Sen4CAP Final User Workshop

Chat log - Day 1 - 4 March 2021

Falah Fakhri: 09:15: Does the quality relate to materials (Optical\SAR - Images) or the tools?

Bastian Berlin SE: 09:18: Since the AMS might have different rules, should there not be a project to adapt Sen4CAP to the new AMS?

Dominique Laurent: 09:31: Is Creodias mandatory to be able to run Sen4CAP tools?

Laurențiu Nicola (CSRO): 09:32: @Dominique no, you can also install it on a different DIAS or cloud provider, or on your own infrastructure

Guido Lemoine (EC-JRC): 09:38: SEN4CAP can in principle be run on any DIAS, esp. since it is now "dockerized". CREODIAS has a predefined VM image, so does not require installation.

Salvatore Carfi: 09:39: Sophie, UC claimless system in NIVA is assigned to Italy (not to Lithuania)

Sylwester Zaprzala (Tragsatec): 09:46: At Tragsatec, we are interested in testing with Sen4CAP. Specifically in the extraction of markers from the images to parcels. We don't need to do ML with Sen4CAP because we already have our own models that work well. It is possible to modify the type of extraction indexes using others other than eg. NDVI?

Laurențiu Nicola (CSRO): 09:48: @Sylwester we support additional markers besides the NDVI, including some derived from Sentinel-1 products. Are you thinking of some indices in particular?

Falah Fakhri: 09:49: @Sophie Bontemps, Would you please to clarify the

metrics of validation you have used? And in which step do you validate your results?

Philippe Malcorps (UCLouvain): 09:50: @Sylwester: we will see all the markers that are extracted automatically by the system tomorrow. If you want to extract other markers, you will have to run your extraction script, but you can use the data preprocessed by the system. We can discuss about that tomorrow.

Cosmin UDROIU (CS ROMANIA): 09:51: @Sylvester Yes, the system can be configured to extract the markers (std dev and mean values per parcel) also for LAI, FAPAR and FCOVER (beside NDVI, AMP and COHE)

Sylwester Zaprzala (Tragsatec): 09:52: eg. VH/VV ratio
Sylwester Zaprzala (Tragsatec): 09:52: Thank you! ;)

Cosmin UDROIU (CS ROMANIA): 09:52: yes, that too for AMP
Cosmin UDROIU (CS ROMANIA): 09:52: (s4c_mdb3)

Anders Munck (FI): 09:53: Thank you Sen4CAP project for implementing the EU DEM!

Guido Lemoine (EC-JRC): 09:57: CREODIAS implemented the Copernicus DEM, so Application Ready Data can be generated also outside the SEN4CAP context.
Guido Lemoine (EC-JRC): 09:57: I guess the other DIAS will do this as well.

Pierre Defourny - UCLouvain: 09:58: @Falah: the metrics of validation vary with the use case and the step in the use case. For instance, for crop type the F-score is a key performance metric but the use case is assessed from its impact on the compliance decision. More will be presented in the forthcoming presentation.
Philippe Malcorps (UCLouvain): 09:59: @Falah: about validation, different validation procedures were applied depending on the products that are

validated and on the availability of in-situ data. It is documented in a validation report -> I will ask if we can share it soon.

Pieter Roggemans: 10:19: What is the accuracy difference obtained by using MAJA versus Sen2Cor?

Falah Fakhri: 10:19: I missed the presenter name, How do you separate soil from mowing in the early stage? and how it affects the classification results?

Bastian Berlin SE: 10:19: Kornelis are you planning on publishing your findings regarding your studies of catch crops? It sounds very interesting and we have discussed similar problems at the Swedish PA with undersowing and specific crop types.

Falah Fakhri: 10:20: @ Sylwester Zaprazala, I'm from Finland

Philippe Malcorps (UCLouvain): 10:21: @Pieter: it was creating a problem especially with the mowing detection algorithm, which was overestimating a lot of mowing events with Sen2COR data.

DE SN - Okke Gerhard: 10:22: I would be interested if anybody has experience (or tried) to use the L4B mowing detection also for harvest on arable land?

Dominique Laurent: 10:27: what was the other source in NL to compare with Sen4CAP results?

Kornelis: 10:35: Bastian, sharing of the report about catch is possible, but it is in Dutch now. I don't have a problem with sharing it however. We are now starting a proof of concept on the basis of this report and the different scenarios for developing markers. I can share the results and the chosen approach. The developing will start this year.

Bastian Berlin SE: 10:37: Kornelis, it would be great to look at your findings

and google translate should be good enough for the essentials :)

Philippe Malcorps (UCLouvain): 10:38: @Okke: do you know that there is a specific harvest detection algorithm for annual crops using the L4C agri. practices monitoring processor?

DE SN - Okke Gerhard: 10:41: @Philippe Yes, I know, I was just wondering If the mowing detection could also be used in that regard, as a harvest and a mowing is all basically a extraction of biomass. It may be resource efficient to run only the L4B processor. We have not tested L4C so far but are considering it for the future.

Philippe Malcorps (UCLouvain): 10:49: @Okke: ok, I understand. Another element: in the new design of the system (since version 2.0), the two processors (L4B and L4C) are using the markers from the markers database. So, if the extraction is done by one of the processors (or the markers database processor) it will beneficiate for the other processor also. So, the other processor (L4B or L4C) will only have to run the time series analysis part.

DE SN - Okke Gerhard: 10:53: @Philippe Thank you for the answer. It seems as if we have to update to the version 2.0 since that seems to be more efficient anyways.

Bastian Berlin SE: 11:03: We validate with manual checks of the Sentinel2 pictures.

Lucie Savelkova: 11:06: In the CZ we used for validation in-situ data collected specifically for the purpose of Sen4CAP validation.

Lucie Savelkova: 11:09: And also, data collected from farmers via regular questionnaires and data from OTSC were used for validation in the CZ.

Dominique Laurent: 11:54: Was the EOStat project conducted only in

Poland or also in other countries?

Jan Musial (IGiK): 11:55: only for Poland

Jedrzej Bojanowski (IGIK): 12:10: @Dominique Laurent, we are open to collaboration towards application of the EOStat products (agriculture activities, yield forecasts) in other countries

Benjamin Koetz: 12:15: There is also the Sen4Stat project which is looking at requirements of National Statistical Offices for example in Spain - there will be an open source tool similar as for Sen4CAP https://www.esa-sen4stat.org

Guido Lemoine (EC-JRC): 12:18: The JRC Checks by Monitoring code is open source since early this year: github.com/ec-jrc/cbm

Pieter Roggemans: 12:19: I understood the Carbon detection algorithm for NIVA made in France is also on github, but don't seem to find it?

Jean-Luc Widlowski: 12:20: @Kemal: How do you plan to handle conflicting results from different satellite monitoring services for the same event & parcel?

Matteo Rastelli: 12:22: to Pieter: All tools and components developed in NIVA are on Gitlab. you can have more information on NIVA4CAP.EU

Guido Lemoine (EC-JRC): 12:25: do you have a direct link to the NIVA gitlab?

Matteo Rastelli: 12:27: fell free to contact me for further questions on NIVA m.rastelli@agea.gov.it

Emmanuel DE LAROCHE: 12:28: @ In addition, if any of you need information on Carbon indicator component, you can also contact directly

Guillaume.marchand@ign.fr who can give you some support

Matteo Rastelli: 12:40: To GuidoAll tools and components are in <https://gitlab.com/nivaeu> it is still a private Project, for developing partners, so far in the next weeks we are planning to make it public if it is urgent we have to grant you the access just make a request to ioannis.andreou@opekepe.gr <mailto:ioannis.andreou@opekepe.gr> otherwise we will make it public soon

more info in the website Niva4cap.eu
regards
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Guido Lemoine (EC-JRC): 12:46: Thx Matteo

Emmanuel DE LAROCHE: 13:05: Sen4Cap should continue to inspire the EO methodologies for CAP. To gather experience in terms of markers (catalogue) could be a useful goal for every of us

Bastian Berlin SE: 13:09: It's good to have common algorithms for all MS. Some PAs might not have the muscle to create many new analyses.

David NAFRIA (ITACyL-Spain): 13:09: It is surprising that keeping the current Sen4CAP functionality in AVL is the lowest priority

Dominique Laurent: 13:10: What about articulation with other EU projects (DIONE, ...)?

David NAFRIA (ITACyL-Spain): 13:10: Nobody is thinking in going operational with the current system?

Pieter Roggemans: 13:11: It would be good if other common tools would use SEN4CAP as basis... like plugins for SEN4CAP.

Eric Ceschia (INRAE): 13:11: SEN4CAP will be essential to develop environmental indicators for the CAP (not only the 3 ones we presented this morning)

Bastian Berlin SE: 13:11: Yes I agree with you Pieter

DE SN - Okke Gerhard: 13:11: In my opinion, keeping up the technical support will help implementing Sen4Cap algorithms in the future. Without the technical support, I think not many new members will join the community. Furthermore, developing new functionalities would help spread the use even further and as already stated by some others, it will help smaller PAs and will provide a standard for monitoring.

Eric Ceschia (INRAE): 13:12: We could imagine to plug an environmental indicator toolbox to SEN4CAP

Kemal Moetz (Ibykus AG): 13:12: @David: I think this is because people would prefer new function (which include keeping the old funktions) instead of just keeping the current funktionalities.

Valentin Louis: 13:12: Maybe a user guide / guidelines on how the community can contribute to new functionalities via GitHub would be good and have the ESA AVL project check and manage the integrations of new code / functions

Guido Lemoine (EC-JRC): 13:12: We need to identify the essential modular parts and take them apart, so that they can more easily integrate with other approaches.

Pieter Roggemans: 13:12: Help/guidance on how to develop new processors/tools in Sen4CAP would be useful as well, so everyone can help building new functionalities...

Guido Lemoine (EC-JRC): 13:18: If all is open source, it should maintain

itself, in principle

Pieter Roggemans: 13:20: I'm afraid the community isn't large enough to only rely on the principle...

Guido Lemoine (EC-JRC): 13:21: There are many ongoing and new initiatives that (intend to) the kind of functionalities that are needed. We just have to make sure they feed into the same open source base
Guido Lemoine (EC-JRC): 13:21: (intend to) contribute to...
Guido Lemoine (EC-JRC): 13:22: or, at least, the modular component