Knowledge profiling

Overview
An innovative, simple method has been developed to capture and exchange the knowledge generated in projects and programmes. It is described in detail in the manual Knowledge profiling: Promoting easy access to knowledge and experience generated in projects and programmes. The manual was prepared jointly by the German Agency for Technical Cooperation (GTZ) and IFAD, as both development actors believe firmly that ‘knowledge is power’ (GTZ & IFAD 2007). A support tool for knowledge management in development cooperation, the manual’s purpose is threefold: first, it provides a quick reference to the knowledge generated in projects and programmes; second, it focuses on those areas of knowledge judged to be worth mentioning by the stakeholders themselves; and third, it presents a method to facilitate comparison of knowledge acquisition by projects/programmes and even cross-sectorally. A short outline of the knowledge profiling (KP) method is presented below, and its application in northern Ghana is illustrated by a module.

Challenges and rationale of knowledge profiling
The knowledge and experience gained during projects and programmes constitute a form of hidden treasure. People know there is valuable information out there somewhere, but it is buried within voluminous reports and documents and dispersed among lengthy descriptions, tables and graphs. Or it lives on in the minds of a handful of people whose names have often been forgotten. At the local level, the target group applies such knowledge in a limited context to which other prospective users have no access. In the first instance, the ‘treasure’ is usually not considered worth the cost and effort to salvage it. In the second, communication barriers (e.g. between sectors) prevent the sharing of the treasure.

As a consequence, ‘the (knowledge) wheel is reinvented again and again’; opportunities to replicate and scale up knowledge are lost; and, inevitably, money is wasted and project/programme impacts reduced.
The IFAD Strategic Framework 2007-2010 and the recently approved strategies for knowledge management and innovation highlight the importance of knowledge in IFAD’s operations. The core issue underlying these strategies is continuous scouting and development of the robust knowledge required to enhance the organization’s development effectiveness. In addition, IFAD envisages mainstreaming enabling knowledge tools to share the knowledge contained in IFAD’s collective memory, which is the public property of all stakeholders.

The knowledge-profiling manual (KP manual) is such a knowledge tool, and the purposes of knowledge profiling are to:

- **Identify, document and enable access to knowledge.** Place major users in a position to gain a rapid overview of project/programme content and knowledge generation.
- **Shed light on and make better use of local knowledge and innovations.** Enable local stakeholders to articulate their own perception of project- and programme-generated knowledge. Enable better integration of existing local and indigenous knowledge into capacity-building efforts.
- **Exchange and compare knowledge and innovations.** Provide the capacity for cross-comparison as development projects/programmes become increasingly embedded within policy frameworks, more holistic in their approach and more multisectoral in nature.

**Application of knowledge profiling**

The KP exercise follows a sequence of steps (elaborated in the KP manual) employing semi-structured interviews with selected stakeholders, who are assumed to have gained knowledge during project/programme implementation. Usually, a sounding board of stakeholders familiar with the project/programme preselects a number of key ‘knowledge modules’. These modules reflect areas of essential knowledge and experience accumulated in the course of activities. Field interviews are conducted with farmers, officials and service providers, among others, thereby bringing in new perspectives and an appreciation of how knowledge is perceived by these stakeholders. Most importantly, a co-verification KP workshop invites the major stakeholders interviewed to provide feedback and to fine-tune the modules. In July 2007, IFAD conducted full KP exercises with a focus on pro-poor agricultural water management in three IFAD-supported projects in northern Ghana – the Upper East Region Land Conservation and Smallholder Rehabilitation Project (LACOSREP), phases I and II, and the Upper West Agricultural Development Project (UWADEP).

Another IFAD case study on the project Pro-Poor Agricultural Water Operations in Northern Ghana complemented those conducted by GTZ in Namibia. Together they served as a foundation for the joint elaboration and publication of the manual. In line with this approach, knowledge profiling does not pretend to be comprehensive or exhaustive for any knowledge aspects of projects and programmes.

**Example of elaborated modules** (see web link in the ‘Overview’):

The following example of a completed description of modules is extracted from the KP study undertaken in the three IFAD-supported projects. The lessons learned in these projects, from 1992 to 2006, were grouped into six main areas (‘modules’) of experience, innovation and knowledge as follows:

**Module 1:** Institutional development of water user associations (WUAs)

**Module 2:** Inclusive targeting and secure land and water access

**Module 3:** Innovations, learning and knowledge for sustainable farming systems and rural livelihoods

**Module 4:** Multiple-use systems and rural water health, nutrition and sanitation

**Module 5:** Capacity-building, training and education

**Module 6:** Participatory design and construction of rural infrastructure/small reservoirs

As an illustration, Module 2 is described below:

**Module 2: Inclusive targeting and secure land and water access**

**Short description of module**

IFAD conceived the targeting strategy of the three projects in northern Ghana as follows: improvements in land management in the rainy season were largely targeted at rainy
season men’s crops, women’s crops on the margins of men’s fields, fishing, and livestock (cattle and goats). During the dry season, the focus would shift to include more women and their irrigated crops, as well as household issues (e.g. domestic water supply, functional literacy groups, composting). The poorest people, such as the disabled, the blind or widows, were not targeted separately. While project designs had not acknowledged these subgroups – each representing about 10 per cent of village populations – the fact that villagers explicitly took care of these groups themselves turned out to be an important achievement of project implementation.

Livelihoods would be safeguarded and improved through secured access rights to land and water in the newly irrigated fields downstream of the dams. Land allocation would typically involve a tripartite arrangement between the district assembly (DA) (the grantor), the original landowning families (the grantees, through their representative tindana, a traditional earth-priest/landowner) and the WUA (the custodian or steward).

Specific steps and activities implemented (outputs)

• Community mobilization and sensitization preceded any project interventions in infrastructure development.

• Agreements on leasehold arrangements were promoted between the newly formed WUA (lessee), the DA (grantor) and the original landowners (leaser). They were stipulated as preconditions in the requests for reservoir reconstruction. Requests also detailed what proportion of the land plots would be allocated to women (setting a design benchmark of 40 per cent).

• LACOSREP I initially based its construction interventions fully on local community labour (with support by the World Food Programme’s Food-For-Work programme on 19 of the 44 dams). This sought to create a sense of ownership of the catchment protection area (CAP) around the reservoir, the dam and major infrastructure works, and the downstream and in-field improvements.

• Context-specific arrangements for subdivision of the dry-season command area were developed on the basis of farmer demand.

• Innovative rules and procedures for the rotation of farm plots after their use were introduced in close interaction with farmers and met with high adoption rates.

• Social arrangements were introduced to deal with claims by traditional landowners concerning dry-season plot allocation by WUAs.

• Inclusive targeting (‘social equity’, ‘solidarity’, ‘safety net’) of socially marginalized groups such as the blind, the disabled and widows was mostly done spontaneously by the WUAs themselves or through NGOs. The Adventist Development and Relief Agency promoted and organized the well-known, but little-documented case of inclusion of the blind gardener and disabled gardener groups in the Kari WUA (Upper West Region [UWR]), where they enjoy the same rights and obligations as other WUA members.

• Resettlement of households, including ancestral grave sites around the compound, and compensation for inundated land has been managed largely to the satisfaction of all parties – for example, the tindana assigns rainfed plots higher up the catchment or provides monetary compensation, or the WUA offers a dry-season plot downstream.

• Technical solutions have been introduced to prevent the collapsing of wells during the rainy season.

Use of specific outputs (outcome)

• By project completion (December 2006), LACOSREP I and II and UWADEP had put into operation a total of 90 small reservoirs (20 in UWR and 70 in the Upper East Region [UER]) for dry-season irrigation, fishing and livestock watering and soaking down, bringing together some 50,000 households into WUAs.

• Total gardening (irrigated) lands developed for dry-season use amount to some 1,000 hectares (ha), of which 10-20 per cent is additionally opened-up gardening land.

• Farmers demonstrated enormous interest in being included in garden irrigation development. This resulted in plot sizes well below 1/8 acre (500 m² or 0.05 ha in the design of LACOSREP I) – and as small as 30 m² (e.g. in Busa, UWR, or Kamega, UER).
- Land leases or verbal agreements of up to 50 years created a sense of permanency and removed the need for annual renewals.
- Overall, equitable access to land was created for all community members.
- Inclusive targeting and empowerment of women resulted in semi-permanent access of women to dry-season garden plots (almost 40 per cent) and increasing recognition in WUAs (women pay the same fees as men) and representation on WUA executive committees (ECs).
- In most cases, land conflicts were resolved amicably by WUAs.

Methods, tools, instruments applied
- Gender sensitization tools (e.g. activity profiles, access and control profiles, traditional beliefs and practices) were used in a series of workshops for communities, tindanas and chiefs.
- WUA/landowner consultations, led by the LACOSREP II project management unit, sought to convince reticent downstream owners to free up land for original landowners/leasers in return for upstream land flooded by the reservoir or in the CAP area on the shore.
- The REFLECT approach to adult learning and social change was used in community mobilization (e.g. for village-level development planning and self-assessment of impact).
- Leasehold agreements were publicly registered at the Ministry of Food and Agriculture (MoFA). Copies are not available to WUAs or DAs; their existence in MoFA could not yet be verified.
- Conflict-resolution mechanisms developed by the Food and Agriculture Organization of the United Nations were applied, as disputes over rural land are not regularly brought to formal justice tribunals (which have a record of charging high transaction fees).

Specific experiences during implementation: what functioned well, what problems were encountered?

What functioned well?
- The traditions of lineage-based societies (in UWR), which are based on networks of mutual support and historic power relations, are not impervious to social equity issues – as demonstrated in dry-season plot distribution by WUAs, which is regulated by binding oral agreements.
- The point of departure for land allocation did not clearly distinguish seasonality of allocation, i.e. the design pretended that all land be allocated to the WUA, irrespective of its seasonal use. As more insight was gained into the roles and responsibilities of WUAs and local conditions, seasonality of plot allocation became the watershed issue: the tindana governs rainy-season plots and lands, whereas the WUA allocates the disposition and use of dry-season land to its members. The association collects a fee (normally about a dollar) for annual renewal of the membership that entitles one to a plot.
- The size of the plot depends on the conditions governing the respective WUA. In some cases, plot sizes are numerically equal. They result from simply dividing the dry-season command area (typically 10 ha) by all adult or adolescent members of the community interested in dry-season gardening land – typically 400 members, but potentially up to 900 or more. In other cases, plot size variations are governed by: labour made available to construction, labour availability of the household, the number of wives, and interest of male farmers in growing vegetables that require different labour and marketing intensities. For example, daily-selling leafy vegetables are a woman’s task and require less land; quick-selling vegetables are a task for adolescent youth; and ‘lazy’ crops such as bean leaves are for the elderly, requiring yet another plot size. Plots can be as small as 30 m² (e.g. in Busa) and still attract the interest of women in search of improved diet or cash income. The quality of land (soil type, level site, position, proneness to waterlogging) does not seem to affect plot sizes. Plots for women are further limited by their capacity for labour and ‘other work to do’.
- The rotation arrangement meant that a WUA member farmer, man or woman, would return the plot to the tindana after its use (with up to three crops in the dry season). Semi-permanent improvements such as levelling and bunding, or even mud walling
and fencing, would be subject to use by a third party, while no warranty would be given by the WUA that the same member would use the same plot in the next year's dry season. However, social pressure resulted in such plots being returned to the same member.

• Initially, traditional landowners were reported to interfere in dry season WUA plot allocation processes, and consideration was given to granting them special concessions to avoid large claims of compensation for resettlement (especially in densely populated areas such as the Bawku District). However, by incorporating tindanas and/or chiefs into the WUA ECs and balancing out their local power, some landowners could be convinced (by community pressure rather than through negotiation by MoFA) to voluntarily give up their interests for the common good. With one exception, this now seems to be the case in all WUA dam sites.

• Land is not sold or bought; it is leased to the male head of household for a number of years and remains in the permanent custody of the tindana. Gardeners may compensate landowners, i.e., household heads, with a token gift such as kola nuts and a basket of produce after harvest. Sharecropping does not seem to be practised.

• Inclusion of landowners, tindanas, chiefs and/or their representatives in WUA ECs has led to clearer and more equitable plot allocation arrangements, especially for the dry season.

• Village participation in the identification of reservoir/dam sites and construction (labour, finance or providing food to labourers) also served to cement access rights to water, but even more importantly, claims on downstream, developed, dry-season gardening plots. The reduction of community labour devoted to certain tasks (clearing the reservoir area, mining, laying stone, vetiver planting, digging canals, etc.) and the subsequent introduction of mechanized dam reconstruction does not seem to have altered expectations for access rights to land and water.

• Wells were filled up after the dry season to avoid collapse during the rainy season. Such refilled wells would be easier to re-excavate for next year’s dry season.

What did not go well (what needs to be improved)?

• Prolonged sensitization campaigns delayed dam construction for two years (requests already filed and prioritized at DA; lack of flexibility of project management).

• Ownership of the reservoir area, the CAP, the dam and works is not clear to involved stakeholders (MoFA, DA, WUAs, chiefs, tindanas and community members). Although legally binding agreements are reported to have been drawn up for LACOSREP I and II and UWADEP, their existence could not be verified. The lack of formal written agreements hampers the process of turnover to WUAs and their acceptance on warranty of works (of which they are largely ignorant).

• Claims for damages by landowners or WUA members farming garden plots – due to breaching dams or mismanagement of water resulting in erosion/siltation of their land and loss of crops or livestock – are not known of, nor do WUA by-laws stipulate such arrangements. Damage done to third parties downstream of the catchment has not been considered, nor has the beneficial use of tail, excess or drainage water been subject to design or WUA training considerations. The newly created District WUA Council has not yet addressed this issue in its by-laws.

• The non-distinctive use of expressions such as ‘ownership’, ‘leasehold’, ‘allocation’, ‘land’ is confusing, as it entails an assumption of ‘cadastral’ arrangements or legally binding land lease/rent contracts. This does not reflect the situation on the ground, where verbal agreements on the use of dry-season gardening plots are made on a seasonal basis between individual male heads of households, the WUA ECs and the tindana. The plot is the unit of agreement, not the WUA member.

• The empowerment dimension: although women are empowered by their presence on WUA ECs and the successful allocation of dry-season gardening plots, water for women’s fields for the second or third dry-season crop is often cut off by men after they harvest their first dry-season crop (usually in February), when they use the remaining dam water for drenching their livestock. Women are often not strong enough to dig
wells (6-15 m deep, used for one season, before being covered up or collapsing), and they do not have the money to have them dug and lined. Credit is not available.

- CAPs are protected in only 25 per cent of the cases (in LACOSREP I the area was too rocky, too degraded, with too many farms).
- Where land distribution is effected by individuals (i.e. where the WUA has not been able to get a grip on the issue), it may remain problematic, even for additionally reclaimed lands.
- Overfragmentation of plots favours social equity, but impedes longer growing periods (and hence better prices), as well as higher water-use efficiencies, thus preventing the use of irrigation water outside the garden areas or of excess water flowing out of these areas.
- Farmer field schools, extension on neglected women’s crops, and rural water supply, health and sanitation were not linked to the land allocation training programmes.

**Important frame conditions relevant to the module/learning area**

**Promoting factors**

- Determinants of community success include quality of leadership, management of elite capture (social control), transparent and democratic accountability of WIAs, accountability of chiefs to their constituencies, and respect for local authorities and customs.

- Where the dam is crucial to people’s livelihoods (e.g. where population pressure on the land is high, or where dependency on livestock rearing is less pronounced, and/or water availability is low), it was apparently important to allow WIAs a large measure of control over the land (LACOSREP I/III).

- Where a particular dam and downstream area has been developed in the past (1960-1980 and in the early 1990s), local communities tend to regard such lands as acquired by the State, which enables the WUA to play a more prominent role in land allocation (LACOSREP I).

- The use of predominantly local labour (LACOSREP I, beginning of LACOSREP II) plays a decisive role in giving the WIAs a firmer grip on the land. On the contrary, dams rehabilitated using contractors do not appear to have the same element of control.

- Proactive WIAs reduce the dependency syndrome and improve their ability to assume a firm hold over land resources (LACOSREP I).

- The frontline role of DA (as a third-party custodian or steward) in securing rights over the land before its passage to the WUA has led to permanent occupancy (LACOSREP I).

- Incorporation of *tindanas* into WUA ECs tends to help the WUA gain control over the land.

- The 1998 Interstate Succession Law is favourable to women and cemented the projects’ benchmark of 40 per cent for women’s land ‘ownership’.

- Madame Hawa Yakubu, Member of Parliament and a native of Bawku District, was a notable woman leader in the area, and as a role model, achieved much in the empowerment of women in her district and in the whole of northern Ghana.

**Hindering factors**

- election-induced reshuffling of MoFA and DA staff, i.e. frequent staff transfers;
- lack of cohesion of social groups within some villages;
- civil engineering bias of the Ghana Irrigation Development Authority and other national partners;
- deficiencies of scope, intensity and frequency of supervision by IFAD or the United Nations Office for Project Services.

**Assessment of impact of module**

- There are indications that irrigated, small-garden development induces young men to migrate less to earn income (e.g. for a dowry or to build assets).

- Theft of crops and cattle (and other assets) has gone down, and break-up of the local landowners’ tight grip on the land has supported the peace process.

- The nutritional situation, especially of children, is perceived to have improved due to incorporation of leafy vegetables into diets or reduction of the lean period.

- The social safety network of allocating plots to the blind, the disabled and widows has improved social equity.
• Inclusive targeting of women has increased functional literacy/numeracy and the uptake of agronomic and livestock husbandry practices.
• The overall impact of this module has been modest, as confirmed by IFAD’s Independent Office of Evaluation.

Assessment of sustainability
• Sustainability of LACOSREP and UWADEP is positive. However, newly proposed deed titling under the Land Administration Commission may negatively affect common pool access and usufruct.
• The inheritance situation governing land and plots is not well understood, which may endanger the sustainability of access to land and water for women. Women (married or not) may inherit plots (or parts thereof) from their husbands or fathers, with 10-30 per cent of women having access to a secured form of plot tenure. However, young widows do not inherit their late husbands’ land, as they may remarry outside the village, thus affecting its patrimony. If capable of working the land, older widows are more eligible, as their mobility is judged to be limited. If a widow is too weak to work the land, it will go to her son(s) or her husband’s brother(s).
• Mechanisms to address water shortages are sustainable (yet not necessarily equitable to women) and are respected by parties within and outside the scheme (i.e. for farmers at the tail end of the scheme and users of excess water).

Assessment of replicability
In general, replicability is judged to be high for northern Ghana. More specifically:
• DA confirms overall impact and potential for scaling up and replication with national resources.
• IFAD’s Northern Region Poverty Reduction Programme and Northern Rural Growth Programme have already incorporated lessons learned from LACOSREP I and II and UWADEP.
Additional information

Who is knowledgeable about the module or elements of it?

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Further reading

Mornah, T.B. 2007. Irrigation as a driver of change in the life of rural women: A case study of Busa in the Wa municipality of the Upper West Region. BSc. thesis, Faculty of Agriculture, University for Development Studies, Tamale, Ghana.