

2022 - Overall and grand period goals and their status

WG1

Overall and grand period goals and their status

Working Group 1 addresses four major tasks and deliverables that are the core of our grand period goals:

Tasks	Deliverables	Due to Action month	Status
Task 1: Performing a systematic review of existing methods and survey results directly related to the topic of evolution acceptance and understanding.	Deliverable 1: Report on existing methods and results.	21	FINISHED (see publications)
Task 2: Developing and translating a set of standardized tools aimed at measuring the acceptance and understanding of evolution as well as related factors across different levels of education.	Deliverable 2: Standardized and ready-to-use protocols (e.g., survey design, questionnaire(s), procedures, data preparation and statistics) in Action Members' European languages.	30	FINISHED (see publications)
Task 3: Pilot study of the standardized tools on a small scale in different European countries.	Deliverable 3: Academic paper on pilot results of standardized tool.	39	FINISHED (see publications)
Task 4: Disseminating existing and future data in the most compelling and publicly accessible way (including popular science outputs and papers in targeted scientific journals).	Deliverable 4: Visual summary & press release of assessment results for media and policy makers.	48	ONGOING

In the table below the goals of Working Group 1 (WG1) for the current grand period (GP4) as well as their status and how they relate to Action objectives (MoU obj.) and WG1 deliverables are displayed [status as of May 2022]:

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]

1. Publish the manuscript about the overall results of the main study on acceptance and knowledge about evolution in Europe in a peer reviewed journal.	1, 4	Task 3, Deliverable 3	DONE: Manuscript submitted to a peer review journal and published (see publications)
2. Writing a manuscript about knowledge about evolution and misconceptions about evolutionary concepts in Europe and submitting it to a peer reviewed journal.	1, 4	Extension (Task 3, Deliverable 3)	ONGOING: Analyses are finished and manuscript writing ongoing
3. Disseminating data on acceptance and knowledge about evolution to the general public across Europe.	4, 11	Task 4, Deliverable 4	ONGOING: First draft of interactive infographic available, finalization ongoing
4. Visual summary and press release of assessment results.	4, 11	Task 4, Deliverable 4	ONGOING: First draft of interactive infographic available, finalization ongoing
5. Plan and coordinate the sustainability of the Working Group.	1, 7	Extension	ONGOING: Session planned at WG1 meeting in Antwerp
6. Transversal: Plan and coordinate further analyses with the aim to merge the data of WG1 and WG2.	1, 3	Extension (Task 3, Deliverable 3)	ONGOING: Session planned at WG1 meeting in Antwerp, STSM call out

WG2

Tasks	Deliverables	Due to Action month	Status
Task 1: A WG meeting dedicated to examining the schools' curricula from the participating countries and focusing on a) the ages at which evolution is taught, b) the allocated time for evolution teaching, c) the content and accuracy of the evolutionary concepts and d) potential contexts to learn about evolution using existing curricula and links to daily life/societal issues.	Deliverable 1: Academic paper and report on the comparative results of the analysis of the schools' curricula with suggestions to explore evolution from elementary school. Results will also be presented in the media in each country's language (Task 1).	12	First publication with the framework published ONGOING: Second publication with the comparison between countries being written

<p>Task 2: Construct a questionnaire to gather data regarding teachers' CK and PCK to teach about evolution and their attitudes and self-efficacy beliefs to teach this subject.</p>	<p>Deliverable 2: Academic paper on the comparative results of teachers' and students' misconceptions about evolution and the socio-cultural factors that might have influenced them as well as of the analysis of the students' understanding about evolution across different developmental stages to inform curriculum design (Tasks 2).</p>	<p>24</p>	<p>First publication with the evaluation framework for elementary school students' evolution understanding published</p> <p>ONGOING: Second publication with the comparison between countries delayed. Framework is being piloted in several countries</p>
<p>Task 3: Fostering cooperation among educators and researchers from the participating countries to collect and analyse data regarding the way that evolution is presented in school textbooks.</p>	<p>Deliverable 3: Academic paper on the manner in which school textbooks present evolution together with proposals increasing its efficacy (Task 3).</p>	<p>36</p>	<p>ONGOING: Draft paper is being finalised</p>
<p>Task 4: Establishing STSMs that will identify and evaluate methodologies, strategies, events and formal and non-formal contexts used to empower teachers of different grades to teach about evolution. Best practices will be identified and disseminated.</p>	<p>Deliverable 4: Academic paper that evaluates the strategies used in initial teacher training and professional development actions on science and evolution education together with reports containing recommendations to enhance science and evolution teaching skills in different countries (Task 4).</p>	<p>48</p>	<p>ONGOING</p>

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]
GP19: Submission of the curricula analysis paper to an international peer reviewed journal	1,4	T1, D1	ONGOING: data collected, paper is being written
GP20: Evaluate the differences between students' evolution understanding across grades	1,4,8	D2	ONGOING: evaluation tool being piloted in 6 countries
GP21: Submission of the text book analysis paper to an international peer reviewed journal	1,4	T3, D3	ONGOING: data collected, paper is being finalised
GP22: To draft a paper characterising teacher training actions offered by the by members of the action	2,4	D4	ONGOING: interviews already performed.

GP23: To offer teacher training actions on evolution education.	3,4,9	D4	DONE: at EvoKE meeting
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WG3

Working Group 1 addresses four major tasks and deliverables that are the core of our grand period goals:

Tasks	Deliverables	Due to Action month	Status
Task 1: Organizing a WG meeting to identify science exhibitions, exhibits and activities that present evolution-related topics and retrieve any available assessment data on their impact.	Deliverable 1: Report of pilot study of assessment of informal learning environments in evolution education (exhibits and other activities)	18	FINISHED (see Zenodo)
Task 2: Organizing a workshop that will establish a set of best practices/guidelines for creating/restructuring museum exhibitions, exhibits and educational programs on evolution.	Deliverable 2: Publication and dissemination of a set of best practices for creating/revising museum exhibitions, exhibits and educational programs..	27	ONGOING (but 95% ready for Zenodo)
Task 3: Organizing a workshop that will explore assessment strategies to evaluate evolution exhibits (in collaboration with WG1).	Deliverable 3: Report of pilot study of assessment of evolution exhibits and activities in informal environments.	36	ONGOING (1 report + potentially 2 publications)
Task 4: Establishing STSMs that will focus on effective links and activities that could reinforce learning both in- and outside of the classroom.	Deliverable 4: Dissemination of a selection of evolution-based activities that can be used both in and outside of the classroom for teachers and the informal education community.	48	ONGOING (dashboard)

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]
WG3: Analysis of the results of the assessments of non-formal evolution-themed activities	1, 2, 8	Deliverable 3	ONGOING: Analyses are currently ongoing for exhibition in Zurich and the WG3 online workshop on evolution VMG ongoing

WG3: Implementing tested assessment instruments to broader range of non-formal evolution-themed activities	3,10	Task 3, Deliverable 3	FINISHED: Based on the WG1/WG3 Workshop two assessments have been done - for a physical exhibition and for the online workshop
WG3: Development of an online workshop to explain basic evolution concepts to teachers, educators, journalists and artists + development of the assessment workshop to teach stakeholders how to assess nonformal learning activities	2,3,4,7,9,11	Task 3, Task 4, Deliverable 3, Deliverable 4	FINISHED: both online Evolution decoded workshop on April 28th, and Assessment decoded workshop on May 31st; VMG completed
WG3: Report of pilot study of assessment of evolution exhibits and activities in informal environments	1,2,8	Extension (Deliverable 3)	ONGOING: the outline of the report has been written at the meeting in Belgrade, as well as a plan for drafting two publications
WG3: Dissemination of a selection of evolution-based activities that can be used both in and outside of the classroom for teachers and the informal education community	2,4,9,11	Extension (Task 4, Deliverable 4)	ONGOING: First draft of interactive infographic available, additional activities will be added until the end of the action
WG3: Establishing STSMs that will focus on effective links and activities that could reinforce learning both in- and outside of the classroom.	2,3,4,7,11	Extension (Task 4)	ONGOING: one STSM accomplished in October 2021 Another STSM/VMG to be established

WG4

Tasks	Deliverables	Due to Action month	Status
Task 1: Organizing an initial STSM that will collect data on the current state of science-journalism and science-media relationships in different countries and search for existing initiatives in this area.	Deliverable 1: Guide/compendium on linking scientists and journalists effectively	30 (originally)	ONGOING (Data collected, we plan to prepare final report during an STSM (June '22) and prepare a draft of a paper for submission during extension period)

<p>Task 2: Promoting links between scientists and journalists/publishers in communicating evolutionary biology by means of a workshop for both groups that will examine themes including how to find potential matches between scientists and journalists or whether to credit scientists as co-authors or external experts.</p>	<p>Deliverable 2: An online list of projects that would benefit from close science-media cooperation</p>	<p>36 (originally)</p>	<p>ONGOING (The Mastodon system was setup and is operational; this deliverable and general idea turned out much more difficult due to country differences and cultural variation, we would still like to see Mastodon as a proof of a more general, developable concept)</p>
<p>Task 3: Organizing a workshop that will design a set of best practices for public media and publishers to demystify evolutionary biology and to present it as a modern, valuable and contributory field.</p>	<p>Deliverable 3: Reproducible Science-Media TS</p>	<p>42 (originally)</p>	<p>COMPLETED (All done thanks to massive effort from Rita and amazing trainers; we consider it done although the final protocol is still being polished)</p>
<p>Task 4: Collation of best practices for science-media relationships.</p>	<p>Deliverable 4: Code of good practices in science journalism</p>	<p>48</p>	<p>ONGOING (Animations under production - they will be also accompanied by our own strategy on how to promote it in our countries)</p>

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]
1.Complete paper /report from science-media practices questionnaire	1,2,3	T1, D1	ONGOING
2.Operational real-life Mastodon platform aimed at linking scientists and journalists	3,6,7, 10	T2, D2	ONGOING
3.Completing the protocol for a scalable, reproducible science-media training school	3,4,6, 9	T3, D3	ONGOING
4.Complete animations	2,4,9	T4, D4	ONGOING

WG5

Tasks	Deliverables	Due to Action month	Status
Task 1: Undertaking a systematic review of the ways in which researchers can be involved in outreach and develop a set of good practices that improve science and evolution literacy.	Deliverable 1: Report and paper reviewing researcher outreach engagement and containing key recommendations on how to encourage researchers' outreach engagement	36	ONGOING 1a - Finishing the writing: Paper#2 - "Understanding scientists' motivations on science communication: a systematic literature review" - (Planned, VIRTUAL MOBILITY GRANT) Paper#3 - "Evolution and science communication: a literature review on its challenges and features" - Ongoing (Extra plan) 1bFinal test of the questionnaire launched in 16 languages
Task 2: Development of standardized tools to enhance researcher engagement in outreach.	Deliverable 2: Ready to apply assessment toolkit for science outreach events	48	ONGOING
Task 3: Develop material to enhance researcher engagement in outreach.	Deliverable 3: Best practice guide and recommendations for scientists' engagement	48	ONGOING Production of 11 modules (example of module 1), with multilanguage subtitles (assembly of the other webpages and finalisation of the videos with credits in progress) Will be transformed into a written guide
Task 4: Organize a joint meeting with existing COST Action on citizen science to explore citizen-science projects with an evolutionary focus.	Deliverable 4: A compendium/ best-practices guide to citizen-science projects in evolution	34	ONGOING

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]
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1. WG5 1b : collect and analyse the data for the survey on researchers' involvement in public engagement, submission of the paper	1, 2, 4, 9	T1, D1a	ONGOING:
2. WG5 1b : collect and analyse the data for the survey on researchers' involvement in public engagement, submission of the paper	1, 2, 6	T1, D1b	ONGOING: ...
3. WG5 2 : Testing and implementation of the outreach projects/activities design and assessment toolkit with EuroScitizen members, and public dissemination of the toolkit.	2,3,4 6, 7, 8, 9, 10, 11	T2, D1	ONGOING: ...
4. WG5 3 : Production a general booklet with advice for researchers on public engagement activities	2, 4, 6, 9, 11	T3	ONGOING:
5. WG5 3 : Produce a series of webinars on successful public engagement activities	4, 9, 11	T3	ONGOING:
6. WG5 1b: produce a visual summary of the researchers' involvement in public engagement survey	4, 9	T1, D1b	ONGOING:

WG6

Tasks	Deliverable	Due	StatusJune 2022
Organize a joint meeting with existing COST Action on citizen science to explore citizen-science projects with an evolutionary focus	A compendium/ best-practices guide to citizen-science projects in evolution (Task 4 WG5).	April 2020	Meeting completed , manuscript resubmitted to Proceedings Royal Society Series B, following revision

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]
WG6: publication of the best practices guide on citizen science projects with an evolutionary focus in a peer-reviewed journal	1,4	Former WG5 deliverable 4	ONGOING: draft resubmitted to manuscript resubmitted to Proceedings Royal Society Series B, following revision
WG6: To apply best practices on creating citizen science projects with learning outcomes to promote citizen science in the classroom and in non-formal learning environments	1,2,9	Former WG5 deliverable 4	ONGOING: Planning meeting on how to accomplish this during the extension

TRANSVERSAL

Grant Period Goal	MoU obj.	Tasks and Deliverables addressed	Status [June 2022]
GP24: To develop and disseminate educational resources that explore evolution under an SSI perspective.	3,4,9		ONGOING: chapters under review; to be ready by September



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