



# LPIS QA Image acquisition

**Slavko Lemajić**

10 years LPIS QA, Varese, 13/03/2019



## LPIS QA Image acquisition - content

- Background/Introduction/news
- Image acquisition process
- Highlighted part
  - Acquisition windows
  - Ortho image return



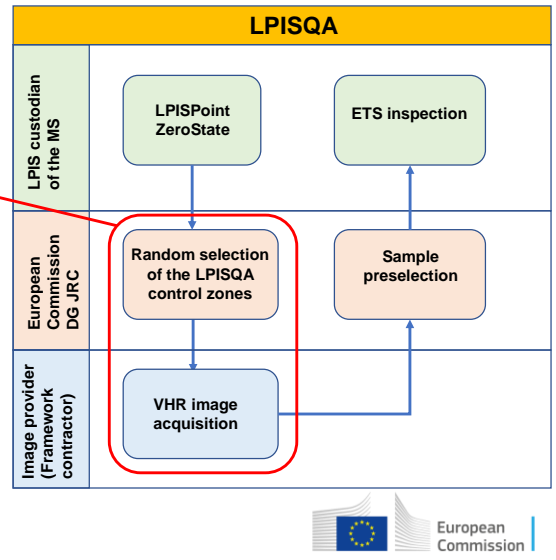
## Background/Introduction/news

- Legal basis for zone selection and sampling
  - EC Regulation 640/2014 art 6: "2. Member States shall perform the assessment referred to in the paragraph 1 on the basis of a sample of reference parcels to be selected and provided by the Commission. They shall use data allowing to assess the current situation on the ground."
- CWRs zone ≠ LPIS QA zone
- Independent zone selection
- Scene selection and acceptance is no longer done by the MS but by the EC (JRC)
- Providing equal conditions for all,
- Due the higher image quality, lower rates of skipping for technical reasons can be expected
- The EC-services do scene acceptance and manage the bonus scene acquisition.
- MS still have to ortho-rectify the scenes
- MS receive their RP sample (LpisSamplePreselection.xml), only when all their scenes are captured and accepted
- **Malfunction** of the WV4 (will not be significant impact to service customers)



# Image acquisition process

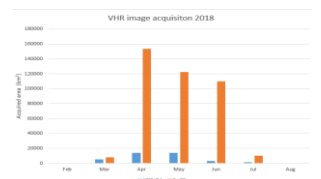
- Preparatory phase
  - Control zones creation
  - Acquisition windows definition
- Operational phase
  - Image order,
  - Image acquisition,
  - Image delivery and IDQA
  - G4CAP
- VHR Image Acquisition Specifications – Campaign 2019
  - [https://g4cap.jrc.ec.europa.eu/g4cap/Portals/0/Documents/VHR\\_2019\\_v105\\_published\\_20180129.pdf?ver=2019-01-29-103528-353](https://g4cap.jrc.ec.europa.eu/g4cap/Portals/0/Documents/VHR_2019_v105_published_20180129.pdf?ver=2019-01-29-103528-353)
  - Near nadir i.e. < 10 deg
  - Max 50 cm GSD (sensor related)
  - 0-10% cc (2015-2018 max cc 4.3%), haze-free, snow-free



## Highlighted/1

### Acquisition windows definition – a key factors

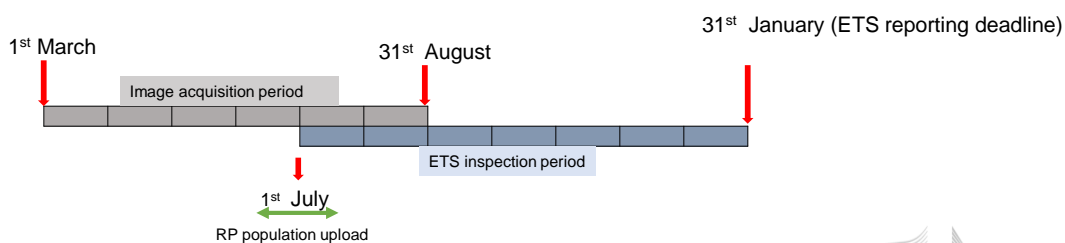
- ✓ Usually one month before CWRS start, from 1<sup>st</sup> March – 31<sup>st</sup> August (drafted by JRC and adjusted by MS)
  - ✓ wider window – LPISQA looks into delineation of AL/PG/PC using structural physiognomy (rather than crop/vegetation growth)
  - ✓ To avoid compete with CWRS
- ✓ Possible delineation issue -> Field observation
- ✓ Early image is more precise in locating the RP perimeter
- ✓ Low density areas -> PANEU zone with the start 15<sup>th</sup> May
- ✓ Image provider capacities
  - ✓ Spare capacities
  - ✓ Wider window in order to acquire quality images



## Highlighted/2

### Important dates

- ✓ Image acquisition from 1<sup>st</sup> March – 31<sup>st</sup> August
- ✓ RP population upload
- ✓ Sample preselection and image delivery (if all images acquired)
- ✓ ETS reporting (ortho image return)



## Ortho image return

### Image return

- ✓ EU financed (satellite) – basic source for ETS
- ✓ MS financed (aerial) - supplementary

### Communication

- ✓ Provide a contact

Orthoimagery	EU-financed	National/MS financed
Platform	Satellite (VHR)	Aerial
Return to	Image provider Image Provider (EUSI)	JRC
Delivery instructions	Image Provider	JRC



## Ortho image return (satellite)

### - OrthoImage return (EU financed) → Image provider

#### - contact

- Request from JRC
- ETS OrthoimagerySet.xml
- Communication letter for OIR (G4CAP)

```
<cap:orthoimagerySet
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://lpis.jrc.ec.europa.eu/registry/6.3.0
  http://lpis.jrc.ec.europa.eu/registry/6.3.0/OrthoimagerySet.xsd"
  xmlns:cap="http://lpis.jrc.ec.europa.eu/registry/6.3.0"
  lpis_code="XY"
  reporting_year="2019">
  <cap:contacts>
    <cap:contact id="1">
      <cap:orthoReturnContractor>DoingOrtho</cap:orthoReturnContractor>
      <cap:orthoReturnContactPoint>
        <cap:firstname>Pablo</cap:firstname>
        <cap:lastname>Neroda</cap:lastname>
      </cap:orthoReturnContactPoint>
      <cap:orthoReturnEmailAddress>pablon@do.xy</cap:orthoReturnEmailAddress>
    </cap:contact>
  </cap:contacts>
```

#### - Data

- Metadata (template) and
- raster files
  - Uncompressed files
  - PSH, All source bands, in original band order
  - Rescaling from 16 to 8 bit → **NOT ACCEPTED**
  - Valid CRS



## Ortho image return (aerial)

### - OrthoImage return (National/MS financed) → JRC

- Metadata
  - OrthoimagerySet.xml rename to ***lpis\_ortho\_meta.xml***
- Raster data
  - Check format (Geotiff, Erdas Imagine, ECW) - Organise your datasets/files per zone – Deliver (via ftp provided by JRC)
- Valid CRS (the same as for ETS)

[https://marswiki.jrc.ec.europa.eu/wikicap/index.php/LPISQA\\_National\\_image\\_upload](https://marswiki.jrc.ec.europa.eu/wikicap/index.php/LPISQA_National_image_upload)





## Any questions?

You can find me at [slavko.lemajic@ext.ec.europa.eu](mailto:slavko.lemajic@ext.ec.europa.eu)

