

*immana*

Innovative Methods and Metrics for  
Agriculture and Nutrition Actions

## Competitive Research Grants to Develop or Validate Innovative Methods and Metrics for Agriculture and Nutrition Actions

### Call for Applications Round 3 – Full proposal stage

Led by the London School of Hygiene & Tropical Medicine (LSHTM)

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The London Centre for  
Integrative Research  
on Agriculture & Health



BILL & MELINDA  
GATES *foundation*

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## 1. Funding Opportunity

### 1.1 Background

With just about a decade to realise the Sustainable Development Goals, making agriculture-food systems work for nutrition and health of populations has never been more urgent. Accelerated momentum is needed to develop a robust scientific evidence base to guide changes in global agriculture and food systems to nourish the world's population in a sustainable, equitable and just way.

Agriculture-food systems impact health and nutrition outcomes through multiple, dynamic, complex, direct and indirect, and often difficult to document pathways. In addition, food systems are also changing rapidly, driven by technological innovation, globalisation, rural transformation and urbanisation, environmental and political fragility and changes in food system governance among others.

The last decade has seen a proliferation of studies assessing the nature and magnitude of these relationships between agriculture-food systems and nutrition <sup>(1-3)</sup>. Several publications highlight the need for development and application of novel, feasible, scalable, field-friendly and cost-effective tools, methods and metrics to monitor and unpack how changes in agriculture-food systems can impact nutrition and health outcomes of populations across diverse contexts <sup>(4, 5)</sup>.

Significant progress has been made in this field in recent years, including through the Innovative Methods and Metrics for Agriculture and Nutrition Actions (IMMANA) programme (2015-2019)<sup>(6)</sup>. Over the past five years, IMMANA has awarded 15 competitive research Grants to develop cutting-edge methodologies and tools that are informing research, policy and practice in international development. It has trained 21 early career Fellows who are already shaping the science and policy landscape in their countries. Finally, the Agriculture, Nutrition and Health (ANH) Academy has grown exponentially, now including over 2,000 members from 770 organisations, predominantly in Africa and Asia. A summary of IMMANA's portfolio to date can be found [here](#).

Despite these successes, much remains to be done. A move towards complex food systems thinking for equitable nutritional and health outcomes, within and across nations, requires an evolution of

methods and metrics in agriculture-food systems and nutrition research. Examining how well the existing methodological innovations work across contexts and at scale is becoming a priority. This Call for Applications welcomes proposals to fill these gaps to facilitate evidence-based policy investments.

## 1.2 About Innovative Methods and Metrics for Agriculture and Nutrition Actions (IMMANA)

The Innovative Methods and Metrics for Agriculture and Nutrition Actions (IMMANA) programme aims to accelerate the development of a robust and coherent scientific evidence base which will support effective policy and investments in agriculture-food systems for improved nutrition. Following a successful five-year programme, a Phase 2 is being co-funded by UK Aid from the UK Government and the Bill & Melinda Gates Foundation. IMMANA is a partnership between the London School of Hygiene & Tropical Medicine, SOAS University of London, Tufts University and The London Centre for Integrative Research on Agriculture and Health (LCIRAH). The objectives of this second phase of IMMANA are to:

1. Stimulate validation and continued development of innovative methodological approaches and novel metrics in agriculture and food systems for improved health and nutrition
2. Deepen and expand the pool of emerging leaders skilled in developing and applying cutting-edge methods and metrics
3. Convene a global research network - the Agriculture, Nutrition and Health (ANH) Academy - to facilitate learning, sharing and catalysing new interdisciplinary research collaborations and policy uptake of emerging evidence
4. Synthesise and facilitate the uptake of existing data and scientific evidence to inform policies and investments in agriculture and food systems for improved nutrition and health.

Like the first phase of IMMANA, the second phase will rest on the core pillars of research, capacity building and knowledge sharing, and will consist of three synergistic **workstreams**:

- [IMMANA Competitive Research Grants](#) to develop *new, and validate existing* methods and metrics at the nexus of agriculture-food systems, nutrition and health (ANH)
- [IMMANA Fellowships](#) for emerging leaders in ANH research
- [ANH Academy](#) with an expanded set of activities including
  - A synthesis centre for data, tools, methods and metrics

- Strengthening the capacity of academic institutions to offer curriculum enrichment opportunities on ANH related topics in Africa and South Asia
- A mentorship scheme for early career researchers in LMICs
- Continuation of [ANH Academy Weeks](#) and other online training and engagement activities

You can find more information about IMMANA on our [website](#).

### 1.3 How to Get Involved

We encourage researchers to participate in all aspects of IMMANA, and provide the following guidance on how IMMANA can best support your research interests:

- If you are a researcher in an institution engaged in and committed to linking research in agriculture, nutrition and health, your institution can join the Agriculture, Nutrition and Health Academy, and you can participate in its conferences, meetings and working groups. To find out more please go to [ANH Academy website](#).
- If you are an early career researcher who wants to improve skills in working across agriculture, nutrition and health programmes in a development context at another institution, then you might consider applying for an IMMANA Fellowship, for which you will need the support of your home institution and the institution that will host you. To find out more about IMMANA Fellowships work stream please visit: visit [IMMANA Fellowships webpage](#).
- If you are a researcher who would like to develop innovative methods and metrics or adapt existing ones in diverse contexts, then you may wish, through your institution, to apply for an [IMMANA Grant](#).

All Fellows and Grant holders will be expected to participate in the Agriculture, Nutrition and Health Academy and its meetings for the duration of their funded programme. We will not normally provide IMMANA Fellowships to researchers to join IMMANA Grants, but it would be acceptable in principle for an institution to be hosting both an IMMANA grant and an IMMANA Fellowship, as long as they are clearly separate activities. For further information, please contact: [immana@lshtm.ac.uk](mailto:immana@lshtm.ac.uk).

The present call for applications refers to the **Round 3 of IMMANA grants only and is addressed to short-listed candidates only.**

## 2. IMMANA Grant Funding

### 2.1 Objectives and Scope

The IMMANA Competitive Research Grants are aimed at accelerating the development of innovative and interdisciplinary methods, metrics and tools to advance the scientific understanding of the linkages between **agriculture and food systems** and **health and nutrition outcomes**, in order to better inform policy and programmatic actions to improve nutrition outcomes in low and middle-income countries (LMICs).

IMMANA will fund innovative research initiatives to **develop and/or validate tools, methods and metrics** for measuring agriculture or food system, nutrition and health interactions of importance in LMICs. We are particularly interested in the following types of proposals:

1. Proposals for validation, or assessing cross-context equivalence of such existing innovative methods, metrics and tools
2. Innovative proposals for applying existing methods, metrics and tools in novel or under researched contexts to generate new insights
3. Proposals aiming to develop new quantitative and/or qualitative methodologies and construct new metrics and tools that bring together ideas and resources from different relevant disciplines, especially those guided by the IMMANA Evidence and Gap Map findings (see section 2.2.1).

For the purpose of this call, **agriculture and food systems** include the production, distribution, processing, marketing and consumption of food; and people, resources and institutions involved in these processes. **Nutrition and health outcomes** include impacts on malnutrition in its broadest sense, including undernutrition, micronutrient deficiencies, and diet-related overweight, obesity and associated non-communicable diseases, as well as other impacts on human health with implications for nutrition outcomes, e.g. food borne diseases.

By **methods** we mean the processes and approaches involved in a systematic inquiry of relationships between agriculture, nutrition and health and generally refer to study design (for example, surveillance systems to monitor changes in food systems and their impacts on human and planetary health; low-cost and pragmatic evaluation designs; methods to study policy processes, governance,

values; assessing trade-offs in policy investments to underpin decision-making). **Metrics** refer to parameters or indicators used for measurement, comparison or tracking performance (for example, the [Women's Empowerment in Nutrition Index](#), or the [Household Water Insecurity Experience Scale](#)). A **tool** is a vehicle or aid to collect information and data to arrive at the metric or aid decision-making (for example, [accelerometers to measure energy expenditure](#); interactive platforms such as [Optifood](#), to design nutrition sensitive interventions for agriculture projects; or a low-cost and field friendly diagnostic tool to assess micronutrient deficiencies).

The process of **validating** a method, metric or tool here broadly refers to further testing an existing novel method, metric, or tool for its reliability and accuracy to make a reasoned judgment about whether it provides useful analytic measurement for the particular purpose(s). For example, does the method or metric represent all facets of a given construct? Does it relate to, or can it establish relationships with outcomes of interest? Does the method or metric perform comparably across contexts (cross-context equivalence)? We are interested in qualitative, quantitative, and mixed-methods studies of validation and cross-context equivalence. For example, novel application of sociocultural and political theories to establish their comparable performance across contexts would be considered eligible and relevant to this Call for Applications.

All proposals must demonstrate **innovation**. For those proposing validation of existing innovative methods, metrics or tools, a clear articulation of **demand** for the method, metric or tool in varied contexts must be presented. As well as being of **excellent scientific quality**, research supported through these Grants must demonstrate clear **development relevance**. Specifically, applicants should make a convincing argument for the **potential of the methods, metrics and tools proposed to be developed or validated under this grant scheme to make a meaningful impact on food systems, nutrition and health in LMICs**, for instance through their use to improve the design, monitoring or evaluation of important nutrition- and health-enhancing food system interventions or policy change. All proposals must demonstrate **translational value, articulating pathways to wider use**. Proposals which build links to programmes in LMICs and which will make use of the methods developed are encouraged, but more general methods research will also be considered as long as it has development relevance. Applicants must identify how the proposal will mainstream gender and other equity concerns in the research activity and outputs. Funded projects will normally be expected to deliver

outcomes that are likely to make a practical impact - either directly, or through further, more applied research - within five years.

## 2.2 Indicative Research Topics and Approaches

The IMMANA partnership will consider a wide range of proposals that address the objectives outlined above, based on selection criteria explained in the section below. We specifically *welcome proposals that align with findings in the IMMANA Evidence and Gap* -- whether development of new methods, metrics and tools, or their validation, theory-testing, novel approaches and application. However, we will also welcome other topics that meet IMMANA objectives.

We expect to fund an even split of awards between development of new methods, metrics and tools, and validation or novel approaches and application. The final allocation will depend upon the proposals received and selected based on the criteria elaborated in Section 5.

### 2.2.1 IMMANA Evidence and Gap: A brief overview

The aim of the IMMANA Evidence and Gap Map is to articulate and summarise innovations in tools, metrics and methods that have been developed and applied to understand agriculture-food systems and nutrition linkages in the last ten years. Links to the Evidence and Gap Map resources are included in Box 1.1.

#### Box 1.1: IMMANA Evidence and Gap Map resources

- A detailed methodological protocol is available [here](#).
- The interactive Evidence and Gap Map can be found at [here](#).
- There are additional resources and guidance documents provided [here](#).

Briefly, the Evidence and Gap Map summarises the number of reports that describe new development or application of tools, metrics and methods in the agriculture-nutrition research space. However, many reports employ the same or similar methods, tools and metrics. In this Evidence and Gap Map, 'filters' can be used to select some of the individual innovations in methods, metrics and tools (which, by selecting will show all the corresponding reports of such), 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. For instance, there are many reports that populate the Water, Sanitation and Hygiene thematic ‘domain’ (rows in the Map). However, this thematic domain is dominated by water footprints with very few new tools, metrics or methods (columns in the Map) on hygiene or sanitation as it relates to the agriculture-nutrition pathway. Similarly, gaps in this Evidence and Gap Map 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. For example, there are fewer reports that exemplify innovation in the food security space, but there are many well-established metrics that exist to measure food security. There might be a need, however, for development of a new method or tool, or linkage with other domains that could be a useful innovation in the field.

When interpreting the Evidence and Gap Map and its results, it is important not to prioritise topics and themes only based on the number of reports (the size of the bubble in the Map) in any given category, but to delve into 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 might still provide a unique opportunity to validate, adapt or link to other data types or domains in innovative ways.

The Evidence and Gap Map can be used to identify gaps in methods, metrics and tool development, validation and theory-testing, or novel approaches and application. Some specific gaps, categorised by thematic domain and type of tool, metric or method, are listed in boxes 1.2 and 1.3 respectively.

**Box 1.2: Key gaps in thematic domain**

- Short-term shocks, humanitarian contexts, emergencies
- Long-term vulnerability and fragility, migration, fragile states
- Food environments, food choice and dietary behaviour
- Food systems and governance
- Trade, markets and value chains for nutrition and health outcomes
- Conflicts of interest and power in food system, food industry, corporate engagement
- Linking agriculture knowledge, attitudes and practices (KAP), norms and values with nutrition and health KAP, norms and values
- Equity and inclusion, especially types other than gender

We encourage applicants to explore [the interactive Evidence and Gap Map](#) to inform the focus and justification of their proposals.

**Box 1.3: Key gaps in type of innovation in tools, methods and metrics**

- Co-production of research
- Qualitative, inquiry-led methods
- Study designs
- Instruments and devices (with the exception of mobile based applications)
- System-level tools, metrics and methods
- Implementation research
- Dynamic, surveillance, ongoing and real-time research innovation

A list of *indicative* topics drawing from the IMMANA Evidence and Gap Map are below:

- Research designs, metrics and tools to further the understanding of food systems-nutrition research in emergency or humanitarian contexts.
- Research designs, metrics and tools to study longer-term stresses and vulnerability (economic, political, environmental, migration) in relation to agriculture-food systems, dietary changes and (equity in) nutrition outcomes.
- System-level ways to measure and monitor evolution of food systems, trade, markets and value chains as they relate to nutritional outcomes across diverse settings. For example (but not limited to) methods for food system surveillance, dynamic and real-time data capture to track food system changes and their health impacts.
- Quantitative, qualitative or mixed-methods novel approaches and metrics to assess and track nutritional (equity) impact of values, power, influence, conflict, cooperation, and corporate influence in food systems. For example (but not limited to), application of socio-political theory to the nutrition and food systems policy space; co-production and inquiry-led methods.
- Innovative methods to assess trade-offs between policy choices that can underpin decision-making.

Equity in food systems and outcomes is a cross-cutting theme.

IMMANA places particular importance on research which brings together expertise across sectors, including agriculture, food systems, environment, water, sanitation, nutrition and health, and between disciplines including economics, sociology, anthropology, agricultural science, nutrition,

epidemiology, geography, psychology, physiology, gender studies, and political science. We are interested in applications proposing innovative use of quantitative, qualitative or mixed methods development as long as they can demonstrate practical potential to address programmatic and development needs specifically addressing the nexus between agriculture-food systems and human nutrition and health.

## 3. Application Process

### 3.1 Eligibility

Only applicants **short-listed** under the Concept Note stage (stage 1) of the application process are invited to submit a full proposals. Any changes to the approved concept note in terms of project scope and objectives, purpose, relevance and original partnership **are not allowed**.

The full proposal should consist of the following:

1. Completed full proposal template (as emailed to applicants)
2. Completed excel budget template (as emailed to applicants)
3. Letter of support from each institution named in the application form provided as a scanned electronic copy on headed paper.

The full proposal template should be submitted as a PDF document in a font size no smaller than 11. Standard character-spacing must be used, and not less than single line-spacing. All margins should be of at least 2 cm (as per the template). Figures and tables are allowed within the word and page limits of the template. Proposals that are not submitted in the correct format will not be accepted. Appendices to the full proposal will not be accepted and footnotes should be avoided.

The lead organisation named in the full proposal is the organisation which will sign the contract should the application be awarded. Successful applicants will be provided with an award letter and invited to submit the following documents as a part of pre-grant due diligence:

1. Certificate of professional indemnity insurance (if the grant is awarded and the insurance certificate expires within that time, an up-to-date certificate will be requested)
2. Audited annual financial report for lead organisation for the most recent year available
3. Anti-bribery and corruption policy

4. Procurement policy (if procuring equipment over the value of £10,000)
5. Safeguarding policy

### 3.2 Budget template and eligible costs

Each IMMANA grant in Round 3 will be a maximum of **£250,000** and up to 8 grants will be awarded.

**All budgets should be submitted in pound sterling (£).**

The excel template contains cells of three colours: blue, white and yellow. Blue cells are headings. White cells contain formulae and should not need to be altered by the applicants. Yellow cells are those which need to be completed. The excel budget template contains formulae which should automatically calculate the totals of the budget lines and the budget as a whole. Please check that these have not been altered before submitting. Add additional lines as required.

Funding may be requested for all research costs that are attributable to the project, including, for example:

- Salary costs for research staff
- Data collection
- Standard class travel related to implementation of the proposed research
- Publication costs (see end of document for information about open access costs)
- Equipment
- Attendance at the Agriculture, Nutrition and Health Academy annual conference held alternately in Asia and Africa (mandatory for one representative from each IMMANA Grant for the duration of the grant – this should therefore be included in the budget)
- Overhead costs - these will be evaluated for value for money on a case-by-case basis at the full proposal stage and overheads cannot exceed 15% of the total grant budget
- Inflation is permitted for salaries only and this is capped at a maximum of 3% per year.

***All applications will be scrutinised for value for money.***

An indicative timeline and a summary of the funding required, in British pounds sterling, by the participating institutions, should be provided and should include estimates of each institution's costs under the following headings:

- Direct costs of the research - staff (salary and salary-related costs), consumables, travel, equipment etc.
- Associated indirect and estates costs or overheads.

**Please refer to the General Terms and Conditions for details on future contractual aspect of the grants. These are non-negotiable and will become an integral part of the contract.**

**In addition, please take into consideration any potential exchange rate fluctuations in your budgeting as we are unable to engage in further budget negotiations once the contract has been signed.**

### 3.3 Duration

The maximum duration for the second round of grants is two years with an estimated starting date on 1 December 2020. All awarded IMMANA grants must be completed by 1 December 2022.

## 4. Proposal Submission

Full proposals must be submitted by April 25, 2020, 23:59 GMT and late submissions will not be accepted. Applicants must submit their application using the online form, email submissions will not be accepted.

In order to successfully complete the full proposal submission the following steps will be required:

1. Download a full proposal template and excel budget template on the [IMMANA Grants webpage](#). Please keep within the word limits for each question. Proposals that are not submitted in the correct format will not be accepted.
2. Complete the template offline.
3. Complete the [online form](#) on Submittable.
4. Upload the completed full proposal template, excel budget template and letter(s) of support to [Submittable](#).

## 5. Timelines

The following timeline is subject to minor changes

Invitation to submit full proposals	11 February 2020
Submission of full proposals	25 April 2020
Notification of awards	1 October 2020
Grants start	1 December 2020

## 6. Selection process

The potential of the research and its overall impact will be an important criterion in the assessment of proposals. The proposed research is expected to develop or validate ***innovative and high quality methods, metrics and tools for application in the short to medium term for improving agriculture and food systems' contributions to nutrition and health in LMICs***. The research is expected to generate global public goods and publications in high quality scientific journals. The applicants and co-applicants are expected to have a demonstrable capacity to deliver high quality research in the relevant areas.

### 6.1 Review of Full Applications

The assessment criteria for the full application are shown below. The full applications will be subject to a peer-review process. The Independent Panel of Experts will assess the full proposals and the peer-review reports and recommend applications for funding. The review process will be overseen by the IMMANA Steering Committee, which is also responsible for approving the Panel's recommendations for funding.

<p><b>1. Innovation</b></p>
<p><b>For Development proposals</b></p> <p>To what extent does the proposed research present a new and imaginative approach to measuring and understanding how agriculture and food systems affect nutrition and health? Based on the proposal and your expertise, is the proposed research unique from existing metrics, tools or methods?</p> <p><b>OR For Validation/Application proposals</b></p>

Is there a clear justification of demand for the validation/application of the proposed metric, tool or method? Does the application clearly explain and justify why and how their process of validation or application is novel, needed and useful?

## 2. Scientific excellence

### 2.1 Rationale

- To what degree will this project add value to existing research on the topic of the proposal?

### 2.2 Approach and methodology

- Is the proposed research demonstrably of highest international standards of scientific excellence in all of the sectors and disciplines that it includes?
- Are the methods proposed sound and of highest scientific standards?
- Are the methods and analysis plans specific and well described and justified?
- Have gender and equity considerations been clearly articulated in the research proposal?
- Is the proposed research feasible within two years?

## 3. Collaboration

How is the proposed research collaborative? Are there satisfactory partnership mechanisms to support collaboration? How interdisciplinary is it in both expertise and proposed methodology? Is there evidence of structures and work allocation that will support equitable partnerships? Is there evidence in the proposal of strong LMIC partnerships?

## 4. Research uptake plans and pathways to impact

How well has the proposed research project planned to assess and promote adoption and transferability of the tool, metric or methodology? To what degree does the proposal demonstrate a feasible plan to assess and disseminate lessons learned and considerations for uptake or transfer?

Please note that the Independent Panel of Experts might choose to take a portfolio approach, based on thematic and regional considerations, in the final selection of the grants for award.

## 7. Dissemination, Data Sharing and Intellectual Property

Information about research funded through IMMANA Grants will be made available publicly on the [IMMANA website](#). Recipients of grants will also be required to provide information about their projects for the Department for International Development's (DFID) [Research for Development portal](#). Grant holders will be asked to collaborate with the funders and IMMANA project partners on research uptake and dissemination activities, which may include, among others, presentations at seminars and conferences, blogs, interviews and opinion pieces (format to be agreed).

Grant holders will be expected to promote the dissemination of the results of their research as widely as possible, based on the premise that publicly-funded research data are a public good, produced in the public interest, and should be made openly available to other researchers in a timely manner to the maximum extent possible. As well as scientific communication, emphasis is placed by the funder on engagement with potential users and beneficiaries of research, and the route to application of its outcomes. Consideration of possible pathways to impact will form an important element of the assessment of proposals.

All intellectual property rights for all materials (including but not limited to reports, data, designs, whether or not electronically stored, and technologies) produced by the investigator(s) or the investigators' personnel, and arising from research funded through the Grant, will be the property of the investigators' institution(s). The investigators' institution(s) will grant to the funders of the programme, if requested, a world-wide, non-exclusive, irrevocable, royalty-free license to use all such material. However, if investigator(s) wish to apply for a patent for a particular application arising out of the information, they may request that publication of data is withheld until the patent has been granted. After that time, the data must be made freely available. The funders should be consulted about any request of this kind at an early stage, and any license(s) granted must be managed in a way that is consistent with the core principles of Global Access, i.e. that the findings of the research would be disseminated promptly and broadly, and that products and technologies arising from the knowledge gained would be made available and accessible at a reasonable cost to people most in need in developing countries.

All projects will be required to comply with DFID's [Open and Enhanced Access Policy](#), as well as Bill & Melinda Gates Foundation [Open Access Policy](#). Applicants are required to include an Access and Data plan in their proposal. DFID, Bill & Melinda Gates Foundation and IMMANA are also partners on the [Global Open Data for Agriculture and Nutrition](#) (GODAN) initiative that seeks to support global efforts to make agricultural and nutritional data available, accessible, and usable for unrestricted use worldwide.

## 8. References

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