YouCount
Youth Citizen Science

D 4.4

Report on impact assessment of YouCount

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D4.4 Report on impact assessment of YouCount

This report will include impact assessments of the YouCount Project, and youth citizen social science (Y-CSS) based on the chosen basket of indicators, including SDG and MoRRI indicators.

The vison of YouCount is twofold, addressing and combining both the scientific and societal needs of our time. The scientific *vision* of YouCount is to strengthen the transformative and participatory aspects of CS and social science, by enabling citizen participation in all facets, reaching out for a more egalitarian way of conducting science. The societal vision of YouCount is to contribute to create inclusive and innovative societies for European youths and to empower them in promoting active citizenship and a just and equitable future, particularly for youths with disadvantages.

Table 1: Revision history

VERSION	DATE	CREATED BY	COMMENTS
1.0	19/12/2023	Usue Lorenz, FD Reidun Norvoll, OsloMet Itziar García, FD Susana Franco, FD Patricia Canto, FD Melanie Saumer, UNIVIE Jörg Matthes, UNIVIE	First version
2.0	21/12/2023	György Pataki, ESSRG	Internal review
3.0	26/12/2023	Usue Lorenz, FD	Second version
4.0	27/12/2013	György Pataki, ESSRG	Second internal review
5.0	28/12/2023	Usue Lorenz, FD; Reidun Norvoll, OsloMet	Third version
1.4	28/12/2023	P1, Reidun Norvoll	Final version submitted

Table 2: Terms and Abbreviations

ABBREVIATION	FULL TERM
CS	Citizen Science
CSS	Citizen Social Science
DEC	Dissemination, exploitation, and communication
DF	Dialogical Forums
EU	European Union
EC	European Commission
KPI	Key performance indicators
LL	Living Labs
MoRRI	Monitoring system for responsible research and innovation
OA	Open access
R&I	Research and innovation
RRI	Responsible research and innovation
SDG	Sustainable Development Goals
SwafS	Science with and for Society
YCS	Young citizen scientist
Y-CSS	Youth Citizen Social Science

Executive Summary

There is a substantial body of literature concerning evaluation and impact of citizen science (CS) including methodical approaches to measure impact in the best way. However, existing knowledge on the actual outcomes and impact of co- creative citizen social science (CSS) is scarcer. This gap includes how impact in CSS can be measured and assessed in the best way.

The H2020 YouCount project can contribute to better understanding of the effects of co-creative CSS as a large multilevel Y-CSS project involving nine countries across Europe and several research substudies. This deliverable introduces the challenges faced when it comes to impact assessment of CSS, the multidisciplinary applied research conducted in YouCount and defines its own approach to impact assessment. The studies' results show the conclusions of the impact assessment of YouCount, building from the rich variety of the outputs and outcomes produced in YouCount. The study delves into the level of achievement of the intended impact objectives of YouCount; and analyses its unplanned impacts.

1. Background and impact assessment challenges

Assessing impact is relevant for both funding agencies and universities and research centres, especially when it comes to prove the value of research beyond academia in the wider society. In the case of CS, there is a need to validate the effectiveness of this scientific approach, especially in the social sciences and humanities, where CS has not been applied as extensively as in natural sciences (see e.g., the Horizon 2020 Science with and for Society programme 2018–2020). There is thus a pressing need to further explore to what extent CSS is valuable for generating new scientific knowledge, what are the effects that this scientific approach generates at the participant level, and society.

The H2020 YouCount project can provide important insights and lessons about the need for more knowledge of the actual impact of YouCount as a large multilevel CSS project involving nine countries across Europe. YouCount research substudies' results intend to respond to these questions, and impact assessment particularly aims to understand the effect of the research, as it is described in section 1.3 below.

This chapter introduces the impact study of the YouCount project by delving into the challenges faced when it comes to impact assessment of CSS and the multidisciplinary applied research conducted in YouCount and defines which are the impact assessment objectives of YouCount.

1.1 The concept of impact assessment

There is not a clear definition of impact, as its scope and scale can be understood differently depending on multiple aspects such as the users and audiences involved; the objectives on the field in which the impact is assessed; and the time scale observed (Penfield T. et al, 2014; Schuch, k. 2018).

The notion of impact is related to 'changes' that 'someone/something' is experiencing because of an 'action': "Marked effect or influence", as defined by the Oxford English Dictionary which highlights the 'change effect' linked to the concept; "Being the result of research" (Penfield T. et al, 2014) emphasizes the fact that impact is a result of an action (in this case, research); "a powerful effect that something, especially something new, has on a situation or person", is the definition of The Cambridge Dictionary that puts the focus on the fact that impact is a result of an action influencing a person or a situation.

All in all, the impact concept depends very much on the context that it is applied. The application field influences the changes that are sought (its objectives), the person or the situation that is affected and the actions developed towards impact achievement. Thus, when it is applied to the

field of R&D, the impact concept takes on new meanings linked to the challenges of the R&D field. These challenges are linked to the growing importance of demonstrating the value of research beyond academia, which has incorporated specific objectives and ambitions to the concept of research impact: from being a concept focused on demonstrating the quality of research, to a concept that also integrates the need to demonstrate the impact of research outside academia (Sutton, 2020). It affects to both, the academic institutions that are encouraged to play and demonstrate a more active role addressing practical challenges; and the policy institutions that need to demonstrate the effects in society of R&D investments (Aranguren et al., 2021; European Commission, 2018). The latter is reflected within the EU Framework Programmes (FP) that are calling for a greater focus on impact. For example, the new Impact Assessment for 9th Framework Programme emphasizes the need to demonstrate why EU R&D investments are crucial to resolve R&I are critical for providing solutions to the challenges of our time (European Commission, 2018).

One of the main challenges when it comes to impact in the R&D field, is demonstrating the value of research beyond the academia. Opening up the concept towards its value in the wider context gives to the concept a more specific and tailored meaning to 'changes' as they are now linked to specific dimensions of life such as economy, society, environment, etc. Besides, 'actions' are interpreted as project activities, research activities, etc.

Overall, impact dimensions in research have traditionally been classified within three wide categories; scientific, societal, and economic dimension, the last two being considered as research impact fields beyond the scientific one. In the last two decades, as policy has become more environmentally focused, this dimension has also become an additional prominent impact dimension. This new dimension emerges as a dimension linked to the status of the natural environment for future generations. In academia, the most common types of research impacts are: the academic impact (intellectual contribution to the field) and the socioeconomic impact, that includes all the other impact that reflects the wider benefits to society and economy (Penfield et al., 2014; Donovan and Hanney, 2011; Joly et al., 2019). The wider benefits to society are named as 'societal impact' or 'socioeconomic impact' and they usually encompass many different terms and meanings such as societal benefits, societal quality, usefulness, public values, knowledge transfer, societal relevance, transformational change, etc. Regarding CS, another impact dimension comes into stake within the societal dimension: the participant dimension. Kieslinger et al. (2018) acknowledge the contribution of CS to transformational change into science and society and identify three core impact and evaluation dimensions: the scientific, the participant and the socio-ecological and economic dimension. Wider benefits to society are included in the last two categories. The participant dimension is crucial to reflect the central role of the citizen scientists have in CS. The key role they play is reflected in the CS definition by Haklay (2013) where co-researchers' role is underlined: "CS are scientific activities in which non-professional scientists volunteer to participate in data collection, analysis and dissemination of a scientific project". The participant dimension emerges therefore as a key impact dimension in CS (Kieslinger et al., 2018).

Still, we find that there is a need to further develop the perspectives on the "socio- ecologic" impact of CS and also the wider innovative potential of CS. CSS projects (such as YouCount) which involve experts from the social sciences and that address societal challenges directly may add valuable knowledge of sub- dimensions to be included in measuring impact in the socio- ecological domain of CS/CSS.

1.2 Models and approaches to impact assessment

There are several models for impact assessment, all of them tackling the challenge of measuring the effects of collaborative knowledge production processes involving a wide variety of actors within and outside academia. These models are: the Payback Model (developed in the mid-1990s by Buxton and Hanney and analysed through the work by Donovan and Hanney, 2011), the concept of Impact Literacy (Bailey and Phipps, 2019), the co-produced pathway to impact (Phipps et al., 2016), case study approach for assessing research impact (Theresa Penfield et al., 2011), the six guiding principles for a consolidated Citizen Science Impact Assessment Framework or CSIAF (Wehn et al. , 2021), the evaluation approach to Citizen Science (Kieslinger et al., 2018), and, the Co-evaluation framework (Kieslinger et al., 2022).

One of the conclusions from our analysis of these models, is that many of them use the logic framework as a tool for systematically try to link research with the associated effects (including positive and negative effects). In the Payback Model (developed in the mid-1990s by Buxton and Hanney and analysed through the work by Donovan and Hanney, 2011) the logic model representation is used to represent the research process across its seven stages. The co-produced pathway to impact is based on the metrics of the knowledge mobilization process represented as a logic model as a sequence of stages that lead from research to impact (Phipps et al., 2016). The Citizen Science Impact Assessment Framework or CSIAF acknowledges the value of the logic framework for defining and capturing the research's results (see Wehn et al., 2021). However, it points out to the limitation of this models to capture the dependencies among different types of impacts. The logic model is also used in evaluating CS project as described by Schaefer et al (2021), for systematically relate inputs, outputs, outcomes, and impact.

While the intervention logic is behind many impacts assessment exercises (When et al., 2021) and has been proved to be useful for tracking quantised impact (Greenhalgh et al. ,2016) or for evaluating any type of societal impact evaluation including Citizen Science initiatives (Schaeffer et al., 2021; When et al., 2021); the model shows limitations for assessing impact in any collaborative knowledge production process.

Limitation of logic models also includes approaches to knowledge production. In contrast to Mode 1 of knowledge production which takes place in the academic disciplinary context; Mode 2 of

knowledge production takes place in the context of its application; it is transdisciplinary, heterogeneous and non-hierarchical and takes place in flexible research teams that change as the task requires; and, quality control is carried out by the participants themselves in the knowledge production process (Gibbons, 1994). Logic models are effective tools for demonstrating causal connections of inputs, outputs and outcomes (Raftery e al., 2016) when the knowledge production is led by a more traditional academic science, led by university researchers and then disseminated to stakeholders. But, when knowledge production is based in non-linearity, messiness and unpredictability of the collaborative knowledge production process, logic models are not that appropriate and new means need to be explored to capture these complex interactions. Co-creation models to knowledge generation imply research collaboration between stakeholders and academics. More co-creative research approaches are therefore more consistent with Mode 2 knowledge production.

In the type of research conducted in YouCount where knowledge production in created through application, where there are complex levels of interactions between participants, the logic intervention is thus not sufficient to show less directly attributable aspects of research-impact link. Greenhalgh et al. (2016) state that Mode 1 research impact frameworks adopt a linear view from outputs to impact that is usually assessed against a predefined range of impact metrics. However, in collaborative research where outcomes might emerge for research activities such as interaction and negotiations, the complexity of outcome assessment increases and the attempt to measure co-created research is limited.

To overcome these limitations, Greenhalgh et al., 2016 propose shifting the focus of impact assessment to the processes by which knowledge is generated by, for example, capturing multiple voices through storytelling, or interviews. For instance, to conduct a process that would study, among others, the existing power relations, and the facts from this unpredictable system. For example, case study descriptions allow capturing the non-linear links between research and outcomes that are often influenced by the complex interactions of multiple voices engaged in research (for example in co-creation); and how research is interpreted and shared. This case approach is very relevant for YouCount given its multi-case study and because it allows a more holistic assessment of impact. Schaeffer et al. (2021) also suggest that new approaches to evaluation should focus strongly on the dimensions of individual and socioecological benefits, involving participants more actively in the process.

1.3 YouCount's approach to impact assessment

The traditional models for impact assessment analysed in YouCount do not fit with the specific research design and characteristics of YouCount when it comes to the challenges that impact assessment shows for a co-creative ad CSS multi-case research project.

Inspired by the analysis of the different models presented above and the main discussions around their limitations when it comes to collaborative research, YouCount's research team therefore has developed and applied a tailored impact assessment approach addressing the need of capturing relevant quantitative and qualitative data that allows a better understanding of YouCount's impact beyond predefined assumptions of where the project can achieve impact.

The approach to impact assessment is elaborated in the methodological section (see section 0 below). The impact approach includes mechanisms to capture the outcomes that emerge from the transdisciplinary applied problem-oriented knowledge production in YouCount across its different research substudies (including the multi-country case studies).

2. YouCount's impact objectives

To understand YouCount's intended impact objectives, it is needed to introduce what does the project aim for: The overarching objective of YouCount is to generate new knowledge and innovations to increase the social inclusion of youth at risk of exclusion across Europe through co-creative youth citizen social science (Y-CSS). Overall, YouCount targets two strands of inquiry:

1) knowledge about social inclusion and how to create social change through the involvement of young citizen scientists and,

2) contributing to the scientific knowledge base for Y-CSS for increased scaling. This is reflected in the specific objectives below.

The project sub-objectives are included in **Error! Reference source not found.**, and the reflection o f the intended impacts of YouCount is intimately linked to these sub-objectives.

Figure 1. YouCount's specific objectives

SO1: Support CS and the social sciences by developing a conceptual and methodological framework
SO2: Provide open data concerning the experiences with implementation of hands-on citizen social science activities through a multiple case study of Y-CSS projects in nine countries across Europe to develop new knowledge of social inclusion for social innovation and policymaking
SO3: Develop new social science knowledge of social inclusion, including identifying the major drivers for the social inclusion of youths and new/better social innovations/policy-making to cocreate positive social change and creating a theoretical model for increased social inclusion of youths on the individual and community/societal level.
SO4: Provide evidence of the costs and benefits of Y-CSS based on open data of the scientific, social, democratic, economic and individual outcomes of Y-CSS from the multiple case study
SO5: Maximise the social impact of the project and contribute to youth policy and the SDG and MoRRI indicators by a) directly benefiting individual Y-CSS involved in the project through social change and b) developing pathways to inclusion through new policy recommendations and a model for innovative community actions and sustainable community engagement. (WP3, 4 & 5)
SO6: Maximise the scientific impact of the project by creating synergies with other CS projects and initiatives and by the coproduction and open science dissemination of a series of practical tools (practitioner handbooks, teaching modules, evaluation tools and science recommendation guidelines) based on cutting-edge and contextually rooted empirical research.

Source: YouCount's webpage, https://www.youcountproject.eu/about-the-project/about-the-youcount-project/objectives

YouCount is aiming to make an impact on the EU Science with and for Society (SwafS) Work Programme and contribute to exploring and supporting CS by expanding and developing CS in the

social sciences. The project also aims for using co-creative Y-CSS to create new scientific knowledge and pushing ahead policymaking to increase the social inclusion of youth. Moreover, the project aspires to create impact by advancing CS tools for science communication and public engagement in the social sciences with (disadvantaged) youths, integrating CS more actively in mainstream R&I institutions and developing informal/formal science education of CSS. In addition, the project is aimed to provide a unique knowledge base regarding how to conduct and evaluate Y-CSS and how to support CS at the policy level and disseminate systematic knowledge of the outcomes, as well as the costs/benefits of CS/CSS. The impact in the scientific dimension also implies generating new/better ICT tools for CS with new groups of citizens, recommendations and guidelines for conducting and evaluating CS in the social sciences, providing educational materials and suggestions for teaching programmes in universities and beyond. The intended impact objectives of YouCount are shown in Table 3.

Table 3. YouCount's intended impact objectives

Impact objectives of YouCount
Impact 1: Development of new knowledge and innovations concerning social inclusion and CSS by YCSs
Impact 2: Availability of evaluation data concerning the scientific, individual, societal, democratic and economic outcomes, and costs and benefits, of citizen social science
Impact 3: Indicators chosen by the consortium against which to measure the impact of their work (including SDG and MoRRI)
Impact 4: Advanced public engagement and science communication in CSS
Impact 5: Science education and improved society–science relationship in R&I institutions
Impact 6: To develop recommendations for future policy strategies to support CS and/or societal challenges

Source: YouCount

However, in the collaborative research conducted in YouCount, unplanned outcomes might emerge from the complex interaction and negotiations that happened in its research activities. The YouCount's impact assessment approach described in the methodological chapter is therefore also focused in building the path towards understanding what other outcomes (other than the intended ones in **Error! Reference source not found.**) emerge from YouCount. In summary, the research aimst hat YouCount's impact assessment is looking for are the following ones:

- To analyse the project's achievements when it comes to its intended impacts (see **Error! Reference source not found.**)
- To discover its unplanned impacts, those that are unpredictable and can emerge from the collaborative research conducted in the project
- To reflect on the impact results of YouCount and the implications of the findings for future CSS and co-creative research.

3. Methodology for impact assessment

The YouCount's approach to impact assessment, explores and outlines how the project impact ambition can be measured by testing how to overcome the barriers and limitations that the most widely used models and tools show when measuring impact in collaborative research. Concretely, the approach described in this section enables assessing the success or not, of both the intended and unplanned results of the project; by developing a methodology that captures both quantitative and qualitative measures from different typologies of research, each based on different modes of knowledge production; and by including a process analysis to capture the non-linear links of research and its impacts that can especially emerge from the complex and unpredictable interactions between participants.

In YouCount, impact is defined as "**all the changes** that are expected to happen due **to project activities**", acknowledging that they can occur **over different timescales**, affect different types of **actors**, and different **dimension**" Network4Society (2020). The adoption of this definition of impact presents several implications about the impact assessment approach of YouCount:

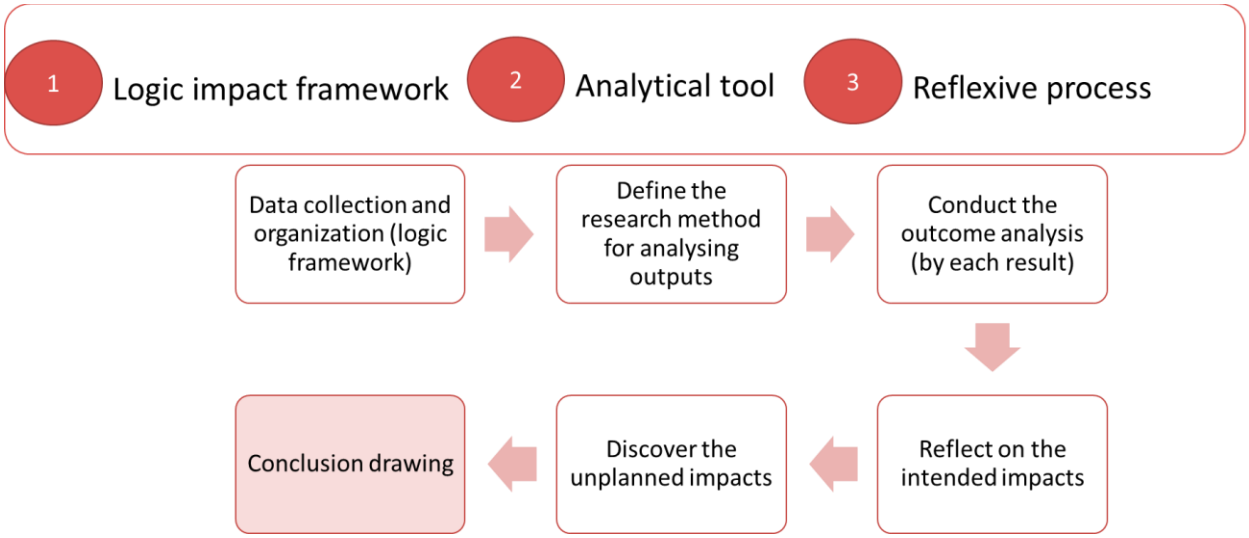
- The **scope of the changes** analysed are limited to the changes that can be observed directly through the project activities and the research conducted within the project.
- The **time scale**: the assessment is focused mainly on the changes that are happening in the project lifetime, that is on the short-term impacts or outcomes. Medium-term impact (within 5–10 years of the project start) and long-term impact (after 10 years), are not included in this study.

  At this point it is important to clarify that the short-term impacts are linked with what is often understood as outcomes (short-term effects of research outputs).

- **The dimensions analysed** are the ones that are defined in chapter 3 by Juricek eta al., (2021) in Butkevičienė et al., (2021) (D1.2. Report on the conceptual, innovative, evaluation and ethical framework for youth citizen social science) within the broader co-evaluation framework of YouCount (in Work Package 4): scientific, participant's and socioecological and economic (or societal) dimensions.

As seen in **Error! Reference source not found.**, the methodological approach to impact a ssessment is based on three main elements and has gone through six different steps.

Figure 2. Summary of the YouCount's impact assessment methodological approach



Source: Own elaboration

3.1 Three main elements of YouCount's methodological approach

The core three elements of the methodology are:

- **The logic framework of YouCount** is applied for understanding the path from project research activities to the intended and unplanned outputs and outcomes or short-term impacts. The input-output-outcome model that is represented in the logic framework provides a structured approach to data collection (see **Error! Reference source not found.**).

  It graphically displays the links between the project's activities, the outputs and end results (outcomes and impacts). This schematic representation allows us reflecting on how the generated knowledge and insights and their interactions, contribute to changes (both intended and unplanned ones). The impact assessment of YouCount includes both intended and unplanned outputs and outcomes (or short-term impacts). Thus, it allows looking at and analysing results that were not expected and that emerge from the collaborative research in YouCount.

  These elements of the logic framework, the outputs, outcomes, and impacts, provide a structured approach to relate activities, inputs, outputs, outcomes and impacts. A variety of definitions can be found around these concepts, but for the purposes of YouCount's impact assessment, the definitions attributed to each of them are the following ones:

The *inputs* are the resources available, and the activities conducted within the scope of the project.

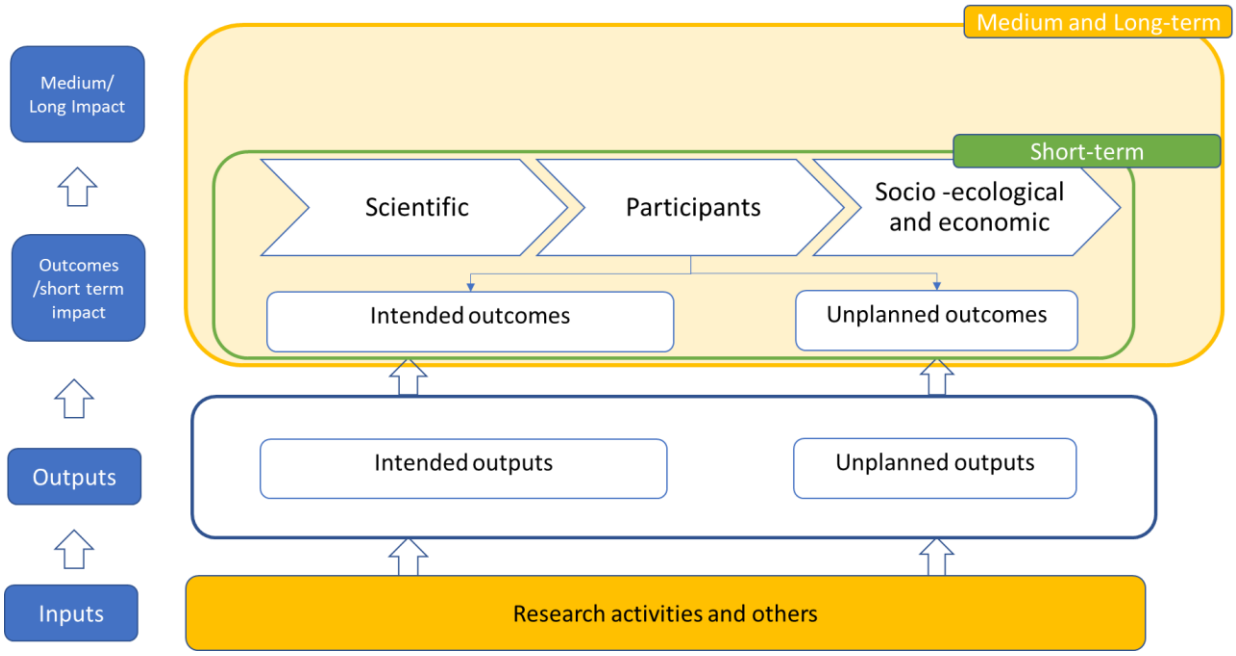
The *outputs* are the direct result of the research activities. The research team has a control over the outputs that are the direct results of the research, and they are under the sphere of control of the research partners.

Outcome and *impact* are terms sometimes used interchangeably. Both represent positive or negative changes in the actions of actors or stakeholders (including behaviour, relationships, actions, and activities) that are influenced, directly or indirectly, partially or totally, intentionally or not, by the research activities and results.

The coexistence of two approaches to knowledge production (Mode 1 and Mode 2 knowledge production as defined by Gibbons, 1994) has crucial implications for the impact assessment regarding the selection of the impact tools and approaches. The logic framework traces the path from project results to impact, capturing data on inputs, outputs to outcomes that would eventually allow to understand if the intended results are achieved or not. However, as seen in the theoretical section, research that is more aligned with Mode 2 knowledge production, like the empirical research conducted in the case studies, can generate unpredictable research outputs that were not foreseen (for example, the opening of job applications for the YCS from the institutional stakeholders involved), and that can lead to unplanned changes in the target group (i.e. improved economic situation of the YCS covering new job positions). A logic framework approach based on a predefined set of input-output-outcome metrics to trace the path from inputs to impact is not suited for capturing that sort of results. Thus, the logic framework of YouCount needs to include data collection mechanisms that enable capturing the emergence of new, unpredictable, and unplanned results and outcomes that came from the co-creative research. It means that impact logic model, needs to become in a more flexible and adaptable tool to capture the evolving results of a knowledge that more consistent with Mode 2.

For overcoming this challenge, the impact assessment of YouCount combines in its impact logic a predefined set of intended outputs and outcomes with the unplanned ones. The impact logic therefore depicts the results in a flexible and responsive way to the evolving and unexpected nature of the research that is more consistent with Mode 2 knowledge production.

Figure 3. Impact logic framework of YouCount



Source: Own elaboration

The analytical tool: The combination of different research methods that are used in the project research substudies provide a mix of data (qualitative and quantitative) which is further utilised in the "analytical tool" for conducting the impact assessment of YouCount. It is the tool for data collection and analysis based on an agreed summary of the relevant data items and sources for impact assessment of the project (after conducting a process for identifying the main data sources for impact assessment across work packages' results).

The process analysis: the abovementioned logic tool for impact assessment of YouCount show limitations to capture the unpredictable and non-linear links between research and impact that emerge from collaborative research. Thus, it needs to be complemented with an assessment of the processes by which knowledge is generated by, for example, capturing multiple voices engaged in the research. At the first stages of the methodological design, a process was designed including the participation of YCS and researchers to reflect on the unplanned outcomes of YouCount. This process was named a "reflexive exercise" and it was aiming to include various voices of the project in the impact assessment process. But, due to time limitations and the excessive workload of the participants in the final stages of the project implementation, it has not been possible to carry out this process. Instead, a focus has been taken to analyse process-wise results of YouCount, that represent participants' process perspective of how things have been progressing along the process (an example of this kind of result is the process survey that captures YCS insights in different times in the project).

By combining these elements, this study can contribute to better understand how to approach impact assessment in collaborative research. Besides, the rich and multidisciplinary empirical research in the project is an extraordinary opportunity to understand which Y-CSS aspects are important when it comes to understand its impact.

3.2 A six-step process

The impact assessment study has been conducted following a six-step process (as showed in **Error! R eference source not found.** above):

1. Data collection and organization:

The process starts with the selection of observable data about impact throughout the project. One of the main challenges is to identify the relevant data for impact as the information is scattered across the project and encompasses inter-country research in and across many local cases (10) and project activities. Identifying data that emerges from research produced in interaction with other actors and consistent with Mode 2 knowledge production models is challenging. This step is aiming to ensure that this data is captured and also to understand what kind of information we are getting from YouCount results.

For doing so, the research team first get involved in a process to understand which kind of aspects are investigated in each substudy across the 6 Work packages in YouCount. The impact assessment research team has conducted a review of the research methods and tasks undertaken for identifying the main output data. The objective is to get to know what kind of observable data on the positive or negative changes directly or indirectly, partially or totally, intentionally or not, is produced in YouCount. After, the research team together with the substudies leaders have selected and agreed about the relevant data about impact included in the outputs that in each substudy can provide.

The result of this process is a set of aspects by impact dimensions that can be observed through the project results. These data are clustered to provide specific meaning to each impact dimensions as shown in **Error! Reference source not found.** (the categories' and codes' definition p rocess).

Categories "speak to the essence of the underlying codes" (Lochmilller, 2021). Categories represent related and similar patterns in codes, and they support the understanding of the research team on the YouCount's impact on the scientific and societal (participant and socioecological and economic) dimensions. That means interpreting the data within the lenses of the categories and codes defined for the impact assessment process. The following table

summarizes the main impact categories and codes that have been used for conducting the outcome analysis for each research result of YouCount.

Table 4. Codes and categories for organizing data on outcomes

Scientific dimension	**New knowledge about** - **Y-CSS** - **Social inclusion** - **Social innovation** - **New methods for science communication, education and public engagement** - **Gender equality and sensivity in research**
	Enhanced science-society collaboration - Open Access knowledge - New training in YCSS
	Intitutional changes for supporting R&I
	Youth friendly academic careers
Participant	Individual knowledge, attitudes and behaviour towards CS and science
	Personal capabilities and skills
	Individual social outcomes or increased social inclusion: - Increased opportunities for social participation - Increased employability - Increased sense of belonging - Strengthening of social networks - Increased social capital - Increased citizen engagement - Others
Social-ecological and economic dimension	Policy change and improvement: - Improved policymaking and innovations to support employability - Informed policymaking - Policy recommendations Power dynamics – organisation and governance New practices for social innovation Gender relatins and dynamics
	Youth-involved innovations and policymaking

Source: Own elaboration

Thereafter, the research team collects and organises the data about the YouCount's outputs or results (see the different outputs analysed in Table 5) and collects it in the analytical tool (extracting only the aspects that are relevant for impact assessment). As seen in Table 5, these results are classified based on whether they represent the YCS or the researchers' perspective. For example, the process survey results represent the YCS perspective (as they rely on YCS answers about the variables analysed) and the Social Innovation Analysis represents the researcher perspective as it is an analysis conducted by them. Some of the outputs are primary data (survey results, case study reports) and others are secondary data, for example, the project deliverables.

A substantial part of the data material is coming from YouPlan, the tool for monitoring the dissemination, exploitation and communication activities of YouCount as defined in Lorenz et al. (2021. However, as including these data would make the deliverable too long, the detailed tables will be submitted as part of the final reporting.

Table 5. Outputs analysed and research methods applied

Perspective	Output	Focus	Method
Researcher	**Social Innovation Analysis** *Source: case studies' reports section 4. Social Analysis. Framed Work Package 3, Social Innovation (Lead: ESSRG)*	Social innovation analysis of the case studies from researchers' perspective	Qualitative analysis based on Atlas.ti: • Text coding based on the impact dimension elements • Analysis of the distribution of codes • Conclusions by dimension based on the observations of the different categories • Identification of patterns based on co-occurrence of observations. • Conclusion drawing by dimension
	Cross-case analysis of experiences with use of dialogue forums with local youths *Source: case studies' reports section 5. Dialogue Forums with Local Youth. Framed within Task 4.6: Cross-case analysis of experiences with use of dialogue forums with local youths (WP4, lead by UNIVIE)*	Cross-case analysis of experiences with "dialogue forums" from the researchers' perspective	Qualitative analysis
	Deliverable 3.1 *Pataki, G., Czeglédi, A., ButkevičienėE. (2023). D3.1 Report on Citizen Social Science and Social Innovation: Analysis Based on YouCount Case Study Reports. YouCount project. Doi.10.5281/zenodo.100533*	Analysis of the section 2.3 *Social Innovation from an impact perspective*	Qualitative analysis based on Atlas.ti: • Text coding based on the impact dimension elements • Analysis of the distribution of codes • Conclusions by dimension based on the observations of the different categories • Identification of patterns based on co-occurrence of observations. • Conclusion drawing by dimension
YCS	**Focus Grous** *Source: 3rd Focus Group transcription excerpt within WPU (Lead: UNIVIE)*	The perspectives of the YCS in the research team on how the project is advancing on social inclusion knowledge generation, communication, changes and benefits)	
	Surveys *Source: surveys developed within Work Package 4, Evaluation (Lead: UNIVIE)*	YCS perspective on their changes on attitudes and knowledge regarding science, citizen science, and social inclusion of youths	Quantitative data analysis using R programming

Perspective	Output	Focus	Method
	Deliverable 1.5 *Murray, C., Göbel, C. & Butkevičienė, E (2023). D1.5 Practices to Empower Young Co-Researchers in Citizen Social Science. 10.5281/zenodo.1005291*	Youth perspective of key youth-centred learnings in YouCount	Qualitative analysis based on Atlas.ti: • Text coding based on the impact dimension elements • Analysis of the distribution of codes • Conclusions by dimension based on the observations of the different categories • Identification of patterns based on co-occurrence of observations. Conclusion drawing by dimension
Other	**Key Performance indicators**	Level of achievement od the expected outcomes YouCount	Qualitative analysis based on the level of achievement of the expected results
	Dissemination, exploitation, and communication activities	Level of achievements of the DEC activity in YouCount	Qualitative analysis based on the level of achievement of the expected results

Source: Own elaboration

2. Definition of the research method for outcome analysis

The outputs are analysed to observe which changes and effects do they identify in the three different dimensions of the study, both intended and the unplanned ones. For that purpose, a content analysis needs to be done. Qualitative analysis based on Atlas. ti is used to help sorting the text, while other methods are used for conducting quantitative analysis (like "R" programming for the survey exploitation). In this stage, for each YouCount's results analysed, the research method is defined as it is shown in Table 5.

In the case of the analysis of the deliverables, the text is analysed within the lenses of impact, trying to get the observations of the authors on the effects produced by the research.

3. Outcome analysis

Once the selection of data, its collection and organization are conducted, this stage is focused on conducting a thematic analysis as Lochmiller (2021) proposes. Thematic analysis involves re-assembling the data fragments that are scattered across the whole range of data available across the project. What are the categories we should be looking at for assessing the effects of the project?

A combined approach to both modes of inductive and deductive reasoning, with a predominant role of the deductive approach, are used. Deductive analysis requires a structured approach based on the pre-existing categories built by researcher in advance. Despite the research starting point is an already existing framework based on Table 4, the data analysis also envisages the emergence of new categories and statements that do not fit the initial coded system (therefore, inductive reasoning is made based on what can emerge from the analysis).

The outcome analysis document is produced. This document includes each output analysis based on the codes and categories presented before (Table 4). This document is a very extensive document that is used to reflect on the level of achievement of the intended and unplanned impacts of YouCount (and it is included in section 4).

4. Reflection on the intended impacts

Once the outcome analysis conclusions are developed by each of the outputs analysed, this stage focuses on analysing whether the intended impacts of YouCount are achieved or not (see the impact objectives in **Error! Reference source not found.**). The impact assessment research team r eflects on whether each impact objective is achieved or not based on the outcome analysis conducted (including the project KPIs).

5. Analysis of the unplanned impacts

Once the conclusions around the level of achievement of the intended impacts of YouCount is made, in this stage the impact assessment research team analyses what other impacts are emerging in YouCount, beyond the intended ones.

6. Conclusion drawing

The objective of this stage is to produce overarching statements on what is found in the process.

3.3 Limitations

The methodological approach presented in this section shows two main limitations.

First, according to the challenges that impact assessment shows when it comes to collaborative research (see section 0), the study should include a 'reflexive exercise' to be able to include the voices of as many actors involved in the process as possible. However, due to the design of the research and the many tasks that the researchers were committed in across the project, designing a process for impact assessment that would include the participants has not been possible (at least without overburdening the researchers, YCS and stakeholders). In order to include the voices of at least two of the main actors of YouCount, the YCS and the researchers, the outcome analysis has included the analysis of process-wise results of the project (for example, the process-survey results). Nevertheless, the impact assessment research team concludes that impact studies in collaborative research and in CSS should include as many perspectives as possible. Future research could delve into how to conduct a reflection process for including more voices in the impact study.

Secondly, in the moment in which the indicators around projects achievements were collected (November 2023), the project was still running. Therefore, the number and indicators included in this deliverable can be modified according to the final achievements of YouCount and around some data, i.e., the actual numbers of participants in the multiple case study, the scientific outputs that are being developed so far, or final deliverables such as the Social Inclusion analysis. Thus, when it comes to final numbers (see for example the KPIs in the Appendix A), the final reporting document will include the final numbers. Nevertheless, the indicators analysed in this document are thought to be sufficient to come up with the impact conclusions in section 3.

4. Impact assessment

4.1 Introduction

Short-term impacts or outcomes represent positive or negative changes in the actions of actors or stakeholders (including behaviour, relationships, actions, and activities) that are influenced, directly or indirectly, partially, or totally, intentionally or not, by the research activities and results. Outcomes or short-term impacts are viewed as the effects of the outputs on the target group, while medium- and long-term impacts are viewed as the lasting effects in society or academia.

This chapter includes the analysis of the impact of YouCount (see section 0), that builds from the rich variety of the outputs and outcomes produced in YouCount, that are analysed from the impact perspective. It includes data (qualitative and quantitative) and analysis of the level of achievement of the intended impact objectives of YouCount; and analyses its unplanned impacts.

Project's intended impacts are shown in Table 6 and as it can be seen there, they are addressing impact mainly in the scientific dimension and in the societal dimension (only one impact objective focuses on this dimension).

Table 6. YouCount's impact objectives and the impact dimensions

Impact objectives of YouCount	Impact dimension
Impact 1: Development of new knowledge and innovations concerning social inclusion and CSS by YCSs	Scientific dimension
Impact 2: Availability of evaluation data concerning the scientific, individual, societal, democratic and economic outcomes, and costs and benefits, of citizen social science	Scientific dimension
Impact 3: Indicators chosen by the consortium against which to measure the impact of their work (including SDG and MoRRI)	Scientific dimension Societal dimension
Impact 4: Advanced public engagement and science communication in CSS	Scientific dimension
Impact 5: Science education and improved society–science relationship in R&I institutions	Scientific dimension
impact 6: To develop recommendations for future policy strategies to support CS and/or societal challenges	Scientific dimension Societal dimension

Source: YouCount DoA

Consistently with what are the impact objectives the YouCount project is looking for, the YouCount's key performance indicators (KPI) measure how YouCount has performed in advancing in the intended impacts in the scientific dimension by looking at how the project is performing in a set of

predefined measures (see the YouCount KPIs in Appendix A). The indicators are designed to monitor YouCount's to progress in science education and communication, public engagement, and open access knowledge (along the lines of the Responsible Research and Innovation dimensions).

However, the broader impact assessment framework designed and applied in YouCount, shows that the project results have contributed to other impact dimensions other than the scientific dimension. For instance, the project results that collect the YCS and the researchers' perspective on different aspects (such as the cross-case analysis of experiences with "dialogue forums", or the analysis of what do young people gain from being a YCS form YouCount's webinars) show that YouCount is reaching an effect in other impact dimensions, the participant dimension and second, in the societal dimension.

Table 7 is a summary of the conclusions of the outcome analysis conducted departing from the YouCount's main outputs and shows the main impact categories where effects were found. It also identifies whether each output analysed represents the YCS or the researchers' perspective, the source and authorship of the output within the consortium, the focus that impact assessment has adopted when analysing each of them. The conclusions of the impact analysis are shown through different colours: the darker the green, the more intense effects are found in each impact dimension (and subdimension) by each output analysed. For instance, if we look at the deliverable D3.1 (see Pataki et al. 2023), we observe that the impact analysis based on this output shows that beyond the traditional gains on science literacy and educational outcomes, there are beneficial personal development and social outcomes for the individuals participating in Y- CSS projects.

Table 7. Impact dimensions influenced by outputs

Perspective	Output	Source	Outcome analysis focus	Outcomes in the main impact dimensions (*)														
				Scientific dimension						Participant dimension				Socio-ecological and economic dimension				
				New knowledge	New methods (*)	Gender equality and sensivity	science-society collaboration	Institutional changes	Youth friendly academic careers	knowledge, attitude, behaviours - science	Knowedge, attitudes and behaviour -CS	capabilities and skills	Social outcomes	Policy change and improvement:	Power dynamics	New practices	Gender relations	Youth-innovations and policymaking
Researcher	Social Innovation Analysis	Case studies' reports developed within Work Package 3, Social Innovation (Lead: ESSGR)	Social innovation analysis of the case studies															
	Dialogical practices	Case studies' reports section 5. Dialogue Forums with Local Youth. Framed within Task 4.6: Cross-case analysis of experiences with use of dialogue forums with local youths (WP4, lead by UNIVIE)	Cross-case analysis of experiences with "dialogue forums"															
	Deliverable 3.1	Pataki, G., Czeglédi, A., ButkevičienėE. (2023). D3.1 Report on Citizen Social Science and Social Innovation: Analysis Based on YouCount Case Study Reports. YouCount project. Doi.10.5281/zenodo.100533	Analysis of case studies about the section 2.3: Social Innovation															
YCS perspective	Surveys	Surveys developed within Work Package 4, Evaluation (Lead: UNIVIE)	Analysis of the process survey results															

Perspective	Output	Source	Outcome analysis focus	Outcomes in the main impact dimensions (*)														
				Scientific dimension						Participant dimension				Socio-ecological and economic dimension				
				New knowledge	New methods (*)	Gender equality and sensivity	science-society collaboration	Institutional changes	Youth friendly academic careers	knowledge, attitude, behaviours - science	Knowedge, attitudes and behaviour -CS	capabilities and skills	Social outcomes	Policy change and improvement:	Power dynamics	New practices	Gender relations	Youth-innovations and policymaking
	3rd Focus Group	Excerpt from the transcriptions of the 3rd Focus Group en each case study, UNIVIE WP4	Changes experienced by YCS															
	Deliverable 1.5	Murray, C., Göbel, C. & Butkevičienė, E (2023). D1.5 Practices to Empower Young Co-Researchers in Citizen Social Science. 10.5281/zenodo.1005291	Analysis of key youth-centred learnings in 10 hands on CSS project across 9 countries (section 3.5)															
Other	Key Performance indicators	Based on Partners' information in YouPLan and direct information request	Level of achievement od the expected outcomes YouCount															
	Dissemination, exploitation and communication activities	Based on Partners' information in YouPLan and direct information request	Level of achievements of the DEC activity in YouCount															

(*) *Note: see the description of each category in* ***Error! Reference source not found.***

Source: Own elaboration

One of the conclusions that can be seen at a first sight from the table 7 is that YCS (the YCS perspective) identify the effects of YouCount mainly in the participant dimension where YCS report having increased their personal capabilities and skills and having experienced different social outcomes. The former means that YCS feel an increased capacity to tackle research task within CSS and the latter is linked with their perceived social gains such as new opportunities of being heard or increased knowledge of the existing different social realities. In the socio-ecological and economic dimension, YCS identify that communication patterns are changing by putting in practice new methods for social inclusion where the communication is based on equal footing.

Regarding the researchers' perspective, they mainly identify that YouCount has benefited the development of new methods for social innovation (socio-ecological and economic dimension) that are also new ways of doing science, interacting, communicating science, and conducting co-creative work in Y-CSS (scientific dimension). The changes that these new methods or practices represent are considered by the researchers as new knowledge in how to effectively communicate science, generate learnings and engage with the participants. Thus, according to the researchers they also are part of the effects in the scientific dimension. In the second place, researchers also see that YouCount is impacting positively on participants (YCS, researchers and stakeholders) , especially on YCS, by increasing their cognitive (their knowledge and understanding of CSS and science), functional (know how to do CSS) and social competencies (attitudes and behaviours).

4.2 Scientific dimension

This dimension looks at the achievement of YouCount in generating new scientific knowledge in regard to the development of the Y-CSS concept in social sciences and humanities, supporting methodological innovation in the social sciences (e.g., PAR with vulnerable groups); co-created and/or developed knowledge through the inclusion of YCS in the R & I activities; and new methods for science education and communication and public engagement. This dimension also looks into the project's contribution to an enhanced science-society collaboration and Institutional changes in R & I institutions providing wide access to research produced in YouCount (Open Science), providing educational and training means for increasing the competences in Y-CSS, and developing of more youth-friendly academic careers.

The impact objectives of YouCount as defined in **Error! Reference source not found.** are mainly f ocused on analysing the project impact in the scientific dimension. The following subsection analysed whether the intended impacts have been achieved from the impact objectives 1 to 6.

4.2.1 Impact 1: Development of new knowledge and innovations concerning social inclusion and CSS by YCSs

The YouCount achievements concerning this impact objective is analysed by gathering evidence of the progress that the project made around the following aspects:

- The delivery of scientific results
- New knowledge on social inclusion
- The development of new innovations with YCS
- The contribution of YCS to the knowledge generation

The delivery of scientific results

One of the impact objectives was to produce knowledge in the form of scientific outputs. This is the usual metric used for giving evidence that the project is contributing to the knowledge generation. The **knowledge generation** in YouCount has resulted in the delivery of different types of scientific results (see the summary in Table 8), being the publications the most prominent category among the different types of YouCount's scientific results (24 publications reported). The results suggest that:

- The publications are mainly articles in scientific journals (13 articles, 5 of which are accepted already), followed by publications in conference proceeding/workshops (7), books (3) and others.
- The planning and publication of the scientific papers and book may take longer than the project lifetime as the 62% and the 67% of the articles and books are still in the planning stage (neither submitted nor accepted), respectively.

It is also remarkable that 7 Thesis, Bachelor and Master's Thesis, are developed in the frame of YouCount, showing that students have developed scholarly papers to dig into the research topics of YouCount, such as social inclusion and citizen science processes in concrete settings (cities or educational settings, for example) or CSS for creating new employment opportunities.

New research opportunities (7) have also emerged in YouCount in the form of new funding opportunities (3) and research collaborations (4) which can indicate that the YouCount results are interesting to other institutions beyond the project partners.

Table 8. Synthesis of the scientific results in YouCount

Type of scientific result			Percentage of activities with YCS participation	Status		How did YCS participate in the activity?
Type		Nº		Planned	Completed (accepted)	
Publication	Article in scientific journal	13	31%	62%	38%	. Data collection and co-writing . Discussing results
	Books/Monographs]	3	67%	67%	33%	. Co-writing
	Other	1	0%		100%	-
	Publication in conference proceeding/workshop	7	43%		100%	. Via interviews and regular meeting notes. - Preparing of inputs
Thesis (a master, PhD, BA)		7	100%		100%	Working on their thesis
New funding opportunities		3	33%	33%	67%	Developing tasks related to youth-led science communication and dissemination
Research collaboration		4	75%		100%	By participating in different aspects of the research process: discovering the field, defining research questions as well as innovating solutions
Teaching module		1	0%		100%	-
Movies + reports		1	100%		100	Presenting their innovations and research questions along with different reports explaining the methods used etc.

Source: own elaboration from data collected through YouPlan

YouCount has achieved supporting CS and the social sciences by **developing a conceptual and methodological framework** for youth citizen social science, as it can be seen by the delivery of the following results:

- Project partners have developed the conceptual framework for CSS, *D1.2. Report on the conceptual, innovative, evaluation and ethical framework for Y- CSS*, that describes the conceptual citizen science framework for Y- CSS in the YouCount Project.
- YouCount also has developed a multistakeholder online platform as a WP1 task (see the Community of Interest in the YouCount's webpage).

New knowledge on social inclusion

One of YouCount's scientific objectives is to develop specifically new knowledge on the topic of social inclusion, including identifying the major drivers for the social inclusion of youths, and new knowledge on social innovations (or policymaking) for positive social change of youths.

A measure to assess whether the new knowledge generation goals have been achieved are the scientific results (see Table 8). YouCount has performed above its planned objectives when it comes to knowledge generation as it can be seen from the list of the different types of Scientific results the project has achieved (see the summary in Table 8).

To assess whether the knowledge generation is addressing the need to generate new knowledge on social inclusion, the topics of the publications need to be analysed. The objectives were to develop 6 scientific publications, 2 in each of the following topics: social participation, social belonging and citizenship.

Project KPIs (see Appendix A) show that 4 publications have been delivered: 3 planned publications on the topic of the social inclusion from different angles (for example, slow science with vulnerable youth) and the deliverable D. 3.2, Cross case metareport about social inclusion[1], that comprises the YouCount findings on the aspects included in this sub-objective. Thus, so far 2 new publications on social inclusion would be missing.

Development of new innovations with YCS

As Pataki et al. (2023) state, the meaning of social innovation is very diverse and different from cases in the 10 CSS projects developed in YouCount: expanding the political participation and civic engagement (Austrian case), promoting a sustainable neighbourhood (Denmark) or connecting a marginalised rural community with socially embedded innovative networks (Hungary B case) illustrate how different its meaning can be.

However, researchers acknowledge that several innovations have been made to the hands-on CSS projects. These innovations are described below, and they are also considered as building blocks or 'future inspiration' for changes in policymaking in the societal dimension (see chapter about the socioecological and economic dimension):

[1] It includes cross-case analysis findings on the social inclusion opportunities, the employability and inclusive science, the- App study findings, the empowerment findings, the findings on the positive drivers for social inclusion and the gender analysis.

- The acknowledgement of the contribution of YCS to collect, structure and examine systematically the most important information about the research topic.

"It is so sad we (stakeholders) do not have these spaces regularly anymore, we really learned a lot and would never have these insights without them" Stakeholder, Austrian Case
"They (stakeholders) also emphasized that our research is capable to collect, structure and examine systematically the most important information about the topic and that can be revealing" Researcher, Hungarian A Case

- The collaborative work with stakeholders has started, that can lead to changes in the sphere of their institutions.

"Thus, our results can directly influence the diversity strategies of the institution" Researcher, Hungarian A Case

- The implementation of youth-led processes where youth are at the centre of many of the decision including the agenda setting, the development of the research method (creation of questionnaire survey, and choosing the most relevant and pertinent questions), analysing data, drafting conclusions and findings, and not only young person-focused but young person-led dialogues.

"The agenda was shaped by the findings made by the YCS […] The questionnaire survey […] was created by the YCS, with their choice of most relevant and pertinent questions resulting from their discussions on what they needed to learn from young people in Preston. […]" Researcher, the UK Case
"The identification and of new activities to be proposed with the aim of enhancing youths' social inclusion, which were jointly co-defined by stakeholders and youths" Researcher, Italian case.

- The establishment of more democratic decision-making processes

"LLs are intended to change the decision-making process that young people and stakeholders have inherited through a hierarchical system, to a democratic system of participatory decision-making" Researcher, the UK Case

- A more empowered YCS in terms of an enhanced ability to access to an expanded social network (stakeholders, community)

"Having their stories portrayed in the news has also contributed to feeling more empowered, […] It was also satisfactory for them that some of their neighbours recognised them after having appeared in the newspaper" Researcher, Spanish Case
"YCS started to be empowered to take on additional responsibilities without being requested to […] the YCS organised a meeting with the Deputy Police and Crime Commissioner" Researchers, UK Case

- Changes in social relations and power relations
  Another change observed is related to social relations and dynamics that reflect changes in participants interactions and relationships.

  New interactions between different participants are happening that otherwise would never happen (or not easily). New relationships between participants of different experiential and

professional backgrounds, geographies and age are reported across case studies. Many of them acknowledge that these relationships are based on equal footing.

"We formed new relationships with members of the LL. Especially with SINOSZ and the deaf community in Szeged. Via scientific conferences, we formed new relationships with experts of the field both in Hungary and abroad as well. "Hungarian A case

"The contact between differences, creating spaces where such contact would not otherwise have occurred. In our case, this contact was also a bringing together of difference, between young people with no specific role responsibility and adult stakeholders with well-defined roles and responsibilities" Researchers, UK Case

"The living lab created a space for a respectful intergenerational conversation between the stakeholders and the youth and the civic society and the youths" Researcher, Danish case

With new relational dynamics, based on equality and new gender roles:

"Policymakers and journalists shared spaces in equal basis, respecting the rules that had been set for the forum" Researcher, Spanish Case

"Traditional gender roles associated with specific tasks in agriculture can be questioned, however a transition may also question social roles in more general" Researcher, Hungarian B Case

Contribution of YCS to the knowledge generation

YouCount results also show that the **new knowledge has been developed together with the YCS**. The ten case studies implemented in 9 countries across Europe have engaged YCS in research and innovation.

- The App study had the objective of involving 700 participants. The KPIs (see indicator number 14 in the Appendix A) show that 347 young people in the ten cases in the nine European countries took part in the study: 193 young people in the case studies contributing to 958 validated spots in the period of March 2022 until October 2023; and 150 young people answering questionnaires building on the App study from the Swedish case. Therefore, we conclude that more than 1000 spots and answers are a high level of achievement, although the youth participation has not been the expected one. The report on the App Study conclusion deepens in the factor behind the participation of youth in the App in CSS.
- 162 YCS and 47 students participated actively in the multiple case and evaluation study throughout the whole research process, thereby contributing to the knowledge generation in YouCount's research substudies.

- In addition to these participants, 209 YCS (162 YCS + 47 students in the research teams) provided observations and comments identifying social and civic engagement opportunities.

Approaching research through CSS, involves working with non-professional scientists that volunteer to participate in different stages of the scientific process (as Haklay, 2013 defines CS). The involvement of YCS in the scientific outputs show evidence that they are contributing to the scientific results:

- Students are delivering Master and Bachelor Thesis based on the YouCount's research topics and experience, such as social inclusion and citizen science processes in concrete settings (cities or educational settings, for example) or CSS for creating new employment opportunities.
- Their contribution to publications.
    - In one out of three scientific articles, YCS are planning to participate, and so far, they have contributed to one accepted article. The participation foreseen is focused on preparing inputs, discussing the results, and co-writing.
    - They have already contributed (in 43% of the cases) to the publication in conferences preparing inputs and participating in interviews and meetings.
- Youth are also to be involved in future new funding opportunities (in 33% of the new opportunities) and in new research collaborations (in 75% of the new research collaborations), showing that future working strands will look after youth involvement in research. red to b
- YCS are mainly involved in the data collection (interviews, meeting notes or preparing inputs) and in results' discussions.

Two tensions around involving YCS in knowledge generation emerges form the analysis:

- Most of the Journal Articles are in their planning stage which may show the tension when it comes to co- creative CSS and more traditional social sciences as it takes a lot of time working with a participatory approach and this may influence the 'traditional' scientific production as researchers need to focus on conducting research rather than on delivering articles in journals.
- This effect is increased by the fact that collaborating in delivering scientific results with YCS may take longer than working with an experienced researcher.

4.2.2 Impact 2: Availability of evaluation data

YouCount ambition regarding this impact objective, "Availability of evaluation data concerning the scientific, individual, societal, democratic, and economic outcomes, and costs and benefits, of citizen social science", is to provide systematic and detailed knowledge of the scientific, societal, democratic and economic costs and benefits of CSS, making them available in open science framework on the project webpage and EU Open Aire.

YouCount has produced and provided open data concerning the experiences with implementation of hands-on citizen social science activities through a multiple case study of Y-CSS projects in nine countries across Europe to develop new knowledge of social inclusion for social innovation and policymaking.

First, the scientific results and their availability are framed within the Open Science framework, where for each of the scientific results (book, journals in articles, among others), whether they are published in Open Access format is specified. The OA publications (13 OA have been reported) also are a measure for assessing the OA generated in YouCount. The open data that is available in YouCount for conducting a scientific, social, democratic, economic and individual analysis of outcomes of Y-CSS is summarised in section 1, in the Table 5, where we identify the open data sources available across the work packages that are useful for analysing the project outcomes.

Second, the main indicator that shows how YouCount has coped with the objective are the ten local Y-CSS projects[2] across Europe and the data generated through the implementation of the Y-CSS projects. The data generated across the work packages and around the experience of its implementation are classified as primary and secondary data. The primary open data generated concerning the experiences with the 10 cases implementation are the ten case study reports, the evaluation substudy' s data (including the process survey results, interviews, and focus group results) and the app data. The secondary data generated that is also open data are the deliverables that are based on the previous primary data. These are the *D4.1., Meta-report of cross-case evaluation including a gender analysis*; D2.3*., Meta report of the experiences with case study implementation*; *D. 3.1., Report of CSS as social innovation*; and *D. 3.2 Cross case metareport about social inclusion*. All these deliverables are available on YouCount website (see here) and Zenodo.

[2] They have been successfully implemented in the project lifetime and they all address the need of increasing social inclusion, although each case study develops in different contexts and focuses on different groups of youth participants facing diverse social inclusion challenges

4.2.3. Impact 3: Contribution to MoRRI indicators

YouCount aims to (1) create scientific impact to the overall SwafS Programme 2018-2020, along the lines of Responsible Research and Innovation (RRI); and (2) to create social impact by working on creating more inclusive societies for youth by involving youths in CSS activities, along the lines of some of the objectives defined by the Agenda 2030. In this section we analyse whether the project has achieved an effect on how societal actors contribute to the research processes. The contribution to the SDGs is analysed in the societal dimension.

As we introduced before, YouCount is aiming to create *scientific impact* to the overall SwafS Programme that aims to allow all societal actors (researchers, citizens, policy makers, business, third sector organisations etc.) to work together during the whole research and innovation process to better align both the process and its outcomes with the values, needs and expectations of European society. This approach to research and innovation is called RRI. RRI ensures that science and innovation address social needs. For being able to monitor research progress in that direction, the RRI indicators are defined in the six RRI dimensions (ethics, governance, public participation, science education, gender equality and open science), the so-called Monitoring System for RRI (MoRRI) indicators. The project ambition is to produce changes related to how societal actors are engaged in the whole research process by contributing to science literacy and education, to increase public engagement and improve knowledge accessibility through Open Access (OA); i.e. the MoRRI indicators PE2 and 3 and SLSE2, 3, and 4, and OA1 as outlined in Table 9.

Table 9. Contribution of YouCount to the MoRRI indicators

RRi Dimension		MoRRI indicator	Value
Science literacy and science education	**SLSE 2 RRI-related training**	. Teaching and training programmes for Y-CSS	
	SLSE 3 Science communication culture	. Handbook -to a broad audience Conduct several science communication/public engagement activities	
		. Reaching out: 900 young citizens and 400 stakeholders /local/national levels and multilevel platform	
	SLSE 4: Citizen science activities in research-performing organisations. • SLSE 4.1. Membership in ECSA • SLSE 4.2. Citizen science publications	. CSS activities (9 universities and/or research centres)	
		. One ethical expert at each university	
		. Two workshops for about 25 participants and consortia and boards (ca. 40);	
		. 3 publications will be in CS journals, and in total, 13 (plus) will address CSS	
		. Increased publications regarding ethics recommendations to Y-CSS	
Public engagement	**PE 2 Policy-oriented engagement with science.** **PE 3 Citizens' preferences for active participation in S&T decision making**	. Policy-makers involved in nine CS projects through living labs and national workshops.	
		. Two key youth/migrant policy organisations are part of the AB.	

RRi Dimension		MoRRI indicator	Value
		. Nine LL informing and targeting policy-making for social inclusion of youth and increase youths' involvement and engagement in policy-making	
		. Contribute to more knowledge of how CSS can contribute to policy-making and local governance/decision making and knowledge of citizens' preferences in science and public engagement by involving about	
		. 270 youths and / 340 stakeholders actively at the local to European levels /700 more youths in the online study.	
		. Recommended organisational changes in R&I institutions to university–society relations through CSS.	
Open Access	**OA1 Open access literature measures the share of publications**	. Contribute with 13+ open access publications that are either gold or green open access.	

Note: The results are shown with a colour code: red means that YouCount has underperformed when compared to its expected contribution, green means that YouCount has performed as expected; and yellow means that the expected contribution is almost achieved but remains slightly behind the objective.

Source: Appendix A, YouCount's KPIs

According to the YouCount's progress of the MoRRi indicators', the project has contributed as expected to science literacy and education, to increase public engagement and to the improvement of knowledge accessibility through OA (See Table 9):

- Science literacy and education dimension

YouCount results contribute to enhance the current education and communication processes as it equips the participants (the partners involved, the researchers, YCS and stakeholders across 10 case studies) with the necessary knowledge and skills so they can participate in R&I debates. Beyond that, the DEC activities, contribute to expand this knowledge to other actors and institutions (see YouPlan). This statement is supported by the following facts: 9 European universities and/or research centres have been involved in developing CSS, including the participation of one ethics expert by university; the research team has collaborated with ECSA developing 4 workshops that have involved more than 300 people interested in CSS, and the partners have already planned 13 publications addressing CSS in Journals

- Public engagement

YouCount research activities have achieved to engage youth, stakeholders, and policymakers in research for including youth preferences and insights. The public engagement ambitions were too high and the level of achievement in this regard has remained below the expectations according to the KPIs:

- 181 stakeholders were involved in different activities (400 were expected): Number of stakeholders involved in LL and other project activities: 104 / Number of national

stakeholders involved in national workshops or other activities: 77). 98 of the 181 stakeholders are policymakers.

- 162 YCS/ 42 students and 347 young people in the App (less than the participation of 270 and 700 young people expected, respectively) participating in the cases and the online study, including 2 key youth migrant organisations. Even if initial objectives regarding the scale of participation is not met, participation is remarkable.
- Finally, recommendations towards adopting CSS approaches (that imply adopting approach to public engagement) were included in the two Policy Briefs in YouCount.

- Open access

Accessibility to knowledge is encouraged as it can be seen for the 13 OA publications YouCount is producing.

4.2.4 Impact 4 and 5: Advanced public engagement and science communication; Science education and improved society–science relationship

YouCount's research has proved to have an effect in the science -society relationship fields. Concretely, the research conducted by the consortium has achieved engaging young people, stakeholders, and the scientific community in its activities (DEC and research activities) contributing to advance in the public engagement of these actors in research. The project has also developed new means for interacting, communicating, and educating in science, which constitute an impact in the fields of science communication and education.

The next paragraphs analyse the outcomes that support that YouCount is achieving the expected impact in these fields, by describing to what extent it improves the science-society collaboration; describing the new means for interacting, communicating, and conducting Y-CSS; and describing the science literacy and educational outcomes identified in the project.

Improved science-society collaboration

The YouCount's strategy to maximise the overall impact of the project defines the dissemination strategy which aims at engaging with key citizen scientists and other stakeholders at the local, national and global levels to facilitate the scaling up of the project's main findings. It seeks to engage internally and externally with broader audiences regarding project results in three

different communication spaces situated at the micro, meso and macro levels (See Canto et al., 2021).

- The micro level is the space in which dialogue between youth and other (adult) stakeholders (policy makers, politicians, researchers, etc.) happens in the 10 Y-CSS projects across Europe.
- The macro level is the space where the results of the 10 Y-CSS projects are communicated and disseminated with a one-way approach in the form of publications or participation in different events, i.e. Conferences.
- The meso level is an intermediate space that complements the micro and the macro spaces for enhanced impact through hybrid (dialogic and non-dialogic) formulas that aim to maximise the impact of the project well beyond the publication of results, through toolkits, handbooks etc.

As defined by Canto et al. (2021), dissemination is making available the results of YouCount to a diverse set of stakeholders (circulating knowledge to those, who can take it further, usually the scientific community), and while it is supported by communication activities (that aims to inform citizens about the benefits of science and to engage them in science), it can stimulate the exploitation of the results (the actual use of results by relevant stakeholders).

Lorenz et al. (2023) developed a process for continuously tracking the DEC activities in YouCount, the YouPlan tool. The DEC activities collected through this tool is used to inform the project KPIs (see Appendix A for details on the level of achievement of the YouCount's KPIs) and understand the science-society collaboration.

1. Key dissemination activities: Scientific results

The main dissemination activities for making available the research results of the project to a diverse set of stakeholders are the scientific results or outputs. These include scientific publications such as the papers on scientific journals, books, among others. Table 8 summarises the projects results in this field. These activities belong to the macro-level communication space and as described in the Impact objective 1, the scientific results have been achieved.

2. Dissemination activities: Events

Events are defined as a set of virtual or physical spaces in which the research team engage in a dialogue around the project's results with YouCount's different target groups at various territorial levels (local, national, European). The summary of the events in which YouCount researchers have participated is presented in Table 10 and are happening in the macro and micro level communication space. In Table 10, a summary of the events in which YouCount partners have

participated is shown, including a column that indicates whether the participation objectives are met (see column “Status”, where green cells indicate that the objectives are met). The raw data about the participation in events is shown in YouPlan.

The main conclusion is that research team’s participation in events has been higher than expected when compared to the objective of participation in events defined in the DEC Plan’s Table 6 (Dissemination activities) and section 7.7 (General Public Events). The participation of the partners in the events has reached more than 6,000 people (see column “number of persons reached per event” in Appendix A, YouPlan).

In addition to what was planned, the research teams have engaged themselves in unplanned events (such as activities organised jointly with other EU projects; pitch events, trade fairs and communication activities from Dialogical Forums).

The main target group with whom the research teams in YouCount have engaged in a dialogue in the macro-level communication space around the project’s results is the scientific community as is it seen from the prolific participation in international and national conferences, research and national workshops and scientific sessions.

Addressing policymakers and community development/planning stakeholders was one of the objectives of YouCount that was aiming to involving them through the organization of nine national policy conferences. The partners have organised 8 national workshops:

- National workshops: in 5 cases the National Workshops took such as the “Common sign research lab's conference with DHH youth” in Hungary, or in the frame of the national ” Science Festival” in Lithuania (see the section “National Workshops”, the events number 16,17, 19, 20 and 21)
- National conferences: The Norwegian national Workshop took place in the Intercultural Museum (stakeholder) and is reported under this category (see event number 6). The UK National Conference was also held on the 7th of September of 2023.
- Dialogical Forums: The National Workshop took place in the last Dialogical Forum in Spain 1 (see the section “Dialogical Forums”, the event number 3)

In the micro level, research teams show evidence of having engaged actively in dialogues with the YCS, students, stakeholders and the general public. This has been achieved mainly through the participation in the living labs meetings and trainings (67 events), and dialogue forums (20). These events predominately serve the implementation of the case study, but they are also an opportunity to disseminate the project results.

Table 10. Dissemination activities (events) result in YouCount

Output type	event		Description	Number of events		Status (*)
	N.	Type		Objective	Achieved	
Targets for key dissemination activities (D5.7 DEC Plan)	1	Presentation / participation at international and national conferences	22 national and international scientific conferences are targeted	22	27	
	2	Presentations at research council conferences / workshops	To create interest in CSS and provide inputs to national research policy concerning CS, we will attend at least one workshop/conference arranged by the research councils or similar in each of the nine participating countries to present CSS and YOUCOUNT	9	27	
	3	Presentations at national policy conferences	The results of YOUCOUNT will be presented at about nine national policy conferences/meetings (e.g., involving a ministry of education or work) and those addressing community development/planning (e.g., for the national association of municipalities).	9	7	
	4	Scientific session at Conferences	(1) The ECSA conference to present the Y-CSS project and (2) a social science conference of relevance for YOUCOUNT, presenting social science research conducted via a CSS approach together with RT-Y-CSS (conference not decided on yet).	2	14	
	5	National workshops	One in each country to present results, organized by Partners	9	28	
	6	Lectures on CSS	The consortium partners will provide lectures on CSS and YOUCOUNT in relevant teaching courses at the BA/MA/PhD level in science education and social policy/communication/ICT at the nine participating universities as part of their ordinary work	9	13	
	7	Living labs trainings and forums	As part of the implementation of the multiple case study in WP2, a number of living labs, trainings and dialogue forum will be organised. Whereas these events predominately serve the implementation of the case study, they are also an opportunity to disseminate the YOUCOUNT project, its message and its results	Unspecified	67	
	8	FINAL Conference	A concluding conference will be organised at the end of the project in Brussels to present the results to key target audiences	1	1	
	9	General public events	The project will be presented in at least 11 events targeting the general public, including young people. The focus will be on events aiming at popularising science for a broad audience.	11	15	
DF (task 2.8)	10	Dialogical Forums	Case sites will conduct at least two meetings in local dialogue forums with young people and community stakeholders.	20	20	
Unplanned outputs	11	Activities organised jointly with other EU projects	Collaboration activities with other EU projets in doains of common interest	0	11	
	12	Pitch Event	Project presentation events mostly addressing the need to engage YCS and stakeholders	0	4	

Output type	event		Description	Number of events		Status (*)
	N.	Type		Objective	Achieved	
	13	Trade Fairs	An exhibition organized so that researchers share different aspects on the CSS implementation	0	1	
	14	Communication Activity from Dialogical Forums	They include activities to make more visible YouCount to stakeholders (study visits, zoom meetings)	0	2	

(*) *The status column represents whether the initial objectives have been achieved or not. Green color represents achievement;*

Source: Source: YouPlan data organised following Lorenz et al. (2023)

3. Communication activities

Beyond the development of different kind of dissemination activities to circulate knowledge towards those that can make use of it (the scientific community, stakeholders, and the public), the communication activities have pursued to inform to society about the project's results regarding the benefits of CSS and participatory approaches to science. The activities developed include:

- The Website and Project Identity development
- The YouCount project social media channels including X, LinkedIn, Facebook, Instagram and YouTube as its main.
- Bi-annual e-newsletters

Besides, the YouCount communication activities developed in the project lifespan are summarised in Table 11. Numerous communication activities have been developed as seen in the number of different activities that happened along the project. The most distinctive characteristic has been that the YCS have had a role in the progress of these activities, especially when it comes to the organization of exhibitions, local dissemination activities, media coverage and video development. Their role has been fundamentally to prepare materials, present their findings and talking about their experience in YouCount or personal situation (this is the topic in the interviews for media of YCS).

Table 11. Synthesis of communication activities' results in YouCount

Communication activity		Percentage of activities with YCS participation	How did YCS participate in the activity?
Type	Nº		
Blog Posts in YouCount's Website Communication Campaign	9	45%	Students were undertaken writing tasks
Communication Campaign (radio, tv)	3	0%	-
Exhibition	11	73%	Students and YCS were involved in organising and participating in the exhibition by, for example: . Preparing materials . Presenting their findings . Telling about their experience in YouCount
Flyer	12	10%	Distributing the flyers in places were youth go
Local dissemination activity	5	60%	Students and YCS supported the dissemination activity by, for example: . Presenting their work in YouCount . Helping to spread the flyers
Media coverage	14	72%	Students and YCS were interviewed to: . Presenting their personal situation (social inclusion or exclusion experiences) . Sharing their experience in YouCount
Video / film	3	100%	Students and YCS participates making videos about themselves/participation in YouCount
Other	9	22%	

Source: YouPlan data organised following Lorenz et al. (2023)

New means for interacting, communicating, and conducting Y-CSS

The outcome analysis conducted in YouCount shows that YouCount's research has resulted in the generation of new practices for social innovation to create social change. These new practices can be valuable beyond YouCount's participants in other institutions, stakeholders and researchers and are related with new ways of (1) conducting the co-creative work in youth-led CSS; (2) interacting; (2) and, communicating science.

First, the CSS project implementation demands that participants adopt new practices beyond the activities they are used to perform. From one side, some participants are involved in doing CSS for the first-time, which is a brand-new and socially innovative activity for a group of people (as they have never participated in this kind of projects before). For researchers, it is a new practice to the extent they need to adapt their research to new approaches for the processes to be youth centred. It implies adopting new practices to develop more frequent interactions with the young citizen scientists, making shared decisions and adapting their initial approaches to the views of the youth and the circumstances of the project. Pataki et al., (2023) emphasize this aspect by highlighting how the quality of research relationship in research changes towards more empathy, relatedness and responsiveness and an improved communication by getting closer to the youth

and their everyday lives. New practices include new research approaches that look after participants are seen as important when working with youth, i.e., slow science, caring research methodology or a trauma informed research attitude, dealing with the role of time in power dynamics and self-reflections to gain insights and realize the importance of slowness and caring.

New practices include looking after the participants' wellbeing, i.e.,

- By introducing welcoming and closing rituals in sessions.
- Distributing responsibilities beforehand in co-creative work.
- Having resources to engage in science communication activities. For example: exhibition in museums
- Balancing the group of facilitators and discussion groups based on gender, role (stakeholder, youth, etc.) for allowing that knowledge flows for people with different experiences and backgrounds.

Second, practices of effective interaction and dialogue between different actors tested in the project, such as Living Labs and Dialogue Forums, trigger social innovation as they represent new spaces for youth to express their opinions and voices regarding their local community issues and new insights that otherwise would not have been captured (i.e., new insights for journalism in a Dialogue Forum resulted in follow up interviews in local media addressing issues of positive image of migrants). Several creative and participative methodologies have been put in place in LL and Dialogue Forums allowing youth to learn about them but also to reflect on their experiences and social realities. Cases cite some methodologies such as the World Café, online quizzes (for example kahoot), surveys, and others where youth were encouraged to engage in by making their own contributions from design to their implementation.

YCS also demand agile and informal ways of communication with each other to allow sharing, engaging, and updating participants along the way. Some examples illustrate that: Teams, WhatsApp , social media, website, and other communication channels are reported being used for a quick communication and exchange of relevant data, both in formal and informal interactions. Besides, other physical interaction channels such as study trips or sharing conversation in coffee breaks and meals are reported as valuable means for YCS.

Third, new practices for communicating science have proven to be crucial for social innovation. These are events (such as exhibitions and videos) where YCS had the opportunity to present their findings to stakeholders and to foster that YCS and stakeholders develop ideas for social innovations (i.e., the national workshop in Oslo, "UNGfluencer").

We observe that the new practices for social innovation represent new knowledge in how to effectively communicate science, generate learnings and engage with other actors other than

researchers (journalists, policymakers, etc). Therefore, the impact objectives in these field also nurture the impact objective 1.

Science literacy and educational outcomes

Finally, science literacy and educational outcomes are found in terms of improvements of the knowledge and understanding of CS and Science (cognitive competence) of the participant. According to researchers in the case study reports, YCS increased their knowledge on the topic of the study in fields such as social inclusion, social exclusion, social belongingness, youth policy, modes of agriculture, gardening, or mobile techniques. They also got to know specific knowledge about citizen science, youth involvement and the role of Y-CS (see Murray et al., 2023, p.15).

From the YCS perspective, their participation in the hands -on CSS projects have increased their understanding of what the scientific study is, as well as their knowledge about science and the scientific research (see Graph 1, that shows that the YCS that have participated in the CSS projects for a longer period of time increase their perception of the knowledge of science[3]).

4.2.5. Impact 6: Recommendations for future policy strategies to support CS and/or societal challenges

The objective was to have an impact on EU policy and national policy through on-going engagement with policymakers and CS organisations. The ambition is also that beyond the project lifetime, the knowledge developed from the project is used by project partners and their research networks.

The outcome analysis conducted gives evidence that this impact objective has been achieved. The engagement with policymakers and CS organisations that YouCount has achieved along the projects is shown through three different outcomes:

First, as described in the section about the impact objectives 4 and 5, YouCount participants have engaged in different dissemination, communication and exploitation activities along the project lifetime, reaching around 6,000 people (see numbers of the events and communication activities developed by the partners in Table 10 and Table 11). Many of them were addressing the policymakers at different levels (see Appendix A, and the target group reached by each of the events in which the researchers have participated). It is worth mentioning the project website as

[3] See items sci_knw_eff_1 and sci_knw_eff_2

one of the main means of communicating the projects objectives and findings to a broader audience, including the policymakers.

Second, in each participating country a national workshop was organised (in 8 out of 9 countries) for sharing the project findings with local policymakers and other relevant stakeholders. 25 policymakers were involved in the national workshops (see project's KPIs in Appendix A).

Third, at the European level, YouCount has engagement with policymakers and other stakeholders as it is shown with the following numbers (including CS organizations) (see Appendix A, project KPIs):

- 63 policy-makers and CS organisations that are part of YouCount community
- 2 Policy briefs are delivered with Recommended organisational changes in R&I institutions to strengthen involvement of youths and communities in university–society relations through CSS.
- A research collaboration with ECSA was set up
- 3 workshops were co-organized with ECSA
- 314 people participated in ECSA workshop (youth / practitioners/ academics / consortium members)
- 2 youth/migrant policy organisations are taking part of the project
- 181 stakeholders are involved in the nine CS projects through living labs (wellbeing the 400 stakeholders the project was aiming to involve).
- A final conference was held in Brussels on the 4-5th of December of 2023 with different participating policymakers and stakeholders.

4.3. The participant dimension

The impacts in the participant dimension emerge as a result of the outcome/impact analysis conducted in the project. The impacts in this dimension were not the focus of the impact ambition of YouCount, as those are mainly defined in the scientific dimension (see impact objective 1 to 6 in Table 6). Therefore, many of the conclusions in this dimension come up as the result of the YouCount methodology for impact assessment that was looking at discovering its unplanned impacts.

The participant impact dimension implies analysing individual learning gains in terms of understanding and attitudes towards science, citizen science and personal skills' development. As part of our broader and more socially related impact framework, the participant impact dimension expands the focus analysis to investigate the possible beneficial social outcomes for the individuals that are participating in the project (see in **Error! Reference source not found.**, in the participant d imension, the aspects analysed within the individual social outcomes, such as 'increased opportunities for social participation' or 'increased social capital').

4.3.1 Increased competences

We use the unified typology of knowledge, skills and competences proposed by Winterton et al (2006) to better understand the competence gains that participants show due to their participation in YouCount research. This typology distinguishes between cognitive (basic knowledge), functional (necessary skills to work) and social competencies (behavioural and attitudinal competences) (p. 11).

The outcome analysis proves that participating in the project implies the adoption of new practices by participants (YCS, researchers and stakeholders) that influence their cognitive, social, and functional competences. However different weight is given to each competence gain depending on the perspective of the participant analysed. Researcher perspective emphasize mainly gains in the social and functional competences, while the YCS perspective include also gains in the social competencies.

Finally, time plays a crucial role in the competence development of the YCS, as they show a higher increase in their personal gains since they show better results the longer they have been in the project.

The researchers' perspective

Researchers that are analysing the hands-on CSS projects (through the case study reports) observe an improvement in the YCS' functional competences related to participating and contributing to CSS projects. Among the cited competencies are an increased ability to share personal stories, exchange information, reflect and debate (by equally participating in debates, with different groups of participants and based on respectful discussions), an increased ability to take decisions and presentational and research-based skills (including questionnaire design, interview techniques, quantitative and qualitative data analysis). For example, learning mobile techniques for producing videos and photos and editing is one of the abilities reported by the researchers.

In the same extent, researchers observe gains in the social competences of the participants, YCS, researchers and stakeholders.

- For YCS, these attitudes have to do with the feeling of self -efficacy and accomplishment; increased courage to express feelings; increased self-awareness (of their identities); being able to confidently and equally participate in dialogues; being able to talk with adults and to an audience; and being more confident, both within the group and in approaching and discussing findings with stakeholders.

  Murray, C., Göbel, C. and Butkevičienė, E (2023) identify benefits of the youths for being a YCS, especially when they are involved over a longer timeframe, and in their social and functional competences: an increased knowledge on the subject of the study, more possibilities for civic engagement and having a say, and social benefits such as an increased social network and better opportunities for employability. Youth also report believing that the capacities gained can result in benefits in employability as they can report the experience on their CV and be more attractive to job market.

  From their participation in webinar, YCS feel an improvement on their English skills. They also identify having increased their cultural competence by learning more about other countries and their cultures, and also an access to new social roles, arenas and social fellowships supporting their empowerment (Murray et al., ,2023).

- Stakeholders, not in the same extent as YCS, show gains in their attitude towards the value that youth views and insights can bring to them as it can be seen in a stakeholder testimony:

> *"I would also like to highlight how valuable the testimony you have given is. We spend time in our offices, preparing decrees, signing documents. This helps us to put faces and names behind the generalities." (stakeholder)*

They also report having increased their ability to listen to experiences and perspectives of youth (especially reported by stakeholders).

> *"At group level, policy makers and local educators have expanded their knowledge about citizen science, […] "*
>
> *Researcher, Lithuanian Case*

- Researcher have gained capabilities to be able to adopt a youth-centred approach. When analysing the experiences with the use of dialogue forums (DF) with local youth (See Task 4.6), DF participants adopt new practices beyond traditional research practices. They need to be flexible to give youth a centrality in the DF by including youth-led tasks in research such as facilitating discussions with peers, conducting interviews, and presenting findings or making them part of the discussions; distributing tasks among YCS and researchers; and giving to youth-led interactive exercises a prominent role in the different communication spaces.

In a less extent than in the previously described functional and social competences' gain, an increase of the topical knowledge of the participants (cognitive competence) is observed by the researchers as shown in the case studies and the webinars with youths (Murray et al, 2023). For example, on the permaculture principles and the chemical-free agriculture notions.

The YCS' perspective

When YCS were directly asked about the aspects that have changed over the time because of their participation in YouCount, their perspective is very much aligned with the researchers' perspective.

They report having increased their ability to share their opinions, to apply research methods, their ability to contribute meaningfully to CSS and the ability to engage with the social participation (functional competences), as well as their social competences in aspects such as being more interested in science or in contributing to improve the lives of young people and to be able to engage better in politics and civic initiatives.

The next paragraphs synthetize the outcome analysis based on the process-survey results of the YCS participating in the case studies, the evaluation focus groups' transcriptions conducted with the YCS in the final stages of each CSS project and the cross-case analysis of the experiences with the use of dialogue forums (DF) with local youth (See Task 4.6).

The YCS participating in the case studies have filled in a survey to be able to analyse different questions. Some of these questions are crucial to understand impact in YouCount and these are shown in the Table 12 (these questions were identified as relevant for impact assessment within the step 1 of our methodological approach).

Table 12. Process-survey questions analysed for impact assessment

Question	Code
Now to citizen science. Citizen science means that professional scientists work with other people on scientific projects. From 1 - strongly disagree to 7 - strongly agree, how much do you agree or disagree with the following statements about citizen science?	
I plan to participate in other citizen science projects in the future.	cs_atts_1
I am interested in participating in citizen science projects in the future.	cs_atts_2
Citizen science projects can help create a better society.	cs_atts_3
Citizen science projects are important to improve the lives of young people.	cs_atts_4
First, think about science and the everyday lives of young people. Young people in this case means ages 14-29. (From 1 - not at all interested to 7 - very interested), how interested are you in ...	
... science in general?	Interest_1
... opportunities for political engagement for young people?	Interest_2
... opportunities for young people to connect with and belong to the community?	Interest_3
... opportunities for social participation (e.g., in sports clubs or through work) for young people?	Interest_4
Now to science in general. From 1 – very unimportant to 7 – very important, how important is science to you compared to other topics?	sci_imp
Below are some statements about you and science. From 1 – strongly disagree to 7 – strongly agree, how much do you agree or disagree with these statements?	
I have a clear idea of what the term "scientific study" means.	sci_knw_eff_1
I know a lot about science.	sci_knw_eff_2
I can contribute well to scientific research.	sci_knw_eff_3
I can contribute to scientific research better than most other people.	sci_knw_eff_4
Now to your participation in the YouCount project specifically. From 1 - strongly disagree to 7 - strongly agree, how much do you agree or disagree with the following statements?	
I can meaningfully contribute to the project.	yc_eff_com_1
My input advances the project.	yc_eff_com_2
I can work at eye level with professional scientists in the project.	yc_eff_com_3
I feel taken seriously by professional scientists in the project.	yc_eff_com_4
Participating in the YouCount project helps me to ...	
... engage more in society.	yc_empwr_1
... engage more in politics.	yc_empwr_2
... know more about my rights.	yc_empwr_3
... be more involved in the local community.	yc_empwr_4
... belong more to the community.	yc_empwr_5
... increase my social network.	yc_empwr_6
... find a job.	yc_empwr_7

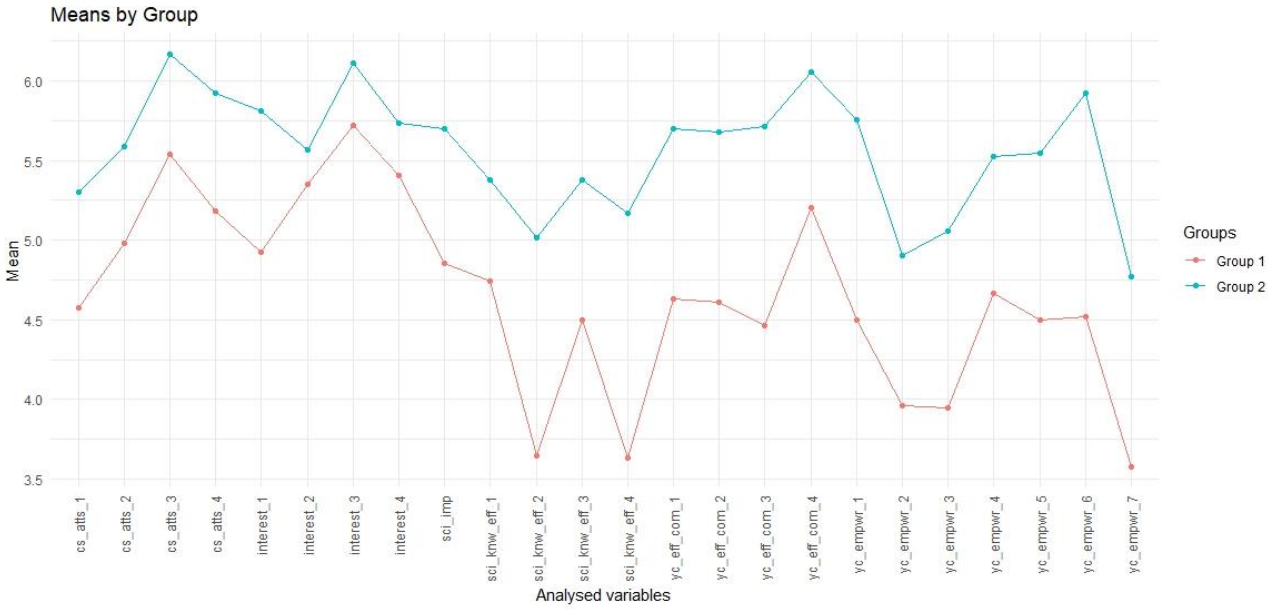
Source: Own elaboration based on the process survey developed by Jörg Matthes and Melanie Saumer (UNIVIE)

Two groups of respondents were identified based on the median days (152 days) the respondents have been involved in the case study. Group one is composed by the respondents that answered the survey when they were participating in the cases for less than 141 days; and the second group

are respondents that were participating in the case for more than 141 days. Group 1 is the 'less experienced' group, while the Group 2 is the 'most experienced' group.

The calculation of the means for each selected variable for both groups in shown below:

Graph 1. Results of the process survey by groups in the selected variables



Source: Own elaboration based on the process survey developed by Jörg Matthes and Melanie Saumer (UNIVIE)

The results show YCS that were participating in the cases for a longer period were identifying more positive effects or their participation in YouCount in all the variables analysed.

The 'most experienced YCS' (from Group 2) experienced a remarkable change in respect their perceived value of their contributions in YouCount, and in the perception that they feel taken seriously by professional scientists in the project [yc_eff_com].

The YCS in the Focus Groups confirm this perceived gain as it is expressed by the YCS in the following quotes where they explicitly identify their increased ability to participate in the CSS projects:

> *"It is very common to share your views now. We are more used to it. I feel it's a lot easier now."*
>
> YCS, 3rd Focus Group transcription of the Norwegian Case

> *"So, I wrote an interview for the first time, that was good. [...]"*
>
> YCS, 3rd Focus Group transcription of the Austrian Case

> *"I have learned how to work in a group, uh, communicate, do interviews, practice English a little, know how to be in formal meetings"*
>
> YCS, 3rd Focus Group transcription of the Spanish Case

The longer the participation of the YCS, the more they think they contribute well to scientific research, and that they can contribute to scientific research better than most other people [sci_knw_eff]

The interest of both groups, the most and less experienced YCS', regarding the opportunities for political engagement, to connect and belong to community and for social participation is very high. However, the interest towards science in general has experienced a higher growth among the YCS that participated for a longer time in the case study.

Engaging in politics, knowing more about their rights or finding a job is among the issues were YCS think that their participation in YouCount would help less [empowerment)].

However, the longer the experience in the cases the better they think YouCount is helping them in increasing their social network. Focus Groups reflections also show strengthen this idea as YCS refer to changes in their behaviour due to their participation in YouCount, by, for example by being more open-minded.

> *"I actually feel that we are a bit more open-minded"*
>
> YCS, 3rd Focus Group transcription of the Austrian Case

An increased acknowledgment of different youth realities in their local settings is pointed out by YCS:

> *"so without this project I couldn't hear so many stories and so much about the problems that the others have said. It really, well it showed me a different perspective and that's very important."*
>
> YCS, 3rd Focus Group transcription of the Austrian Case

4.3.2 Social outcomes for the participants

YouCount's impact assessment methodological approach is designed to expand the traditional focus on science literacy individual outcomes, to explore broader and more socially related impacts for the participants (and the wider community).

The researchers' perspective

The main social outcomes identified by the researchers are linked to (1) the strengthening of the social networks of participants, especially for YCS; (2) increased opportunities of participation and for being heard; and (3) acknowledgement of the existing realities of youth.

The strengthening of YCS's social network is one of the main gains reported by the researchers in their case studies, and this conclusion is also supported by the social innovation analysis results (see Pataki et al., 2023; and Murray et al., 2023). The CSS projects allowed participants to reckon other groups and individuals working on the same topic, creating a supportive network of people by building a relationship with the people they work with (both YCS and researchers), and establishing new connections such as the one created between youth across European countries.

Regarding new opportunities, according to the researchers, youth had new opportunities for participating in discussions and working spaces where they usually do not have access to (conclusion from the case studies' report outcome analysis and also in Murray et al., 2023). Sharing their insights with policymakers and participating in discussions with policymakers are the main opportunities identified. In addition to the new participation opportunities, youth are reported to be feeling heard on their needs and ideas, making them feel that they matter. Finally, youth think that the competencies gained in the project can result in benefits in employability as they can report the experience on their CV and be more attractive to job market (see Murray et al., 2023, p. 16).

Pataki, et al., (2023) identify that YCS have increased their feeling of being respected and acknowledged.

The YCS' perspective

The YCS perspective points out, in the same direction as the researchers, social gains such as new opportunities of being heard or increased knowledge of the existing different social realities in their contexts.

The increase opportunities for being heard are framed within their participation in the research activities and in their opportunity to interact with stakeholders.

"as giving us opportunities, both in presentations, both with the conference and everything, both for publications potentially more serious than our future plans, so I feel that they see it in that way completely, as a full-fledged team member."

YCS, 3rd Focus Group transcription of *Hungarian A Case*

"I feel as if it's given younger people more of a voice, people like stakeholders, they tend not to listen to young people. They will now listen a bit more and take the feedback a bit more serious than just like,' ohh. They're younger than us, don't know what they're talking about.' Type of ideology. So I found that an improvement."

YCS, 3rd Focus Group transcription of the UK Case

"We have also engaged many stakeholders in the project. And they have also had the opportunity to talk and collaborate with each other. […] they have found their ideas and solutions to the problems they face in society.."

YCS, 3rd Focus Group transcription of the Norwegian Case

YCS report as changes in practices related to a shift in the communication patterns within research teams towards a communication based on an equal footing; and towards a greater role of YCS to have a say on the research process.

"Do you feel like you're on an equal footing, do you feel like you're taken seriously?

CS5: Yes, very, yes.

CS2: Totally.."

YCS, 3rd Focus Group transcription of the Austrian Case

I feel that the adult researchers care a lot about what we think. When we had the exhibition at Grønland, Aina sent me messages and asked if I was happy with everything and wanted to know what I thought, or all of us thinks.

YCS, 3rd Focus Group transcription of the Norwegian Case

4.4 Socio-ecologic and economic dimension

The socio-ecological and economic or the societal dimension (both terms are used in the document interchangeably) of YouCount is closely related to the overall social vision and objectives of the project of creating more inclusive societies for youth through innovations and policymaking, where youth are the cornerstone.

This dimension captures the contribution of the project to the wider societal goals by looking into

- The contribution of YouCount to the Agenda 2030. More specifically, it aims to contribute to increase opportunities for youth inclusion (Goal 1: End poverty in all its forms everywhere); increase employability of YCS and improved policymaking and innovations to support employability (Goal 8: Decent work and economic growth); reduce social inequality and income growth, enhance awareness and knowledge of how to increase social inclusion of disadvantaged and marginalised youth population (or at risk), and develop youth-involved innovations and policy-making (Goal 10: Reduce inequality within and among countries).
- Capturing the societal impact on non-individual level, such as an enhanced science-society collaboration by working on an increased policy engagement with science and citizens' active participation in research and decision making; and, new social innovations, informed policymaking and governance and policy recommendations from local to national / EU levels.

4.4.1 Contribution to SDGs

SDGs represent a call-to-action for people worldwide to address five critical areas of importance by 2030: people, planet, prosperity, peace, and partnership (as defined in the Agenda 2030). To monitor YouCount's progress in the societal dimension, objectives to contribute to the SDGs were set up at the project design stage. Concretely, YouCount societal impact objectives framed within the SDG are described in the Table 13, including the target SDGs, their description and the project targets regarding each SDG.

Based on the outcome analysis and the project KPI, the research team has reflected on the level of achievement of the YouCount's intended contribution to the selected KPIs. Table 13 includes a column with the conclusion of the research team of the level of achievement in each of the preselected SDGs. The results are shown with a colour code: red means that YouCount has underperformed in its contribution to the SDG, green means that YouCount has performed as expected; and white means that the research outputs do not provide evidence to assess the level of achievement of YouCount in the SDG.

Table 13. YouCount's contribution to the SDGs

	SDG indicator		Level of achievement
SDG1	**End poverty in all its forms everywhere**	. Increased youth employability and work opportunities, supporting to reduce their poverty	
SDG 3	**Ensure healthy lives and promote well-being for all at all ages**	. Increased wellbeing and health as a consequence of improved social inclusion	
SDG 5	**Achieve gender equality and empower all women and girls**	. Include 50% of YCS girls	
		. Generate gender specific knowledge , for tailored actions	
SDG 8	**Promote inclusive and sustainable economic growth, employment and decent work for all** **8.2** Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.	. Full and productive decent wok: increased employability 270 YCS	
		. Improved policymaking and innovations to support employability	
SDG 10	**Reduce inequality within and among countries** **10.2** By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	. Contribute to reduce social inequality and income growth,	
		. Enhanced awareness and knowledge of how to increase social inclusion of disadvantaged and marginalised youth population (or at risk)	
		. Youth-involved innovations and policy-making.	
		. Empower and promote the social and political inclusion of at least 270 YCSs in 9 EU LL	
		. Contribute to targeted policy-making and social change	

Source: Own elaboration from the project KPIs (see Appendix A) and outcome analysis

Small scale achievements can be seen that point out towards the direction marked by some of the target SDGs:

- Regarding SDG1, YouCount has achieved an improvement of youth employability and work opportunities, supporting to reduce their poverty by increasing to 5 the opportunities for youth women in the labour market in the ten case countries.
- YouCount results also point out towards the SDG 5, by generating gender specific knowledge through 2 papers addressing gender-specific issues and a cross case analysis about gender in the 10 case studies.
- SDG 8 aims to promote inclusive and sustainable economic growth, employment, and decent work for all and YouCount points out in the same direction by coming up with a set of improved policymaking and innovations to support employability, such as 4 local policies improved, 2 improved initiatives of local social services for migrants and 1 case in which new means for youth entrepreneurship are created.

- YouCount has also achieved results that increase awareness and knowledge of how to increase social inclusion of disadvantaged and marginalised youth population (or at risk) by developing 10 case reports that describe these new means by case. These experiences point out towards SDG 10, Reduce inequality within and among countries by empower and promote the social, economic and political inclusion of all.

YouCount's initial ambitions related to some SDGs are difficult to measure through the project results and KPIs, and further research would be needed to collect evidence on them. This is the case of SDG3, that aims to ensure healthy lives and promote well-being for all at all ages, where YouCount was aiming to contribute by increasing wellbeing and health as a consequence of improved social inclusion. This question has not been explored within YouCount research substudies directly, thus no measures are found that could link YouCount results with this SDG. Along these lines, YouCount had the ambition to contribute to SDG 10 (reduce inequalities) by reducing social inequality and achieving an income growth, empowering, and promoting the social and political inclusion of at least 270 YCSs in 10 cases, and contributing to targeted policy-making and social change. These questions can hardly be answered with numbers, and they rather call for an in-depth analysis. YouCount outputs can be analysed to look at evidence in these issues, but neither the data collection nor the results were including these aspects.

4.4.2 Other societal impacts

In YouCount multiple stakeholders engage with each case studies research teams (formed by professional researchers and YCS as citizen scientists) to use the data generated in the hands-on CS projects and co-create policymaking and innovations in terms of new ideas, products, or methods to co-create social change. In addition, the activities held in the project for communicating, exploiting and disseminating the YouCount's results and findings in the micro-meso and macro level communication spaces (see impact objectives 4 and 5) have pursued to scale up project's findings towards broader audiences at the local, national and global. While the impact that these impact maximization activities have cannot be assessed by the inputs provided by YouCount; some outputs and outcomes across the work packages can support to what extent improved policymaking, innovations, policy recommendations (youth led or not) are produced in YouCount. Thus, based on the case study reports (see section 4 of each report); the deliverable 3.1, that includes the meta-analysis of the social innovations in CSS based on the YouCount case study reports (see Pataki et al., 2023); and the evaluation Focus Groups' transcriptions, the conclusions of the outcome analysis around the societal impacts of YouCount are described.

The researchers' perspective

At case level, the change in policymaking is yet to be seen, because either it is too early to see changes and more time is needed or either the direct attribution of impact on policy making is not identified (beyond the recommendations and proposals described below). However, many of the cases have reached the stage where the impact on policymaking affecting young people may happen. Thus, the building blocks for future changes in policymaking are set up as it is defined in the impact objective 1, where YouCount's achievements about the development of new innovations with YCS are described. These innovations are the acknowledgement of the contribution of YCS to collect, structure and examine systematically the most important information about the research topic; the collaborative work with stakeholders (that can lead to changes in the sphere of their institutions); the implementation of youth-led processes; the establishment of more democratic decision-making processes; a more empowered YCS in terms of and enhanced ability to access to an expanded social network (stakeholders, community); and changes in social relations and power relations, towards relations based on equal footing.

Although evidence of the direct effects of the project in local policymaking is not reported, there are changes in terms of new proposals and recommendations for change (co-created between YCS and other stakeholders and researchers).

- Some cases have come up with the development and delivery of co-created proposals for change in matters to meet youth needs more effectively. These proposals are different forms of suggestions for planning and designing a service or an initiative (but not its delivery). Examples of that are how YCS actively contributed to a proposal to the national parliament, action proposals to be implemented between youth and stakeholders, co-definition by stakeholders and youth of new activities to enhance youths' social inclusion, activities to approach local and migrant young people`s realities and planned future developments such as the Youth Zone in Preston or the Youth Council.
- In the second place, policy recommendations are also found, although not as many as proposals, in the form of suggestions for supporting university in continuing with work in the LL and new ideas for social innovations. In some cases, resources were developed to spur change. For example., in Preston further suggestions were made related to the University having a continued role in supporting young people with the issues and opportunities raised at the Living Labs.
- Finally, in one case, the implementation of a proposal of change has happened. It is the case where the YCS and stakeholders worked in establishing a set of criteria for socially inclusive youth jobs.

The YCS' perspective

YCS report as changes in practices related to a shift in the communication patterns within research teams towards a communication based on an equal footing; and towards a greater role of YCS to have a say on the research process.

"Do you feel like you're on an equal footing, do you feel like you're taken seriously?

CS5: Yes, very, yes.

CS2: Totally.."

YCS, 3rd Focus Group transcription of the Austrian Case

" I feel that the adult researchers care a lot about what we think. When we had the exhibition at Grønland, Aina sent me messages and asked if I was happy with everything and wanted to know what I thought, or all of us thinks."

YCS, 3rd Focus Group transcription of the Norwegian Case

5 Discussion of impact achievements

Creating impact in the participant and societal dimensions was initially not the main focus in YouCount's ambition because the project was focusing more on scientific impact. However, due to a broader and more socially related impact assessment framework, we can see that gains in these dimensions have emerged as more prominent, especially due to the main unplanned impacts of YouCount. The project thus indicates a possible broader, empowering and more socially impactful effect of co- creative CSS than previously described in the literature. Participating in YouCount has for example increased the cognitive, functional and social competences of participants, making them more knowledgeable of CSS, more able to perform tasks related to conducting Y-CSS, and more able to interact with their social environment. Moreover, the participants, especially YCS, have experienced social outcomes in terms of strengthening their social networks, increased opportunities of participation and of being heard, acknowledgement of their social realities, and a shift in the communication patterns within research teams towards communication on an equal footing and an increased opportunity to interact with stakeholders. In addition to these gains, researchers identify advances in the scientific field, especially in developing new knowledge in how to conduct Y-CSS and participate in science and communicate science. In YouCount, the new knowledge generated in this field is considered as a novel practice for social change and innovation. In a sense, these are deemed the building blocks for the changes in policymaking to happen in the future. There is however need for more research to explore these tendencies.

Further, our conclusion is that the project copes with the objectives in terms of scientific results when it comes to knowledge generation, the development of knowledge by YCS, the advances in the improvement of science-society collaboration and science literacy and educational outcomes. However, it is necessary to make some reservations about the scientific outcomes of the project. For example, while the objective was to reach 13 articles in scientific journals, and while the 38% have been already accepted, still the 67% of the articles are in the planning stage. Two reasons can explain this deviation in impact achievements: First, this objective was very ambitious as the planning and publication of scientific papers takes longer that the project lifetime and moreover as they tend to happen at the end of the project when results are available, they are not developed within the project frame. Secondly, the current situation may show the tension when it comes to co-creative CSS and more traditional social sciences as it takes a lot of time working with a participatory approach. The demanding character of the hands- on research may influence the researchers' capacity, and prioritation of the local research activities instead of writing scientific publications. It is thus important that the EC and research teams conducting co-creative CSS define more feasible project objectives when it comes to the scientific dimension. It may also be necessary to supply more resources and time to conduct both practical research and scientific analysis and writing, or to put more emphasize on research benefits outside scientific writing.

Concerning the expected impacts in advancing in public engagement (see impact objective 5), we can see that the YouCount project has achieved the aim of engaging youths, stakeholders and policymakers. Still, not in the scale that was expected. CS means involving non-professional scientists that volunteer to participate in different stages of the scientific process and it expands the scale of participation. The question is whether it will be important to encourage higher numbers of participants in CSS projects likewise to large- scale CS projects in other scientific disciplines, or to acknowledge that co- creative CSS projects will need to have more limited numbers of participants due to the nature of this kind of research. The best numbers of participants will, of course, also depend on the objectives for the research, choice of research methods (e.g., less work-intensive) as well as available time and resources. In YouCount, we would have needed more time and resources to achieve the aspired numbers of participants given the demanding nature of inclusive co-creative CSS.

When it comes to implement actions to maximise the project impacts, the DEC strategy is the cornerstone. In YouCount, the role that YCS have played in implementing the strategy to maximise the overall impact of YouCount was unexpected. While their involvement in the micro level communication space (where the dialogue between youth and other stakeholders happens) has been the expected one, their role in the macro level communication space has been higher than expected. YCS are being particularly active in participating in the scientific results (books, publications in conference proceedings, Thesis and new research collaboration); and communications activities addressing the local community such as local exhibitions, local dissemination activities, interviews for articles in media (media coverage) and delivering videos around their experiences. They were involved in tasks such as preparing the materials, presenting their findings and their personal experiences of the YouCount experience.

Finally, although the study was aiming to conduct a reflexive exercise to capture the multiple voices engaged in YouCount's research for analysing the non-linear links between research and impact that emerge for the collaborative research in YouCount, time limitations have made it impossible to conduct such a process. Instead, the outcome analysis has put an emphasize on analysing process-wise outputs that include the YCS and researchers' views in the study. The YouCount's approach to impact assessment has shown how an impact assessment study can be conducted in a large multilevel CSS project to understand what can be expected and achieved in a project like YouCount. Further research is needed also to investigate how a shift to process assessment can be applied to capture the new outcomes that emerge from collaborative research.

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Appendixes

Table 14: Appendixes

APPENDIX A. The Key Performance Indicators

Note: the column "Status" indicates whether the YouCount objectives are met: green cells indicate that the objectives are met; orange means that the objective is almost met but remains below the expected numbers; the red cell means that the project has underperformed in the indicator; and the white cells indicate that the indicator is not measured

N.	Indicator	Objective	Achieved	Status	Description / clarifications
1	Number of policy-makers and CS organisations that are part of YouCount community	0	63		The SwafS group (about 15 projects and then ECS with over 30 projects and initiatives (partly overlapping). We also have ECSA and WG EIE. Policy organisations, other than the 3 in our AB board. We have particularly collaborated with CS projects: ECSA, EU-citizen science/ECS, SEEDS, CoAct and COESO, Time4 CS (N= 7). SEB members (ethics or legal "experts" or representatives from each partner institution): 9 externals and 2 internal from the consortium.
2	Publication in CS journals	3	2		Interpretation form YouPlan+ Claire Murray's planned article
3	Publications addressing CSS	13	24		YouPlan (scientific results, including Publication in conference proceeding/workshop)
4	Policy brief with Recommended organisational changes in R&I institutions to strengthen involvement of youths and communities in university–society relations through CSS.	1	2		D1.4. Policy brief Y-CSS and social inclusion + D5.5. Policy brief with recommendations for Y-CSS, and future policymaking for social inclusion of youth
17	Number of Young girls,participating in the projects	0	160		
5	Research collaboration with ECSA	1	1		
6	Number of workshops co-organized with ECSA	3	4		D1.5 Report from ECSA-workshops

N.	Indicator	Objective	Achieved	Status	Description / clarifications
7	Number of participants in ECSA workshop (youth / practitioners/ academics / consortium mebers)	25	314		D1.5 Report from ECSA-workshops
8	Number of papers co-created with Y-CSS	0	9		Claire Murray leads the co-produced paper + 3 scientific papers (2 planned +1 accepted) +2 books (1 submitted and 1 planned) + 3 (Publication in conference proceeding/workshop)
9	Open access publications (gold or green open acces)	13	13		From YouPlan
10	CSS activities in universities	9	13		1 training in YCSS training (events) + Master thesis on Knowledge about CSS in educational settings and co-creating youth friendly societies + Norwegian project YouCountNor+ funded by Research Council Of Norway (NFR) includes development of teaching material +A teaching module about citizen science and youth participation for a master course called "Adolescent Health"+ 10 hands on CSS projects in 9 universities (the case studies)
11	Number of new funding opportunities for the partners	0	3		From YouPlan
12	Number of youth/migrant policy organisations taking part of the AB	2	2		At least 2 form the Spanish case (Zabalduz and Loiola Etxea)
13	Number of policy-makers involved in the nine CS projects through living labs	400	181		Number of stakeholders involved in LL and other project activities: 104 / Number of national stakeholders involved in national workshops or other activities: 77 (98 of them policymakers)

N.	Indicator	Objective	Achieved	Status	Description / clarifications
14	Number of youth engaged in the online study	700	347 / 958		The analysis about the App report builds on data provided from a total of 193 young people in the ten cases in the nine European countries taking part in the YouCount project, and these youths have contributed 958 validated spots in the period of March 2022 until October 2023. In addition, 150 questionnaires building on the App study from the Swedish case can also be included to the involved youth
15	Number of opportunities for youth with migrant/refugee backgrounds in the labour market in nine case countries	0	0		
16	Number of opportunities for youth women in the labour market in nine case countries	0	5		
18	Number of Y-CSS participating in the case studies	135	162		
19	Number of students participating as R-CSS in the case studies	18	47		
20	Number of teaching modules adopting recommendations form the project	0	1		OsloMet will end up with this in secondary/high school and university . This course will be included in the toolkit from the project and also ECS project Science Academy
21	Local case reports Social participation	2	10		These are the case study reports (10) and as each of them address social innovation different dimensions, they cannot be split in three categories
22	Local case reports Social belonging	2	10		
23	Local case reports citizenship	2	10		
24	scientific publications social participation	2	1		Mihók, B., Juhász, J., & Gébert, J. (2023). Slow science and “caring” research–the transformative power of collaborative

N.	Indicator	Objective	Achieved	Status	Description / clarifications
					research with hard of hearing youths. IJAR– International Journal of Action Research, 19(2), 157-173.
25	scientific publications social belonging	2			
26	scientific publications citizenship	2	2		Winther, C. (2022). Engaging communities in citizen science. *Journal of Science Communication*, *21*(5), R04.+ Swedish case paper (not reported in YouPlan
27	Number of local case reports on how communities can develop more attractive and youth-friendly societies	2	10		Split the case summary reports here (in total 10) on the various topics
28	Number of scientific publications addressing how communities can develop more attractive and youth-friendly societies	3	2		See indicator n.26
29	Number of local case reports regarding how Y-CSS can contribute to increased civic engagement by young refugees	3	2		2 case study reports (WP3) from Austria and Spain
30	Number of publication about how participation in CSS activities can support civic engagement amongst young people in the local area.	3	4		indicator 26+28
31	Number of Y-CSS in nine European countries identifying social and civic engagement opportunities	270	209		162 YCS in the research teams + 42 students in the RT
32	Number of papers addressing gender-specific issues	3	2		Gender issues have been included as part in the case summary reports, evaluation study and subsequently in the meta-reports from WP2- 4: D2.3 Meta report of the experiences with case study implementation; D4.1 Meta-report of cross-case evaluation including a gender analysis
33	Number of initiatives at case level addressing better community plans or developments strategies (co-created innovations and/ or new policy-making initiatives in the nine local living labs)		25		

N.	Indicator	Objective	Achieved	Status	Description / clarifications
34	Number of local policies improved	0	4		
35	Number of improvement initiatives of local social services for migrants	0	2		
36	Number of cases in which new means for youth entrepreneurship are created	2	1		
37	Reaching out to more than 900 young citizens and 400 stakeholders in total in the project on local/national levels	1300	1183		Number youth in local community contributed to DF/WK/other activities: 892 + Number of stakeholders involved in LL and other project activities: 104 / Number of national stakeholders involved in national workshops or other activities: 77
38	Number of policy-makers involved in the nine national workshops	0	25		
39	Number of Y-CSS participating in the dissemination activities (presenting / preparing materials..)	0	400		Reported: 130 in Scientific results + 170 other dissemination activities
40	Number of reports regarding ethic recommendations to Y-CSS	1	6		D1.2. Report on the conceptual, innovative, evaluation and ethical framework for Y- CSS+ D.2.1Establish collaboration with ethical board and secured formal approvals local levels+ D6,5 Final report on ethical issues +D6.6. Report on the recruitment criteria and informed consent procedures + D7.1. POPD - Requirement No. 2+ D6.2 Data management plan
42	Number of educational materials including ethics recommendations to Y-CSS	1	4		1 training in YCSS training (events) + Master thesis on Knowledge about CSS in educational settings and co-creating youth friendly societies + teaching module toolkit Norway +A teaching module about citizen science and

N.	Indicator	Objective	Achieved	Status	Description / clarifications
					youth participation for a master course called "Adolescent Health".
43	Number of publications regarding ethic recommendations to Y-CSS	0	1		Canto-Farachala, Norvol (2023). Paper on ethics

YouCount

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