ACTION

D 3.4 - Summary of Round Two

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Abstract	This deliverable outlines the procedures, processes and timelines for the second round of the ACTION open call. This call solicited applications from citizen science projects in the domain of pollution, which were evaluated by a panel of experts made up of external reviewers and the ACTION consortium. In this document, we further outline key aggregate statistics concerning pollution focus, country of origin and the evaluation outcomes of these applications, as well as the relationship with applicants through email correspondence and webinars. We conclude with lessons learned and recommendations for open calls in general.
Keywords	Open Call, Citizen Science, Pollution, Summary statistics

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EXECUTIVE SUMMARY

Participatory Science Toolkit Against Pollution (ACTION) is a Horizon2020 project which aims to establish tools, technologies and methodologies to enable citizen science in the area of pollution. As part of that process, ACTION aims to support and fund a set of citizen science pilots, giving them the opportunity to make use of and bootstrap these tools, through an open call. In this document, we set out a summary of the second round of the open call, which opened on the 1st of September 2020, with the projects joining the ACTION accelerator in March 2021.

This document may be of use to individuals and organisations looking to carry out their own open call, particularly in the areas of citizen science and pollution, as well as policy makers, researchers and citizen science projects and administrators, who may obtain insight about the types and focus of projects in this area.

The main findings of this document are as follows:
- We received 78 applications (including one duplicate) from a total of 25 countries, including 15 EU member states, 6 associated countries and 3 third countries.
- The most common country from which applications were received was Spain, with 14 applications. Significant numbers were also received from Italy (13 applications)
- 24 applications were deemed ineligible with 54 selected for review. Of these 54, 36 were rejected prior to interview, while 18 were shortlisted for interview. Ultimately 13 of these projects were rejected upon interview, with a final 5 projects selected for the accelerator programme.
- The most common pollution focus was air pollution, representing 23 of the 77 unique applications.
- During the application process we received 49 emails from applicants.
- We carried out two webinars, with a total of 16 attendees and a total of 143 subsequent views of webinar recordings through the ACTION website.

1   INTRODUCTION

ACTION (Participatory science toolkit against pollution) is a Horizon2020 project aiming to devise novel methodologies, create and provide infrastructure and develop a socio-technical toolkit to provide recommendations and guidelines for citizen science, with a particular focus on the area of pollution. As a core element of these aims, ACTION aims to set-up and carry out a citizen science accelerator, involving 10 pilot citizen science projects in the domain of pollution, to bootstrap these tools and facilities.

These pilots were recruited through an open call process, consisting of two rounds, open to applicants from across the EU and the associated countries defined in the Horizon2020 projects. Applicants were offered €20,000 euros and support from the ACTION consortium to devise and carry out research activities using citizen science to address pollution challenges, over the course of a six month period. The first round of this call took place in 2019 and identified six pilot projects who joined the accelerator in February of 2020. The second round took place in 2020, with the open call launched on 1st September and closing on 1st November, and selected projects joining the accelerator in March 2021.

In this summary report on the second round of the ACTION open call, we provide details of the call process from the perspective of applicants, consortium partners and external evaluators who assisted with the review process. We provide key statistics on the eligibility, review and evaluation outcomes of the applications, country of origin and the pollution focus of each application. We also describe the relationship with applicants through email correspondence and a series of webinars held to inform applicants and answer any queries. Finally, we identify lessons learned and make recommendations for future open calls in this space. All relevant documentation is included with this deliverable in the appendices, including the guide for applicants, FAQ document, short proposal template, declaration of honour and an example negotiation contract which provided the basis for the final contracts agreed with successful pilots.

2   Summary of Call Process

The ACTION open call is a competitive funding call intended to promote open innovation within European citizen science initiatives, with a particular focus on those initiatives researching and addressing pollution-related issues. Successful applicants gain access not only to funding, but also to an incubator process designed to take projects through the process of designing and implementing citizen science actions, gathering data and producing early outputs, over the course of a six month period. The call is divided into two rounds, each comprising five key phases: Preparation, Call, Evaluation, Negotiation, and Launch. Successful projects then join the 6 month ACTION accelerator and receive funding and ongoing support from the ACTION consortium.

Figure 1- Summary of Call Stages

For this second call, we adjusted the timeline slightly from the first call in 2019, allowing just two months for applications instead of three. This was in response to the significant lack of applications and queries during August in the first call, as well as a general lack of events to attend and difficulties in dissemination. Feedback from applicants and partners identified August as a holiday period, where many were unavailable or preoccupied with existing concerns

A timeline of these phases for round two of the call can be seen in table 1 below:

Date	Milestone	Description
1st September 2020	Call opens	Easychair open for applications. Call published on website and social media channels.
14th September 2020	First Webinar	Webinar 1 (recording)
2nd October 2020	Second Support Webinar	Webinar 2 (recording)
27th October 2020	Reviewer webinar	Webinar with internal and external reviewers to discuss

		the review process
1st November 2020	Applications close	Easychair applications close.
4th November 2020	Eligibility check complete	Applications checked for eligibility (total eligible 54).
4th November 2020	Reviewing begins	Each reviewed by 2 reviewers each (total 27 reviewers)
24th November 2020	Reviewing ends	Applications shortlisted for interview (total interviews 18)
30th November - 2nd December 2020	Interviews take place	18 eligible applications interviewed by ACTION panel
3rd December 2012020	Final notifications, negotiations begin	
26th February 2021	Negotiations end	

Table 1 - Key Dates and Milestones for the Second Round of the ACTION Open Call

2.1 Call Process for Applicants

The first source of information potential applicants have access to is the ACTION website, with a dedicated page on the first round of the call (https://actionproject.eu/apply-2020). The website serves as the entry point for the call and offers all the documentation and information that an applicant needs to be aware of in order to apply, along with links to any upcoming webinars, previous recordings and the application platform (*Easychair*). Over the period of the open call, the page had 4156 visitors, compared to 5527 visitors in the first call - over 80% of visitors were new in both years.

Applicants were strongly advised to read the 'Guide for Applicants' prior to beginning their application. This document contained all the necessary information to submit to the open call, including the call aims, eligibility requirements, key dates, and template documents that must be submitted, as well as the review and notification processes.

In terms of eligibility, applicants to the second round of the call were required to be a legal entity established in an EU member state or an associate country of the Horizon 2020 programme. While we allowed applications from consortia, any individual applying to the call could make one application only. We required them to reserve time for the interview and negotiation phases if they were selected.

In order to apply, applicants were asked to complete a short proposal document of a maximum of 4 pages, by filling in a template provided within the guide for applicants and available for download from the ACTION website. The proposal template consisted of 22 questions, along

with a brief budget breakdown and an explanation of key costs. Questions were divided into three sections, according to the main criteria expected in a successful application: the **idea**, **impact** and **implementation**.

In addition to the questions within the template, we produced a public set of criteria, following the main principles we would expect in a successful application. These criteria were included within the guide for applicants and formed the basis of the criteria provided to reviewers for the evaluation process. When receiving their reviews, applicants were given overall comments for each of the core areas - idea, impact and implementation - structured around these principles, along with an overall score out of 5.

Following the closure of the call, applications were assessed for eligibility. Ineligible applicants were identified at this stage, along with the reason for their ineligibility -- e.g., overlength applications. These applicants were informed of the status of their application and the reason for this ineligibility shortly following the completion of the eligibility check.

Eligible applications were then reviewed by the ACTION team and external reviewers. Each eligible applicant received a copy of these reviews following the completion of the review process. Reviewers were asked to make overall comments, as well as comments on the idea, impact and implementation respectively. Upon completion of the review process, applicants received all four comment fields from both assigned reviewers, as well as a summary meta-review from a third reviewer. In addition to these review comments, applicants received an overall score out of 5 from each reviewer, and a final overall shortlisting decision, explaining whether the application had been selected for interview or not.

Shortlisted applicants were then asked to prepare a five minute presentation, briefly summarising their project idea. The remaining 15 minutes of the interview consisted of questions from the ACTION interview panel - three reviewers with expertise in citizen science, pollution, and technology/data, and a chair with the role of coordinating the interview process. Each interview concluded with the chance for applicants to ask any questions they may have about the open call process or the next steps.

Upon completion of the interview process and after allocating a few days to discuss and select applications, applicants were then informed of whether their application had been selected for the ACTION accelerator or not.

Successful applicants then entered the negotiation phase. At this stage, applicants selected a more concrete project plan and timeline, with deliverables and Key Performance Indicators. A first version of the project plan was developed by the 15th January, to be used on a week-long workshop with all successful applicants. This was the implementation of one of the learnings from the first call, where the workshop was held at the beginning of the accelerator, leading to changes to project plans that were already agreed. Holding the workshop during the negotiation phase allowed applicants and the ACTION team to include early insights into the project and processes they would conduct to generate higher quality plans.

Following the workshop, project plans were finalised and a formal contract produced with agreement from both parties. This was then signed by applicants and KCL as the coordinator of the project. An initial payment of 50% was made to selected applicants upon completion of the negotiation phase and the commencement of the accelerator process, with the final 50% to be paid upon completion of the accelerator, subject to a final review and adherence to the requirements set out during the negotiation process. A summary of the main call stages can be seen in Figure 1 above.

2.2 Call Process for the ACTION Consortium

For the ACTION team, the structure of the open call was broadly similar to the structure for applicants. However, the consortium had a more expanded role, being instrumental in designing and setting out the requirements of the call, prior to the call launch, as well as shaping the accelerator programme.

To summarise, the role of the ACTION consortium was as follows:
1. **Prior to the commencement of the open call process**: set out call objectives, requirements and programme, agreeing eligibility and evaluation criteria. At this stage, draft public-facing and internal call documentation and guidance were produced and distributed to consortium members for comment and editing.
2. **During the application period**: Disseminate and publicise the call, including attending events, hosting webinars, responding to email queries and producing and sharing social media materials. During the call period, 15 blog posts were published, two of which directly addressed the call. We also had 24 tweets and retweets, and 17 Facebook posts about the call. Full details on dissemination activities will be provided in D7.3.
3. **Near the end of the application period:** Provide names and details of parties for review, including external experts. These external reviewers were approached by members of the ACTION team and made aware of the call, prior to the closure of the call process.
4. **Upon closure of the application period:** review applications for eligibility, identifying ineligible applications and specifying the reason for applications. Attend a webinar on the review process.
5. **During the review process**: Review applications according to review criteria. Each reviewer completed approximately 4 reviews on average.
6. **Upon completion of review process:** Identify shortlisted applications. All applications that achieved an average score of 4 or higher were selected for interview.
7. **Upon commencement of the interview process**: attend interviews, listen to application presentations and ask questions. Make notes on applications and write recommendations and feedback.
8. **Upon completion of the interview process:** Identify successful applicants to join the ACTION accelerator. This stage involved all members of the consortium who were involved in the interview process, and all interviewed applicants were discussed, with an opportunity for the panel members to give their recommendations and justify their decisions.
9. **Negotiation process:** oversee negotiations and administrative processes, including management of internal and institutional processes such as signing of documents and formulation of contracts.

2.3 Call Process for External Reviewers

To ensure a balanced view of applications, and cover expertise we did not have within the consortium for specific types of pollution, we recruited a number of external reviewers to participate in the review stage of the open call. A total of 7 reviewers provided their time and each reviewed between 3 and 4 applications for the call. The review process was the same for both internal and external reviewers. External reviewers did not participate in the interview process.

2.4 Review Process

Each application was reviewed by two reviewers, which were assigned for two categories: expertise in pollution, which was matched as closely as possible to the type of pollution addressed by the application; and expertise in citizen science. All applications were also overseen by a single meta-reviewer, who ensured the consistency and quality of reviews and decisions. To complete reviews, reviewers were asked to fill in a score page within the Easychair system, divided into four sections, with scores and comments for the idea, impact, implementation and an overall score and comment. Each section was to be evaluated on a scale of very poor (1), poor (2), fair (3), good (4) and excellent (5).

To support this process, each reviewer was given a document outlining the criteria, which broke down the expectations for each field and area for each point on the scale. There was no requirement that any given score be influenced by another - i.e., an application could in theory receive a 1 for implementation, but still receive a high overall score. Nevertheless, the criteria and importance of each area for the overall evaluation meant that such disparity in scores was not observed. Reviewers were asked to clearly outline their reasoning and comments for each field and reviewers were checked for consistency between scores and comments. It should be noted that while all comments and an overall score were provided as feedback to applicants, individual scores for fields were not.

2.5 Interview Process

As part of the interview process, each application was reviewed by a panel consisting of three members of the ACTION team and a fourth chair, who had been responsible for the meta-reviews and who was familiar with each application. Due to a lack of availability and a desire for consistency among the interview team, the three interview panel members assigned to each application may not have been responsible for originally reviewing each specific proposal. For this reason, interviewers were provided with a copy of each application and a summary of the most pressing issues identified by the reviewers, prior to beginning the interview process. Additionally, reviewers were given a set of example questions that could be used during the interview process if necessary.

Due to time restrictions of individuals in the ACTION team, some variation in members of the panel between interviews was inevitable. For this reason, panel members were asked to record notes, comments and recommendations immediately following each interview and these comments and recommendations were discussed by the entire ACTION consortium when deciding on the final set of successful applications.

2.6 Effects of the pandemic

The global pandemic had two specific effects on the second open call:

1) We sought applications from existing, established projects looking to expand their activities, for example by introducing new tasks or reaching new target groups; and we expected all activities carried out by volunteers to be entirely achievable **online**, without a need for physical events that must be attended in person. This was a consequence of project plan revisions from the first accelerator, where projects had to adapt their plans at short notice when lockdowns across Europe made their original plans impossible to deliver. For the second open call, we decided that it would be safer to focus on projects delivered online from the outset, to minimise risks of the projects in the second cohort facing similar issues.

2) Two of the pilots from the first open call had to postpone their projects, and were set to join the second accelerator programme. Unfortunately, just before the start of the second accelerator, one of the projects lost a local partner, making it impossible for them to carry out the project as planned. We therefore replaced one pilot from the first open call with a backup candidate selected in the second open call. While the first call selected six projects, and the second open call was meant to produce four additional pilots, a total of five pilots was selected from the second open call.

3   Call Statistics

3.1 Evaluation Outcomes

For the second round of the ACTION open call, we received 78 applications, landing slightly below the target of 100 applications set out in the grant agreement. This was due to the criteria for the second call being more specific, following an adjustment made due to the global pandemic in 2020: We were looking exclusively for projects carried out online, which somewhat limited the possible pool of candidates. 24 of these applications were deemed to be ineligible and so a total of 54 applications were reviewed and evaluated for inclusion within the ACTION accelerator. A breakdown of evaluation outcomes can be seen in table 2 below.

Outcome	Number of Applications
Submitted	78
Ineligible	24
Eligible and reviewed	54
Rejected prior to interview	36
Shortlisted for interview	18
Rejected after interview	13
Successful applicants	5

Table 2 - Evaluation Outcomes for Round One Applications

3.1.1 Reasons for ineligibility

During the eligibility check, applications were checked for adherence to the criteria of the call, including the length of applications, the budget available and the list of eligible countries. Additionally a minor due diligence check was carried out at this stage to ensure that applications involved legal entities or organisations that the ACTION consortium would be able to enter into an agreement and fund. The reasons for applications being deemed ineligible can be seen in table 3 below. Note that while 24 applications were deemed ineligible, many applications had multiple issues; they were only counted under the first issue identified. For example, if an application had both an ineligible page count and was submitted from an ineligible country, it would only be counted under the former, as further checks would not have been carried out.

Reason for ineligibility	# of applications, Call 1	# of applications, Call 2
Overlength	11	9
Formal issues (e.g. declaration of honour not	1	5

signed, invalid form used)		
Ineligible (third) country	3	3
Irrelevance for call	1	3
Conflict of interest		2
Attempted submission after call closure		1
Duplicate	1	1
Other	4	

Table 3 - Summary of Eligibility Issues for Round One Applications

The most common reason for ineligibility was the length of applications. While the short proposal template and guide for applicants both stressed that applications should not exceed 4 pages, most ineligible applications were 5 pages and in one case as many as 12. Four applications were submitted in invalid forms, either adapting the ACTION application template, or disregarding it altogether. Three applications were received from ineligible countries as set out in the call criteria - specifically Egypt, India, and South Africa. Two applications sought funding to design and launch products and had no citizen science or research based aims. One application was received after the call closed, another was submitted without a signed declaration of honour.

3.2 Geographical Coverage

For the first round of the call, we received applications from a total of 25 countries, of which 15 were EU member states, 6 associated countries under the Horizon2020 programme and three countries were third countries deemed ineligible. These are shown in Figure 2 below. In terms of the number of applications received, 85 were received from EU member states, 26 were received from associated countries and 4 were received from ineligible (third) countries. Note that there was a degree of ambiguity present in applications, which in many cases involved international collaboration between workers in one country, working in a second country and carrying out research activities in a third. We therefore consider only the country as recorded by the individual within their Easychair application. Generally speaking, this refers to the country in which the organisation was founded, rather than the country where the research was to take place.

We note that submission rates appear to be generally higher in countries where the ACTION consortium partners are based -- i.e., Spain, Italy, the UK, and Germany -- than in other countries. One significant exception to this was Serbia, submitting five applications, continuing a trend from the first call, where 11 out of 116 applications were submitted from Serbia. Finally, the ACTION consortium comprising two Norwegian organisations, only one application was received from Norway.
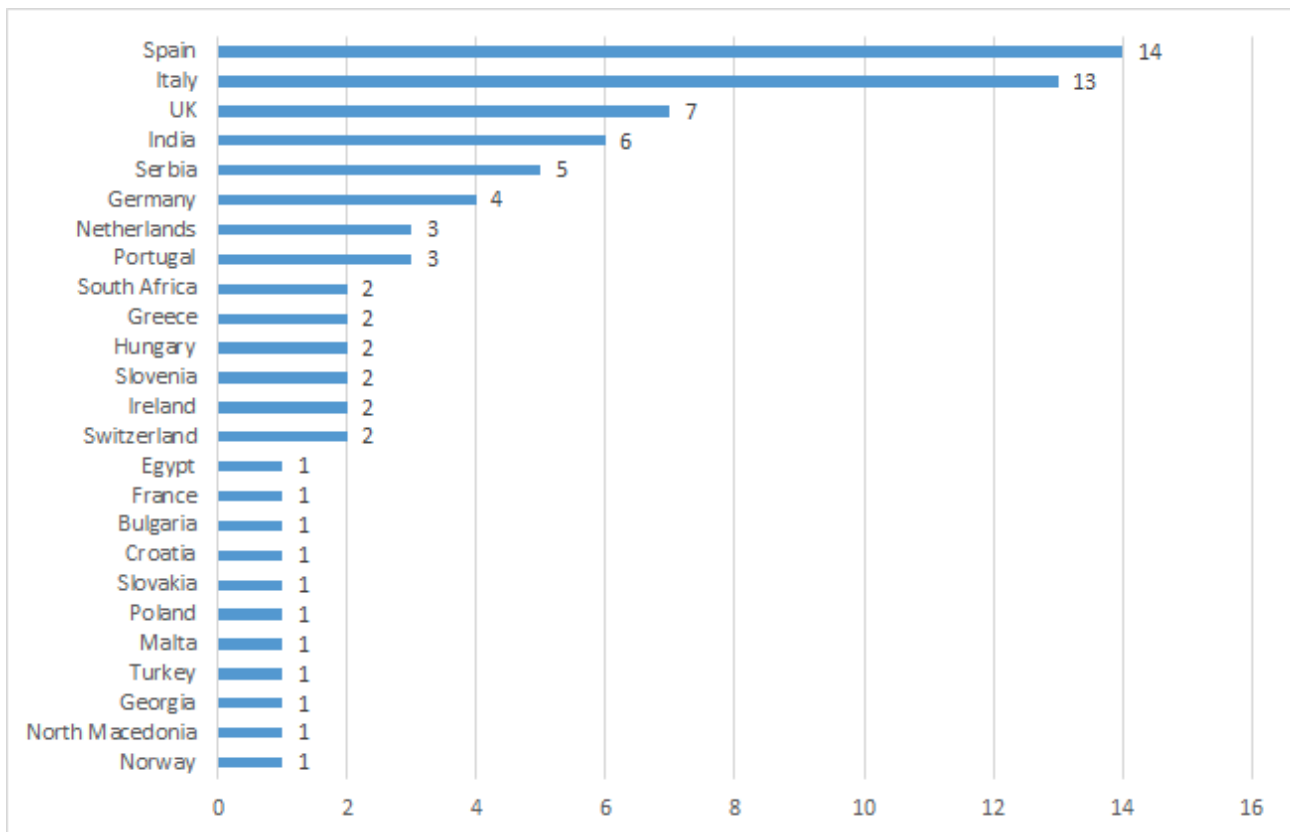
Figure 2 - Submissions by Country Prior to Eligibility Check

3.3 Pollution Focus

For the second round of the open call, we implemented few restrictions in terms of the pollution focus that applicants should have and applications included a diverse range of pollution issues and activities. In spite of this diversity, it should be noted that proposed activities and research topics tended to be similar for particular topics -- e.g., air pollution generally involved citizens taking measurements using sensors in various circumstances, while plastic pollution generally involved asking citizens to gather and record examples of plastic waste.

Air pollution was by far the most popular topic of submissions, with 23 submissions in this area, representing a third of the total submissions. However, this is a distinctly lower proportion than in the first call, where air pollution made up nearly half of the applications. In comparison, while the second call received applications focusing on 11 different types of pollution, compared to the first call's 12 types, due to the lower number of applications in the second call, the spread of pollution types is in fact much less skewed.
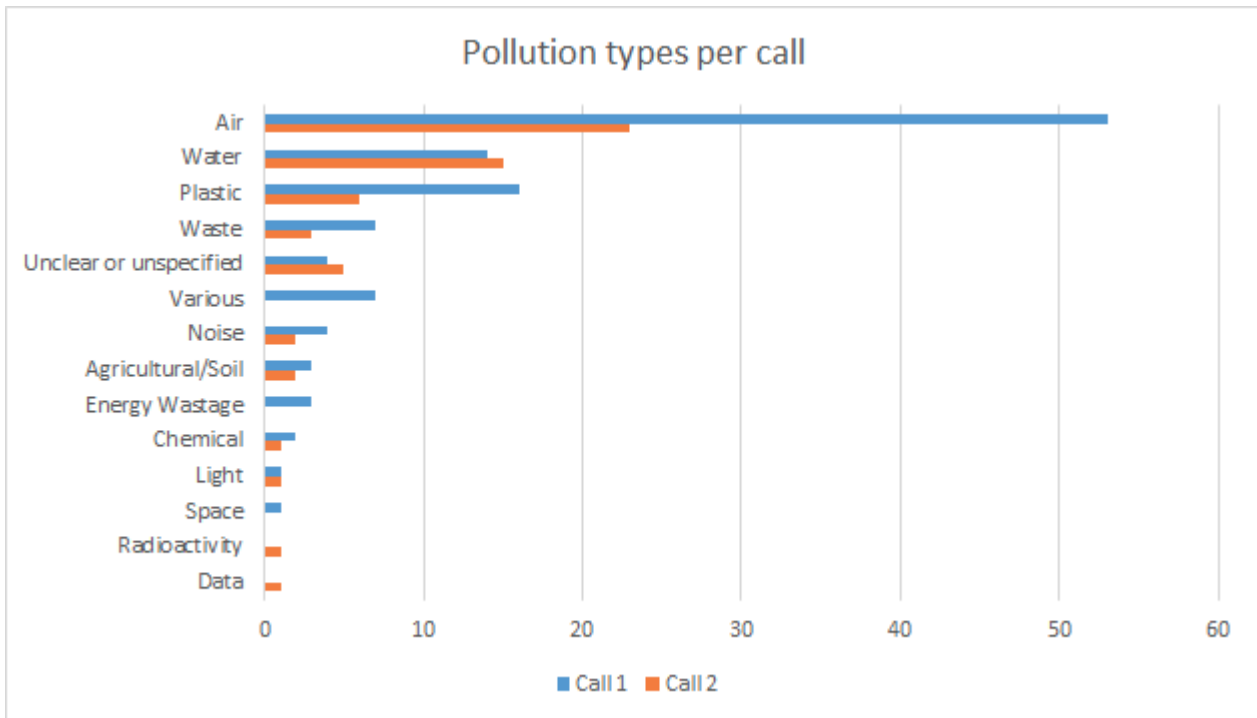
Figure 3 - Pollution focus comparison for the first and second call

Table 4 below shows the list of pollution topics on which each application focused. Note that due to significant ambiguity in applications and a general lack of a common framework for pollution topics, we assign applications to categories based solely on how that application describes its pollution focus. There is, therefore, some overlap in categories between topics such as plastic, and water or soil pollution. For those where a more general issue such as 'environmental' pollution or multiple pollution issues were mentioned, we assigned applications to the unclear or unspecified' category.

Pollution Topic	Number of Applications
Air	23
Water	15
Plastic	6
Unclear or unspecified	5
Waste	3
Noise	2
Agricultural/Soil	2
Chemical	1
Light	1

Data	1
Radioactivity	1

Table 4 - Pollution Focus of Round Two Applications

4   Relationship With Applicants

4.1 Email Correspondence

On launching the call on the 1st of September 2020, the ACTION team also launched an email helpline (call@actionproject.eu) to field questions from potential applicants. This helpline was managed by two members of the team at KCL and aimed to respond to applicants within 2 working days wherever possible, with some longer turnaround times for questions with some degree of uncertainty or which required input from other consortium partners. Additionally a frequently asked questions document was provided for applicants on the ACTION website.

During the application period (between 1st September and 1st November), we received a total of 49 emails from participants. These emails largely comprised two broad categories - questions about eligibility and clarification about the application process (i.e., the proposal template).

A small number of queries - four, specifically, were about the partner search, where ACTION had offered to publish institutions looking for partners with whom to apply for the open call. This was meant to support smaller institutions, or those from third countries. In practice, we found that these queries required in-depth filtering, as the forms that were submitted often sought general support or funding, as opposed to stating clearly what kind of partnership they were looking for in order to apply for ACTION. Two of the four queries for the partner search were ultimately posted on the ACTION website, but none of them led to a collaborative application.

4.2 Webinars

To assist applicants with the application process, answer questions and clarify the aims and objectives of the ACTION accelerator, we ran two webinars for potential applicants, one for each month that the call was open to applications. These took place on Microsoft Teams, and were published on the ACTION website, YouTube channel, Facebook and Twitter accounts. The first webinar took place on the 14th September, the second on the 2nd October, each at 11am CEST.

Each webinar lasted for approximately one hour, and consisted of a presentation explaining the application and evaluation process for the call, along with opportunities throughout and at the end for questions from applicants. Registration for both webinars was made available with the launch of the open call on 1st September. Both webinars including questions were recorded and published on the ACTION website shortly after completion.

Total registration counts, attendance figures and view counts for each webinar and video can be seen in table 5 below. Note that webinars used the same presentation and were all very similar, with the only difference in the questions from applicants asked throughout.

Date	Registration	Attendance	Views
14th September	25	9 (36%)	72
2nd October	27	7 (26%)	76
Total	52	16	148

Table 5 - Registration, Attendance and Viewing Figures for Round Two Webinars

5 Lessons Learned

For the second round of the ACTION call, the objectives, procedures and tools used were generally successful. We received 78 applications, bringing us to 194 applications in total, just slightly below the target of 200 proposed in the grant agreement for the two rounds, with a variety of pollution focuses, citizen activities and countries of origin. We had noted some areas for improvement in the application and evaluation process from the first round, which we implemented. The below is a reflection on those changes and their effect, and further lessons learned from this second open call:

In the first call, participants struggled with both the structure of questions and length of responses within the short proposal template: Some applicants repeated answers or offered insufficient information. We addressed this by changing the order and wording of questions in the short proposal form, adding a general summary of the project at the beginning, and removing some questions that seemed repetitive or irrelevant. We also indicated clearer how long we expected responses to each question to be. This has worked well, and we found that the answers we received from applicants were much more coherent.

In the first call, some applicants struggled to understand administrative restrictions, particularly surrounding the budget. We addressed this by updating the guide for applicants, clarifying missing details around the budget. We remove any expected costs from ACTION's side, primarily in the form of holding the kick-off event online. This has resolved the problem, and we have not rejected any proposals due to budget issues.

In the first call, many queries around eligibility and the application process were asked multiple times. Moreover, applicants did not always understand the types of support offered by ACTION. We addressed this by updating and extending both the guide for applicants and the FAQ available on the website. Moreover, we added a clear list of support opportunities to both the guide and the application form. This has worked to a degree: Support requests in the second round were slightly more focused. Still, about half of the reviewed applications did not make sufficiently clear how the project would benefit from participation in ACTION, and what kind of support (beyond funding) was sought.

Although we still received many queries around eligibility, the focus of these has now shifted to specific types of projects, with many applicants outlining their general idea and asking whether this would be a suitable project. This was mainly due to the new focus on online implementation of projects, which we introduced to limit risk of project delays or failures due to the pandemic.

The most common issue highlighted by reviewers in the second round was the proposed engagement strategy, with citizen scientists being involved in very limited ways, often only as hosts

for sensors. Impact was also critical, with about 50% of projects showing only limited potential impact, both on the pollution issue addressed, and on the participants themselves. On the other hand, nearly as many applications came with impressive impact opportunities - though some lacked impact in one area (e.g. pollution) in favour of another (e.g. policy).

Several projects did not appear to be feasible, either in the timeframe, budget, or ambition they put forward; for example, one project suggested to work with volunteers only, and stretch the ACTION budget over three years, instead of six months. Similar issues were highlighted around sustainability, where several projects did not provide sufficient plans for activities or maintenance of their outputs beyond the ACTION accelerator.

Overall, although the second open call attracted slightly less applications than we had aimed for, we still consider it successful. Given the circumstances (during a global pandemic) and limitations in delivery (focusing on online projects only), we are proud of the five projects that we have selected, and now look forward to their implementation during the second round of the accelerator.