Independent Science and Partnership Council

CGIAR

CALL FOR EXPRESSIONS OF INTEREST

Documenting the impact of widely-adopted CGIAR research-related innovations

Email expressions of interest to: Tim Kelley, timothy.kelley@fao.org cc'd to Ira Vater (ira.vater@fao.org) no later than 5pm CET, on Monday 13th October 2014

Background

The Standing Panel on Impact Assessment (SPIA) is inviting expressions of interest in studies that seek to measure the impacts of widely-adopted CGIAR research related innovations. Such innovations are distinct from those still in the pre- or early-adoption scale like those under field testing or in pilot studies and hence not validated by significant diffusion. This research in a sense targets 'research successes' that, due to their already widespread diffusion, lend empirical support to the global (or regional) public goods argument for CGIAR research.

SPIA hopes to fund 3 or 4 large studies. The budget of individual proposals should not exceed USD 200,000. We give preference to proposals that provide some co-financing to the study.

Study scope

Successful studies will document the adoption and the direct (yield), intermediate (crop income) and, where possible, ultimate (poverty and or nutrition) impact of research-led innovations that are widely disseminated. SPIA recognizes that such studies are likely to depend on primary data gathered in the past and as such, the primary data may be from various sources and of somewhat uneven quality. Hence the proposed studies will likely depend to some extent on availability of existing data and may build on the approach of earlier researchers. We recognize the formidable challenge therein, for all the reasons associated with *ex post* counterfactual identification. As such, different strategies and approaches will be employed, targeting different indicators of impact as the case warrants, with the objective of bringing different types (and degrees of strength) of evidence to bear on the challenge.

These studies should focus on major areas of CGIAR investment, but after sufficient time has passed to allow for significant adoption and diffusion. The long lag times incurred by many types of R&D initiatives before full impacts materialize typically require long-term historical impact assessment. While measuring economic impacts is important, where possible, attention to non-monetary impacts, such as environmental, food security, and gender, both positive and negative, are strongly encouraged. Qualitative but rigorous assessments of CGIAR impacts are also encouraged. We also welcome studies that might consider CGIAR influence on the global development agenda or on international agreements are also encouraged.

While experimental and quasi-experimental approaches potentially have much to offer in terms of rigorous estimation of causal effects during early stages of adoption and at limited scales within producer populations, other methods, often less quantitative and seemingly less rigorous but more comprehensive, may be needed to estimate impact over longer time periods and larger spatial scales. In addition to measuring the effects on total farm income/nutrition, etc. of adopters, estimating the impact of widespread technological change requires consideration of effects on other groups. Widespread technological change often generates significant partial and general equilibrium effects on farm product prices and farm production resources, especially labor, but potentially land and other inputs that in turn have significant impacts on poverty, nutrition and other welfare measures affecting

adopting farmers as well as other populations[1]. Indeed, in many cases, it is believed these widespread indirect effects dwarf direct impacts in the adopting regions.

Estimating the direct and indirect impacts from widely adopted CGIAR-related technologies and policies is of special relevance to CGIAR donors and other stakeholders, particularly in a climate of high accountability and expectation of linkages between agricultural research investments and socially desirable outcomes. The usual "impact" studies, which estimate producer and consumer surplus, take the first step of including effects on consumers of the product whose production efficiency has improved, and such studies undoubtedly have shortcomings that should be addressed. But in addition, they often do not in any way consider the indirect effects on farm input markets or on markets of production complements or substitutes. To what extent it is possible to demonstrate direct and indirect causal linkages from CGIAR-related technologies in these fairly complex pathways remains to be seen, but this is the goal of the present call.

Attempting to quantify the contribution of widely-spread innovations which have been adopted some years in the past is challenging in the absence of existing "baseline" information so a profitable way to approach the problem, as suggested above, may be to build on existing data sets or studies that provide historical information. Often such studies will have been conducted by earlier investigators and will require retrieving data from archives.

Macro analyses that identify the causes of agricultural growth across time and space generally include some kind of proxy for technological change. We are open to studies that use macro econometric techniques or models, so long as the basic structure of the analysis can be made transparent and the sensitivity to different assumptions can be made clear.

Studies of whole countries or major regions thereof where a specific innovation/technology originating in CGIAR research might also prove a profitable avenue of consideration. Countries/regions where the dominant varieties of staple food crops have changed over the past 25 years, like Bangladesh, Indonesia, North India, Mexico, Turkey and others might be appropriate subjects for study. However, the innovation/technology must be more specific than simply the general category of "policy innovations," or "semi-dwarf-rice/wheat".

Village studies that trace changes over time in the life and livelihoods of people living in one or several agriculturally-dependent villages can provide a rich set of information about the social and economic changes that occur, but existing studies generally fail to closely link specific technological changes with output variables. Proposals to update the conditions existing in such villages would be considered if they identified specific CG-related technologies being used and related those technologies to output variables of interest.

A variety of other approaches will surely occur to the community. Some recent studies of CGIAR-related innovations focus on the extent of adoption but do not attempt to document yield changes, or do so inadequately; others measure adoption and provide some indicators of yield effects, but fail to address the bigger question of impact on income and poverty or nutrition – the outcome variables of ultimate interest. Proposals that begin with a specific technological innovation and trace its impact from large scale adoption, through yield, income, nutrition and poverty would be given higher priority. Of course, such research would likely draw on a number of existing results in addition to new data in order to tell a comprehensive story.

[1] Cochrane, in his discussion of the "technology treadmill" was one of the first to point out the macro effect of widely spread technological improvements on lowering farm prices. Binswanger (XXXX) developed the math that relates the market effects of the input and output markets to the farm product markets that enables one to calculate the effects, given robust estimates of elasticities (which are difficult). Measuring these welfare effects, preferably disaggregated by target (income and gender related) groups requires both econometric and simulation-based methods.

Submission guidelines

The application procedure is organised as a two-stage process. In the first stage we solicit expressions of interest (EoI) that should be sent in electronic format by **5pm CET, on Monday, 13th October 2014** to Tim Kelley, timothy.kelley@fao.org with a copy to Ira Vater (ira.vater@fao.org) .

Expressions of interest must **not exceed 5 pages** in length and should contain the following information:

- Title of the proposed study
- Innovation/technology under assessment and its link to specific CGIAR/NARS research effort
- Approach to be used
- Time period to be studied
- Geographic region
- Impact indicators that will be documented
- Sources of existing data to be retrieved from archives, if any
- Estimate of the budget and timeframe required to conduct the proposed work
- Names and institutional affiliations of those who would do the proposed work

Selection procedure

SPIA will review each EoI and provide feedback before 15th November 2014. The feedback will either: invite a full proposal; reject the proposed idea; or offer suggestions for modifying the proposal so that it would be considered further.

EoIs will be scored according to the following set of criteria:

- Technical merit and feasibility (including availability of existing datasets and previous analyses) (30%)
- Innovation of research questions and research design (30%)
- Relevance and quality of the research team (including CGIAR), capacity and reputation of proposed grantee (20%)
- Cost effectiveness, availability of co-financing (10%)
- Other outstanding aspects of the proposal (10%)