

# “A Marketplace for Agricultural Information Services (MPAIS) In Uganda”

## SYNTHESIS & POLICY BRIEF

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The MPAIS Project was funded by the UK DFID Crop Post Harvest Programme and implemented in Uganda between March and December 2005 jointly by Africa 2000 Network (Uganda), SourceKM (UK), InfoBridge Foundation (NL) and Nkoola Institutional Development Associates (NIDA : Uganda). Other outputs report elements of the project in more detail and are available from NIDA or Africa 2000 Uganda : (i) MPAIS Institutional Analysis, (ii) MPAIS Portal User Specification, (iii) MPAIS Trial evaluation Report.

### THE POLICY ISSUE

Under the Ugandan Plan for Modernization of Agriculture (PMA), extension reforms being implemented through NAADS (National Agricultural Advisory and Development Services) have decentralised financing to sub-county level and created an effective demand by farmers for advisory services provided by private extension service providers. However reviews indicate that, in fulfilling contracts for service provision, these NAADS Service Providers are making little use of high quality science-based technical information. The evidence is that the Service Providers face a number of constraints in this respect, including: high transaction costs and inadequate supply of relevant timely information.

### A NOVEL OPTION : PROMOTING A ‘MARKETPLACE FOR AGRICULTURAL INFORMATION SERVICES (MPAIS)’

The MPAIS project set out to evaluate the potential for a privately operated market for agricultural information services, operating between the supply of science based information from research organisations, and the demand for packaged extension information materials and related services by NAADS Service Providers. A working hypothesis for this MPAIS project is that there is room and opportunity for new entrants in this market, whereby private ‘Infomediaries’ package content into appropriate products for private sale to NAADS Service Providers, and

other ‘Information Market Service Providers’ provide services such as training, consultancy, internet access and other technical services, in response to demand from other market participants. The project also evaluated the viability of using a web-based trading platform as a coordinating and cost-reducing mechanism to ‘bring the market together’.

### THE ACTION RESEARCH

**Institutional Analysis** : Stakeholder workshops, surveys and key informant interviews were undertaken to assess baseline conditions and issues and options for a successful privately operated information market;

**Capacity Development** : a pilot information services trading portal was designed and implemented under local network management; pilot institutional arrangements were established based on a central portal and market coordination unit, an MPAIS users working group, and an MOU incorporating agreed Codes of Practice for information trading. Potential participants were trained in internet skills and web-based information management;

**MPAIS Pilot Trading** : A limited 3 month trial of a web-based agricultural information services market was implemented and evaluated. The means of exchange on the web portal were electronic ‘credits’ nominally worth 1 Uganda shilling that could only be exchanged for MPAIS products and services. The trial involved 30 NAADS Service Providers from four districts in Central and Eastern Uganda: Mukono, Iganga, Soroti and Tororo; 13 Agricultural Information Suppliers and 6 Information Market Service Providers (Internet cafés), also participated.

### CURRENT STATUS OF THE AGRICULTURAL INFORMATION MARKET

According to stakeholders there are some substantial constraints currently acting upon private investment in the agricultural information services market. The scale, nature and sustainability of the market opportunity created by the NAADS reforms is opaque and uncertain; infomediaries also face an apparently uneven playing field, already populated with public operators and NGOs either supplying information products for free or at sub commercial rates. At the same time the fledgling private market is fragmented and disorganised and has no collective voice to engage and negotiate with the public sector.

**Willingness to pay for Privately Supplied Extension Materials :** A baseline survey of 31 NAADS Service Providers and 26 Agricultural Information suppliers indicated a potentially significant latent demand for information materials that could be privately supplied. Eighty percent of NAADS Service Providers in the survey report that they are willing to pay private suppliers of information materials. Key factors influencing their willingness to pay were the technical content and whether this would help them to meet a market demand in the context of the contracting mechanism. On the supply side of the market, 5 of the 26 organisations were currently charging for information, however another 11 organisations plan to in the future; a trend which is linked to increasing pressure to achieve cost recovery.

When asked to consider potential ways forward, private sector actors displayed considerable distrust of any direct government intervention and a strong preference for measures that are private sector led, improve coordination, reduce costs and risks, and directly incentivise participants.

From the public sector, some agencies appear to lack confidence and trust in the market as a mechanism to supply research based technical information to NAADS Service Providers and their client farmers. There are concerns about how quality standards would be maintained and consumers protected in such a market, and how the intellectual contribution of public sector researchers would be acknowledged and adequately protected.

## RESULTS OF THE MPAIS TRIAL TRADING PERIOD

During the 3 month trial, 26 organisations (more than 50% of the sample) successfully engaged in transactions via the web portal for agricultural information products or services. There were 78 different transactions involving 37 different information products including soil maps, guidelines for community development, technical training, marketing and business development manuals, and leaflets on a variety of improved livestock and crop husbandry practices. There were also 94 separate requests for information or services expressed. This trading activity was leveraged by expenditure of UG Sh 298,000 (162 USD) worth of 'virtual' credits available to NAADS Service Providers on the portal.

Summary Data on the MPAIS Trial	
Description	Statistics
Registered Organisations	49
Total number of logins	443
Requests for information products or service	94
Offers of information products or service	148
Total number of transactions	78
Information Products involved in transactions	37
Information services involved in transactions	zero but see text
Number of organisations that achieved sales	10 (out of 13)
Number of organisations that made purchases	16 (out of 29)
Total available capital as credits	UG Sh 1,044,000
Capital used	29%

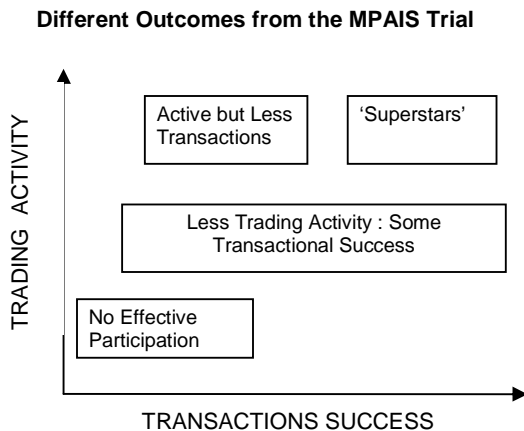
Approximately half of the sales were of short 'how-to' leaflets at an average price of UG Sh 1,230 (about 0.7 USD); there were also sales of technical manuals, books, posters and a CD. All of the information products were offered in print/hard copy except for one product in MS Word, a CD, and the some soil maps offered in digital format. In addition to actual sales registered on the MPAIS portal, there were several anecdotal accounts by participants of new business relationships formed as a result of market interactions. The institutional arrangements designed to support the trial were generally evaluated as very successful. Agreed trading practices were substantially adhered to; complaints by 'consumers' were related principally to issues of customer service and fulfilment rather than to trading standards, pricing, or quality issues *per se* (read on).

The trial received a highly positive evaluation from participants. There is considerable enthusiasm amongst participants for some form of continuation of the market, a strongly positive assessment of the potential impact of the market and a high propensity to continue using the MPAIS Portal if available. All of the participants indicated an in principle interest to engage or become involved with any future 'MPAIS institutions'.

## KEY ISSUES ARISING

### Diverse Outcomes

One fifth of the participating organisations accounted for more than 60% of all log-ins; 9 NAADS Service Providers (of 29 participating) managed to spend more than 50% of their available credits and these same organisations accounted for 80% of all purchases by value; meanwhile 5 Infomediaries (of 13 participating) accounted for 80% of all product sales by numbers of transaction and 90% by value.



There was a group of 'superstars' in the trial, about 20% of the trial participants, including both infomediary and NAADS Service Providers, who were very active in terms of their activity at the portal and successful in demanding and supplying relevant information and services. These organisations were generally market oriented 'problem solvers' and could be expected to be successful and enthusiastic participants in any scaled up initiative.

Another larger group of around 60% of the trial were moderately successful but affected to greater or lesser degrees by various constraints as discussed below. Finally around 20% of the trial group effectively did not participate, either through indifference or misunderstanding, or in some cases because they were simply monitoring events.

### Rural ICT Infrastructure and Skills

A significant group of mainly NAADS Service Providers reported constraints relating to ICT infrastructure and skills, either at their own facilities or at Internet Cafes. Lack of familiarity with use of computers/internet, sometimes combined with hardware/software and connectivity problems at internet cafes influenced the frequency of successful log-ins. Internet café operators observed that some of the portal users needed a lot of help in using the portal.

### Success of Public Sector/NGO Participants and Constraints for New Private Entrants

The most successful information suppliers in the trial included two departments of Kawanda Agricultural Research Institute (KARI – part of NARO) and several NGOs more used to providing 'public good' extension information materials for free or at cost. These are positive developments in terms of strengthening demand responsiveness of public funded research, however the presence of public sector and NGO operators offering 'subsidised' materials is a real challenge to private firms who may find it difficult to achieve significant sales of commercially priced information products and services, especially where they lack clear market information to guide the design and pricing of products and services.

Another issue for private investors is the scale of the potential market. If this is restricted to supply of information materials to NAADS Service Providers, potential new private entrants may view the market as both small and already well populated. Anecdotal evidence suggests that there would be potential to expand the market beyond the needs of NAADS Service Providers alone, and target a significantly larger potential group of organisations in the agricultural sector.

### Market Clearing and Performance

During the trial there were a significant number of information or service requests that were not matched by a relevant product or service and, conversely, a number of product and service offers for which there was no expressed demand. At the same time, participants on both sides of the market noted that their enthusiasm to make regular visits to the portal was dampened when they were unable to find relevant new information there. Some explanatory factors seem to be :

- Description of information products and services too brief or not clear;
- Difficulty in costing products and services;
- Lack of experience in and maturity of the market;
- Small scale of trial market and limited time or incentive for suppliers to respond to market signals with new products;
- Demand by Service providers influenced by the NAADS bidding cycle (so a longer trial period was needed).

A number of participants also experienced problems relating to customer responsiveness and order fulfilment. Some information suppliers observed that there were difficulties in contacting and communicating with potential buyers; conversely, some NAADS Service providers complained of long delays or lack of response from infomediaries.

These difficulties appear to have arisen from:

- High transport and/or postage costs not priced by suppliers;
- Poor addressing/contacts provision by buyers;
- Market naivety and lack of customer service ethos

### **Lack of Services Take Up**

There were no recorded transactions in services, which on the face of it is a disappointing result. In fact, some services transactions, including sales of internet time and of consultancy services, were reported to have taken place during or shortly after the trial. The lack of recording of these was partly due to the different mechanism for transacting in services on the portal which required users to transact offline and then return to the portal to enter the agreed price. This was not well understood. There was also confusion amongst some participants about whether the portal credits could legitimately be exchanged for services.

### **Use of The MPAIS Web Portal**

There was generally a high degree of satisfaction with the usability of the web portal, however a number of practical suggestions were made for enhancements to further improve simplicity of use, signpost the most recent/relevant information, enhance the amount of transactional and market summary data available to users; and upgrade the contact and messaging features available. Users had difficulties with the rating tools, in part because they wanted time to read materials and provide a fair review, but there was also a request from some participants for specific tools/standards by which to compare and rate products and services.

Most technical issues and other assistance requirements were directed to the portal managers by email or telephone. In addition to technical support, help requests were frequently also of a more general nature in terms of assistance with coordination and 'market-making'.

## **LESSONS LEARNED – HOW TO PROMOTE THE INFORMATION SERVICES MARKET**

Delivery of support to the market could be based on a partnership of public and private initiatives as follows ;

### **Demand Side Stimulus through Credits for Agricultural Information and Services**

Financing the provision of credits through the MPAIS web portal is efficient, targetable, low-cost, and auditable, and has proven to be effective in stimulating supply of relevant technical

information and services to NAADS Service Providers through the market from both public and private sector suppliers. The credit mechanism is effective in introducing liquidity to the market that can be used by the participants to finance training and other business development services (read on); it also leverages private investment in improved capacity as well as the development of improved market institutions.

### **Measures to Strengthen Capacity for Active and Successful Participation in the Market.**

There is a need for significant investments in human resources and capacity development to ensure that participants who were moderately successful in the MPAIS trial can be highly successful in an expanded initiative market,

A range of relevant business development services, including training in ICT, information management and communications, information product design, pricing, sales and marketing, customer services and order fulfilment, could all be effectively delivered through the MPAIS portal alongside information products. Other, secondary market services could also be offered such as in 'rural distribution and fulfilment'. Expansion of this 'service side' to the market is a vital element of measures to take MPAIS forward

### **Measures to Attract More Private Sector Entrants to the Market**

It is encouraging that public sector and NGO information suppliers were able to use the trial to experiment with a demand driven approach to product delivery. However future market expansion requires that new private sector entrants are also able to operate profitably in the market to increase diversity of choice and lower costs to consumers. At the moment it is not clear that this will be the case. Ways to stimulate private investment include :

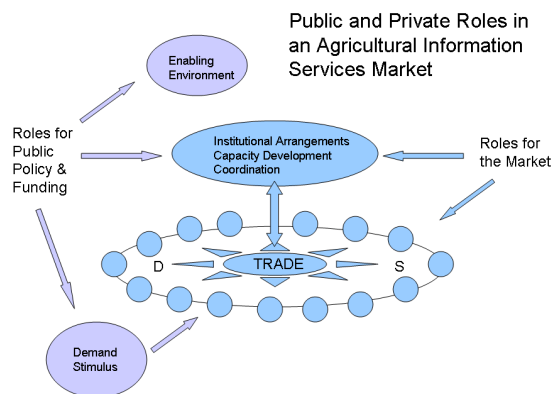
- Using the credit mechanism to actively stimulate the service side of the market (as above), where private operators are likely to be relatively competitive.
- Encouraging expansion of the market beyond its current restricted target group (the NAADS Service Providers) to include a wider range of organisations in the market for agricultural information products and services (both in Uganda and Regionally);
- Providing additional targeted support for private SMEs wishing to participate in MPAIS (to compensate for barriers to entry and playing field issues), through credits for business development services or, potentially access to small grants or a micro-credit facility.

### Market Infrastructure : the Web Portal

The existing MPAIS web portal was designed by Source-KM and InfoBridge as a short term vehicle for the purposes of the trial; the current technology and the licensing and management arrangements around it (which will end in August 2006) are not suitable for an expanded or longer term production implementation. In planning ahead it will be necessary to implement a more robust and scaleable technical platform with secure ecommerce capability and long term arrangements in place for site maintenance, and technical development to meet evolving user requirements.

### Market Coordination : Institutional Arrangements

The MPAIS Users Working Group established for the trial, with representation from all sides of the market, proved to be a dynamic and effective forum and it is important that this group is able to maintain the positive momentum. The group could act as a model for an expanded MPAIS Association or similar body with a mandate to support it's members, foster growth and development of the market, set trading standards and Codes of Practice, and lobby for financial support and policy change.



The MPAIS Coordination and Portal Management Unit headed for the purpose of the trial by Africa 2000 Uganda had a vital coordinating role at the centre of the market. Further development of MPAIS will need to see a similar facility in place with an expanded mandate to undertake 'market making' activities, including management and accounting of credit facilities, facilitation, information provision, coordination of training efforts and problem-solving issues such order fulfilment, and other constraints. The Facility could also have a role in monitoring and reporting on market performance according to agreed metrics, including compliance with trading standards. The Facility should be privately operated, but could also act as an interface and conduit between the privately operated market (through the MPAIS Association) and relevant public sector bodies.

### CONCLUSIONS FOR PUBLIC POLICY

Findings of the MPAIS project provide further evidence that the NAADS Programme has succeeded in providing a powerful demand-side stimulus on the agricultural advisory services market, and fuelled a need and desire for more and better agricultural information and related services by Service Providers. However it has also highlighted that private sector information services providers who could potentially enter this market are not doing so because the necessary conditions for a supply response from these actors are not currently in place. Instead there is a continuing reliance on a small number of public research agencies and project-financed NGOs to deliver the information products and services that NAADS Service Providers need; a reality that appears contrary to the aim and intention of the NAADS reforms.

#### FINDINGS FROM THE MPAIS PROJECT

- Agricultural information supply can be delivered through the market by stimulating demand
- Web technologies can be used to improve market information, reduce transaction costs, aggregate demand, facilitate supply
- Rural information market participants can work together effectively to identify and implement appropriate institutional arrangements for the market
- There are differentiated abilities to respond effectively to the information market, based on existing capacity, infrastructure – so differentiated policy responses are needed
- A set of potential public and private roles and responsibilities has been identified and documented with potential to enable a sustainable expansion of the agricultural information market.

The MPAIS project has demonstrated an approach that could help to bring more private investment into this market, based on a web-based, privately operated trading environment for agricultural extension materials and related services. Evidence from the trial is encouraging and suggests that there is both existing capacity and willingness within the private and NGO sectors to take such an initiative forward.

At this stage, and for the foreseeable future, these developments, though privately driven, will require public finance and other strategic support measures as described above. There is a clear cut case for such support given demonstrable existing market failures, the substantial social

benefits to be derived from the increased uptake of science-based technical information in rural areas, and overall congruence with existing NAADS Programme aims.

### **Enabling Policy Environment**

A more coherent strategy towards the agricultural information services market as a whole, including both public and private actors, is a necessary step to create the conditions for increased private investment. Currently a confused situation exists in which public agencies are effectively crowding out potentially more efficient private operators across a range of service types. The development of such an integrated strategy requires a more detailed analysis than this project has been able to deliver in the time available, in order to assess more comprehensively the mechanics of the agricultural information services market, economically optimum roles of public and private operators and the interface with broader public research extension policy. In the meantime, a number of possible components of such a strategy have been suggested and discussed above and in other project outputs.

### **Recommendations for NAADS Secretariat**

- NAADS Secretariat is recommended to identify and assign responsibility and resources to take forward a package of support measures as described above to establish the MPAIS Portal, stimulate demand, strengthen institutions and improve market coordination within a coherent and well publicised programme that will reduce uncertainty and risks for private operators.
- The need for some short term support measures, ideally through a privately operated MPAIS Coordination Facility is relatively urgent in order to fully capitalise on and develop the opportunity that the MPAIS project has helped to open up. This Facility will need to be financed by public funds in the short term, but should co-financed from the outset by private finance from market participants.
- Consideration should be given to supporting a full feasibility study and financial/ economic appraisal of a scaled up National MPAIS implementation.