

# *I*ndex *I*nsurance **4** *I*nnovation *I*nitiative

## REQUEST FOR PROPOSALS

The **I4** Index Insurance Innovation Initiative invites researchers to submit seed grant proposals to develop and establish the feasibility of long-term pilot activities that will design, market and evaluate innovative index insurance contracts targeted at improving the lives and livelihoods of small-scale agricultural or pastoral households in Africa, Asia or Latin America. Seed grants will provide \$20,000 to underwrite the costs of the partnership development and the preliminary analysis necessary to prepare a full proposal for a long-term pilot activity. After approval, full proposals for three to four year activities will be funded at levels of up to \$1 million dollars to cover the costs of product design, implementation and multi-year impact evaluation research.

The **I4** foresees funding up to 6 long-term pilot activities at the million-dollar level, including at least one related to climate change adaptation. We will fund only the number of seed grant proposals for which we have funding in hand to fund long-term pilot activities. It is possible that some seed grant projects will prove infeasible, or that **I4** board will otherwise reject the full proposal for a long-term pilot activity. We will therefore keep a small number of seed grant proposals not initially selected in reserve for potential future funding should any of the funded seed grants not result in an approved long-term pilot activity.

The successful seed grant proposal will identify an important risk that constrains the ability of households to get ahead and propose an innovative insurance mechanism that promises to relax that constraint. We are especially interested in mechanisms that have a strong theoretical foundation and that are designed to complement broader risk management efforts. The **I4** research priorities summarized below give some ideas on the frontiers of innovation in the design and implementation of index insurance contracts.

### THE **I4** INDEX INSURANCE INNOVATION INITIATIVE

Housed at the University of California, Davis, the **I4** is a joint venture of the BASIS Assets and Market Access Collaborative Research Support Program, the United States Agency for International Development, the Food and Agriculture Organization of the United Nations, the Micro-Insurance Innovation Facility of the International Labour Organization, and OXFAM America. The initiative is a response to the overwhelming evidence that uninsured risk can create and sustain poverty and food insecurity, especially amongst low-wealth agricultural and pastoralist households. While index insurance would seem to be an ideal instrument for transferring risk from smallholder households (as it promises low transaction costs and minimal problems of adverse selection and moral hazard), its viability and poverty reduction impacts



have yet to be demonstrated. The goal of the *I4* is to discover whether, when and how these impacts can be realized and sustained.

With this request for proposals, the *I4* will fund a set of projects, strategically selected to represent a diversity of agro-ecological, economic and social environments. The *I4* will work with selected projects to assure that they benefit from best practice guidelines derived from prior index insurance pilots. We anticipate that each project will impact at least 5000 small-scale agricultural or pastoralist households.

In addition to speaking to the research priorities enumerated below, work funded by the *I4* will feature:

- *Rigorous impact evaluation and research methods.* Each pilot will embed a rigorous research agenda into the design and offering of the index insurance product. The research plan must include a strategy to effectively identify the impact of the insurance on credit market participation, farmer adoption of technology, and household income and wealth.
- *Sustainability.* The development of the insurance contract and the selection of local partners must have the goal of developing the insurance market so that it remains viable and grows after the program is completed.
- *Local scale-up and dissemination:* In order to maximize impact in the host country, each pilot will be expected to clearly communicate both the methodology of product design and research results to the local insurance industry. In addition, the pilot will promote technology transfer and enhance local technical capacity for the design, implementation, and supervision of index insurance products. Finally, the pilots will demonstrate collaboration with private sector partners (insurance companies and microfinance institutions) to promote the scaling up of the index insurance market beyond the region of pilot implementation.

At a global level, *I4* will synthesize lessons learned from the individual pilots and create a set of global best practices for the design and implementation of index insurance.

### **SEED GRANT REQUIREMENTS**

Researchers interested in undertaking a long-term pilot activity that will contribute to the objectives of the *I4* should prepare a seed grant proposal. Consistent with the terms of our funding through the BASIS Access and Market Access Collaborative Research Support Program, *I4* grants will require both a US university and a host country principal investigator (PI). If possible, seed grant proposals should be a joint submission of both PIs, but we are willing to consider seed grant proposals where the host country PI has not yet been determined. Additional PIs are of course welcome. Please contact us if the US university PI requirement is problematic for your project.

Seed grant proposals are due by 1 May 2010. We ask that applicants notify us by email ([iFour@ucdavis.edu](mailto:iFour@ucdavis.edu)) of their intention to submit a proposal by 15 April 2010 so that we can prepare for proposal review.

The primary obligation of seed grant recipients is to refine their ideas and strategies and establish the feasibility of a long-term index insurance pilot project. Seed grant recipients will be expected to deliver a full proposal on the long-term pilot activities. Full proposals should include a detailed analysis of the risks being targeted, the contractual innovations being piloted and an impact evaluation strategy. The full proposal must also make a case that the proposed strategy is feasible and must include letters of support from the partners required to implement the strategy (e.g., insurance providers and microfinance institutions). Additional details on the requirements for the full proposal will be provided to seed grant recipients.

Seed grant recipients are encouraged to submit their full proposal for a long-term pilot activity as soon as possible. A decision on funding full proposals will be made within three weeks of receipt. Full proposals must be received no later than 15 October 2010, but we encourage earlier submission if at all possible. The timeline for the overall application process is as follows:

Date	Event
15 April 2010	Declare Intent to Submit Proposal
1 May 2010	Submission Deadline for Seed Grant Proposals
21 May 2010	Seed Grant Awards Announced
15 October 2010	Final date by which Full Proposals for Long-term Pilot Activities Will Be Accepted
3 Weeks after Full Proposal Submission	Full Grant Award Announced

In addition to preparing a full proposal for a long-term pilot activity, grant recipients will be expected to assist the *I4* with its outreach mandate. While the primary goal of the *I4* is to produce quality research, our funding carries the obligation to communicate our ideas and findings to the development policy and programming community. There is tremendous interest in this topic at the moment, and it is likely that the *I4* will host an issues-oriented event in Washington, D.C. during the period of the seed grant. Should this opportunity arise, we would expect seed grant recipients to help with this event by presenting the ideas and questions you are exploring. Separate funding will be provided to cover costs associated with this event. Editorial assistance will also be available as needed to turn seed proposals into a brief discussing your project.

Finally, seed grant recipients must initiate contact with the local USAID mission in the country where they intend to work. The *I4* office will assist with making the necessary contacts with missions.

## REQUIREMENTS FOR LONG-TERM PILOT ACTIVITY GRANTS

Applicants for seed grants should also be aware of the requirements that will be attached to the grants for the long-term pilot activities. Chief among these is a continuing commitment to the outreach responsibilities of the *I4* described in the prior section. As a practical matter, this commitment will entail participation in public outreach events as well as preparation of short papers and briefs that distill and make accessible the results and lessons from more technical research output.

In addition, while the *I4* will primarily operate as a virtual research center, long-term grant recipients will be expected to participate in annual *I4* technical research meetings. These meetings will be crafted to share ideas on design and implementation questions, as well as a forum to share research results as they become available. The first *I4* technical research meeting will be held as soon as long-term grantees are selected. The goal of this meeting will be to introduce researchers to each other and to researchers from on-going insurance projects so that the new work can benefit from the practical and technical wisdom that has already been accumulated.

Finally, the long-term research grants will carry the following additional administrative obligations:

- *Matching funding:* Each research project must match a minimum of \$75,000 with **non-federal funds or contributions**. All projects must provide indicative matching figures for the project budget. Sources of matching can include other grants, university funding for graduate students, and researcher salary time.
- *Preparation of an Annual Report and Workplan:* Researchers will be required to submit an annual workplan as part of the renewal process for their grant. In addition, you will be required to write an annual activity report at the end of each fiscal year. Guidelines for these reports will be provided.
- *Relations with USAID Missions:* The *I4* is primarily funded by USAID-Washington (by the Offices of Agriculture and the Global Climate Change team in the Environment and Science Policy Office) to generate knowledge that is of interest broadly across the Agency. Before any long-term pilot grants can be awarded, the USAID Mission in the country in which research will be undertaken must concur with the proposal. Therefore, as part of their reconnaissance with seed grant funds, researchers are encouraged to communicate with USAID Mission staff about their pilot ideas. *I4* and USAID-Washington staff can help identify appropriate contacts in the field Missions and facilitate this communication. More generally, grantees are expected to maintain contact with local USAID missions as projects progress.

## SEED GRANT PROPOSAL GUIDELINES

Seed grant proposals must be submitted in electronic format. All components should be sent as a single pdf file to [iFour@ucdavis.edu](mailto:iFour@ucdavis.edu). Budgets should also be sent as a separate, editable Excel file. All proposals must contain the following elements:

- **Title page**, including a list of Principal Investigators (include name, title, institutional address, phone, fax, and email).
- An **abstract** not to exceed 200 words.
- A **narrative description** of the project not to exceed 10 double-spaced pages. The narrative description should take care to describe:
  - The context in which the proposed pilot project will be implemented, including the risk that will be insured, its importance, and the target population;
  - The hypothesized effects of transferring that risk using an index insurance contract, including (as appropriate) its relationship to other risk-reducing efforts or efforts to use the insurance to crowd-in new economic growth opportunities from either the supply or demand side;
  - The preliminary strategy and priorities for developing the contract, including how the proposed contract will advance one or more of the *I4* research priorities discussed below;
  - The proposed strategy for creating the private sector and other partnerships needed to implement the insurance contract; and,
  - The preliminary impact evaluation strategy, giving particular attention to the outcome variables on which the large-scale pilot project would focus.
- A **budget** for the seed grant.
- One paragraph summary of each researcher's **qualifications**.
- **Curricula Vitae** for Principal Investigators.

## SEED GRANT EVALUATION AND SELECTION

Proposals will be evaluated based on their technical merit along the following dimensions:

- Creativity and innovation of the proposed insurance design;
- Contribution to *I4* research priorities listed below;

- Relevance of the site chosen for general learning, food security, and, or climate change<sup>1</sup> (A listing of priority countries from the perspective of food security will be posted with the RFP announcement on <http://i4.ucdavis.edu>);
- Quality of research methodology;
- Qualification of researchers; and,
- Likely feasibility of project.

A review panel comprised of the *I4* director, Michael Carter, the USAID Project Officers, Lena Heron and Nora Ferm, and three academic reviewers will score proposals based on the above criteria. The *I4* Board of Directors will make the final selection, choosing among the top-rated proposals to ensure a program portfolio that is balanced in terms of regional and thematic considerations.

### ***I4* RESEARCH PRIORITIES**

The overarching goal of the *I4* is to innovate and test index insurance contracts that promise to reduce rural poverty. While recent years have seen a handful of innovative, but uncoordinated, efforts, the *I4* will strategically select a set of projects that will speak to the most pressing unresolved issues concerning the design and impacts of index insurance. At its recent inaugural meeting, the *I4* Scientific Advisory Committee identified priority areas for research and innovation. While no single project will speak to all of these areas, the goal is to have the overall *I4* portfolio speak to the following challenges:

#### *1. Interlinking Index Insurance with Accumulation and Income Growth*

Conventional economic theory suggests that individuals are averse to fluctuations in consumption and are therefore willing to pay for insurance that lowers variation in consumption at the cost of lower consumption on average. While this standard perspective is unassailable on its own grounds, it offers a zero sum proposition that appears particularly harsh to low income rural households.

It also overlooks the mass of evidence that risk is costly for reasons that run much deeper than sporadic fluctuations in consumption. Risk exposed households may conservatively shy away from opportunities and investments that would on average increase their incomes and consumption. If insurance can be interlinked with the adoption of these opportunities, then this zero sum tradeoff can potentially be superseded as mean incomes can increase even as consumption variation decreases.

Arguably, demand for insurance will in turn be stronger and more sustainable when it offers the farmer a positive sum game in which it simultaneously underwrites an increase in expected

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<sup>1</sup> Due to constraints on available funding, we cannot support climate change themed pilots in countries that are active non-associators with the Copenhagen Accord. Contact [iFour@ucdavis.edu](mailto:iFour@ucdavis.edu) with specific questions on country eligibility.

income even as it reduces risk exposure. This positive sum game can happen if income insurance crowds in the adoption of new, higher returning technologies, either by improving the supply of credit to purchase these technologies or by increasing farmers' willingness to bear the risk to adopt these technologies. Similarly, by preserving productive assets for future periods, asset insurance also offers higher incomes over time and makes insurance a positive sum game.

All these positive sum scenarios also suggest that insurance will have stronger food security and human development impacts when it is interlinked with accumulation and income growth. Finding ways to interlink index insurance with opportunities to increase mean income is one of the *I4*'s key research priorities.

## *2. Livelihood Focused Contract Design*

The exigencies of the supply side of the index insurance market are substantial. Yet if contracts do not adequately mitigate the fundamental risks faced by households on the demand side of the market, they cannot play their poverty reduction role. The *I4* is especially interested in proposals that incorporate some or all of the following considerations in the proposed contract design:

- *Ex Ante Risk Identification*: Can the risks that are most important to households be identified and contracts built to specifically address those risks?
- *Demand-driven Contract Design*: Can micro data be used to select the technologically feasible contract option that offers the best insurance value to the household?
- *Hybrid Mechanisms*: Can elements of individual insurance be combined with index insurance principles in a way that reduces basis risk without creating a crippling increase in transactions costs, adverse selection or moral hazard?
- *Robust Contracts*: Contracts designed around a particular activity (e.g., maize yields) lose their appeal if farmers shift to other crops. Can flexible index mechanisms be designed that are robust across an array of livelihood activities?
- *Catastrophic Protection versus Trust Building*: Infrequent payoffs that protect against low probability catastrophic events make sense from some perspectives. And yet, infrequent payoffs may make it hard for insured households to trust that novel insurance mechanisms really will protect them. How can contracts be best designed to mediate between these two logics?

## *3. Insuring Households versus Intermediate Institutions*

Designing contracts for individual households would seem logical given *I4*'s poverty reduction focus. However, household level contracts may have high marketing costs and face severe constraints of contract understanding and trust. Contracts designed for intermediaries (e.g., portfolio insurance for an agricultural microfinance lender, or a contract that covers a farmers'

cooperative which then determines payouts based on members' damages) may be cheaper and easier to market, but may need to be designed so that the households whose activities are indirectly insured benefit from the insurance and understand that how they will benefit from the insurance. Finding the right level at which to write index contracts—especially those that crowd in income growth opportunities—is a priority for *I4* research.

#### *4. Index Insurance in the Context of Climate Change*

With climate change, covariant shocks like drought, floods, and extreme weather events are becoming more severe and more frequent, and leave less time for recovery. Climate change that shifts and destabilizes weather patterns also makes insurance provision more complicated as underlying probability structures become less certain. Insurance can facilitate and incentivize climate change adaptation, by providing a safety net for vulnerable households including cash to use in recovering from climate shocks; price signals to motivate adaptation; access to credit for investments in adaptation measures and new enterprises; and an opportunity to bundle and deliver new adaptive crop varieties, agricultural inputs, or technologies. A combined package of insurance and risk reduction measures can potentially be more effective than separate interventions, if each addresses a different layer of risk. How --and how effectively-- can this idea be exploited by interlinking index insurance contracts with risk mitigation efforts as a way to increase the value of the contract to the insured population and to increase their ability to cope with climate change impacts? In addition, are there ways to price index insurance contracts in the context of this structural uncertainty without driving the price to unmanageable levels?

#### *5. Behavioral Economic Insights*

While expected utility theory remains the predominant framework that economists think about decisionmaking under risk, there is ample behavioral evidence that the people do not conform to the basic postulates of this theory. The *I4* welcomes proposals that will explore the implications of alternative behavioral specifications on the design and, or the marketing of index insurance contracts.

#### *6. Creating Contractual Understanding and Trust*

No matter how well designed, index insurance can only reduce risk, reduce distortions in farmer behavior and deepen agricultural financial markets if there is sustained and *informed* demand for the insurance. However effective demand for insurance may be weak among a population never before insured. Insurance is an intangible good that offers stochastic benefits: sometimes insurance delivers an indemnity payment and sometimes it does not. If farmers misunderstand or underestimate the value of the stochastic benefits of even a well-designed insurance contract, then there will be little demand for the contract and little impact on farmer behavior. Similarly, if the insured view insurance as a risky proposition—not quite trusting that payments will really be made in bad years—then the insurance will again have little uptake and economic impact. Finding cost-effective educational and/or institutional mechanisms that solve these problems of understanding and trust is another *I4* research priority.

## FURTHER INFORMATION

For additional details on BASIS and the I4, please visit the websites, [www.basis.wisc.edu](http://www.basis.wisc.edu) and <http://i4.ucdavis.edu>. Specific questions may be directed to Michael Carter or Elizabeth Long (I4 director and assistant director, respectively) via email ([iFour@ucdavis.edu](mailto:iFour@ucdavis.edu)).