ACTIVITIES-DIMENSION GRID OF CITIZEN SCIENCE (ADG-CS) *Derived from categorisations, typologies, classifications and listed open questions found in literature*	Area 1 Research policy — Deliberation, consultation …	Area 2 Participating in research — Determining research questions	Research design	Data collection	Data preparation & processing	Retrieval scientific literature	Experimenting	Knowledge management	Analysis & problem solving	Reviewing & evaluating	Action research	Passive participation	Area 3 D & I — Technical development	DIY biology	Area 4 School — All activities in Areas 0-3 are possible.
Location of participation															
Physical place															
At home, working place, garden …															
A separate institution (laboratory, garage …)															
Outside in unspecific environments															
Outside in dangerous environments															
Sensible biotopes (Marshes, wildlife parks, …)															
ICT environment*															
Online platforms															
Forums															
Social media (Twitter, …)															
Other															
Location not determined															

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* Such an environment can include an integration of human research capabilities and Artificial Intelligence (AI) technologies such as machine learning and computer vision ([3], [15]). For example, the biodiversity projects eBird and iNaturalist apply AI to verify the accuracy and consistency of contributors' submissions ([3]).

	Consult-DeliB	Det. quetstions	Research design	Data collection	Data preparatio	Retrieval of sci. lit.	Experimen ting	Knowl. MGT	Analysis & problem	Review. & evaluating	Action research	Passive part.	Tec. develpm.	DIY bio	1-3 in school
Requirements for participation															
Material															
Smartphones															
Specific software															
Measuring devices (sensors, …)															
Laboratory equipment															
Optical instrument (microscope, telescope, etc.)															
Other special devices															
Non-material															
Certain skills or knowledge															
Degree of experience															
Minimum level of education (e.g. high school degree)															
University study (ongoing)															
Specific training															
Scale of the citizen science project															
Number of participating "citizen scientists"															
Intensity of unpaid work															
Working hours per month & duration by month															

	Consult-DeliB	Det. quetstions	Research design	Data collection	Data preparatio	Retrieval of sci. lit.	Experimen ting	Knowl. MGT	Analysis & problem	Review. & evaluating	Action research	Passive part.	Tec. develpm.	DIY bio	1-3 in school
Characteristics of country															
Human development Index (UN)															
Life expectancy below EU Member States (WHO)															
Democracy (EIU)															
Geographic coverage															
Local (L), Regional (R), National (N), Global (G), EU															
Beings and/or objects dealt with															
Objects/non-sentient beings															
Undamagable or ordinary inanimate objects/non-sentient beings															
Damagable, rare or valuable objects/ beings															
Sentient beings															
Domestic animals															
Wildlife															
Endangered or rare species (red list?)															
(Indirect damage possible ---> protected habitats ---> see: locations.)															
Humans															
Identifiable humans															
Non-identifiable humans															

	Consult-DeliB	Det. quetstions	Research design	Data collection	Data preparatio	Retrieval of sci. lit.	Experimen ting	Knowl. MGT	Analysis & problem	Review. & evaluating	Action research	Passive part.	Tec. develpm.	DIY bio	1-3 in school
Funding															
Citizens themselves (no external funding).															
Crowdfunding															
SMEs, their associations or organisations															
Large enterprises, their associations or organisations															
Government (agency, non-military)															
Military															
Publicly funded organisations															
Political parties, religious or other ideologic organisations															
Private persons of wealth															
Socio-economic enterprise/s															
Civil society organisation/s															
Philanthropic foundations															
European Commission															
UN organisation or similar international organisation															
Other															
Initiators of citizen science															
Citizens with no academic education in the field															
Researchers in the field or research organisations															
Other															
Organisers (Who runs the project?)															
See groups in "funding".															

	Consult-DeliB	Det. quetstions	Research design	Data collection	Data preparatio	Retrieval of sci. lit.	Experimen ting	Knowl. MGT	Analysis & problem	Review. & evaluating	Action research	Passive part.	Tec. develpm.	DIY bio	1-3 in school
Citizen scientists are known to															
Organisers															
Everybody in the project															
Publicly															
None of them (anonymous)															
Unknown issue															
Partners cooperating as citizen scientists															
Individual citizens															
NPOs															
Educational institutions															
Other institutions?															
Communities/civil initiatives															
Individuals as citizen scientist(s)															
Lay persons in the field															
Non-academic experts in the field															
Sometimes also: Participants with ongoing (or partially completed) university studies in the field															
Users															
Makers and developers															
School students and pupils (most <18 years old)															

	Consult-DeliB	Det. quetstions	Research design	Data collection	Data preparatio	Retrieval of sci. lit.	Experimenting	Knowl. MGT	Analysis & problem	Review. & evaluating	Action research	Passive part.	Tec. develpm.	DIY bio	1-3 in school
Individuals as traditional scientist(s)															
No "traditional scientists" involved															
Professional researchers/scientists															
Students in a relevant field.															
Persons who partly completed studies in a field relevant to the project															
Topic areas and/or disciplines															
1. Disciplinary competences in project organisation teams															
2. Self-categorisation of the project by its organisers															
3. Categorisation by research funders, publishers, and other researchers															
Incentives and remunerations promised															
None															
Symbolic (Price, worthless certificate, medals …)															
Monetary remuneration															
Certificate on education/experience															
Recognition by naming															
Other															

Table 1: The Activities & Dimensions Grid of Citizen Science (Strähle & Urban, 2021, p. 100 – 105)