Structural and procedural properties important in promoting bio-enterprises as alternative livelihoods to pastoral and agro-pastoral livelihoods

by Chinwe Ifejika Speranza and Susie Wren

Paper presented at the International Conference on

Future of Pastoralism

21 – 23 March 2011

Organised by the **Future Agricultures Consortium** at the **Institute of Development Studies**, University of Sussex and the Feinstein International Center of Tufts University

Structural and procedural properties important in promoting bio-enterprises as alternative livelihoods to pastoral and agro-pastoral livelihoods

Chinwe Ifejika Speranza [a,b] and Susie Wren[c]
[a] Centre for Training and Integrated Research for Aid and Semi-arid Lands Development, (CETRAD), Nanyuki, Kenya.
[b] Centre for Development and Environment (CDE), University of Bern, Bern, Switzerland.
[c] Laikipia Wildlife Forum, Bio-enterprise Development Programme, Nanyuki.

Paper submitted to the 'Future of Pastoralism in Africa' Conference March 21st – 23rd, 2011, Addis Ababa, Ethiopia.

Abstract: There is increasing interest in rural development circles in promoting alternative livelihoods opportunities for pastoral and agro-pastoral livelihoods. However, there is very little empirical evidence that effectively evaluates the impact of the existing approaches. As pastoral and agro-pastoral production conditions change, due to factors such as increasing competition over natural resources and climate variability, the pressure on pastoralists and agro-pastoralists to find alternative income sources is forcing them to make fundamental changes in their livelihoods and coping strategies. This paper synthesises the lessons learned from the study of bio-enterprise initiatives by identifying and discussing the features important for such initiatives to reduce poverty and improve the adaptive capacities of pastoralists and agro-pastoralists. It draws on a study of different bio-enterprise initiatives that have aimed to improve agro-pastoral and pastoral livelihoods and natural resources management (NRM) in the drylands of Kenya. The identified factors include close interaction with and cooperation between the stakeholders, understanding of the specific needs of all the players, adequate evaluation of the business viability prior to implementation, application of sound basic business principals throughout the value chain, the up-take of organic and ethical trade standards and well phased market gearing. Other factors, such as access to affordable small scale business finance and loans, adequate skills development, ability to achieve the necessary product quantity and quality demanded by the market, are some of the more apparent steps that are essential to improving bio-enterprise-dependent livelihoods.

Introduction

As social-ecological factors such as climate variability, population pressure and competition for land continue to decrease the viability of traditional pastoral and agro-pastoral livelihoods, complementary or alternative pathways are sought to enhance the resilience of agro-pastoralists and pastoralists. 'Bio-enterprise', that is, rural businesses that are based on the sustainable utilisation of indigenous natural products that deliver positive socio-economic and environmental impacts, is one such pathway. The development objective of bio-enterprise development is to create greater economic incentives for participating communities/farmers/pastoralists to conserve biodiversity whilst increasing household incomes and gaining additional coping strategies.

However, the bio-enterprise sector in Kenya, as for other Eastern Africa countries, is not well developed. In particular, such enterprises developed through the support of Non-Governmental Organisations (NGO) have achieved no or little growth compared to those developed under private management and, in some cases, those managed through Community Based Organisations (CBO). This poor performance has been attributed to the neglect of basing such activities on sound business principles and the general lack of business knowhow of the initiators. Poor sustainability of traditional systems is mostly due to the increasing demand for natural resources. The low market awareness of the majority of the producers means that they have little negotiating capacity and receive low returns from intermediaries. Lack of investment

capacity and trade finance has also led to poor business growth and has constrained local actors from investing adequately in infrastructure and equipment. The lack of technical, management and business skills at all levels, further hinder local actors from achieving consistent supply of quality products and quantity demanded by more rewarding markets.

Subsequently, poor cooperation and cohesion within groups lead to fragmented markets, poor linkages between actors, no economies of scale, and very little impact on improving environmental management and household incomes. In addition there are few opportunities to raise trade finance, thereby constraining the local producers' capacity to invest in equipment, infrastructure and raw material to increase production. Poor quality and insufficient supply on the other hand, do not attract good commercial partnerships with ethical private operators or improve access to premium markets.

Departing from these reflections it is therefore important to understand the structural and procedural properties that are fundamental in promoting and assisting the development of successful bio-enterprises that complement pastoral and agro-pastoral livelihoods, or replace income generating activities that are no longer viable and sustainable. In order to provide information as to how to design effective bio-enterprise support programme, data was collected on a representative range of existing bio-enterprise initiatives, selected through purposive sampling, to evaluate their contributions to improving livelihoods among the participating pastoral and agro-pastoral communities (cf. Wren and Ifejika Speranza 2010). The findings which are discussed in detail in Wren and Ifejika Speranza (2010) provide the empirical background for discussing the various structural and procedural factors displayed in Table 1. First we shall discuss the importance of understanding the inter-linkages between sustainable resource use and bio-enterprise development and then go on to discuss the various factors.

Understanding the inter-linkages between sustainable resource use and bio-enterprise production

In order to support livelihoods while maintaining the quality of the environment, development actors initiating bio-enterprises and the involved local actors need to understand the inter-linkages between their bio-enterprise production, sustainable resource use and resource conservation or protection. This can be achieved by demonstrating the linkages between the two spheres. For instance, bees depend on vegetation and as such to ensure honey production, the producers have to maintain the forests around them. Forests are sources of wild products and communities that use such non-timber forest products rely on the continued existence of the forest and would tend to act in manners that do not jeopardise the existence of forest. Further, using fast-growing regenerative indigenous shrub species for charcoal production can reduce the pressure on the surrounding forests. These cases are to be understood as examples which need to be tailored to the opportunity costs of certain actions in certain contexts. With this understanding of the inter-linkages as a basis for bio-enterprise production, it is more likely that natural resources will be used in a more sustainable manner.

Structural and procedural properties important in promoting bio-enterprises

In many of the bio-enterprises studied, external actors (NGOs, government officers, researchers) played a key role either as initiators, facilitators or mentors. Where external actors did not initiate the bio-enterprises, they still played a key role either in facilitating local producers access to knowhow and skills, to finances or to markets. We expect that these external actors will continue to play a key role in the development of such bio-enterprises. Hence this paper

addresses the contexts where external actors are likely to play a key role in bio-enterprise development and production.

Table 1: The structural and procedural properties important in promoting bio-enterprises among agro-/pastoral communities:

Key structural and procedural factors
1. Producer group formation and business organisation
2. Feasibility studies and business planning
3. Business framework and gearing
4. Inclusive – participatory planning
5. Training and extension
6. Infrastructure and appropriate equipment
7. Support and organisational assistance
8. Long-term relationships between value chain actors and support agents (Trust)
9. Commercial partners
10. Guaranteed market
11. Finance and savings
12. Integrated management capacity
13. Marketing and promotional mechanisms
14. Equitable benefit and cost sharing systems
15. Quality protocols and certification

The following discussion is structured according to the various factors identified in Table 1.

1. *Producer group formation and business organisation*: A careful assessment made of the organizational and management ability of the producer groups and commercial operator will enable development actors to provide well placed support in achieving organised, structured and technically competent groups and then in the relevant technical skills development. This input is not technically demanding, but requires man-power and time. These aspects represent cost, time and unviable business risk and opportunity for commercial partners. Therefore, the benefits of sound partnerships between commercial companies, development agents and NGOs can lead to private sector investment into rural areas that were previously commercially unattractive.
2. *Feasibility studies and business planning*: As in general business development, feasibility studies of the commercialised production of traditional products are crucial. It is not enough to assume that because local actors have been producing honey for instance for the local markets, that they would be successful in producing it for other markets and clientele. Thus pilot tests of bio-enterprise initiatives need to be conducted before transiting to full-scale production in order to improve the initial business plans based on experiences made during the pilot. Often, funding for this crucial phase may be easy to acquire but at the same time, bio-enterprise developers need to address the funding issues with a long-term perspective in order to ensure that once the pilots have been run successively that funds are available to

modify the business plan or to go full-scale.

3. *Business framework and gearing*: A common characteristic of rural enterprise initiatives is the small amount of produce achieved and the poor economies of scale regarding abilities to invest in transport and infrastructure, to gain bank loans and good commercial partnerships. Prior to developing the bio-enterprise, producers/actors must have full knowledge of what is entailed in setting up and developing the business operations to market quality and statutory compliant standards. Therefore producers need to have sufficient capacity to conduct a cost-benefit analysis and simple business plan. The support actors also need skills to provide effective training and extension support, and to gear the infrastructure and equipment investment, trade finance and operating capital appropriately. In most of the bio-enterprises that were studied, success hinged on sufficient gearing of the project; such as adequate investment into basic activities (i.e. training and extension), early engagement of commercial partnerships that provide strong market linkages. These experiences articulate the need for development actors to acknowledge that the business dynamic is central to any livelihoods support initiative. As such there is a need to take full regards of the basic fundaments of all businesses: *competitive advantage; economies of scale*; *ability to meet market forces* and the *opportunity cost.*

4. *Inclusive participatory planning*: One of the significant areas of influence in terms of the medium to longer term success of bio-enterprises in the rural regions of Kenya is the level of participation between all stakeholders and actors in the initial and on-going planning of the bio-enterprise activities. The close working relationship with the community in activity planning and implementation in technical and business areas results in a collaborative and more sustainable enterprise development approach. This included skills gaps identification and the design of training needs and impact monitoring conducted as joint activities. The time and interest invested in the project by project staff and the community / association leaders stimulated the communities' commitment to the ownership and direction of the enterprise. Stakeholder workshops enabled communities to participate more closely in resource management processes.

5. *Training and extension*: While the agro/pastoral communities have local knowledge about their indigenous plant based products (for example, honey or aloe), to value add to these raw products to achieve greater market returned, requires knowledge and experience of the harvesting and processing methodologies and technologies, understanding of the target markets, the actors involved and the expected product quality. As many agro/pastoral communities do not have this experience, adequately skilled extension services are pivotal in enabling communities to gain the necessary skills development and market knowledge, and the level of investment and commitment required to achieve business success (Wren and Ifejika Speranza 2010). In many cases there is a network of actors providing extension services, which proved a strong factor in the successful growth of bio-enterprises. It is necessary to ensure that there is good participation of both gender in training sessions. The case studies showed that the practical field based training sessions have enabled greater participation of women than the class room based approach. The up-take of training is also improved by shorter multiple practical trainings than fewer longer duration collective classroom based courses.

6. *Infrastructure and appropriate equipment*: Infrastructure (e.g. power, machines) and quality equipment are crucial although not the only defining factor for success. The questions that must be answered are what the appropriate equipment is for the scope of production planned. Can the level of mechanisation be phased so as to reduce the strain on finances? Where can quality equipment be sourced and are the after-sales maintenance services

guaranteed? Addressing these questions in a timely manner contributes to a smooth running of a bio-enterprise production.

7. *Support and organisational assistance*: In order for any enterprise to meet basic business, market and ethical trade requirements it needs adequately managed organisational structures and operating mechanism that provide transparency and traceability. Community governance and group management systems, such as those traditionally used for managing grazing lands, and the recent wave of resource groups, such as water users associations, established by government and NGOs provide a good foundation for this. Training and mentoring of the producer groups in organisational management is one of the fundamental processes of bio-enterprise development.

8. *Long-term relationships between value chain actors and support agents:* The development of a strong functional value chain requires the commitment and trust of the actors throughout the chain. Weak links bring negative impact to all chain actors. The building of sound long-term relationships between the chain actors is therefore in the interest of all, including the support agents. The use of internal mechanism, such as the Internal Control System (ICS), and external mechanism, such as legally binding contracts and certification inspections, bring about great transparency and traceability. Developing long-term relationships also requires a sound foundation, preferable supported by an MOU (Memorandum of Understanding) that states the responsibilities and roles of the parties, reliable communication, willingness of the parties to meet compliance measures and sufficient pro-activity, flexibility and loyalty to overcome short term problems.

9. *Commercial partners*: Early partnership with ethical commercial operators is one of the most important components of achieving strong and sound bio-enterprises. Commercial partners can assist producers in understanding specific product quality and quantity requirements and enable producers to gain clear learning steps through product price based on quality as grades. Sound and ethical commercial partnerships can be most effective tools in creating long-term sustainability of rural enterprise operations.

10. *Guaranteed market*: As discussed above, the engagement of commercial partners can provide the necessary market information for local producers to achieve the required standards. In the absence of this relationship it is necessary for the producers themselves to know the specific market expectations and quality standards.

11. *Finance and savings*: Access to rural finance is fundamental to the expansion of rural based enterprises, due to lack of capital finance, risk bearing and existing skills capacity of the rural producers. Little business finance for producing raw materials (e.g. honey, aloe) and equipment makes it difficult for local producers to improve and sustain production due to the hurdles in accessing credit from the banks, the high interest rates for servicing such credit and the limited equity to obtain loans. This means that enterprises remain small, cannot improve the quality of products or expand their products. Qualified CBOs and development practitioner can link local producer organisations with banks and could develop innovative financing instruments aimed at supporting bio-enterprise development.

12. *Integrated management:* Most rural enterprise development initiatives require both a developmental approach and a business approach. The combined requirement for capacity, in terms of skills, professional guidance, extension and training, financial assistance, access to micro-credit etc., as well as strong linkages with commercial partners and the marketplace, signals the need for an integrative management approach.

13. *Marketing and promotional mechanisms*: The marketing and promotion of bio-products, along with product branding and retail packaging design represents a significant area of

non-physical value addition to a product, and is an area that must be professionally and innovatively embraced in order to maximise on market opportunity and competitive advantage. Marketing and product branding includes the 'story line', the 'feel good factor', the image being sold with the products. Packaging is a major factor of product competition as is customer appeal. Unfortunately a large majority of natural products retailed in Kenya are both poorly promoted and poorly packaged. Understanding the market, monitoring its trends, applied and up-dated business planning processes and effectively gearing of the business to the target market are fundamental components of a good marketing strategy, whether they are small or large in scale. As soon as viable quantities of semi-processed and retailed packed bio-products are produced, the market should be tested through market sampling methods.

14. *Equitable benefit sharing systems*: The inclusion of equitable benefit sharing mechanism in the design of bio-enterprise initiatives is a major aspect in the longer term sustainability of the enterprise. To overcome the competition of intermediate traders and to stimulate loyalty of producers to serve the bio-enterprises, as well as ensuring their equitable returns, profit sharing approaches that reward the individual producers are very effective. Using the fair trade approach not only provides the producer with a greater interest in serving the best interests of the wider value chain but also increases the strength of the relationship between the buyer and the suppliers, giving the buyer a guarantee of supply[1] (Wren 2008, 2010). This win-win scenario is well understood in the private sector but not widespread among the new entrants to bio-enterprise and need to be fostered.

15. *Quality protocols and certification*: Where sound value chains and commercial partnerships are in place it is necessary to assist producers to develop quality standards and protocols, internal control systems and organic certification, training in sustainable wild harvesting and business management based on these systems and fair-trade principles and thus linking producer groups/enterprises with new market outlets. To achieve organic certification, which provides market advantages, the enterprises must establish an internal control system and if the plant materials are collected from the wild it is imperative that sustainable wild harvesting protocols are in place and certified (i.e the International Standard for Sustainable Wild Collection (ISSC-MAP) and the FairWild Standard[2]).

Conclusion

The above points highlight the importance of sound and well informed design of bio-enterprise initiatives that are based firmly on business principals, rooted in the interests and aspirations of the participating producers/communities. Furthermore, these points, drawn from a study of a range of bio-enterprises, clearly demonstrate the need for these initiatives not only to be appropriately designed but also to have the capacity to address multiple commercial, socio-economic and environmental factors that impact on the development of viable and sustainable bio-enterprises.

In certain contexts, some of these factors may not be as important as the others. Thus while this list may seem prescriptive, it offers a guide on the factors found to be important in bio-enterprise development and production, which need to be tested and adapted to the particular context. In addition, the cases from which we derived the above factors are still few. Therefore more empirical studies of bio-enterprises in agro-/pastoral areas are needed on the one hand to test

[1] See also www.faitrade.org
[2] http://www.fairwild.org/standard

how important these factors are and identify the contexts within which certain factor constellations play out to shape the success or failure of bio-enterprises.

As the name hints, bio-enterprises do not only aim to make profit from natural products but aim to do so in a way that accounts for the sustainable management of natural resources. As such more studies are required that can evaluate and illuminate the level competition or complementarily between the conservation of natural resources and deriving economic gains from the use of natural resources and their driving factors.

Acknowledgements: Chinwe Ifejika Speranza contributed to this paper in the framework of the Volkswagen funded research project on “Semi-arid areas in transition” under the programme "Knowledge for Tomorrow – Cooperative Research Projects in Sub-Saharan Africa". Susan Wren acknowledges the work of her team who are committed to the pioneering and success of the Bio-enterprise Development Programme, Desert Edge and its partners, Laikipia Wildlife Forum, Africa Wildlife Foundation, USAID and the Royal Netherlands Embassy. It is because of their collective belief in the objectives of this initiative (www.biotrade.co.ke) that there are now strong bio-enterprise models in the drylands of Kenya that demonstrate the points made in this paper.

References

Wren S. (2008) Development of new and /or Scale-up of exisitng Aloe-based business in Laikipia. http://www.biotrade.co.ke/pdfs/LWF%20Aloe%20Bio-enterprise%20Development%20copy.pdf (Accessed 24 April 2011).

Wren S. (2010) Guidelines of Developing Sustainable Dryland Products Enterprises Commercial and Development Sector Operators – Version 1. http://www.elmt-relpa.org/aesito/hoapn?&id_cms_doc=58; http://www.elmt-relpa.org/aesito/hoapn?id_cms_doc=58&download_file=on&get_file=104 (Accessed 24 April 2011)

Wren S. and Ifejika Speranza C. (2010) The Struggle to Diversify Rural Livelihoods: Bio-enterprise Initiatives and their Impacts on Agro-Pastoralists and Pastoralists Communities in the Drylands of Kenya. *European Journal of Development Research* (2010) 22, 751–769. doi:10.1057/ejdr.2010.42