
When citizens and scientists work together : a french collaborative science network on earthworms communities distribution

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Abstract

Scientists have become more and more interested in earthworms because of their impact on soil functioning and their importance in provision of many ecosystem services. In order to improve the knowledge on soil biodiversity and integrate earthworms in soil quality diagnostics, it appeared necessary to gain a large amount of data on their distribution. However, despite the huge number of research programs to collect these data, efforts are still needed. In order to compensate for these missed data and accelerate their collect, the University of Rennes 1 developed since 2011 a collaborative science project called Observatoire Participatif des Vers de Terre (participative earthworm observatory). It has several purposes : i) to offer, through earthworm assessment, a simple tool for soil biodiversity evaluation in natural and anthropic soils, ii) to offer trainings to farmers, territory managers, gardeners, pupils, ..., iii) to build a databank of reference values on earthworms iv) to propose a website (https://ecobiosoil.univ-rennes1.fr/OPVT_accueil.php) providing for example general scientific background (earthworm ecology and impacts of soil management), sampling protocols and online visualization of results (data processing and earthworms mapping).

This project, initially available to anyone on a voluntary basis, is also used by the French ministry of agriculture to carry out a scientific watch throughout the French territory. Up to now, more than 2500 plots have been prospected since the opening of the project in 2011. Details of this collaborative project will be presented, meaning adaptation of the sampling protocols, tools for training, results and returns from end-users.

Keywords: Earthworms, Observatory, Citizen science project, Sampling protocols

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