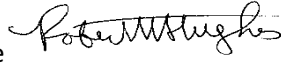


Date: 30 August 2017

To: Programas Doutorado, Portuguese Science & Technology Foundation

Subject: Advisory Committee review of the FLUVIO program

From: Robert M. Hughes, Chair, FLUVIO Advisory Committee 

Copy: Maria Teresa Ferreira, FLUVIO Program Director  
Rui Cortes, Universidade do Trás-os-Montes e Alto Douro, Portugal

Felix Frances, Universitat Politècnica de València, Spain

Antoni Munné, Agència Catalana de l'Aigua, Spain

Paulo Pompeu, Universidade Federal de Lavras, Brazil

Nuno Portal, EDP Gestão da Produção de Energia, Portugal

Stephane Stroffek, Agence de l'Eau Rhône-Mediterranee et Corse, France

The FLUVIO Advisory Committee (ACFLUVIO) has reviewed the FLUVIO report for July 2016 to September 2017 dated 7 August 2017. The ACFLUVIO has the following comments and suggestions:

In the text in the 2nd line from the bottom of page 3, Chapter 5 (not Chapter 4) should be cited.

In the text in the 5<sup>th</sup> line from the bottom of page 4, as well as that in the second line of page 5, Figure 1 (not Figure 2) should be cited.

ACFLUVIO commends FLUVIO for tabulating the research progress of each student in the 1<sup>st</sup> cohort in Table 1. It would be helpful to list presentations at professional meetings as well. It also would be useful to have a similar table for the 2<sup>nd</sup> cohort detailing progress along their degree paths (courses completed, study plans, data collection, data analysis, manuscript status, presentations at professional meetings).

ACFLUVIO commends FCT for supporting, and FLUVIO for holding, the second annual all-hands FLUVIO meeting. Because there were sufficient travel funds, the ACFLUVIO chair was able to attend that meeting in person and is able to add the following observations regarding that meeting.

- It was nice to see data from multiple nations included in several presentations, reinforcing the international nature of FLUVIO research.
- Problems persist for some dual degree students because of differing requirements of the differing universities.
- The presentation laptop should be positioned so that the speaker faces the audience.

- To improve clarity, all presentation abstracts should have comparable structure (introduction, objectives, methods, research schedule, expected results/results, & implications if completed).
- Because of the highly applied nature of the FLUVIO program, all students should indicate the economic and social costs and benefits of their results and conclusions.
- Several students need more practice in giving scientific presentations to avoid common errors (talking to the screen vs. the audience; reading each word on a slide versus summarizing; failing to be sufficiently organized to complete the presentation in the allotted time). Increased opportunities for giving presentations in classes and to the public should be considered.
- Student presentations to their instructors and reviewers should include specific research objectives & hypotheses; how sites will be selected (random, systematic, disturbance gradient, ad hoc), detailed methods of what, where & how data will be collected; the specific numerical indicators that will be developed from the raw data; the statistical analyses that will be used; and the titles of expected manuscripts.
- There is a need to improve the knowledge exchange between and within the 1<sup>st</sup> and 2<sup>nd</sup> cohorts, perhaps via students interacting via monthly lunches where one or more students give informal presentations of research issues of concern; formal mentoring of the 2<sup>nd</sup> cohort by the 1<sup>st</sup>; increased interdisciplinary collaboration among students; and increased manuscript co-authorship between students conducting related research.
- Some students need greater guidance on how to complete their degrees in the allotted time. Suggestions include developing formal Gantt Charts indicating when major research components will be initiated & completed, as well as more frequent supervisor-student meetings.
- Some students do not seem to know how long it really takes to complete a research project, including data collection, statistical analyses, manuscript preparation & submission, manuscript review & revision, and final manuscript publication. This needs to be clarified for the benefit of all.

*David Kaul*

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*Robert M. Hughes*