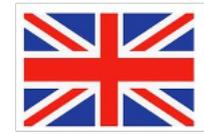


HOW TO ENGAGE BEARS IN SCIENCE PROJECTS



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Communication and engagement in CS

Communication and engagement are the heartbeat of Citizen Science (CS) – it's how you bring in, engage, and inspire participants and people interested in your results. It's how you disseminate the results and impact your CS project meaningfully.

It's the key to sharing your research findings and spreading awareness among the public and authorities, educating them about the project's focus and the scientific process.

Don't underestimate your time connecting with decision-makers and the wider community. It should be an ongoing process, from shaping your research question to unveiling the results.



Bears? Who are they?

Why do we want to involve them?

Bears are actors that sponsor, launch, set the common strategy (in a neighbourhood, city, etc.), understand the domain/problems, and are willing to support societal and pro-environmental behaviour change through Citizen Science in the geographical scope they live, or they manage.

Bears can be organizations, policymakers, city planners, associations or companies that provide support and infrastructure for CS projects.

Bears are essential facilitators supporting Queen Bees and beekeepers engaging citizens in their campaigns and disseminating the results of such campaigns.



Bears? How to identify them?

While there are many ways to know who bears can be, we deem that the best approach to start with is stakeholder mapping.

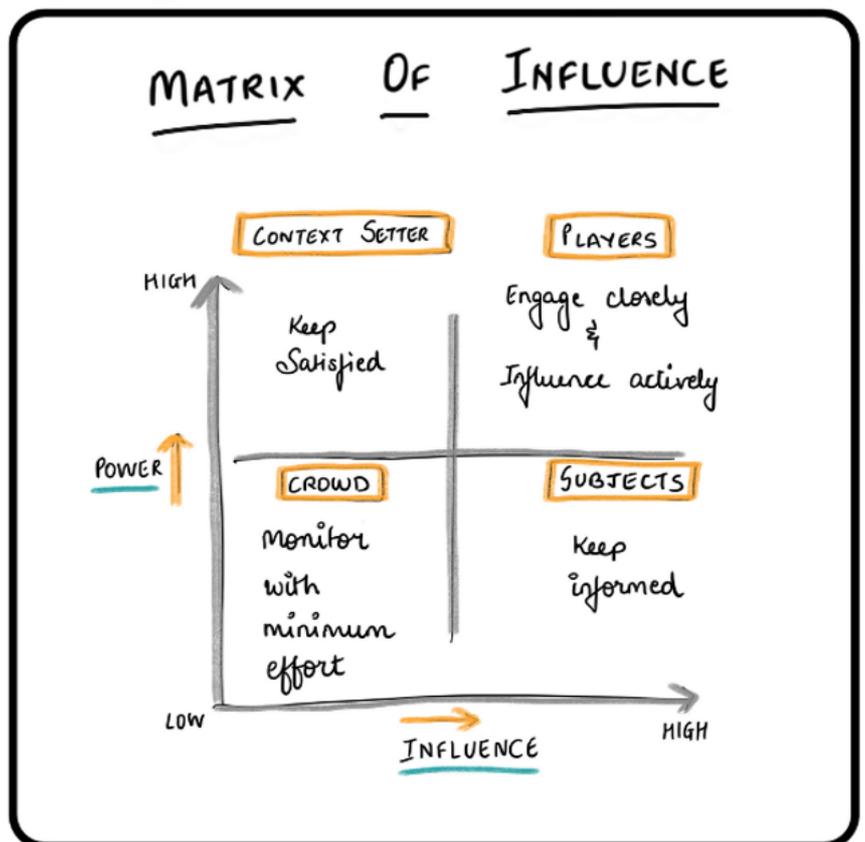
A stakeholder map is a visual process of laying out all the stakeholders of a product, project, or idea on one map. The main benefit of a stakeholder map is to get a visual representation of all the people who can influence your project and how they relate to it.



Understanding the matrix of influence for bears

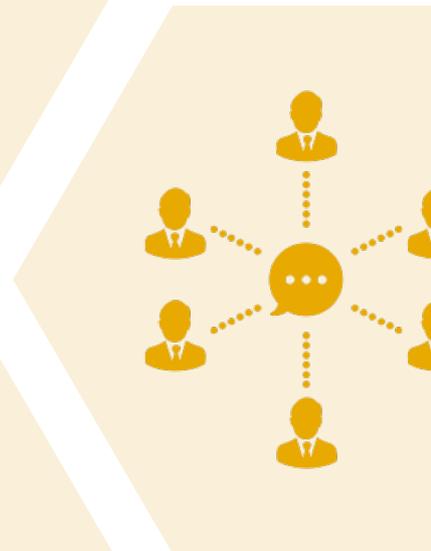
Knowing who are the bears is important, but also sorting them by their influence and interest in the CS project we are conducting. By mapping stakeholders on a matrix of influence grid, identifying those with high influence or interest will help to understand how to involve them and where.

The objective is: “Ensure those with high power are satisfied and those with high influence are informed, managing closely those with both”.



Building your engagement plan for bears

1. Get involved: Be reliable and willing to engage with bears at all times. If you follow these two ideas, you might begin to be seen as an authority by others you would like to involve.
2. Understand the policy environment and stay up to date: Take the time to research the people you'll be interacting with.
3. Be timely: get involved with policy and decision-making processes early on.
4. Connect to current priorities: Understanding of the policy agenda and its pipeline of initiatives should be coupled, when possible, with demonstrations of the potential citizen science impact on constituencies, and this could increase such commitment. A clear policy strategy for citizen science initiatives would help ensure they are perceived as useful for policy.
5. Plan your approach: Different policy makers work at different levels, so you will need to tailor your language and message appropriately to connect with them.



Building your engagement plan for bears

6. Tell a relevant and engaging story:

Create a narrative to bring your research to life. Create human interest with stories, case studies and graphics that are relevant to them.

7. Be a generalist and a specialist:

Decision-makers won't necessarily always expect, need, or want to know about the minute details of a particular study, but instead the wider areas of your subject.

8. Rid yourself of imposter syndrome:

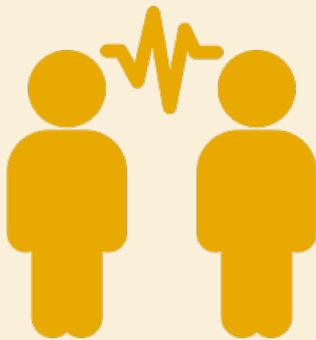
Bears don't expect you to know everything.

9. Be certain about uncertainty:

Be clear and open, use language that is easy to understand and try not to make it into the big issue you may think it is.

10. Be objective:

Make it obvious when giving your own personal opinion and when using a scientifically informed one. Referring back to what the evidence says can add clarity to your answer and highlight that you are acting as a knowledge broker.



Building a foundation: Your communication plan

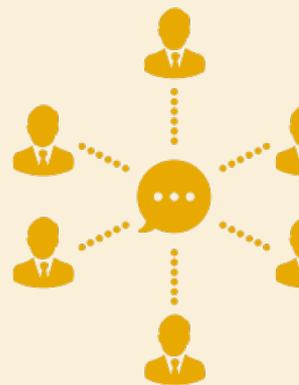
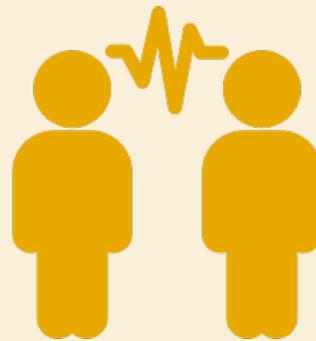
11. Build trust:

Making a difference to science or the (local) environment and its acknowledgement by policy makers are key motivations of participants in environmental citizen science projects. It can therefore be expected that the uptake of citizen science projects that are relevant for policy making will depend on the public's confidence in whether the outcomes will lead to actual change.

12. Ensure data quality and management:

Data quality, comparability, and interoperability are considered essential for both evidence-based policy making and scientific evidence. At the same time, the capacity of citizen scientists to deliver high-quality and reliable data is one of the most debated issues in citizen science. Try to ensure data accuracy that complies with standards.

13. Remember, science is not everything, but must be open: As long as you can convey your message as best as you can and give bears evidence that can be used to inform their decision, that is all that can really be expected of you. Be open and apply FAIR principles.



Building a foundation: Your communication plan

14. Don't give up!

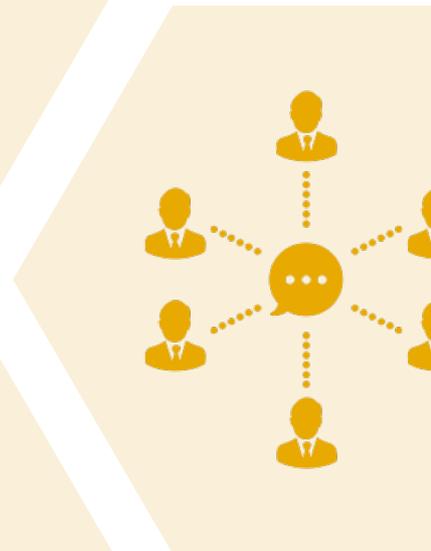
One important aspect to take from our recommendations is that they will not always yield immediate, tangible rewards, but this should not be the sole aim of practicing good engagement. Rather, ongoing, long-term engagement can lead to a change in the overall policy framing of problems and solutions, something which can occur diffusely over a long time-scale.



Different types of activities with bears

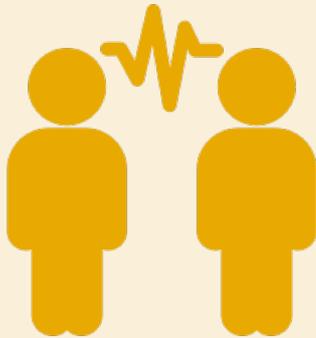
Here are some examples of potential activities to engage with bears:

- Kick-off event
- Training Sessions
- Town hall meetings
- Online info sessions
- Policy briefings
- Video tutorials
- Bilateral meetings
- Local press releases
- Public community presentations and workshops
- Policy workshops
- Community forum (contest and hackathons)



Main takeaway messages

1. Make data accessible to ensure that bears can be informed and with the data available. They can guide, be consulted, or even be involving in the overall CS process.
2. Provide a useful and actionable list of tools to ensure effective communication with bears.
3. Find ways to easily interpret the results obtained in the campaigns, so that policy makers can better understand the impact of measurements on some areas.
4. Make sure to explain to bears that available data is reliable and uses common standards.
5. Try to engage all actors by all means, translating citizens contributions into a tangible impact. For that, the main recommendation is to visualise the role of the bears in the campaigns and the way they are involved in transforming data into policy recommendations.



Conclusions and recommendations

More information and extended insights can be found in:

- [1] Nascimento, S., Rubio Iglesias, J. M., Owen, R., Schade, S., & Shanley, L. (2018). Citizen science for policy formulation and implementation. UCL Press.
- [2] Schade, S., Pelacho, M., van Noordwijk, T., Vohland, K., Hecker, S., & Manzoni, M. (2021). Citizen science and policy. *The science of citizen science*, 351-371.
- [3] Rose, D., & Jarvis, R. (2020). 10 ways scientists can better engage with decision makers. *Impact of Social Sciences Blog*.
- [4] British Ecological Society (2014). Top 10 tips for engaging and communicating with policy makers. www.britishecologicalsociety.org/public-policy
- [5] ECSA (2023) Citizen Science for Policy across Europe (EU-Citizen.Science Consortium). <https://eu-citizen.science/resource/196>

