

ECSA comments on the updated Recommendations on electronic information tools

In the attached document (and also listed in the table below), we provide comments to the document “Draft updated Recommendations on the more effective use of electronic information tools“ on behalf of the European Citizen Science Association (ECSA).

We would like to thank the Chair, the secretariat, and the parties to the convention for including citizen science within the range of information sources that should be used in monitoring and managing the environment.

Our comments are focused on issues that relate to citizen science in the context of the Aarhus convention - namely public access to environmental information, participation in decision making, and access to justice. Based on the growing evidence in the field of citizen science in general, and environmental citizen science in particular, we suggest that the promotion of citizen science can support the general goals of the convention. Citizen science can assist in raising public environmental understanding and awareness, improve public ability to access and use environmental information through hands-on learning and increased scientific literacy, and increase public capability to actively participate in environmental decision making. In addition, it holds the potential of providing suitable scientific evidence that can promote access to justice.

Our community view of citizen science and its definition is a pluralistic one, as can be found in our documents, the “ECSA 10 principles of citizen science” and the “ECSA characteristics of citizen science”. The framework that these documents provide will allow parties to the convention to adopt a suitable definition of citizen science activities that are in line with local practices and capacity.

We would like to underscore a concern in paragraph 6 about the “open by default” principle, which should have an exception for indigenous and local knowledge, where international treaties such as the UN Declaration on the Rights of Indigenous People are providing rights for Free and Prior Informed Consent in terms of indigenous knowledge and its applications.

We note that our first comment to the document is in the contextual information in the introduction. Here, we suggest a link to the discussion on the human right to enjoy the benefits of scientific progress and its applications. Citizen science is part of this right. In the environmental context, citizen science is also compatible with the desire to contribute to the protection of the environment, and to make progress toward the sustainable development goals.

We respectfully suggest the following edits (provided below), which are also included inline in the body of the document. We provide further details and additional explanations for our comments. Including, where appropriate, the sources of our suggestions.

We hope that these comments are helpful for the Chair, the secretariat, and the parties to the convention and we will be happy to join the upcoming meeting of the Task Force on Access to Information in Geneva, 16-17 November 2020.

With our best regards

European Citizen Science Association (ECSA)

P.	PARA	SUGGESTION (added text in bold)
5	Introduction 11	<p>Adding “and the right to enjoy the benefits of scientific progress and its applications’ (A/HRC/20/26),”. The first mention of the right for science in an official document was in 2012, when Farida Shaheed, Special Rapporteur for the United Nations (UN), submitted a report to the UN Human Rights Council on the scope and application of the right to science.</p> <p>The Special Rapporteur frames the right as that to enjoy the benefits of scientific progress and its applications. Particularly timely are part (b) of Shaheed’s reasoning, where she defines the right as entailing the ‘opportunities for all to contribute to the scientific enterprise and freedom indispensable for scientific research’ and part (c) where she envisages for ‘participation of individuals and communities in decision-making and the related right to information’.</p> <p>Sources: Farida Shaheed, ‘The right to enjoy the benefits of scientific progress and its applications’ (A/HRC/20/26, HRC 2012); Audrey Chapman and Jessica Wyndham, ‘A Human Right to Science’ (2013) 340(6138) Science.</p>
6	3	<p>Adding “open science” which is a wider emerging scientific practice of which citizen science is one of the pillars, but in its entirety it will facilitate the sharing of scientific knowledge and directly contribute to the goals of the convention. Many of the details that are provided in the guidelines and the annex (e.g. use of “open by default”) are part and parcel of open science. (see Annex I, Chapter I - Terminology).</p>
6	7	<p>Adding “Take the necessary measures to reduce and remove social, financial, legal, procedural, and technological barriers that restrict public access to environmental information” as these can be central obstacles of participation in citizen science (e.g. cases where scientific observations are prohibited in certain areas).</p>
7	8(b)	<p>Adding “and provide data and other forms of evidence” as this is in line with open data and the ability of the public to analyse information and provide scientific evidence.</p>
7	9	<p>Replacing “best available” with “most appropriate” in regard to technologies, as in some cases the use of the latest technology can exclude participation of members of the public who have limited access to technology. The most appropriate will provide a focus on ensuring accessibility, usability, and use.</p>
7	14	<p>Adding “such as citizen science data” as this is inline with Paragraph 16.</p>
8	16	<p>Adding to the text further explanation of the role of citizen science: “Promote the use of citizen science, crowdsourcing and local and indigenous knowledge through electronic information tools to support the performance of public functions and the provision of public services related to environmental monitoring , to facilitate the rights and ability of the public to submit data and information to inform decision-making in environmental matters, including proposed activities, plans, programmes, policies and legally binding instruments, and to promote meaningful environmental contributions and awareness among the public (see section V below);”</p>

8	20(a)	Adding “ machine readable ” in line with 20(c) and paragraph 30
9	20(e)(i)	Adding “ radiation ” which is an environmental aspect for which there are excellent examples of successful collaboration with public authorities and citizen science participants in addressing Radon or monitoring local conditions in Fukushima, Japan.
10	20(e)(v)	Adding “ provided by citizen science or crowdsourced by a public authority ” in line with other mentioning of these approaches in the document. A reference can be added to a recent JRC report https://ec.europa.eu/environment/legal/reporting/pdf/best_practices_citizen_science_environmental_monitoring.pdf
10	22(j)	Adding “ and application programming interfaces (API); ” in line with the Addendum, Chapter IV
12	25(c)	Adding “ open science ” as in paragraph 3.
12	27	Adding “ (i) Participatory mapping, crowdsourcing, and citizen science platforms; ” as these systems are being used for consultation and evidence gathering, and this is in line with paragraph 16
13	32	Adding “ crowdsourced ” as the suggested mobile applications need to rely on such an approach for data collection, as the current example in France shows.
13	33	Adding “ low cost and mobile sensors ” as these are used extensively in citizen science activities.
14	36	Adding “ citizen science participants ” to the list of involved public stakeholders
15	37	Adding “ content ” as to ensure that users of such system can comment on the information that is provided to them
13	38	Adding “ datathons ” - hackathons are usually understood as workshops in which something is being created (e.g. a mobile app), whereas in terms of the convention goals, promoting public analysis of environmental data (e.g. new analysis and visualisation) are important.
14	39	The paragraph was updated to include citizen science beyond citizen science observatories, to highlight integration with official sources of information, and to emphasise the role of mobile apps for data collection Encourage the collection of local and indigenous knowledge, citizen science and crowdsourced data provided or generated by members of the public through citizen science observatories, <u>projects</u> , or other relevant <u>participatory initiatives</u> , and promote the interoperability <u>and integration</u> of such data <u>with traditional forms of environmental data</u> in accordance with best available international standards. <u>Promote and support efforts towards the development of methodologies and mobile applications and tools to support the public in collection and sharing of environmental information</u>

14	44	Adding “ open science ” as in paragraph 3.
14	46	Changing “best available” to “ most appropriate ” as in paragraph 9.
15	47	Adding “ citizen science participants ” as in paragraph 36
15	53	Adding “ This should include the capacity to handle the range of information sources that are noted in paragraph 20 ” to highlight the technical literacy that is expected of public authorities

In the addendum, we suggest the following changes

P.	PARA	SUGGESTION
3	Ch I “citizen science”	Adding “ engineering research ” to the definition of <i>citizen science</i> , since engineering research is distinct from scientific research, and is particularly important in the context of environmental citizen science.
3	Ch I “citizen science observatories”	Adding a definition to “ citizen science observatories ”. citizen observatories are mentioned in Paragraph 39 of the main document. We are suggesting a definition from the WeObserve project (https://www.weobserve.eu/about/citizen-observatories/)
3	Ch I “data”(e)	Adding to the definition of <i>Data</i> details about citizen science data “citizen science data, which means data, images, audio recording, samples, and other information and materials collected by volunteers and members of the general public, often in collaboration with or under the direction of professional scientists, civil society organisations , and scientific institutions;” - First, to clarify the types of data that can be included, and importantly for environmental citizen science, there is a need to mention civil society organisations since significant amount of citizen science is led by environmental NGOs (WWF, Earthwatch, BirdLife), Natural History Museums, and Botanical gardens, etc.
3	Ch I “data”(h)	Adding to the definition of <i>Data</i> “(h) Citizen-generated data (CGD) ” using the source A Berti Suman, S Schade and Y Abe, “Exploring legitimization strategies for contested uses of citizen-generated data for policy”, the Journal of Human Rights and the Environment.
4	Ch I “datathon” and “hackathon”	Addition a definition for “ datathons ” and for “ hackathon ” as they are mentioned in Paragraph 38. The proposed definitions are based on Oxford English Dictionary definition for hackathon.
4	Ch I “Discoverability”	Changing “users” to “ laypersons ” in the definition of <i>discoverability</i> to emphasise the type of audience that should be able to find and use the information

5	Ch I “open science”	Adding definition for open science that is based on OECD definition https://www.oecd-ilibrary.org/science-and-technology/making-open-science-a-reality_5jrs2f963zs1-en (see paragraph 3 in the main document)
5	Ch I “Participatory mapping”	Adding a definition of participatory mapping , building on NOAA https://coast.noaa.gov/data/digitalcoast/pdf/participatory-mapping.pdf (see paragraph 27 in the main document)
10	CH IV 3(l)	Adding to the list of standards PPSR-Core , which is the recognised standard for sharing information on citizen science projects.
13	CH V 10(v)	Adding “ Odour ”, since, like Noise, it is can be identified and collected through citizen science and crowdsourcing
13	CH V 10(h)(v)	Adding “ citizen science ”, since in emergency situations, there is an evidence for citizen science and crowdsourcing data collection