



## **Call for Expression of Interest: Scoping review of concepts and empirical evidence on scientific literacy**

### **1. Background**

A vital element of public health emergencies is the need to translate the emerging science into effective messages, recommendations and actions that are easily comprehensible, accessible and relevant to different audiences, and the COVID-19 pandemic experience has underscored this need. An ongoing dialogue between researchers, the public, the media, the health workforce and decision-makers is crucial to increase understanding, trust and engagement in science, and on public health measures based on such science.

Science translation requires the involvement of a multidisciplinary community including actors from research, media, policy and practice to ensure the pandemic communication addresses the needs and concerns and meets the background knowledge of all relevant stakeholders. The COVID-19 pandemic has highlighted how much science and evidence-based public health measures can affect people's lives. Journalists, healthcare workers, religious leaders, teachers and others had to become science communicators to effectively fulfil their professional roles. At the same time, researchers were requested to communicate their results transparently and explain the underlying scientific processes. Recognizing the challenge and importance of making science accessible and understandable to all, WHO convened a global conference in June 2021 to learn from the public and over 60 experts about how to effectively communicate science during health emergencies.

A lack of understanding of scientific data and processes in population groups, and a subsequent lack of trust in science, were highlighted as major challenges to effective science communication during the global conference. In contrast, trust in scientists and science was identified as a key driving force behind individual support for and compliance with public health and social measures (PHSMs) and favourable attitudes towards vaccination during the COVID-19 pandemic<sup>1,2</sup>. This underlines the critical need to build and maintain trust in science and increase the understanding of scientific processes, so people feel equipped to access and use trustworthy science-related information for decision making.

While the evidence-base on the importance of science literacy is growing, less is known about practical interventions, projects and programmes that increase scientific literacy among the population. Yet, action-oriented and evidence-based best practice principles to strengthen stakeholders' capacities to achieve greater science literacy are crucial for better health emergency preparedness.

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<sup>1</sup> [Trust in scientists in times of pandemic: Panel evidence from 12 countries - PubMed \(nih.gov\)](#)

<sup>2</sup> <https://journals.sagepub.com/doi/full/10.1177/1478929920948684>

## 2. Objectives

The objective of this call for expression of interest is to identify a service provider to conduct a scoping review of the literature on science literacy, how it is conceptualized and defined, and interventions and programmes that increase scientific literacy.

This project has two main objectives: (i) advancing the conceptualization of scientific literacy by reviewing existing definitions and exploring its function for health emergency preparedness, and (ii) compiling and reviewing the existing evidence base of interventions, particularly in the context of epidemics and pandemics and public health emergencies, including the identification of implementation barriers and enablers and analysis of best practices to increase scientific literacy among the general population, media professionals, health professionals and policy decision-makers.

The results of the scoping review will be published in a peer-reviewed article and feed into the development of a WHO manual on science translation during health emergencies.

## 3. Deliverables

This project consists of two main pieces of work, which will both be developed under the guidance of the technical team working on science translation in WHO's Epidemic and Pandemic Preparedness and Prevention Department:

1. Scoping review of the evidence on scientific literacy in the population:
  - a. The scoping review will build on a comprehensive search approach including (i) grey literature search to identify project reports and evaluations published e.g. on university and government websites, (ii) a keyword search in relevant electronic databases to identify scientific articles defining and conceptualizing science literacy, interventions to increase scientific literacy and implementation barriers and enablers, particularly in the context of public health emergencies, and (iii) snowball sampling to gather expert input to complement the literature search. The detailed search strategy will be reviewed and approved by WHO.
  - b. The search will be conducted in multiple languages (to be determined with the supplier) to avoid a bias towards English-speaking literature and countries.
  - c. The review will include information spanning a timeframe of 10 years, i.e. comprising material from 2012 onwards.
  - d. Findings of the review will be analyzed using pre-defined categories, which will be developed in close collaboration with the technical team at WHO.
  - e. The results of the review will be made available to WHO via a database, e.g. using Excel.
  - f. The review will focus on the following PCC (population, concept and context) elements, which will be finalized and further defined in collaboration with the WHO technical team:
    - i. Population: General population, media professionals, health professionals and policy/decision makers
    - ii. Concept:

1. Conceptualization of scientific/science literacy in general and its specific function for health emergency preparedness
  2. Interventions, projects and programmes to enhance scientific literacy as well as the implementation barriers and enablers to identify what works and what does not. Outcomes linked to increased scientific literacy could include data from surveys measuring the understanding of scientific processes, trust in science and the support of public health and social measures during health emergencies
- g. Context: High-, middle- and low-income settings; a particular focus on health-related and emergency contexts
2. Peer-reviewed article summarizing and analysing the findings of the scoping review:
    - a. The main results of the scoping review will be included in a manuscript to be published in a peer-reviewed journal.
    - b. The manuscript will be developed under the guidance of the technical team at WHO and underlies WHO-internal clearance and publication processes.

Responsible officers from technical team working on science translation in WHO's Epidemic and Pandemic Preparedness and Prevention Department will be available for guidance, input and consultation during the entire project duration.

WHO will own the intellectual property of work produced through this contract, and appropriate attribution will be given to individuals and organizations involved in the development of the work.

#### **4. Timeline**

Estimated time necessary: February to April 2021

Estimated duration/period: approximately 3 months

#### **5. Specific requirements**

Interested organizations and individuals should meet the following requirements:

- 7+ years of experience in public health research including previous experience with leading multidisciplinary research projects is required. Particular expertise in science translation is required.
- Demonstrated experience in conducting and publishing systematic and/or scoping reviews and grey literature searches is required.
- Background in public health, science communication or related field.
- Previous experience in working with WHO is an asset.
- Language: expert knowledge of English required and working knowledge of at least one other UN language preferred.

#### **6. Place of assignment**

The project can be completed remotely.

## **7. Travel**

No travel is anticipated.

## **8. Compensation**

Payment will be aligned to the WHO consultancy pay band(s) on headquarters level and will be commensurate based on experience of the service provider/team.

## **9. Application procedure**

Interested organizations and applicants should send an email to [epi-win@who.int](mailto:epi-win@who.int) by **20 January 2022, 18:00 CET**. Please indicate the project for which you apply in the subject line of your email.

Applicants are kindly requested to include the following information in their application:

- A cover letter describing their motivation for application and highlighting any specific skill or experience relevant,
- CVs and publication lists of all team members,
- A cost estimate and proposed work plan including timeline.

Interviews will be held in January 2022 with an expected start date to be confirmed for early February 2022.