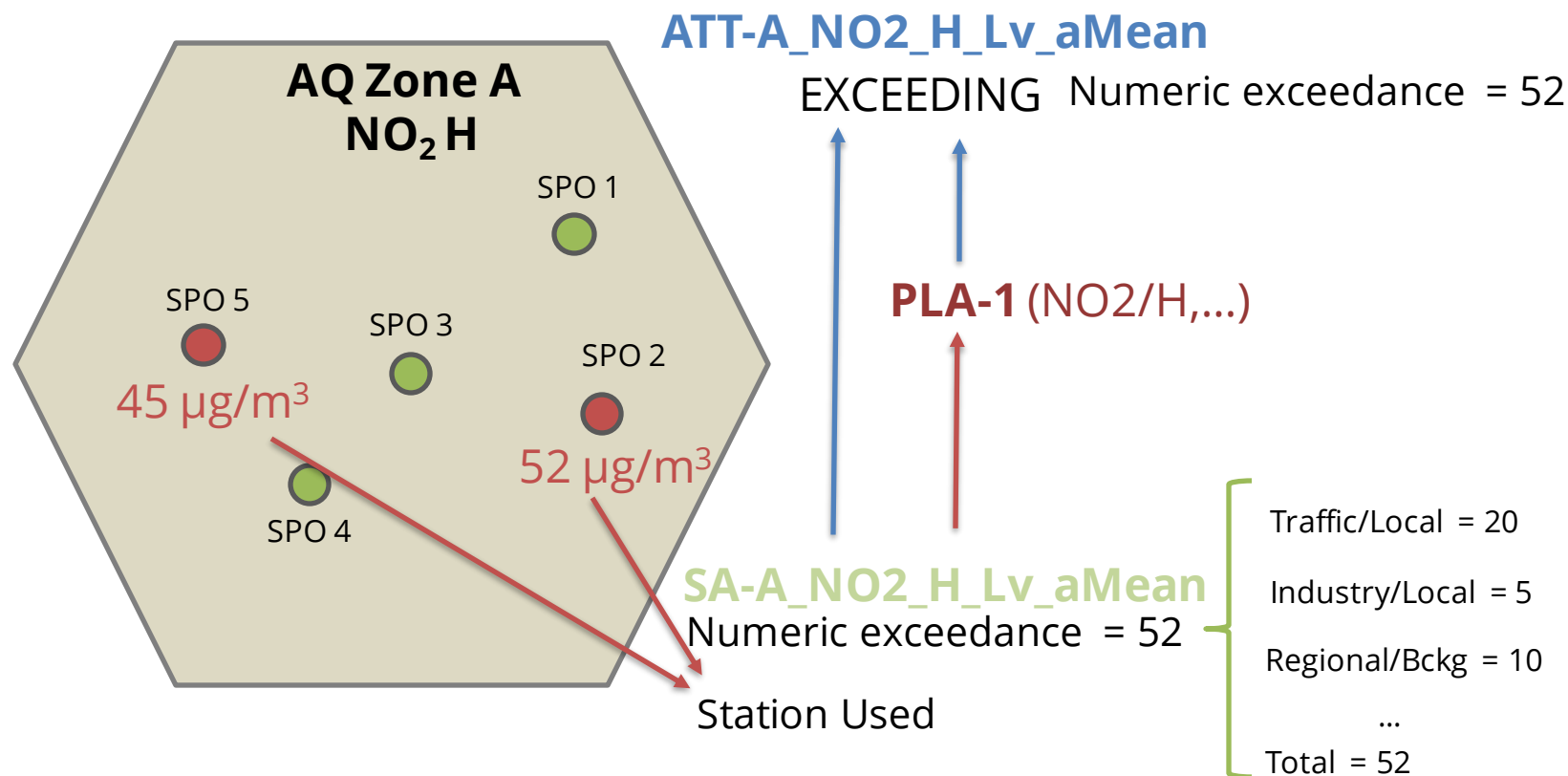**ATT-A_NO2_H_Lv_aMean**

EXCEEDING Numeric exceedance = 52

PLA-1 (NO2/H,…)
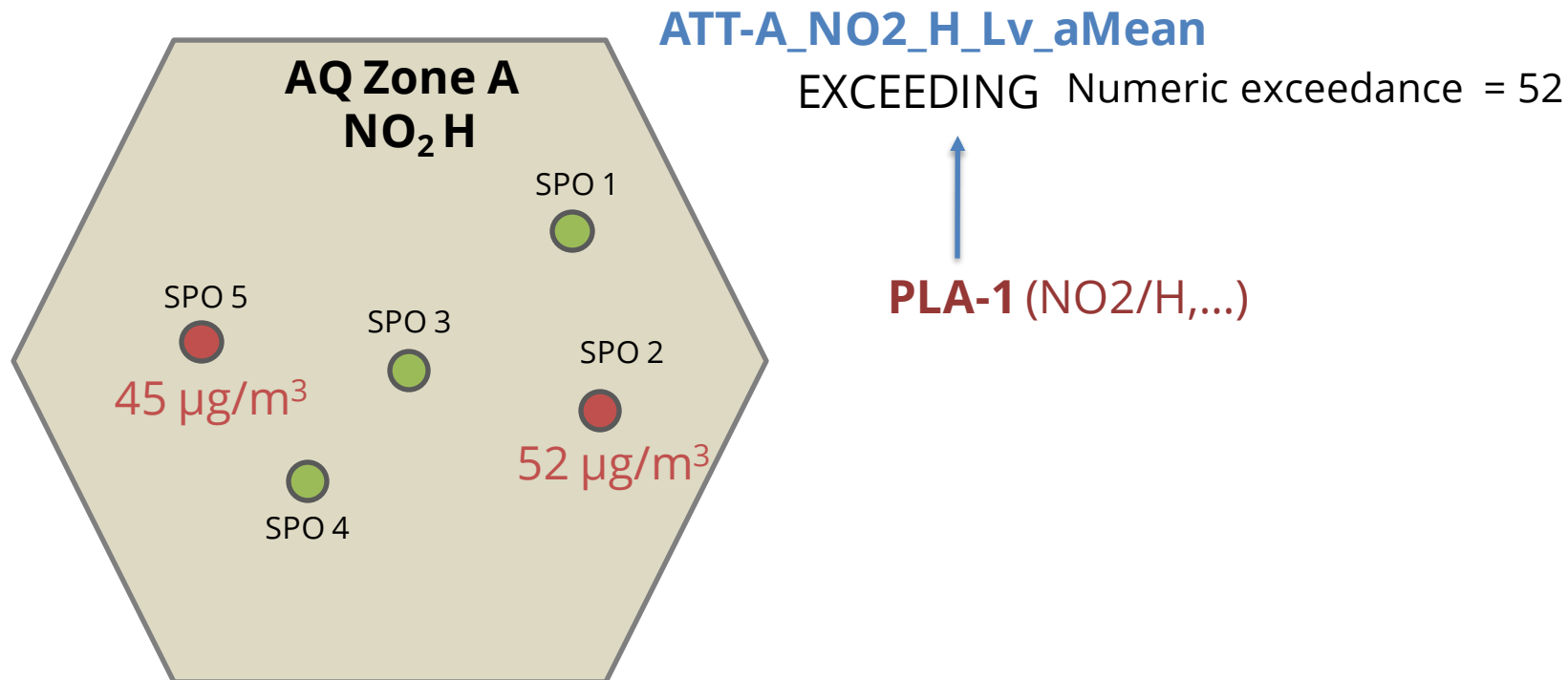
As there is a new exceeding attainment an AQPlan should be put in place. The AQPlan is connected to the Attainment

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Dataflow I – Source Apportionments

ATT-A_NO2_H_Lv_aMean

EXCEEDING Numeric exceedance = 52

AQ Zone A
NO$_2$ H

SPO 1

SPO 5

SPO 3

SPO 2

45 µg/m^3

52 µg/m^3

SPO 4

PLA-1 (NO2/H,...)

SA-A_NO2_H_Lv_aMean
Numeric exceedance = 52

Station Used

Traffic/Local = 20

Industry/Local = 5

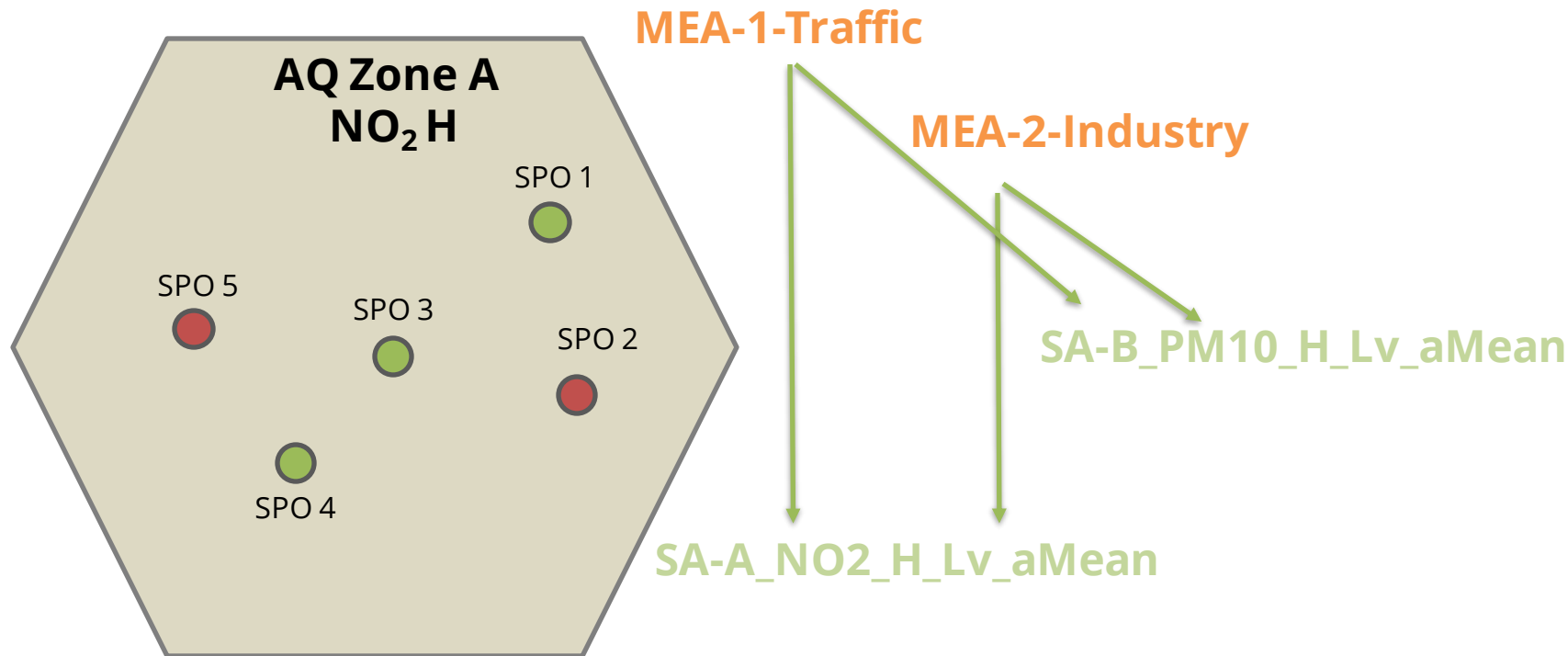Regional/Bckg = 10

...

Total = 52

A Source Apportionment is needed to evaluate the contribution of different emission sources. Source Apportionment is connected to the AQPlan and to the Attainment. Exceedance description mimics the Attainment

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Dataflow I – Measures

AQ Zone A
NO$_2$ H

SPO 1

SPO 5

SPO 3

SPO 2

SPO 4

MEA-1-Traffic

MEA-2-Industry
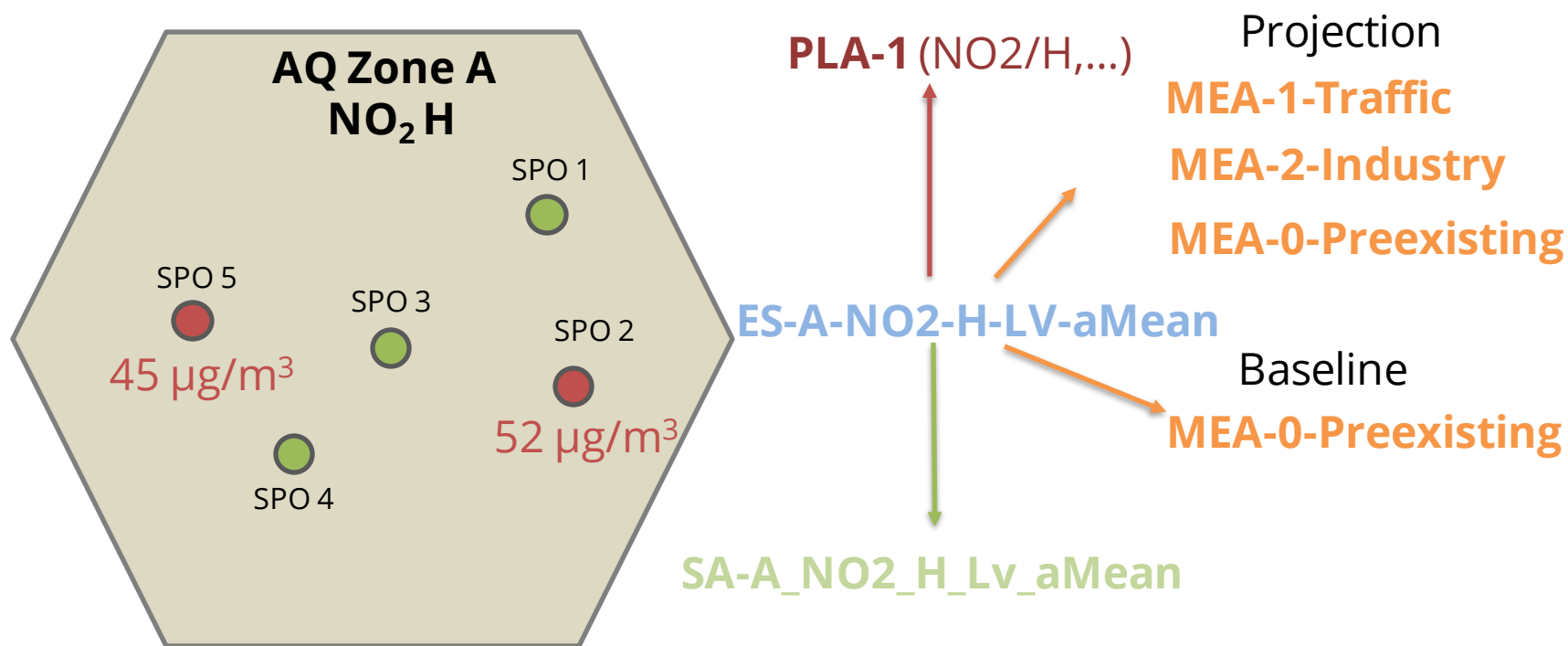
SA-B_PM10_H_Lv_aMean

SA-A_NO2_H_Lv_aMean

Measures to target emission sources are formulated. Measure can target multiple pollutants so they can be linked to multiple Attainments and Source Apportionments also related to different zones

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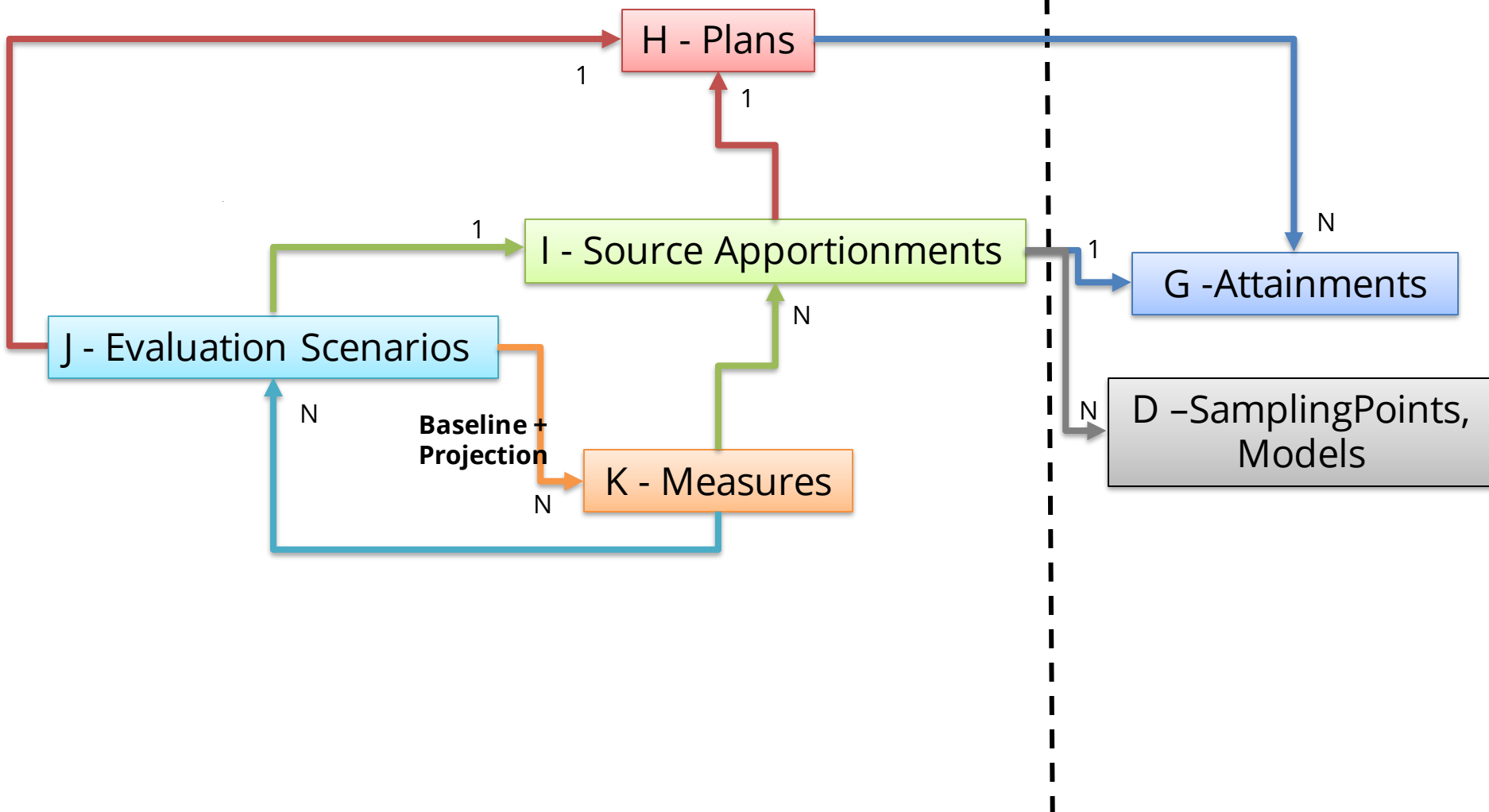
Dataflow J – Evaluation Scenarios

Evaluation Scenarios describe the planned effects of the Measures put in place in the AQ Plan on the Exceedance (linked by the SA). Each scenario takes into consideration the evolution of a Pollutant concentration under existing configuration (Baseline) and with new measures in place (Projection).

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Overview of AQ Plans – H-K Structure

H-K Domain

B-G Domain

H - Plans

1

1

1

I - Source Apportionments

1

N

G -Attainments

J - Evaluation Scenarios

N

N

D –SamplingPoints, Models

Baseline + Projection

N

N

K - Measures

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Overview of AQ Plans – Simplified Links (2020)

H-K Domain

B-G Domain

H - Plans

I - Source Apportionments

J - Evaluation Scenarios

K - Measures

G -Attainments

D –SamplingPoints, Models

1

1

1

N

1

N

N

N

N

Simplified since 2020

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Overview of AQ Plans – Simplified Links (2020)

H-K Domain

B-G Domain

| H - Plans |

| I - Source Apportionments |

| J - Evaluation Scenarios |

Baseline + Projection

| K - Measures |

1

1

1

1

N

N

1

N

| G -Attainments |

| D –SamplingPoints, Models |

Considering the definition process of AQPlans described and the relationships between different entities, we require that   all the links resolve in the same reporting year. Each entity is reported once

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Overview of AQ Plans – Simplified Links (2020)

H-K Domain

B-G Domain

H - Plans

I - Source Apportionments

G - Attainments

J - Evaluation Scenarios

D – SamplingPoints, Models

Baseline + Projection

K - Measures

1

1

1

1

N

N

N

The only exception is dataflow J that can link measures defined in previous reporting cycles in the baseline scenario

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When to report – To Report or Not To Report

- **Reporting AQ Plans is strictly required only after an AQ Exceedance is observed the first time**

- **What does it mean?**
  For a given AQ Zone, Pollutant and Protection target, Environmental Objective and Metric we should look at the first year the Attainment is exceeding

- **In 2019 only 59 Attainments in 10 countries were exceeding for the first time mostly O3 (also PM2.5, PM10, SO2, BaP)**

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When to report – To Report or Not To Report

- **No need to report AQ Plans if no new AQ Plans are put in place**

- **No need to report old AQ Plan already reported in previous years**

- **Resubmissions of updates or corrections should be made in the original reporting cycle (more on entities lifecycle)**
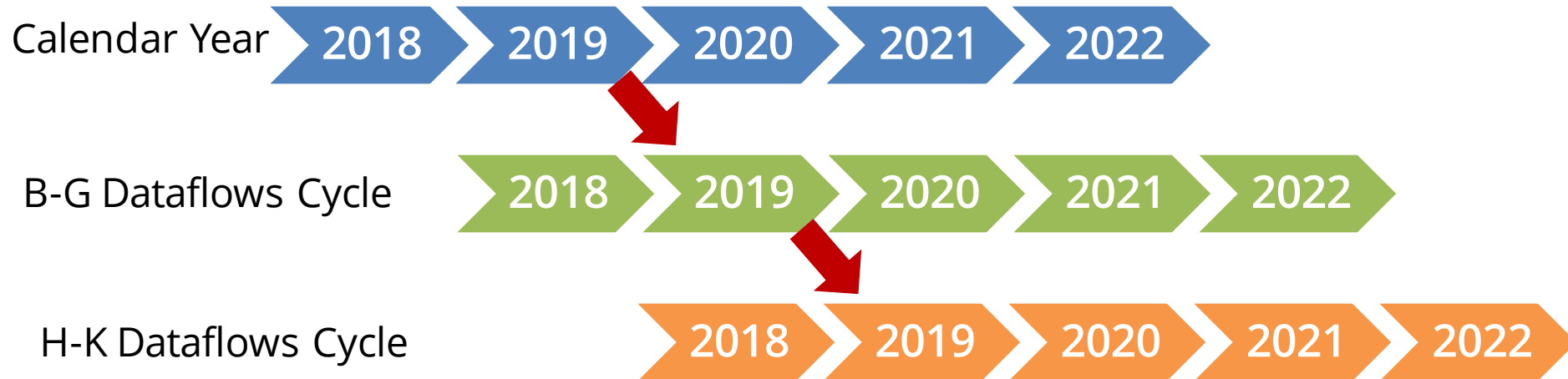
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When to report – Reporting schedule

- **There is a difference between reporting cycle and reporting time**

Calendar Year 2018 2019 2020 2021 2022

B-G Dataflows Cycle 2018 2019 2020 2021 2022

H-K Dataflows Cycle 2018 2019 2020 2021 2022

When to report – Reporting schedule

- **There is a difference between reporting cycle and reporting time**

Calendar Year: 2018 2019 2020 2021 2022

B-G Dataflows Cycle: 2018 2019 2020 2021 2022

H-K Dataflows Cycle: 2018 2019 2020 2021 2022

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When to report – Reporting schedule

- **There is a difference between reporting cycle and reporting time**

Calendar Year: 2018 2019 2020 2021 2022

B-G Dataflows Cycle: 2018 2019 2020 2021 2022

H-K Dataflows Cycle: 2018 2019 2020 2021 2022

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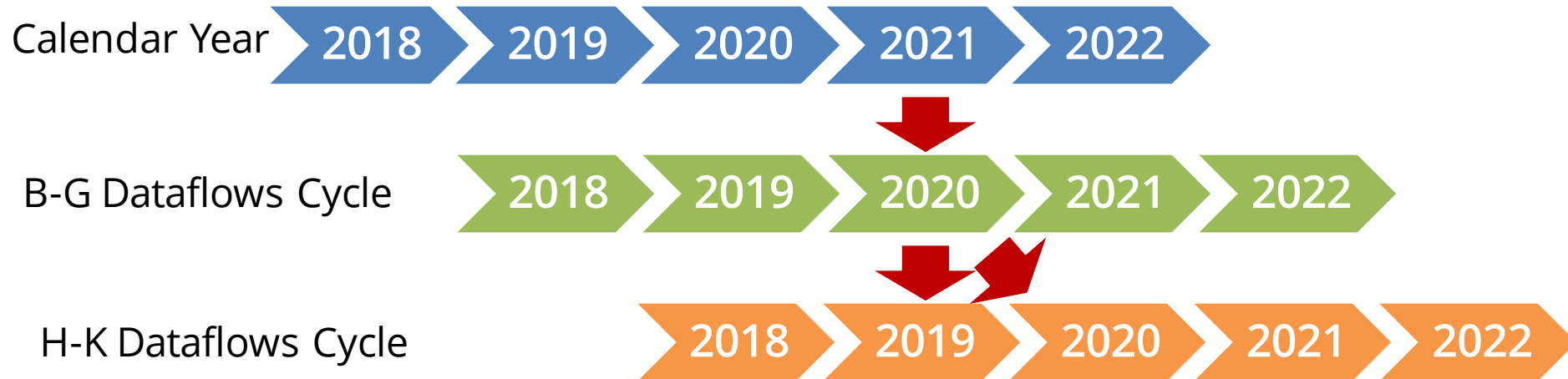
How to report – Submission procedure

- **When reporting H-K we expect a full package of submission including H, I, K, J**

- **The only exception is to have only K submitted - More on this later**

- **Partial submission cannot be blocked if all the links are resolved.**

- **Partial submission does not comply with IPR requirements**

How to report – Submission procedure

Since 2020 we expect H-K submissions to be made in

- **In a single envelope for each dataflow**

- **As a single file for each envelope**

- **New submission of the same dataflow cancels the previous one**

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Since 2020 we expect H-K submissions to follow a sequence that allows verification of links

- **H**

- **I**

- **K**

- **J**

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Entity Lifecycle - Corrections

- **A correction of an entity in any of the dataflows, in which reporting year is submitted?**

- **Corrections are submitted in the same reporting year as the original submission in new envelopes**

- **Submissions should contain both corrected and non corrected entities**

- **If after submitting AQPlan or Measure in year Y its status changes in Y+x, what needs to be reported and in which reporting year?**

- **Should be submitted in year Y with an updated status within a full submission containing the rest of the AQ Plans/Measures originally submitted in Y**

- **Applies to changes in:**

  - aqd:Status, aqd:AdoptionDate in AQPlan

  - Aqd:PlannedImplementation in Measure

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- **If the AQ Zones definition changes and there is still an exceedance, what need to be reported in H-K?**

- **We expect a new H-K delivery that targets the new Attainments**

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Special Cases -Measures without AQ Plans

- **Legislation requires reporting of Measures on heavy metals in PM10 and BaP but does not require AQ Plans. But measures without Source Apportionment are meaningless.**

- **Countries should report Measures connected to 'dummy' SA and to Attainments. QA will accommodate missing link to AQ Plans**

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Special Cases –Source Apportionment for O3

- **Most Source Apportionment entries are meaningless for O3**

- **Provide 'empty' Source Apportionments**

Papers Pitfalls –Deduction Assessments

- **Papers has a facility to specify deduction assessment methods for natural source deduction**

I.2.6 Macro exceedance situation

A.2.1 Exceedance * ✱ ☑
A.2.2 Numerical exceedance * 44
A.2.3 Number of exceedances *

Deduction assessment method

A.2.4.1 Assessment method

Items per page 10 ⌄		Filter
▲ Assessment type	⇕	Command
No data was found		

0 to 0 of 0

First | Previous | Next | Last

A.2.4.2 Adjustment type | None ⌄
Values from
http://dd.eionet.europa.eu/vocabulary/aq/adjustmenttype

A.2.4.3 Adjustment source
Volcanic eruption inside the Member State
Volcanism outside the Member State
Coastal wetlands
Seismic activity inside the Member State
Seismic activity outside the Member State
Geothermal activity inside the Member State
Geothermal activity outside the Member State

Values from
http://dd.eionet.europa.eu/vocabulary/aq/adjustmentsourcetype

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- **Deduction of natural sources has not much sense in the context of Source Apportionment (there is a specific entry related to natural sources)**

- **We recommend to keep this section empty and specify as adjustmentType either none applied non applicable or fully corrected.**

Papers Pitfalls –Deduction Assessments

- **Some reporters reported the exceeding Assessment Methods in the Deduction Assessment box**

Papers Pitfalls – Station Used

- **Station Used = Sampling Point Used**

- **Are the exceeding sampling points**

Values from
http://dd.eionet.europa.eu/vocabulary/aq/areaclassification

A.2.5.3 Area estimate [km²]

A.2.5.4 Road length estimate [km] 2

A.2.5.6(a) Station used

SPO.DE_DENW211_NO2_dataGroup1 ×
SPO.DE_DENW148_NO2_dataGroup3 ×
SPO.DE_DENW219_NO2_dataGroup3 ×
SPO.DE_DENW336_NO2_dataGroup3 ×
SPO.DE_DENW212_NO2_dataGroup1 ×
SPO.DE_DENW332_NO2_dataGroup3 ×

A.2.5.6(b) Model used

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Thank you for your attention!

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