



Eligibility reporting in case of multiple monitored schemes

CbM QA TG v.1.1

How to record CbM decisions for multiple schemes per FOI

1st use case

- Monitored schemes: BPS, YFS, Greening exemption
- CbM process: Crop classification, type T4

FOI_id	BPS	YFS	GE
10001	1, M	1, M	1, A
10002	0, M	0, M	0, A
10003	1, M	1, M	1, M
1000x	0, M	0, M	0, M

This table determines the rules for the traffic light results per scheme

1 = positive detection/prediction
0 = negative detection/prediction

M = manifestation scenario
A = absence scenario

4.1.1. CbmItemStatus.gml

Spatial file containing the polygon collection of all FOIs in scope for the QA inspection.

```
<gml:featureMember>
  <cap:featureOfInterest fid="F01">
    <cap:geometryProperty>
      <gml:Polygon srsName="EPSG:4326" xmlns:gml="http://www.opengis.net/gml">
        <gml:outerBoundaryIs>
          <gml:LinearRing>
            <gml:coordinates>0.620758483033932,0.70059880239521
0.473053892215569,0.584830339321357 ... 0.792415169660679,0.694610778443114
0.620758483033932,0.70059880239521</gml:coordinates>
          </gml:LinearRing>
        </gml:outerBoundaryIs>
      </gml:Polygon>
    </cap:geometryProperty>
    <cap:foiID>123_abc</cap:foiID>
    <cap:step1ItemList>
      <cap:item itemID="1234abc">
        <cap:itemStatus>1</cap:itemStatus>
        <cap:itemFinalDate>2020-06-03</cap:itemFinalDate>
      </cap:item>
      <cap:item itemID="456def">
        <cap:itemStatus>0</cap:itemStatus>
        <cap:itemFinalDate>2020-06-04</cap:itemFinalDate>
      </cap:item>
      <!-- ... -->
    </cap:step1ItemList>
    <cap:step2SchemaList>
      <cap:schema>
        <cap:applicableSchema>BPS</cap:applicableSchema>
        <cap:itemS2>0</cap:itemS2>
        <cap:itemS2FinalDate>2020-09-10</cap:itemS2FinalDate>
        <cap:scenario>manifestation</cap:scenario>
      </cap:schema>
      <cap:schema>
        <cap:applicableSchema>YFS</cap:applicableSchema>
        <cap:itemS2>1</cap:itemS2>
        <cap:itemS2FinalDate>2020-09-10</cap:itemS2FinalDate>
        <cap:scenario>absence</cap:scenario>
      </cap:schema>
      <!-- ... -->
    </cap:step2SchemaList>
  </cap:featureOfInterest>
</gml:featureMember>
```

Annex VI

CbmItemStatus.gml file contains applicable schemas per FOI

Annex VI

CbmlItemLog.xml file contains multiple decisions per FOI

4.1.10.CbmlItemLog.xml

File containing the log of the items per each FOI.

```
<cap:featureOfInterest foiID="123_abc">
  <cap:lotType itemStatus="1">T1_A</cap:lotType>
  <cap:lotType itemStatus="1">T1_B</cap:lotType>
  <cap:lotType itemStatus="1">T3</cap:lotType>
  <cap:lotType itemStatus="0">T4</cap:lotType>
  <cap:lotType itemStatus="2">C1</cap:lotType>
  <!-- ... -->
</cap:featureOfInterest>
<cap:featureOfInterest foiID="A-2">
  <cap:lotType itemStatus="1">T1_A</cap:lotType>
  <cap:lotType itemStatus="1">T1_B</cap:lotType>
  <cap:lotType itemStatus="1">T3</cap:lotType>
  <cap:lotType itemStatus="0">T4</cap:lotType>
  <cap:lotType itemStatus="2">C1</cap:lotType>
  <!-- ... -->
</cap:featureOfInterest>
<!-- ... -->
```

Xml snippet.

```
<cap:featureOfInterest foiID="1001">
  <cap:lotType itemStatus="1">T4</cap:lotType>
  <cap:lotType itemStatus="1">T4</cap:lotType>
  <cap:lotType itemStatus="0">T4</cap:lotType>
</cap:featureOfInterest>
<cap:featureOfInterest foiID="1002">
  <cap:lotType itemStatus="0">T4</cap:lotType>
  <cap:lotType itemStatus="0">T4</cap:lotType>
  <cap:lotType itemStatus="1">T4</cap:lotType>
</cap:featureOfInterest>
<cap:featureOfInterest foiID="1003">
  <cap:lotType itemStatus="1">T4</cap:lotType>
  <cap:lotType itemStatus="1">T4</cap:lotType>
  <cap:lotType itemStatus="1">T4</cap:lotType>
</cap:featureOfInterest>
<cap:featureOfInterest foiID="100X">
  <cap:lotType itemStatus="0">T4</cap:lotType>
  <cap:lotType itemStatus="0">T4</cap:lotType>
  <cap:lotType itemStatus="0">T4</cap:lotType>
</cap:featureOfInterest>
<!-- ... -->
</cap:featureOfInterest>
```

Inspection – step 1

- Inspect a single sample of 365 items by visual photo-interpretation
- QA hypothesis (per FOI):
 - Do I see the target crop class (phenomena)?
 - Yes/true (positive 1)
 - No/false (negative 0)
- Note: inspect only based on the physical manifestation of the phenomena according to the scenario (do not take the eligibility per scheme into account)
- Calculate the α and the β errors

Eligibility check per scheme – step 2

- Prior to Step 2 – a single sample of 365 items has been inspected

Eligibility check per scheme:

- determine the number of items in the sample that yielded a detection per scheme (n_{BPS} , n_{YFS} , n_{GE}),
- retrieve the α and the β from step 1,
- determine the abatable errors n_{sa} and the end-stage errors n_{se} per scheme,
- test n_{sa} and n_{se} against the AC_a/AC_e obtained from n_{BPS} , n_{YFS} , n_{GE} (Table 5.),
- report per scheme