Studying the local diversity of rural livelihoods systems: An Application of typological techniques for integrated rural development support in the Eastern Cape (South Africa)

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Abstract

This paper presents briefly the principles and procedure of typology schemes, which aim at describing and representing the local diversity of rural households, through the analysis of their modes of operation, strategies and prospects, activities and livelihoods' systems. This approach departs from both strict economic analysis and social participatory approaches, which often overlook the diversity that exists amongst rural households at local level. It basically combines the respective principles and advantages of both approaches.

Through a case study, which was carried out in a rural community of the Eastern Cape Province of South Africa, the paper highlights this local diversity, its representation through a typology scheme, and the issues related to livelihood systems: complementarity between on-farm and off-farm activities and sources of income, the key role of women, significance of subsistence farming activities, existence of productive and potentially profitable activities (wool). Some key questions for the close future are also raised: ageing process at household level (pensions are currently instrumental in livelihood build-up), transmission process to youngsters in a context of PTO land access system, sustainability of farming systems in a fragile and constraining natural environment, weaknesses in the agribusiness environment, basic needs in development support as expressed by people, the worrying situation of certain very poor households, problems and constraints as expressed by farmers.

The paper finally discusses the significance of such tools for integrated rural development planning and management purposes. They may be responses to the increasing need for proper diagnosis, in a context of persistent poverty in South-Africa’s rural areas and of public willingness to tackle it in an integrated manner.
1. Introduction

Diversity in rural settings manifests itself in the variety of responses to development actions, in the different livelihood systems, or in the different modes of agricultural use of the same natural environment (Ruthenburg, 1980), which one can observe amongst farming households, even at a community or village level, with a common economic environment.

Agricultural economics, as a discipline, usually makes no distinction with respect to the social organization of farm production in any analytical work. It is however true that short-term economic decision by farming families in developing countries are inseparable from the larger social relations within which production takes place (Ellis, 1993). These social relations are manifested by departures of various degrees from the pure market relations. Small scale developing farmers differ from other types of farming enterprises because non-market interactions still figure in their access to resources, in the farming system they adopt, in the livelihood system they resort to, and in the social principles to which they conform. The failure of developmental policy to take into account local variation in these social relations frequently results in a waste of resources and unintended side effects (Ellis, 1993).

In contrast to Agricultural Economics, one typically find that other social sciences related approaches to rural development tend to emphasise participation, and strives to identify problems and development needs at community level, within social groups or local institutions in rural communities (women, youngsters, etc.). They however seldom address rural households as the actual production, economic and decision-making strategic core units (Capillon, 1986).

The resolution of taking farming households’ diversity into account means, for the development operator, to notice that rural households do not have the same activities or sources of income, that farmers do not have the same way of production, and this, independently from variations in both the physical environment of production, and the economic context. The outcome resulting from the implementation of such a resolution must go beyond data averages and standard deviations calculated at community level. It is may become a tool for differentiated and well-targeted actions for policy makers, if it enables a clear representation of the local socio-economic fabric.

The need for such tools in agricultural policy analysis is illustrated by the following statement

“…To determine policy priorities to address poverty and food insecurity, and to assess the role that agriculture can play in the national effort, it is necessary to understand how people in rural areas create livelihoods. Poor rural households combine their resources in a variety of ways to enable them to maintain a minimum living standard (livelihood strategies)…” (Extract from “Agricultural Policy in South Africa”, 1998, Ministry of Agriculture and Land Affairs, p.10.)
Typological methods have been developed for assessing, describing and representing the diversity of rural households in terms of their operation modes and strategies (Capillon, 1986). This paper describes the application of this technique through a case study. It provides a useful illustration of the rural socio-economic complexity, and discusses both its scientific and developmental meaning and its place in policy-making.

2. Rural households’ typologies, why and what for?

2.1. Generalities and specificities

According to Jary & Jary (1995), a typology designates “Any classification conceptual scheme. It may or may not be exhaustive within its empirical frame of reference. The role and utility of any typology is relative to the theoretical or practical perspective within which it is formulated”.

The use of typologies has a long lineage in sociological analysis. Typologies have been used in rural sociology primarily to distinguish the social and economic characteristics of farming (Whatmore, 1994). Even within this specific focus, however, farm typologies may differ in terms of (i) unit of analysis, (ii) criteria for classification, or (iii) analytical purposes.

In recent works on agricultural systems (Perrot & Landais, 1993; Landais, 1998), the term typology designates both (i) the procedure that leads to building-up types, designed to help analysis of a complex reality and to order objects which, although different, are of one kind (households for instance), and (ii) the system of types itself resulting from this procedure.

A typology is usually an attempt to group activity units according to their main modes of operation and their common characteristics. Farm typologies were first applied in intensive production contexts, for diagnosis and technical improvement purposes (Capillon, 1986; Perrot & Landais, 1993; Landais, 1998). They tend to be extended to rural households in the context of developing rural areas (Laurent & Centres, 1990; Laurent et al., 1998; Perret, 2000). Within the framework of rural development support projects, designing a typology will imply grouping and describing the households with similar needs, with regards to the project’s objectives.

This constitutes a clear shift from a positivist approach of farm classifications. Such classifications involve the mere grouping of morphological features of a unit of analysis (size of farm, total income, etc.), and, therefore, refer more to taxonomy. The approach adopted here refers directly to a constructivist paradigm, which rests upon the identification of coherent patterns of economic and social relations between the object of study (the farm) and its environment (Whatmore, 1994). In the farming household typology, it is taken for granted that one must study not only the variety of farming activities, but also the variety of farmers’ practices and strategies. Following Whatmore, Perret (1999) made a distinction between a structural typology, i.e. the factors of production and how they are managed, and a functional typology, i.e. the
decisions taken by farmers, given the constraints and their behaviour in view of climatic fluctuations and the changing socio-economic circumstances. The key methodological difference between a functional approach and the positivist approach is that the functional relations defining types do not necessarily coincide with any observation or morphological feature of the processes being studied. Finally, typology schemes strive to be exhaustive and integrative, rather than sectorial (focusing only on commercial farming potential for instance, Eckert & Williams, 1995). Thence, typologies represent formalisations of the complexity of the rural world at local level, and analytical ways of making sense of this world.

2.2. Principles and steps of the assessment

Typological techniques borrow their implementation components from diverse disciplines, i.e. rural anthropology (strategies’ approach, disaggregated data collection and analysis, allowing gender analysis), micro-economics (production costs, family budget), rural sociology (questionnaires build-up, interviews, farms’ trajectory analysis). There are different ways to implement this kind of approach. None of them are recipes as the practical procedure carried out will be highly dependent on context, demand and objectives. However, one can identify several unavoidable steps in the assessment procedure (Perret, 1999):

- Formulation and understanding of the demand, and/or of the problem situation to be dealt with;
- Identification and demarcation of the area;
- Collection of relevant data with regard to the area and identification of the main characteristics of the agricultural systems as well as the socio-economic circumstances at regional level;
- Choice of a range of households to be assessed (sampling phase);
- Collection of information in a homogenous manner (questionnaire and interviews);
- Processing of this information (meaning data entry, sorting, storage, analysis...);
- Modelling the operation of the households and also the identification of main criteria together with the factors of evolution;
- Grouping the farming households in several types, according to these criteria and factors;
- Drawing-up the historical trajectories of the groups, and the possible future trajectories, identification of links between types, roles at community/region level…
- Feedback to the community and to development operators, validation of the typology, exchanges with those not included in the sample.

The essential steps of this procedure have been detailed (Perrot & Landais, 1993; Mettrick, 1994; Landais, 1998; Perret, 1999).
2.3. Use and utility of typologies

Typology schemes basically form groups of farming households with similar features, according to their practices and strategies, and then, strive to identify the possible evolutions of holdings, with attention paid in particular to the conditions for their sustainability. Also, an effort is made to reveal the problems and difficulties encountered by the farmers in the management of their holdings.

For development operators and extension services, this allows the definition of recommendation domains for technical advice, training or extension purposes (Mettrick, 1994). They can also become frameworks to extrapolate local technical references or to form interest groups of farmers. Such assessments also proved particularly useful in the following areas (Jouve, 1992):

- in the preparatory stage of a development project aiming at promoting technical change and improving farming systems (e.g. targeting research and/or extension programme);
- or conversely, in assessing ex post the impact of such programmes at farm level (or more generally for monitoring/evaluation purposes);
- in operations providing farm management recommendations.

Typologies can allow economists to disaggregate data collected at community level. Laurent et al. (1998) also argued that a better knowledge of local rural diversity might avoid the exclusion of certain households from development projects, ignoring their specific circumstances and needs. Moreover, typologies can give the decision-makers at region level a useful picture of the diversity in the socio-economic fabric. Whatmore (1994) reflected on the problems and possibilities of securing a place for these valuable approaches in the policy process, since she highlighted specific traits of typological schemes. First, the aims, analytical objects and uses of typologies clearly differ depending on the explanatory framework in which they are located. Second, these different explanatory frameworks are unevenly institutionalised in scientific discourse, which has important implications for the legitimacy accorded to their analytical insights by policymakers. These aspects will be discussed in line with the case study provided. Landais (1998) states that farm typologies based on the operation of farms represent a real investment for local development. This is particularly due to the various functions they can accomplish. Thus, they provide a useful picture of local or regional farming activity for decision-makers in guiding development projects.
3. A case study: rural household typology in the Eastern Cape (South Africa)

3.1. Location and framework of the survey

3.1.1. A LandCare project in the Eastern Cape

The South African LandCare Programme is driven by the National Department of Agriculture, as a community-based and government-supported land management programme. It is a process focused towards conservation of the natural resources through sustainable utilisation by a community with a conservation ethic, created by education and community-based monitoring of these resources. The issue of LandCare is that it is a grass-root programme supported by both public and private sector through a series of partnerships. The LandCare Programme offers practical assistance to effect land conservation activities that are identified, implemented and monitored by a community – primarily the farming community.

The LandCare Project of the Eastern Cape (Integrated Multiple Livestock and Crop Agricultural System Development, a Community Development Project) has been launched in 1999. The overall goal of this programme is to optimise productivity, food security, job creation and better quality of life for all.

In line with the above longer term objectives, the Eastern Cape LandCare Project has as immediate objective the creation of financial stability in targeted communities by means of agriculturally directed interventions. For the most appropriate interventions, the Project stated to first determine the needs and potential of the targeted communities and the area through socio-economic studies and establishing a link between research and application of technologies in the communities.

A consortium of resource institutions drives the LandCare Project, in full cooperation with the communities. These institutions are the Agricultural Research Council, Eastern Cape Dept. of Agriculture and Land Affairs, and the National Wool Growers Association. They operate by means of a steering committee and focussed initially all their efforts on 5 selected communities, now extended to other communities of the Eastern Cape from 2000 onwards.

3.1.2. Eastern Cape Province, Transkei area and Xume community

The Eastern Cape area was a hotbed of struggle in the 19th century, with successive encroachment of Boers and the British. The basis for the bantustan structure was laid early by the British in the 1890s with the introduction of a Council system for the Transkei, and the incorporation of headmen into the system. The self-administration process continued until the Transkei became nominally independent in 1976, with Ciskei becoming self-governing in 1972.

The Eastern Cape area was particularly affected by the major policy changes over the last ten years, with the gradual removal of Apartheid legislation since
1990, the re-amalgamation of the two independent homelands in 1994, and the creation of the current Eastern Cape Province.

Bembridge (1984) described the history and the main socio-cultural traits of the Transkei area. He especially underlines the prominence of labour out-migration since the end of the 19th century and its implication on livelihoods and activity systems at household level in rural areas. It is currently estimated that one quarter of the total South Africa mining labour comes from Transkei, resulting in the fact that about 60% of the adult inhabitants (15 to 64 years old) are female (Verschuren, 2000).

Eastern Cape is currently one of the poorest provinces in South Africa, with 70.7% of its 6.2 millions inhabitants classified as poor. It also shows the highest unemployment rate, 48.5% (Central Statistics Service, Population Census, 1996; Statistics South Africa, Rural Survey, 1997). As a result, a large number of households rely on pensions (40%) or remittances (23%) to eke out a poor livelihood. Poverty in this province is deeply entrenched with 27% of households earning less than R400.

Within the rural areas of the Eastern Cape province, 84% of the households access land for agricultural activities with more than 95% of households farming mainly for subsistence purposes. The community of Xume lies in the northern part of the Amatola District of the Eastern Cape Province, in former Transkei area. A participatory rural appraisal (PRA)-style survey (Khanya, 2000) was carried out in Xume at the same time as the typology study reported here. The findings from the PRA survey underline the major problems facing people in Xume:

- Access to the basics: lack of domestic water (women are walking up to an hour return to fetch water), poor roads making access difficult, especially to the clinic, seasonal diseases and malnutrition, lack of electricity, HIV/AIDS is not recognised and little seems to be done about it, lack of attention to street children and orphans;
- Access to production means and facilities: lack of fencing, so animals roam, eating crops, lack of irrigation water, which would reduce risks and increase productivity, livestock diseases are reducing productivity, as is stock theft, skills are lacking;
- Lack of purchasing power, so that local businesses are not thriving and there is little money to circulate around;
- Institutional problems also affect Xume: pensions and grants are not always being paid, there is a lack of support services, some groups are forgotten (youth, unemployed), there are poor links with the local government authorities (TRC), bureaucracy is limiting opportunities, people are very unaware of what is happening about projects, departments and the TRC is not accountable.

3.2. Objective and procedure

In rural areas of the Eastern Cape Province, the considerable uncertainty about markets, land-tenure and land-access issues, as well as the constraining climatic conditions are forcing people to develop a wide range of
activities and/or to resort to different sources of income as a risk-limitation strategy or as means to maintain a livelihood (Makhura et al., 2000). Thus, even though located in a limited and quite homogenous area, households may be very different to each other. Typological techniques have been implemented in order to address this diversity, and to accompany the planning of actions by the LandCare project.

3.2.1. Building up a questionnaire and seeking relevant criteria

The questionnaire has been built up using past experiences in the area (Zarioh & Laurent, 1997) as well as some local knowledge. Exchanges have been organised among the survey team and local operators involved, in order to refine the questionnaire. The following main items were selected (and developed within the questionnaire):

- Household level of income, sources of income (farming, casual local job, permanent local job, remittances, pension, welfare, family/community solidarity (in kind))
- Expenditures (food, farming)
- Proportion of income gained from farming activities
- Household farming style (none, subsistence, wealth storage/social function, casual local marketing, casual marketing (commodity chain), significant local marketing, significant marketing (commodity chain))
- Household farming activities (none, house gardening, field crops (dry land), micro-livestock, livestock, wool)
- Access to land (none, garden, grazing land, arable dry land, irrigation scheme)
- Family members / labour force (old, adults, school, pre-school)
- Household head (gender, age, education character)
- Composition of the household
- For each activity in the household allocation of labour, decision-making system and gender were determined.

3.2.2. The interview phase

A total of 81 interviews has been carried out between July 2nd and 13th 1999, in five wards (Elalini, Catshile, Enyanisweni, Mnyamandawo, Ezidulini) of the Xume administrative area, in the Tsomo District. In each ward, at least 15 interviews were conducted, according to a random sampling process. The interviews were done by 8 extension officers of the Eastern Cape Department of Agriculture and Land Affairs (capacity building of these officers was one of the expected outcomes of the study).

The 81 households interviewed accommodate 476 persons (on both full time / part time basis). The Xume community population is 2488. Thus, the survey covered a satisfying 20% of the population.

The most noticeable problems are (i) the lack in certain information, or their poor accuracy or reliability, especially those about income and expenditure, and (ii) the probable misunderstanding that often occurred about the house garden and the arable land. Many interviewees mixed up both kinds of fields while answering questions about access, use and the productivity of these fields.
However, much information has been gathered and allows a better understanding of the diversity of activities within the community. All the information was gathered according to people’s sayings and perceptions.

3.3. Main characteristics of the community

The main traits of the community are described hereafter, as well as the variables that eventually do not account for the discrimination of types but characterise the whole community.

The community of Xume can be seen differently, according to the viewpoint chosen: it is an ageing, local-born, and poverty-stricken community, dependant on welfare payments. But it also develops subsistence farming activities, and basically, it is a community of stock-keepers and woolgrowers.

3.3.1. An ageing, local-born community

Most generally, the households are extended families (group of people related by kinship, where more than two generations live together). On average 6 (5.9) persons live in the household, on a part-time or full-time basis. Old pensioners, looking after their grand children, head many households, whereas adults are often absentees.

More than half (51 percent) of households are headed by a both husband and wife, within which the man is considered as the head. A third (33%) are headed by a lonely woman (either single, widowed, divorced…). while 10% are headed by a married woman, whose husband works far away. Only 6% are headed by a lonely man (either single, widowed, divorced…).

Half of the households’ heads are older than 59 years while 25% are older than 69 years of age. The rest (25%) are younger than 48. Most of the household heads (86%) were born in the community or married a member of the community. Only 14% are immigrants. The majority of respondents (95%) indicated that they have a permit of occupation for their residential site. The size of these residential sites range from 70 to 6400 m² (average: 4185, median: 4900).

3.3.2. A poverty-stricken community, dependent on welfare and resorting to different sources of income and activities.

Among the households, 59% earn some income from farming. However, only 9% use farming as their only source of income. Some 43% of households have access to remittances from a working husband, spouse or children (outside the community), while 43% of households also have access to one or two pensions (old age- or sick-pensions). Only 9% access salaries and wages from permanent local jobs and 6% from non-permanent or casual local jobs.

1 It is noticeable that some interviewed women consider their husband as the head, even though away, and those women making all decisions within the household. This is probably linked to land access, which is most of the time granted to men.
Five percent of households access welfare payments (childhood, disablement...).
The average household income is R6 081 per annum (median: 6 000). A quarter (25%) of households earn less than R2 440 per year, whereas 25% earn more than R8 400. Figure 1. shows the proportion of money flows from different sources in Xume community (survey sample), and confirms the overwhelming influence of pensions and of remittances on livelihood build-up.

3.3.3. A rural community with subsistence farming activities

The community analysed here has the typical characteristics of any subsistence farming community with 94% of households having access either to a garden (close to their residential site) or arable land (but only 12% have fruit trees –mainly peach trees-), without regular irrigation system. Only 28% access a communal garden but at least 85% of households grow crops in the different fields. They plant and/or plough mechanically, with a hired tractor (72%), their own oxen or donkeys (23%) or their own tractor (5%). Almost 40% have significant, regular crop production out of these fields, mainly available in summer. The major crops are maize, bean, cabbage, pumpkin, potato and spinach. But only 4% sell their products (even from time-to-time).

Those who grow crops point out the lack of water and drought as the main constraint to crop production (81% of answers), then lack of fence (15%), then thefts, rocky soils and poor fertility, diseases, lack of equipment, remoteness of fields, weeds...

A large proportion (94%) of households own micro-livestock and chickens (88%), and pigs (75%). Of these households only 4% sell micro-livestock (animals, meat and/or eggs...), and in 84% of the households, a woman takes care of micro-livestock.

3.3.4. A community of stock-keepers and wool-growers

As there is no camp system in Tsomo for collective management of grazing areas, each and every one may access rangeland. Seventy-nine percent of households have a kraal, on their residential site. Ownership of livestock amongst the households is prevalent with 60% of households owning cattle (or keep it for relatives), 68% owning sheep (meat/wool purposes), and 44% owning goats (mainly indigenous). Among the stock-keepers, only 20% of sell either animals or meat. A much larger percentage (78%) of sheep owners sell wool, mostly to speculators. Some others own donkeys and/or horses.
Table 1 shows the different combinations of livelihood and activity systems observed in Xume community. Particularly, it reveals that farming activities are very often part of those systems. 38% of the households rely on one single type of activity or source of income, the majority combines 2, 3 or more activities.

3.4. Household typology in Xume (Tsomo District)

Having provided a broad characterisation of the households in the case study area we now go in more detail to identify the different types of households in the case study area to illustrate the diversity of this rural community. Most agricultural economic analyses will usually only provide a descriptive overview or an average picture of the community as above without appreciating the diversity of the community as this section now illustrates.

The typology was aimed at matching the frame and the objectives of the LandCare Programme. Thus, it firmly refers to farming and land use activities. With regard to this, it seemed relevant to distinguish pensioners from adult-headed groups, as they access a permanent and reliable source of income, they have accumulated skills, assets and livestock, but finally changes might occur shortly for most of these households. On the other hand, it seemed also wise to identify clearly the poorest among the poor. Thus, some major criteria were chosen and led the manual grouping: total income, farming income, access to a pension, access to off-farm income, number of animals owned, marketing of any farm products. At the end of the systematic browsing and grouping analysis of each questionnaire, the following typology came up:

**Non-farming types**
1. Very poor single female-headed households
2. Pensioners with some subsistence farming activities
3. Adults’ households with external activities and sources of income

**Farming types**
4. Stock-keeping pensioners
5. Part time stock-keepers, with off farm activities and sources of income
6. Full time farmers

3.4.1. Description of types

The main features of each type are described thereafter, along with an attempt to identify the leading strategy of the households.

**Type 1. Very poor single female-headed households (5 households out of 81 sampled)**

They are mainly single female-headed households (4/5). All own their residential site, some are immigrants and were not given access to arable land. The head can be around 55-60, and then support some of her children and grandchildren, or can be young, around 30, with her young children, families remains rather small (5.2 on average).
They possibly access low remittances or gifts in kind by relatives (local solidarity), or welfare grants for children. When existing, husband or spouse is away and do not work or do not send any money. The total yearly income is below R1200 (average 560, std. 606). Expenditures for food supply range between R360 and R1800 per year (average R770, std. 610). There are debts outstanding, and no savings.

Subsistence farming activities remain scarce and under-developed (no or occasional crop growing activities, with no or low yields, some micro-livestock, no marketing). The heading woman is in charge of all farming activity. There are only few livestock, not marketed at all. No expenditure is dedicated to farming activities.

These households are in short food/money supply, all year round.

**Type 2. Non farming single pensioners-headed households (16/81)**

All these households access one pension. Thus, their minimal annual income is R6000. Half of them combine pensions, remittances from children or external jobs’ salaries of adults. Thus, the average yearly income is relatively high (R8670). Income from farming is scarce and low.

A large majority of these households are widowed-woman headed (11/16). The head is 70 years old (average). They live with some of their children and grandchildren (6.5 members on average, mostly adults).

Most of them grow crops in a garden or arable piece of land, with low yields and no marketing. Chicken and pigs are self-consumed as well. The heading woman is involved in each and every decisions and activities on farming. Some households own few cattle (less than 7), and some sheep or goats (less than 10), also slaughtered for self-consumption. They do not market animals or meat. A small quantity of wool may be sold to speculators.

Expenditures for household supply in food reach R1760/year on average (std. 1150), whereas expenditures for farming activities are around R285 on average (std. 340) (mainly for seeds, tractor hiring, some vet-medicines).

**Type 3. Adults headed households with external activities and sources of income (15/81)**

All these households have external activities or sources of income. In most of them, the husband or a child works outside the community (often in mines) and send remittances monthly to the household. In other cases, the husband or spouse access local occasional or permanent jobs, or a disablement-welfare grant. The head may either be male or female, 48 years-old on average. The household accommodates 5.5 relatives on average, mostly adults and children. Available family labour force is 2.1 on average.

The total yearly income is extremely variable (R3010 on average, std. 2000). Income from farming activities is scarce and low (less than R100/year). They spend R1700/year on average for food supply (std. 850).

Most of them grow crops in a garden or arable piece of land, with low yields and no marketing. Chicken and pigs are self-consumed as well. Some sell piglets locally and occasionally. The heading woman is involved in each and every decisions and activities on farming, and takes care of crops and micro-livestock with children.
These households own few livestock, cattle, sheep or goat, for self-consumption, wealth storage. None are marketed. Small quantities of wool can be occasionally sold to speculators, by those owning sheep. Decisions on livestock are made by the heading man or by the spouse in case of remote off farm activity by the husband. Females and children take care of livestock. These households point out sheep diseases, and breeding problems (no mating) as their major constraints on farming. Expenditures for farming purposes are R300 on average.

**Type 4. Stock-keeping pensioners (19/81)**

All these households access one or two pensions. Thus, their minimal yearly income is R6000. Half of them combine two pensions and/or remittances from children or external jobs’ salaries of adults. Thus, the average yearly income is relatively high (R9220 on average, std. R4110). For most of these households, farming is gainful and represent R540 on average (maximum observed R3100, std. R1010).²

A large majority of these households are headed by a couple of pensioners (72 year-old o.a.). They live with some of their children and grandchildren (5.7 members on average). The average labour force is 1.8.

Most of them grow crops in a garden or arable piece of land. Some have significant yields and market vegetables occasionally and locally. Chicken and pigs are self-consumed. The heading male is involved in each and every decisions and activities on crop production (with or without support of his spouse and children), whereas micro-livestock management remains a female activity (often with children support).

These households own cattle (6 on average), sheep (37 on average) or goats (4 on average), and possibly some donkeys and/or horses. Sheep and goats are slaughtered for self-consumption, and some lambs are sold locally. Wool is also sold to speculators. The main constraints that are pointed out by these stock-keepers are sheep diseases and ticks, and limited access to medicines, vaccines, and dipping tanks... Limited access to water and theft problems are also mentioned.

Expenditures for household supply in food reach R1670/year on average (std. R1470), whereas expenditures for farming activities are around R550 on average (std. 730) (mainly for seeds, tractor hiring, vet-medicines).

**Type 5. Part time livestockowners, with off farm activities and sources of income (15/81)**

All these adults headed household make a living with external jobs. Most husbands work outside the community and send remittances on a monthly basis to the household. Some combine it with old age-pension when they accommodate an old relative. Total yearly income is R6700 on average. All of

² The information gathered does not seem fully reliable, especially about wool supply and the price paid to farmers for wool. Farmers were reluctant to deliver proper accounts during the interviews, and most probably hid some incomes.
them generate income out of farming (R180/year, maximum observed R1350, std. R345, see footnote 2).
All these households are headed by a couple of adults (49 years-old on average). They live with their children (7.4 members on average). Family labour force is 2.5 on average.
All of them grow crops in a garden or arable piece of land. Some have significant yields. Chicken and pigs are self-consumed. Piglets or other micro-livestock can be occasionally sold locally. Micro-livestock husbandry and crop production are female business. These households own cattle (5 on average), sheep (50) or goats (9). Sheep and goats are slaughtered for self-consumption, and some lambs are sold locally. Most of them market wool to speculators. The main constraints that are evoked by these stock-keepers are sheep diseases and ticks, and limited access to medicines, vaccines, dipping tanks.
Expenditures for household supply in food reach R1980/year on average (std. 1140), whereas expenditures for farming activities are around R770 on average (std. 1030) (mainly for seeds, tractor hiring, vet-medicines).

Type 6. Full time farmers (11/81)
All these adult headed households (meaning being less than 60 years old) make a living mostly from farming activities. Some combine this income with occasional local jobs or support by children (remittances). Total yearly income is R2740 on average (std. R1930). Farming activities generate R2220/year on average (std. R1510) (see footnote 2).
Most of these households are headed by a couple of adults, some by a single woman (50 year-old on average). Families are rather small, with adults and their children (4.4 members on average). Family labour force is 2.4 on average. All heads were born in the community.
All of them grow crops in a garden or arable piece of land, some have significant yields, but do not sell. Chicken and pigs are self-consumed. Piglets or other micro-livestock can be occasionally sold locally. Micro-livestock husbandry is a typical female business, whereas crop production is a family business.
These households own cattle (6 on average), sheep (64) and/or goats (10). Some have also donkeys and/or horses. Sheep and goats are slaughtered for self-consumption. Oxen are used for ploughing tools’ traction. All of them market young animals and/or wool.
The head makes major decision about livestock, whereas the day-to-day management is a family business. The main constraints that are pointed out by these stock-keepers are sheep diseases and ticks, and limited access to medicines, vaccines, dipping tanks.
Expenditures for household supply in food reach R1470/year on average (std. R1280), whereas expenditures for farming activities are around R770 on average (std. R1040) (mainly for seeds, tractor hiring, vet-medicines).

3.4.2. A synthesis of the Typology
Table 2 lists some of the main criteria that were used for defining the typology and provides additional synthetic data. It underlines that Xume is definitely a poor rural community, in which farming activities are divided in two types:
(i) Crop, garden and micro-livestock production, widely spread amongst types. Women play a key-role in these activities. Self-consumption of maize and vegetables is the objective of almost all families. Some cannot access plots (type 1), but most of them try to grow crops in gardens and/or on arable land. Some even produce crops all year round (type 4, 6) despite drought, which is the major constraint pointed out by farmers, along with lack of fencing. The LandCare project has initiated community demonstration plots (e.g. on vegetable production with simple irrigation techniques). With regard to the typology results, establishing community gardens would help landless people (type 1). Also, supporting the local organisation of seed supply, fence build-up might be useful for most types. Some basic training should help as well. Finally, any initiative should strongly involve and rely on women, as key players in those production activities.

(ii) Stock-keeping and wool production; although practiced by types 2, 3, 4, 5 and 6, those activities are more significantly carried out by types 4, 5 and 6, although with different strategies (see table 4). Stock-keeping actually corresponds to different objectives: cash income for full time farmers, additional income for pensioners and off-farm workers, accumulation, social status, self-consumption of meat. It is also an important social link within the community, since collective management of herds, animal keeping for neighbours or relatives, exchanges of animal, of labour, etc. are often observed. For most of those farmers (and more than half of the households), wool is the steadiest source of cash, although, price is often low and fixed by speculators.

Households are in need of technical improvement (means of production, technical advice, training, services, infrastructures, local institutions…), and alleviation of other constraints. Farmers often refer to sheep diseases, lack of remedies and services (access to vaccines, dipping tank), as the major constraints. The LandCare project also strives to focus and deliver at this level: shearing shed, dipping tanks have been built up, and training about shearing and wool sorting/grading is implemented. Greater attention should however be paid as to who will really benefit from that in the long run. Only households’ heads of types 2, 4, 6 may be available on a full time basis (for training for instance). In other types, de facto heading women can hardly make themselves available, as they are already very busy with other activities. Type 6 is the only one that is really willing and able to intensify wool productivity (on both labour and inputs), while 5 can only intensify on inputs. Old pensioners (type 2 and 4), even though owning large herds, will hardly intensify. These assumptions refer to the different strategies that came up from the case study (see Table 4).

In Tsomo, the 81 households of the sample own 2 236 sheep (among a total of 2 904 large animals). Assuming the representativity of the sample, this means that the sheep population within the community is about 11 000 (among 14 500 large animals). Thus, a question remains as to the possibility to connect more farmers to the wool supply chain (what is the carrying capacity and related-environmental issues in the community’s grazing
area?). With regard to these questions, a second research phase has been undertaken, focusing on wool production and animal husbandry aspects. Table 2 also underlines the different aspects of rural households' diversity, beyond economic and technical aspects: These include the number of relatives accommodated, available labour force, gender and age of the head show very different patterns according to types.

Table 3 lists the different farming activities developed in Xume. It shows also a huge diversity and highlights that some of those activities are carried out by most household types (house gardening, small stock keeping, while others characterize the farming types (macro livestock).

3.4.3. What is next? An attempt to identify the trajectories of the different types

Table 4 describes the main modes of operation for each type, resulting in the definition of its strategy. Those strategies are related to the issues and threats that have been collected and identified during the survey. Even though providing a seemingly dark perspective, this procedure is based upon trends or events that are possible (job losses, production or market failures), realistic (failures in farm assets transmission, decease of the old pensioner heading the household) or merely natural (ageing), in the next five to ten years. Thence, it allows (1) identifying some important developmental intervention to be drawn up, and (2) identifying the possible evolution of the different types.

Table 5 identifies the possible dynamics of the different types, as it includes those issues and threats, but also, some more positive factors that might improve households' circumstances and even provoke their shift towards other types. According to these deductions, type 3 seems to be the most unstable, as the possible trajectories are very diverse, according to the occurring factors. For all types, the factors' likelihood of occurrence are obviously also very diverse, and highly dependant on external interventions or opportunities (i.e. land access and land tenure transmission system, off-farm job opportunities, access to credit and production means, to markets). Finally, the identified dynamics do not take account of the emergence (or disappearance) of new types. One can imagine for instance that improvement in wool production (e.g. shearing shed, dipping tanks, vet inputs made available) and wool marketing (e.g. better supply chain and agribusiness linkages, increasing and stable prices) should undoubtedly generate an overall improvement for type 6, then probably for types 4 and 5, some of them becoming commercial wool growers, as a new type that does not exist currently.
4. Conclusion

The Xume typology scheme provides an illustration of the value of knowing local diversity better since it provides an way to properly target development-support interventions. It is not only a result as such but also provides the background for further actions. Some data that has been highlighted might become indicators of the impact of the LandCare project (incomes, crop production indicators, wool production indicators, number of livestock units, etc.). Through the involvement of extension officers in the survey and data analysis, it has also undoubtedly generated capacity building and awareness about the actual circumstances of the rural people of Xume.

The place of such approaches in the development policy process can however be questioned. In the case of the LandCare project of the Eastern Cape, typology schemes were implemented while most decisions had already been made in terms of intervention. They eventually justified ex-post most technical interventions planned. However, this delay of implementing a socio-economic diagnosis confirms Whatmore’s impression (1994) that typologies are unevenly institutionalised in both scientific and political discourse. The case study proved that their legitimacy does not only lie in their contribution to technical aspects but also in the issues they raise about rural development strategy, planning and management, as a whole.

The case study also provides some insights at project level in the case of the LandCare programme in the Eastern Cape. Overall uplift and natural resource protection at community level, on one hand, and the promotion of emerging commercial woolgrowers, on the other hand, are two different strategic objectives (although complementary to each other in the long run). The typology scheme shows how and who they may concern, currently and in the close future. The case study also refers to more general concerns about rural development.

Full-time farmers are not the wealthiest groups amongst the community’s households. Despite its increasing scarcity, off-farm employment still sway the activity systems at household level. Currently, full-time farming does not seem to be the objective of most households – most of them aiming to diversify their sources of income. Today’s diversity and strategies represents the background for tomorrow’s diversity, and development programmes (i.e. land reform, development projects, etc) should take this into account.

Pensions also play a paramount role in households’ livelihoods (for instance, in Xume community, pensions and welfare grants represent 53% of the overall money flowing through the households). Like off-farm income, they do not seem to undermine the development of farming, but conversely to support it in most cases. A question remains as to what is next? Households’ heads are ageing, while a half of the community population is under 15 years old. Transmission of farming potential is a major issue in most households that have been interviewed.
As touched on by Laurent et al. (1998), the typology scheme does not provide any instant solution. Appropriate pathways for development are to be decided and implemented at policy making and strategic planning levels.

5. References


Figure 1. Proportion of income from different sources in Xume (proportion of money flows from different sources at the community level, survey sample)

Table 1. Livelihood & activity systems in Xume community (% of households involved in, survey sample)

<table>
<thead>
<tr>
<th>No income</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pension/Welfare + Farming</td>
<td>22</td>
</tr>
<tr>
<td>Remittances only</td>
<td>15</td>
</tr>
<tr>
<td>Remittances + Farming</td>
<td>16</td>
</tr>
<tr>
<td>Farming only</td>
<td>9</td>
</tr>
<tr>
<td>Pension/Welfare only</td>
<td>9</td>
</tr>
<tr>
<td>Pension + Farming + Remittances</td>
<td>6</td>
</tr>
<tr>
<td>Local job only</td>
<td>5</td>
</tr>
<tr>
<td>Local job + Farming</td>
<td>4</td>
</tr>
<tr>
<td>Pension + Remittances</td>
<td>5</td>
</tr>
<tr>
<td>Other combinations</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2. Main features per type in Xume

<table>
<thead>
<tr>
<th></th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Type 4</th>
<th>Type 5</th>
<th>Type 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income per household</td>
<td>&lt; 1200</td>
<td>8670</td>
<td>3010</td>
<td>9220</td>
<td>6700</td>
<td>2740</td>
</tr>
<tr>
<td>Total income per capita</td>
<td>&lt; 100</td>
<td>1334</td>
<td>550</td>
<td>1620</td>
<td>905</td>
<td>620</td>
</tr>
<tr>
<td>Farming income</td>
<td>0</td>
<td>&lt; 100</td>
<td>&lt; 100</td>
<td>540</td>
<td>180</td>
<td>2220</td>
</tr>
<tr>
<td>Number of animals owned/kept</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cattle</td>
<td>&lt; 2</td>
<td>&lt; 4</td>
<td>&lt; 3</td>
<td>3</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>sheep</td>
<td></td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>7</td>
<td>37</td>
<td>50</td>
</tr>
<tr>
<td>goat</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Marketing of animals</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Marketing of wool</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Expenditures for inputs to farming activities</td>
<td>0</td>
<td>285</td>
<td>300</td>
<td>550</td>
<td>790</td>
<td>770</td>
</tr>
<tr>
<td>Expenditures for external food supply</td>
<td>770</td>
<td>1760</td>
<td>1700</td>
<td>1670</td>
<td>1980</td>
<td>1470</td>
</tr>
<tr>
<td>Number of relatives accommodated in the household</td>
<td>5.2</td>
<td>6.5</td>
<td>5.5</td>
<td>5.7</td>
<td>7.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>
Available labour force | 2.2 | 1.8 | 2.1 | 1.8 | 2.5 | 2.4
Gender of the head | F | F | M or F | M | M | M or F
Age of the head | 46 | 70 | 48 | 72 | 49 | 50
Access to a pension | No | Yes | No | Yes | No | No

(Incomes & Expenditures in ZAR per annum, all data are averages, except maximum indicated with a prior <).

Table 3. Farming activities in Xume (Percentage of household involved at least in a given activity)

<table>
<thead>
<tr>
<th>Farming activities</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>House gardening</td>
<td>40%</td>
<td>81%</td>
<td>80%</td>
<td>79%</td>
<td>93%</td>
<td>91%</td>
</tr>
<tr>
<td>Dry land crops</td>
<td>40%</td>
<td>50%</td>
<td>47%</td>
<td>79%</td>
<td>60%</td>
<td>55%</td>
</tr>
<tr>
<td>Fruit trees</td>
<td>0%</td>
<td>12%</td>
<td>0%</td>
<td>21%</td>
<td>20%</td>
<td>9%</td>
</tr>
<tr>
<td>Chicken</td>
<td>80%</td>
<td>94%</td>
<td>73%</td>
<td>84%</td>
<td>100%</td>
<td>91%</td>
</tr>
<tr>
<td>Pigs</td>
<td>80%</td>
<td>75%</td>
<td>80%</td>
<td>74%</td>
<td>73%</td>
<td>73%</td>
</tr>
<tr>
<td>Other micro-livestock</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>0%</td>
<td>27%</td>
<td>9%</td>
</tr>
<tr>
<td>Goats</td>
<td>40%</td>
<td>19%</td>
<td>47%</td>
<td>53%</td>
<td>93%</td>
<td>73%</td>
</tr>
<tr>
<td>Sheep</td>
<td>20%</td>
<td>50%</td>
<td>27%</td>
<td>95%</td>
<td>100%</td>
<td>82%</td>
</tr>
<tr>
<td>Cattle</td>
<td>20%</td>
<td>25%</td>
<td>33%</td>
<td>84%</td>
<td>100%</td>
<td>73%</td>
</tr>
<tr>
<td>Horses/Donkeys</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>26%</td>
<td>0%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Table 4. Identification of households’ strategies per type.

<table>
<thead>
<tr>
<th>Type</th>
<th>Main strategies</th>
<th>Main issues and threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Defensive (survival strategy), striving to get a job for someone in the household, secure some subsistence and/or rely upon local solidarity.</td>
<td>Deep poverty. Some are landless, resulting in weak subsistence potential. Ageing, resulting in even weaker subsistence farming.</td>
</tr>
<tr>
<td>2</td>
<td>Self consumption &amp; subsistence farming, access to complementary external income for the adults.</td>
<td>Head deceased, resulting in pension loss, as major source of income.</td>
</tr>
<tr>
<td>3</td>
<td>Secure an external sustainable source of income, farming for subsistence and for some additional income (opportunities), accumulation of capital and social status through livestock.</td>
<td>Job loss, as major source of income. Ageing, resulting in declining subsistence farming activities.</td>
</tr>
<tr>
<td>4</td>
<td>Self consumption &amp; subsistence farming, accumulation and social status through stock keeping, access to complementary external income for the adults, marketing for additional income.</td>
<td>Head deceased, resulting in pension loss, as major source of income. Issue of transmission of farming assets, land rights and animals to younger relatives.</td>
</tr>
<tr>
<td>5</td>
<td>Wealth storage, additional income and social status through stock-keeping, access to complementary external income for the adults, self</td>
<td>Job loss, as major source of income. Ageing, resulting in declining farming activities.</td>
</tr>
</tbody>
</table>
### Types' dynamics: identification of the possible trajectories and factors

<table>
<thead>
<tr>
<th>Current types</th>
<th>Possible trajectories</th>
<th>Factors, conditions and results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>Ageing, then access to a pension</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Access to a job or to welfare grants</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Access to arable land, to production means</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Head deceased, no external source of income</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Head deceased, access to external source of income</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Access to production means, market opportunities</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>Ageing, then access to a pension</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Job loss, enough farming skills and assets to shift to farming</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Job loss (or no more news from working husband), little subsistence activities</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Ageing and accumulation (money, livestock)</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Accumulation (money, livestock)</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>Head deceased, access to external source of income, succession</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Head deceased, no external source of income, succession and concentration of production means on an adult headed household</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Head deceased, access to external source of income, no succession</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Head deceased, ageing and end of farming –stock sold-</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>Ageing, then access to a pension</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Job loss</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>Ageing, then access to a pension</td>
</tr>
</tbody>
</table>

The trajectories of type 2/4 households and of the relatives highly depend upon the succession process than would be implemented (modalities of transmission of patrimony, assets and animals).

All households may also remain pertaining to the same type, as an effect of ageing as unique factor, with farming potential and likelihood to access an external job slightly declining.