Information maps: a path to effective solutions

RIU

Validated RNRRS Output.

Practical software tools—known as 'Step Tools'—are helping local users to make better and more effective use of information, creating flexible, database-driven solutions without the need for high-level technical expertise. This contributes to pro-poor development by improving local practices and information flow. The innovations apply information mapping to help users visualise their requirements. Customised programming transforms the information maps into searchable web-based databases. The methodologies and tools were developed and pilot-tested with partners in Kenya, Malawi, Uganda and Zimbabwe. They are currently in use in Kenya, Malawi, Pakistan, Tanzania and Uganda.

Project Ref: **CPH45:**
Topic: **7. Spreading the Word: Knowledge Management & Dissemination**
Lead Organisation: **Step Systems Ltd, UK**
Source: **Crop Post Harvest Programme**

Document Contents:

Description

CPH45

Research into Use
NR International
Park House
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Aylesford
Kent
ME20 6SN
UK

Geographical regions included:

Kenya, Malawi, Pakistan, Tanzania, UK, Uganda,

Target Audiences for this content:

Crop farmers, Livestock farmers, Fishers, Forest-dependent poor, Processors, Traders, Consumers,

A. Description of the research output(s)

1. Working title of output or cluster of outputs.

Step Tools - **S**upporting **T**echnologies for **E**nter**P**rises.

2. Name of relevant RNRRS Programme(s) commissioning supporting research and also indicate other funding sources, if applicable.

Crop Post-Harvest Programme.

3. Provide relevant R numbers with institutional partners.

R8402 (Theme 4: New tools for packaging and delivery of CPH information)
Business Consult Africa, Malawi (Towera Jalakasi) - core partner
Kenya Gatsby Trust, Kenya (Jane Mung'oma) - core partner.

4. Describe the RNRRS output or cluster of outputs being proposed and when was it produced?

Information, **knowledge** and **skills** are the most valuable assets for an organisation. Invariably, the 'know-how' - the *'intellectual capital*' - is the prime reason for the organisation's existence. Managing such resources effectively in day-to-day activities is challenging. Whether the organisation is involved with technical, scientific or training activities; with agricultural production or food chain operations; with manufacturing or providing services; **managing information** productively is a common problem.

Databases offer many advantages, but their complexities frequently act as barriers to their use, especially for smaller organisations. Building database systems are technically demanding, take time, often require specialist IT skills, have associated high initial and recurring costs. Spreadsheets and propriety programmes rarely provide a practical means to make the most of intellectual capital in meaningful ways that can benefit local organisations.

Building on the outputs of a earlier DFID-fund project *eToolbox*, the NRIL Project R8402 aimed to develop and test processes (as **methodologies**) and a product (as a set of innovative **software tools** - 'Step Tools') that could be used locally to create flexible, database-driven solutions, without complexities and need for high-levels of technical expertise. And thus, indirectly, help pro-poor development activities through improved local practices and information flow.

For example, the different kinds of information management for different types of application include:

- **Documentation Systems** - eg for publishing on CD informational guides, research outputs, multi-media training materials, business information .....
- **Monitoring and Evaluation Systems** - eg for assessing agricultural performances, farmers and farmer group training activities, changes in livelihoods of the poor .....
- **Traceability Systems** - eg for quality assurance and quality control purposes, HACCP and GMP procedures, product tracking .....

The innovative solutions devised make use of **information mapping**, employing object-orientated entities with metadata related to each object. This helps users to 'visualise' their informational requirements. Customised programming transforms the 'Information Map' developed into a dynamic, web-based, metadata-driven, searchable, relational database application.

The methodologies and tools were developed and pilot-tested during 2005 with core partners - **Kenya Gatsby Trust** (Kenya) and **Business Consult Africa** (Malawi), in collaboration with **NIDA** (Uganda) and **CPHP-SA** (**Zimbabwe**).

Seven **Workshops** were held in late 2005 in **Kenya**, **Malawi** and **Uganda** to disseminate the project outputs. A total of 125 people from 90 different organisations attended. From the feedback received, the existing need was evident for practical tools that local users can readily utilise for making better and more effective use of information.

(An example of an Object Map is given in Annex A).

5. What is the type of output(s) being described here?

Product	*Technology*	*Service*	*Process or Methodology*	*Policy*	*Other Please specify*
X			X		

6. What is the main commodity(ies) upon which the output(s) focussed?

The outputs are not specific to any particular commodity.

7. What production system(s) does/could the output(s) focus upon?

Semi-Arid	*High potential*	*Hillsides*	*Forest-Agriculture*	*Peri-urban*	*Land water*	*Tropical moist forest*	*Cross-cutting*
							X

The outputs are not specific to any particular production system.

8. What farming system(s) does the output(s) focus upon?

Smallholder rainfed humid	*Irrigated*	*Wetland rice based*	*Smallholder rainfed highland*	*Smallholder rainfed dry/cold*	*Dualistic*	*Coastal artisanal fishing*
-	-	-	-	-	-	-

The outputs are not specific to any particular farming system.

9. How could value be added to the output or additional constraints faced by poor people addressed by clustering this output with research outputs from other sources (RNRRS and non RNRRS)?

The methodologies and tools developed provide a means to improve the handling, analysis, reporting, publishing and brokering of information at a local level, irrespective of commodity, farming system or poverty group and whether related to RNRRS outputs or not. It is cross-cutting.

Clustering appropriate outputs from RNRRS and non-RNRRS projects would provide a means for gaining clearer insights into 'specific local needs'. It would help to broaden the scope and thus deepen the understanding of different informational needs, in different contexts, for different kinds of application.

Such insights would better facilitate the creation of an innovation platform for developing a series of 'generic' framework themes for mapping informational requirements to objects and standardised formats. The eventual aim would be to create means to automatically generate database applications direct from the 'Information Map' generated by end-users themselves.

To date, practical experiences have been gained with customised systems for various types of Documentation Systems, Monitoring & Evaluation Systems and Traceability Systems. As yet, we do not have experience, for instance, with market information type systems nor microfinance type systems and others.

Thus any outputs involving such activities could present potential opportunities for clustering.

RNRRS

From the information we have at present, there are likely to a number of synergies (eg CPHP R7493, R8431, R8271, R8263, R8261, R7168) where they involve, for instance, quality issues for products, but there are also likely to be synergies in other projects and programmes. Wherever aspects of 'knowledge management' - in the broader sense - is involved, then there may be opportunities for clustering.

Outside RNRRS

Those using Step Tools in other ways, as explained in Section 10 below, also provide opportunities for clustering, sharing experiences and for networking.

Validation

B. Validation of the research output(s)

*10. **How** were the output(s) validated and **who** validated them?*

The outputs of the project have been validated through use by several different organisations for several different types of application as follows:

1. Documentation Systems

Adapting the object models developed for the '*About Foods in Africa*' CD (an output of the '*eToolbox'* project), a searchable, database-driven 'Compendium' of research output information has been produced which documents the operation and experiences of NRIL with the management of the DFID-funded Crop Post-Harvest programme over the last 11 years (1995-2006). The CD will be published later this year by NRIL as an informational and lesson-learning guide.

2. Monitoring & Evaluation Systems

The partners are using the technology in actual projects to assess, *inter alia*, changes in livelihoods of rural poor. The information maps developed includes information about people, their profiles, assets, activities, training received, sales and volumes of products produced, and various other socio-economic indicators as required for the different projects. Entered data can be analysed in different ways according to needs of the projects and report outputs produced from the database.

The '*Technology Development & Transfer Project'* and the '*Integrated Fresh Fruit Juice Processing Project'* of KGT are using the Tools for, *inter alia*, baseline data recording and tracking production to assist management. These projects target more than 125 SMEs.

BCA are using the Tools for the *Grass Roots Market Access Project* (funded by Oxfam Malawi) targeting 2,000 households, and for the *Chia Lagoon Watershed Management Project* (funded by USAID) targeting 15,000 rural poor households. Analysed data is subsequently reported back through local reporting to the funders.

3. Traceability Systems

Information maps and objects have been developed for recording, *inter alia*, raw material supplier details, raw materials purchased, stock levels, production procedures, training activities, quality checks, quality issues, HACCP and GMP reporting, products and buyer details. Use and validation include:

- 'Mountain Fruits', a private sector company in rural northern Pakistan in the Hunza Valley producing solar dried fruits, through assistance under the Aga Khan Rural Support Programme involving more than 90 villages. Dried apricots and dried apples are exported to the UK as fair trade (FLO certified) products.

- '21 C' in Tanzania for quality control purposes in their production of fair trade soap products. They are working with more than 200 people in rural areas who supply raw materials.

- 'Fruits of the Nile', a small company in Kampala, have implemented a Step System with assistance from the Shell Foundation for production and quality control purposes of their fair trade dried fruits products for

export. They are working with nearly 150 producers groups, each of which typically employ 6-8 people, most of whom are women.

Without systems capability to formally track, record and analyse quality assurance and product safety reporting - from raw material supply through to final product - and to be able to provide evidence-based documented proof, it is unlikely that products from these companies could enter 'developed' markets such as Europe.

*11. **Where and when** have the output(s) been validated?*

The use of 'Step Tools' to develop database solutions for handling information have been validated during the last 10 months by their use in actual projects in Kenya (KGT), Malawi (BCA), Pakistan (Mountain Fruits), Tanzania (21C) and Uganda (Fruits of the Nile) and the UK (Step Systems).

Current Situation

C. Current situation

*12. **How and by whom** are the outputs currently being used?*

KGT (Kenya) and BCA (Malawi) are continuing to use the installed applications for their projects activities as described in section 10.

Mountain Fruits (Pakistan), 21C (Tanzania) and Fruits of the Nile (Uganda) are using the installed applications in their day-to-day operations.

In addition:

BCA - resulting from the capacity building of their IT skills gained through both the '*eToolbox'* and '*Step Tools'* projects, a local 'start-up' business - 'Computer Plus Peripherals' - has been created which is working in partnership with BCA for executing IT-related projects. This company presently employs 3 core staff and contracts in local graduates according to business needs. The company have been particularly successful recently in compiling and publishing a 'Malawi - *e*directory (2006)' on CD to meet the needs of many enquiries to BCA for information on where to find information on organisations in Malawi. The CD contains business information for over 300 organisations in Malawi. More than 10,000 copies have been sold and this has generated income for BCA. More details can be found at www.edirectory.mw .

Step Systems - in addition to the NRIL Compendium, we are currently developing a highly customised database application, using Step Tools, to enable Nkoola Institutional Development Associates Ltd (NIDA, Uganda) establish a monitoring and evaluation system for assessing improvements in livelihoods for, ultimately, more 20,000 'extreme poor' households. This is associated with the Danish assistance to 'Development Support for Refugee Hosting Areas' and 'Restoration of Agricultural Livelihoods in Northern Uganda'.

*13. **Where** are the outputs currently being used?*

East Africa
In Kenya, Tanzania and Uganda

Southern Africa
In Malawi

South Asia
In Pakistan

Europe
In UK.

14. What is the scale of current use?

The purpose of project R8402 was to develop methodologies and a product for pilot-testing for validation with our core partners during 2005, based on the experiences gained though the earlier '*eToolbox'* project. Since then, other applications have been developed and validated as explained in Section 10.

However, there are barriers slowing down adoption and these are outlined in Section 17. If these could be overcome, then much wider uptake is anticipated for use in both RNRSS legacy project activities and in other (non-RNRSS) activities.

15. In your experience what programmes, platforms, policy, institutional structures exist that have assisted with the promotion and/or adoption of the output(s) proposed here and in terms of capacity strengthening what do you see as the key facts of success?

The institutional factors that were most important to the project included:

- The core partners (KGT and BCA) being established BDS providers in their respective countries with a wide range of existing local and regional clients and contacts
- The partners having:
    - sound business and financial security
    - successful previous collaboration through the *eToolbox* project
- Positive attitudes to adopting new methods of working
- Active projects which could be used for pilot testing the Step Tools
- The potential to be able to adopt the tools more widely within the organisation
- The potential to be able to promote and extend the outputs of the project into the eastern and southern regions of Africa
- Step Systems having technical 'know-how' and practical experience of working on projects in Africa over many years.

The support of DFID in funding the research has been critical. It is most improbable that such innovative tools

would otherwise have been developed, particularly for the kinds of application involved that benefit local organisations for tacking poverty issues.

The outputs of the project have provided KGT and BCA with new skills and capabilities by '*learning through doing for a purpose*'. It has helped them in their day-today activities. It has also strengthened their IT understanding and their capacities, and given insights into possible new business areas that they did not identify with previously. It has imparted 'new knowledge' which they can potentially exploit in the future.

The experiences are also two way in that it has given Step Systems new knowledge about informational needs of various organisations in Africa. This is prompting ideas for appropriate mechanisms that can be utilised so that database-driven solutions can compile themselves directly into specific applications directly according to the specific needs of end-users.

Current Promotion

D. Current promotion/uptake pathways

*16. **Where** is promotion currently taking place?*

Step Systems have a web site (www.StepSystems.co.uk) where Step Tools are promoted. Also promoted are the '*About Foods in Africa*' CD, produced using Step Tools, and the earlier NRi eGuide '*Breaking into Mainstream Food Markets in the UK*'. The web site is to be updated in the near future to reflect the more recent activities and achievements including the NRIL Compendium (UK), and systems in Pakistan, Tanzania and Uganda. A presentation was also made to the 'Knowledge Management for Development' Discussion Group Meeting held at NRIL on 11 July 2006.

The '*About Foods in Africa*' CD has featured in Spore (Issue 123, June 2006). The KGT web site makes reference to our activities as do various on-line directories. Other initiatives are taking place through personal communications.

The Workshops held in late 2005, in Kenya, Malawi and Uganda to demonstrate and disseminate the outputs of the project, identified a number of real opportunities for uptake of Step Tools. Further enquiries have been received since.

However, until there are means to consolidate the position of all our partners, there is reluctance by them not to promote the project outputs to any great extent.

17. What are the current barriers preventing or slowing the adoption of the output(s)?

Generally, using database-driven solutions for managing information is relatively new in Africa, especially for smaller organisations who believe databases are 'not for them'. Whilst many understand the concept of databases, few understand how they can actually benefit them.

More specifically, the barriers include:

skill shortage - it is evident that partners require capacity strengthening of IT skills to help consolidate their position before they feel able to embark on programmes to locally promote and supply systems as solutions.

business confidence - partners do not appreciate yet the full benefits that could accrue; diverting their scarce resources to what is presently considered to be 'risk business' is not easy.

client's perspective - clients want to be sure that their requirements can be realistically met - not only technically, but to time and cost and that there is local support available.

track record - clients seek confidence and trust in their suppliers. Strengthening the track record of partners and Step Systems, and bringing in new partners to deepen usage, would help.

18. What changes are needed to remove/reduce these barriers to adoption?

The Workshops highlighted the need for such tools. The partners have subsequently received a number of noteworthy enquiries for different kinds of application (from ngos, charities, private sector and parastatal organisations). Demand is becoming increasingly apparent.

Improving local skills through training to strengthen capabilities would help overcome the 'chicken and egg' situation. Partners do not want to extend Step Tools until they have more experience and are confident that they can properly fulfil customer expectations.

Bringing in new partners (and training them to the same levels) and forming a 'user network' would strengthen confidence significantly, as would Step Systems being able to provide technical back-stopping support over a period of time.

We have not yet reached the stage of preparing promotion materials with the partners for the reasons outlined in section 17, but this is something that clients would expect. Part of this would include developing free downloadable products from the Step Systems web site (or, preferably, from an African users network site) to provide sets of practical and useable applications, but which would have limitations as to content and extent of use.

At the same time, building track record is crucial - and this has gradually started to happen.

19. What lessons have you learnt about the best ways to get the outputs used by the largest number of poor people?

Working with local partners in African and South Asian countries and understanding and meeting their needs has been crucial. It has given Step Systems the focus and motive for developing the innovate tools to tackle knowledge management issues that are important to the partners. It has also given them the motivation to adopt the tools through 'self-interest'.

Requirements for handling information vary. Invariably, organisations need individual solutions to meet their own specific needs. Nonetheless, there are many typical elements that can be used to 'characterise' requirements. By understanding these for different kinds of application and within different contexts, it would be possible to establish a series of 'generic' themes with related objects and metadata.

For instance, for a specific application, the Information Map would be built by selecting objects from generic themes. Each Object would have a set of metadata elements. An Object entitled say 'Person' could have metadata elements that includes, inter alia, Name, Sex, Age, Nationality, Address/Location, Contact details, Areas of expertise, Language and so on. (See Annex 1). By marking those specifically required for the 'Person' Object for a particular application and allowing customisation of elements by the user, the Person object could be defined. By repeating the process with different objects, it would be possible to uniquely define the entire Information Map for the application needed.

Developing this capability for core partners to generate solutions, and then to other partners and others identified would facilitate rapid extension of the use of the outputs of the research.

Smallholder agriculture and agrifood supply chains for formal markets would be a key focus for developing initial generic themes. The reasons for this are explained in the following section.

Impacts On Poverty

E. Impacts on poverty to date

20. Where have impact studies on poverty in relation to this output or cluster of outputs taken place?

No impact studies for the outputs of this particular project have been undertaken, but studies have been carried out on related key issues relating to traceability and standards impacting on poverty in Africa. These pose both threats and opportunities.

The importance of smallholder agriculture and its role in sustaining the livelihoods of a majority of Africa's poor is well recognised by both African governments and donor communities. Agriculture could significantly contribute to Africa's ability to meet the Millennium Development Goals (*Resnick, 2004*). However, the proliferation and increased stringency of food safety and agricultural health standards is a source of concern among many developing countries *(Jaffe, 20004).*

Increasingly, producers, processors and others involved in chain activities are needing to face up to certification, auditing and traceability issues in some way or other. This is being widely imposed as countries become signatories to WTO Agreements, because, in doing so, they are automatically accepting a regulatory requirement for food businesses to comply with Codex Alimentarius [1] , as well as with local regulations. This in turn means compliance with, *inter alia* for instance, HACCP and GMP requirements for ensuring food safety. Inevitably, supply chains will become under growing pressure to be able to prove compliance and to verify the safety and quality of their products whether for local, regional or international markets.

This situation is also being forced by supermarkets who are transforming the retail food sector, particularly in Southern and Eastern Africa, where they are already proliferating beyond 'middle-class', 'big-cities' into smaller towns and poorer areas Supplying supermarkets presents both potentially large opportunities and big challenges for producers. Their procurement systems involve purchase consolidation, a shift towards specialised wholesalers, and tough quality and safety standards. This is hardest for small producers who risk exclusion if they do not make investments and adopt new practices *(Weatherspoon, Reardon)*.

Step Tools are presently facilitating quality assurance for products in Pakistan, Tanzania and Uganda. The technology could play a wider key role in producing practical solutions to help meet the needs of small local producer groups becoming involved in formal supply systems, both in terms of providing capabilities to trace and document for quality assurance as well as training and procedural aspects. And thus impact, albeit indirectly, on poverty.

[1] The Codex Alimentarius, or the food code, has become the seminal global reference point for consumers, food producers and processors, national food control agencies and the international food trade. The code has had an enormous impact on the thinking of food producers and processors as well as on the awareness of the end users - the consumers. Its influence extends to every continent, and its contribution to the protection of public health and fair practices in the food trade is immeasurable. Following the successful conclusion of the GATT Uruguay Round of Multilateral Trade Negotiations in April 1994, Codex standards, guidelines (including the Guidelines for the Application of HACCP system) and recommendations constitute the reference for food safety requirements in international trade.

Reference

Weatherspoon, D.D. and Reardon, T. (2003) The rise of supermarkets in Africa: implications for agrifood systems and the rural poor. Development Policy Review, 21, 3.
Jaffe, S. and Henson, S. (2004) Standards and agro-food exports from developing countries: rebalancing the debate. World Bank.
Resnick, D. Smallholder African agriculture (2004). International Food Policy Institute (IFPRI), DSGD 9.

21. Based on the evidence in the studies listed above, for each country detail how the poor have benefited from the application and/or adoption of the output(s).

At present, this includes Pakistan and Tanzania and Uganda. In each case, the poor have benefited through employment in rural and urban areas. The outputs of the project are, indirectly, a contributing factor in bringing this about. Without quality assurance tracing systems in place, products being produced would not be accepted into European and UK markets and possibly not into regional markets.

It is not possible within the timeframe given to gain data to be able to disaggregate the ultimate beneficiaries in the ways requested. Generally, employment for many hundreds of people are involved so far, mostly women in rural areas.

Environmental Impact

H. Environmental impact

24. What are the direct and indirect environmental benefits related to the output(s) and their outcome(s)?

The outputs of the project are neutral and are not expected to generate any environmental benefit directly, now or in the future. However, as an informational handling tool, the outputs could be used, for instance, for monitoring and evaluating purposes for environmental benefits of activities undertaken by others (eg to validate the sustainable use of local woods in Kenya).

25. Are there any adverse environmental impacts related to the output(s) and their outcome(s)?

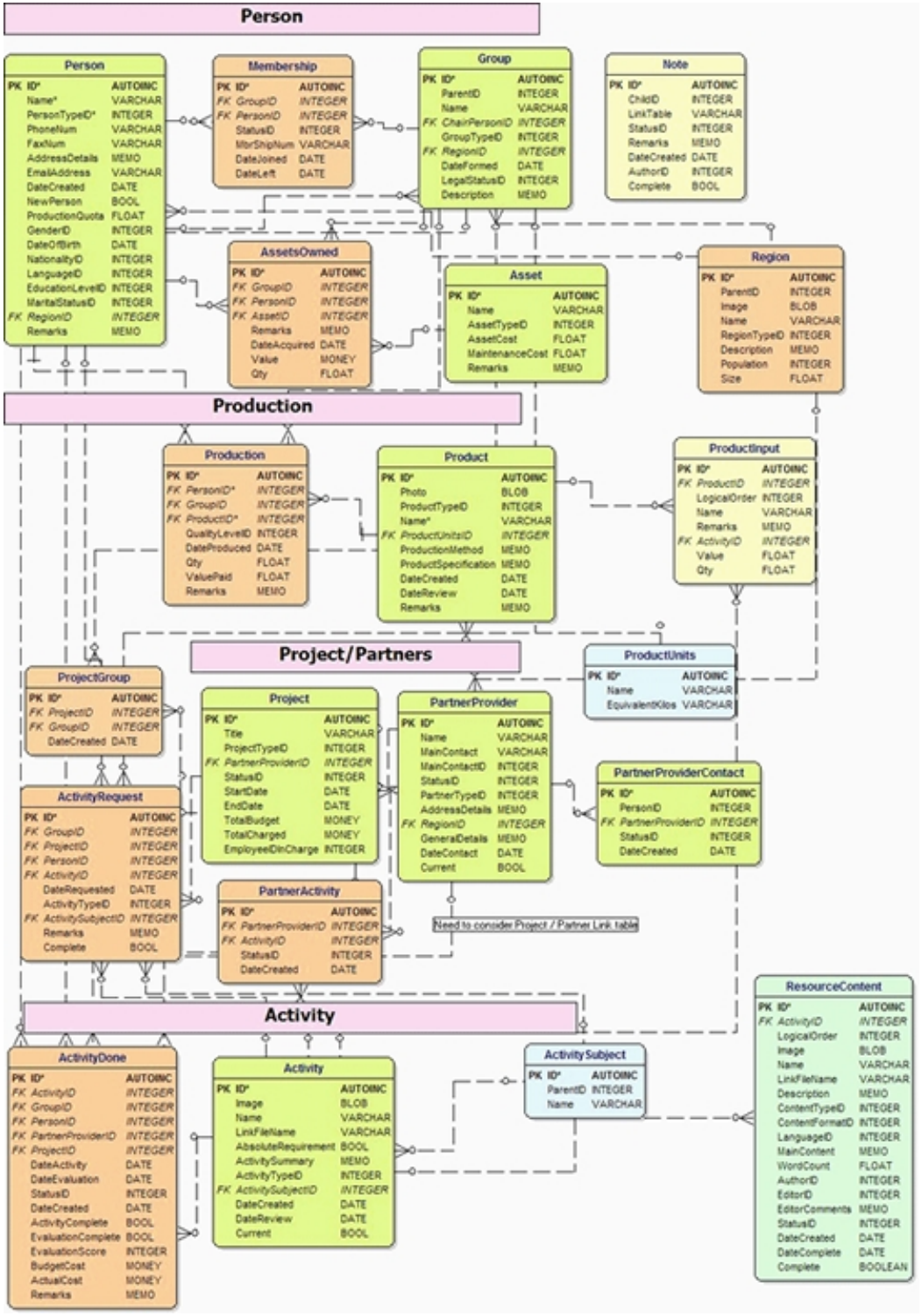
The outputs of the project are neutral and are not expected to generate any adverse environmental impact, now or in the future.

26. Do the outputs increase the capacity of poor people to cope with the effects of climate change, reduce the risks of natural disasters and increase their resilience?

The outputs do not increase the capacity of the poor to cope with these situations. However, in the 'Step Tools' application we are currently developing for NIDA (relating to monitoring and evaluating the 'Restoration of Agricultural Livelihoods in Northern Uganda Component'), we have recommended that the weather is included as a key element within the data collection process. This is to ensure that any analyses concerning assessments in the changes in production and in livelihoods also take account of external factors including, importantly, climatic conditions over the different seasons and years of the project life. This could influence intervention measures introduced in the future.

Annex

Annex 1 - Example of an 'Information Map' for a Farmer Group System Showing Objects and Related Metadata


Person
Person
PK ID* AUTOINC
Name* VARCHAR
PersonTypeID* INTEGER
PhoneNum VARCHAR
FaxNum VARCHAR
AddressDetails MEMO
EmailAddress VARCHAR
DateCreated DATE
NewPerson BOOL
ProductionQuota FLOAT
GenderID INTEGER
DateOfBirth DATE
NationalityID INTEGER
LanguageID INTEGER
EducationLevelID INTEGER
MaritalStatusID INTEGER
FK RegionID INTEGER
Remarks MEMO
Membership
PK ID* AUTOINC
FK GroupID INTEGER
FK PersonID INTEGER
StatusID INTEGER
MbrShipNum VARCHAR
DateJoined DATE
DateLeft DATE
Group
PK ID* AUTOINC
ParentID INTEGER
Name VARCHAR
FK ChairPersonID INTEGER
GroupTypeID INTEGER
FK RegionID INTEGER
DateFormed DATE
LegalStatusID INTEGER
Description MEMO
Note
PK ID* AUTOINC
ChildID INTEGER
LinkTable VARCHAR
StatusID INTEGER
Remarks MEMO
DateCreated DATE
AuthorID INTEGER
Complete BOOL
AssetsOwned
PK ID* AUTOINC
FK GroupID INTEGER
FK PersonID INTEGER
FK AssetID INTEGER
Remarks MEMO
DateAcquired DATE
Value MONEY
Qty FLOAT
Asset
PK ID* AUTOINC
Name VARCHAR
AssetTypeID INTEGER
AssetCost FLOAT
MaintenanceCost FLOAT
Remarks MEMO
Region
PK ID* AUTOINC
ParentID INTEGER
Image BLOB
Name VARCHAR
RegionTypeID INTEGER
Description MEMO
Population INTEGER
Size FLOAT
Production
Production
PK ID* AUTOINC
FK PersonID* INTEGER
FK GroupID INTEGER
FK ProductID* INTEGER
QualityLevelID INTEGER
DateProduced DATE
Qty FLOAT
ValuePaid FLOAT
Remarks MEMO
Product
PK ID* AUTOINC
Photo BLOB
ProductTypeID INTEGER
Name* VARCHAR
FK ProductUnitsID INTEGER
ProductionMethod MEMO
ProductSpecification MEMO
DateCreated DATE
DateReview DATE
Remarks MEMO
ProductInput
PK ID* AUTOINC
FK ProductID INTEGER
LogicalOrder INTEGER
Name VARCHAR
Remarks MEMO
FK ActivityID INTEGER
Value FLOAT
Qty FLOAT
Project/Partners
ProductUnits
PK ID* AUTOINC
Name VARCHAR
EquivalentKilos VARCHAR
ProjectGroup
PK ID* AUTOINC
FK ProjectID INTEGER
FK GroupID INTEGER
DateCreated DATE
Project
PK ID* AUTOINC
Title VARCHAR
ProjectTypeID INTEGER
FK PartnerProviderID INTEGER
StatusID INTEGER
StartDate DATE
EndDate DATE
TotalBudget MONEY
TotalCharged MONEY
EmployeeInCharge INTEGER
PartnerProvider
PK ID* AUTOINC
Name VARCHAR
MainContact VARCHAR
MainContactID INTEGER
StatusID INTEGER
PartnerTypeID INTEGER
AddressDetails MEMO
FK RegionID INTEGER
GeneralDetails MEMO
DateContact DATE
Current BOOL
PartnerProviderContact
PK ID* AUTOINC
PersonID INTEGER
FK PartnerProviderID INTEGER
StatusID INTEGER
DateCreated DATE
ActivityRequest
PK ID* AUTOINC
FK GroupID INTEGER
FK ProjectID INTEGER
FK PersonID INTEGER
FK ActivityID INTEGER
DateRequested DATE
ActivityTypeID INTEGER
FK ActivitySubjectID INTEGER
Remarks MEMO
Complete BOOL
PartnerActivity
PK ID* AUTOINC
FK PartnerProviderID INTEGER
FK ActivityID INTEGER
StatusID INTEGER
DateCreated DATE
Need to consider Project / Partner Link table
Activity
ResourceContent
PK ID* AUTOINC
FK ActivityID INTEGER
LogicalOrder INTEGER
Image BLOB
Name VARCHAR
LinkFileName VARCHAR
Description MEMO
ContentTypeID INTEGER
ContentFormatID INTEGER
LanguageID INTEGER
MainContent MEMO
WordCount FLOAT
AuthorID INTEGER
EditorID INTEGER
EditorComments MEMO
StatusID INTEGER
DateCreated DATE
DateComplete DATE
Complete BOOLEAN
ActivityDone
PK ID* AUTOINC
FK ActivityID INTEGER
FK GroupID INTEGER
FK PersonID INTEGER
FK PartnerProviderID INTEGER
FK ProjectID INTEGER
DateActivity DATE
DateEvaluation DATE
StatusID INTEGER
DateCreated DATE
ActivityComplete BOOL
EvaluationComplete BOOL
EvaluationScore INTEGER
BudgetCost MONEY
ActualCost MONEY
Remarks MEMO
Activity
PK ID* AUTOINC
Image BLOB
Name VARCHAR
LinkFileName VARCHAR
AbsoluteRequirement BOOL
ActivitySummary MEMO
ActivityTypeID INTEGER
FK ActivitySubjectID INTEGER
DateCreated DATE
DateReview DATE
Current BOOL
ActivitySubject
PK ID* AUTOINC
ParentID INTEGER
Name VARCHAR

Annex 2 - Acknowledgements

We wish to acknowledge the assistance of the following organisations for providing information to include in this Proforma, including: Kenya Gatsby Trust (Kenya), Business Consult Africa (Malawi), Computer Plus Peripherals (Malawi), Nkoola Institutional Development Associates Ltd (NIDA, Uganda), Knowledge Transfer Africa (Zimbabwe); also to Mountain Fruits (Pakistan), 21C (Tanzania) and Fruits of the Nile (Uganda).

Derek Cox
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