

RESEARCH INTO USE: AN EXPERIMENT IN INNOVATION

Photograph courtesy IRIN



DFID's Research Into Use (RIU) programme is one of a series of current innovation-centric agricultural development programmes attempting to reinvent how agricultural research is used for impact. In this month's LINK LOOK ANDY HALL, JEROEN DIJKMAN and RASHEED SULAIMAN V.¹ introduce RIU and explain how it is organising its lesson learning to guide choices for public and private sector investment in innovation.

IMPACT AT LAST

RIU, launched by DFID in 2006 with a budget of £37.5 million, was conceived as an entirely new sort of programme. As a successor to DFID's 10-year, £200-million Renewable Natural Resources Research Strategy (RNRRS), RIU's objective was to extract impact from excellent but underused agricultural research. The sense was that the RNRRS legacy must contain maybe as many as 30 high-performing, blockbuster research products that had yet to reach their full potential.

Part of the uniqueness of the programme — and, as it turned out, the challenge of imple-

menting it — was that its design explicitly combined some unfamiliar bedfellows. The first unusual pairing was that the programme was given an objective ('purpose' in logframe speak) that combined the impact-at-scale ambitions of a development programme with a learning lessons remit that itself combined research, monitoring and impact assessment perspectives.

The second odd coupling was in the underlying assumptions about how RIU would achieve impact. The programme's rationale rested on the rapid and widescale promotion of high impact-potential research products — classic

technology transfer. But RIU's implementation strategy used the rationale of an innovation system with its emphasis on strengthening long-term capacity for learning and change.

It wasn't that this unusual pairing of ideas was necessarily incorrect. Rather, without any precedent for how to operate this type of hybrid programme and because of the inevitable tensions involved in trying to reconcile conceptually opposing perspectives, the programme was slow to start, got bogged down in trying to define itself, and hit a number of dead-ends.

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BOX 1

A TYPOLOGY OF RNRRS RESEARCH PRODUCTS

TECHNOLOGICAL ARTEFACTS:

Blockbuster new varieties, disease and pest control products and methods, new equipment. Least common among RNRRS products and those that did exist were inseparable from the other forms of products listed below.

ACCUMULATED KNOWLEDGE PRODUCTS AROUND SIGNIFICANT PROBLEM AREAS:

Knowledge associated with a series of linked projects conducted over many years addressing major problem areas. No single solution developed, but expertise built up and research dead-ends identified. Modest number of major themes in RNRRS, mostly closely aligned with the original 10 RNRRS disciplinary programmes.

MOSAIC OR COMPOSITE PRODUCTS:

Research product clusters that provide a menu of options for different development themes. No *one* overarching research product that is likely to have significant impact. Many examples in RNRRS, including the range of technical and institutional developments around post-harvest/ marketing systems or natural resource management.

POLICY ANALYSIS AND PLANNING FRAMEWORKS:

Common in RNRRS. Examples include: Stakeholder analysis, agricultural innovation systems approaches; market analysis tools, etc.

INSTITUTIONAL AND PROCESS PRODUCTS:

New ways of working developed to improve impact or target specific social groups. Examples include: Participatory approaches; farmer field schools; social forestry; partnership approaches; institutional learning and change approaches. Common in RNRRS.

PRODUCTS EMBEDDED IN EXPERTISE AND KNOWLEDGE NETWORKS:

Knowledge, social capital and capacity embedded in the expertise and networks that had emerged in and around RNRRS research projects. Not formally recognised, but the most pervasive type of RNRRS research product.

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A series of reviews have helped sharpen RIU's operational focus and better frame its lesson-learning. This is now beginning to give shape to what an innovation-centric agricultural programme might look like.

OPENING THE RNRRS BOX

In its initial phase RIU made considerable efforts to both create a database of the 1,600 RNRRS projects and 280 research products (www.researchintouse.com/index.php?section=16) and to scan these for candidates for widescale transfer into use. Two candidates stood out: A livestock health approach to sleeping sickness control, which subsequently was selected as an African Best Bet project (see below) and a client-orientated plant breeding approach that had developed a number of rice and legume varieties and which subsequently become the sole Asian Best Bet project.

But there were few, if any, other candidates. **Box 1** illustrates the types and distribution of RNRRS research products. Many of the research products were process, policy and institutional innovations that had been developed and piloted to help sharpen the poverty impact of RNRRS's more technical research. This orientation reveals much about how RNRRS had evolved during its 10-year lifespan away from its original disciplinary, technology development research roots and the diversity of research products it was delivering. A major legacy of RNRRS was the knowledge and social capital embodied in research teams and networks that had been built over many years. This, however, was not explicitly perceived as a product to be put into use.

Clearly, with a scarcity of blockbuster research products, extracting impact from putting this sort of legacy into use would need a rethink.

LEARNING TO EXPERIMENT WITH INNOVATION

Under significant pressure to get something up and running RIU established its first two experiments in putting research into use in 2007-2008. The first was its **Asia Challenge Fund**. Projects funded tended to be of a rather modest scale, focused around RNRRS-era project teams and themes, with the logic that a final 'into use' phase could extract the elusive impact desired.

The second experiment was the establishment of 6 **Africa country programmes** in Tanzania, Rwanda, Malawi, Zambia, Nigeria and Sierra Leone. The emphasis in these programmes was to establish offices to incubate clusters of research development and enterprise organisations around development opportunities and, in doing so, put RNRRS and other research into use. The assumption was about the need to build systems that could respond to opportunities and challenges by mobilising ideas and expertise, including research. A key approach was the idea of an innovation platform. This tended to be a suite of processes to get people talking to each other, rather than necessarily involving the setting up a formalised body. This played out differently in different countries — although there were initial attempts to standardise this across countries that, fortunately for the sake of diversity and context-relevance, failed.

A third experiment was established in 2009 after a number of reviews helped refocus RIU towards

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a more explicit focus on private sector-led innovation. Known as the **Africa Best Bets**, this used a venture capital investment-style selection process to identify business models and public-private

sector partnerships that centred on the delivery of research-derived products and services to the poor. RIU support is helping incubate these business models and partnerships, often by helping create awareness among the poor for products and services that companies can then sell to them. Some aspects of this experiment involve encouraging civil society organisations to behave more like private companies. A key question of the best bets is to determine whether such initiatives could become an attractive option for private venture capital investment.

A fourth experiment, which is only just taking off, is the use of a third party private technology broker. A venture capital organisation will be funded to search internationally for research products beyond RNRRS and identify target entrepreneurs who then may be able to commercialise these for development impact. Again, important questions here concern the viability of this approach and its potential for private investment.

A fifth cross-cutting experiment concerns engagement with policy with a view to ensuring that lessons from RIU — on how to put research into use — start to influence framework conditions. This is being done in two ways. The first is a research and communication strategy that is using a website and related media to promote lessons. The second involves a range of ways that the Africa country programmes are engaging in policy dialogue, both formally and informally. For example, the Rwanda programme is participating in that country's National Innovation Council. The Nigeria programme is located in the Agricultural Research Council. The Sierra Leone country programme is embedded in the Ministry of Agriculture and has established PAID, a private sector company with public, private and civil society members and a mission to identify opportunities for policy influence. While there is still a long way to go to achieve policy influence these are the sorts of strategies that are being developed and explored.

It worth noting how RIU evolved as its understanding of the nature of the research into use task became clearer. The emphasis shifted from a slavish reliance only on the promotion of RNRRS products to a more general focus on trying to extract value from research (products, expertise, social capital and networks) by constructing consortia that fit different niches in the market and development landscape and exploring how these can be exploited for impact. (The nature of these niches is illustrated in the final table on Page 4)

The defining feature of RIU is that the role of projects has shifted from managing the quality of research to managing the relationships needed for innovation and impact.

CORE FEATURES

A combination of good luck and good design in RIU's development has provided an innovation experiment exploring two core features that are at the heart of current research, innovation and development debates: Partnership and the

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LATEST AT LINK

LINK-KIT JOINT COMMUNICATION INITIATIVE



LINK (www.innovationstudies.org) is pleased to announce a joint communication initiative with the Royal Tropical Institute (KIT) (<http://portals.kit.nl/smartsite.shtml?id=7587>), Netherlands towards promoting the innovation systems approach in agricultural and rural development. Initially, the partnership is exploring ways to jointly develop the news sections of the KIT and LINK websites, including using social networking tools like twitter and facebook to reach out to a wider audience. Stay tuned for more announcements from the partnership in the coming months.



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quest for development models that make better use of the private sector.

This plays out in different ways across the experiments. In the Asia projects, networks of partners with a history of working together have been expanded to address the impact-at-scale objective of RIU. Sometimes this involves partnering to strengthen the communication of research products — for example, the fish seed and fingerlings project in Bangladesh is working with partners that can help promote approaches that allow the wider distribution of genetically-improved fish. Another take on this in Asia is partnering with microfinance organisations to invest in rural innovation as part of a wider package of rural service delivery.

In the Africa Country Programmes the emphasis has been on experimenting with brokering and incubating the emergence of networks and partnerships around different research-into-use themes and opportunities. The Africa Best Bets have also relied heavily on brokering and partnership as core strategies.

The private sector focus has also played out in different ways across RIU. The African Best Bets have taken the most explicitly private sector-led innovation approach, with projects mainly led by companies or, alternatively, development organisations employing market-based operating principles. The other facet of this concerns the exploration of roles of the public and private sectors in financing these initiatives.

The Africa country programmes have engaged the private sector as one of a number of players needed to address rural development opportunities and challenges. In some cases, such as a poultry development initiative in

Tanzania, the private sector has taken the lead. In others, such as an activity promoting cow pea and soybean production and marketing in Northern Nigeria, the private sector has taken on more of a service/ backstopping role.

In many of the Asian projects the private sector has been one of a number of actors involved. For example, in a flood plain management project in Bangladesh civil society organisations, including environmental lawyers, have been much more prominent, with the private sector being more an interested stakeholder than a partner. In contrast, the Client-Oriented Plant Breeding Best Bet project is attempting to set up different types of private sector organisations to both establish new Client-Oriented Breeding programmes as well as distribute new varieties.

In another cluster of projects in Asia the focus is on innovation in the value chain. The approach has been to engage entrepreneurs and companies involved in linking farmers to input and output markets. Two projects have partnered with an NGO — IDE (International Development Enterprises) — which uses market system development as a way of delivering services and products to the poor.

More generally the RIU experiments seem to be challenging common assumptions about public and private sector roles and this is a topic where RIU lessons will have much to offer.

Another common thread in these experiments is the importance of innovation brokering by programmes, projects, companies and others. Sometimes this has been used to build local networks and alliances. Other times brokering has been used to negotiate changes in the wider techno-institutional system: Changes in regulatory systems such as the approved use of bio-pesticides;

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BOX 2: RIU'S INNOVATION NARRATIVES

- **POOR USER-LED INNOVATION.** Approaches that place poor farmers and consumers at the centre of the innovation process as they have superior knowledge of their production and social context.
- **PUBLIC-PRIVATE PARTNERSHIP-LED INNOVATION.** Approaches that seek to deploy the expertise, and resource and market perspectives of the private sector in an alliance with public actors and policies.
- **CAPACITY DEVELOPMENT-LED INNOVATION.** Approaches with a focus on institutional and network development with a view to enhancing innovation system capacity.
- **BELOW-THE-RADAR-LED INNOVATION.** Approaches that seek to nurture emerging innovation models that focus on the opportunities presented by large markets of poor people.
- **INVESTMENT-LED INNOVATION.** Approaches that rely on financial incentives for innovation through a variety of operational forms.
- **RESEARCH COMMUNICATION-LED INNOVATION.** Approaches that seek to improve the transmission and availability of ideas to different audiences and make them accessible through databases that use communication as a network building tool.

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Photograph courtesy IRIN

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changes in internationally-accepted ways of tackling animal and crop disease control, plant breeding and other dominant agricultural development regimes; and changes in the organisation and governance of value chains such as those associated with produce company-based business models. Understanding how to change these wider systems is central to understanding and promoting research into use.

HOW CAN WE LEARN FROM THIS?

Having established its experiments, RIU then brought in innovation studies expertise to form a central research team to help draw out lessons. RIU's research relies on the following principles:

- The challenge is about putting the research **process** into use as much as it is about putting research **products** into use.
- Innovation diversity is central to the research design, emphasising that there is no optimal approach or way of organising research into use for innovation and impact; rather it is context-specific and path-dependent.
- The main investigative focus of the research is to understand the clustering of organisations, resources and institutional and policy regimes around different market and development niches and how these can be used to enable innovation and impact.
- The main analytical focus is on understanding which approaches work best in which market and development niches; i.e., looking for common patterns that can help planners and investors make choices.
- Research combines public policy with business investment reconnaissance perspectives to ensure that guidance on choices and new opportunities is articulated in ways attractive to the widest possible audiences.





WHAT ARE WE LIKELY TO LEARN?: HORSES FOR COURSES

As a framework to help sort evidence from its research RIU adopted 6 competing and overlapping innovation narratives, which characterise commonly proposed approaches to organising innovation and impact (see Box 2). The rationale of this framework is that sometimes private sector-led innovation is going to be valuable; at other times it may just be an issue of communicating results better, etc. The framework will focus lessons on the selection, sequencing and bundling of approaches. So, if these comprise the suite of horses that planners and investors are going to place their bets on, which are the courses on which these horses will perform best?

The 'courses' are market and development niches and the opportunities these present for impact. But how do we define them and are there a finite number of generic types that planners and investors could use as a ready-reckoner? One part of RIU's lesson learning is to reveal what these market and development niches look like in the programme's sphere of activity. By way of conclusion the following presents what has been seen so far. It is anticipated that this list of niches will be expanded as RIU's innovation studies proceed over the next year. What is already apparent at this early stage is that no *one* approach outlined in the innovation narrative in Box 2 will fit in any *one* niche. Rather, we expect to see a bundling of these different approaches. Expect future RIU lessons to point to teams of horses for an ever-expanding set of courses.

1. In 2009 RIU appointed LINK to act as its Central Research Team with overall responsibility for designing and implementing its research. The CRT is headed by Andy Hall. Research is coordinated by Jeroen Dijkman in Africa and Rasheed Sulaiman V. in Asia. For more information on RIU visit www.researchintouse.com

THE COURSES (Market and Development Niches)	HORSES (Bundles of Innovation Approaches)
Strong urban demand for traditional foods	Private sector supplying production inputs to farmers organised by the development sector. E.g., Poultry Development, Tanzania
Standards and norms in international value chains that create experiences and services applicable to poor farmers	Private companies sell products and services to poor markets incubated with public funds and development organisation assistance. E.g., Real IPM, bio-control of striga, Kenya
Upgrading of traditional commodity markets	Intermediary organisations from the public and private sectors brokering access to private sector organised input and output markets. Policy lobbying by the private sector. E.g., Cowpea and soybean, Nigeria; FIPS's small seed and fertilizer packs in East Africa
Policy windows associated with reform of tertiary education	University graduate scheme that promotes business-led technical services. E.g., Sleeping sickness control in Uganda
Increasing effective demand of large numbers of poor people for goods and services	Public and private sectors invest in pro-poor business models that rely on user-led models of innovation. E.g., Real IPM; FIPS in East Africa; Fish seed in Asia; Client-Orientated Breeding in Asia
Value chains with governance for ethical niche markets	Private and development sectors partner with producer-owned enterprises to link to lucrative markets. E.g., Value chain development projects in India and Nepal
High degree of social organisation for development purposes	Development and private sectors partner to build on the existence of groups of poor people organised for different purposes. E.g., Microfinance for innovation in India
Social capital from historically-developed, multi-sector alliances for development purposes	Reconfiguration of consortia for public good mobilises public, private and development actors, resources and services. E.g., Army worm control, East Africa; Flood Plain Management, Bangladesh

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