



#HorizonEU

HORIZON EUROPE POLICY SUPPORT FACILITY

2021 – 2027

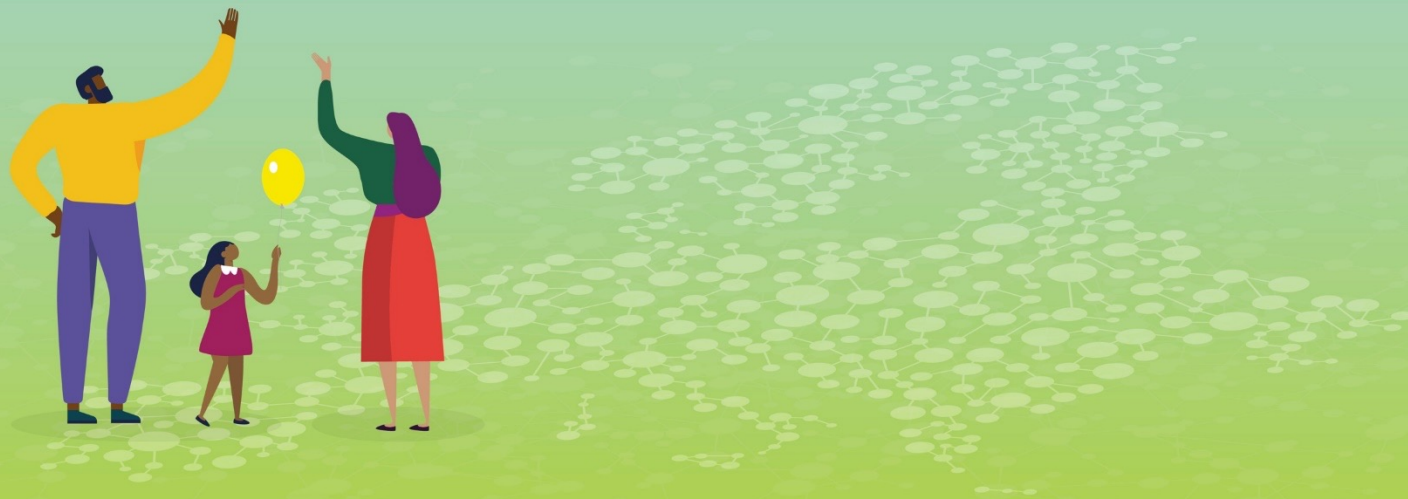
OPEN SCIENCE CONFERENCE
STOCKHOLM,

16 – 17 MAY, 2023

ALAN IRWIN & MARGARET GOLD

Introduction - Alan Irwin

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE



Aims

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE

The main aim of the MLE has been to **identify and promote good practices, experience and lessons learned**, in addition to policies and programmes for Citizen Science among 11 participating countries.

The MLE therefore aims to **achieve greater societal impact** and **increase trust in science** through the leveraging of **collective societal capabilities and insights**, and

to **enlarge the scope and impact** of Research and Innovation through **increased societal relevance, responsiveness and transparency**.

HORIZON EUROPE

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#HorizonEU



European
Commission

Eleven Participants



HORIZON EUROPE

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Chair

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Rapporteur

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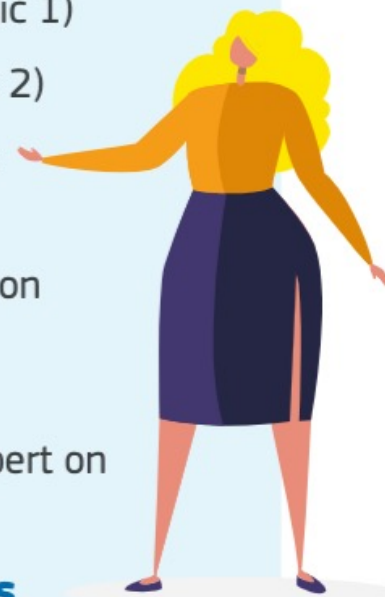
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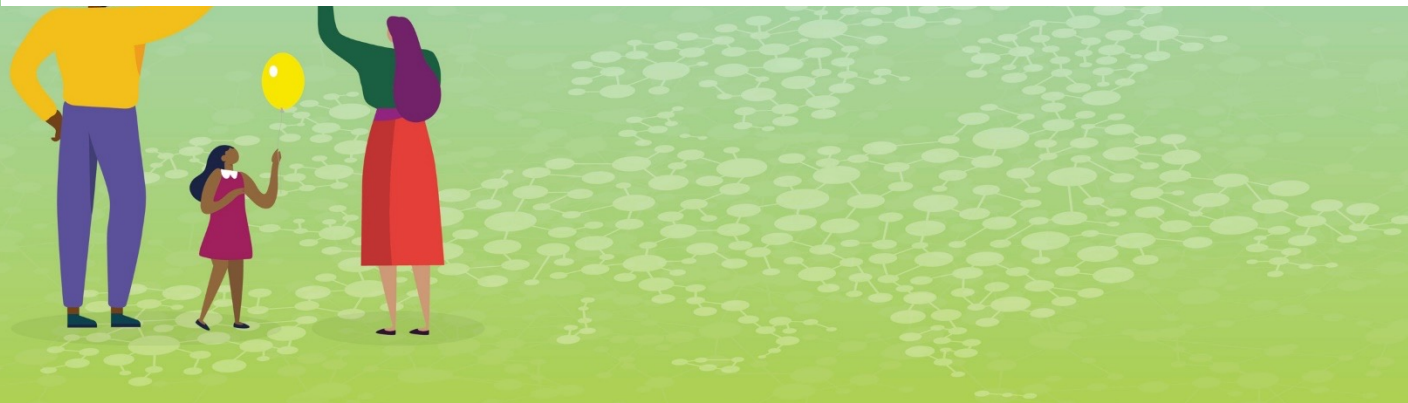
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Six Interactive Workshops

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE



Five Core Topics

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE

- 1: Introduction and overview on citizen science
- 2: Ensuring good practices and impacts
- 3: Maximising the relevance and excellence of citizen science
- 4: Enabling environments and sustaining citizen science
- 5: Scaling up citizen science



Repository of Outputs

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE

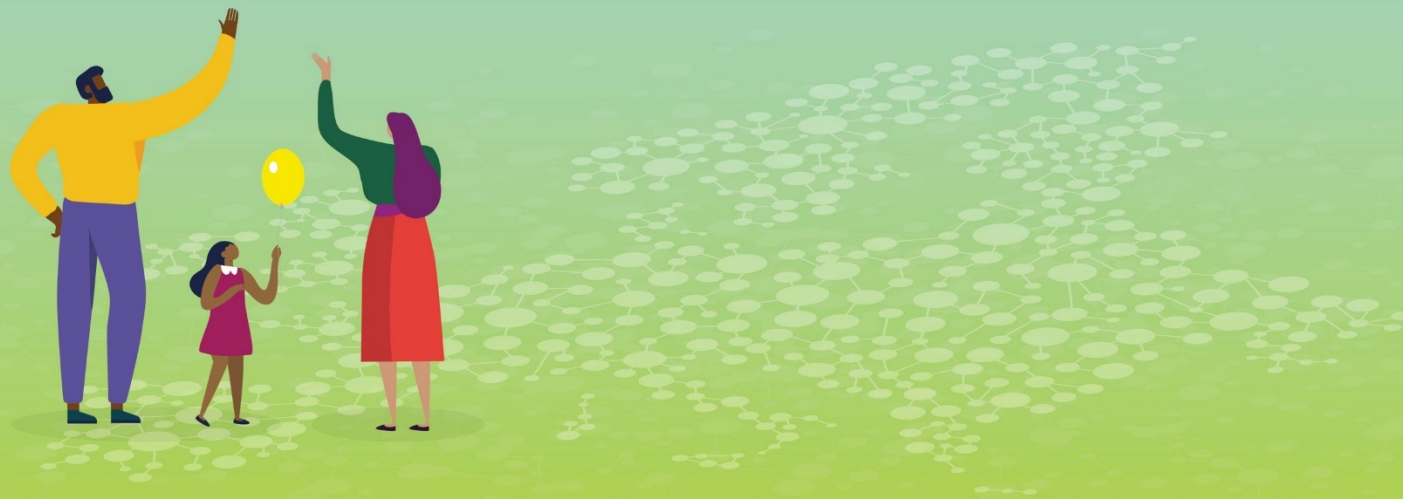
<https://tinyurl.com/psfMLEcs>



The screenshot shows the official website for the Mutual Learning Exercise on Citizen Science Initiatives - Policy and Practice. At the top, there is the European Commission logo and a search bar. Below the navigation menu, the title "Mutual Learning Exercise on Citizen Science Initiatives- Policy and Practice" is displayed. The main content area includes an introductory paragraph about the increasing number of citizen science projects and initiatives across Europe. To the right, there is a table with two columns for the dates "01 DEC 2021" and "28 FEB 2023". Below this, there are two tables: "PSF Geo coverage" listing countries like Norway, Austria, Belgium, France, Germany, Hungary, Italy, Portugal, Romania, Slovenia, and Sweden; and "PSF Exercise type" listing "Challenge/ MLEs". A "Documents" section follows, featuring three items: a video titled "Citizen Science at the heart for research and innovation (Video)", a summary article titled "Summary article - mutual learning boosts citizen science across Europe", and a final report titled "Final Report: Mutual Learning Exercise on Citizen Science Initiatives - Policy and Practice". Each document has a corresponding thumbnail image and a button to view or download it.

Outcomes – Margaret Gold

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE



TOPIC 1 – INTRODUCTION & OVERVIEW



MUTUAL LEARNING EXERCISE

Citizen Science Initiatives - Policy and Practice

*First Thematic Report:
Introduction and Overview on Citizen Science*

PSF CHALLENGE

HORIZON EUROPE
POLICY SUPPORT FACILITY

Independent
Expert
Report



Research and
Innovation



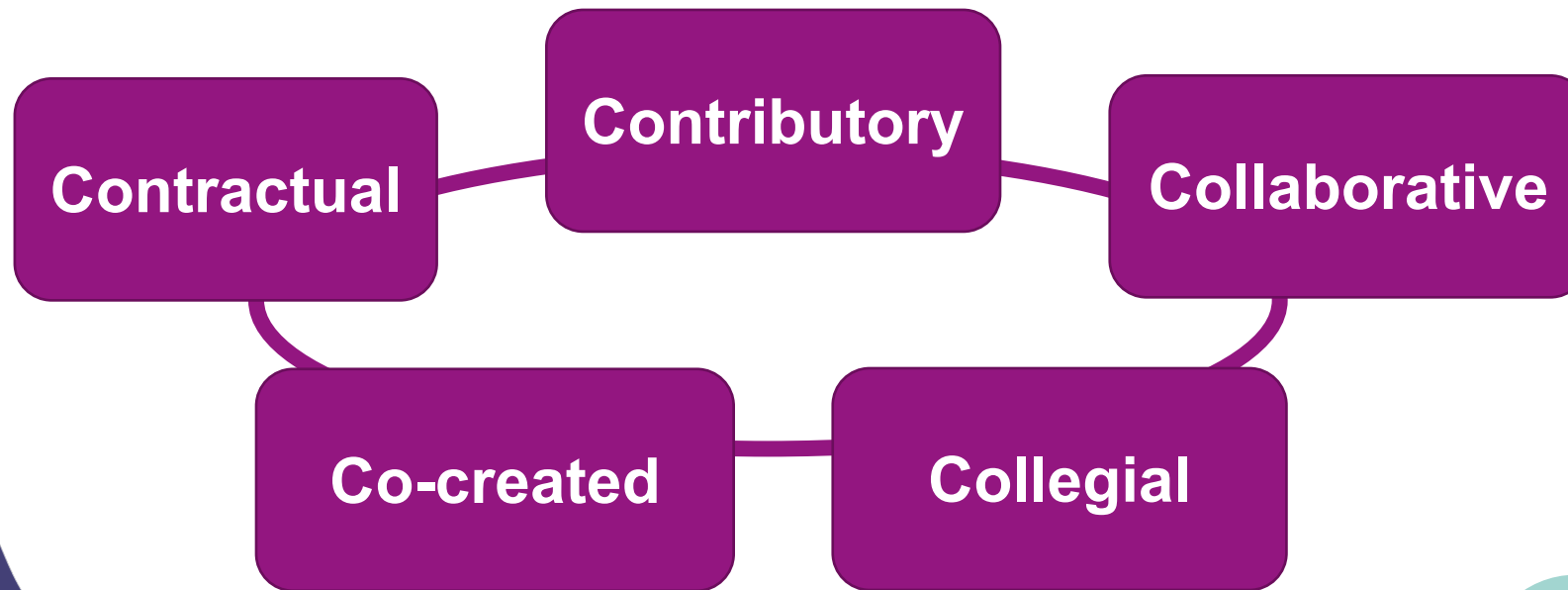
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The range of participatory practices is wide and diverse





And there are many levels of engagement and participation

'Extreme' Citizen Science

Participatory Science

Distributed Intelligence

Crowdsourcing





European
Citizen Science
Association

The 10 Principles of Citizen Science

Ten principles of citizen science

A flexible concept which can be adapted and applied within various disciplines. The declarations that have been developed by the 'Sharing best practice and building capacity' project, led by the Natural History Museum, are the 10 principles which underpin the concept of Citizen Science.

Zehn Prinzipien von Citizen Science – Bürgerwissenschaft

Citizen Science – Bürgerwissenschaft – ist ein flexibler Ansatz, welcher in verschiedenen Disziplinen angepasst werden kann. Die hier aufgeführten Prinzipien sind die Grundlage der Praxiserfahrungen und Kapazitätenentwicklung im Bereich der Bürgerwissenschaft.

Diez principios de ciencia ciudadana

La ciencia ciudadana es un concepto flexible que se puede adaptar y aplicar a diversas disciplinas. Las declaraciones que se presentan en este documento han sido desarrolladas por la Asociación Europea de Ciencia Ciudadana (ECSA) 'Sharing best practice and building capacity' y desarrollando capacidades, dirigido por el Museo de Historia Natural de Londres. La idea principal es compartir las buenas prácticas y desarrollar las capacidades de muchos miembros de esta Asociación. La idea principal es compartir las buenas prácticas y desarrollar las capacidades de muchos miembros de esta Asociación. La idea principal es compartir las buenas prácticas y desarrollar las capacidades de muchos miembros de esta Asociación.

Dieci principi di Citizen Science

Un concetto flessibile, che può essere adattato e applicato in questo documento per migliorare le pratiche e le capacità.

Dez princípios da ciência cidadã

Um conceito que pode ser adaptado e aplicado em diferentes disciplinas. As declarações apresentadas neste documento foram desenvolvidas pelo projeto 'Partilhando as melhores práticas e aumentando as capacidades', liderado pelo Museu de História Natural de Londres.

Ti principper for Citizen Science - Borgervidenskab

Citizen science – på dansk borgervidenskab – er et fleksibelt begreb, der kan tilpasses forskellige situationer og indenfor mange forskellige discipliner. Nedenunder er de ti principper for borgervidenskab (European Citizen Science Association) præsenteret. De er udviklet af nogleprincipperne, vi som forskere og borgere kan bruge til at forbedre vores samarbejde og kapacitet.

Dix principes de sciences participatives

Les sciences participatives sont un concept flexible qui peut être adapté et appliqué dans de nombreuses situations. Les déclarations ci-dessous ont été développées par le groupe de travail «Echanger et renforcer les capacités» de l'Association Européenne de la Science Citoyenne, mené par le Musée d'Histoire Naturelle de Londres, avec la contribution de nombreux membres de l'Association, afin de partager les bonnes pratiques et de développer les capacités de nombreux membres de cette Association.

Deu principis de ciència ciutadana

És un concepte flexible que es pot adaptar i aplicar a diverses disciplines. Les declaracions que es presenten en aquest document s'han desenvolupat mitjançant el projecte 'Compartir les millors pràctiques i desenvolupar capacitats', dirigit pel Museu d'Història Natural de Londres.

Deset principů občanské vědy

Občanská věda je koncept, který lze uplatnit v různých situacích. Prohlášení níže byla vypracována skupinou pracovníků «Sdílení zkušeností a posilování kapacit» Evropské asociace občanské vědy, kterou vedl Muzeum přirody v Londýně, s přispěním mnoha členů asociace, aby se sdílely dobré zkušenosti a rozvíjely se schopnosti mnoha členů této asociace.

CITIZEN SCIENCE PROJECTS ACTIVELY INVOLVE CITIZENS IN SCIENTIFIC ENDEAVOUR THAT GENERATES NEW KNOWLEDGE OR UNDERSTANDING

1

Citizens may act as contributors, collaborators, or as project leader and have a meaningful role in the project.

CITIZEN SCIENCE PROJECTS HAVE A GENUINE SCIENCE OUTCOME

2

For example, answering a research question or informing conservation action, management decisions or environmental policy.

BOTH THE PROFESSIONAL SCIENTISTS AND THE CITIZEN SCIENTISTS BENEFIT FROM TAKING PART

3

Benefits may include the publication of research outputs, learning opportunities, personal enjoyment, social benefits, satisfaction through contributing to scientific evidence e.g. to address local, national and international issues, and through that, the potential to influence policy



What terminology do YOU use to describe participatory practices and citizen engagement?

MENTIMETER












What Europeans think about science and technology

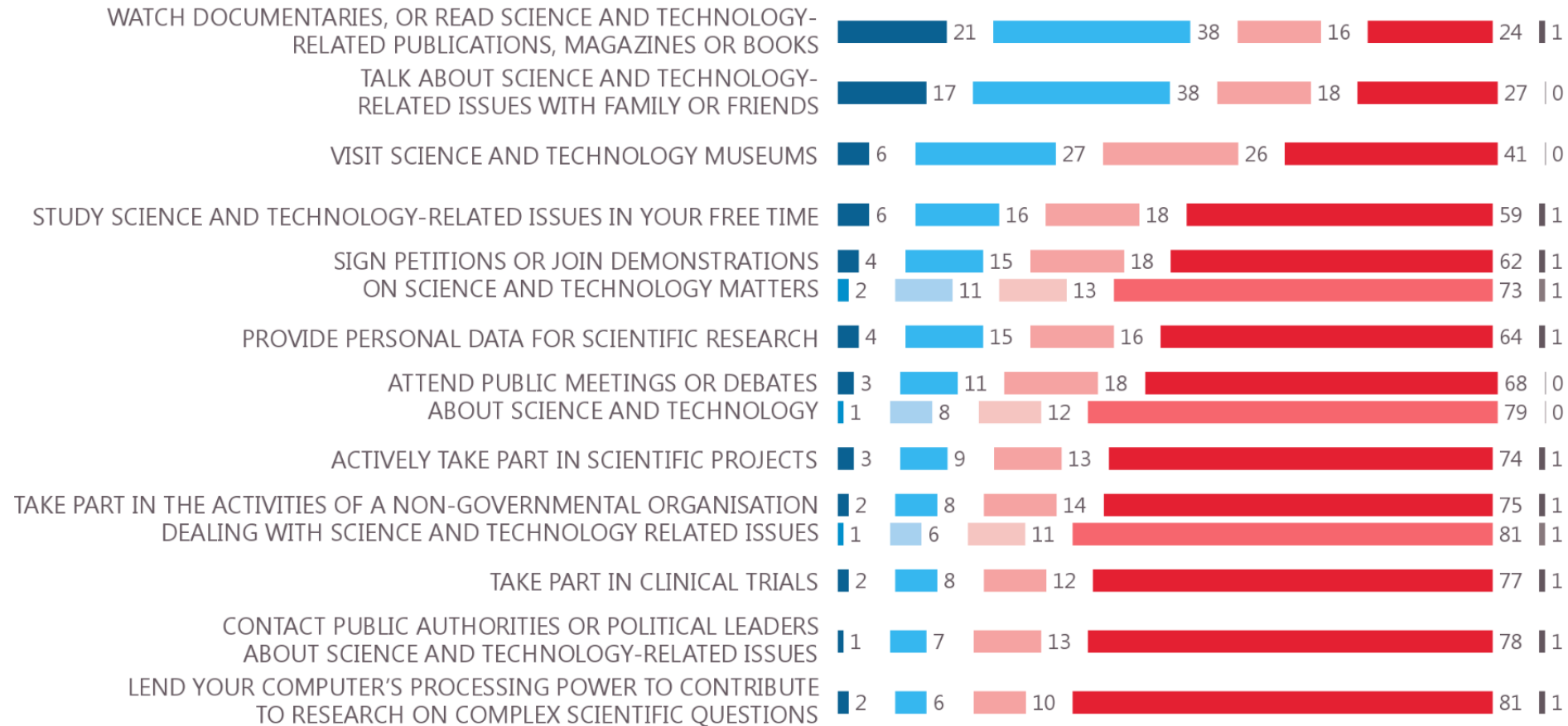
Special Eurobarometer 516

How citizens engage with science and technology

-  ● **59%**
watch **documentaries**, or read science and technology-related publications, magazines or books
-  ● **55%**
talk about science and technology-related issues **with family or friends**
-  ● **33%**
visit science and technology **museums**
-  ● **19%**
sign petitions or **join demonstrations** on science and technology matters
-  ● **14%**
attend **public meetings or debates** about science and technology
-  ● **12%**
actively **take part** in scientific projects
-  ● **8%**
contact **public authorities or political leaders** about science and technology-related issues

Impressive - and increasing - engagement

QA14 And now, a few questions on how you engage with science and technology issues. Do you
(% - EU27)



Source: Special Eurobarometer 516 – “European citizens’ knowledge and attitudes towards science and technology”.
Fieldwork: April – May 2021, sample: EU27 data (26,827 respondents)

Apr./May 2021
Jan./Feb. 2010



CITIZEN SCIENCE ELEVATING RESEARCH & INNOVATION THROUGH SOCIETAL ENGAGEMENT



Interaction between citizens, scientists and policy makers is essential to enrich research and innovation, and reinforce trust of society in science. I am proud of the hundreds of thousands involved citizens that already contributed to research and innovation and look forward to continue opening up research towards society and the world.

Mariya Gabriel *Commissioner for Innovation, Research, Culture, Education and Youth*



IN THE FIELD AT HOME & ABROAD

MLE CASE STUDIES

CITIZEN SCIENCES (CS) AT THE RBINS : RECENT AND RECURRENT COLLABORATIONS

The Royal Belgian Institute of Natural Sciences (RBINS) has an extensive and well established collaboration with volunteers in almost all its directorates (Taxonomy & Phylogeny, Public Services, Natural Environment, Scientific Heritage Service, Earth and History of Life). The nature of the activities of the «Citizen Scientists» (CSs) is really varied. With their help, the RBINS complements the lack of expertise in some research fields. They also valorize the scientific collections by studying them, as a result improving collection management and accessibility of the collections. This poster shows some of the most recent projects where the CSs are active and how important their role is to the RBINS.

MALACOLOGICAL - INVERTEBRATES



Contribution to Taxonomy Neotropical landmasses, especially the re-evaluation of the *Orthis* genus.
CSs contribute to the research of landmasses, and collection management (typics, biohistory, Dautzenberg collectors).



Fraud and Fakes with specimen shells, shell related objects and artefacts
Study and analysis of shells and shell related objects found and taken in real life museums, private collections and ethnographic collections worldwide, improving and valorising conservation and management of collections.



Contribution to taxonomy & population distribution
Identification of *European marine Mollusca* (Gastropoda, Opisthobranchia, Naudobranchia) from the Atlantic & Mediterranean Sea with occasional support in identifications for stakeholders.



Siké-du (Sikéen inventarisatie in de Duinen) project
CSs make an inventory of the *terrestrial and freshwater molluscs* from the Belgian coastal region with attention for vulnerable and Red List species and endemic/recent species.



Contribution to SPEEDY (2014-2017) by a collaborative project funded by the IAP program of Belgo
CSs and researchers sample *landmasses* for DNA research and morphometrics to study the responses of populations and communities to urbanisation.



"Overarching project" improving our knowledge and expertise of species: invertebrates
CSs and professionals describe new species of *invertebrates* (Mollusca, Crustacea, Hydrozoa, Porifera, Echinodermata, Bryozoa, ...), study collections, data, archives, etc.

ENTOMOLOGY



Contributions to Taxonomy
CSs study and describe specimens of *insects and spiders* (specific groups: Families, genera, ...) from the collections at home (local) and are valorising un-identified specimens/collections.



Contributions to Collection Management
CSs are involved in sorting, mounting and *labeling* specimens of insects and spiders, re-organising collections and making them available for study.



Contributions to field sampling and international scientific missions/ expeditions
CSs are involved in *sampling* specimens in Belgium or foreign countries. Citizens and professionals with an interest in *insects, insects, spiders, mites, collembola, ...*



Contributions to digitization of type specimens (pictures) by crowd sourcing
CSs make high resolution stacked pictures from type specimens and put them on *Virtual Herbarium* (FIGIS database) using an on line crowd sourcing tool. After validation, the pictures are put online.



Contribution to entomological databases and websites by crowd sourcing
CSs compile *Excel lists* of observations (*collections*). Screened and validated data are added to a database, and can be used by both researchers and CSs for their own projects, publications etc.

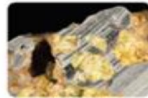


Education & sensitization on insects for a broad audience
CSs help organizing *educational activities* on insects for a broad audience. One of the top activities is the "Week of the insects" organized by FIGIS and 6 Belgian entomological associations. During this work, all over Belgium CSs are *enrolled* on the magic world of insects.

GEOLOGY & PALAEONTOLOGY



Contribution to palaeontology and geology
CSs are collecting *fossil specimens*, studying them and analyzing the results, studying specimens from the RBINS palaeontology collections, either on their own or in collaboration with RBINS scientists.



Collecting geological data and samples from temporary outings
CSs provide information about temporary outings (such as excavations for new buildings or roadworks, make a description of the outcrop to be included in the *GeoBase database*, and supply useful samples for the collection.



Contribution to fossil preparation
CSs participate in the preparation and *restoration* of *fossil vertebrate remains*, both recently collected specimens as well as specimens from the RBINS collection. Part of the prepared/restored specimens are studied at RBINS or by the CSs at home (local).



Enlargement of the RBINS reference collection of dry fish skeletons
CSs collect and deliver *skuller rays* or carcasses of *carp fishes*, that are prepared for their skeletons at RBINS and deposited in the collections. They serve for comparative purposes to identify fish remains from archaeological or palaeontological sites.

BELGIAN BIRD RINGING CENTER



Birdlife (Belgian Ringing Scheme)
Birdlife (about 150 regions) aims to organize the collection of quality data through a network of *certified volunteers* (ringers); make the data available to scientists, CSs, policy makers, ... participate in training students, and develop research programs focused on the conservation of nature.
<https://museumpb.be/natural-sciences/be/birdlife>

PUBLIC AWARENESS



Doing it Together Science (DITIS) : 2016 - 2019
European projects supporting RBINS CSs activities like the DITIS project focusing on *Biodiversity and Environmental Sustainability*.



XperiBe.be
XperiBe.be is an educational project that aims to distribute *most boxes* equipped with a camera and a nano computer to schools and educational partners around Belgium. *School kids* enter their observations on the website <http://www.xperi.be/>.

For any questions, please write us at citizenscience@naturalsciences.be



The pictures are used by kind permission of the RBINS and its collaborators.

Design by Mieke Berckx, RBINS © 2018



IN THE FIELD AT HOME & ABROAD

MLE CASE STUDIES

SNAIL-BORNE DISEASES



IN THE FIELD AT HOME & ABROAD

MLE CASE STUDIES

weekly snail collection



sorting & counting



water chemistry



TOPIC 2 – GOOD PRACTICE & IMPACTS



Mutual Learning Exercise

Citizen Science Initiatives –
Policy and Practice

*Thematic Report: Ensuring Good
Practices and Impacts*

PSF CHALLENGE

HORIZON EUROPE
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Independent
Expert
Report



Research and
Innovation

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CHALLENGES & SUCCESS VARIABLES

MLE WORKSHOPS

Variable 1: **Citizen Engagement & Participation**

Variable 2: **Data Quality & Openness**

Variable 3: **Communication Efforts**

Variable 4: **Sustainability over the longer term**



e.g. LEVELS OF PARTICIPATION

MLE WORKSHOPS



Level of participation											
Austria	Belgium	France	Germany	Hungary	Italy	Italy	Norway	Portugal	Romania	Slovenia	Sweden
					Unknown						
				Unknown	Unknown						
					Unknown						

e.g. ENGAGEMENT STRATEGIES

MLE WORKSHOPS

Engagement strategies											
Austria	Belgium	France	Germany	Hungary	Italy	Italy	Norway	Portugal	Romania	Slovenia	Sweden
Unknown		A lot of local animation, national and local media coverage, restriction of results, ...	The project was announced nationwide via media (TV, radio, social media, newspapers and magazines) and on the project website. Schools nationwide were informed via a direct mailing.	Based on personal involvement, for example citizens living at Lake Balaton could help to discover the damaged stretch (both Pirella roads and also participated to replace the new mats on the lake).	Unknown	Unknown	Researchers have worked together with youth and municipal through employees to find out how young people can be included when their services are developed that are aimed them.	Engagement is based on a capacity building program, which created new occupational and professional roles centered on participants' expertise and life experiences, providing them with a source of complementary income.	The project has been promoted through various channels, including radio, TV, social media, specifically made for the project (Age SOS), workshops and other meetings to discuss, or discussions with them. Feedback made only through e-mail, Facebook and WhatsApp.	Unknown	Email, Facebook/Twitter, school visits, Teaching material in different languages Website (multilingual), Co-OP Collaboration support with local groups
		No	No	Unknown	Unknown	Unknown			No	No	
		No	No	Unknown	Unknown	Unknown			No	No	



'ACTION PROJECT' IMPACT FRAMEWORK

MLE CASE STUDIES

SCIENTIFIC IMPACT

- Scientific knowledge
- New research fields and interdisciplinarity
- New knowledge resources
- Innovation in education

SOCIAL IMPACT

- Community building and empowerment
- Social inclusion
- Researchers' and research community's growth and empowerment
- Knowledge, skills and competences
- Changes in way of thinking, attitude and values

ECONOMIC IMPACT

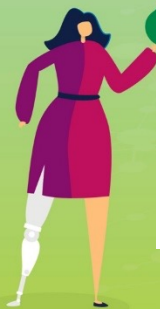
- Impact on employment
- Cost saving
- Income and revenue generation for leading organisations
- Economic impact on the local communities

POLITICAL IMPACT

- Impact on policy process
- Political participation
- Self-governance

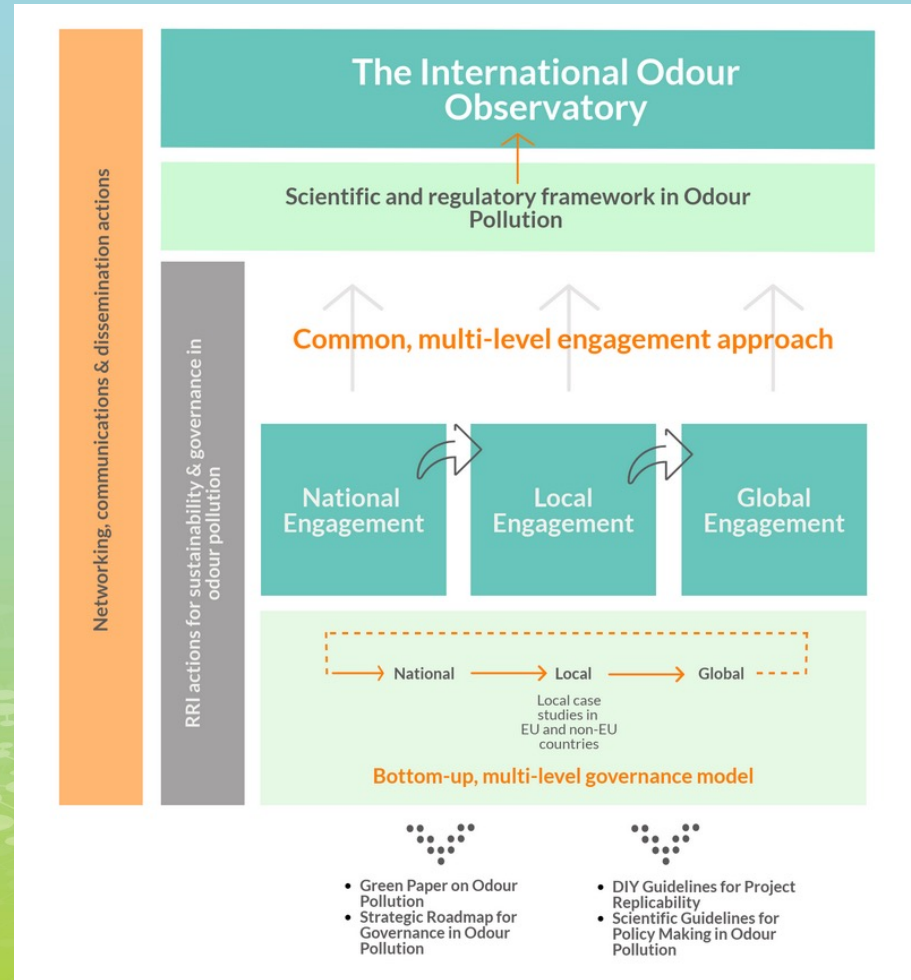
ENVIRONMENTAL IMPACT

- Impact on ecosystem
- Impact on biodiversity
- Impact on soil quality
- Impact on water quality
- Impact on air quality
- Impact on health



THE 'D-NOSES' CASE STUDY

MLE CASE STUDIES



D-NOSES
Distributed Network for Odour Sensing, Empowerment and Sustainability

ODOUR POLLUTION A GROWING SOCIETAL CONCERN

3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 5 GENDER EQUALITY 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 11 SUSTAINABLE CITIES AND COMMUNITIES 12 RESPONSIBLE CONSUMPTION 13 CLIMATE ACTION 14 LIFE BELOW WATER 15 LIFE ON LAND 16 PEACE, JUSTICE AND STRONG INSTITUTIONS 17 PARTNERSHIPS FOR THE GOALS



The Participants' Top-10

1. Work on recognition and institutional barriers
2. Facilitate training and capacity building
3. Launch specific funding calls
4. Include specific evaluation criteria in general calls
5. Build common repositories, observatories or platforms
6. Launch calls for replication and upscaling of ongoing projects
7. Increase & strengthen new & existing networks
8. Use cascade funding schemes
9. Promote common data infrastructures
10. Support CS practices through incubator model



TOPIC 3 – RELEVANCE & EXCELLENCE



Mutual Learning Exercise

Citizen Science Initiatives – Policy and Practice

Third Thematic Report: Maximising the Relevance and Excellence of Citizen Science

PSF CHALLENGE

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Report



Research and
Innovation



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FACTORS OF EXCELLENCE

MLE WORKSHOPS

Factor 1: **Align with and support the Sustainable Development Goals (SDGs)**

Factor 2: **Consider and address novel ethical issues**

Factor 3: **Manage data in line with the FAIR principles in order to impact policy**



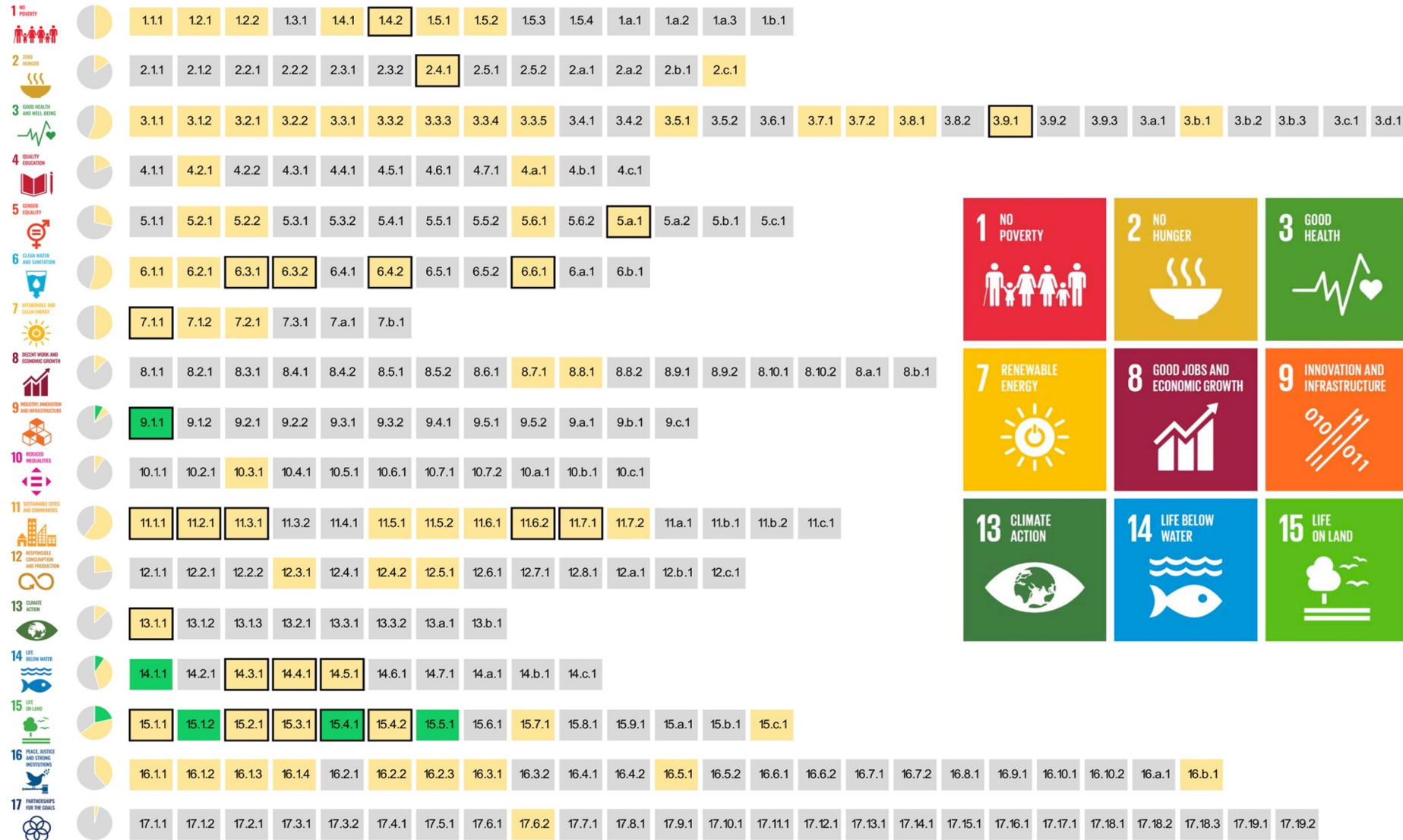
CS CONTRIBUTION TO THE SDGS

MLE CASE STUDIES

- Defining targets and metrics and improving reporting coverage
- Monitoring progress and closing data gaps in a more cost-effective way
- Fostering actions towards implementing and achieving the SDGs



The SDG indicators where citizen science *projects* are 'already contributing', 'could contribute' or where there is 'no alignment'



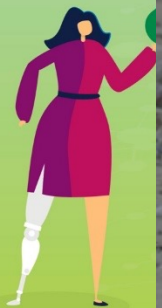
CS CONTRIBUTION TO THE SDGS

MLE CASE STUDIES

Strengthening Measurement of Marine Litter in Ghana

How Citizen Science is Helping to Measure Progress on SDG 14.1.1b

SDSN TReNDS | 9 April 2021



CS CONTRIBUTION TO THE SDGS

MLE CASE STUDIES

- Ghana is the first country to report on SDG indicator 14.1.1b
-and the first country to use citizen science data for that purpose.
- Ghana's Integrated Coastal and Marine Policy makes use of this data
- local data collection efforts are connected with global monitoring processes





Key Participant Recommendation

Use the momentum of the Agreement on Reforming Research Assessment (and CoARRA) to bring Citizen Science explicitly into the definition of "excellence" in R&I and Science.



TOPIC 4 – ENABLING ENVIRONMENTS

European Commission

Mutual Learning Exercise

Citizen Science Initiatives - Policy and Practice

Fourth Thematic Report: Enabling Environments and Sustaining Citizen Science

PSF CHALLENGE
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Report

Research and Innovation

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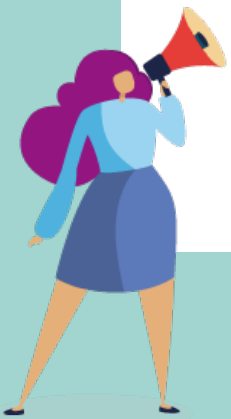
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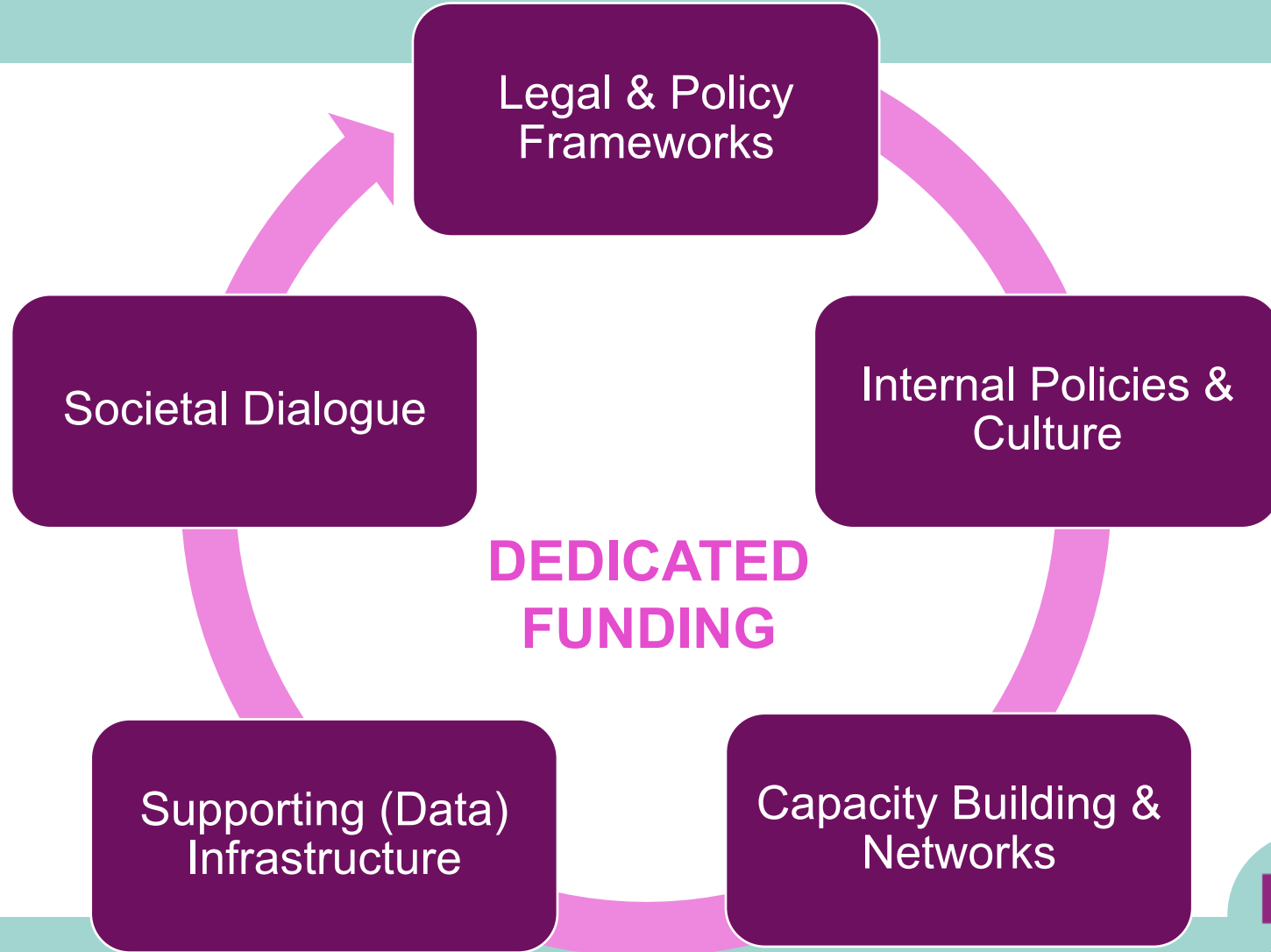
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What is an Enabling Environment?

the factors that enable Citizen Science initiatives
to be launched, sustained,
grow and thrive – and ultimately achieve
their aimed-for impacts and outcomes





CITIZEN SCIENCE FOR POLICY ACROSS EUROPE

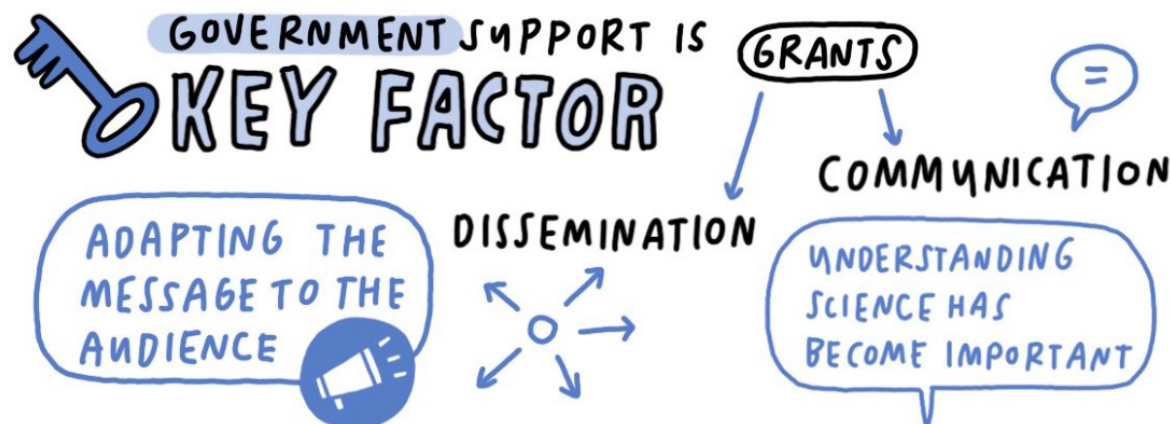


eu-citizen.science

CARMEN CASTRESANA PROMOTING CITIZEN SCIENCE THROUGH THE LAUNCH OF NATIONAL PLANS FOR FUNDING CITIZEN SCIENCE PROJECTS

SPAIN

SUBMISSIONS GROW YEAR BY YEAR



IN SPAIN, IT'S BECOMING COMMON TO INCLUDE CITIZENS, IT'S A **NECESSITY**

CULTURE CHANGE

- 1 FOSTER CITIZEN SCIENCE
- 2 SPECIFIC MODALITY CALL
- 3 CS IN SPANISH STRATEGY 2021-2027



THIS IMAGE IS A VISUAL SUMMARY OF A PRESENTATION GIVEN AT THE EVENT "CITIZEN SCIENCE FOR POLICY ACROSS EUROPE" HELD ON 22 JUNE 2021 ORGANISED BY EU-CITIZEN.SCIENCE.



CS CONTRIBUTION TO THE SDGS

MLE CASE STUDIES



CITIZEN SCIENCE TOOLS

CONTRIBUTE TO EXISTING PROJECTS OR CREATE YOUR OWN

The Citizen Science Center Zurich is developing a set of tools that make it easy for scientists and citizens to engage with Citizens Science projects.

- 
Discover
- 
CS Logger
- 
CS Project Builder



Citizen Science Center Zürich

PRACTICING CITIZEN SCIENCE IN ZÜRICH

HANDBOOK





What are YOUR own local examples of support and enabling factors for Citizen Science?

MENTIMETER



TOPIC 5 – SCALING UP

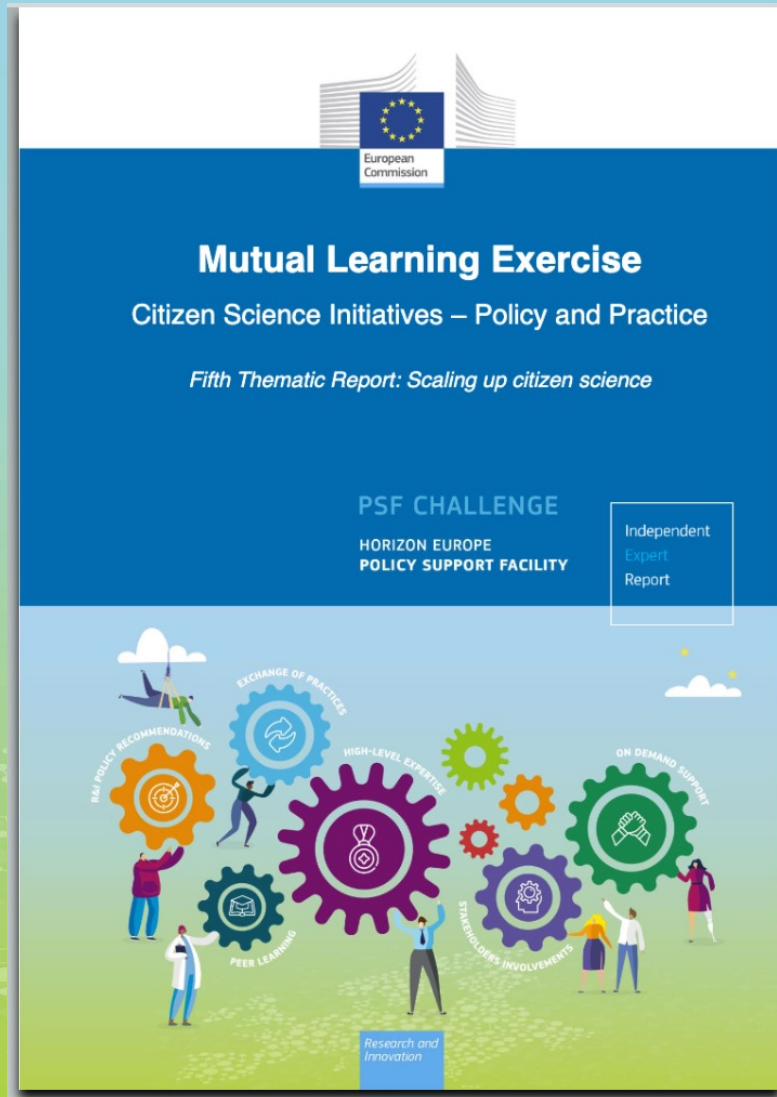
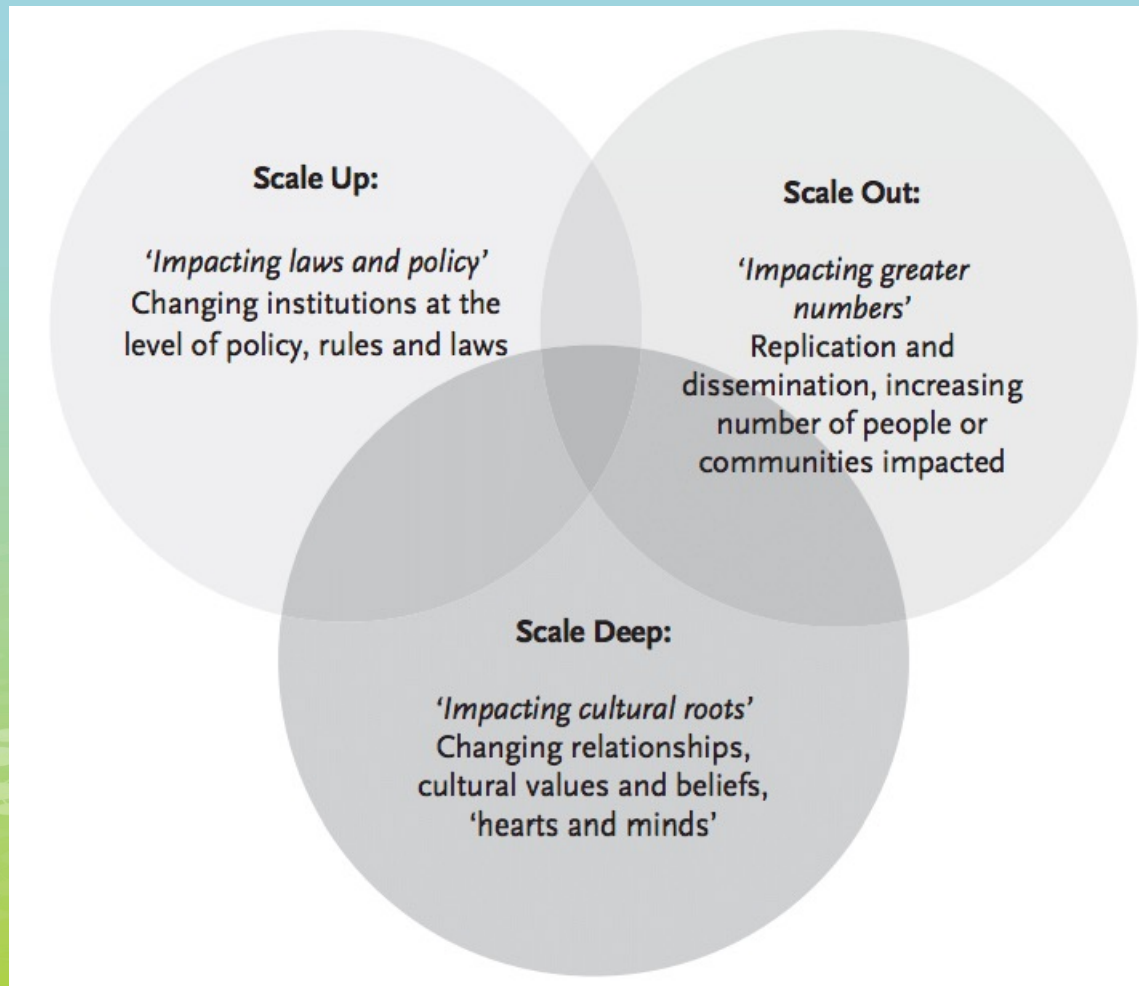


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SCALING UP, OUT, DEEP...AND DOWN

MLE WORKSHOPS



HORIZON EUROPE

ADVANCED CLIMATE,
SCIENCE AND SOLUTIONS



European Union, 2023

A collage of images related to the 'Plastic Pirates' campaign. The top image shows a woman in a brown jacket and hat standing next to a large banner that reads 'GO EUROPE! PLASTIC PIRATES' with the European Union flag. The banner is being held by several people in a natural setting. Below this are three smaller images: a person on a beach with a net, a map of Europe titled 'PLASTIC PIRATES - SAMPLINGS IN 2022' showing sampling locations with numbers, and a person in a boat collecting plastic waste. The bottom of the collage features the hashtags #HEClimate, #EUGreenDeal, and #EUMissions.

GO EUROPE!
PLASTIC PIRATES

#HorizonEU

PLASTIC PIRATES -
SAMPLINGS IN 2022

#HEClimate #EUGreenDeal #EUMissions

©Plastic Pirates



FINAL REPORT – BACKCASTING



Mutual Learning Exercise

Citizen Science Initiatives - Policy and Practice

Final report

PSF CHALLENGE
HORIZON EUROPE
POLICY SUPPORT FACILITY

Independent
Expert
Report

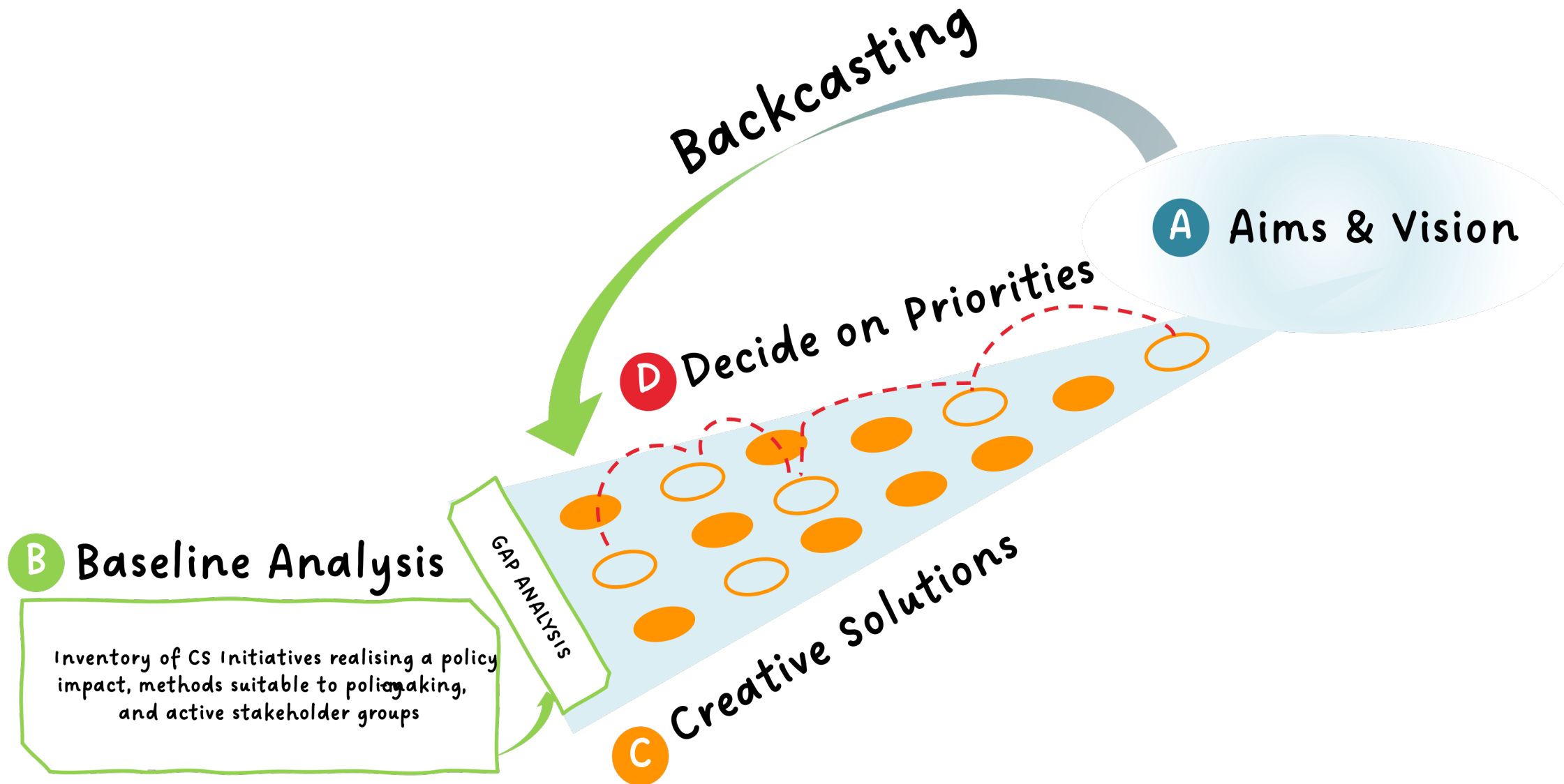


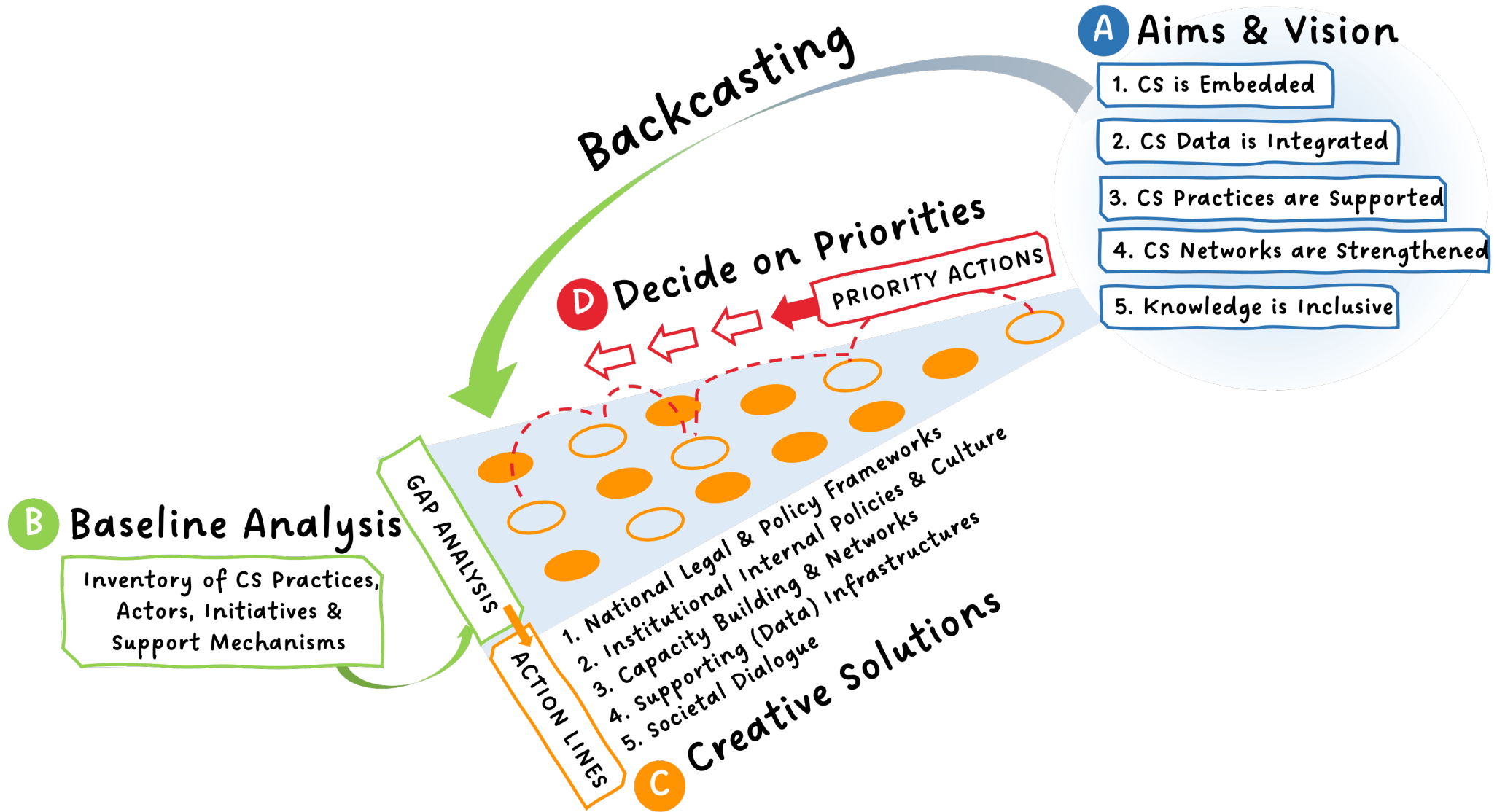
Research and
Innovation

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Spheres of Influence → Strategic Aims ↓	Ministries	RFOs	RPOs	RSOs	HEIs
1 (a) Embed Citizen Science as part of mainstream research and innovation processes	✓	✓	✓✓	✓	✓
1 (b) Embed Citizen Science as part of mainstream funding	✓	✓✓			
1 (c) Embed Citizen Science as part of mainstream education	✓	✓	✓		✓✓
2 (a) Integrate Citizen Science Data into mainstream processes for research, policy making and decision making.	✓✓	✓		✓	
2 (b) Build Citizen Science data and technology infrastructure	✓	✓	✓	✓	
3 Support Citizen Science Practices	✓	✓	✓✓	✓✓	✓
4 Strengthen Citizen Science Networks	✓	✓✓	✓	✓	✓
5 Make Knowledge Production Inclusive	✓	✓	✓	✓	✓

THE GERMAN 'WEISSBUCH'

MLE CASE STUDIES

BÜRGER SCHAFFEN WISSEN Digitale Mittagspause 27. AUGUST 2021

wissenschaft im dialog
 HOST: AG WEISSBUCH far Naturen MUSEUM FÜR NATURKUNDE BERLIN

Gemeinsam die ONLINE-KONSULTATION GESTALTEN!
MODERATION: SIKE VOIGT-HEUCKE (MFN) & CHRISTIN LIEDTKE (HELMHOLTZ GESCHÄFTSSTELLE)

WEISSBUCH CITIZEN SCIENCE STRATEGIE 2030 FÜR DEUTSCHLAND

FÜR 2030
AG WEISSBUCH
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 HANDLUNGSOPTIONEN 41 THEMEN

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NATURGUCKER [VEREIN]
 PLATTFORM FÜR DATEN, BILDER, AUS-TAUSCH UND BEGEISTERUNG
 NATURGUCKEN MACHT SPAß UND SCHAFFT WISSEN!
 ES BRAUCHT NIEDRIGSCHWELLEN EINSTIEG!
 ICH MACH NUR SO VIEL ICH WILL!

ORIENTIERUNG
 GIBT UND BRAUCHT JETZT KONSTRUKTIVE WEITERENTWICKLUNG

SEHR HILFRICH: HANDLUNGSEMPFEHLUNGEN
 TRANSPARENTES DATENSAMMELN
 WEISSBUCH ALS REFERENZ FÜR NEUE PROJEKTE

MAINSTREAM ODER ELITÄR?
 DAS IST DAS ZIEL!
 NOCH NICHT VIEL BEWEGUNG IN RICHTUNG MAINSTREAM...
 CITIZEN SCIENCE IST IMMER NOCH NISCHE...
 ES BRAUCHT DIE ZUSAMMENARBEIT, Z.B. IN DER MEDIZIN

STARKE COMMUNITY & VERNETZUNG UND AUSTAUSCH
 KARTIERUNGS-LÜCKE!
 Z.B. ZIELGERICHTET FLIEGENPILZE ZÄHLEN UND ZUFALLSBEOBSACHTUNGEN
 MABNAHMENORIENTIERTE HILFSTELLUNG

BRÄUCHT GUTE DATEN-QUALITÄT!
 SCHULISCHE GRUNDBILDUNG FINDET MEIßT ÜBER KLASSISCHE MEDIEN STATT

AUßER-SCHULISCHE ANGEBOETE!
 & INFORMATIONEN ZU UNIVERSITÄREN GRUPPEN STRUBEN
 LABORE, SPIELERISCH HERANTASTEN

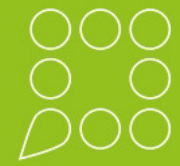
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 SCIENCE LITERACY FÖRDERN
 BEGEISTERUNG SCHAFFEN
 SKEPSIS ABBAUEN!
 WISSENSCHAFTLICHE METHODEN KOMMUNIZIEREN
 DATEN SCHÄTZEN & KREATIV NUTZEN
ÜBER THEMEN

GÄSTE
 MANFRED RONZHEIMER (JOURNALIST)
 GABY SCHULEMANN-MEIER (NATURGUCKER)
 ANKE VALENTIN (WISSENSCHAFTS-LADEN BONN)

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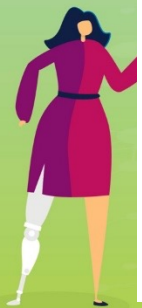


Weißbuch
 Citizen-Science-
 Strategie 2030
 für Deutschland



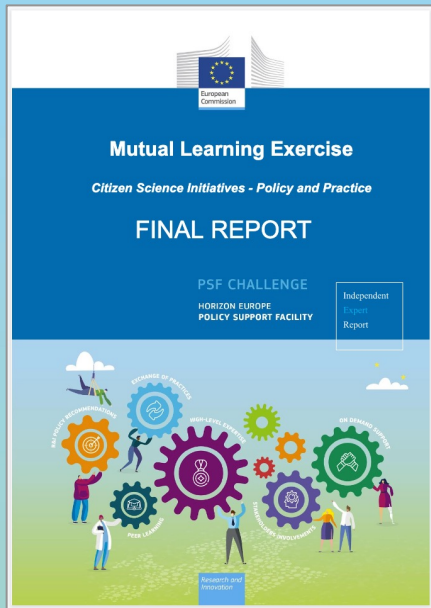
THE GERMAN 'WEISSBUCH'

MLE CASE STUDIES



The Top 4

<https://tinyurl.com/MLEcsfinal>



1. Support & grow national networks of practitioners
2. Develop & provide dedicated funding instruments
3. Enable the required culture change
4. Invest in supportive infrastructure

Q & A

THE MUTUAL LEARNING EXERCISE ON CITIZEN SCIENCE

<https://tinyurl.com/psfMLEcs>

