

Participatory sciences

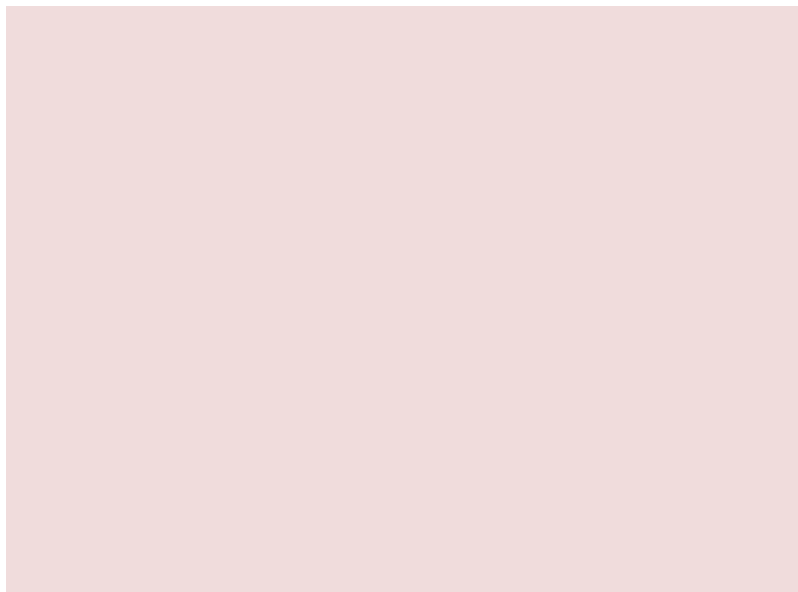


Figure 1. Graph presenting the relationships between 4 main types of actors likely to be interested, involved or concerned in citizen or participatory science processes. [Source: Lamiot (CC BY-SA 3.0), from Wikimedia Commons].

Citizen or participatory science programs [\[1\]](#) on biodiversity projects involve volunteers, most often at the data collection level (Figure 1). Depending on the case, they are addressed to experienced naturalists or volunteers with no particular skills, who thus see the opportunity to acquire knowledge in the natural sciences. Researchers define precise, reproducible, simple protocols that must be used rigorously by participants. They analyze the data collected and provide feedback to observers to inform them of the use of their data.

In France, many programs exist. One of the most important is managed by the *Centre for Ecology and Conservation Sciences* at the *National Museum of Natural History*. It is **Vigie-Nature** [\[2\]](#), itself composed of many variants involving different taxonomic groups. Some are generalist programs and are interested in the French territory as a whole, including cities: Temporal Monitoring of Common Birds (**STOC**, short for *Suivi Temporel des Oiseaux Communs*) [\[3\]](#) or **Vigie-Flore** [\[4\]](#). Other projects are clearly dedicated to the urban environment. First of all " **Sauvages de ma rue** " [\[5\]](#) which asks the general public to send inventory data on sidewalk flora, then the " *Observatoire de la Biodiversité des Jardins* " (**OBJ**, short for Observatory of Garden Biodiversity) [\[6\]](#) which lists birds, butterflies, snails and garden bumblebees, and finally *Lichen go* [\[7\]](#) whose object is the lichen growing on urban tree trunks.



Figure 2. Participatory science monitoring (Biolit Programme) on the Dinard Coast (Ille-et-Vilaine)[Source: G. Mannaerts[CC BY-SA 4.0 (<https://creativecommons.org/licenses/by-sa/4.0>)], from Wikimedia Commons]

The “*Sauvages de ma rue*” program, for example, has provided information on the evolution of flora since 1883 through a comparison of data collected by observers since 2011 and data collected by botanist Joseph Vallot in Paris. The results show that the disappearance of horses in favour of cars, rising temperatures, soil pollution and the arrival of exotic species are the factors that have most influenced the observed changes (publication in progress).

Notes and references

Coverage image. [Source: © Nathalie Machon]

[1] [Sciences participatives en France \(2016\)](#). Report prepared at the request of the Ministers in charge of National Education, Higher Education and Research, under the direction of François Houllier

[2] www.vigienature.mnhn.fr

[3] <http://www.open-sciences-participatives.org/fiche-observatoire/144>

[4] <https://vigienature.mnhn.fr/page/vigie-flore.html>

[5] <https://www.vigienature-ecole.fr/les-observatoires/le-protocole-sauvages-de-ma-rue>

[6] <https://obj.mnhn.fr/>

[7] <http://www.particitae.upmc.fr/fr/participez/suivez-les-lichens.html>

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