

## Second Call for Proposals

### “Enabling Bio-Innovations for Poverty Alleviation in Asia”

**Deadline for submission of Concept Notes: September 15, 2009**

“Enabling Bio-Innovation For Poverty Alleviation in Asia” is a competitive research grants awarding program supported by the IDRC-CRDI Asia Regional Office (Singapore) in partnership with the Asian Institute of Technology (AIT, Thailand). The project aims to stimulate and enable research on bio-innovation in Asia that addresses poverty alleviation, and to initiate and support the building of a network of researchers and scholars committed to understanding and enhancing bio-innovation towards economically progressive and socially responsible goals.

This research grants competition on bio-innovation for poverty alleviation in Asia is premised on two key insights from earlier meetings and publications<sup>1</sup>. First, there is little known about patterns and characteristics of bio-innovation systems operating in the region and their social dynamics. Second, there is little understanding about how these existing bio-innovation systems actually affect poverty or are able to support poverty alleviation goals.

There are important reasons why it is urgent to address these knowledge gaps on bio-innovations in the region. While developing Asia has made great progress in cutting the overall rate of poverty since the 1990s (largely as a result of poverty reduction in China, and a few SEA countries), the poverty rate still stands at 42.2% or a headcount of 843 million people (ADB 2008 Poverty Survey based on PPP)<sup>2</sup>. By most predictions this estimate will likely worsen in the context of the current global recession. On the other hand, biotechnology, one of the two engines of growth in the new economy<sup>3</sup> is being promoted and spreading in many developing countries in Asia in a manner that seems to overlook the needs and potential gains of the poor. There is a valid and growing concern that current biotechnology development and innovations are being shaped and harnessed exclusively by transnational businesses and domestic big private agribusiness enterprises for purely profit accumulation, thus may be widening inequality in many societies.

#### *Relevant dimensions of bio-innovation*

This research program departs from a dominant techno-centric view of bio-innovation in Asia, which vests too much autonomy and power to the physical technology itself as the driving force of technology diffusion, ignoring the social contexts, the relevant social groups and the institutional factors that are involved and that enable (or constrain) innovation.

This program views innovation as the widespread generation and utilization of knowledge in society involving the following features: interaction of diverse research and non-research organizations, individuals and groups; combinations of technological and institutional innovations; continuous evolutionary cycles of learning; shifting roles of information producers, users and a need based exchange of knowledge; and an institutional context that

<sup>1</sup> The workshop on “Integrated Policy for Bio-innovations in Agriculture and Health in Asia” in Bangkok, Thailand on 13-14 November, 2006, which was attended by scholars, researchers and experts in the field working in region. This important meeting was supported by IDRC and the Rockefeller Foundation. Subsequently, a paper was commissioned by IDRC and conducted by Dr Rajeswari Raina, -- “Fostering Bio-innovation in Asia: Ways Forward”, Commissioned Paper by IDRC (Innovation, Policy and Science Program Areas). October 2007.

<sup>2</sup> This poverty rate survey covers 16 developing countries in the Asia region (excluding China), using the new \$1.35 per day as poverty line.

<sup>3</sup> Two industry sectors are widely considered central and most dynamic in the current shift of North countries into an increasingly knowledge-based, high-technology intensive mode of production – information technology and biotechnology. The growth and maturation of biotechnology is most evident in these countries, but its span and reach in the globalized economy has permeated developing countries.

supports interactions, learning and knowledge flows. Innovation therefore is a social process involving and interlinking individuals and groups nested and operating in various domains or components such as: the research domain (e.g. R&D, universities, and private laboratories); enterprise domain (e.g. seed firms and vaccine manufacturing); demand domain (e.g. farmer-users, urban poor residents, primary health centers); and policy domain (e.g. government agencies; international protocols; policies specific to industry and agriculture, or public health and safety).

In line with this framework, the call for proposals thus urges applicants to focus their inquiry, among others, on the following questions:

- Who are the market, non-market, state, and non-state organizations, individuals and groups engaged in the bio-innovation process? How are they inter-linked or expected to inter-link with each other? What are their respective stakes in bio-innovation? Are there coalitions, competitions and/or conflicts between them? In particular, what is the stake of the poor in the process?
- How and at what levels are relevant decisions being made? Whose voice counts in identifying problems and bio-innovation processes and solutions? Whose voice/s is un-, under-, or mis-represented in crucial planning, policy formulation, and public resource allocation associated with the bio-innovation? How are the poor's needs expressed and represented?
- Whose (human, financial, social, natural, political) resources are being invested in the bio-innovation? For what specific purpose or functions? Whose resources, on the other hand, are being deliberately not deployed, and why? What are the legal or regulatory mechanisms that promote or impede certain types of investments in bio-innovation?
- What are the incentives and disincentives in the participation of various parties in bio-innovation process? Especially, from the end-users' or from the demand side (the poor and their most immediate providers of service, in this particular case), what are the incentives or disincentives involved in the generation of (say, specific protocols for markers or surrogate carriers, or for products like enzymes), and the adoption of a technological innovation?
- What are the bio-innovation impacts on the poor – particularly, in terms of certain improvements in their quality of life, access and acquisition of knowledge and skills important to improving their health and livelihoods, and in building social capital in communities and localities? What kinds of policy and institutional changes enable awareness among the poor about the potential benefits and risks associated with bio-innovation (say, pharmacovigilance programmes, bio-safety monitoring associations, etc.)?
- *The research program will not accept proposals with a central and singular focus on the development of an innovative or new bio-technology that is without an explicit exploration of the social dimensions and the processes and dynamics of the innovation system as outlined above.*

*On the poverty focus.*

The program is chiefly interested in bio-innovations demonstrated to be directly relevant to the social phenomenon of poverty – whether alleviating, worsening or creating new forms of poverty. We also further narrow the scope of poverty to two important areas: – on **poor people's livelihoods** and **basic health**. Bio-innovations are systems, including technologies that are directly related to improvements or use of living organisms that have transformative significance to society.

Poor people's livelihoods include both natural resource-based (e.g cultivation, livestock) and

non-natural resource based activities (e.g. rural enterprises, rural trade, urban informal sector occupations) that are practiced in multiple localities that span rural, peri-urban and urban spaces. Their livelihood platforms harness assets (i.e., natural, physical, human, financial and social capital), and are highly vulnerable and insecure in the face of shocks (such as drought, floods or diseases), and in the context of broader secular trends (such as market and price changes that induce poverty and greater social inequities), and risks (such as seasonality or climate change-induced). Though certainly not exhaustive, some examples of bio-innovations in these areas are as follows: new farm inputs such as bio-pesticides and bio-herbicides; bio-based adaptive responses to climate change conditions such as drought-, flood-, heat-resistant and short duration crops and crop varieties; development of renewable and alternative energy and water resources that directly support agriculture, forestry, livestock and fisheries; biofuel crops and biofuels from waste materials for alternative fuel sources; and biotechnology advances in crop and animal species for increased food productivity and improved livelihoods.

The subject area of poor people's basic health includes their health status (such as infant and child mortality, child nutritional level, and human fertility and reproductive health), use of basic health services (immunization, treatment of common illnesses, prenatal and antenatal care and assisted delivery); and sanitation and hygiene such as for example, waste bio-mass management. The social implications of new drugs and vaccines, as well as disease diagnostic and reproductive technologies are also possible areas for research that fall under the concern for people's basic health and reproduction.

Investigation of the components of the bio-innovation system should principally shed light on how these bear on poor peoples' livelihoods and basic health. The linkages between bio-innovation and poverty can be examined and demonstrated as equity impacts or as patterns of inclusion/exclusion in or impacts of the bio-innovation processes and certain domains. The latter, in turn, may feed back as factors contributing to the weakness, strength, and stability of the existing bio-innovation system.

*Context, and ex-post and ex-ante issues.*

A bio-innovation system is a web of mutually interacting individuals and relevant groups in various domains that is generally too complex to be adequately understood from a context-independent perspective. This research therefore encourages richly textured descriptions and analysis of the relevant contexts at play in the system's functioning and outcomes.

Examination of the relevant groups and domains, their inter-relationships, and dynamics of the bio-innovation system, and their association or causal relationship with poor people's livelihoods and health status are generally *ex-post* studies. Lessons, understandings and theoretical insights should be derived from particular past or ongoing case experience/s in a given context. However, attempts at *ex-ante* projections and evidence-based policy prescriptions are welcome, to lay the groundwork for the development of pro-poor bio-innovations.

## **Guidelines for Submission**

### **Eligibility for Potential Partners**

**The 2009 Bio-innovations Asia Small Grant Competition is open to individual researchers and groups/organizations interested in the subject of bio-innovations for poverty alleviation in the Asian Region.**

Groups/organizations must be duly registered entities, eligible for entering into contracts. Individual researchers must be affiliated with an academic institution, civil society organization or association, business organization or association, community organization or organized group.

### **Research Funding**

The Program is extending grants of up to 18,000 CAD. Microgrants will also be awarded (up to 2,000 CAD) for writing unpublished papers based on a case relevant to the themes discussed in the Call for Proposal. Grants will be awarded to projects that can be completed within one (1) year, unless otherwise indicated in the proposal.

### **Basic Outline of the Research Proposal**

Applications for research funds can only be evaluated and selected if a complete and well-argued proposal complies with the following outline and components:

#### **a) Title Page**

The working title of the proposal should be straightforward, clear and concise.

#### **b) Introduction (1-2 pages max.)**

Introduction should give the basic background information about the case to be investigated and its practical, policy or theoretical significance in relation to the central theme.

#### **c) Statement of the Problem (1 page max.)**

This section should summarize the core issue/s being explored or knowledge deficits being addressed, or understood, and lessons and policy prescriptions likely to be drawn. This will normally consist of a few paragraphs that present a concise statement of the research problem to be investigated and nature of likely solutions to be proposed (which may have desired impacts on poor peoples livelihoods or health). This will also require reference to some literature, such as reports of previous research in the field or related areas --both academic and non-academic – and some official statistics and/or other reliable secondary sources.

#### **d) Research Objectives (1 page max.)**

This should discuss the following: (a) what are the expected ways by which existing knowledge or notions about the call will be enhanced; (b) how will this enhanced knowledge lead to positive actions or policy initiatives in the relevant sector (health or pro-poor livelihood).

#### **e) Research Plan and Methods (2 pages max)**

This should present an outline and brief discussion of the way the research will be conducted. Included in this part are the sources, types and forms of data needed to fulfill the tasks and objectives set in the research project, the method of selecting the data (including sampling design when appropriate) and the methods of collecting, reducing and analyzing the data. Indicate and justify why this research is employing a quantitative, qualitative or mixed method procedures.

**f) Expected outcomes or benefits (1 paragraph/10-15 lines/ max 4 bullet points)**

This part should provide information about the intended policy or action implications of the research for any of the domains of the bio-innovation system or specific organizations/groups within domains. It should show how the direct stakeholders can benefit from the findings, especially the poor end-users and the public sector. It should show any indirect stakeholders and benefits to them. Present objectively verifiable indicators of results and outcomes (eg., scientists from public sector labs work with local governments or municipalities in pharmacovigilance groups, or corporate sector sponsors bio-safety/bio-ethics committees in vulnerable agro-ecosystems).

**g) Communication of findings (1 paragraph/ 10-15 lines/ max 4 bullet points)**

This pertains to a discussion and plan on how the findings of the research can be communicated to a larger audience or the public. The results and the lessons learned from the joint action research could be disseminated through various media such as print, Internet (Bio-innovations Asia website), CD-ROM, or VDO.

**h) Timetable (Table – with quarterly or monthly activities and milestones)**

The proposal should include a breakdown of activities with corresponding realistic timelines and objectively verifiable indicators of achievement.

**i) Budget**

As mentioned above, estimated funding for each small grant research project is up to CAD 18,0000. Within this budget limit, the expenses include services and materials required to carry out the research and dissemination of research results. Cost may include remuneration of persons who gather data and information or provide casual labor in research activities. However, this allowance can only be paid to staff hired for this project in particular, NOT to existing staff of the recipient organization. The grant does not allow administrative cost and capital expenditure of any kind, such as vehicles and computers, nor does it provide for contingency expenses. (No overheads costs are allowed???)

**j) References**

All references in the body of the proposal should be put.

**k) Researchers' and Institutional Profile**

This section should give basic information about the organization/institution applying, with especial emphasis on its track record in research work. The institution's immediate or future counterpart contribution to this research should also be discussed. Likewise relevant information about the researchers to be involved in the project should be presented, including specific roles of each in the research.

**Documents required for Full Proposal Submission**

The complete set of documents for proposal submission consists of;

- Full research proposal
- Total Proposed Budget
- Gender Analysis Check-list in Research Design

## **Selection Criteria for Research Proposals**

The following criteria will be applied to the selection of proposals for funding:

- Clear objectives oriented towards the issues or problems identified in the Call for Proposals.
- Transformative potential of research results (e.g. capacity-building of important groups, especially poor end-users).
- The research ability to inform unique and innovative solutions to meet the needs of the targeted group.
- Gender-sensitivity to the substantive and methodological aspects of the research plan, and gender-responsiveness to policy change
- Emphasis on field information/data gathering (primary and secondary) and substantial participation of major stakeholders' (from different bio-innovation domains) in the research process
- Clarity and manageability of the overall research design
- Partnership-building prospect, that is, on how linkages between relevant groups in the bio-innovation system can be enhanced in the research.
- Potentials of research results to bear on, and influence responsive policy changes (with indicators wherever possible)
- Level of institutional commitment by potential partner group to the research project and sustainability and potential for replication of the proposed outcomes
- Proponent's involvement in other related bio-innovations, as well as, ability to help expand the network of bio-innovation research partners in the Asian region.
- Realistic and relevant budget (with in-house or other donor support if any)

## **Evaluation of the Proposals**

All proposals will be reviewed by the Project's Advisory Committee and some revisions for basic format completion may be asked from the applicants. The AC will then make an evaluation summary of the proposals using a set of evaluation criteria as mentioned above.

## **Application Procedure and Deadline**

**Applications should be submitted in the form of a letter of intent (maximum of 2 pages) introducing the applicant (individual or organization), explaining the proposed research project, and its relevance to the themes discussed in the Call for Proposal.**

**Short-listed applicants will be requested to submit a 10 to 15 page fully developed research proposal.**

**Deadline for submission of Concept Notes: September 15, 2009**

**Short-listed concept notes announced: September 30, 2009**

**Deadline for submission of Full Proposal: October 31, 2009**

**Announcement of Results: November 15, 2009**

**Small Grants Inception and Launching: December 2009**

Applications can be submitted via e-mail or courier:

- Via e-mail: The electronic/soft copies of the letter of intent should be sent to [bio-innovations@ait.ac.th](mailto:bio-innovations@ait.ac.th) . Files should be either in Word (.doc) or PDF (.pdf) format.
- Via courier: Two (2) sets of the letter of intent should be sent with the heading “2009 Bio-innovations Asia Small Grants Competition Entry” to the following address:

**Enabling Bio-innovations for Poverty Alleviation in Asia Project**  
c/o Dr Edsel Sajor  
Urban Environmental Management (UEM) FoS, SERD  
**Asian Institute of Technology**  
Khlong Luang PO Box 4  
Pathumthani 12120  
Thailand

**For more information you may contact:**

**Enabling Bio-innovations for Poverty Alleviation in Asia**

Tel. no: 66 2 524 5671

Fax. no: 66 2 524 6166

Email: [bio-innovations@ait.ac.th](mailto:bio-innovations@ait.ac.th)

Website: [www.bioinnovationpolicies.ait.asia](http://www.bioinnovationpolicies.ait.asia)

**AIT Project Core Team**

- Dr Edsel Sajor, Urban Environmental Management [esajor@ait.ac.th](mailto:esajor@ait.ac.th)
- Dr Bernadette Resurreccion, Gender and Development Studies [babette@ait.ac.th](mailto:babette@ait.ac.th)
- Prof Sudip K Rakshit, Food Engineering and Bioprocess Technology and Vice President for Research [rakshit@ait.ac.th](mailto:rakshit@ait.ac.th)

**Project Management**