

Common Data Issues

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



Presentation plan

- *Motivation*
- *Zones*
- *Assessment Regime*
- *Assessment Methods*
- *Next Steps*



Motivation



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- *We have been reporting AQ data for almost 10 yrs*
- *AQ Reporting is complex however it is intended to answer basic questions:*
 - *How is the Air Quality monitored in Europe?*
 - *Are the pollution levels above the limits?*



Motivation

- *We have been reporting AQ data for almost 10 yrs*
- *AQ Reporting is complex but is meant to answer basic questions:*
 - *How is the Air Quality monitored in Europe?*
 - *Are the pollution levels above the limits?*
- ***Do we have the elements to answer these questions?***



Zones



AQ Zones (B)

- *Countries identify AQ Zones to monitor the mandatory pollutants for Health and Vegetation protection*
- *Zones designated for Health protection should cover the entire territory of each country for each pollutant (with few exceptions)*



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- *Zones designated for Health protection should cover the entire territory of each country for each pollutant (with few exceptions)*
- *Is this true according to the data we have?*



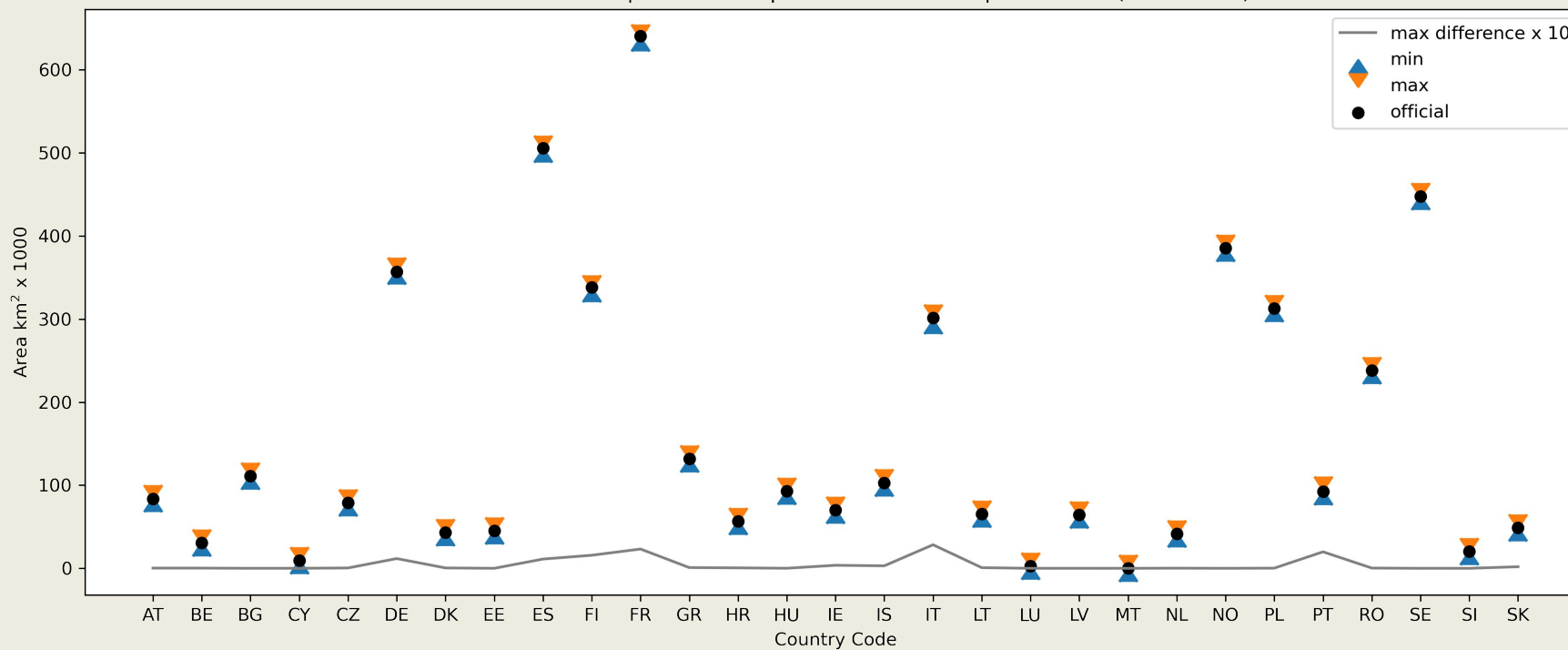
AQ Zones (B) - Test

- *Take all the zones declared for Health protection for each pollutant and country.*
- *Sum the population and the area of the zones for each reporting year*
- *The values obtained should match the total area and population of the country*

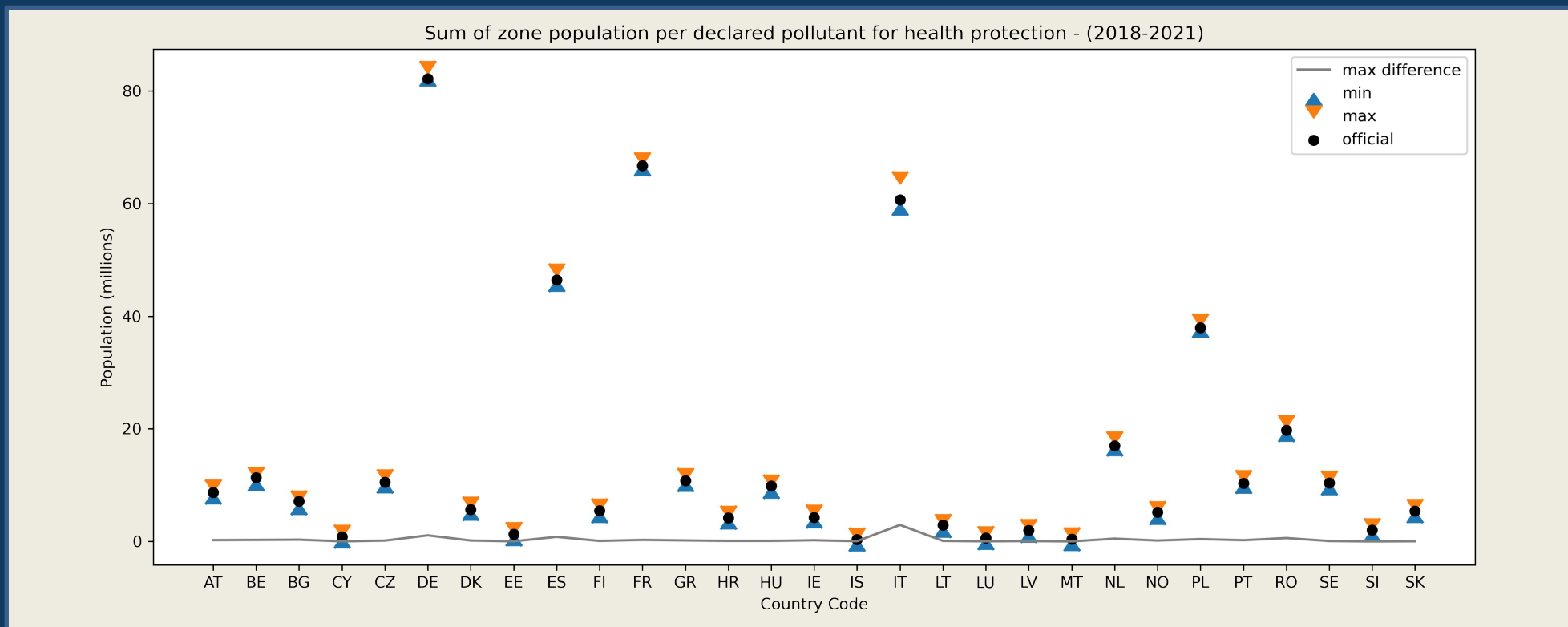


AQ Zones (B) - Area check

Sum of zone areas per declared pollutant for health protection - (2018-2021)



AQ Zones (B) - Population check



Assessment Regimes



Assessment Regimes (C)

- *Countries declare in each zone for each combination of pollutant, protection target a set of Assessment Regimes according to the rules in the Directives to describe how the AQ is monitored*

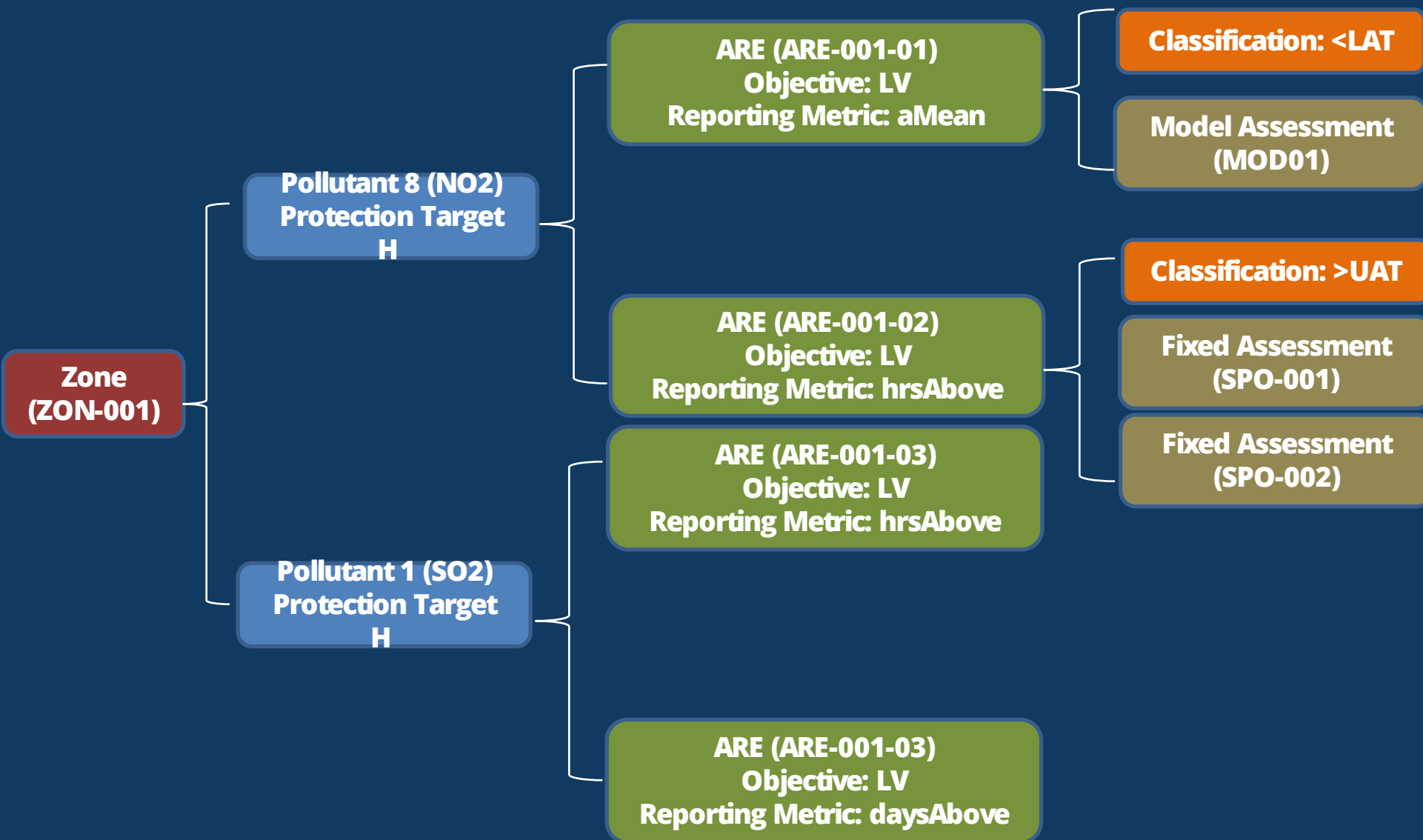


Assessment Regimes (C)

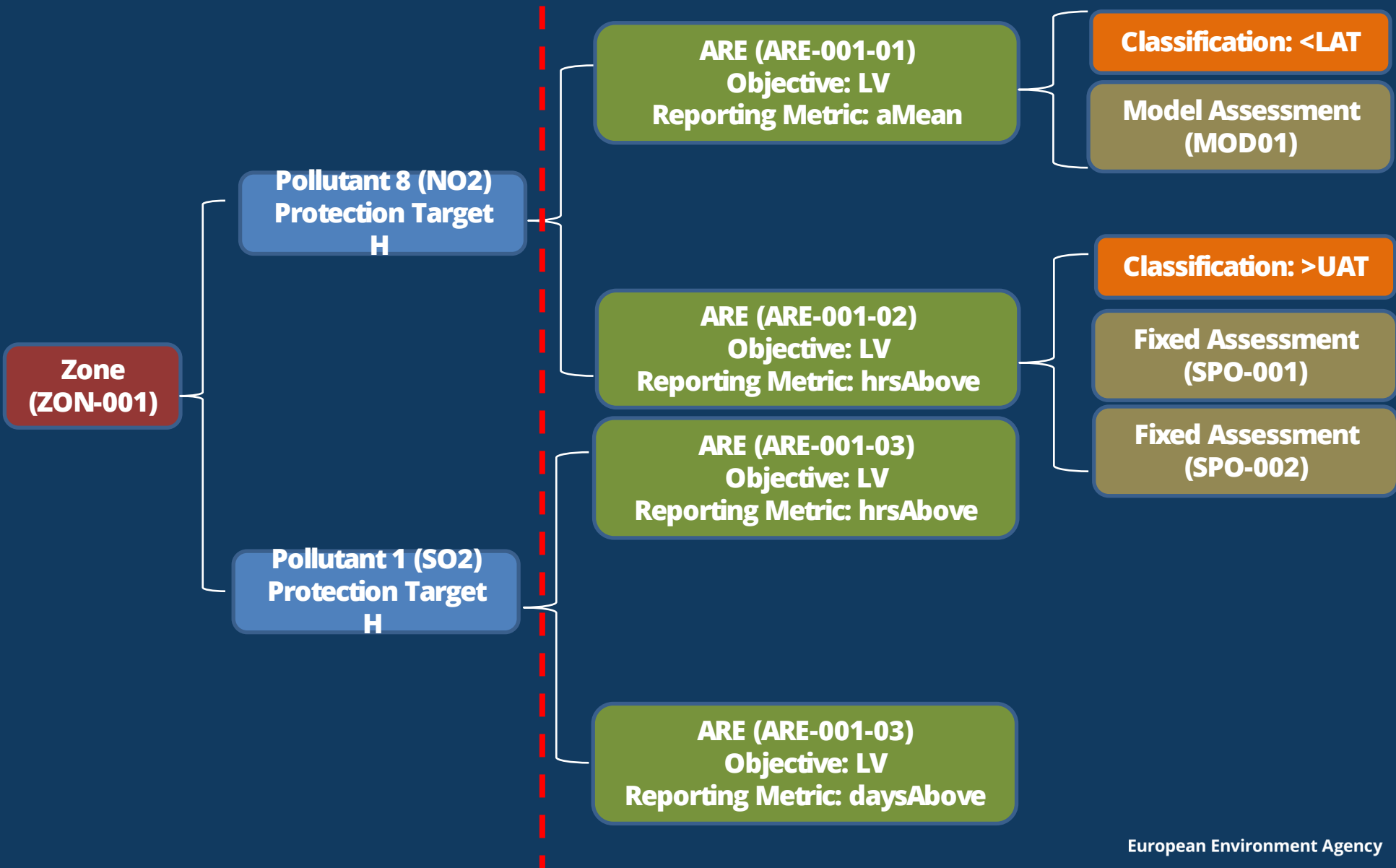
- *Countries declare in each zone for each combination of pollutant, protection target a set of Assessment Regimes according to the rules in the Directives to describe how the AQ is monitored*
- *Do we have all the information to see how the AQ is monitored?*



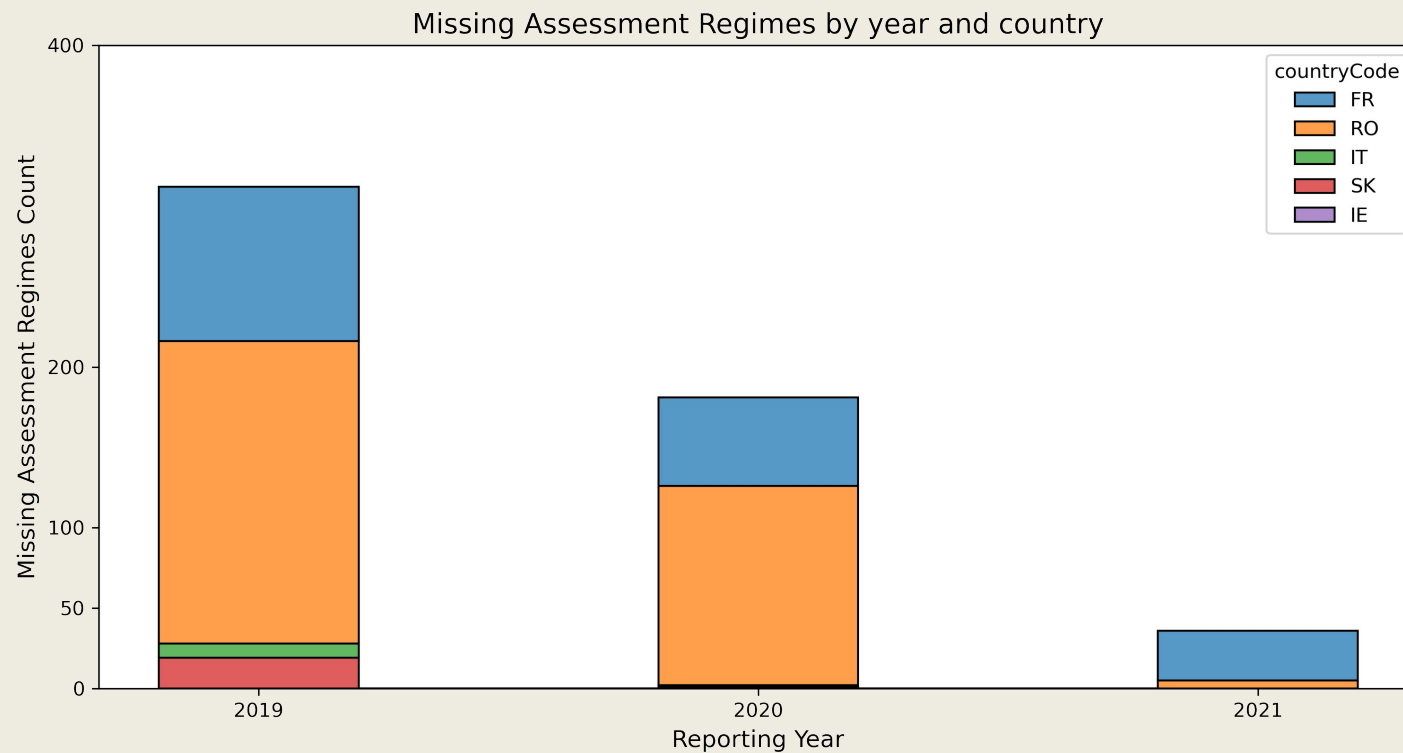
Dataset C Recap - Structure



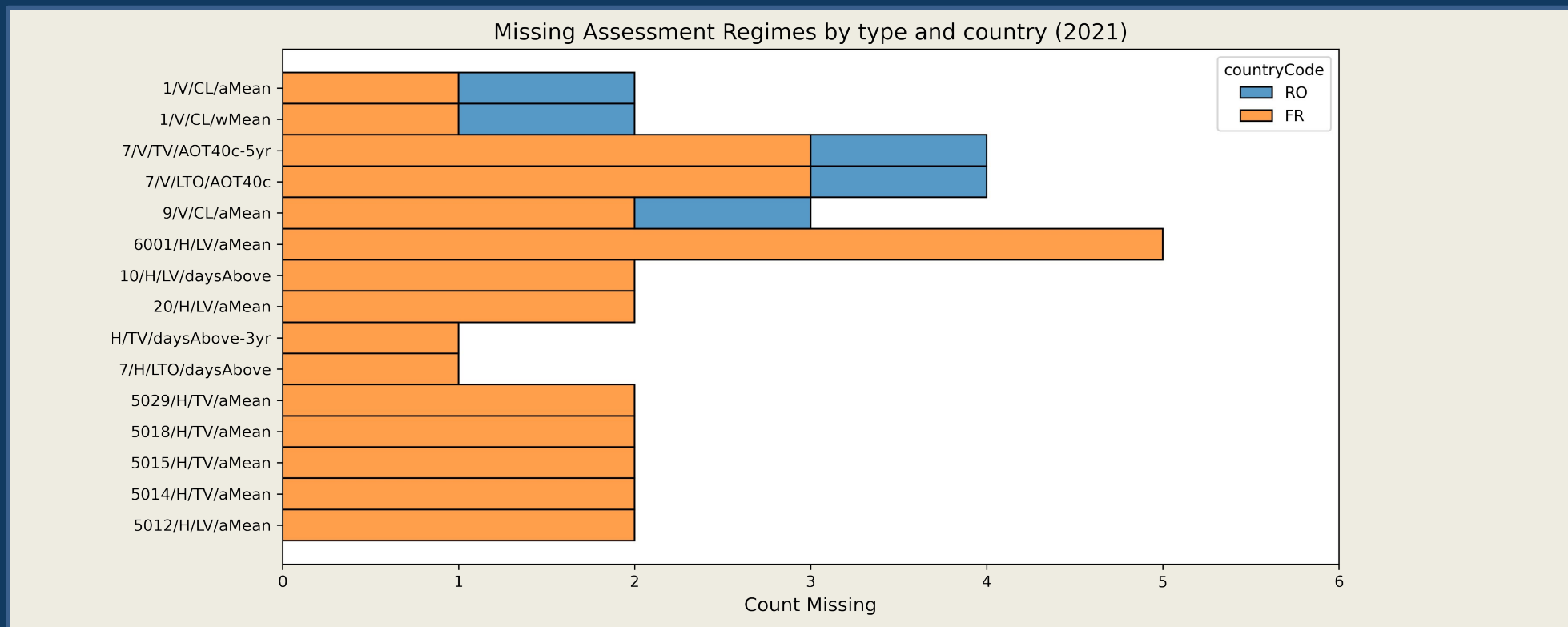
Dataset C Recap - Structure



Assessment Regimes (C) - Missing



Assessment Regimes (C) - Still Missing



Assessment Regimes (C)

- *When Assessment Regimes are missing we have no information on how the AQ is monitored*
- *We cannot tell anything about compliance*
- *We can only use Sampling Points or Models based on their spatial relationship with the zone*

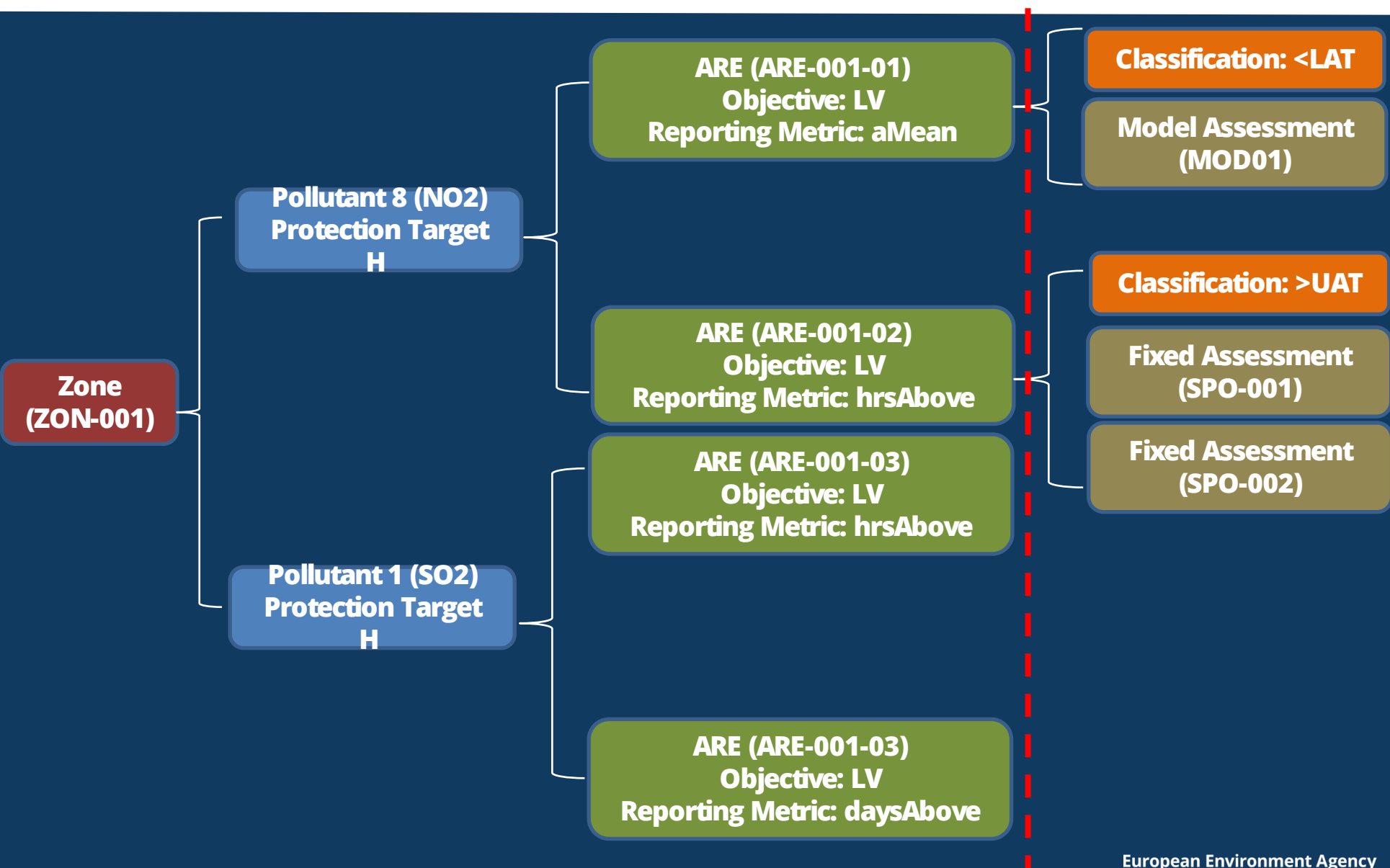


Assessment Regimes – Assessment Methods

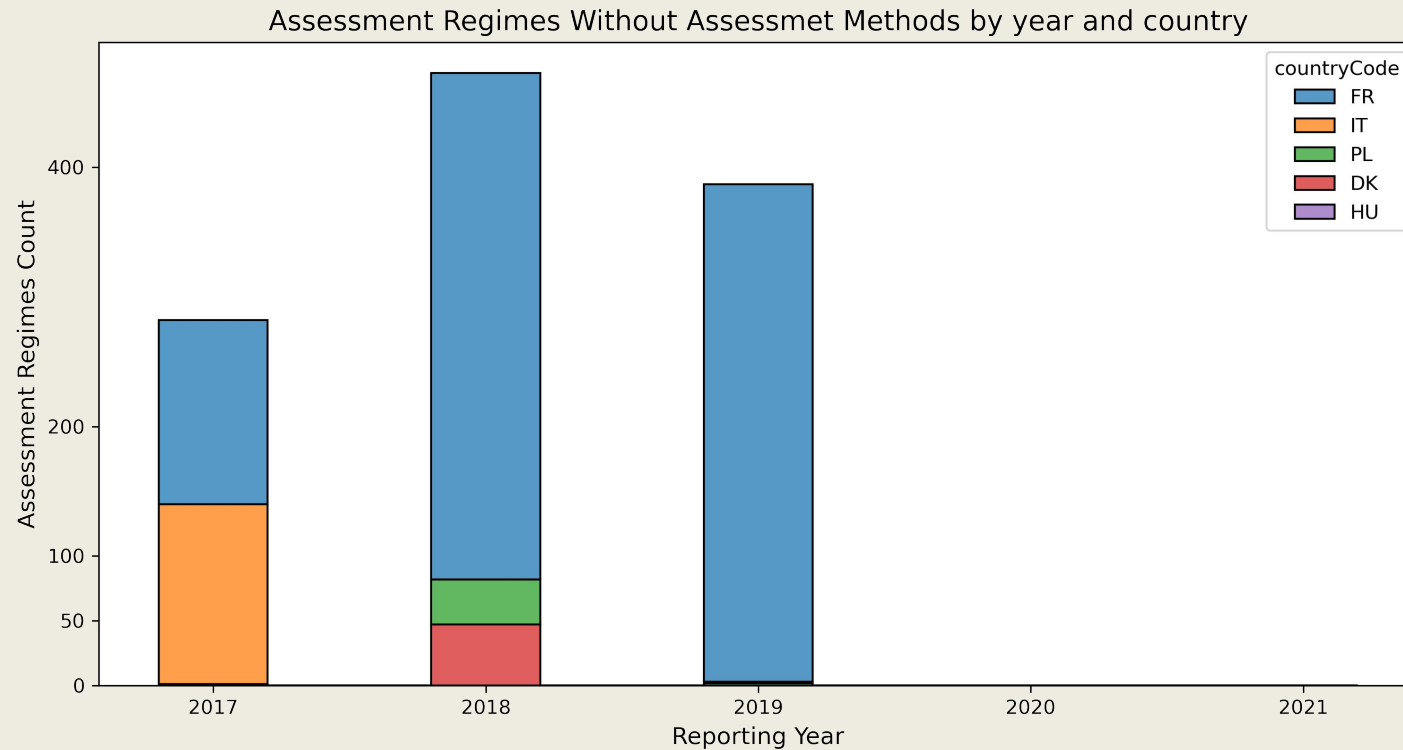
- *Sometimes we have the Assessment Regime but we have no information on the methods used to assess the AQ*



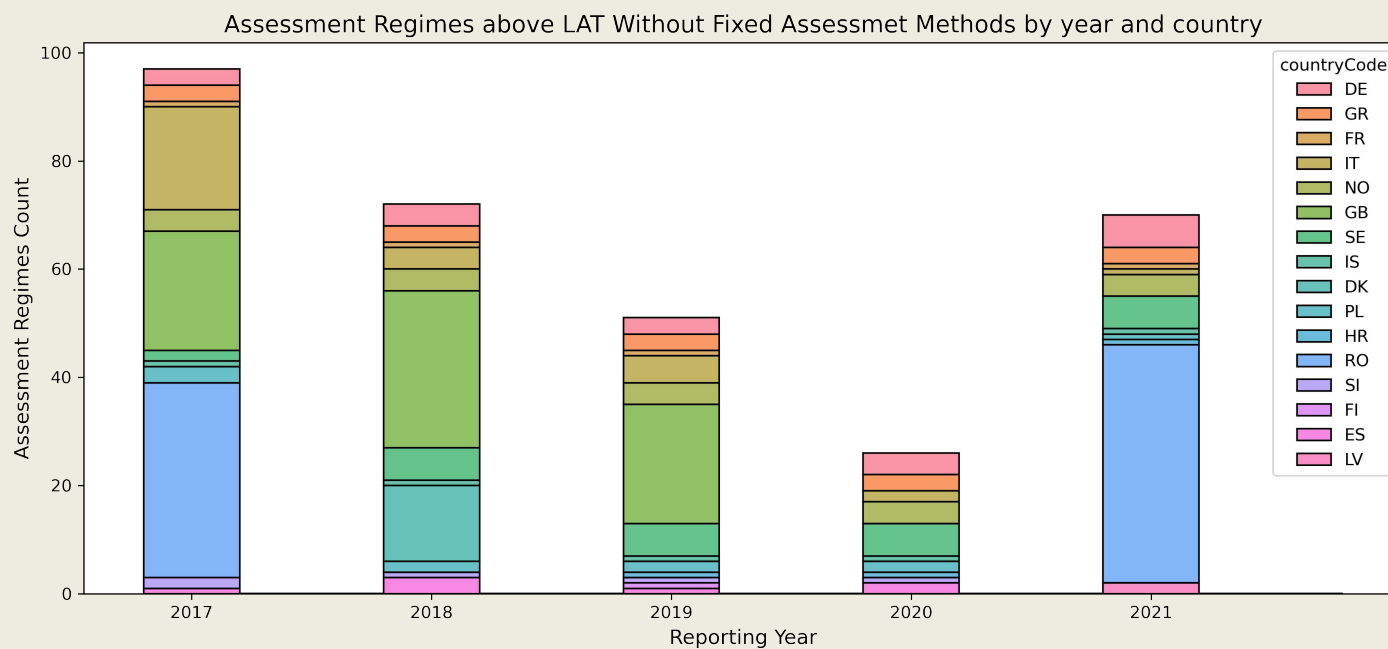
Dataset C Recap - Structure



Assessment Regimes (C) - Missing Assessment Methods



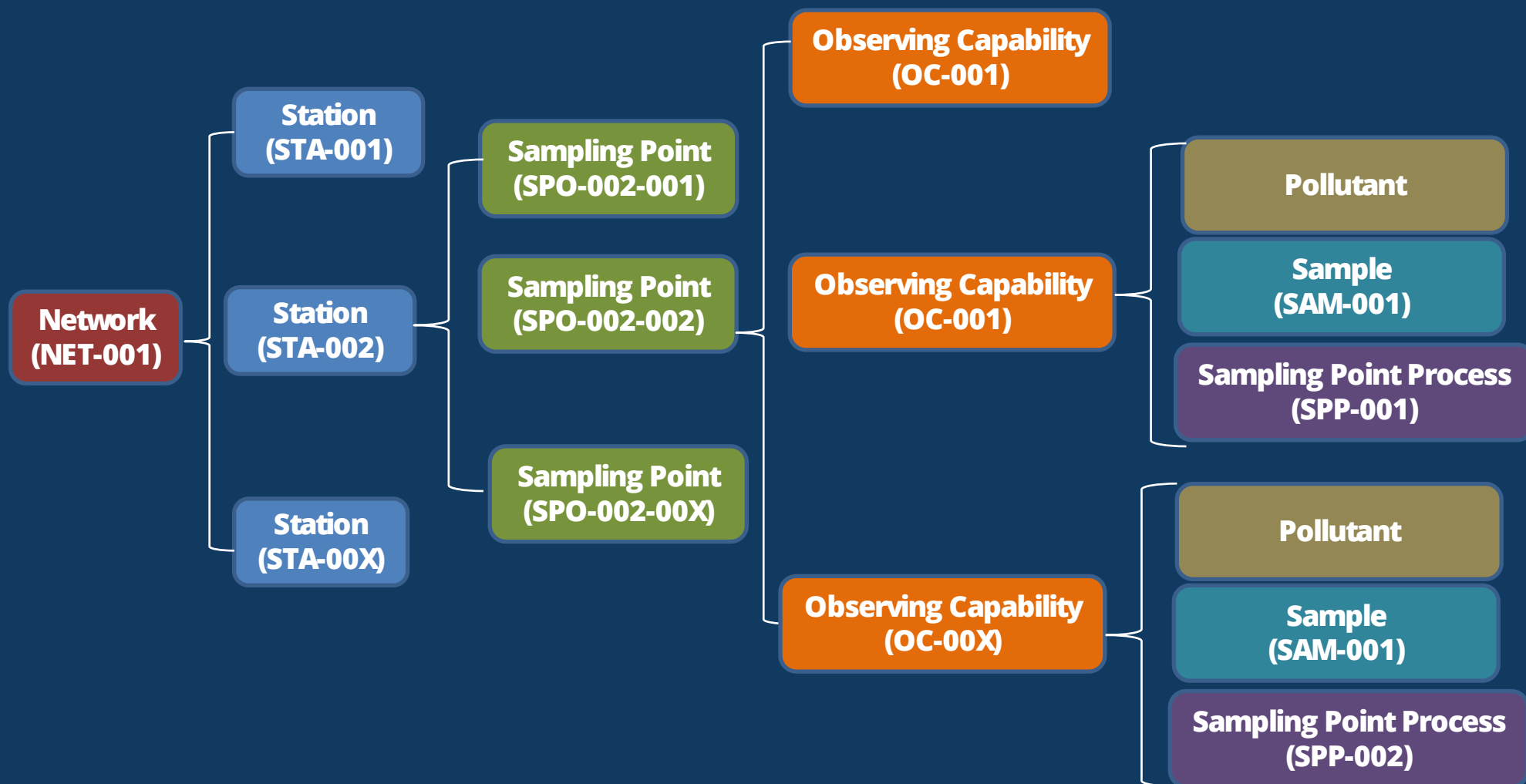
Assessment Regimes (C) - Missing Sampling Points



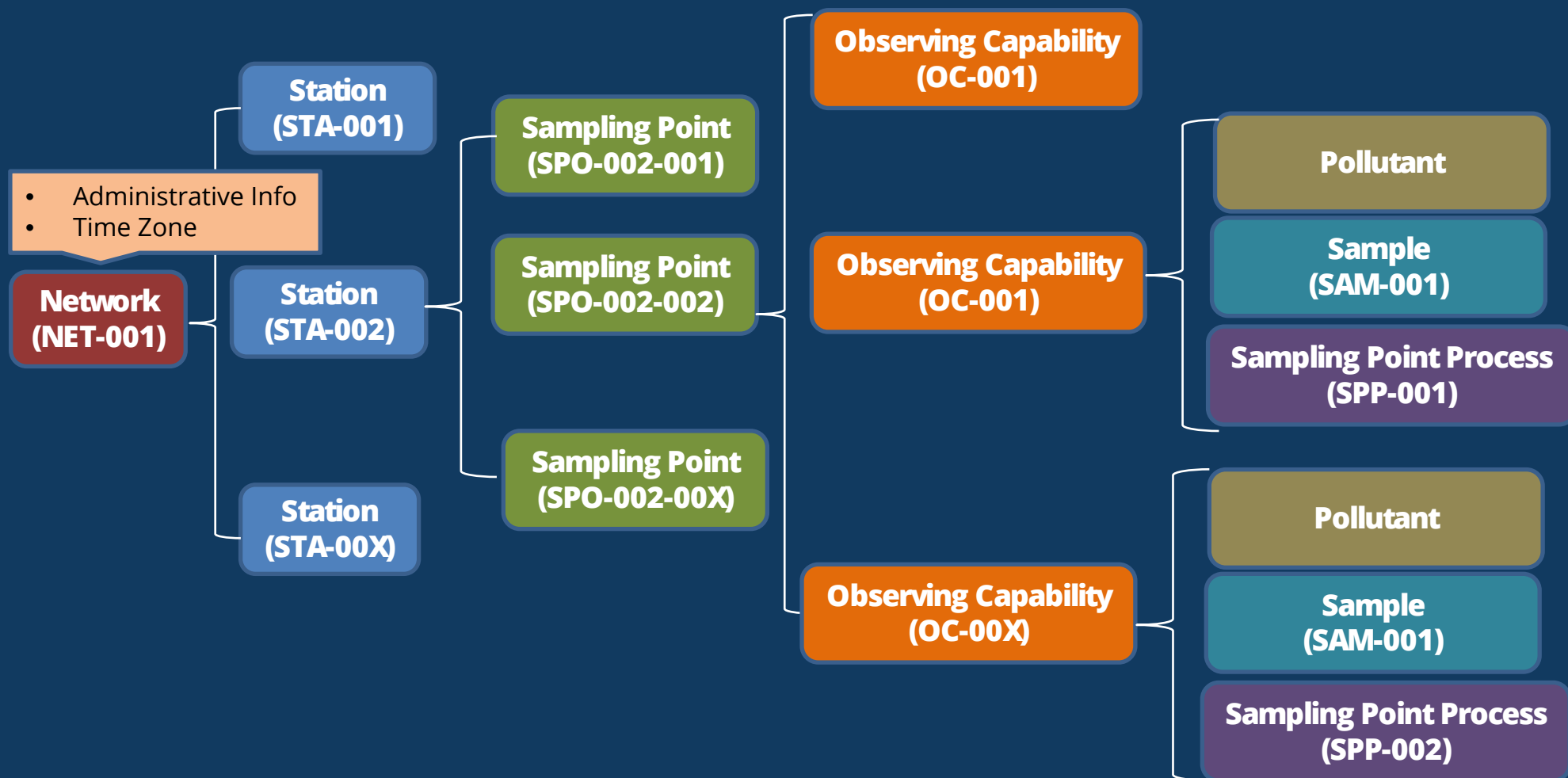
Assessment Methods



Dataflow D Recap - Structure

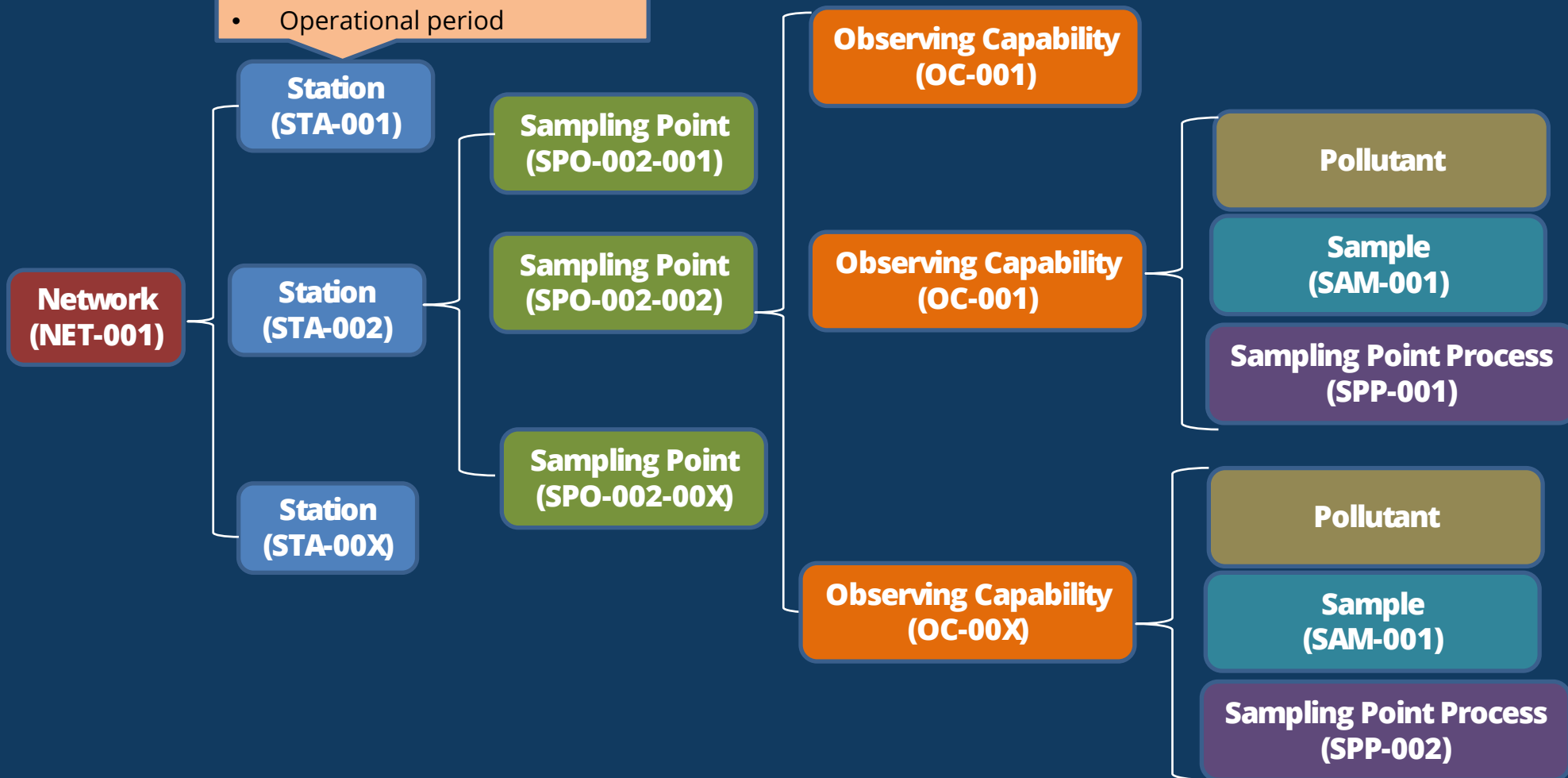


Dataflow D Recap - Structure

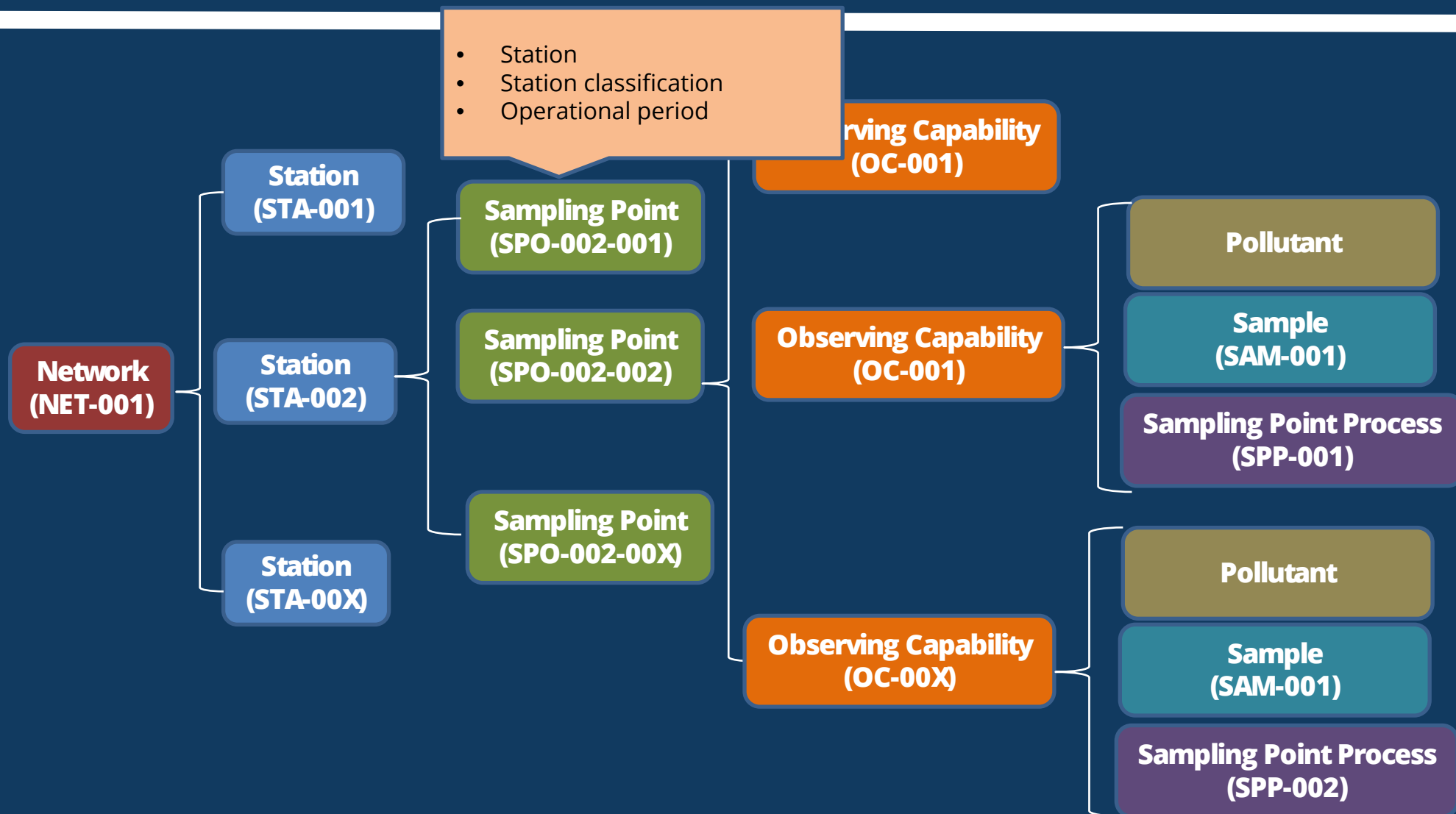


Dataflow D Recap - Structure

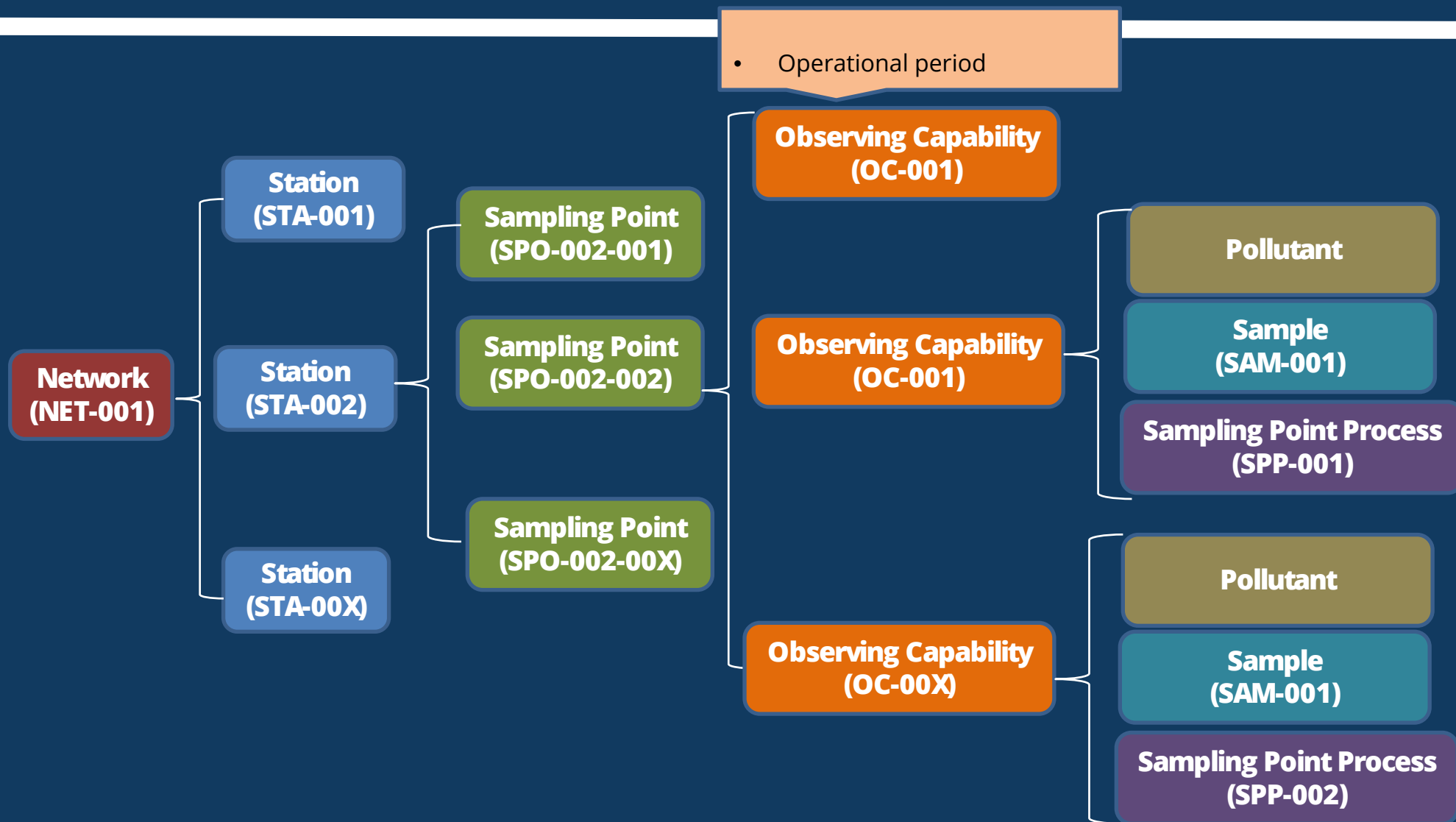
- Position
- Altitude
- Dispersion situation
- Area classification
- Operational period



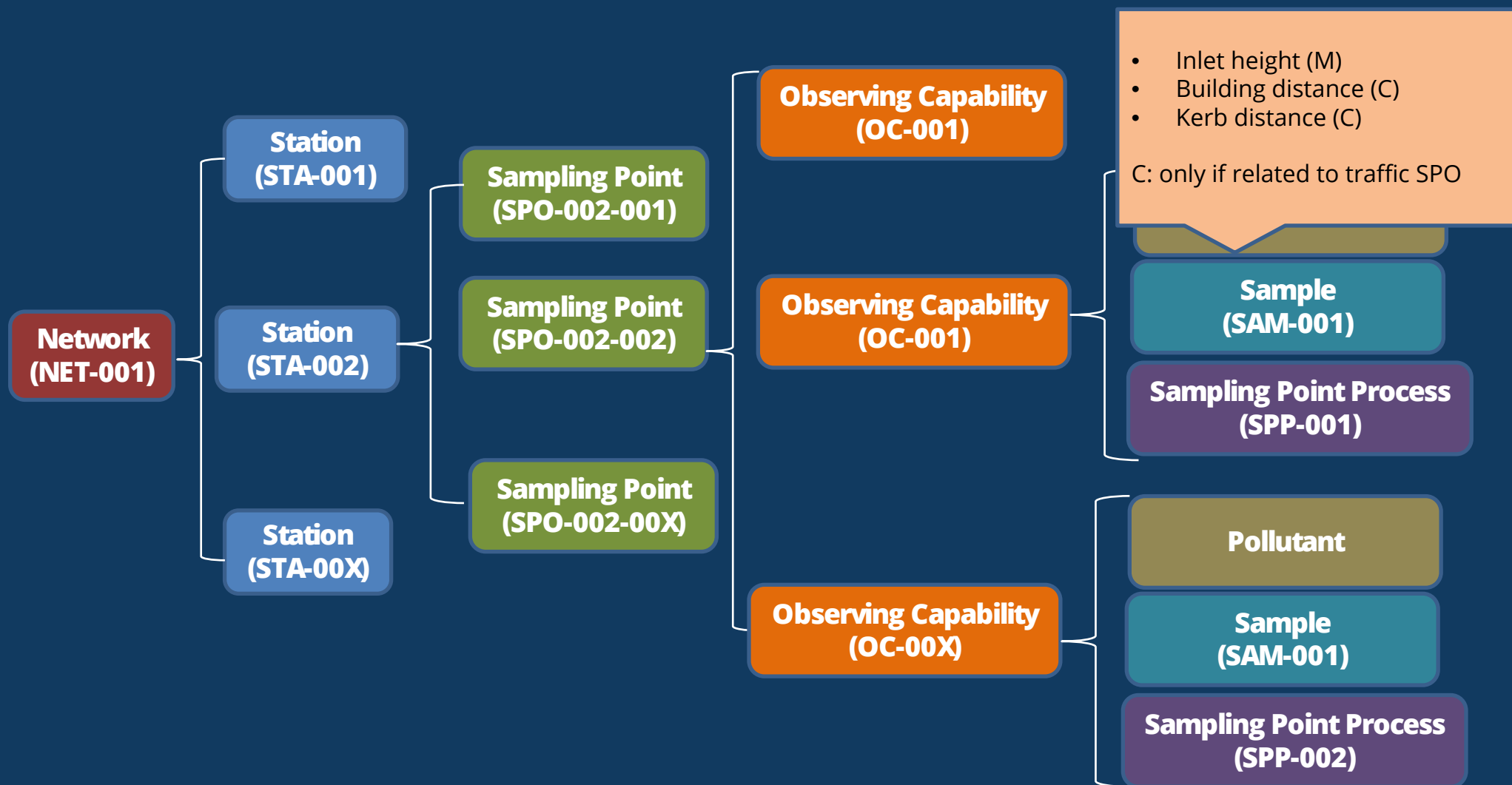
DataflowD Recap - Structure



Dataset D Recap - Structure



Dataflow D Recap - Structure



- Inlet height (M)
- Building distance (C)
- Kerb distance (C)

C: only if related to traffic SPO

Sample (SAM-001)

Sampling Point Process (SPP-001)

Pollutant

Sample (SAM-001)

Sampling Point Process (SPP-002)



Dataflow D – Rules

- *Each D delivery describes the full history of the network from its beginning to the current configuration*
- *Each D delivery overwrites any previous one*
- *Need to ensure consistency with previous deliveries*



Dataflow D – Consistency between deliveries

- *Removing Sampling Points generates 'orphan' time series*
- *Moving Stations or changing station area classification or station classification potentially invalidates analysis and assessments*



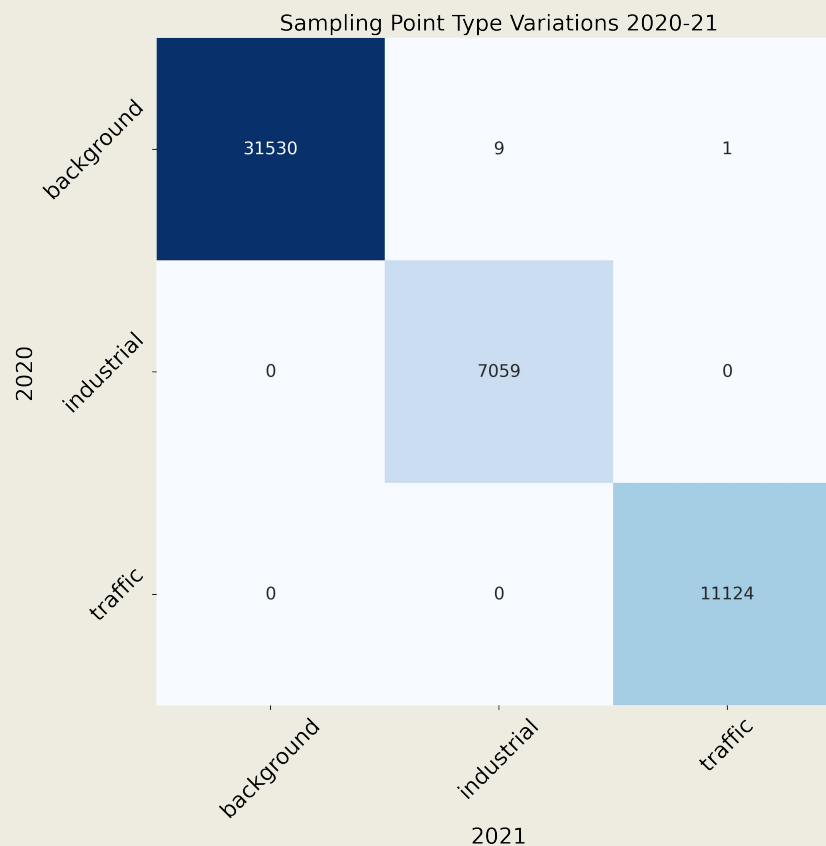
Assessment Methods (D) - Station Area Classification

Station Area Classification Variations 2020-21

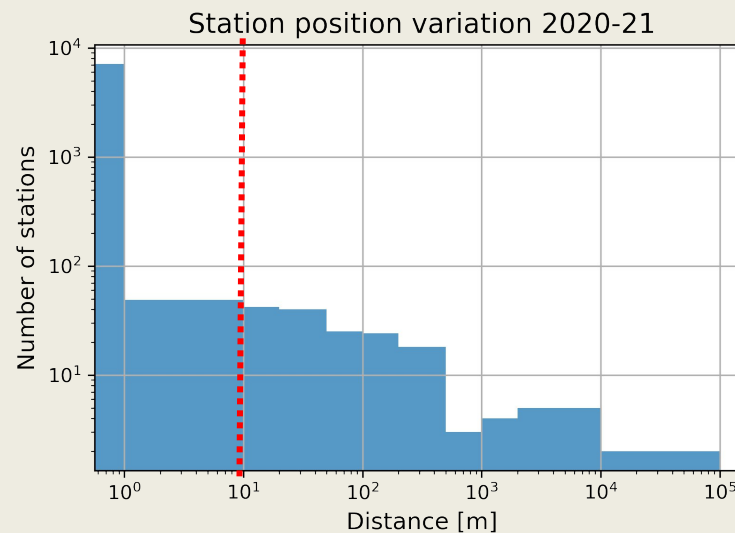
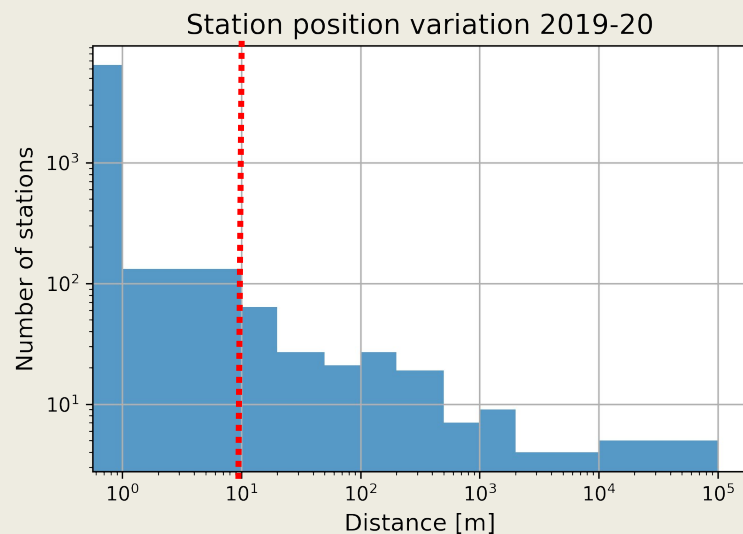
2020	rural	rural-nearcity	rural-regional	rural-remote	suburban	urban
	722	0	0	0	6	1
	0	147	0	0	0	0
	4	0	225	0	1	0
	3	0	0	49	0	0
	1	1	0	0	1645	5
2021	rural	rural-nearcity	rural-regional	rural-remote	suburban	urban
	1	0	0	0	17	3740



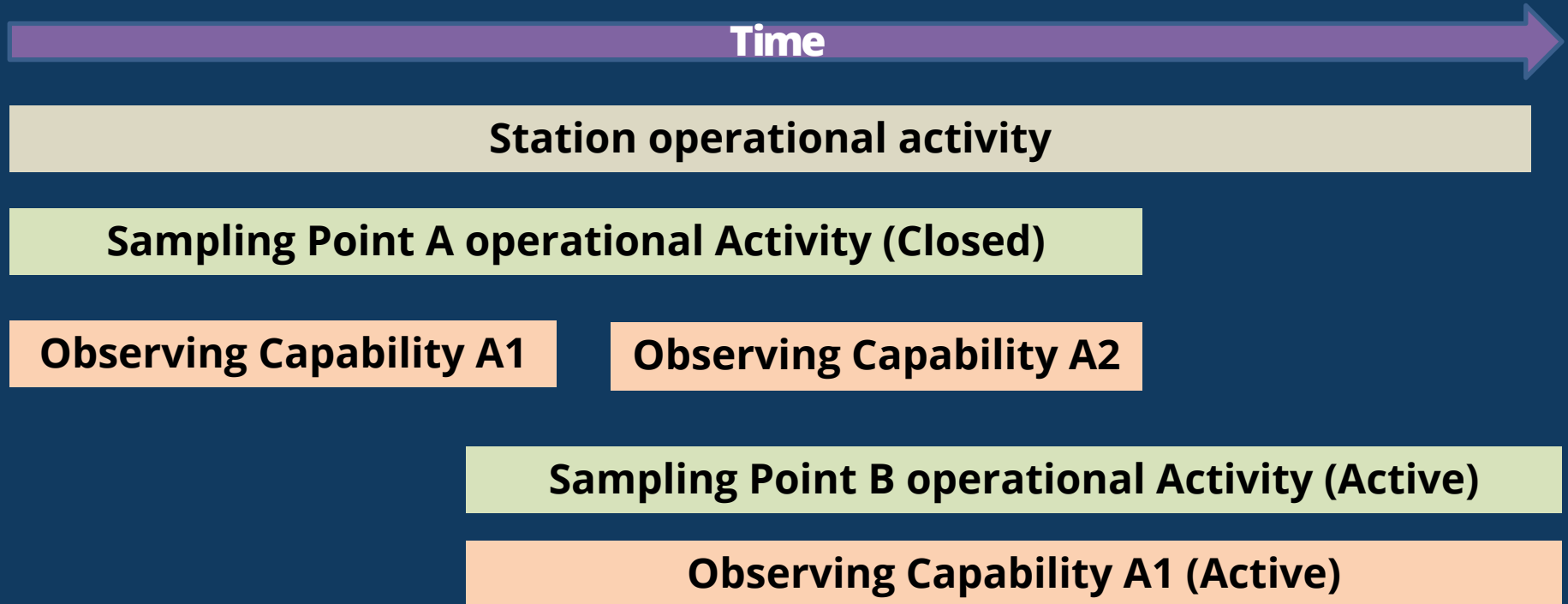
Assessment Methods (D) - Station Area Classification



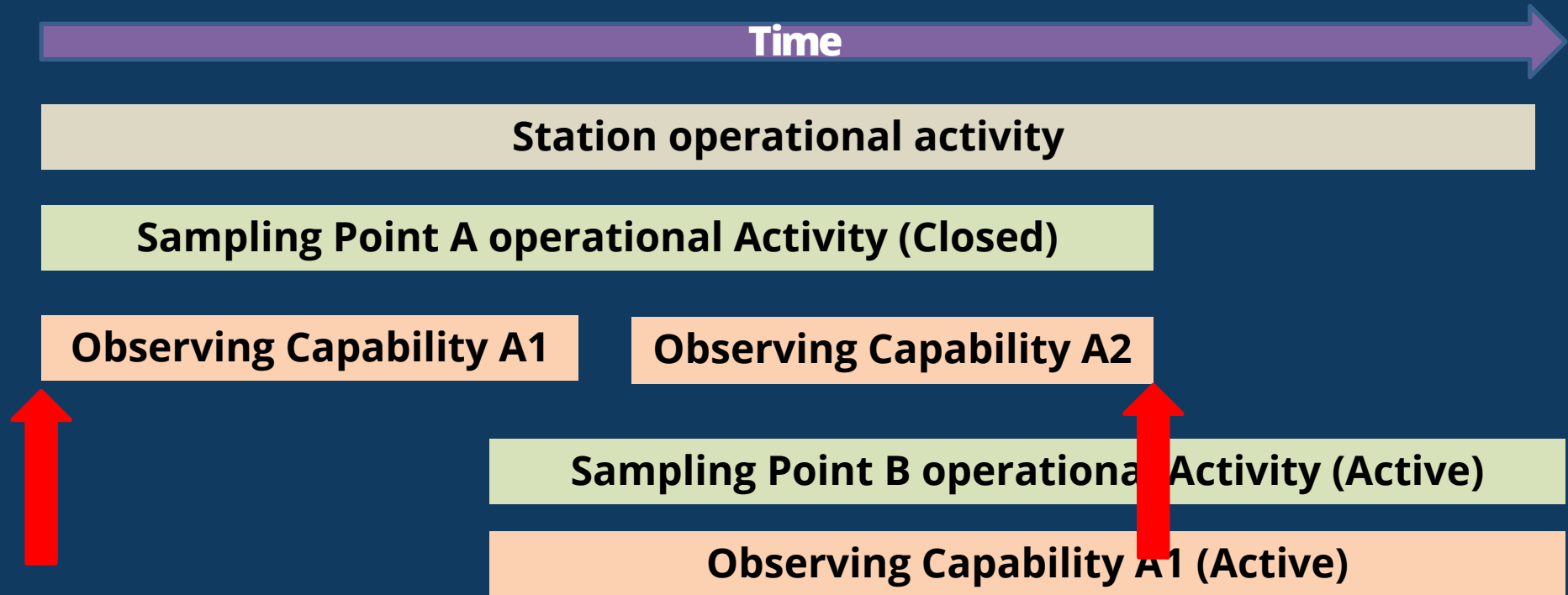
Assessment Methods (D) - Station Position



*Consistency of **Sampling Point**– Activity Periods*



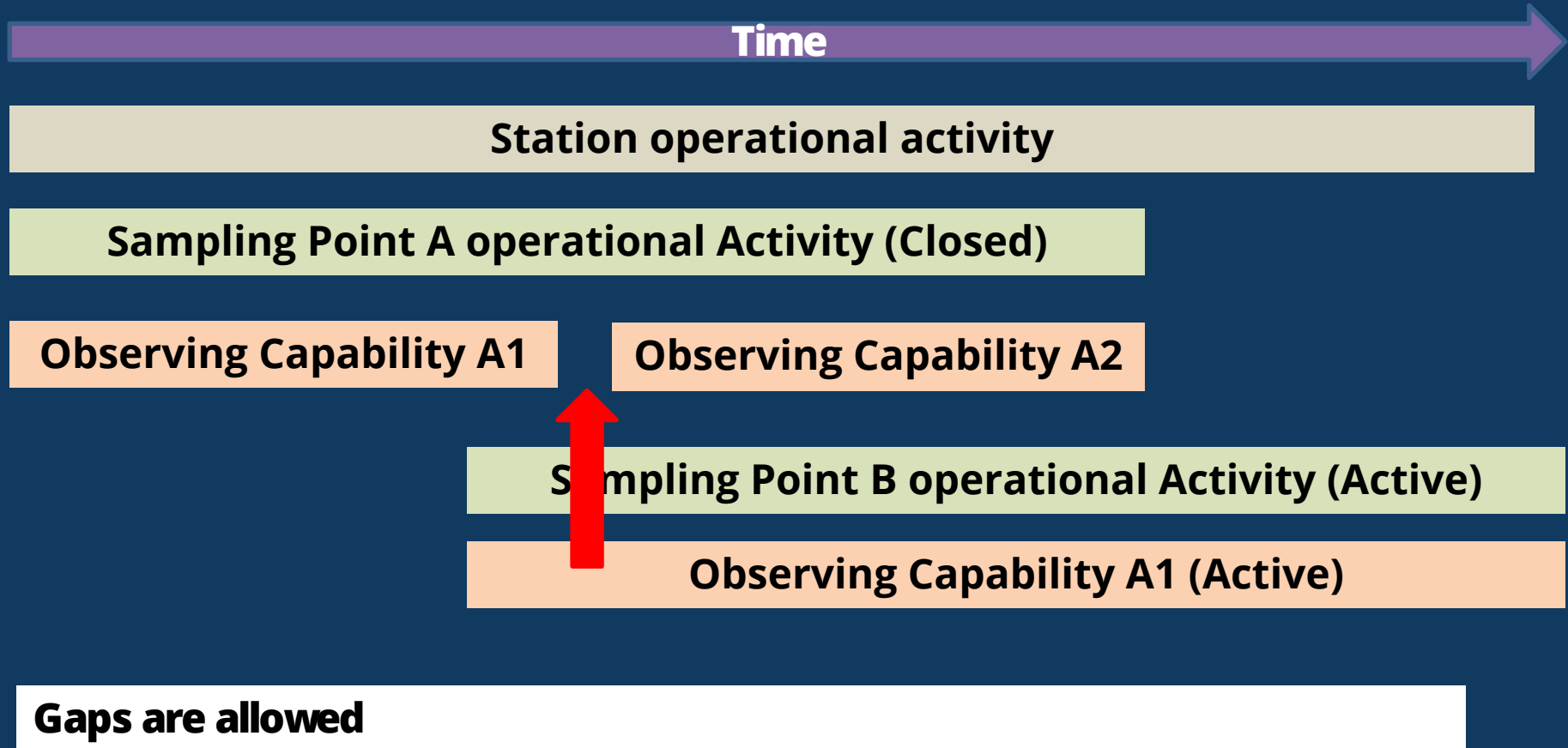
Consistency of Sampling Point– Activity Periods



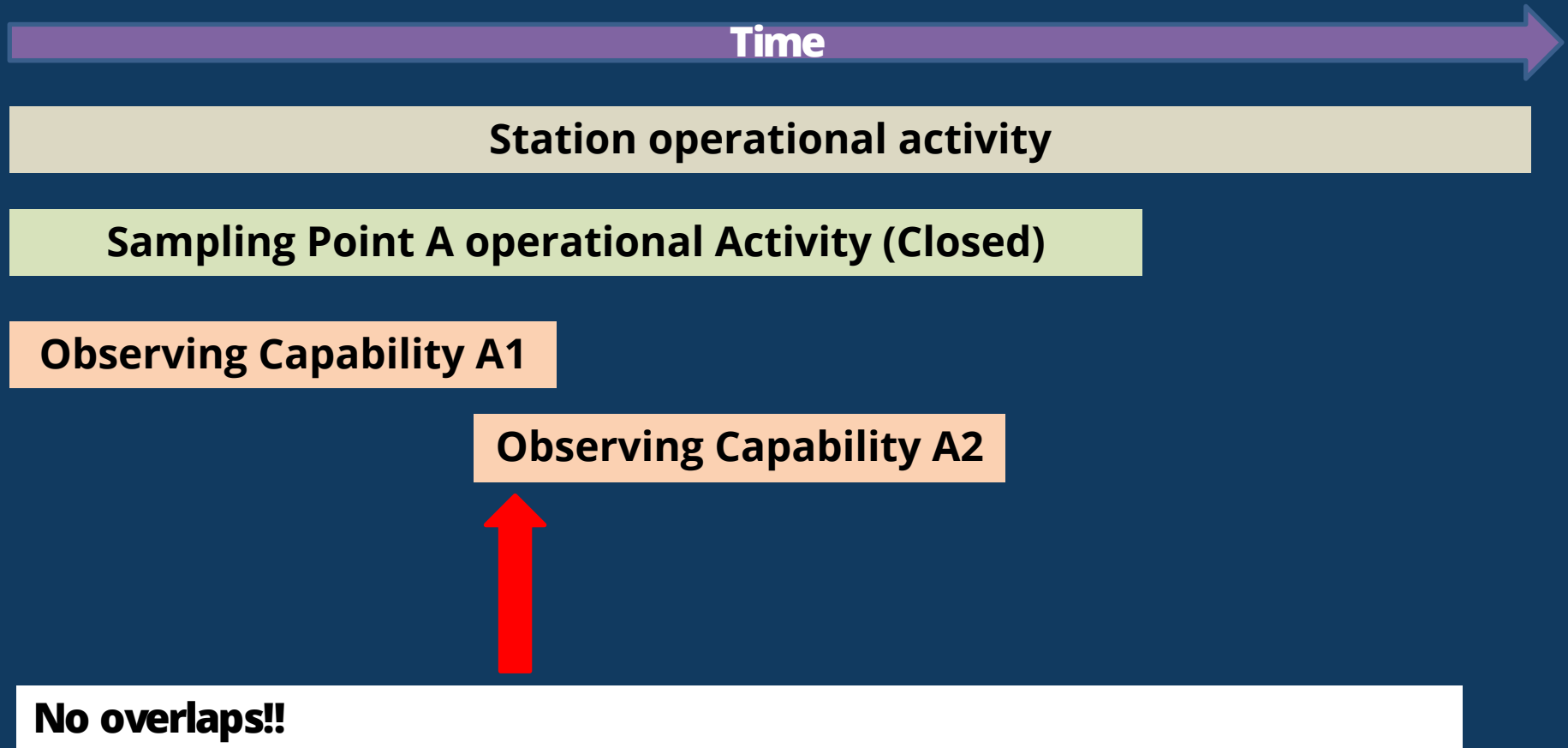
Begin/end time of first/last observing capability should match the begin/end of the SPO activity



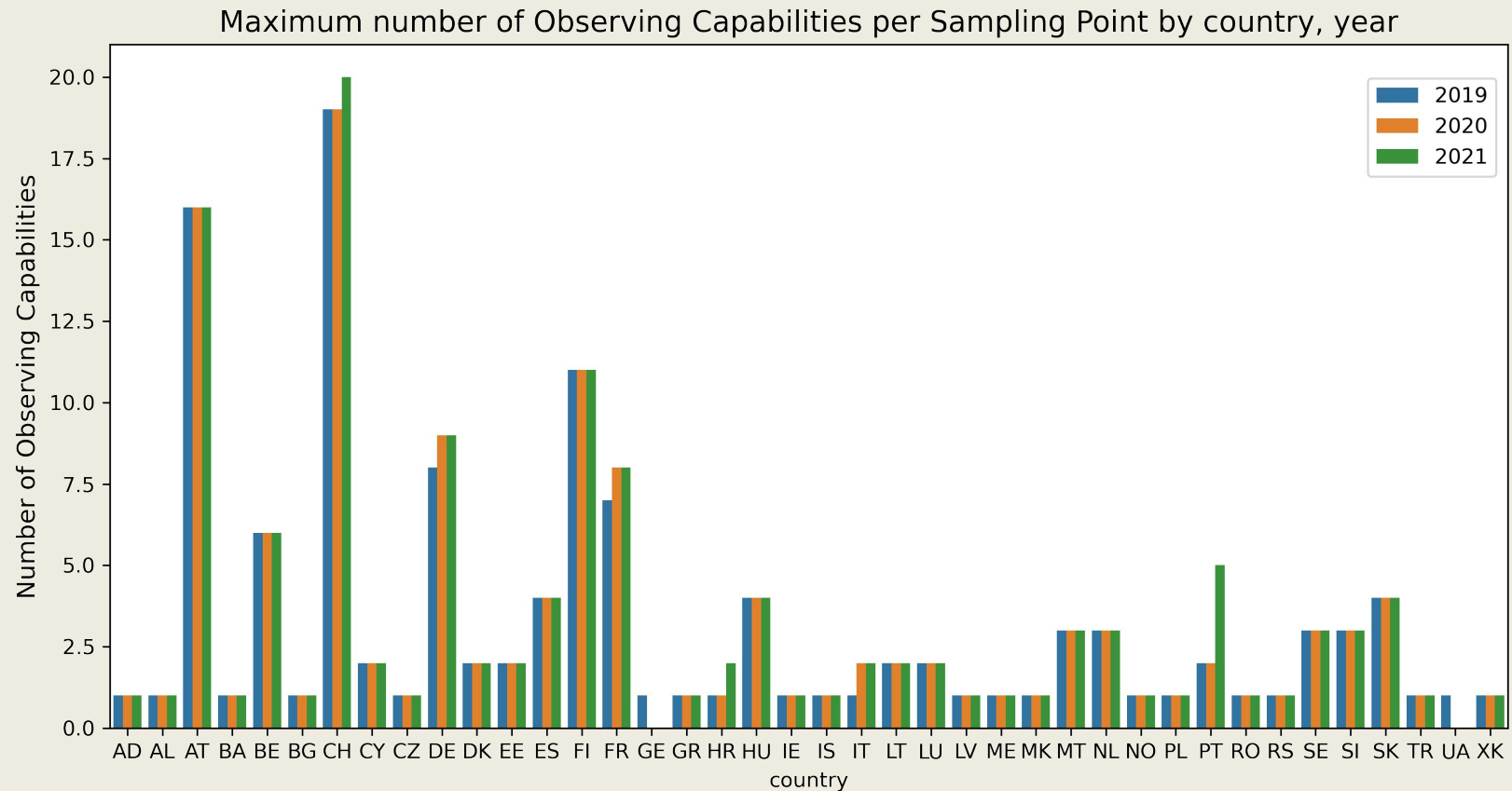
Consistency of *Sampling Point*– Activity Periods



Consistency of Sampling Point– Activity Periods



Sampling Point History - Observing Capabilities



Conclusions and Next Steps



Next Steps

- *Dataflow B quality seems to be satisfactory*
- *Additional work is required to ensure dataflows C and D are reported correctly*
- *Focus on reporting of full history of the network in D*
- *In the new E1a/E2a harvester implementation we won't use constellation anymore*



Thank you for your attention!

