

# Advancing Methodologies for Tracking the Uptake and Adoption of Natural Resource Management Technologies in Agriculture

## Request for Concept Notes

Issued by: Michigan State University, on behalf of the SIAC Project of the CGIAR's Standing Panel on Impact Assessment. July 29, 2013

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For many years, the CGIAR has worked on a variety of technological and institutional interventions that affect farming practices, agronomic techniques, and ground level practices related to the use of specific natural resources. For simplicity, these are referred in this Note as 'natural resource management (NRM) technologies.' Most previous estimates of adoption of NRM technologies have relied either on "expert opinion" or on elicited responses from farmers in farmer-level surveys. These two methods differ in the cost of data collection and the accuracy of resulting estimates of adoption of technologies. The 'expert opinion' may be the least cost method of eliciting adoption estimates, but the estimated values usually have an unknown range of confidence interval. On the other hand, sourcing this information directly from the adopters may provide more accurate adoption estimates, but the cost of collecting this information from a representative sample of farmers is much higher than 'expert opinion' surveys. Farmers' responses may also incorporate response biases due to a desire to please or an effort to conform to various norms. As a result, it is not self-evident that survey responses should be considered as accurate.

In addition to the tradeoff between 'accuracy' and 'cost' of tracking agricultural technology adoption, the nature of adoption of NRM technologies further adds to the challenges of documenting the adoption of NRM technologies. These include: 1) location specificity of research outputs (which by definition implies that very few 'technologies' are adopted at a scale that trigger interest in *ex post* impact assessment to document adoption and impact); 2) Changes in practices at the farm level evolve over time, which makes it difficult to come up with a universal definition of an NRM technology and attribute that 'practice' to a specific research program; 3) Many times these types of technologies come as a 'package of practices' and farmers pick-and-choose its sub-components, which makes it difficult to define and measure 'adoption.'

To address these challenges, the SIAC program is seeking ideas/concept notes that propose the use of:

1. Innovative methods, tools and techniques to track and document the adoption of NRM technologies or a tapestry of NRM technologies (e.g., the use of satellite imagery, remote sensing, mobile phones, etc.)
2. Methods that can be routinely applied to document trends and patterns in adoption of agricultural NRM technologies at a broad geographical scale (i.e., landscape, regional, or national level).
3. Methods that can be evaluated against a 'benchmark' method to test its effectiveness (as measured by accuracy) in estimating the adoption rate.

The degree of innovativeness of proposed ideas will be judged **against these three criteria**.

Proponents of promising ideas/concept notes will be invited to submit a full proposal to implement

the ideas/methods at a pilot scale. Successful proposals will be funded by Michigan State University through a sub-contract under the SIAC grant. The plan is to fund 2-4 innovative studies at a pilot scale. A total of \$220,000 to \$250,000 is available to support activities across all the pilot studies. The funding will be available from October 2013 and all the activities must be completed by August 2014.

### **Who can submit the concept note?**

The concept note can be submitted by CGIAR centers and scientists, universities, other national/international research institutes, NGOs, and public/private entities that have interest in applying/promoting innovative methods for tracking the adoption/uptake of agricultural technology in a developing country context.

### **Procedures for the Submission of the Concept Note:**

Individual researchers/organizations interested in sharing an innovative idea as described in this request note can submit a Concept Note, not exceeding 2 pages. The Concept Note should include the following information:

1. Name and contact details of the main proponents
2. A brief description of the innovative idea, method, tool or technique being proposed to track the adoption of agricultural technology. Include information on prior use/application of this method (if any), the context in which it is (or has been) used, and why you believe it can be used for the purpose of tracking adoption of CGIAR-developed NRM technology.
3. Specific technology for which the method will be applied or pilot tested; location in which it will be pilot tested and a timeframe
4. A description of the methods to be used as a benchmark to test the effectiveness of the proposed / innovative method
5. A ball-park estimate of total cost of pilot testing the method to test its effectiveness (indirect costs cannot exceed 10% of direct costs in this estimate)

Concept Notes should be submitted by email in a Word document, attention to: Mywish Maredia [maredia@msu.edu](mailto:maredia@msu.edu). Please include "Concept Note for SIAC Activity 1.2" in the subject line. Concept Notes received by August 31 will be evaluated by a review committee and decisions conveyed by September 20.

### **About the SIAC Project:**

'Strengthening Impact Assessment in CGIAR' (SIAC) is an initiative of the CGIAR Standing Panel on Impact Assessment (SPIA) to bridge the gap in the generation of quality data on the uptake and diffusion of CGIAR research outputs and to assess their impact on CGIAR goals. The three year (2013-2015) SIAC program is funded through a multi-donor trust fund. The ultimate responsibility for oversight of the SIAC program rests with the Project Steering Committee (PSC) chaired by the Standing Panel on Impact Assessment (SPIA) of the Independent Science and Partnership Council (ISPC), and includes representatives from the SPIA Secretariat, Fund Council, and an independent expert in the area of impact assessment. Michigan State University serves as the lead entity for implementing two of the project objectives related to advancing methods and institutionalizing the collection of technology diffusion data needed to conduct critical CGIAR impact evaluations.

This 'Request for Concept Notes' falls under the broad objective of 'developing, pilot testing, and validating new and cost-effective **methods for tracking the uptake and diffusion of CGIAR research outputs** in the areas of crops, livestock, aquatic systems and natural resources.'