JUNO: TRANSFORMING EVIDENCE FOR AGRICULTURE, FOOD AND CLIMATE

Locations  United Kingdom

Dates  01/01/2023 - Ongoing

Summary  To respond urgently in times of crises we need to be ready. Researchers need the know-how and tools to develop rapid evidence synthesis at short notice, and coordinated networks need to be able to translate, communicate, and share evidence at a moment’s notice so that policymakers can use that evidence. The Juno Evidence Alliance will be a cutting-edge global platform that empowers evidence-based policy in agriculture, food systems, and climate adaptation. By utilizing artificial intelligence and proven research methodologies, the aim is to streamline the synthesis of diverse data sources, providing timely, relevant, and high-quality conclusions for governments, funders, and policymakers. With Juno, decision-makers can accelerate progress, reduce costs, coordinate messages, and shape a sustainable and resilient future for the benefit of all.

The problem  From farmers to policymakers, there is no easy way to get updated with reliable synthesis on critical issues. Nor is there systematic tracking and monitoring to map current targets like the Paris Climate Agreement and SDG sub-targets with specific, scientific solutions.
We need ways to ask questions and synthesise the world’s accumulated knowledge amid a massively expanding evidence base where knowledge is siloed across multiple fields and experts.

The vast amount of knowledge added into the scientific corpus every year makes it difficult for researchers and other stakeholders to keep abreast of everything that is available. One example is CAB Abstracts where more than 500,000 journal abstracts are added every year along with thousands of grey literature sources from research organizations, NGOs, and agencies including important studies, impact evaluations, randomised controlled trials, and research reports. Conventional search functions, based on keywords, natural language processing, and meta-tagging, are inadequate tools for both discovery and synthesis.

Evidence summary processes are currently expensive, bespoke, and time-consuming. The average systematic review takes between 18 months to three years to complete, with an average cost of £240,000-£400,000 per review.

Without an evidence alliance, we will continue to spend billions of dollars supporting research and development, often duplicating work that has already been done, without demonstrating the importance of science underpinning policy.

By harnessing the power of Artificial Intelligence and established scientific research methods, Juno will expedite the synthesis of diverse data sources, delivering scientific and technical conclusions for governments, funders, and policymakers worldwide.

We bring together researchers, policymakers, publishers, computer and data scientists, and evidence advocates from across fields and disciplines to break down traditional boundaries between research production and use.

We do this by:

1. Prioritising evidence needs for policymaking and drafting normative guidance and minimum standards for synthesis conduct; translating this guidance into methodologies and guidelines to generate high-quality evidence by researchers, NGOs, and other actors
2. Equipping learners worldwide with skills in evidence synthesis, using a blend of sustainable train-the-trainer and online courses from partner institutions, augmented by an extensive online library of materials
3. Creating interoperable tools and products for the research community to synthesize available evidence from content providers into a range of evidence synthesis products including reviews and maps. These products and the underlying data will be linked to ODA (Official Development Assistance) spending and accessed and processed to support decision-making. Dashboards and policy summaries featuring visualizations will also be made available
4. Sharing our work with non-technical audiences in ways that ensure understanding, support and accountability, and support policy processes and guidelines; championing the global publication of high-quality solutions and issues of shortcomings in data availability, accessibility and reliability that underpin evidence synthesis.

By March 2024, the Juno Evidence Alliance will have completed the pilot phase funded by FCDO. Four deliverables are planned as follows.

1. Agree on a Juno governance structure: a roadmap for Juno partner and stakeholder engagement
2. State of the Field for Agricultural Research: a global evidence gap map assessing the contributions of millions of scientific and development papers across the agrifood system
3. Five major global or regional evidence reviews commissioned and delivered
4. Online publication of best-practice training materials on evidence synthesis and methodologies for researchers

The Project Board continues to build relationships with potential partners and funders to support the medium- and long-term development of the project.

For more information, visit the Juno website.

**Donors**
Foreign, Commonwealth & Development Office (FCDO), Bill & Melinda Gates Foundation (as part of the Hesat 2020 initiative)

**Partners**
CABI, University of Notre Dame, Havos Ali

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