

Node: Suite Summary^{1,2}

Eastern Africa: Densely populated, high rainfall lands with land management and market access constraints

Context

The highland areas of Eastern and Central Africa (ECA) are the most densely populated areas of this region. They account for only 23% of the ECA-landmass but, because of their suitability for human habitation, they accommodate 50% of the region's population. In many parts of the region, the natural resource (NR) base has features (such as soil types and rainfall amount and distribution) that can support NR-based livelihoods resulting in intensive cultivation. However, incomes from farming are very low and poverty is widespread. The increase in population density that has occurred over the past fifty years has resulted in small, often fragmented farms (typically sized 0.25 to 1 ha). Associated problems are land degradation and people's inability to invest in better land management. Poor public services and infrastructure, which limit access to such things as credit, markets and information, which could assist farming and land use decisions, are also factors that constrain agricultural development and limit livelihood options.

NRSP's research focused on the highland areas of Kenya and Uganda and prioritised improving soil and land management as a means to sustain productivity of the major rainfed farming systems. Initially research (1997-2000) addressed technical interventions for soil management that could increase small farm productivity, and projects were located only in Kenya. In 1999, some reorientation took place in respect of research emphasis and geographic coverage, as follows.

- Research plans were based on the rationale that existing technical knowledge relevant to improving ECA highland farming systems was adequate. The main constraint to address was the conditions that limited the application of this technical knowledge to assist livelihood improvement of poor people.
- In terms of research design, this reorientation led to the commissioning of projects with social and institutional, as well as technical, dimensions.
- Research in Kenya narrowed to focus only on the relatively remote highland areas of western Kenya and two projects were commissioned in similarly remote highland areas of Uganda.
- In 2002, a study of rural youth was added, based on the hypothesis that youth are major stakeholders in the sustained improvement of natural resources management (NRM).

Research Topics

- What mix of fallow species can be recommended that can best: (a) help to restore soil fertility, and (b) provide a range of economic benefits that would make fallow management a viable option for farmer-adoption?

¹ This document summarises NRSP's work in one of its uptake promotion node: suites. For further details and links to project and project documents see <http://www.nrsp.org.uk/6.aspx>

² This document presents research funded by the UK Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID.

- Has the model, WaNulCAS, potential as a tool to assist assessment of agroforestry options?
- Can a sustainable micro-credit system be devised that can serve as a replicable model for seasonal credit provision to poor people who engage in semi-subsistence rainfed farming?
- What effect does the availability of seasonal credit have on the adoption new crop and soil fertility management technologies?
- What range of co-ordinated services do farmers need in order to provide them with a better opportunity to improve their farm productivity and livelihoods?
- What evidence-based livelihood outcomes and impacts could be attributed to farmers' access to improved pro-poor rural services?
- What approaches and tools do hillside farmers and their local service providers identify as priorities for assisting them to diagnose land and soil problems and adopt/promote measures that can improve soil and hillside land management?
- Is the strengthening of social capital efficacious for initiating a process that benefits NRM practices and policies?
- What ways are most effective for strengthening social capital, and is this effective for improving local-level institutions and policies, supporting the integration of scientific and participatory approaches into policy development and implementation, and accelerating adoption of sustainable NRM technologies and practices?
- What are the main outcomes of strengthening social capital in village communities, and what are the main implications of these for achieving sustainable and positive changes in NRM and livelihoods?
- As a result of promoting the research findings and products of NRSP's 'ECA highlands' suite of research projects, what are the key findings that NRM researchers should internalise in their planning of uptake promotion towards achieving the use of research in developmental policy and practice?
- What are the main characteristics of the livelihoods of rural youth and what implications do these characteristics have for the formulation of NRM policies?

Projects

Seven projects comprise this node:suite. R7056 (Nutrient sourcing and soil organic matter dynamics in mixed species fallows, 1997-2001). R7517 (Bridging research and development in soil fertility management: Practical approaches and tools for local farmers and professionals in the Ugandan hillsides, 2000-03). R7856 (Strengthening social capital for improving policies and decision-making in NRM, 2000-04 which utilised findings of NRSP research on the user perception of land degradation from Sri Lanka (R6525). R7962 (Linking soil fertility and improved cropping strategies to development interventions, 2001-05). A scoping study on rural youth in Eastern Africa in 2002 led to R8211 (Understanding and enhancing youth livelihoods in rural East Africa, 2002-05). R8400 (Advancing the use of the products of NRSP's past and current research projects in Eastern Africa, 2005). R8494 (Tracking social capital outcomes and sustainability of local natural resource management policies, 2005).

R7056 conducted trials on farmers' fields at various sites in the highland area immediately to the north of Lake Victoria in western Kenya to evaluate improvements in soil fertility and maize crop productivity arising from planted fallows of mixes of leguminous species (herbs, shrubs and trees). Phosphorus (P) and potassium (K) chemical fertilisers were applied to all maize trials in order to overcome the known P fixation and K deficiencies of the soils. In

addition to maize grain yield, secondary benefits (e.g., fodder offtake and cash cropping opportunities during fallow establishment) were determined. The fallow benefit in terms of nitrogen (N) supply for the maize crop was determined and using stable N isotope methods the biological N fixation of leguminous fallow species, the depth of N capture and fallow species interactions were studied. An existing model for assessing options for agroforestry systems, WaNuLCAS (Water, Nutrients, Light Capture in Agroforestry Systems) was tested and an alternative simpler tool was developed. WaNuLCAS and other modelling tools for strategic agroforestry planning were promoted through a training workshop. Farmers' field days were used to promote mixed species fallows.

R7962 followed R7056 and was undertaken in the same highland area. It took account of the R7056-findings and other prior social and biophysical research conducted in the area including research on the P problems of nitosols (the area's main soil type). The project introduced a development intervention (a community-based micro-credit scheme) to enable poor farmers to take advantage of relevant knowledge and available technologies that could improve their crop and farmland productivity. Use of credit for key inputs, such as chemical P fertilisers and new crop varieties appropriate to their farming system was encouraged. With micro-credit as the entry-point for interaction with farmers' groups, the project developed and promoted a range of decision support tools (DSTs) relating to farm management and used field demonstrations, farmers' field days, market visits and various forms of training to assist farmers to build their capacity in financial and technical decision-making. The project's DSTs were promoted more widely with farmers and extension organisations in the target area. The project's impact was assessed in its final year.

Similarly, R7517 addressed the gap between research-generated knowledge on soil fertility management (SFM) and use of this knowledge by farmers and local professionals (government and non-government service providers). It was conducted in two districts located in the Mount Elgon hills in eastern Uganda, where increasing land degradation, soil erosion and soil fertility decline are common problems for hillside farmers. In this context, national researchers collaborated with district-level professionals (both senior and field extension officers) and a sample of local farmers to identify information needs and develop and test appropriate fieldwork methods and information tools that local professionals could use to contact, interact and advise farmers on SFM and land management. A national researcher was seconded to work locally with extension staff and farmers.

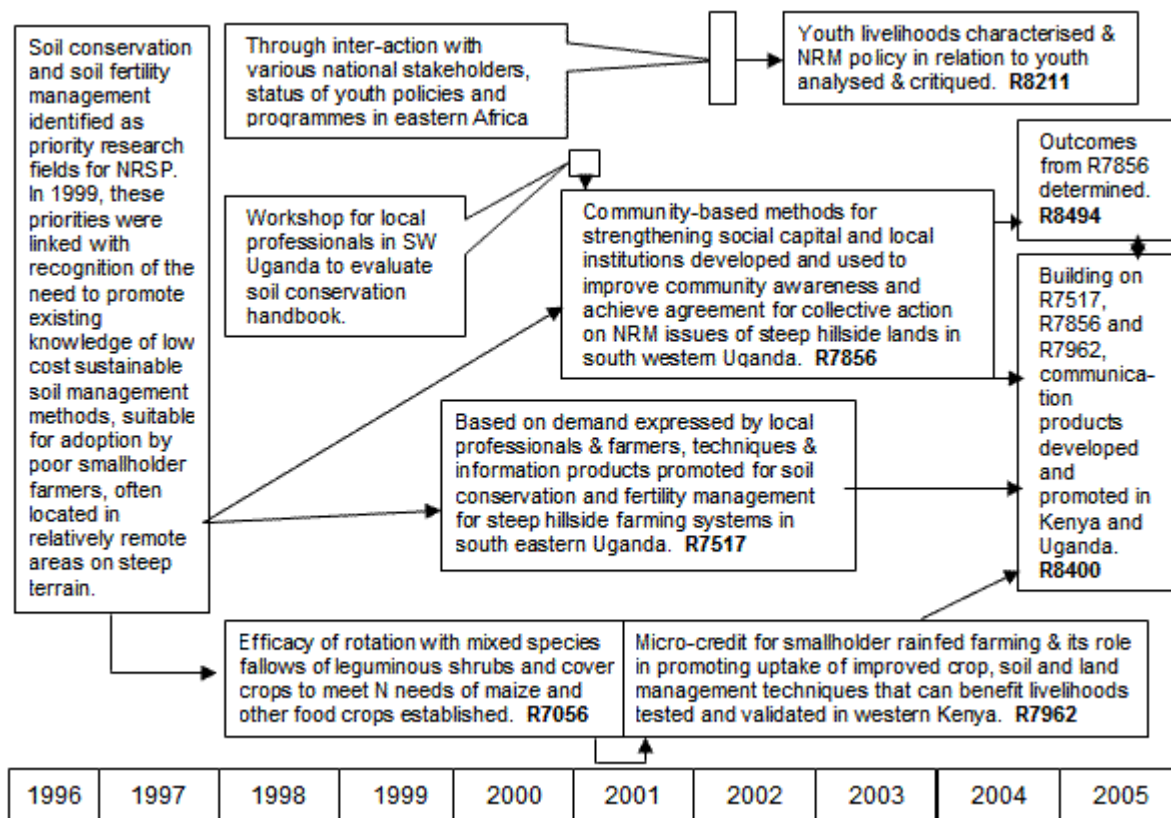
R7856 also focused problems of land and soil degradation where solutions are needed at field and landscape levels that require both individual and collective action. The project worked with four communities who farm the steep intensively cultivated hills of Kabale District in south western Uganda. Using various participatory methods, an understanding of the various dimensions and strength of existing social capital and its link with livelihoods was generated. This understanding was then used to develop and test mechanisms to build social capital in the target communities and use this social capital to improve natural resource management (NRM) practices and policies. New village-level institutions (farmer forums and task forces) and regular multi-level stakeholder workshops were tested as a means to improve community-based NRM planning, develop stronger links between communities and other key stakeholders (local decentralised government organisations, local members of parliament, NR-service providers and research organisations) and enable the participation of local communities in NRM policy formulation and implementation.

R8494 was a follow-up to R7856. It had two main thrusts: (a) a study that determined the outcomes and livelihood impacts from building social capital in the target communities and the performance and sustainability of strengthened social capital in NRM; and (b) development of appropriate communication materials to support promotion of the community-based NRM planning and action. The second thrust linked with R8400 for stakeholder analysis and communication planning.

R8400 was an uptake promotion project that aimed to widen stakeholder uptake of the research findings and knowledge-sharing products of R7056, R7517, R7856 and R7962 in Kenya and Uganda. The project undertook a detailed analysis of the stakeholders that it should aim to reach covering those at policy and downstream levels and used a consultative process with key stakeholders to identify the preferred communication products of different stakeholder types. Communication products were then developed, pre-tested, produced and disseminated. An end-of-project survey with stakeholders who had received the R8400 products determined the extent of uptake and scaling-up in respect of such things as policy-level adoption, practitioner use, further production and wider dissemination.

Following a scoping study R8211 focused on rural youth with field study sites in Kenya and Uganda. Based on data from field surveys and information contained in journals of youth informants, R8211 characterised youth livelihoods and assessed the relevance of the findings to NRM policy. Relevant policies relating to NRM were reviewed particularly in respect of the extent to which they addressed the needs and interests of rural youth. Visits were made to relevant government departments and field-based organisations to discuss their views on youth and assess the extent to which rural youth were considered in policy-planning and field programmes.

Project links within Eastern Africa Suite 2: 1997-2005



Outputs

Findings

R7056. Data from field trials enabled the development of guidelines on the incorporation of mixed species fallows into arable rainfed (two wet seasons per year) cropping, where maize is the major crop. The guidelines addressed soil fertility improvements, economic viability, pest and disease risks, fallow species management and cropping/intercropping patterns. Short-term fallows (9 months) initiated during the growth of a maize crop in the short rains season were found to result in significantly greater grain yield in a post-fallow long rains maize crop compared with that from plots under continuous maize (a common practice in the target area). Maize grain yield in the first crop after a 15 month fallow was estimated to be equivalent to the application of 100 kg N/ha to the continuous maize plots. Relative to non-fallowed plots, greater maize yields were obtained for up to four years post-fallow. The contribution of various legume species to soil N balance was quantified including the extent to which fallow species extract N at depth and make it available, through residue cycling, to more shallow rooted arable crops. Simulations generated by WaNuLCAS and a simpler model indicated such models have predictive value for assessing the potential of mixed species fallow systems.

R7962. Although the credit scheme had poor initial performance, it improved over time and achieved greater than 95 per cent repayment at project closure. It reached a total of 790 clients (52% men, 48% women of whom about 60% were in the least poor quartile of poor farmers with the remainder in poorer quartiles). Through experience, the scheme identified five key features as necessary requirements for micro-credit that supports seasonal semi-subsistence rainfed farming. Training of borrowers also was found to be important. From the outset, the project developed links with a local major micro-finance company, Wedco, who assisted with meeting financial training needs. Using an iterative process of farmer feedback, the project distilled a considerable amount of research knowledge into the development of three paper-based pictorial DSTs covering better land management, correcting nutrient deficiencies and *Striga* control supplemented by a number of posters. On-farm demonstrations and field visits made farmers aware of new maize varieties, alternative crops (soybean, improved bean and groundnut varieties), maize yield response to applied chemical fertilisers and new cropping patterns. Market visits and training in participatory budgeting helped farmers' decision-making on crop choice and use of inputs. In the end-of-project impact survey found at least 70% of farmers who had seen the DSTs reported that they had used them in planning their cropping activities including decisions to introduce crop rotation, change to new crop varieties and change their soil fertility management practices.

R7517. An initial household survey established the complexity of providing service support for SFM and land management to local farmers for which key factors were the variability in: their knowledge; access to resources; and perceptions of soil degradation and crop production constraints. It was also recognised that, from the viewpoint of sustainability, solutions for improving service provision must keep within the confines of limited locally available human and financial resources. In this context, through interaction between researchers, service providers and farmers, the project identified four main requirements that could enable local services to better meet the diversity of farmers' needs: (a) service providers should understand that their role is to facilitate farmers' decision-making (rather than promoting a technical solution that a farmer should adopt); (b) to help service providers fulfil this role,

they need simple analytical and diagnostic tools (e.g., for participatory financial appraisal of soil management options) and also guidelines to assist them to communicate with farmers; (c) researchers need to offer service providers and farmers a broad suite of feasible options for improving SFM and tackling land degradation relevant to the highland conditions of the target area (including locally located observation plots of available technologies); (d) the scope for farmers to fine-tune technologies to suit their circumstances is considerable and service providers can assist farmers with this; such experience then becomes a local resource for the promotion of better SFM and land management practices.

R7856. Ways by social capital is activated in pursuit of livelihoods, particularly how access to (or exclusion from) social capital can assist or impede access to other forms of capital and hence influence livelihood choices and outcomes, were established, including gender-related aspects. It was found that there was a relatively high density of community-based groups covering a range of activities and a generally high level of participation in collective activities. Nevertheless, instances of collective action relating to agriculture and NRM were mainly limited to active groups rather than the wider community. Villages were relatively well endowed with bridging and linking social capital and had intensive links with external organisations (mainly NGOs). However, the distribution of social capital was found to be uneven and farmers with less social capital could be excluded from development activities. These various findings were factored into the development of methods for building social capital and linking communities into NRM-related policy processes. Even though such work has long lead times, one mechanism that showed potential during the project's duration was the establishment of farmers' forums, and policy task forces (PTFs) operating at three levels (village, sub-county and district). This mechanism was found to be effective for: (a) helping farmers to analyse NRM issues, develop community action plans and undertake collective action on NRM; and (b) linking communities with local government and relevant research and development organisations. The link at sub-county level was especially important as this is where administrative powers lie to make bye-laws, develop plans and budgets, and allocate resources. In practical terms, the mechanism generated support for reviewing and formulating NRM-related byelaws and for mobilising political, social, human and financial resources for byelaw implementation. The PTFs also identified indicators for community-based monitoring of the implementation of their NRM-related community action plans.

R8494. About one year after the end of R7856, it was found that the work on strengthening social capital had resulted in positive outcomes for three of the livelihood capitals (social, human and natural). One main outcome of employing social capital towards community action on NRM was that it had generated more social capital. Local people complied with bye-laws knowing others would do so. Village PTFs had continued to operate and were playing a significant role in community-based collective action for NRM through initiating, facilitating and monitoring the effective implementation of community bye-laws. Although there were strong indications that the community-based and other institutional arrangements to support improvement of NRM were sustainable, mentoring of community representatives was identified as one way to make this more assured. Such work, that an organisation engaged in community-based activities could provide, would also feed into the further refinement of community-based mechanisms for improving both NRM and livelihoods.

R8400. The project developed eight of the products of previous research projects in this node:suite to provide a suite of communication products (termed knowledge-sharing products - KSPs) in poster and book formats in the English language, designed for use by service providers and farmers in Kenya and Uganda. Owing to limitations of time and funding,

products using other media and in other languages were not developed. Even though there was only a short interval between distribution of the KSPs and conducting the end-of-project uptake survey, it was found that organisations (ranging across government, non-government, farmers, communities and the private sector) that had participated in the project's planning workshops and then received the KSPs were using them; posters were especially popular. Some organisations were taking necessary steps for reproducing some of the KSPs and one organisation had already commenced this work and begun wider promotion of the KSPs by the project's end. There was one acknowledged gap in the project's communication work, namely that stakeholder interaction at a senior policy level and development of KSPs suited to such stakeholders was not achieved. The importance of this link to support wider uptake promotion was recognised and was planned as an area that project team members would endeavour to cover, post-project. Arising from the project's overall work on uptake promotion (including communication planning and implementation, and tracking of uptake) some priority issues that need to be addressed in research planning for strengthening the research-development linkage were identified.

R8211. The project found that a commonly held view amongst rural development agencies and professionals working at a national policy-level was that rural youth were not interested in deriving a livelihood from natural resources. Similarly, policy analysis found that youth were only occasionally visible in NR-related policy documents and commonly their particular interests and concerns were subsumed within the broader category of 'disadvantaged groups' or 'women'. With regard to NRM, negative attributes were attached to 'youth', such as a desire for urban life styles, irresponsible attitudes to the environment, criminal tendencies. In contrast to these policy-related findings, the various studies of young men and women found that, for the majority, use of natural resources was a key feature in their livelihoods, although the extent of dependency varied both between different young people and over time for any one individual in response to changing needs during this part of their life course. A common feature was that a broad and income-earning portfolio of livelihood activities was essential. However, as youth progressed towards adulthood, their livelihood strategies became more focused. As formative livelihoods took shape, they moved towards activities based on more sustained use and management of natural resources.

Research messages

- It is not possible to recommend one single mixed species fallow as the most efficacious improved fallow. Recommendations have to be tailored to farmers' circumstances and associated needs and preferences. Research has provided evidence for proposing a suite of options for mixed species planted fallows each with identified benefits and certain limitations from which farmers can choose.
- Models can assist strategic planning of agroforestry systems provided their use is supported by training and advisory support.
- Micro-credit for rainfed seasonal smallholder agriculture is feasible provided the scheme is tailored to its conditions and needs. Key features are that the loan system: (a) extends over the annual farming cycle rather than a shorter term; (b) has repayment dates that take account of the highs and lows of income sources during the year; (c) has a lender visit system which devolves responsibility to a contact farmer to encourage individual loan repayment from members of a farmer group (which in turn reduces the lender's loan management costs); (d) is distributed in kind (i.e., as input supply) rather than cash; and (e) uses a group-based incentive scheme that links future credit allocation to current loan repayment.

- While poor farmers value access to information on new technologies relating to their farming system, more wide ranging information (e.g., on markets, farm budgeting) helps them to make more robust assessments of opportunities for more secure food production and income generation. In addition, while adoption of some new technologies may not require access to micro-credit, the availability of credit is an important factor for adoption of those technologies that have costs but also obvious benefits. Access to credit makes these technologies affordable, even though there are risks.
- A co-ordinated service that combines micro-credit with input supply and information highly relevant to a farming system strengthens poor farmers' capacity to assess and afford technical change in their farming activities. Thus, access to micro-credit adds considerable value to the availability of information, especially when credit and information form a co-ordinated service that is linked with a community-based organisation (such as a farmers' group) that has a role in the operation of the micro-credit scheme.
- Although there is good evidence that improved maize productivity and crop diversification beyond maize definitely can reduce poverty, small farm sizes limit what can be achieved. This farm type alone cannot enable a household to escape poverty. Thus, for the densely populated areas of western Kenya, non-farm as well as farm income sources are essential for escaping from poverty.
- There is evidence that an active partnership between researchers, local service providers and farmers is an effective way of understanding and coping with the complexity and diversity of local farming conditions, especially in respect of improving SFM and reducing land degradation in hilly terrain. Seconding a national researcher to work locally facilitates interaction between research, extension organisations and farmers, helps in bridging between research and local knowledge, and assists promotion of options for improved land and soil management.
- In situations where sustained collective action is needed to address NRM, social capital alone cannot mobilise the resources needed to promote broad-based and sustainable NRM. Rather, complementarities and synergies between social capital and local policies and institutions are needed to improve NRM. There is evidence that a community-based mechanism that strengthens social capital and improves the organisational capacity of local communities is effective not only for developing community action plans and the commitment to action but also for establishing effective links with a range of other key stakeholders concerned with policy and service support for NRM. These links help to provide necessary information, mobilise essential inputs and influence policy action for NRM.
- An organisation that facilitates community-based planning and collective action, and the development of links into policy processes should also undertake mentoring of different community representatives as an on-going process after completion of a time bound project. Such work will provide opportunities for sharing experiences and will feedback into the further development of community-based methods for improving NRM.
- Effective communication and achieving scaling-up of the findings and products of research needs time and requires the early involvement of all stakeholders commencing from the initial stage of product development. Linked with this, there is a need (in Kenya and Uganda at least) for mechanisms to institutionalise the use of research findings and products in development beyond that which can be achieved by a time bound project.

- NR-related policy does not address the particular needs and interests of rural youth because those working on it do not understand what young people do, especially their involvement in NRM, and more generally in the rural economy. Policy-level recognition of youth as stakeholders in NRM, and engagement with youth in rural research and development can make an appreciable contribution to sustainable NRM on which so many livelihoods depend.

Key research products

- Cadisch, G. and Giller, K. 2001. Nutrient sourcing and soil organic matter dynamics in mixed-species fallows of fast-growing legume trees. Final Technical Report of project R7056. Wye: Imperial College, University of London. 30 pp.
- Poulton C, and Ndufa J.K. 2005. Linking soil fertility and improved cropping strategies to development. Scientific report. Annex A of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 62 pp.
- Poulton, C., Ndufa, J.K., Ogolla, G. and Maina, P. 2005. Impact survey. Annex B of the Final Technical Report of project R7962. London: Imperial College London and Kisumu, Kenya: KEFRI. 76 pp.
- McDonagh, J (2003) Bridging research and development in soil fertility management: Practical approaches and tools for local farmers and professionals in the Ugandan hillsides. Final Technical Report for project R7517. Norwich: Overseas Development Group, University of Norwich. 22 pp.
- Sanginga, P.C, Martin, A.M. and Kamugisha, R.N. 2004. Strengthening social capital for improving policies and decision-making in natural resources management. Scientific report. Annex A of the Final Technical Report for project R7856, 'Strengthening social capital for improving policies and decision-making in NRM'. Kampala, Uganda: CIAT - African Highlands Initiative. 66 pp.
- Sanginga, P., Kamugisha, R. and Abenakyo, A. 2006. Tracking social capital outcomes and sustainability of local policy initiatives. Final Technical Report of project R8494. Kampala, Uganda: CIAT-AHI. 31 pp.
- Ndufa, J.K., Semalulu, O., Sanginga, P., Noordin, Q., Kayanda, S., Obaga, S., Kasule, J., Lwasa, J. and Nyagot, C. 2005. Advancing the use of the products of NRSP's past and current research projects in Eastern Africa. Scientific report. Annex A of the Final Technical Report of project R8400. Kisumu, Kenya: KEFRI. 42 pp.
- Poulton, C., Ndufa, J.K., Gitau, M. and Ogolla, G. 2005. A guide on sustainable community based input credit scheme (SCOBICS). Kisumu, Kenya: KEFRI. 32pp.
- Semalulu, O., McDonagh, J. and Lu, Y. 2005. Bridging research and development in soil fertility management: Practical tools and approaches for better soil management in East Africa. Kampala, Uganda: NARO and Norwich, UK: ODG. 76 pp.
- Sanginga, P.C and Chitsike, C.A. 2005. The power of visioning: A handbook for facilitating the development of community action plans. Enabling Rural Innovation Guide 1. Kampala, Uganda: CIAT. 138 pp.
- Waldie, K. 2005. An investigation into the formative livelihoods of rural youth in East Africa. Scientific report. Annex A to the Final Technical Report for Project R8211. Reading, UK: International and Rural Development Department, University of Reading. 110 pp.
- Waldie, K.J. 2004. Youth and rural livelihoods. LEISA (Magazine on Low External Input and Sustainable Agriculture), 20(2): 6-8.

Impacts

- Farmers' awareness of the potential of mixed species fallows in their farming system in western Kenya was improved.
- Training on the WaNuLCAS model facilitated the evaluation of agroforestry systems in Kenya, Malawi, Uganda, and Zambia. A Latin American group of organisations including EMBRAPA (the national agricultural research system of Brazil) requested and received training in the use of WaNuLCAS.
- In addition to building the capacity of those accessing micro-credit to use the DSTs that R7962 developed, the DSTs were distributed to over 400 lead farmers and to a large number of organisations (GOs, NGOs, CBOs) working with farmers in western Kenya.
- Although the micro-finance company, Wedco had expressed interest in taking over the micro-credit scheme of R7962 (named SCOBICS), at the end of the project this was not achieved. One reason for this was that the value of the SCOBICS loan portfolio was considered to be too small to be viable under the Wedco business model. However, post-project, while other options that could lead to Wedco takeover were pursued, SCOBICS was sufficiently strong for local arrangements to be put in place for its continuation on its existing scale.
- R7962 developed links with COSOFAP (the Consortium for Scaling-up Options for increased Farm Productivity). COSOFAP has over 100 members in the GO, NGO and private sectors covering 25 districts in western Kenya. A commitment to improving farmers' access to information is central to COSOFAP's purpose. The link with R7962 enhanced COSOFAP's appreciation of the breadth of farmers' information needs and also the value of coordinated services that go beyond information alone and make it possible for farmers to make use of information in their livelihood enterprises.
- The interactive methods used by R7517 helped to build capacity amongst extension professionals in the project's target districts in eastern Uganda for providing advisory support on SFM and land management. National agricultural research scientists also gained experience of ways to strengthen links between research and extension towards bridging the gap between technology development and uptake. Both outcomes were relevant to national implementation of the Uganda Plan for the Modernisation of Agriculture and the reorganisation of extension services under NAADS (the National Agricultural Advisory Services).
- Through presentations at a range of international venues in Africa and Latin America, a wide range of international stakeholders were made aware of the methods that R7856 had developed and tested for achieving community-based collective action for NRM.
- By the close of R8400, COSOFAP was reproducing the R8400-KSPs on a scale to reach all COSOFAP members. COSOFAP estimated that it had reached 200 organisations (both members and non-members) in western Kenya. These included farmers' and community-based organisations which reported demand from smallscale farmers for the KSPs. In Uganda, 24 organisations received the KSPs. Several reported high demand for the KSPs and three organisations indicated willingness to use their own resources to reproduce some of them.
- R8211 established links with some key organisations in Kenya and Uganda at a policy-relevant level that can be used for promoting R8211's findings on youth livelihoods.

- The end-of-project impact survey of R7962 compared 94 borrower households and 188 non-borrower households drawn from three out of the eight multiple-village locations where the project's micro-credit scheme operated. Borrowers achieved greater maize grain yields, reduced the extent of land use for maize, had more diversified cropping, and were more food secure (albeit not to a level of household food self-sufficiency). In addition, 87 per cent of borrowers held the view that access to the coordinated credit-information scheme had enhanced their income generation. However, over the period of micro-credit access, there was no evidence that borrowers had improved their stores of value.
- Although there were differences in the extent of progress made in the pilot villages of R7856, the tracking study of R8494 provided evidence of sustainability of the method developed for collective action on NRM with indications of livelihood improvement. More than 75% of farmers attended community meetings and events relating to byelaws on tree planting, erosion control, and controlled animal grazing. Both men and women participated equally but men tended to participate more where important decisions were made and there were some other equity issues. There also was evidence that the village PTFs had been instrumental in linking farmers and communities to decentralised local government structures and development organisations. Significant changes in human capital (expressed in new skills and knowledge, and changes in attitude and behaviour) had enabled greater individual investment in NRM. There also was evidence of reduced land degradation, increases in tree planting and trench construction as well as an overall improvement in farmers' perception of NRM and its role in their livelihoods.

Further work

There is considerable scope for scaling-up the research of this node:suite. Priorities should be:

- Scaling-up of the model of micro-credit and co-ordinated services of R7962. Western Kenya would be the priority area building on the stakeholder links that R7962 and R8400 established.
- Scaling-up of the social-institutional method for collective action on NRM that R7856 developed. The ASARECA-African Highlands Initiative (who implemented R7856 and R8494) would have a leading role.
- Promotion of the findings of R8211 on youth livelihoods with key stakeholders in Kenya and Uganda, undertaken by the team of R8211.