

FOCUS DG SANTE Version Control - Stakeholder exchange

Date: 02 September 2019; 14:30 – 18:30

Venue: Piacenza, Catholic University

Participants: EFSA, Model Developers, Model Users, Industries, Member States

Highlights:

- consensus from all members of the FOCUS Version Control (FVC) group has to be reached in order to allow changes in the tools;
- in case consensus is not reached there are two steering groups that can be consulted: the EFSA pesticide steering network - for issues related with timing of the use of changes for regulatory submissions - and the EFSA PPR panel - for technical issues (implementation, description, etc...);
- EFSA is responsible for updating the documentations in version control, excluding the users' manuals of the tools;
- for using models for regulatory purposes, changes should not happen too quickly, too often and what has changed should be clear;
- it is important to explain why a change was made, and not only what was changed;
- every model is available at JRC website, where it is also possible to retrieve historical versions;
- individual model developers are responsible to store the source code in a safe place;
- current situation is that a release candidate is sent around to the FVC group for assessment, but this tends to be undertaken by whichever FVC group members are available. It then goes for a quality check. This can result in a lack of rigour and has a potential to miss issues (e.g.: R2 climate file). Also, there can be significant iterations if the quality control turns up issues that need to be addressed. A proposal for two stage process was made (see below);
- the FVC group purpose is not to undertake software testing on behalf of the model developers; developer testing is focused on making sure that specific updates have been implemented correctly, and therefore the test framework is targeted to demonstrate this;
- there is flexibility to allow model developers to make changes, however developers that want to implement new routines should contact and discuss with FVC;
- regarding the FOCUS repair action, it was pointed out that those outside the work group had some strategies that might reduce run times and computer memory storage requirements. A GUI that automatically produce calculations could be helpful (see below).

Proposals:

- **Official open public beta testing** (using a version with an expiration date) will allow more rigorous tests. Now a restricted group of people can access the un-released versions , but it is not open to everybody for beta testing.
However, managing the communication and all the interactions in a large testing community could be complex.
- **Possibility of testing also at regulatory level.**
The consequence could be having a massive group of people, which would make more difficult to reach agreements.
- **Two stage process for the assessment of a release candidate:**

- Stage 1: similar to the quality check, the behaviour of the release candidate is evaluated in terms of its operation and robustness. This stage is quite open and potentially iterative so it needs a flexible time frame. The main question is whether the model is robust enough for users to work with;
- Stage 2 (after Stage 1 passed): set of defined runs covering a range of crops and scenarios which will be repeated for all release candidates to assess the impact of changes to the model outputs. This stage is relatively formalised and could work on a fixed time line, but there should be allowances if repeats are needed (*e.g.*: if unexpected differences between versions are identified); stage 2 testing is looking at the portfolio impact of the holistic update of the model which is why there has to be consistency between version test. In case of significant changes, they need to be explained/justified.

In order for this 2 stage process to work well, the model developers should test thoroughly (and in a documented manner) before submitting release candidates to the FVC group.

- **FVC to write guideline describing what is expected to be in the changelog**, making a detailed explanation as for commercial software. Changelog for FOCUS users should be easily readable. For model developers there could be utility in having one document containing all changes, with unique reference number for each change.
- **FVC for geodata required for spatially distributed leaching models.**
Now model developers maintain their model; for geodata there are different authors and data owners, and then how the maintenance could be managed? Having too many datasets of different quality, transparency and documentation could be difficult. There should be an agreement on the best datasets that should be used for a certain approach.
For regulatory purposes there should be a frozen version of the geodata at the FVC website. Quality control of geodata could be difficult for different data and could lead to different assessment. There should be a selection on data relevant for regulatory purposes.
Therefore, it was discussed whether it would be useful to have FVC for geodata. Some regulators welcomed this initiative and confirmed that it would be helpful for assessing higher tier approaches.
- **Cookbook for scenario development.** Scenario development is described in several guidance documents, the FVC group could do an extract of the essential parts (*e.g.*: how to get to specific percentiles, advice on how to select points in big data set) in a cookbook in order to set a procedure that others can follow to derive scenarios. The procedure should be harmonized and can be checked by others (*e.g.*: PECsoil and data from JRC which lead to scenario developed).
- **Expand the FVC to the effect models.**
For regulatory accepted models, FVC is the place. However, at the moment there is no time to incorporate new activities. Therefore, in order to expand the FVC to the effect models DG Sante should mandate; MS should prioritize.
A way forward could be to place two models in the FVC website or to put them on EFSA knowledge junction in order to get a DOI.
If there will be a way with JRC, it would be fine; otherwise other solutions can be found by the effect models group.
- **For the FOCUS surface water** it could be helpful to **have only one tool allowing to run all the surface water models automatically**. Companies having already this kind of tool could make their technical knowledge available to the FVC.

Actions:

- This first physical meeting was welcomed by all stakeholders, and it was proposed to repeat it in 2 year in connection to the pesticide conference in York (UK)
- A proposal for the next meeting agenda will be done, but it was suggested to have less agenda points
- Minutes and the power point presentations of this meeting will be circulated by EFSA via email as it was not possible to upload documents on the PFmodels website.

Note:

The description of the FOCUS Version Control, its structure, the responsibilities of FOCUS scenario managers and model developers, the protocol for changing software packages, and the independent quality check are reported in the document 'Definition document for version control of FOCUS software packages and FOCUS guidance documents prepared by EFSA Pesticides peer review unit (Version 2.5- 20/05/2019)'.