

The European Commission's science and knowledge service

Joint Research Centre

Working Group on topic
'the actual use of data'
or
'optimizing the use of image data'

discussion outcomes

Chair: X
Rapporteur: Y



Proceedings

1. Group composition – some main CwRS specialists, some LPIS only not familiar with the CwRS process.
2. Method – All 5 presentations relevant to 1 or more themes before lunch. After lunch intro. by chair and JRC coordinator for each theme, and then some good discussions. Important exchange of info. between specialists of MS
3. Challenges – many ..., present need of imagery is sure, how will it look in future methods ...
4. Breaks – interfacing between specialists
5. Critical success factor – see above

Bullet 1 - Optimizing CwRS methods - ask for right amount of images and make right use; issues

1. What are the bounding, blocking factors for further changes in image requests (km²) VHR and HHR?
2. What will happen in your MS in 2019, 2020 regards to VHR, HHR, Sentinels? OTSC (not monitoring...)
3. Name (3) most important factors for deciding on CwRS method in your MS?
4. Other issues / problems ...

Bullet 1 - Optimizing CwRS methods - ask for right amount of images and make right use; suggestions/proposals

1. We need “a good quality in control method ...” and also a 😊 good quality control i.e. need to have quality results, ‘fit for purpose’ method and an OK in audit, this drives and decides the amount and type of imagery requested.
2. MS image needs follows quite well the CAP Regulatory/Reform evolution, and EC guidelines (cf. graphs discussed)
3. Budget should not drive CwRS image needs, however MS need early answer to be able to plan (JRC use of indicators in act)
4. VHR2 going down – will reduce further but depends on VHR2 CD measurement need => optimize position of VHR window
5. HHR substitutes VHR2
6. S2 substitutes HR, and when possible HHR
7. VHR and HHR imagery remain needed !
8. Method (profile/timing/series of imagery) used depends on elements to control, and PA organization

Bullet 2 - Acquisition windows fitting OTSC controls - feasibility, and image acquisition efficiency; issues

1. Name the (3) most important factors in your MS for deciding on acquisition windows (periods)
2. How important is time between different acquisitions within an acquisition windows? High/Low?
3. Any feasibility issue / problem / G4CAP ?

Bullet 2 - Acquisition windows fitting OTSC controls - feasibility, and image acquisition efficiency; suggestions/proposals

1. What crop, what activity, what dates (sowing, mowing, ploughing etc.) decides acquisition window
2. Time between partial acquisitions creates CAPI difficulties, different sensors also some ortho correction problems...
3. Feasibility OK in G4CAP but feasibility is complex especially for the HHR using different scenarios (best case, worst case, 'fixed window', etc.)
4. Feasibility evaluation important since there is the need to optimize better the window length which from MS is experienced too long (eg. VHR) (\Rightarrow JRC is acting on evaluation of feasibility accuracy, and "goodness" of proposed change for both VHR and HHR)

Bullet 3 - Use of correctly processed imagery, image quality issues; CwRS imagery and LPIS QA imagery ; issues

1. Is rescaling good for CAPI? Classification? Why do you do it or not? Give technical or procedural reasons?
2. Are all bands necessary for CAPI? Is it a different person, in a different place, preparing images (LUT, rescale, classif. etc.) compared to who is interpreting?
3. Problems in orthorectification in VHR/HR CwRS - list your main issues/problems
4. Should JRC continue geometry benchmarking of the satellite sensors used?
5. Have you experienced geometry problems of S2? Important in future monitoring multitemporal sequences.
6. LPIS QA imagery - any issues (method, profile)

Bullet 3 - Use of correctly processed imagery, image quality issues; CwRS imagery and LPIS QA imagery ; suggestions/proposals

1. 8 bits / LUT stretch; seems to be unison (IT, DE, IE, MT ...) on the fact that there is no time in CAPI exercise to 'play' with 16 bits, and LUTs to extract more info. 8bits are enough in CAPI! Need to put inspectors in front of a unique standardized imagery. (IT - not a problem of bandwidth to send if necessary a 16 bit image to control body, but needed in CAPI)
2. It was agreed that a MS using classification do not have interest to do a 16->8 rescale (6 MS in 2017 use classif.)
3. Ortho issues – DEM accuracy important, buffer issue around control zone should be taken care of by image provider ..., SPOT in-house processed ortho product is not always sufficient in quality, need of pansharpened SPOT product (commercial issue...)

Bullet 3 - Use of correctly processed imagery, image quality issues; CwRS imagery and LPIS QA imagery ; suggestions/proposals

4. Partial deliveries need to be delivered in less complex shape, and overlapping with other partials, and if full new image acquired deliver both (JRC will pursue)
5. Geometry bench is appreciated – further, it should include radiometry, it should be continuous so if sensor is enhanced updates should be incorporated (e.g. S2B geometry), and geometry across sensors to be followed, S2 reprocessing of archives important (start spring 2019 with new ground truth, and new DEM) (JRC resources ...)
6. Request for JRC to continue validation of new sensors for single tolerance buffer (JRC time, and new CAP ...)
7. LPIS QA imagery perceived good

Bullet 4 - Image Requirements workflow issues - regulatory, administrative, procedural, data sharing etc. ; issues

1. Beware: new deadline in 809/2014 art 40b amendment for monitoring (01/12), how does it fit with 908/2014 art. 26 (01/11) – how will you manage this in 2018, in 2019 and future?
2. Delivery of 'fit for purpose' imagery to control body in time - does it work? Issues/problems in workflow?
3. Ideas Campaign Result statistics?
4. Image return of ortho imagery to JRC – FTP account where (push/pull)? Can we ask MS to archive (10 years) or should EC?
5. If time: INSPIRE data sharing - issues for imagery, issues for LPIS data

Bullet 4 - Image Requirements workflow issues - regulatory, administrative, procedural, data sharing etc. ; suggestions/proposals

1. Dates no problem, if a MS will perform monitoring it will know even 1 month before the deadline 1/12 so any changes (down?) in image requests will be mirrored before 1/11.
2. Image delivery OK timewise; 1-2 days in 2018 (specs < 6 days)
3. Campaign Results stats – we will ask MS for minimum, DG AGRI anyway retrieves bulk (as is done already by July year n+1 of campaign n)
4. Ortho image return to JRC – Reg. 908/2014 art. 21. MS prefer not to archive themselves; some could provide PULL for JRC; suggested JRC, DIAS, cloud ...
5. INSPIRE – left for future; indeed DG AGRI is addressing IACS data share;

Bullet 5 - The regular LPIS update and the actual use of [any] imagery; issues

1. Good efficiency in pre-existing imagery (OTSC/QA)?
2. Limitation to a unique type of imagery, purpose ?
3. Process implementation: unique / specific?
4. Issues with imagery?

Bullet 5 - The regular LPIS update and the actual use of [any] imagery; suggestions/proposals

1. Present MS are using the surplus of OTSC and/or LPIS QA imagery; and some pro-active processes to detect possible needs for update are in place.
2. All types of imagery are used for LPIS update, incl. aerial, VHR/HR... S2 is also already used in some MS as a trigger for a need of update.
3. Update process: Imagery is used for systematic but also risk based approach. Updates are done either all year long either on specific period.
4. No specific issue in costs of imagery, resolution needed, planning of image acquisitions, interaction with image providers, IT infrastructure and processing power needs

Bullet 6 - Future use of data; S1, S2, micro-satellites, HAPs, RPAS etc. as input to monitoring, or to QC of systems/methods; suggestions/proposals

1. S1, S2 in future monitoring – pros/cons
2. Will 2019 see a reduction in MS image requests from EU due to start of monitoring? 2020?, 2021? – what will happen in your country?
3. Need of imagery in monitoring, or other purpose (e.g. QC)? When and for what?
 - HHR, VHR, other (which, name these)

Bullet 6 - Future use of data; S1, S2, micro-satellites, HAPs, RPAS etc. as input to monitoring, or to QC of systems/methods; suggestions/proposals

This questions was considered too important to answer in the 15 minutes left ...

1. Small parcels, permanent crops, landscape features are problematic for S1, S2
2. Clarity on doubtful cases, increased number of RP to be followed compared to the present 5% is not feasible.
3. Stretch S1, S2 use as much as possible, find a path/method through pilots, and a gradual (3 years) introduction to monitoring (*problem of time and indeed to introduce CwRS took 10 years ...*)
4. The need for HHR imagery in monitoring exists
5. Some MS expressed the need of VHR imagery

AOB (optional)

1. Topic 1
2. Topic 2

Thank YOU