



*Bridging the gap between policy and knowledge on
biodiversity in Europe*

Document of Work (DoW)

Games to connect science and policy

Requested by

University of Stirling, EcoKnowGame project funded by UKRI

Developed by Eclipse Scoping Group
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1. General Information

Original Title: EcoKnowGames: Games to connect science and policy

This request was submitted to Eklipse by the University of Stirling, the EcoKnowGame project funded by the UK Research and Innovation (UKRI) funding agency.

This document of work describes the results of the scoping activities as well as the background of the request and is the basis for the call for experts.

Requesters: EcoKnowGame project

Date request received by Eklipse: October 2025

Date of first meeting with requesters, Eklipse KCB and MEG: December 2026

Launch of the Call for Knowledge: 8th May 2026

Deadline Call for Knowledge: 22nd May 2026

Expected deadline for deliverables: December 2026

In order to refine the request, the following scoping activities have been carried out:

- a. Call for knowledge to identify existing work on the request, and
- b. Discussion with initiatives/projects working on the topic of the request.

This Document of Work (DoW) describes the results of the scoping activities, the background of the request and is the basis for the call for experts. It explores the existing knowledge in this area, who the main knowledge holders are, how the request relates to existing policy processes at the EU level and identifies plausible and relevant programmes of work and methodology for answering this request.





2. Background and context of the Call

Original request:

EcoKnowGames: Games to connect science and policy

Background:

The Ecological Knowledge Games (EcoKnowGames) project is an interdisciplinary research programme leveraging the technology of games to evaluate sustainable development solutions and share diverse views on human development. How humans collectively respond to environmental change will ultimately determine the degree to which many global challenges of the 21st century are successfully met. Global challenges are reflected across multiple United Nations Sustainable Development Goals (SDGs), including conserving biodiversity, ensuring food and water security, and responding to climate change. Finding effective SDG solutions is critical but often hindered by the undesirable risk, high cost, and long timescale of their implementation. The EcoKnowGames project develops virtual game worlds to address challenges for sustainable development.

EcoKnowGames is funded by the UK Research and Innovation (UKRI) cross-research council responsive mode pilot scheme (MR/Z505833/1). The core team includes people from the University of Stirling, the James Hutton Institute, and King's College London, with the project partner Marist College. Game development is in collaboration with the award-winning games studio Glitchers.

The EcoKnowGames project has five objectives and work packages (WPs), which will unlock the potential of knowledge games and diverse game communities:

- Objective 1: Develop open-source modelling software (WickedABM) and a decision-support tool to simulate complex joint natural and social systems that model wicked problems hindering SDG solutions (WP1; Social-ecological & environmental modelling).
- Objective 2: Improve the realism of decision-making in social-ecological models by integrating game output and data. (WP2; Social sciences & model integration).
- Objective 3: Evaluate how knowledge games built with realistic underlying natural and social models can test hypotheses in the social sciences (WP3; Social sciences & game design).
- Objective 4: Develop a blueprint for applying knowledge game results to impact policy, promote ethical design, and engage communities. (WP4; Impact & policy).

- Objective 5: Develop an open-source game-builder software to provide researchers, policy-makers, and the public with a tool to build social-ecological games that are grounded in science for inclusion and creative expression. (WP5; Game design, interdisciplinary methods).

In particular, this request is connected to the work developed in Work Package 4 (WP4), Impact & policy. WP4 is aimed at understanding knowledge games that address specific, technical problems can be highly successful at crowd-sourcing the collective problem-solving capabilities of game communities and translating their in-game outputs to real-world applications. The pathway from game output to real-world application is relatively straightforward. In contrast, the pathway for translating in-game solutions to wicked problems into real-world policy applications is less straightforward. Even if new and effective solutions are found in games, creating real-world impact will rely on bringing these in-game solutions to policymakers effectively. While games have proved to be useful in public policy by providing evidence or anticipating responses to new policies, these games are not yet successful in delivering new solutions. WP4 explores the current global landscape of how social-ecological research outputs are used in policy making, specifically identifying and characterising barriers and leverage points for most effectively applying game output to policy impact for addressing new solutions to timely SDGs. Particularly, research how games can help close the science-policy gap, and the particular outcomes, outputs, and impacts that this project can generate to maximise impact from our knowledge games approach. By using surveys, focus groups and workshops, the WP seeks to establish an understanding of how different stakeholder groups perceive games and game data. To achieve this, WP4 submitted a request to the international science-policy for biodiversity network Alternet, and we will form an independent expert working group following the Alternet-Eclipse request process for knowledge synthesis and societal engagement (D4.1).

The main goal of the request, put forward by the EcoKnowGame project is to identify and explore:

‘What types of games and game features will ensure for games to become a tool to connect science and policy and lead to an improved science policy interface, acknowledging the balance between integrity of science and fun of playing a game. Also, identifying the enablers and barriers for policy makers to use games as a way of knowledge and evidence synthesis and transfer’





Policy relevance and geographical scope of the request:

The final framing of the request could contribute to EU Legal Instruments or/and international agreements such as the Convention for Biological Diversity, Sustainable Development Goals, Habitat and Birds Directive, EU Restoration Law, Common Agricultural Policy, by leveraging the technology of games to evaluate sustainable development solutions and share diverse views on human development. Furthermore, by understanding what types of games and game features can ensure for games to become a tool to connect science and policy and lead to an improved science policy interface the request seeks to potentially connect to existing initiatives/experts/bodies such as the European Digital Twin of the Ocean European, Digital Twin of the Ocean (European DTO) - European Commission, the UN Playing for the Planet Home, Games for Good HOME | Games For Good.

The geographical scope of the request is European and global.

Relevance for biodiversity

New games can be a new tool in biodiversity research, policy and management that contributes to addressing challenges for sustainable development. How humans collectively respond to environmental change will ultimately determine the degree to which many global challenges of the 21st century are successfully met. Global challenges are reflected across multiple United Nations Sustainable Development Goals (SDGs), including conserving biodiversity, ensuring food and water security, and responding to climate change. Finding effective SDG solutions is critical but often hindered by the undesirable risk, high cost, and long timescale of their implementation.

Timeline and type of deliverables

The desired deliverable is a technical report and a policy workshop, but the type of deliverable is flexible and it open to discussion with the selected members of the Expert Working Group (EWG)

Potential forms of participatory process/consultation and types of tools/analysis suggested by the requesters are:

- Focus groups
- Workshops

Added value of Eklipse:

The Eklipse process enables answering requests from decision-makers on a wide range of topics by synthesising available knowledge from scientists and other knowledge holders (i.e. summarising academic and grey literature). The process, in place since 2016, facilitates evidence-

based decisions through a transparent, objective, and robust process. Transparency and robustness are prioritised at every step. For instance, peer review is favoured at two important stages (1. the development of the methods protocol, and 2. the production of all results deliverables) to ensure scientific quality and vigour. This is the very added value of Eklipse, which ensures the transfer of scientific knowledge to the policy arena in a meaningful way so that effective evidence-informed environmental decision-making can be undertaken with confidence.

One of the added values of Eklipse concerning this specific call will be to:

- a) link up existing initiatives, projects, and knowledge holders,
- b) the identification of the types of games and game features will ensure for games to become a tool to connect science and policy and lead to an improved science policy interface,
- c) identifying the enablers and barriers for policy makers to use games as a way of knowledge and evidence synthesis and transfer.

Eklipse will liaise with policy initiatives, such as the JRC Policy Lab, to ensure the policy relevance of the results of this process.

3. Refined request question

Games are a science-communication tool that provides players the possibility to experience scientifically informed contexts and situations that otherwise would be out of reach. Games are also highly interdisciplinary, with important inputs from the arts and humanities and scientific disciplines, including social sciences.

Through Eklipse, we would like to explore what types of games and game features will ensure for games to become a tool to connect science and policy and lead to an improved science policy interface, acknowledging the balance between integrity of science and fun of playing a game. Also, identifying the enablers and barriers for policy makers to use games as a way of understanding and changing perspectives as well as knowledge transfer.

Specifically, the request will be working on the following themes:





- To make explicit the role of games as a way to experience alternative perspectives -put policy-makers (and other stakeholders) in others’ shoes at different phases of the policy cycle.
- To consider/reflect on the spectrum of games and gamification tools depending on the ambitions of the science-policy connection sought (e.g. pedagogy, engagement, collaboration, perspective change, testing and iteration, exploration, creativity) with special emphasis on those relevant to the integration of science (e.g. testing and iteration, exploration), potentially looking also into other sectors
- To consider how scientific data are integrated into game mechanics through testing and iteration with policy-makers, and how the complexity of a game supports or hinders effective perspective change and policy-making

4. Suggested Programme of work and methods

The MEG has undertaken an assessment of the request, conditioned by the short timescale required by the requester. To support us in identifying the best tools available, we have run the MAGICKS tool based on the characteristics of the Request (see Annexe 3). However, it is important to note that MAGICKS only assesses single methods rather than combined approaches, where the impact may be much greater.

Table 1. MEG opinion(s) based on MAGICKS tool output (cf. Annexe 3 for the full MAGICKS output and options)

MAGICKS TOOL OUTPUT	MEG insight(s)
Expert consultation	Provide opportunities for targeted guidance from specialists/experts
Multiple expert consultation with Delphi Focus group	More rigorous approach, to be considered if sufficient time is available.
Focus group	For more structured discussion with selected experts to explore diverse perspectives (e.g., game designers, developers, practitioners, etc.)
Non-systematic literature review	Integrating diverse perspectives and approaches to generate in-depth insights.

There are three suggested options from the MEG:

- Expert consultation
- Focus group
- Non-systematic literature review

5. Logbook

The logbook describes the agenda for exchanges with the Requester and the Scoping group, which is composed of members of the Knowledge Coordination Body (KCB), Methods group, and Eklipse Management Body (EMB), as well as the topics discussed during the meetings.

Table 2. Logbook

Date	Participants	Topic	Platform
03.12.2025	Scoping group meeting with the requester Requester: Diana Valero (EcoKnowGames), Marly Muudeni (EcoKnowGames), Invited: Antonia Mochan (Deputy Head of Unit of the EU Policy Lab, JRC) Eklipse KCB: Ute Jacob, Carla-Leanne Washbourne EMB: Marie Vandevallé, Karla Locher, Candice Pouget	To discuss the request and clarify aspects with the requester	Online
13.04.2026	Second Scoping group meeting with the requester Requester: Diana Valero (EcoKnowGames), Marly Muudeni (EcoKnowGames), Invited: Antonia Mochan (Deputy Head of Unit of the EU Policy Lab, JRC)	To discuss the request and clarify aspects with the requester	Online





	<p>Eclipse KCB: Sonja Hölzl, Carla-Leanne Washbourne, Anna Fricke.</p> <p>MEG: Malavika Hosahally, Saloni Bhatia, Nina Nygren</p> <p>EMB: Marie Vandevale, Karla Locher</p>		
29.04.2026	<p>Scoping group meeting</p> <p>Eclipse KCB: Sonja Hölzl, Carla-Leanne Washbourne</p> <p>MEG: Malavika Hosahally, Saloni Bhatia, Nina Nygren</p> <p>EMB: Karla Locher</p>	To discuss the development of the call for knowledge	Online
13.05.2026	<p>Scoping group meeting</p> <p>Eclipse KCB: Sonja Hölzl, Nils Bunnefeld</p> <p>MEG: Malavika Hosahally</p> <p>EMB: Karla Locher</p>	To discuss the dissemination of Call for Knowledge (CfK) and the preparation of the Document of Work (DoW)	Online
20.05.2026	<p>Scoping group meeting</p> <p>Eclipse KCB: Sonja Hölzl, Nils Bunnefeld</p> <p>MEG: Saloni Bhatia, Nina Nygren</p> <p>EMB: Karla Locher</p>	To discuss the preparation of the Document of Work (DoW)	Online
27.05.2026	<p>Scoping group meeting</p> <p>Eclipse KCB: Sonja Hölzl, Nils Bunnefeld</p> <p>MEG: Malavika Hosahally</p> <p>EMB: Candice Pouget</p>	To discuss the results from the Call for Knowledge (CfK)	Online
03.06.2026	<p>Scoping group meeting</p> <p>Eclipse KCB: Sonja Hölzl, Nils Bunnefeld</p> <p>MEG: Malavika Hosahally, Saloni Bhatia, Nina Nygren</p> <p>EMB: Harineeswari Meenakshi</p>	To discuss the results from the Call for Knowledge (CfK) and transfer of information to the DoW	Online

10.06.2026	Scoping group meeting Eclipse KCB: Nils Bunnefeld MEG: Malavika Hosahally EMB: Karla Locher	To discuss the finalisation of the DoW and revise the text of the Call for Experts (CfE)	Online
17.06.2026	Scoping group meeting Eclipse KCB: Sonja Hölzl MEG: Malavika Hosahally EMB: Karla Locher	To discuss the finalisation of the DoW and launch the Call for Experts (CfE)	Online





Annexes

Annexe 1: Results Call for Knowledge

Summary

The [Ecological Knowledge Games \(EcoKnowGames\)](#), funded by the UK Research and Innovation (UKRI), requests help from the Eklipse organisation to explore what types of games and game features will ensure for games to become a tool to connect science and policy and lead to an improved science policy interface, acknowledging the balance between the integrity of science and the fun of playing a game. Also, identifying the enablers and barriers for policymakers to use games as a way of understanding and changing perspectives, as well as knowledge transfer.

Specifically, the request will be working on the following themes: (a) To make explicit the role of games as a way to experience alternative perspectives -put policy-makers (and other stakeholders) in others' shoes at different phases of the policy cycle. (b) To consider/reflect on the spectrum of games and gamification tools depending on the ambitions of the science-policy connection sought (e.g. pedagogy, engagement, collaboration, perspective change, testing and iteration, exploration, creativity), with special emphasis on those relevant to the integration of science (e.g. testing and iteration, exploration), potentially looking also into other sectors. (c) To consider how scientific data are integrated into game mechanics through testing and iteration with policy-makers, and how the complexity of a game supports or hinders effective perspective change and policy-making.

The scoping phase of this project consisted of 9 meetings with and without the requester, to clarify the questions, followed by a call for knowledge. This call resulted in documented suggestions from 14 different experts. In addition, the Methods Expert Group performed an analysis of possible methods.

Call for Knowledge

Games are a science-communication tool that provides players with the opportunity to engage with scientifically informed contexts and situations that would otherwise be inaccessible. They are inherently interdisciplinary, with insights from the arts and humanities, as well as scientific disciplines, including social sciences.

Considering the broader concept of “games,” they are defined as designed systems of play that may encompass cooperation, learning, competition, and meaning-making, extending beyond a sole focus on winning. This includes categories such as strategy, role-playing, simulation, educational, and participatory games, delivered through formats like board and tabletop, digital and mobile, card-based, and facilitated field exercises—ranging from light gamified tools (e.g.,





quizzes and interactive dashboards) to participatory role-play and simulation-based policy games for decision support.

The call for knowledge resulted in an extensive overview of challenges, knowledge gaps, as well as already existing resources such as publications.

Types of knowledge and key knowledge gaps that need to be addressed to better understand how games can meaningfully connect with and inform policy processes:

- **Knowledge integration and inclusivity:** Better approaches are needed to integrate scientific, policy, practitioner, local, Indigenous, and lived knowledge systems equitably, while addressing issues of representation, legitimacy, power, and participation.
- **Game design for policy learning:** More research is required on how game mechanics, system structures, conflict, failure, narratives, and facilitation methods influence learning, reflection, dialogue, and decision-making.
- **Contextual and culturally informed design:** Games should be designed around participants' worldviews, experiences, and cultural contexts, including meaningful incorporation of local and Indigenous knowledge and ways of knowing.
- **Policy alignment and institutional uptake:** Greater understanding is needed of how games can accurately reflect policy processes and how game-generated insights can be translated into and embedded within formal policy, planning, and governance systems. Stronger collaboration between game designers and policymakers, alongside institutional recognition of games as legitimate knowledge-building tools, is essential for their effective integration into decision-making.
- **Evidence, evaluation, and long-term impact:** Robust frameworks are needed to assess learning outcomes, behavioural change, trust-building, policy influence, and long-term impacts, alongside stronger evidence of effectiveness across different contexts.
- **Systems thinking and complexity:** Improved understanding is needed of how games can represent complex socio-ecological and governance systems, helping participants explore trade-offs, uncertainty, and multiple perspectives.
- **Recognition and practitioner learning:** Greater awareness and acceptance of serious games as legitimate tools for research and policymaking are needed, alongside better documentation and synthesis of practitioner experiences and lessons learned.
- **Cross-cultural applicability and adaptation:** More research is required on how games can be adapted and applied across diverse cultural, social, and governance contexts while maintaining relevance, inclusivity, and effectiveness.

- **Ethics & Inclusion:** Who designs, whose knowledge is represented, and who benefits must be central questions. Power dynamics, equity, and cross-cultural transferability remain under-addressed.

Challenges and problems in using games with decision-makers

- **Balancing complexity & realism.** Games must simplify complex systems (e.g. scientific uncertainty and long-term environmental change) while remaining credible and policy-relevant (as well as addressing stakeholder needs). Oversimplification can distort realities, while excessive complexity discourages participation.
- **Accessibility and participant engagement.** Different knowledge backgrounds, gaming experience (via rules or mechanics), and language barriers affect participation. Policymakers' limited time and competing schedules also reduce participation opportunities and limit stakeholder representation needs.
- **Challenges translating gameplay into real-world policy action.** Insights gained during gameplay do not automatically lead to behavioural, institutional, or policy change. Outcomes are often qualitative, long-term and difficult to evaluate using conventional policy assessment frameworks.

DO: Debriefing is essential to connect gameplay with real-world contexts and policy implications and allow for reflection and discussion as well as to create actionable takeaways.

- **Game mechanics can shape or constrain experience and consequentially, discussion.** Rules, mechanics, and debriefing questions influence what participants notice, discuss, and remember. Games may unintentionally privilege certain perspectives or reinforce power dynamics. → Effective facilitation strongly influences the quality of discussion and outcomes. Facilitation must also manage social hierarchies and participation dynamics.
DO: game-design that is clearly connected to practical policy issues, careful facilitation that provides a safe space for exploring scenarios.
- **Resource and implementation constraints.** Designing meaningful participatory games requires substantial time, funding, testing, and expertise. Many games are highly context-specific, limiting scalability and reuse.
- **Perception of games as non-serious or illegitimate:** Many decision-makers are highly sceptical and perceive games as only a learning tool, recreational (and a distraction), or insufficiently professional/scientific (especially in hierarchical institutional settings).





DO: clearly frame the purpose of the methodology, introducing games in informal settings can help, especially in conflictive sectors. Acceptance also often improves after direct participation and proper framing.

Key EU and global organisations with expertise and engagement

- European Commission Joint Research Centre (JRC) – Policy Lab — active in experimentation and serious-game approaches for policymaking and systems thinking; recent examples include policy-oriented serious game initiatives.
- Serious Games Society (SGS) — a major European network connecting researchers and practitioners focused on serious game research, design, and implementation.
- Science Europe — a network of European research organizations deeply involved in research policy and science-policy coordination.
- European Citizen Science Association (ECSA) — useful for perspectives on participatory engagement, co-creation, and public involvement in evidence generation. International Science Council (ISC) — a global actor focused on strengthening science-policy interfaces and evidence-informed policymaking.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) — particularly programs involving education, futures thinking, sustainability, and knowledge systems.
- Future Earth — global sustainability network with extensive experience in transdisciplinary research and stakeholder engagement.
- Science at Home — an example of game-enabled citizen science and participatory research that could offer practical lessons on scientific engagement through gameplay.
- EUSEA (European Science Engagement Association) — focuses on public engagement and science-society interactions.
- Theory U
- Ludogamie
- <https://www.commod.org/>
- UNEP
- University of Liege
- non-policy game designing actors & policy related game-designers
- university and learning-oriented game designers

Fields of expertise are necessary to answer this request

The Scoping Group discussed all the fields of expertise mentioned in the meeting and selected those most relevant to the request for inclusion in the Call for Experts.

- **Game design and serious games expertise:** Knowledge of game mechanics, participatory game design, gamification, and player experience design; Expertise in balancing engagement, learning outcomes, and decision-making support.
- **Public policy and governance expertise:** Knowledge of policy-making processes, institutional procedures, governance systems, and the science–policy interface; Understanding how evidence is translated into decision-making.
- **Social sciences and behavioural sciences:** Expertise in sociology, anthropology, political science, human geography, psychology, and behavioural science; Understanding stakeholder interactions, power dynamics, motivation, learning, and collective action.
- **Environmental and sustainability expertise:** Knowledge of sustainable development, climate change, biodiversity, natural resource management, marine spatial planning, and socioecological resilience; Domain-specific expertise (e.g., biology, engineering, fisheries, conservation) depending on the policy issue.
- **Facilitation and participatory methods:** Skills in moderation, stakeholder engagement, co-design, participatory methods, and multi-actor collaboration; Experience conducting debriefings and managing group dynamics.
- **Science communication and education:** Ability to communicate scientific concepts clearly through games and interactive methods; Expertise in translating complex or technical knowledge into accessible experiences.
- **Creative and design-oriented expertise:** Knowledge of narrative design, design thinking, human-centered design, creative thinking, and entrepreneurial thinking; Focus on user-centered experiences and iterative development.
- **Systems thinking and complexity science:** Understanding interconnected socio-ecological and policy systems; Ability to design system dynamics, boundaries, and interactions within games.
- **Research, analytical, and technical expertise:** Skills in analytical rigor, data analysis, simulations, project management, and interdisciplinary research; Familiarity with digital games, game development, and data-based modeling approaches.
- **Interdisciplinary collaboration:** Strong emphasis on collaboration between researchers, policymakers, practitioners, scientists, and game designers from multiple disciplines

Key Peer-Reviewed Literature

- Gaming for change - exploring systems thinking and sustainable practices through complexity-inspired game mechanics, <https://www.nature.com/articles/s41599-025-04990-x>





- Álvarez, Y. A. A., Jepsen, M. R., Müller, D., Rasmussen, L. V., & Sun, Z. (2024). Unraveling the complexity of land use change and path dependency in agri-environmental schemes for small farmers: A serious game approach. *Land Use Policy*, 139, 107067. <https://www.sciencedirect.com/science/article/pii/S026483772400019X>
Description: paper relates to serious games. I believe that depending on the type of games, scale, type of outcomes to analyze (behavior, learning, etc) different types of institutions can be included. In Denmark IT Copenhagen University works developing games, Departments of Psychology also develop virtual (game-related) experiences to explore human behavior.
- Trautwein, F., Zürn, B., Lukosch, H., Meijer, S., & Alf, T. Shaping the Future through Simulation and Gaming. <https://link.springer.com/book/10.1007/978-3-032-20129-4>
- Santos, C. P., Warmelink, H., Boode, W., de Groot, P., Hutchinson, K., Gancalves, M., ... & Mayer, I. (2020). A digital game-based simulation platform for integrated maritime spatial planning: design challenges and technical innovations. *J. Ocean Technol*, 15(2), 78-100. https://www.thejot.net/article-preview/?show_article_preview=1163
- Whitby, M., Mao, F., Stawarz, K., Marrero, S., & Walton, J. L. (2024). Serious Games Cookbook: A beginner's guide to using and designing serious games. <https://publishing.warwick.ac.uk/index.php/uwp/catalog/book/31>
- Edwards, P., Sharma-Wallace, L., Wreford, A., Holt, L., Cradock-Henry, N. A., Flood, S., & Velarde, S. J. (2019). Tools for adaptive governance for complex social-ecological systems: a review of role-playing-games as serious games at the community-policy interface. *Environmental Research Letters*, 14(11), 113002. Description: highlights role-playing games at the community–policy interface and shows how games can support adaptive governance and stakeholder engagement. <https://iopscience.iop.org/article/10.1088/1748-9326/ab4036/meta>
- Medema, W., Mayer, I., Adamowski, J., Wals, A. E., & Chew, C. (2019). The potential of serious games to solve water problems: Editorial to the special issue on game-based approaches to sustainable water governance. *Water*, 11(12), 2562. Description: examines games as mechanisms for social learning, policy dialogue, and decision support. <https://www.mdpi.com/2073-4441/11/12/2562>
- Susi, T., Johannesson, M., & Backlund, P. (2007). Serious games: An overview. Description: foundational grey literature outlining principles behind serious game design and learning outcomes. <https://www.diva-portal.org/smash/record.jsf?pid=diva2:2416>
- Report reflecting real world demographic pressures and bridging the gap between science, policy, and practice: <https://www.centreforsocialjustice.org.uk/wp-content/uploads/2024/02/CSJ-Creating a Britain that Works and Cares.pdf>
- McCall, V., Rutherford, A. C., Bowes, A., Jagannath, S., Njoki, M., Quirke, M., ... & Gibson, J. (2024). Othering older people's housing: Gaming ageing to support future-planning.

International Journal of Environmental Research and Public Health, 21(3), 304.
<https://www.mdpi.com/1660-4601/21/3/304>

- McCall, V., Ziegler, F., Robertson, J., Lovatt, M., Phillips, J., Porteus, J., ... & Wallace, T. (2020). Housing and aging: Let's get serious—"How do you plan for the future while addressing immediate chaos?". *Social Inclusion*, 8(3), 28-42.
<https://www.cogitatiopress.com/socialinclusion/article/view/2779>
- Blake, K., Arbieu, U., Castelló y Tickell, S., Gleave, A., Johnson, P., Kubo, T., ... & Veríssimo, D. (2025). How commercial video games engage with biodiversity and conservation: a systematic map of literature. *ACM Games: Research and Practice*. Description: Blake will also be publishing results on player perceptions of using video games for this purpose as well as interviewing near 50 game developers of commercial titles to understand impact, challenges, and recommendations to further advance purpose-driven games.
<https://dl.acm.org/doi/10.1145/3811918>

Initiatives/Games/Platforms

- Deliver Social Value Through Game-Led Energy Education: www.megawatt.game
- Platform: <https://community.mspchallenge.info>;
- CoolCity - Game to cooperative puzzle together a cause and effect network and learn how resilient landscapes work, what they need in terms of a new economy, what they offer as socioecological effects and what inner work we need for it. Website: coolcity.online
- Tenlives Festival - People learn hand on, how to do water retention structures, dance and participate in workshops in a festival set up. Website: tenlivesfestival.com
- Game, Game-Design & Learn: <https://www.biodidaktik.uni-rostock.de/arbeitsgruppe/mitarbeiter/e-nestler/game-game-design-learn/>
- Socialudo: social enterprise that uses serious games to help organisations with strategic and creative thinking and embedding evidence into their practice. Our founders, Professor Alasdair Rutherford and Professor Vikki McCall, have more than 30 years of experience between them in scientific research, taking forward important research-led recommendations that help bring people together to tackle challenges. We work with professionals across health, housing, social care, and education, using our serious games as impactful tools to promote whole systems thinking, social change, and a better understanding of some of the key challenges faced across the UK today. We have also written and co-produced several papers, highlighting the impact of our serious games on policy: Socialudo was referenced in a Blog by the Housing Evidence Centre (CaCHE) Serious games for serious issues – using participatory methods to explore home





improvement across the life course that notes “these games having a transformative impact by being used within and across a whole range of organisations to help facilitate decision-making”. <https://housingevidence.ac.uk/serious-games-for-serious-issues-using-participatory-methods-to-explore-home-improvement-across-the-life-course/>

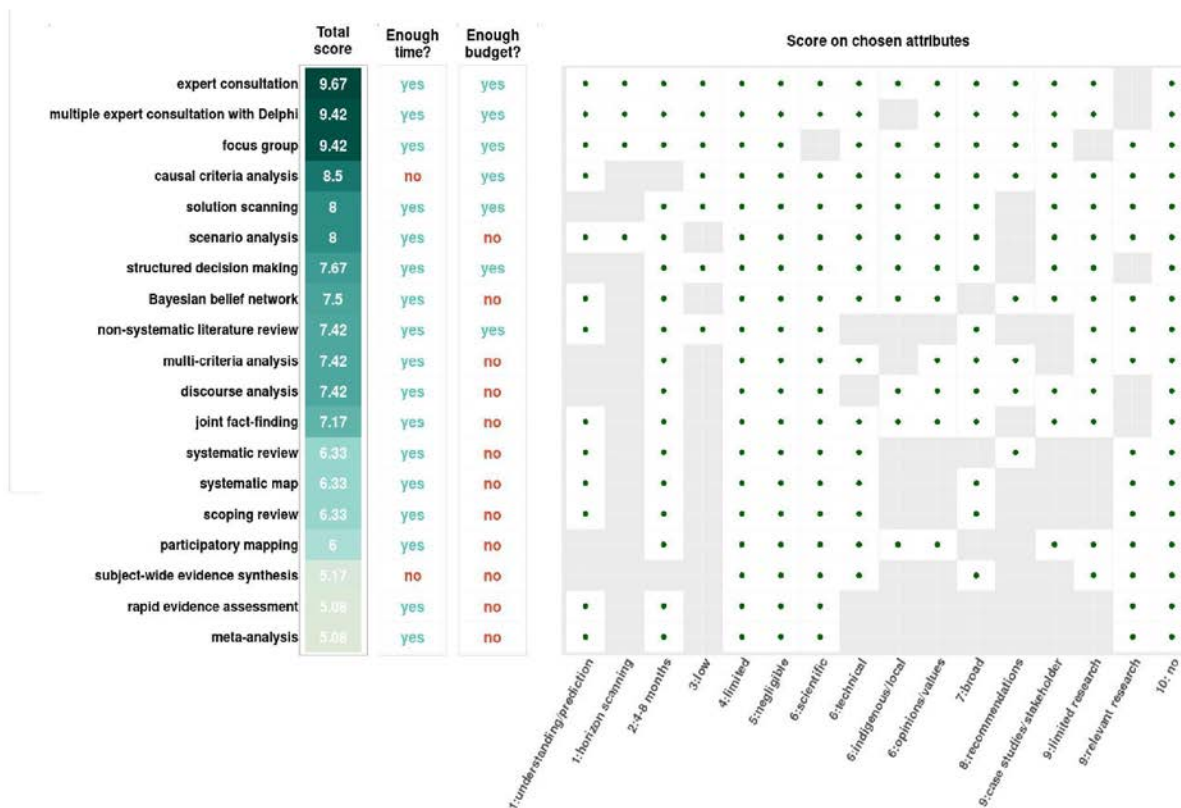
Our game ‘Hopetown’ was used to support the Ageing Well strategy in South Ayrshire.

<https://hscp.south-ayrshire.gov.uk/article/78375/Ageing-Well-in-South-Ayrshire>

- Gadget Match’ was used by health and social care professionals across South Ayrshire to support co-production, problem-solving around ageing, independence, and increased awareness of assistive technologies. <https://info.socialudo.org/gadgetmatch-impact-report-2025>
- Le Miroir des jeux : ludogamie.com/blog L’Atelier du Game Design (+ Compas des jeux) : atelierdugamedesign.com (In French)

Annexe 2: Rationale on parameters and results of the MAGICKS tool

Below, MEG includes the full output from the MAGICKS tool, for reference.



The MAGICKS tool selection options were run as follows:

1. Purposes of the question
 - Greater understanding or predictive power
 - Horizon scoping
2. Time available
 - 4 - 8 months
3. Resources
 - low: full-time salary for less than 4 months and/or limited specialist expertise
4. Consequences
 - low/limited: little policy impact
5. Controversy in the knowledge
 - negligible
6. Types of Knowledge





- scientific
 - technical
 - indigenous and local knowledge
 - opinion-based knowledge
- 7 Breadth
- broad: many possible research questions, responses or more than one policy area
- 8 Output
- recommendations
- 9 Existing knowledge
- anecdotal/local/case studies/stakeholder information
 - research outputs that may be limited in scale/scope/relevance
 - relevant research outputs
- 10 Uncertainties
- no

Prepared by Eclipse Method Expert Group members

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Annexe 3: Screening process

A detailed list of Initiatives (I), Projects (P), Agencies (A), Networks (N), Other (O), publications, and reports can be found [here](#).





Annexe 4: Call for Knowledge



Bridging the gap between policy and knowledge
on Biodiversity in Europe

CALL FOR KNOWLEDGE FOR INITIAL SCOPING

Eclipse - CfK 01/2026

TOPIC:

Games to connect science and policy



May 2026

Responses by May 22nd, 2026

1. Invitation to share knowledge for informed decision-making

Eclipse invites you to contribute to this open call with your knowledge on games that connect science and policy.

Background:

The Ecological Knowledge Games (EcoKnowGames) project is an interdisciplinary research programme leveraging the technology of video games to evaluate sustainable development solutions and share diverse views on human development. How humans collectively respond to environmental change will ultimately determine the degree to which many global challenges of the 21st century are successfully met. Global challenges are reflected across multiple United Nations Sustainable Development Goals (SDGs), including conserving biodiversity, ensuring food and water security, and responding to climate change. Finding effective SDG solutions is critical but often hindered by the undesirable risk, high cost, and long timescale of their implementation. The EcoKnowGames project develops virtual game worlds to address challenges for sustainable development.

EcoKnowGames is funded by the UK Research and Innovation (UKRI) cross-research council responsive mode pilot scheme (MR/Z505833/1). The core team includes members from the University of Stirling, the James Hutton Institute, King's College London, and the project partner, Marist College. Game development is in collaboration with the award-winning games studio Glitchers.

Games are a science-communication tool that provides players with the opportunity to engage with scientifically informed contexts and situations that would otherwise be inaccessible. They are inherently interdisciplinary, with insights from the arts and humanities, as well as scientific disciplines, including social sciences.

Considering the broader concept of “games,” they are defined as designed systems of play that may encompass cooperation, learning, competition, and meaning-making, extending beyond a sole focus on winning. This includes categories such as strategy, role-playing, simulation, educational, and participatory games, delivered through formats like board and tabletop, digital and mobile, card-based, and facilitated field exercises—ranging from light gamified tools (e.g., quizzes and interactive dashboards) to participatory role-play and simulation-based policy games for decision support.

Eclipse invites scientists, policymakers, practitioners, and other societal actors to share their knowledge on the topic. The main aim of this Call for Knowledge is to gather all relevant knowledge to be considered during the [Eclipse process](#). This is to avoid duplicating ongoing efforts and to ensure that outputs are developed jointly and in a timely manner.

Please respond to the following questions:

1. Do you know of any **major or overlooked projects, papers, reports, or grey literature** that could support the understanding of what types of games and game features/design choices can enable games become an effective and impactful tool to connect science and policy and/or lead to an improved science policy interface in any topic or context (e.g., incorporating stakeholder perspectives, making complex science understandable, support evidence-based decision-making, enhancing learning about uncertainty etc.). Please share details such as names, relevant links, etc., where possible.
2. Could you share your experiences of **on-the-ground actions** related to types of games and game features/design choices that can enable games to become an effective and impactful tool to connect science and policy and/or lead to an improved science policy interface? Please share details such as names, relevant links, etc., where possible.
3. Could you share your experiences related to challenges and problems in using games with decision-makers? (Please also include game design)
4. What types of knowledge and key knowledge gaps—across science, policy, practitioner and societal experience, including local and Indigenous knowledge systems—need to be addressed to better understand how games can meaningfully connect with and inform policy processes?

2. How to contribute?

Please contribute your comments, knowledge/initiatives/references through [the Eklipse Form](#). Please feel free to email us directly at emb@eklipse.eu or request a meeting with us.

We invite you to add any information you consider relevant to this request and to justify its inclusion (e.g., additional information from countries, scales, or disciplinary perspectives not sufficiently covered). We also warmly encourage you to help us disseminate this call for knowledge broadly.

Relevant information should be grouped under the following:

- (1) initiatives/projects (indicating if completed, ongoing or planned),
- (2) literature reviews,
- (3) empirical studies/practical experiences,
- (4) modelling studies, and
- (5) conceptual papers.

Contributions may include:

- (a) links to websites or contact details,
- (b) links to open-access papers,
- (c) links to published and unpublished grey literature or case studies,
- (d) descriptions of ongoing research projects or knowledge compilations expected to deliver results within the next year or
- (e) your on-the-ground experiences in this field

You may choose to have your contributions acknowledged or remain anonymous. If you opt for acknowledgement, your contributions will be included in the document generated by this request process, with the steps you contributed specified.

3. Objective of the call and request to be addressed by this call

Through Eclipse, the aim is to explore what types of games and game features/design choices will ensure for games to become an effective and impactful tool to connect science and policy and lead to an improved science-policy interface, acknowledging the balance between integrity of science and fun of playing a game. Also, identifying the enablers and barriers for policymakers to use games as a way of understanding and changing perspectives as well as knowledge transfer.

Specifically, the request will be working on the following themes:

1. To make explicit the role of games as a way to experience alternative perspectives - put policy-makers (and other stakeholders) in others' shoes.
2. To consider/reflect on the spectrum of games and gamification tools depending on the ambitions of the science -policy connection sought.
3. To consider how scientific data are integrated into game mechanics and how the complexity of a game supports or hinders effective perspective change and policy-making

The objective of this call for knowledge is to launch an initial scoping process on the request meant to identify available assessments, existing studies, and other resources.

For further details, check Eclipse's [background](#), its [functions](#), and its [process](#), describing how it addresses requests from policy and society.

The Eclipse Scoping Team

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And the Eklipse Management Body.

If you have any questions, do not hesitate to contact the Eklipse Management Body (<https://eklipse.eu/contact/>).