Open Reproducible Science in Ecology

O. Flores

Peuplements végétaux et bioagresseurs en milieu tropical (PVBMT)

Centre de coopération internationale en recherche agronomique pour le développement

[CIRAD]

UMRC53, Université de la Réunion Faculté des Sciences et techniques - Université de La Réunion 15 avenue René Cassin CS92003 97744 SAINT DENIS CEDEX 9 - France

olivier.flores@cirad.fr

Mots clefs: reproducible research; open science; workflow; litterate programingOpen

The development of open-source software in recent years has paved the way to new ways of using them. Among these tools, R now offers one of the most flexible and powerful framework to interface the various aspects of the work of scientists, especially in the field of environmental sciences, and biology in general. From data mining to report writing including complex statistical analysis, and interfacing with other powerful tools, such as LaTeX for text editing, or open-source GIS tools, R now allows to generate truly reproducible science. In this talk, a general analysis workflow is presented, and illustrated with a case study from the real world, which aims at making scientists, and future scientists among students, sensitive to the capital goal of producing reproducible science. And to the feasability of such a goal based on open-source and freely available software as R.