



Evidence and Gap Map: Innovative Metrics, Tool and Methods in Agriculture-Nutrition Research

Overview

This evidence and gap map summarises the innovation in tools, metrics and methods that have been created and applied to understand food systems and agriculture-nutrition linkages in the last ten years. This map also highlights gaps and opportunities for future development. A detailed methodological protocol is available at:

<https://onlinelibrary.wiley.com/doi/full/10.1002/cl2.1035>.

Map structure

The 'intervention' (rows), will be defined by thematic pathways or domains, through which nutrition and health are improved, such as household or on-farm production, food policy and governance, or food environments and markets. The columns correspond to an innovation in the form of tools (technology application and instruments to capture data on a range of agriculture-nutrition topics), metrics (new indices and measures to quantify agriculture-nutrition linkages) and methods (research design and analytical approaches applied to agriculture and nutrition research).

The size of the bubbles are proportional to number of studies in that cell. The bubbles within each cell are colour-coded for stage of development:

- Blue for Stage 1 (concept development and pilot)
- Green for Stage 2 (Feasibility, efficacy or internal validity)
- Yellow for Stage 3 (Demonstration/testing, effectiveness, external validity)
- Red for Stage 4 (Adoption, generalisability and wide-spread application)

By selecting a cell, a list of those studies will appear by title, author, and year, with color codes for stage of development. By clicking on each title, publication details, available abstracts and other details of the study will appear.

There is a grey 'Filters/Settings' tab on the upper left corner of the map. On the right-hand column under 'Style', there are four options of viewing style: bubble, heat, donut and mosaic. On the left-hand column, the map can be filtered by many different categories, sub-categories, and even individual tools. There are several main sections of filters.

They are:

- IMMANA outputs
- Measurement unit
- Setting or geographic application
- Filters, which include various classifications and sub-categories of tools, metrics or methods
- Whether a report is classified as describing a new tool, metric or method

Once you select your filter, click the blue 'update' button in the upper right-hand corner of the settings tab.

Web portal

There is an additional way to access data that is mapped. Users can access a searchable, online web portal here: Web portal: <https://epi.ioe.ac.uk/webdatabases4/Intro.aspx?ID=18>

- Username: IMMANA
- Password: nutrition

A brief explanation and guidance are offered on the home page of the link.

Guidance on interpretation

The EGM summarizes the number of reports that describe new or new applications of tools, metrics and methods in the agri-health space. However, many reports employ the same or similar methods, tools and metrics. In the EGM, we provide 'filters', which can be used to select some of the individual innovations (which by selecting will show all the corresponding reports of such), and also families, additional categories and sub-themes of tools, metrics and methods. Well-populated categories do not necessarily mean that there are no 'missing pieces', as one category could be dominated by certain types of innovations. Similarly, gaps in this EGM could indicate that there are sufficient, older methods, metrics and tools to measure intended relationships, or it could mean that there is a need for innovation in these areas.

When interpreting the EGM and its results, it is important not to prioritize topics and themes only based on the number of reports in any given category, but to delve in to the diversity of tools, metrics and methods within each category. Furthermore, promising or even well-established tools, metrics or methods that exist within a certain thematic domain still might provide a unique opportunity to validate, adapt or link to other data types or domains in innovative ways.