



Overseas Development Institute

Extension, Poverty and Vulnerability: Inception Report of a Study for the Neuchâtel Initiative

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Results of ODI research presented in preliminary form for discussion and critical comment

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Copies of the 'Common Framework of the Neuchâtel Group' and of the 'Guide for Monitoring, Evaluation and Joint Analyses of Pluralistic Extension Support' (English version only) can be obtained by writing to:

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Acronyms

AgSIP	Agricultural Sector Investment Programme
BRAC	Bangladesh Rural Advancement Committee
CLUSA	Co-operative League of the United States of America
CPRM	Common Property Resource Management
ERP	Economic Reform Programme
EU	European Union
FAIDA	Finance and Advice in Development Assistance
FAO	Food and Agriculture Organisation
GOPDC	Ghana Oil Palm Development Company
IASC	UN Interagency Standing Committee
IDPM	Institute for Development Policy Management (University of Manchester)
IFI	International Finance Institution
IFOAM	International Federation of Organic Agriculture Movements
NPM	New Public Management
NR	Natural Resource
R&D	Research and Development
SL	Sustainable Livelihoods
SWAps	Sector-wide Approaches
T&V	Training and Visit approach to agricultural extension
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission on Refugees

Summary

This inception paper reviews recent trends in poverty, vulnerability and extension, and the policy context in which extension is located. It does so in order to identify key issues for further investigation through more detailed literature review and field investigation in the main part of the study. Some scope for action by governments and donors arises from this inception review, but discussion of this will be presented in the final report. Further, it would be premature here to discuss extension approaches and methodology in any detail until broader questions of the contribution that can be made by extension to the reduction of poverty and vulnerability have been discussed.

Following a brief introduction to the main concepts, this paper examines wider trends bearing on extension and then provides brief illustrations of where innovative approaches to extension may have an impact on the poor.

Its main conclusions are that neither the prevailing statist nor neoliberal reformist views of the role of the State in extension are adequate. There is a role for the public sector in extension but it needs to be defined in a more nuanced way than hitherto, and in response to, recent changes in our understanding of:

- poverty and vulnerability;
- global economic, political and social trends (globalisation, democratisation, and systemic collapse attributable to HIV/AIDS or the emergence of 'uncivil' society);
- the changing role of the State – both in principle and in reality – and the range of roles that different organisations can play in performing the desired functions of extension, both separately and in collaboration, and in terms of how these roles can be funded and managed.

Chronic problems of poor performance in public sector extension, despite decades of a highly structured Training and Visit system (T&V) in some countries, still needs to be addressed. Extension has little prospect of making a significant contribution to the reduction of poverty or vulnerability unless agricultural and rural development policies adequately address these changes. To this extent, support for extension has to be located in a sector-wide context.

Specifically, the paper concludes in respect of *poverty and vulnerability* that:

- Poverty is multi-faceted, but as the Sustainable Livelihoods (SL) framework argues, the poor have assets and choices; development is not merely about increasing income, but about broadening livelihood-related choices. In its broadest conception, the purpose of extension is to help in broadening choice.
- Agricultural change can impact on the poor through production, consumption, price and employment effects. Extension does not relate to poverty simply through the crops that the poor typically grow. Livelihood diversification means that activities at the interface between agriculture and other natural resources, or between agricultural production and input supply or processing/marketing are likely to be important to the poor.
- Vulnerability is endemic among the poor and severely constrains their livelihood choices. The very poorest will be unable to engage in production and so, in many cases, cannot be helped by agricultural extension directly. Here social policy will take on a more important role, incorporating livelihood extension and safety nets. Vulnerability has increased in contexts of systemic collapse attributable to HIV/AIDS and political disturbance. Policy (and extension) needs to focus not just on increasing accumulation, but also on reducing vulnerability.

in respect of *the scope and organisation of extension* that:

- Against this poverty context the desirable scope for extension is much wider than what public sector services can hope to provide, and embraces production, the wider production context, and wider aspects of livelihoods in a range of possible roles (purely advisory; advisory and input supply; advisory and institutional support). Furthermore, the poor will benefit from having access to advisory expertise that helps them make better and more open choices about their own livelihoods, including how to make ‘good exits’ from agriculture.
- Options for fulfilling these roles include public, private and mixed and a range of funding and management arrangements. Inter-organisational relationships in providing and delivering extension are likely to become of increasing importance than has hitherto been the case (either through contract arrangements or co-operation for joint action), with consequent challenges for development management.
- In this context, the mode of extension delivery will range from advice and training on (‘transfer’ of) specific technologies to facilitation in relation to technologies (e.g. improved access), but also in relation to pro-poor institutional arrangements for accessing markets, planning resource-use at the local level, accessing credit and insurance and so on. Though the organisational landscape will vary, what is clear is that extension must be firmly nested within a wider service context (including credit, input supply, processing, marketing).

in respect of *the role of the State* that:

- Market failure is widespread, especially among the majority of poor who are remotely located, and the neo-liberal prescription that the State should work to correct market failure is important. But, is it insufficient on two grounds? First, the correction of market failure is a medium/long-term project in many areas (especially in sub-Saharan Africa) where the private sector is weak; the State will have to continue engaging in or supporting economic activity for some time to come. Second, many of the factors keeping poor people poor are structural, and there are strong justifications for social policy to address these without merely aiming at short-term increases in production.
- Choices must be made with respect to growth-related policy elements, pro-poor distributional policy elements and the balance between them. This is likely to vary according to the level of inequality in society. Policy analysis can benefit from scoping the way in which policy initiatives can lessen the transaction costs related to the poor engaging in the global economy.

in respect of *wider trends* that:

- *Globalisation* is likely to bring more threats than opportunities to poor people and poor countries. Poor producers will need particularly rapid and effective support in accessing new technologies and markets, and in meeting new standards of quality and reliability if they are to take advantage of new trade opportunities. The record of support to these hitherto, has not been encouraging. The promise of cheaper imported food needs to be balanced carefully against the threat it poses to local food producers.
- *Urban growth* and growth in urban incomes offers a number of opportunities for producers, and the demand for livestock products will increase particularly rapidly. A well-balanced regional policy and appropriate advisory support is needed if the poor are to have some prospect of benefiting from growth-led demand.

- *Decentralisation* remains high on the agenda for donors and for some governments. It offers particular opportunities for prioritising agriculture and natural resource (NR) development in ways that meet local needs, and for innovative ways of engaging and managing both public sector staff and public/private partnerships in extension. Finding an appropriate balance between central control and local autonomy remains a key challenge.
- Questions of how public goods (or ‘bads’) should be managed remain important in relation to the *environment*; where the poor rely heavily on the commons improved management practice has particular implications for them. Policy to support integrated watershed development in some countries offers pro-poor opportunities for extension which have not yet been taken up.
- Many poor countries are on the verge of undergoing, or trying to recover from *systemic collapse*, which may take many forms (HIV/AIDS; natural disaster; civil strife). Providing that they adequately respond to new conditions (increased vulnerability among the poor; changed labour relations; political volatility), agricultural policy and extension have a role to play in devising new options for the poor and helping to (re)build their institutions.

in respect of *opportunities for innovative policies and extension support* that:

- A rapid and as yet incomplete review suggests opportunities for support to niche products; for reconstructing livelihoods in crisis; for innovative approaches to contract farming and outgrower schemes; for links between extension and micro-enterprise and micro-finance and for extension in a watershed rehabilitation context.

The paper identifies a number of issues for further investigation in more detailed literature reviews than have been possible here, and in primary data collection including:

- Questions of triage: should public sector extension services be prioritised for areas having some market prospects, with (if anything at all) alternative, lower cost arrangements for more marginal areas?
- Questions of diversification and rural finance: diversification is important for the poor, directly in agriculture, in ancillary activities, and beyond agriculture – yet extension has been most successful when linked to individual market-oriented commodities. Are there ways in which it can support diversification more effectively than hitherto?
- Questions of how increased market demands for quality control, regulation and certification will be met in the future. How will extension relate to these? Or are these themselves key extension services of the future?
- Questions of organisational partnership: which types offer promise, in what conditions, and under what management arrangements?
- Questions of whether a switch from supply-led to demand-driven models is desirable, and how it might be achieved;
- Questions of whether, and how, extension can be reorganised under strengthened local government and decentralised public administration;
- Questions of how and how far, agricultural policy and extension can respond to systemic collapse.

1. Introduction: Who and where are the poor?

This introduction sets out:

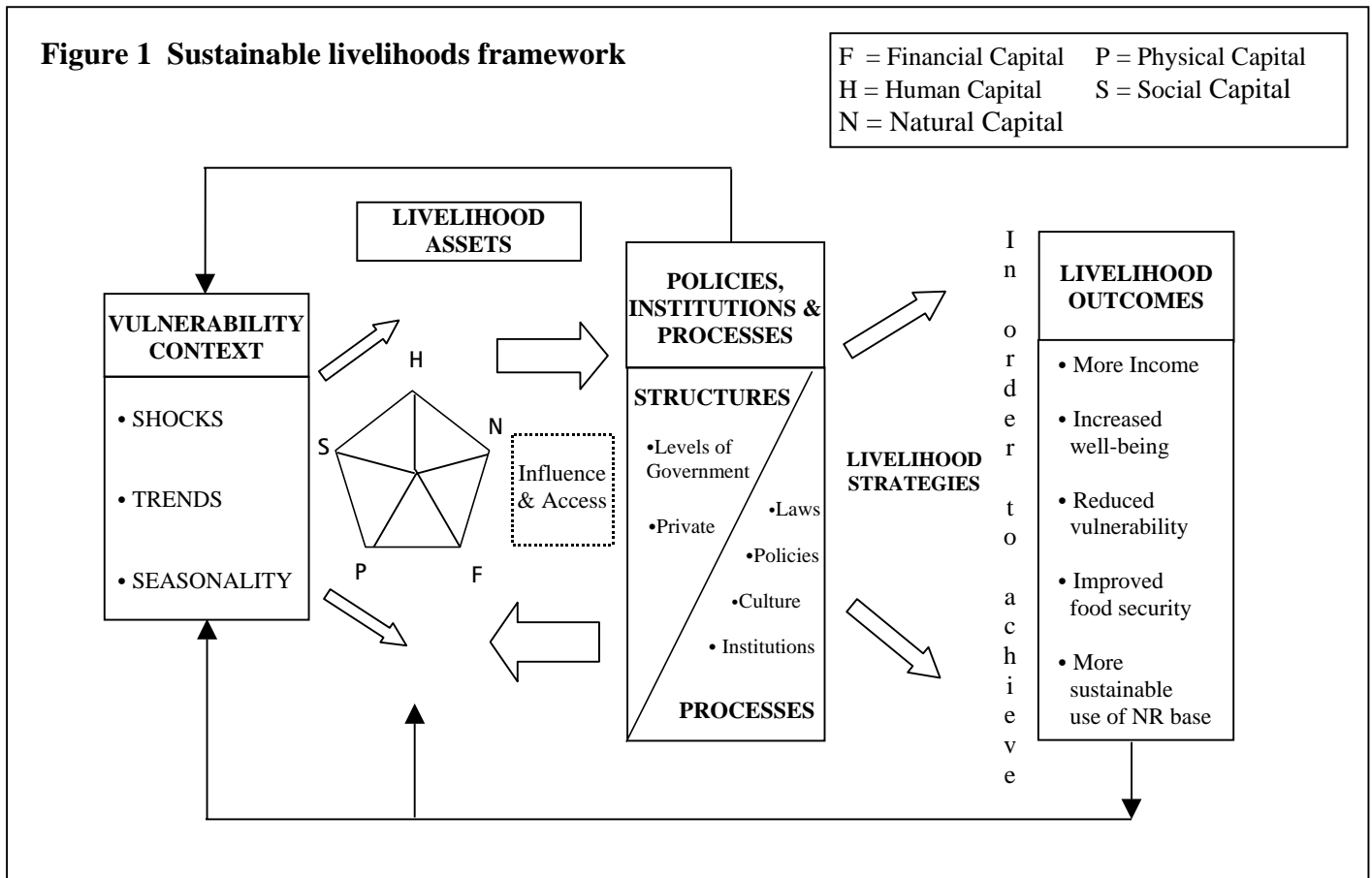
1. Who and where the poor are;
2. How technical change can impact on the poor;
3. What *functions* and modes of operation are normally associated with extension;
4. The changing institutional and organisational patterns of providing these functions;
5. The policy context in which extension is located.

1.1 Poverty, livelihoods and location

Most of the poor are to be found in rural areas, and among these, the majority are located in the more difficult areas characterised by combinations of low and erratic rainfall, hilly topography, poor soils and weak infrastructure. *Place* matters in relation to poverty; those in the more remote areas are likely to be especially hampered by poor information and weak infrastructure in any effort to take up employment opportunities in, for instance, urban areas or better endowed rural areas. Similarly, efforts to link them and their products to major domestic or export markets are likely to be costly, especially where populations are widely dispersed. For difficult and remote areas, a compelling question is whether to seek ways of linking the poor to markets, or whether it is better simply to aim at ensuring food self-sufficiency through production and/or transfers in ways which are environmentally benign (and which by implication restrict returns to labour to near-subsistence levels). The implications for policy – and corresponding extension practice – of these two options are very different. A major purpose of this study is to address questions of this kind by taking a wider view of poor people's livelihoods and prospects than merely looking at 'food self-sufficiency'.

A broad view of poverty is an essential starting point – it is not solely lack of income or of capabilities. A view of poverty as a lack of entitlements (Sen and Drèze, 1989) provides a more appropriate starting point for this study, but demands an assessment of why the entitlements of the poor continue to be limited and, more positively, what assets they do in fact possess or can access. Especially relevant to this latter question are livelihood approaches to identifying escape routes from poverty. These see the poor as having access to five types of 'capital asset' (physical, natural, financial, social and human)¹ which they can draw upon selectively in the pursuit of livelihood activities to achieve desired outcomes, such as increased income, reduced vulnerability, more reliable access to resources and so on (Figure 1). The poor will typically pursue a 'portfolio' of activities which they will change with shifting pressures and opportunities. Poverty in this sense is dynamic: people can move in and out of it, depending on individual, local, national or international circumstances. The relationship between activities and desired outcomes will be moderated by policies, institutions and processes, both formal and non-formal. Success in achieving outcomes may be translated into consumption, or into investment into one or other capital asset.

¹ Although there are strong arguments that political capital should be included as a sixth asset (Baumann, 2000).



Of the wide range of policies, institutions and processes influencing the livelihood strategies of the poor, two merit particular mention in the present context:

A first is that the poor face substantial transaction costs in accessing the means of production, in adding value to their produce, and in accessing markets for it. A fundamental purpose of rural policy, of which extension provision can form a component, is to reduce these transaction costs. It is fair to assume that people trying to follow livelihood options based on their asset set and the pressures and opportunities around them are “fallible learners” (Ostrom et al., 1993), who make choices based on incomplete knowledge of alternatives and likely outcomes. The core of extension is to help people make better choices through the supply of information and enhancement of people’s capacities to process information and act on it, thereby reducing the transaction costs involved in productive activities or livelihood options. But, transaction costs impact disproportionately on the poor due to access problems caused by weak infrastructure, poor organisation and adverse local power relations.

A second is that in many countries, the policies, institutions and processes are loaded against the poor. Although some traditional institutions provide safety nets (for widows, for instance), there are indications that these are weakening in changing socio-economic contexts (Bryceson, 2000). In other societies traditional systems such as caste, may actually perpetuate social and economic difference and prejudice against, for instance, engagement by women in economic activity. Organisations in the private and public sectors are also more likely to disadvantage the poor in difficult areas where there is less competition in input or produce markets, less supervision of junior civil servants and higher levels of vacant posts.

Finally, it is clear that safety nets become essential towards the lower ends of the income or asset scale. Indeed, for those unable to engage in productive activity by selling their labour (such as women with large numbers of dependants, young orphans, the old and the chronically sick) safety

nets provide practically the only means of support. One immediate implication is that in areas characterised by high levels of chronic sickness (such as HIV/AIDS) and high dependency ratios, agricultural policy (and with it extension) must adapt to the types and levels of labour still available, but will itself not be sufficient to address extreme poverty and must be accompanied by strengthened safety nets.

1.2 Technical change and the poor

It is now well-known that technical change in agriculture² can impact on the poor in six possible ways:

- (i) Directly through increases in on-farm production, whether consumed directly or marketed;
- (ii) Through increased local employment opportunities;
- (iii) Through secondary effects on growth in the local non-farm economy;
- (iv) Through increased migration opportunities that it provides;
- (v) Through increased provision of staple food and fibre; and
- (vi) Through pro-poor price effects in all of the above (relatively lower food prices, higher wages, increased returns to own-farm labour, etc.)

These possible effects interact in different ways, and much will depend on the distribution and sequencing of technical change. For instance, lower food prices will almost universally benefit the poor since all are consumers, but some are also producers, and if the technical change underpinning reduced prices is first introduced by larger-scale farmers, then poorer ones may find themselves unable to compete in the changed markets. The extent of this problem will vary from country to country, depending on the level of inequality in resource endowment across society. Regulatory and quality control institutions may play an increasing role in either supporting or preventing poor people's access to changing demands in the global market. How, and how far technical change impacts on the poor, is therefore dependent, to a high degree on careful management of the poverty environment or 'rules of the game'. An important question therefore, is how the type and uptake of technical change can best be managed to raise the probability that impacts on the poor will be positive (whether directly or indirectly)?

A further complicating factor is that the livelihood strategies of the poor are dynamic, complex and diverse; a single household (even a single individual) may engage in a range of own-account or employee activities in farming or the non-farm economy. Intangible factors, such as improved access to resources, reduced risk and enhanced voice in planning rural 'futures', are also potentially important. Diverse livelihood options of poor people can also bring competition for scarce resources, (leading to conflict) among farmers and pastoralists for example. It may not always be possible to construct win-win strategies and 'whose voice counts?' becomes of great importance. An understanding of the broad and shifting patterns of rural livelihoods and the power relations influencing them, is therefore a prerequisite to the introduction of pro-poor technical change, as is the capacity to monitor impacts and make necessary course-corrections. In this sense, a 'process' approach is necessary (Mosse et al., 1998). Extension services have not traditionally been strong in fitting with such complexities in an open, client-oriented manner, amid divergent interests.

² Agriculture here is broadly defined to include not only crops and livestock, but also the related management of the wider natural resource base (water, soils, trees, etc).

1.3 The roles and organisation of extension

There are always a number of factors involved in productive activities, some more tangible (e.g. seeds, agrochemicals, credit), others more intangible (e.g. husbandry, management, forms of organisation, markets). Extension can be applied to any one or combination of these factors. Table 1 summarises some of these factors in relation to the main domains in which extension functions are performed. These include activities relating directly to *agricultural production* (which historically have received most attention in developing countries); those relating to the wider *production context* (such as the use of trees or water resources in agriculture; wider environmental issues such as soil conservation; health and safety issues and processing or marketing issues) and those relating to aspects of *livelihoods* beyond the purely economic, such as issues of resource access, risk and voice.

Table 1 Potential scope of extension

	Domains		
	<i>Production</i>	<i>Production context</i>	<i>Wider livelihoods</i>
Intangible factors with a potential role for extension	<ul style="list-style-type: none"> • Crop and livestock husbandry • Farm management 	<ul style="list-style-type: none"> • Use of natural resources in relation to agriculture • Wider environmental issues • Marketing • Processing • Producer organisation 	<ul style="list-style-type: none"> • Alternative livelihood opportunities • Improving access to natural resources for the poor • Social safety nets • Power relations and institutional landscape • Law • Local and national level planning of agricultural and NR 'futures' • Reduced vulnerability in relation to the above
Institutional support with a potential role for extension	<ul style="list-style-type: none"> • Promotion of producer organisations or co-operatives for input acquisition, information access, veterinary services, phytosanitary services etc. 	<ul style="list-style-type: none"> • Promotion of groups for joint action in NR management • Promotion of producer organisations for marketing, processing, certification, etc. 	<ul style="list-style-type: none"> • Promotion of groups to exercise small farm 'voice' in planning NR 'futures', in accessing NR, and in accessing alternative livelihood options and the requisite skills
Tangible factors with a potential role for extension	<ul style="list-style-type: none"> • Seeds • Agrochemicals • Irrigation water • Productive credit 	<ul style="list-style-type: none"> • In relation to above 	<ul style="list-style-type: none"> • In relation to above • Insurance schemes • Consumption credit

In relation to each of the factors mentioned above, extension agents have occasionally been given input supply functions. However, a major thrust of the T&V system was to strip public extension services back to basic information transfer, advisory and training functions. Recent experience with micro-finance and micro-enterprise indicates success within and outside agriculture. In some cases, micro-finance supports other measures to reduce vulnerability; in others, it helps to support micro-

enterprise. In some cases, micro-enterprise is intimately linked with agriculture (e.g. in the supply of seeds or water, or in veterinary services). In others, it represents a positive exit from agriculture by offering higher returns to labour. In all events, the healthy operation of micro-enterprise is of relevance to agricultural and rural development policy. Extension, as currently defined, can and should help to link between these and low-income farmers. A future (and broader) definition of extension could assist directly in the development of these livelihood opportunities, so that extension is nested within a broader service delivery environment.

Much the same applies to micro-finance, but the point here is not so much that extension agencies should provide it directly, rather that agricultural and rural policy should define broader and more practical ways for the poor to access micro-finance. Extension agents may be able to help them meet the necessary requirements (completing forms, helping to create peer group guarantees etc.) thereby strengthening the link between the poor and those agencies providing micro-finance services. Perhaps most importantly, intermediary organisations or advisors may have the technical capacity to assess investment risk – something that is often lacking in both micro-finance service institutions and their clients. There is potential for synergy as extension services, micro-finance services and farmers jointly consider the economic value and risks related to a proposed technological innovation.

A third dimension could be added to Table 1 to denote the *mode* of extension delivery. The more tangible the factor and the more directly related to production, the more likely extension is concerned with training and advice on technologies ('transfer of technology'). On the other hand, the more intangible or related to the wider context, the more extension is about delivering advice or 'facilitation' on ways of doing and organising. In reality, there are various positions between these two extremes, but it is worth noting that whilst transfer approaches may work well for production activities, facilitating approaches are likely to be more appropriate in efforts to improve wider aspects of livelihoods. Furthermore, given the complex livelihoods, stresses and opportunities of the rural poor, these modes of extension are not mutually exclusive and an appropriate balance will depend on the context.

Another topic of relevance to the 'transfer – facilitation continuum' is links with regulatory and quality control institutions. As with micro-finance, client-oriented advisors should not become directly involved in any control function, but the importance of meeting quality standards for export markets is growing. The poor need support in order to gain access to markets for organic and dairy products for instance, and this requires training and advice for meeting the necessary standards.

Analysis of the *scope* of extension does not automatically generate formulae for how extension *services* should be designed and managed. It is now widely accepted that no one actor or agency is best placed to offer the whole range of services, and there is a need for a plurality of extension agencies to support producers and the rural poor by undertaking various extension activities. Many of these agencies may not consider themselves to be 'extension agencies' as such (traders, producer organisations, credit providers, contract farming enterprises), but they clearly can, and should, incorporate extension functions in their work. The organisations best placed to offer extension services will largely be guided by the roles defined for public and private actors and agencies (see Box 1 below). Table 2 sets out some of the principal models of structuring and organising extension, ranging from pure public sector models to pure private, with collaborative and contracting mixes in between. Again, a third dimension could be added to this Table, to set out the options for funding in more detail. Thus in Table 2, funding by the public sector is the dominant mode, with the exception of column 4. Public sector funds can however, be managed in different ways – their use in contracting is mentioned in the Table, but a more radical approach is to put funds in the hands of producers themselves, with the intention of enhancing the accountability and client-orientation of extension agencies to users. Various voucher schemes provide as yet, fully

analysed examples (Swiss Centre for Agricultural Extension and Rural Development, 2000). Important questions here concern the extent to which contracting and vouchers have been effective to date, what preconditions need to be in place for schemes of this kind to function more effectively in the future, and how realistic it is to expect such conditions to be put in place. A fourth dimension could examine various arrangements for decentralisation, such as the division of responsibility between central and local government for managing, and possibly funding, extension.

Table 2 Structure and organisation of extension

	1) 'Pure' Public Sector model	2) Collaborative model	3) Contracting model	4) Private sector models
Planning, management and funding	By public sector	Government and other agencies (producer organisations; service-providing NGOs) jointly responsible for agreeing priorities, modes of operation etc. Funding generally from government	Generally by government (though (b) may be evidence of breakdown in government's capacity to plan and manage)	Include: (a) Commodity-based; (b) Area-based (e.g. for an irrigation scheme); (c) Farmer-to-farmer Private funding is a dominant characteristic
Implementation	By a public service	Agreed division of responsibilities for implementation	(a) Government contracts private organisations and individuals in to implement extension to agreed specifications; (b) Government staff contracted in or part-funded by private agencies	Generally by private (for-profit or non-profit) organisations

Extension history tells us that there are many pitfalls to simplistic notions of the 'transferability' of institutional arrangements. All of this points to the need to consider the 'institutional fixes' that have so often dominated extension thinking, and place them in a more profound analysis of the field level incentives and disincentives for their eventual viability.

1.4 Public and private roles and the crisis of public sector extension services

Agriculture comprises a large number of private economic enterprises. What therefore, is the role of the State in the context of this essentially private industry? Those taking a neoliberal view, generally argue that the State should only intervene in order to correct market failures, or to compensate for them where failure is chronic (see Box 1). In this context, a question that goes to the core of neoliberal approaches, is how far privatisation has fulfilled its promise of allowing private resources to be augmented in those areas where public funding is generally agreed to be justified? From a broader perspective however, governments can also legitimately engage in pro-poor

distributional activities, the aims of which are not directly to promote growth. It is generally (though not universally) recognised that market-driven growth and poverty reduction are broadly correlated. Thus, higher growth is often associated with a reduction in poverty. This is particularly the case in countries with low levels of inequality, which have some prospect of meeting poverty targets by 2015. The situation is far from clear in those countries where there is greater inequality (particularly in sub-Saharan Africa) where states may need to have a greater focus on distributional policies.

Box 1 Features of market failure

The characteristics of market failure include:

- Public goods, from which private suppliers cannot appropriate benefits. In a pure market situation, goods or services of this type would therefore be undersupplied. Public goods typically include training and advice on subsistence crops, and on soil and water conservation. What constitutes a public good in some settings may not be in others. For instance, the products of research geared towards small farmers may be patentable in some countries but not in others;
- Externalities, which have positive or negative impacts not encompassed in the monetary cost of the activity. Of major concern are external impacts on the environment attributable to poor soil and water conservation, deforestation and so on. To ‘internalise’ the full cost of these effects would reduce the activities concerned to socially desirable levels;
- Indivisibilities and increasing returns, which create barriers to the entry of new companies, and contribute to monopoly supply of services. These are typically found in the provision of large-scale infrastructure such as irrigation reservoirs, and are as such less relevant for extension;
- High levels of risk associated with particular activities, which is not adequately covered by insurance provision. Typically, high risk may discourage smallholders from producing higher-value crops, or from keeping large units of livestock, such as cows;
- Inadequate amounts of information on which to base rational economic decisions.

Pro-poor distributional policies include: the provision of safety nets for those temporarily or permanently unable to engage adequately in economic activity; a reduction in the vulnerability of those whose only livelihood options carry a high risk of unacceptable deprivation; a strengthening of the ‘voice’ of the poor in determining their own futures, through for instance, the creation of local-level resource user-groups, of farmers’ associations, and so on; and measures to promote access by the poor to a range of assets, markets and services, within and beyond agriculture. There is a growing view that to adopt a purely neoliberal stance undervalues these functions and may be driven by political motives of “busting the State” (Girishankar, 2000). In this context it is useful to bear in mind that the notion of public goods requiring action by the State, is a social and political construct rather than an economic one based purely on notions of market failure.

Public extension services face financial crisis in many countries. In sub-Saharan Africa vacancies have been left unfilled and operating budgets approach zero, as donors’ interest has swung away from extension in particular, and agriculture in general. In Latin America large parts of what were formerly regarded as public extension services, have now been privatised. In South Asia, extension services are generally less donor-dependent but face chronic problems of weak management, unfilled vacancies and formulaic approaches.

Neoliberal philosophy has been in part responsible for the ‘rolling back’ of the State and for promoting alternatives ranging through cost-recovery, and collaborative and contractual approaches to the full privatisation of extension. One feature of these reforms has been the attempt to approach extension provision from the demand side, strengthening producers’ capacity to draw on service agencies through, for example, voucher schemes. Whilst potentially promising, experience with

such schemes has been mixed. The limited capacity to respond to the problems of small farmers and diversified livelihoods has prompted the sale of such vouchers to larger farmers.

1.5 Extension in the policy frame

In many senses, public sector support for extension is little more than a mechanism for implementing certain aspects of agricultural policy. Nor does agricultural policy stand in isolation: at higher levels it is mediated by food, health and safety, environmental, foreign trade and other policies. For this reason, no matter how well-organised or well-resourced extension may be, the type of impact it achieves will depend on the broad direction of policy. This will require conscious policy decisions if pro-poor impacts are to be achieved, and outcomes against the interests of the poor are to be avoided. Thus, for instance, the poverty ameliorating impact of the Green Revolution in South Asia was diminished by the decision to subsidise labour-displacing mechanisation in response to claims by medium/large-scale producers that it was becoming increasingly difficult to manage large gangs of labour.

Important questions that recur throughout the study relate to:

- The types of agricultural and rural development policy that promote, or inhibit, pro-poor outcomes of extension and positive livelihood outcomes for the poor, bearing in mind that for some, these outcomes may require 'good exits' from agriculture;
- The types of policy change necessary to ensure that producers and consumers can take advantage of the positive opportunities offered by globalisation, whilst minimising its potentially negative effects;
- The types of policy necessary to ensure that changes in global conditions do not have excessively uneven effects – whether positive or negative – across different types and scales of production systems, or across different regions within a country;
- The types of policy that create local level incentives for extension services and the financial, regulatory and other institutions with which they interact to support the livelihoods of the poor. Questions of how national and provincial government can best work together to generate future options that are coherent, viable and equitable, become increasingly urgent as donor pressures towards decentralisation grow.

2. Broader trajectories

This section explores some of the broader trajectories that are shaping the issues related to poverty, vulnerability and extension, and include:

1. The agriculture and natural resources context
2. Likely impacts of globalisation
3. Vulnerability
4. Systemic collapse and HIV/AIDS
5. Privatisation and changing organisational roles
6. Democratisation and decentralisation
7. Adopting sector-wide approaches (SWAps)

2.1 The agriculture and natural resources context

For the purposes of this paper agriculture is broadly defined. At its core, lie the activities associated with the land-based production of annual or perennial crops and livestock. But, according to circumstances, these are also linked to other activities in five distinct ways:

- Those relating directly to the *production system*, including: linkages between crops and livestock, trees and water-based activities. There are important and well-known biomass flows across these. For instance, livestock provide draught power and manure in arable farming and feed directly on cultivated fodders or on crop by-products (stover; bran; bagasse; etc). Irrigated areas themselves may be combined with fish culture. Trees can provide crops in their own right, but also green manure, firewood for crop processing and necessary shade or support for some crops. These relations are institutionally more complex where divergent interests among local producers' privately owned resources (farmland; livestock) interface with each other, and with resources either managed communally or without any identifiable type of management regime (i.e. 'open access').
- Those relating agriculture to its *environmental context*. These are conventionally thought of as the externalities of agricultural production or processing, such as the agrochemical pollution of soil and water, or the salinity problems associated with inappropriate or poorly managed irrigation. But many environmental effects are less direct, such as the atmospheric pollution associated with the clearing and burning of vegetation for new areas of agriculture and the loss of carbon conversion capacity that this might imply. The loss of biodiversity, either within crop species as a small number of new varieties become dominant; between cultivated species as some of the more traditional foods (e.g. teff, fonio, quinoa) are replaced by a narrower range of 'modern' ones (particularly rice, wheat, and maize); or between cultivated and non-cultivated species (as forest is burnt to make way for agriculture), is also an important environmental effect. Nor is the effect one-way. Agriculture itself can be affected by pollution from industrial areas (e.g. by heavy metals) or from urban domestic waste (as when untreated or semi-treated wastewater is used to irrigate vegetables) (Conway and Pretty, 1991).
- Those involving *horizontal links* between agriculture and related aspects of natural resource management. The types of agricultural system outlined above generally have horizontal characteristics, but more widely, agriculture is linked in with natural resource management in numerous ways, including watershed-scale rehabilitation; reclamation of saline and former mining areas; dune stabilisation and management of forest re-growth. Aspects of agriculture (especially input supply and marketing) also have strong horizontal links with urban areas. More

widely, the performance of agriculture is closely linked with other sectors within the broader rural economy, including transport and communications infrastructure; health; education and so on.

- Those involving *vertical links*. These are well-known and include links with input supplies (seed, agrochemicals, labour, equipment, credit) and with processors and markets.
- Those involving *wider spatial links*. Many of the above have spatial dimensions, and these become particularly important where they coincide with different levels of political and administrative responsibility. For instance, the allocation of water resources between agriculture and industrial or domestic purposes increasingly requires decisions at national level; some environmental questions (such as conversion of carbon-trade payments into incentives for farmers to preserve existing forest or cultivate plantations) can only be handled by combinations of action at national and international levels; some questions of natural resource management (especially those involving large river basins) can only adequately be addressed on a regional (i.e. multi-country) basis, and the regional level may be the most appropriate at which to address certain aspects of marketing and of agricultural technology generation and testing.

In this paper we address the core aspects of agriculture, but also the major components of its linkages in the five dimensions above.

Policy interventions have to be guided by a clear understanding of who owns the resource and what arrangements govern its use. For instance, agricultural land, rangeland, forest and water may be *owned* by the State, by tribal authorities, by some other collective or privately by individuals. But, a range of formal or informal arrangements may permit private *use* of resources held in common or by the State, and impose corresponding responsibilities for their upkeep.

Recent debate has focused both on ownership (especially of land) and on usufruct arrangements (for all types of resource). After some success in contexts dominated by major political change (e.g. Taiwan and South Korea four decades ago), major land re-distribution following the imposition of ceilings for individual ownership has had mixed results in Latin America and South Asia, where vested interests have militated against reform, both openly and through an array of strategies for evasion. Current debates on reform of land ownership and access rights centre on sub-Saharan (especially southern) Africa, and policies being promoted include those for: recognition of traditional rights; change in inheritance and transaction laws (e.g. to allow inheritance by women); and local-level resolution of disputes. Of central importance in southern Africa, is the need for agreement on the peaceful and equitable re-distribution of land appropriated under colonial regimes (Adams, 1995; Adams et al., 1999; Alden Wily, 2000; Toulmin and Quan, 2000). In other countries that have undergone major ideological and regime shifts (e.g. the former Soviet block, Nicaragua, Palestine/Israel), sorting out land titles between former and current owners is a major task. In indigenous communities there are many unanswered questions regarding how to intermesh traditional and even new demands for communal rights with national legal systems based in individual ownership. In South Asia, the computerisation of land records and accompanying improvements in rights to access these records are being considered in an effort to enhance people's capacity to assert and defend their rights.

Many of the same general themes recur in respect of other types of resource, where more specific issues also arise. In the case of rangeland for instance, it has been argued persuasively that policies of privatisation accompanied by fencing are incompatible with the capacity to move livestock over long distances in response to rainfall patterns, and may be ecologically detrimental (Behnke et al., 1995). In forestry, important debates surround local people's rights of access to timber and non-timber forest products where the resource is predominantly owned by the State, and the division of rights and

responsibilities between people and state where the State's capacity to 'police' the resource is weak, and the cost of demarcating and fencing individual plots prohibitively high (Hobley and Shah, 1996). In the case of water, there are major debates over how the resource can be allocated efficiently and equitably among competing demands: pricing the resource may meet efficiency criteria, but is at odds with views which see people's access to water as a basic human right (Winpenny, 1994; Turrall, 1998).

The design and effectiveness of policy measures depends largely on how rights and responsibilities relating to the resource – especially rights of access – are organised. The breakdown in many areas of traditional institutions (often as a consequence of population pressure) has allowed many previously managed common pool resources to degenerate into open access in which individuals draw on the resource without regard to sustainability, often with substantial negative externalities. The primary challenge for governments here is to promote collective action to manage the resource, and there are examples of success from micro-watershed, forest and water resource rehabilitation in some areas. But two sets of constraints remain powerful: one is that where law and order are weak, or where populations are migratory (as in pastoralism), then it is clear that the preconditions for joint action are weak; the second, is that as the resource becomes more productive, local elites become more interested in it and tend to take it over.

Agriculture sector policies, some of them with implications for extension, include:

- Support for appropriate technical change, capable of increasing the returns to labour in small-farm agriculture in difficult areas;
- Support for links between poor farmers and public and private agricultural services, including inputs such as micro-finance and micro-enterprise relating to wider livelihood options;
- Support to resource user groups to assist in the equitable and sustainable management of common resources;
- Support to groups to increase the capacity of the poor to voice their needs in relation to the creation of locally relevant future options in agriculture and natural resource management.

2.2 Likely impacts of globalisation

In general terms, globalisation refers to the growing interdependence of the world's economies, and comprises:

- Substantial increases in capital movements, average daily foreign exchange transactions having increased from \$15bn in 1973 to \$1.2 trillion in 1995, and international capital movements now exceed trade flows by a factor of sixty (Sutherland, 1998);
- Rapid growth in world trade with a likely doubling in trade every 12 years. Low elasticities of demand for primary goods mean that agriculture's share in total world trade has been falling, but even here, agricultural exports have grown at twice the pace of world agricultural output (WTO, 1999);
- Internationalisation of production through the growth of multinational corporations, the prospects of more rapid spread of new technologies such as genetically modified organisms providing both threats and opportunities to the rural poor (see section 3);
- The declining relative costs of international transport;
- The rapid spread and declining costs of telecommunications and information flow associated with the information technology revolution.

Not all market factors have been liberalised however. In the case of labour for instance, largely because of immigration policies only some 2.3 per cent of the world's population lives outside its country of birth (World Bank, 1999). Further, it is only private capital movements that have been

internationalised. Public capital, in the form of development assistance, has declined by 0.7 per cent per annum in 1988-97 in real terms (UN, 1999), with aid to agriculture falling by almost 50 per cent in real terms in 1986-96 (Pinstrup-Andersen and Cohen, 1998). Finally, there has been limited progress in specifically agricultural liberalisation.

Biotechnology is a particularly important example of globalisation in the present context. It can be defined as “any technique that uses a living organism or substances from those organisms to make or modify a product, improve plants or animals, or develop micro-organisms for specific uses” (Persley and Lantin, 2000).

The principal uses of biotechnology products and processes are in the health sector, with an annual market of some US\$13bn. In agriculture, some 40M ha of transgenic plant varieties were sown in 1999 creating a market for biotechnology products of some US\$1.6bn. Over 80 per cent of R&D in agricultural biotechnology is in the hands of commercial companies, and is clearly focused to major commercial markets.

Three types of biotechnology have agricultural applications³:

- (i) Diagnostics, in which applications of molecular biology identify the presence of a particular gene;
- (ii) Tissue culture, which allows (for instance) the production of disease and pest-free planting material of known characteristics for crops that are not normally reproduced by seed; and
- (iii) Genetic modification, which involves the precise identification of a gene with a useful function (such as disease resistance), its cloning and insertion into the target variety, and ultimately the large-scale reproduction of that variety. The cloned gene may come from the same or entirely different species.

The first two of these applications are uncontroversial and in many ways, simply help to make existing approaches to plant breeding more efficient. They are difficult and expensive however, and public sector research services in most developing countries are unlikely to be able to access them directly.⁴ Some applications of the third raise health and biodiversity concerns, which can only be met by new types of regulation.

Other concerns include the legal measures taken to prevent the retention by farmers of seed from patented crops, though this is likely to be difficult to enforce. A second is the search for and patenting of indigenous varieties by commercial companies, which might then be sold back to their countries of origin – the attempt to patent basmati rice being one of the most notorious. A third is that a plant variety protection system must be in place to safeguard the exchange and utilisation of public germplasm. A fourth is that small-scale farmers operating mixed farming systems in remote locations are likely to represent an unattractive market for commercial companies, so that the gap between better-off and poor and between favoured and less-favoured areas, is likely to widen further as the poor fail to gain from the new technology.

Trade theory predicts that since developing countries have a relative abundance of unskilled labour, freer trade should increase demand for exports embodying large inputs of unskilled labour, thus increasing employment, raising wages and reducing poverty. In a comprehensive effort to assess the current and likely impact of globalisation on the rural poor, especially on those relying principally on agriculture, Killick (2000) concludes that increased world demand appears to be most buoyant for

³ This section draws heavily on Tripp (2000).

⁴ Access to them via centres under the Consultative Group for International Agricultural Research may therefore be particularly important.

products embodying skilled labour and relatively advanced technology. Globalisation is likely to have little positive impact, and possibly a number of negative ones.

He attributes this to five sets of factors:

- Extensive continued protectionism in OECD countries, which has severely limited the amount of agricultural trade liberalisation that has occurred;
- Limited liberalisation within developing countries, with the persistence of anti-agricultural biases (Schiff and Valdes, 1998);
- Biases in technical progress in favour of capital- and skill-intensity, and towards commodities which do not easily lend themselves to production by small farmers in remote areas;
- A wide range of factors (many associated with market failure) preventing the rural poor from responding as well as they might to emerging market opportunities, including scarce market information, poor infrastructure, weak institutions and inadequate access to assets such as education, land, water and finance;
- The high proportion of rural population, especially in Africa, who find it difficult to be economically active, including the handicapped, the aged, orphans, refugees, and female- and child-headed households. In many settings this is accompanied by the weakness of modern safety nets and the erosion of traditional ones.

Killick (2000) concludes that in many developing countries, the welfare of those involved in agriculture will be increasingly dependent on the sale of their labour and also determined by the efficiency of labour markets, increasingly linked with the wider development of the economy and of the growth of non-farm employment opportunities in rural areas.

Kydd et al. (2000) broadly concur with Killick's analysis, but add two further areas of difficulty of particular relevance for extension:

- The fact that new GM technology is spreading more rapidly because of globalisation, but has attributes that make it easier for those with adequate skills and access to markets to acquire it. The capacity of GM technology quickly to 'flood' markets means that the disadvantages of late adoption are accentuated, and so there will be increased returns to any effort by extension which narrows the gap between early and late adopters.
- Access to knowledge, credit and markets are becoming more crucial as globalisation gathers pace. This gives particular advantage to (usually) larger farms located in favoured areas, making outdated some of the conventional wisdom concerning the superior efficiency of small farms and, again, raising the returns that can be achieved when extension and other services are provided to small farms.

Drawing on Kydd et al. (2000), a number of policy responses can be identified:

- Where access to productive resources can be made reasonably equitable, broad-based growth has been shown to contribute strongly to poverty reduction. In these contexts, the priority is to gear policies to growth;
- Institutional environments are often weak, with unpredictable policy environments characterised by rent-seeking and lack of protection for private investors. These weaknesses have to be addressed;
- The role of the State in agricultural marketing has been 'rolled back' too far: the private sector has not responded adequately, especially in sub-Saharan Africa. Improved market access by small farmers is crucial if they are to have any prospect of sharing the benefits of globalisation. This requires new institutional arrangements, including for instance, farmer-trader relations and non-competitive structures in which the State acquires a more active role, without return to the old inefficiencies;

- The improvement of market access also requires massive investment in rural infrastructure;
- The introduction by some developing countries of a modest level of protection on their agriculture, to raise the incentives to increase production in their own hinterlands.

Overall, policy will have to provide some support for small-scale farming, but without inhibiting larger farmers' ability to compete in international markets. The employment creation capacity of larger-scale farming needs to be enhanced, and, where small-scale farming is becoming relatively inefficient, it may be supported for some time on a 'holding' operation until the poor can find new livelihoods. Or, where people are leaving the land, policy must ensure that there are minimal impediments to farm mergers, which may have positive productivity and environmental effects.

Agriculture sector policies, some of them with implications for extension, need to:

- Support further reduction of anti-agriculture biases in fiscal and other policies;
- Support national policies designed to reduce the large-farm bias, which *de facto*, appears likely to result from globalisation. These would include policies to enhance communications and transport infrastructure, technology provision, skills acquisition and the availability of finance for lower income farmers in more difficult areas;
- Support the identification and implementation of new roles for the State: without a return to former kinds of state monopoly, it is clear that in many settings private competitive markets have not resulted from economic reform programmes in the ways intended. The State may for instance, be able to promote new types of arrangements for collaborative advisory services, input supply, marketing and finance between farmers and traders;
- Promote links between small and large producers through, for instance, contract farming or outgrower schemes;
- Engage with supply chains to ensure smallholder-friendly quality assurance for high-value exports of smallholder origin;
- Promote producer organisations for greater efficiency in marketing, but also for their capacity to engage in policy advocacy and bargain over the 'rules of the game';
- Improve access to market information by smallholders, including via innovative promotion of information technology, such as the use of cell phones and the internet where appropriate.

2.3 Vulnerability

As outlined in the introduction, extension directed at the poor can be justified on interrelated grounds. Extension agents can provide poor people with the information and institutional support (including links with other services such as micro-finance) that they need to increase their wealth and well-being, and thereby 'escape' from poverty. It can also help the poor to mitigate risks to their livelihoods and thereby provide a higher degree of stability. This involves reducing vulnerability, rather than accumulating assets. This too can be described as an escape from poverty, in the sense that poverty can be equated with insecurity as well as material deprivation.

Asset accumulation has traditionally dominated most development efforts directed at poverty alleviation, and extension support is no exception. Risk aversion, implying the desire to reduce vulnerability rather than accumulate wealth, has traditionally been perceived of as a central 'problem' for those doing extension rather than an objective to be supported. When the perspectives of poor people themselves are analysed however, it appears that vulnerability reduction is frequently given priority over asset accumulation. Micro-finance programmes that have been established with the aim of asset accumulation, have increasingly been found to be used by the poor as a source of capital to deal with livelihood shocks, i.e. as *de facto* insurance policies (Matin et al.,

1999). Fear of destitution and alleviating suffering may often be more immediate concerns than getting rich.

The changing world economy is contributing to a change in the nature of these fears. Livelihood shocks are becoming more common from natural disasters, conflict and market turbulence. Economic problems in urban areas have an increasing impact on rural people, who have become more dependent on markets, part-time employment and remittances from relatives in towns. Greater interdependence has increased the transmission of economic shocks and conflicts across borders. Capital can move to avoid such shocks, but the poor are far less mobile, and therefore far more vulnerable. Coping strategies have been weakened. Commercialisation has meant that help from wealthy neighbours is less forthcoming and horizontal ties are subject to covariate risk, implying that when need is greatest it is unlikely that other poor people will have the capacity to help (Devereux, 2000).

Whereas in the past a low-risk strategy was often synonymous with a cautious approach to new technologies and products (and thus a *problem* for extension premised on the transfer of technology), poor people are increasingly struggling to reduce their vulnerability by diversifying their livelihoods within, and beyond, agriculture (Berdegué et al., 2000; Bryceson, 2000). By keeping eggs in several baskets, poor people are able to take advantage of emerging opportunities and minimise losses from weak markets. When most poor people no longer have the opportunity to meet their subsistence needs by their own crop production, diversification is increasingly attractive as a risk mitigation strategy. It has been noted however, that these risk mitigation strategies are themselves often risky, due to capital demands and high levels of uncertainty (Bryceson, 2000).

Furthermore, the line between asset accumulation and vulnerability reduction strategies is constantly shifting and is closely related to the availability of services. If poor farmers lack confidence in access to information, credit and marketing services, they will naturally adopt a more risk-averse production strategy. Decentralisation and the existence of democratic and responsive governmental institutions at local levels may create a sense of greater security. On the other hand, if decentralisation and the outsourcing of public services results in chaotic and uncertain relations between service agencies and the poor, the reverse may occur.

It is increasingly clear that traditional public sector extension services can only provide a limited portion of the information that households need. An array of new and old institutions is effectively (or ineffectively) being drawn in to fill the gaps. New options for the poor may be opened through access to a micro-finance institution to mobilise capital for small-scale livestock, or through a producer organisation arranging group or area-based forms of organic certification. To reduce the risk of new capital-demanding or market-oriented strategies, a producer needs to assemble a package of information on new production techniques to meet strict market demands and must simultaneously consider financial and biological risks. It is increasingly likely that the farmer looks to pull down such information services directly from those providing credit, regulatory or veterinary services, rather than calling on a generalist extension agent. It is uncertain though, whether these erstwhile extension providers have the capacity to provide such support. A new look at institutional collaboration and configurations is warranted. For example, credit institutions would seem to have the potential to find common concerns and synergy with some form of extension support, since they are also very concerned with risk.

For many households, accessing (semi-) skilled labour opportunities (through education) on larger farms may be a more reliable development strategy than investing in their own plot of land. For many, migration or access to food for work and other public works schemes has become part of their 'sustainable livelihoods'. Strategies that were once seen as symptoms of the problem, are now

being recognised (at least by poor people themselves) as part of the solution. Reducing vulnerability means making the best of the options available.

Diversification of institutional networks is an important component of diversifying production strategies. Questions exist however, as to how well the poor can pursue such a networking strategy. Power relations, geographic isolation and lack of knowledge, all serve to institutionally exclude the poor. Producer organisations and other forms of user groups have been promoted as a solution, but evidence has shown them not to be a panacea, being also subject to domination by powerful groups. Producer organisations often primarily serve more accessible areas that have good market access.

The changing nature of links between urban and rural areas is affecting vulnerabilities in different respects that are of relevance for extension strategies and priorities (Satterthwaite, 2000):

- Vulnerability is being reduced for those near urban areas due to increased possibilities for diversification, commercial horticulture and livestock production and alternative employment;
- Vulnerability to traditionally urban hazards (pollution, crime etc.) is seeping into rural areas, as is vulnerability to turbulence in the urban economy;
- The traditional vulnerability of isolated rural areas is increasing as they are effectively excluded from new economic structures and as many states reduce, or withdraw, the provision of public services in expensive and non-dynamic hinterlands.

Agriculture sector policies, some of them with implications for extension, include:

- Make risk reduction a central objective within policy initiatives, with asset accumulation no longer being the sole *de facto* focus of poverty reduction strategies;
- Integrate awareness, concern and preparedness for shocks to livelihoods (from natural disasters, conflict and economic turbulence) as inevitable and “normal” aspects of the development process;
- Revise the focus of micro-finance to explicitly target increased security through diversification of household livelihoods;
- Look for better synchrony between support to short-term survival (migration, relief aid, public works etc.) and long-term development efforts.

2.4 Systemic collapse and HIV/AIDS

In many areas of the world development is no longer on the agenda. A combination of ecological, agricultural and social systemic collapse has meant that disasters are no longer temporary disturbances in the grand march of development, but are instead indicators that ‘durable disorder’ is taking hold. Some of these are in arid hinterlands, where conflict has been endemic for centuries. Other places were until recently productive zones, where inappropriate agricultural systems (Tajikistan) or armed conflict (Central Africa) have pushed back government authority, allowing ‘uncivil’ society to fill the vacuum. The poor inhabitants of these places have reacted in various ways. Some have adapted cropping patterns to minimise risk (e.g. Sierra Leone – Richards, 1996), many others have joined the drug economy (e.g. Afghanistan – Goodhand, 2000). Smuggling networks, such as in the Balkans, often define the parameters for the new rural economies. Globalisation’s capacity to link local production to global markets has created lucrative opportunities for investments in areas outside formal or legitimate state control (Duffield, 1998).

All this creates enormous challenges with uncertain outcomes for those hoping to contribute to reconstruction. The implicit assumption that support to agricultural rehabilitation should be about helping people to simply return to the livelihoods they pursued before the crisis has given way to an

increasingly acknowledged uncertainty about *what* it is that should be re-built. As conflicts drag on for decades in many parts of Africa, and as entire production systems collapse as in parts of the former Soviet Union, the poor are no longer farmers simply waiting in refugee camps to return to their farms. Many have little direct experience of smallholder production, having adopted livelihoods as soldiers, refugees, labourers and slum dwellers. Re-establishing rural livelihoods is not just a matter of going home. The *need* for extension when people return to rural areas is enormous. The capacity to mobilise institutions to meet these challenges, whether public or private, is usually extremely limited.

Even in 'post'- conflict situations, the homes that people are returning to are often scarcely served by government authority. Government capacity to provide minimal basic services is directed to higher priority areas, and civil servants refuse to work in the insecure and forgotten hinterlands. A brain drain draws the commercially ambitious and well-educated to more dynamic areas. One exception is the magnetic attraction of hinterlands to those who wish to take advantage of the absence of formal authority. The corrupt and criminal forces that tend to fill such vacuums in authority are unlike the warlords of old. They are often transnationally connected and have learned to manipulate both humanitarian and development initiatives. This creates special dangers in promoting extension, as the desire to rush in and strengthen the capacity of local institutions may be at odds with the need to be extremely careful in choosing which institutions to strengthen.

HIV/AIDS is a feature of systemic crisis of critical importance for development in general. It is not a health issue alone. The agricultural sector is particularly affected. In some of the more heavily affected countries there have been dramatic shifts in the demography of the population. HIV/AIDS exacerbates existing problems such as labour bottlenecks and problems of rural women, especially female-headed farm households arising from a gendered division of labour and land rights (du Guerny, 1999). In some areas, the combined impact has reached crisis proportions. Agricultural development and food security are key areas that need to be monitored with reference to the impact of HIV/AIDS, together with the response of rural populations to the pandemic at national and international levels.

The HIV/AIDS epidemic is of concern for rural policy, though some countries have higher rates of infection in urban areas. Zambia has a prevalence rate of 33 per cent among women in urban areas compared to 13.2 per cent in rural areas. The rate is much closer in other countries (such as South Africa) and a key factor is the amount of movement and interchange between urban and rural areas. One hypothesis is that successful rural development facilitates the spread of HIV/AIDS and rural policy must incorporate safeguards to minimise this. The agencies UNAIDS and UNDP are supporting a project by the FAO to study the impact of HIV/AIDS on agricultural extension, and to assess the validity of existing agricultural extension policies. UNAIDS also provides funds to public agricultural administrations to incorporate HIV/AIDS awareness into extension programmes.

The impact of HIV/AIDS on economic growth is such, that per capita income growth is reduced by 0.5–0.75 per cent per year in countries with adult prevalence rates of 10–13 per cent (World Bank, 1997). The reliance on labour intensive agricultural production in many poorer economies makes the HIV/AIDS pandemic particularly important. In West Africa, there is evidence to suggest reduced cultivation caused by HIV/AIDS of cash crops or food products, including market gardening in Burkina Faso and cotton, coffee and cocoa plantations in Côte d'Ivoire. A study in one Tanzanian district suggests that the time spent on farming has shifted radically because of AIDS. Women with sick husbands spend 60 per cent less time on agricultural activities than is the norm. In rural areas, the impact is greatest when the primary income earner dies, or through the cost of looking after relatives who return to the village and are no longer able to send remittances from urban employment.

Though information is scant at present, it seems that the impact varies in different farming systems given their variation in labour requirements of crop and livestock enterprises and seasons (USAID, 1996; UNAIDS, 2000). Small-scale crop production relies on family labour, and a number of other household activities such as food processing and home maintenance can be significantly affected by the loss of family members. Hiring labour has been a common response. But survival strategies of the poorest households, such as the sale of assets and use of any savings, make them particularly vulnerable following the death of a household member. A response has been to shift towards livelihood systems that incorporate less labour demanding crops and enterprises. HIV/AIDS therefore, can have more significant consequences for the poorest households who are least able to cope with illness and death. Children are amongst the worst affected as many are orphaned or have to leave school to look after sick relatives. The changing demographics, with a greater proportion of the elderly and the young, are clearly a challenge to extension agencies who must consequently reconsider their approaches.

Agencies offering agricultural extension are also feeling the impact of HIV/AIDS among staff. Professionals in many of the most heavily affected countries are among those who have the most unsafe sexual behaviour. The effects are felt in reduced productivity, both among those infected and those taking the time to attend the funerals of colleagues and family members. There is also a loss in staff morale and increased costs in terms of employee benefits and replacements. Furthermore, there has often been high investment in human resource development within extension organisations through staff education and training. Indeed, it has been suggested on occasion that the risk of investing in human capacity building has increased significantly with the HIV/AIDS epidemic and that such strategies must be questioned accordingly.

Agriculture sector policies, some of them with implications for extension, include:

- Whilst systemic collapse has severely weakened the capacity of many nations to define and put into place agriculture sector policies, the need to define policies that address these realities is pressing;
- The social and security costs of abandoning marginal areas to warlords and other forms of ‘uncivil’ society must be taken into account and included in national priorities, even if this implies subsidisation of agricultural services;
- Post-conflict agricultural rehabilitation must take into account the weak capacity of state, private sector and civil society actors to fill gaps in service provision;
- Nonetheless, the critical importance of re-establishing agricultural services in post-conflict areas should be acknowledged in order to restore livelihoods and avert a return to violent conflict or chronic insecurity;
- Planning should take into account the chronic vulnerability of certain regions (many arid and semi-arid areas) and sectors of the population (including households affected by HIV/AIDS) and not assume that such problems are of a temporary nature;
- HIV/AIDS is a factor that must be dealt with both for its implications for extension priorities and for designing appropriate and realistic organisational strategies within devastated service institutions.

2.5 Privatisation and changing organisational roles

After Independence, most poorer countries followed ‘statist’ models of technical change in agriculture and natural resource management, with the public sector dominating or monopolising the supply of inputs, credit, research, extension and marketing systems. This led to the creation of large, hierarchically structured public administrations, staffed with permanent employees fulfilling various roles and functions that were thought to maintain a broad impact and equity in the treatment

of clients. However, since the early 1980s financial crises and a common feeling that these public administrations were too inflexible and unresponsive, bearing high costs with insufficient benefits, led to a fundamental re-thinking of the role of government, along with those of other actors and agencies.

Much of the discourse for reform has been underpinned by welfare economics that helps define whether 'nature of the good' is more public or more private. The neoliberal project suggests a 'rational' allocation of goods and services among sectors will achieve goals of greater efficiency, improved effectiveness and enhanced accountability. Such analysis has been used to demonstrate that many of the functions related to technical change in agriculture being undertaken by the State were essentially private in nature and were, therefore, better offered by the private sector. The drive towards privatisation has become an almost inevitable development strategy, both by transferring some services into private ownership and by internalising private sector principles in public administration, i.e. new public management (NPM).

'Rolling back the State' was therefore placed firmly on the agenda for international financial institutions (IFIs) and donors in their interactions with governments, though this has often been less the case for governments and public administrations themselves. Where significant inertia has been experienced in reform processes, the 'rationalising' discourse has had a more political content aimed at almost 'busting the State' as a first step to facilitating a market-oriented 'phoenix' of a state emerging from the ashes.

It is principally in the areas of service provision that IFIs, and in response governments, have been promoting privatisation. In its full sense, privatisation involves the sale of former state enterprises (e.g. in input supply, marketing and processing) to private sector organisations. But also widespread is the introduction of private sector practices within publicly run operations, such as charging for services in order to achieve a degree of cost-recovery. Efficient market performance is premised for instance, on adequate competition among enterprises, adequate access to information, and known risks.

Clearly, many of these conditions do not hold in many parts of developing countries: reviews of economic reform programmes (ERPs) indicate that whilst some of these conditions might hold in favoured areas close to urban centres, they do not elsewhere. The result has been that the majority of rural populations are subject to high degrees of private monopoly, or (once the State has withdrawn) no service at all. The supply of improved inputs (seed of modern varieties; agrochemicals; machinery) to remote areas has been particularly hard hit, as has the provision of marketing and processing services, and of credit tied to the marketing of produce.

Within reformist agendas, two linked roles are defined for the State: one is to take measures to correct market failures, the other is to provide (or commission the provision of) goods and services where market failure is persistent. As the introduction emphasises, governments can also legitimately engage in pro-poor distributional activities as an attribute of social policy, i.e. without necessarily having the immediate aim of promoting growth. To re-cap, in relation to agriculture such policies may include: the provision of safety nets for those temporarily or permanently unable to engage adequately in economic activity; strengthening of the voice of the poor in determining their own futures through, for instance, the creation and support of local-level resource user-groups, of farmers' associations, and so on; and measures to promote access by the poor to a range of assets, markets and services, within and beyond agriculture.

While it is largely accepted that the state can have a role in *providing* extension where there is market failure or distributional objectives, the dominant discourse suggests that this does not necessarily mean that it needs to *deliver* services (see for example, the Common Framework of the

Neuchâtel Group, 1999). Thus the public finance/private delivery dyad is being promoted as a model responding to the poor performance of public services (Kidd et al., 2000).

‘Contracting out’ is one institutional mechanism emerging from the NPM strand of reform that is being presented as a key channel for the public financing of extension in several African countries (e.g. Uganda, Ghana, Tanzania), following the demise of T&V systems (see Table 2). Thus, there would no longer be a public extension service but rather private service agencies bidding for contracts from the public purse. Such initiatives follow in the wake of experiences in Latin America, where the evidence is far from clear or convincing (e.g. Bebbington and Sotomayor, 1998). Clearly, issues of policy transferability arise here (Kidd et al., 2000): do the preconditions for private sector oriented models of public service provision exist in countries other than those where some success has been claimed?

Indeed, present reality is often far more complex than common discourse would seem to acknowledge, and the converse to the public finance/private delivery dyad is often the case. Without operational funds, the public service has underutilised technical expertise which can be made available to a private sector (whether for-profit or not-for-profit) that has recourse to operational funds but may lack in technical expertise (i.e. private finance/public delivery). An example of this is where the project holder is an NGO whose purpose incorporates public good concerns, thereby suggesting a *de facto* privatisation of the *management* of extension, because the funds may be ‘public’ in origin but use extension workers belonging to the public service. Such arrangements – the field reality – are contrary to the assumptions of policy-level discourse, and will pose important operational challenges to the changing roles of various organisations.

There is evidence that public service provision can benefit from a more empirical approach to local institutional arrangements, with a growing number of examples of public-private interaction in the provision of services that go beyond more simplistic notions of the role of different agencies. Potentially, these new configurations are particularly important in the ‘institutional support’ role of extension (Table 1). The use of public-private dyads has been criticised for being too crude and simple (Ostrom et al., 1993). The institutional landscape is becoming much more complex under the driving forces of globalisation and democratisation. Indeed, some of the more interesting examples of service provision point to a “blurring” of the public and the private (e.g. Tendler, 1993). Co-operatives for example, may be a rather mixed form of ‘ownership’, being more producer-owned at grassroots levels and more parastatal at higher levels of geographic or sectoral aggregation.

Producer organisations have taken on greater prominence in the discourse for extension reform and are expected to have an increasingly important role in the provision of services to their members (see Carney, 1996). Many producer organisations seem to provide a balance between the growth potential of a market-orientation, and some distributional objectives associated with collective action, which may be presented as a panacea to both government and market failure. But concerns are also raised as to their social inclusiveness and reach. While producer organisations will be an increasingly important component of the institutional landscape, it cannot be assumed that poorer producers will automatically gain equal access or gains through producer organisations. Furthermore, group formation is often used as part of an extension approach, thereby increasing coverage and reducing transaction costs for addressing common problems faced by producers. However, there is some evidence to suggest that this strategy runs contrary, even blindly against the tide of globalising forces which seem to be contributing to an erosion of social cohesion in many societies, through migration and the monetisation of social relations.

A distinction needs to be made between formally constituted and medium/large-scale producer organisations on the one hand, and less formal organisations which serve very local needs on the other. In developed countries, producer organisations are among the main mediators of technical

change in agriculture: they make demands on public and private sector research services; they facilitate information exchange on new technologies through a range of media (newsletters, broadcasts, fairs, exhibitions etc.); they negotiate with government on health, safety and environmental matters that have implications for technical change; they exercise self-monitoring in respect of commercial and public interest criteria for the farm industry, and they lobby for, or against, technical change. In sum, producer organisations in the North often provide classic examples of the types of roles that civil society should play more generally.

Trends towards the privatisation of research and extension in the North have drawn even more attention to the role of producer organisations, and many have begun to assess the prospects of a greater role for them in technical change in developing countries. Strong producer organisations have indeed sprung up in a number of developing countries, but these tend to be rooted in very specific conditions, of which the commodity base is generally the most important (e.g. cotton in the case of Mali, groundnuts in Senegal and a somewhat broader range of commodities in the cases of Kenya and Zimbabwe). But in a few instances (e.g. Burkina Faso), the growth of producer organisations is systemically rooted in wider patterns of democratisation.

Development interventions have frequently built upon cursory assessments of cases such as these, without consideration of the preconditions for success on which they have relied (nor of the prospects of replicating those preconditions). This has resulted in a very serious tendency for the rhetoric to run ahead of the reality. A more sober assessment of the prospects for producer organisations to support technology change for, and with, small-scale, mixed (and semi-subsistence) farmers (Carney, 1995) argues that:

- Producer organisations play very limited roles in supporting technical change; they are constrained by combinations of: statutory barriers (which may rule out this kind of activity); lack of resources; the complexity of members' needs (especially where small-scale mixed farming is concerned) and poor internal communications; there are also questions over how far they represent low-income farmers;
- Producer organisations are often represented on the governing bodies of research centres, but in reality have little leverage to ensure that their views are heard, even if they were able to formulate a single set of views to cover all members' needs;
- These factors, when combined with the common view within producer organisations that other areas offer quicker returns for less effort (such as lobbying for more favourable price or regulatory environments), means that technical change is given low priority by most.

However, set against this is some positive evidence that, where they have close links with markets, producer organisations are more able to provide (and often draw in) advice on quality control, and on those aspects of production having a bearing on quality control.

In short, producer organisations may have a role under specific conditions (e.g. market-oriented commodity production) to broker technical advice for their members. In this sense, they form part of the plurality of organisations working on extension. However, it is less realistic to expect them to make a substantive contribution to the reduction of poverty or vulnerability; small-scale mixed, semi-subsistence farmers are a highly diverse constituency, potentially making a multiplicity of demands and unlikely to have the funds even to pay for membership. They therefore hold little appeal as potential members. Even where they are members of producer organisations, such organisations are unlikely to command the resources to meet more than a fraction of their diverse demands.

In light of these conclusions, the role of producer organisations *vis-à-vis* extension and poverty must be considered in relation to questions of the impacts on poverty when supporting relatively well-off farmers. Producer organisations are significant actors in agricultural change more generally, and thus cannot be ignored in efforts to strengthen extension for the poor, but should not be assumed to be ready or effective vehicles for either managing extension, or for helping the poor to draw down services.

Agriculture sector policies, some of them with implications for extension, need to:

- Recognise a legitimate role for a broad range of interrelated actors and agencies implementing rural policy and in delivery of extension;
- Promote a pro-poor agenda within new and developing interorganisational relationships;
- Underwrite the engagement of the poor in activities of the private sector from which they would otherwise be excluded, though the notion of triage will come into play here;
- Promote the development of producer organisations, perhaps recognising and supporting the latent potential of social capital that can exist in some transforming contexts (e.g. former primary societies, indigenous production-related organisations);
- Base strategy development on an empirical analysis of the existing organisational landscape and competencies, rather than only on broad-brush generalisations emerging from neoliberal theory.

2.6 Democratisation and decentralisation

Linked to initiatives for privatisation and the changing organisational roles in rural policy and practice, are common trends towards democratisation and decentralisation in many transitional and less developed countries. Through the 1980s and into the 1990s, public sector institutions were increasingly seen as being unnecessarily remote from service users, whereas the growing fashion for decentralisation was regarded as having benefits in terms of proximity, relevance, autonomy, participation, accountability and democracy.

A clear distinction needs to be made between various types of reform of the public administration, among them decentralisation of management, and political reforms, such as the strengthening of local government. Clearly, the two interface: in principle, stronger local government allows pressure from below to be exerted on the public administration, and where they have the necessary funds and mandate, local governments can take on a wide range of planning and service-delivery activities related to agriculture, including for instance, the employment of extension staff. In analytical terms however, they raise different issues and are best treated separately.

Evidence suggests that strengthened local government has considerable promise in: promoting local institutional development; making development initiatives flexible and sustainable; enhancing public sector responsiveness; increasing information flows between people and government; enhancing responsiveness and accountability; providing early warning of disasters and carrying out local-level regulatory functions. It has shown less potential in broadening narrowly yield-oriented interventions; changing policy environments which are adverse to agriculture; assisting women or minorities or addressing problems of complexity or co-ordination (Manor, 1998; Goldman et al., 2000).

As far as public administration is concerned, deconcentration of management cannot be examined in isolation from other processes, including the criteria for performance assessment, how performance is monitored against these criteria, and how it is rewarded.

With few exceptions however, little progress has been made in either decentralising agricultural public administration or in strengthening local democracy. At a general level, the strengthening of local government has also raised fears of social and political fractures in those countries where tribal or ethnic divisions are strong. Many of the paths to decentralisation have been good in theory, but poor in practice. The record tends to be worse in less-favoured or more marginal areas, i.e. where many of the rural poor live. Even where this has been attempted, reliance on central funding often remains high. In most settings, the public sector is characterised by underfunding, conflicting mandates and weak monitoring, which contributes to inefficiency and corruption.

Of course, there is a danger in making sweeping generalisations. The story is clearly complex and often underpinned by strong political discourse in favour of one 'solution' or another. Ostrom et al. (1993) note that there are often more decentralisation claims than facts. As with privatisation, this is another arena where care must be taken to move beyond rhetoric. In aiming to better understand the dynamics of decentralisation, it is commonly understood that the concept cannot fit a centralisation-decentralisation dichotomy or even as a continuum between two poles. Rather, it needs to be located in, and analysed according to, multiple dimensions (see for example, Conyers, 1985; Ostrom et al., 1993). Conyers (1985) highlights five dimensions characteristic of all decentralisation efforts. They are:

- Functions over which authority is transferred;
- The type of authority or power transferred with respect to each function;
- The level(s) or area(s) to which authority is transferred;
- The individual or agency to which authority is transferred at each level; and,
- The legal or administrative means by which authority is transferred.

In practice, the decentralisation strategies are commonly described in terms of political, fiscal and administrative components. However it cannot be assumed that these components will be in harmony, and there are cases in the agriculture sector where political decentralisation may not be met by the necessary fiscal decentralisation. This does not seem to be a problem in, for example, Uganda where the District Councils have the responsibility for both the extension and budgeting of extension (though intergovernmental transfers are necessary, given insufficient local capacity for revenue generation). Problems have emerged in Ghana, where local authorities seem to be undermined by a retained centralised fiscal responsibility.

In terms of agricultural development, what is clear is that local government is unlikely to play a strong role unless it is given the mandate and resources to carry out (or influence) particular functions. In Colombia, both of these conditions apply to the management of agricultural extension by the *municipalidades*. In Uganda, district-level bodies have been given a similar mandate, but very limited resources. In India, local government at district levels and below, have been mandated to organise and fund local-level planning and related service delivery in a total of 17 distinct natural resource spheres, including micro-watershed rehabilitation which attracts central government expenditure of some US\$500M/yr. What is of particular interest is the fact that funds for this approach are channelled direct to local government, and local people's committees have the mandate to authorise (or refuse to authorise) disbursements according to whether work has been carried out in line with the agreed specifications.

A dynamic civil society is commonly regarded as an indispensable component of strategies for democratisation and decentralisation. But in many countries, and particularly in the poorest regions, these organisations remain weak. Formal producer organisations are few in number and rarely represent low-income farmers. With few exceptions (Mozambique, Bangladesh and parts of Latin America) service-providing NGOs are few and far between, and where they do exist, their high dependence on foreign funds may call their local accountability into question. Furthermore,

traditional institutions have long proven able to manage common pool resources such as rangeland, forest and water effectively, but in many areas, rapidly increasing population pressure on these resources has caused their decline and only rarely (e.g. Ostrom et al., 1993) have they been effectively incorporated within the changing patterns of civil society or replaced by new organisations.

Given the diversity in policy, it is clearly difficult to establish unambiguous relationships between the type and extent of decentralisation or democratisation and agricultural development. However, widespread donor support for these trends implicitly argues that such issues need to be addressed on a broader level. It is clearly as important for people to have a strong voice in decisions on development that affect them, as it is for minorities to assert their rights and for democratic systems to demand accountability from their public administration, thereby reducing the scope for corruption. While there has been a groundswell of public demand for local control, the high level of donor promotion of, and support for decentralisation, has compromised 'ownership' of the process in many countries. Line ministries often show symptoms of inertia with regards to decentralisation, with those ministries responsible for extension often arguing that they have been the most decentralised (at least in the sense of deconcentration). There seem to be few examples of centralised ministries making 'good exits' within a decentralised framework.

Certainly decentralised levels often have capacity problems when trying to undertake planning and public service provision. However, caution must be used in going down the capacity building road. Ostrom et al. (1993) note that decentralised capacity is often underutilised, and local planning skills seem to atrophy by being underused. They would argue that one needs first to understand the 'rules of the game' that shapes patterns of interaction amongst various actors and agencies on various levels.

Indeed, Palidano (1999) draws on Tandler (1997) to demonstrate that public action is often a matter of the intertwined actions of centralised and decentralised levels, and questions the predictability of policy choices regarding the effects of decentralisation on public service provision. Simplistic notions of policy transferability (of which there seem to be many related to agricultural extension) must be challenged by lessons in contingency where experimentation and eclecticism are key.

A common challenge is to balance central control and local autonomy. A re-drawing of boundaries between what is best done locally and centrally is important (as, for instance, in the case of agricultural research and training, or poverty reduction strategies), allowing provision for cross-learning among decentralised administrations, and between them and central government. Poverty reduction is becoming an overarching policy objective of government in many poorer countries, and this has implications for interactions between central and local government. There are often concerns for 'elite capture' within decentralised structures and the lack of priority that elected local governments tend to give intangibles such as extension, in contrast to, for example, rural roads, which are a more convenient 'objectively verifiable indicator' in the political arena. Even if public support for extension is a justifiable strategy for poverty reduction, it may not always survive local political processes. It is argued then, that central government can in these instances legitimately act in support of its own policy objectives. Intra-governmental transfers are used to provide local governments with operating funds that they may otherwise not be able to generate. These are particularly important for poorer and more marginalised regions. The instrument of conditional grants (matching or non-matching) can define what funds are to be used for, and set the boundaries within which local autonomy operates.

Despite the difficulties of achieving even modest degrees of strengthened local government or deconcentration of the public administration, there are likely to be substantial returns to increased effort over the medium term. The stakes are especially high in agriculture.

In principle, agriculture-related sector policies, some of them with implications for extension, need to:

- Determine a balance of responsibilities (political, fiscal, administrative) between central and local government that promotes central policy objectives for poverty reduction and safeguards local government embeddedness within the local institutional landscape;
- Promote awareness creation with, and through, local organisations: what quality of service do poor people have the right to expect from service delivery agents? If these are below standard, how can they voice complaints?
- Promote local organisations' capacity to voice quality and safety concerns regarding private service delivery: how can their voice be better heard, and complaints be better upheld? What role can the public sector play in ensuring quality of private training and advisory services (through education, certification of advisors, codes of conduct, target setting, complaint procedures, client assessments)?;
- Promote the capacity of local government to plan and manage change, and to monitor the performance of public and private agencies working as technical change agents;
- Promote the technical and financial capacity of local government to engage with line departments and with local people in planning resource use, identifying technical change trajectories, and monitoring the implementation of change in these directions;
- Promote a capacity at local level to identify pressing environmental issues and create mechanisms for addressing these, consistent with wider poverty objectives. This will provide the context for a strengthening of local resource-users' associations, but it is clear that preventing elite capture of revitalised natural resources will require longer-term mechanisms for ensuring vigilance and political appeal.

2.7 Adopting sector-wide approaches (SWAps)

In the words of a recent review "SWAps are intended to ensure that all public support (government and donor) to a sector is informed by a common vision and strategy, implemented through a common management framework with increasingly effective and accountable institutions, and based around a public expenditure programme. The SWAp vision is based on a view of what is required for improved performance of a particular sector, and will normally go beyond the mandate of a particular government ministry" (Gilling et al., 2000). The criteria proposed by Harold and Associates (1995) are more comprehensive, and maintain that SWAps should be sector-wide in scope, provide a coherent policy framework, put local stakeholders in the driving seat, achieve 'buy-in' by all donors, have common implementation arrangements, and rely on minimal long-term technical assistance. Despite differences in criteria, the near-universal view is that SWAps are a process for implementing an agreed strategy, and for institutionalising an effective and sustainable cycle of policy formulation and implementation.

Conceived in this way, SWAps represent an attempt to go beyond Agricultural Sector Investment Programmes (AgSIPs), which were commonly used as a means of defining the parameters and implementation procedures for World Bank loans. These have been characterised by a failure to make the link between agriculture and other sectors, lack of government ownership, poor linkage between AgSIP procedures and those of government, and over-ambitious donor-driven timetables.

There is still very little experience with fully-fledged SWAps which are consistent with the above criteria, but a review of SIPs of varying vintages across different sectors – 85 per cent of which are in sub-Saharan Africa – (Foster et al., 2000) suggests increased coherence of priorities among donors and between donors and government; some improvement in government implementation capacity; links to a credible medium-term government budget framework; innovative approaches to tackling problems of

low incentives and rent-seeking; increased allocations to operating expenditures, and some improvement in the coverage and quality of service provision. Negative aspects include: limited shifts from donor coordination towards service improvement and poverty reduction; weak monitoring; limited buy-in by civil society organisations and by government, with heavy dependence on a few key individuals; and limited harmonisation of donor procedures. Specifically in relation to agriculture, there is continuing uncertainty over the role of the State and weak engagement with issues outside agriculture (trade, infrastructure, education) that have a key impact on the likely effectiveness of agriculture policies.

General conclusions (from still rather weak evidence) are that government expenditures in the agriculture sector have not yet become more pro-poor. With a continuing emphasis on privatisation, access by poor people to agricultural services has declined in (especially) the more difficult areas, and cross-sectoral issues are not being addressed at local level.

There is a growing view that SWApS are inherently more difficult to achieve in agriculture than in sectors such as health or education, for a number of reasons:

- The high degree of private sector activity and market transactions means that the precise effects of government interventions are difficult to predict;
- Changes in policy can have far reaching effects, especially on those areas where market failure is most severe;
- Especially in rainfed areas, agriculture is complex, risky and heterogeneous, implying a need to draw on local knowledge and to adapt policy to local conditions;
- Rural people's livelihoods are multi-faceted, and agricultural policy has to be designed to take this into account;
- Agriculture is influenced by policies in several other areas. For instance, insensitive management of food imports can negatively affect farm livelihoods.

As argued above, in its comprehensive form a SWAp implies a shift from project to programme and, ultimately, budgetary support. Yet it not clear that all donors are willing to lose their specific association with projects in favour of collective approaches. The same reluctance is evident among many government agriculture ministries – partly because the threat of reduced status if they lose the prestige and distinctiveness of projects; partly because of the potential reduction in rent-seeking opportunities.

Several factors argue in favour of an approach that reflects many of the broad principles of SWApS, but is less ambitious and less prone to failure. This might have three elements:

- Improvement in the financial and personnel management procedures of government departments such as extension, including recognition of the need for innovative ways in which work can either be contracted out by government to private agencies, or contracted 'in' so as to supplement the meagre operational resources generally available to public sector staff and so enhance their productivity;
- Improved interaction between local and central government, with improved stakeholder inclusion at local level to identify the future prospects for agriculture, to identify feasible trajectories of technical change, and to take steps to implement and monitor progress towards these;
- Within this context, identification of the key areas in which agricultural change interfaces with other sectors (infrastructure, health, education) and pressure for closer synergy among these.

2.8 What implications for extension?

This review of background issues and trends has set out a number of powerful arguments:

- Poverty is multi-faceted, attributable not just to lack of income or skills, but to high vulnerability, limited and uncertain access to capital assets, and weak voice. Several aspects of poverty are profoundly structural, and functional responses to poverty (more of this or that input; more relevant advice on this or that technique...) are by themselves inadequate. A sustainable livelihoods framework helps in understanding the complex nature of poverty, and appropriate types of response;
- Extension is one means of delivering a set of agricultural and rural development policies, and that tinkering with the methods and hierarchies of extension is likely to have little impact unless policies themselves are geared to poverty reduction. There is growing confidence that appropriately adapted SWApS can serve as a basis for policy reform;
- Agreement needs to be reached on the *scope* of extension separately from the organisational configurations or methods employed to implement these functions – one aspect hitherto little exploited but which potentially helps to address the structural nature of poverty is institutional strengthening. Depending on the context, this may be enhanced by the provision of (or facilitation of access to) certain kinds of input, especially micro-finance;
- Two issues need careful consideration in relation to institutional strengthening: one is the type of organisation which best lends itself to strengthening the voice of poor people in demanding certain types of technology, but also, importantly, in the planning of agriculture and related activities that increases their income-generating options; reduces the vulnerability in which they operate; makes their access to resources more secure, and reduces the dangers of elite capture of any benefits they have gained. The second concerns the preconditions that have to be in place to allow institutional strengthening of this kind to take place, including an enhanced capacity on the part of (for instance) local government or line departments to hear the voices of the poor and to respond to them;
- The largest single influence on the market prospects faced by the poor is likely to be globalisation. This will increase the pressure to ‘get policy right’ in relation to markets and infrastructure, to provide an appropriate mix of services through extension (e.g. relating to market access, quality control, organic certification), and to ensure adequate interaction between national and local governments and rural people (especially the poor) in setting-out and supporting realistic futures for agriculture in specific localities;
- Moves towards political and administrative decentralisation are likely to enhance the prospects of hearing and responding to the poor, but, in turn, these depend for their own success on a complex set of preconditions;
- The prospects for the development of public services in many areas in the face of systemic collapse and post-conflict domination by warlords and ‘uncivil’ society, imply that outside actors must act cautiously in polarised environments and among less than legitimate institutional actors;
- The costs of subsidised support for public service institutions for poor and isolated areas and target groups must be weighed against the costs of not investing in these areas, and of thereby allowing ‘durable disorder’ to take hold in the form of chronic violence and insecurity.

- Other influences on the wider livelihood prospects of the poor will also be important, HIV/AIDS causing significant shifts in the volume and composition of the labour force available for agriculture and for the provision of agricultural services.

These broad interpretations of the scope of extension in relation to poverty are consistent with recent thinking on the nature and purpose of development itself. Amartya Sen (1999), for instance, has proposed freedom of choice as a basic criterion of development. Increased productivity therefore, is only part of the objective. A more fundamental aspect of development is the ability to participate in the market through ready access to information, freedom of movement and access to the socio-political and institutional infrastructure that underpins the market. When development is described in these terms, extension clearly becomes a central issue. The poor need *choice*, and rural policy can have a pivotal role in facilitating freedom of choice, with extension providing a key support function to help people make better choices and act accordingly.

This in no way implies that access to information is the primary obstacle to poor people's ability to choose their livelihoods. Information is bound together in the structures of capital and power, which relates not only to immediate production decisions but also to wider questions of vulnerability, access to resources, and ability to 'voice' requirements. By placing extension's information role in this context, the clients of extension become more than mere consumers or customers (as in new voucher and contracting schemes), or co-producers (as in farmer-to-farmer approaches), but citizens as well (see Girishankar, 2000). The future of public sector support for extension is more dependent than ever on a capacity to strengthen the institutions of the poor, not only in relation to production, but also more widely in relation to access, vulnerability and voice.

Related to this is the question of how the role of government in relation to extension is best defined. In the Introduction, it was argued that the role of government in development is not only to make good market failures, but also to take on a wider distributional mandate as a form of social policy. This is certainly consistent with the role of extension in strengthening institutional capacity, but it can equally apply to the provision of information, advice and training. In a changing world, access to information is coming to be seen as a basic *social* policy objective (ODI, 2000). Extension can therefore have both economic and social goals, and so be judged on the principles of both economic and social policy. If not, and if extension continues to be judged on purely economic terms, then triage must be discussed more openly. Some states and donors have essentially written off the agricultural livelihoods of many of the poor as being simply non-viable (Bebbington, 1999), the implications of this must be more explicitly acknowledged.

Again, in the Introduction it was argued that a re-consideration of the link between extension and input supply is overdue. The separation of advice from input supply became one of the strongest foundations of the T&V approach. But the livelihoods of the rural poor are complex and have not only production, but also consumption and employment dimensions. They are located in a context of vulnerability, uncertain access to resources, and limited voice. It cannot be assumed that the market will ensure equitable access to physical inputs and financial services. To open options within this context requires not only technical advice, but also institutional strengthening and the provision of services such as micro-finance and insurance. Public sector extension strategies cannot merely ignore these factors as 'somebody else's business'. The role of public extension services should not return to one of assembling packages, but must nonetheless act in cognisance of the problems that poor farmers face in assembling packages themselves. The current neoliberal perception of the appropriate public role in extension is very limited and deserves a re-assessment along these dimensions, not least because of radical changes in the role of rural finance over the past decade.

“Previously we saw the poor as small or marginal (male) farmers needing subsidised agricultural credit. As the ‘micro-finance’ revolution spread, our image changed, and we came to see the poor as (largely female) micro-entrepreneurs with no collateral to pledge but with a business world to conquer with the help of micro-credit. Now a new understanding is emerging: the poor are a diverse group of vulnerable households with complex livelihoods requiring a full set of micro-financial services” (Matin et al., 1999:3).

In practically all countries, the long-term trend is for agriculture to decline in relative importance. Recent evidence suggests that this decline is more rapid than had been thought (Berdegúe et al., 2000; Bryceson, 2000). Non-agricultural options include accessing wage employment (migratory, casual and skilled), and engaging in micro-enterprise, both of which relate to the growing importance of rural-urban linkages in the livelihood strategies of the poor (Satterthwaite, 2000). The support given by extension for new technology has tended to focus only on the productive aspects. Some micro-enterprise has a direct bearing on production, such as input supply or veterinary care, easily allowing a direct interface with extension services. However, and not least because of the influence of globalisation, greater attention to the marketing and processing aspects is now urgently required. In its wider ‘livelihoods support’ role (see Introduction) extension agencies can validly engage in forging the interface between micro-enterprise in these areas and agricultural production, and in enabling the poor to engage in these types of micro-enterprise. Extension services must find a new role as part of overall rural development processes by becoming nested within a sound service context, and not act as if agricultural production can be seen in isolation.

With regards to employment, questions emerge regarding whether working for a wealthier neighbour may be a more appropriate option than investing in a minuscule plot of land. Economies of scale are changing. Whilst extension should continue to strive to increase the relative efficiencies of smallholder production, a two-track approach including support to larger-scale farming may have considerable impact on the livelihoods and well-being of rural households. A fresh look at the equity and viability issues related to employment generation in medium and large-scale production units is warranted. These questions go to the heart of the basic concepts and assumptions of poverty alleviation. The failure of the trickle-down approaches of the 1950s – 1970s is well-documented. But much of the promotion of growth in this period took place in a laissez-faire environment. Knowledge of the preconditions and instruments necessary for ensuring more equitable distribution of the benefits of growth has greatly increased since then.

Poor people are increasingly reliant on wage labour (Devereux, 2000; Berdegúe et al. 2000; Satterthwaite, 2000). Agricultural policy however, is still often disposed to respond to the demands of larger-scale farmers by subsidising labour-displacing mechanisation. Extension is frequently seen as a tool in implementing this policy. Extension’s role must be assessed in relation to overall policies regarding mechanisation and employment generation. At the minimum, a ‘do-no-harm’ perspective may be advisable, whereby labour-displacing technologies should not be subsidised. They are not a public good. More pro-active rural development policies, possibly implemented through extension, can help poor farmers (and especially their daughters and sons) to prepare to meet the increasing demand for skilled labour in agricultural enterprises and thus find a ‘good exit’ from smallholder farming. The development of human capital has been cited as one of the most important factors in securing rural livelihoods (Killick, 2000; Bryceson, 2000). Agricultural education should not be seen in isolation from the broader educational needs of enabling people to pursue a diverse array of agricultural and non-agricultural strategies. The so-called ‘yeoman farmer fallacy’, the belief that equity can, and should be achieved mainly by supporting farmers as producers, has tended to blind development thinking to the diversity of poor people’s livelihoods, and to the options for fostering access to wage- and self-employment.

3. Aspects of agriculture offering scope for pro-poor policies and extension

In order to place extension in a broader framework of agricultural and rural development policy reform, it is necessary to ‘start at both ends’. This report began by reviewing the context and policy issues facing extension. In this section, it continues with a review of how the relationship between these policies and on-the-ground extension priorities may look through the lens of a small selection of production themes, options and strategies. Extension is a field where policy is formed both at the macro-level and (particularly in the face of decentralisation) by street-level bureaucrats – the extension agents themselves, local politicians, NGOs and private sector agricultural service firms. These actors take the ‘policy narratives’ that are generated at central levels and make them their own in discussions about whether to focus on pigs or cattle, whether to promote high-input packages or to ponder EU directives on organic imports, and so forth. In order to insert objectives of poverty and vulnerability reduction into extension practice, it is essential to review the practical choices that practitioners face. The following section is not intended as an exhaustive review of extension options, but is rather intended as a set of illustrations of some of the key areas offering scope for agricultural policy and extension to be made more pro-poor. A number of issues will also be highlighted for each theme that, among others, will help guide the coming empirical field study and further literature review.

3.1 Specialty/niche enterprises

A frequent topic of advice for smallholder farmers is that they should invest in specialty or niche products. Higher value and lower transport costs are cited as reasons that the poor, with a capacity for small-scale diversification, should experiment with new and potentially lucrative markets. But taking up a new enterprise has risks, and the challenge will be to find opportunities for exploiting further what poorer producers already do, or that require only small, incremental steps in technical change which fit with their broader livelihood strategies. These will be reviewed more comprehensively in the main study; here we explore the issues on the basis of two enterprises. One of these (organic produce) has been widely discussed as having potential for low-income farmers; the other (bee keeping) has received less attention, but raises some specific questions for extension.

3.1.1 Bee products

Bee keeping is an example of a niche enterprise that has multiple benefits and in which small-scale producers have traditionally been active (especially in sub-Saharan Africa) and can be found in the marginal hinterlands of many countries. Various products are the outcome of bee keeping with honey and beeswax being the two most important, though propolis and royal jelly can also be of high value in some countries. These products provide a source of income and nutrition for the household, while also having clear positive externalities in the sense of improving crop yields through pollination (perhaps its most economically important aspect) and incentives for the preservation of natural capital. The exchange of bee products also appears to help cement the formation of social capital in some societies. Bee keeping can also help provide a safety net for the vulnerable in times of shocks and stresses, and may enable a more rapid restoration in livelihoods following some forms of systemic collapse. There is anecdotal evidence to suggest that, for example, bee-keepers may have been able to restore their livelihoods more quickly following famine in Ethiopia.

Hives can be either intensively or, more commonly among poorer bee-keepers, extensively managed, and can therefore fit with a range of livelihood strategies involving seasonal high demand in agriculture, wage labour, or migration to the cities and other regions. Bee keeping does not require land ownership, only access rights, and is a common activity for people with access to forests and border zones. Beekeepers are usually male, with women often more involved on the processing and marketing side. At present, there are few reliable estimates of the numbers of rural people who are bee-keepers and the ways in which this enterprise fits with various other livelihood strategies. However, there is clearly sufficient evidence to suggest that bee keeping, as with other non-wood forest products, is undervalued as a coping strategy or as a means for poverty reduction, particularly in many parts of rural Africa.

How does this then fit with the issues concerning globalisation raised above? Trade liberalisation has meant that global trade is growing, though there still remains an undersupply of bee products. The consumption of bee products has risen over the last few years, linked to increases in living standards in Western Europe, North America and Japan in particular. This is also associated with a growing demand for specialised honeys like unifloral and organically produced honeys. In the cosmetics, pharmaceutical and confectionery industries, there is no complete substitute for beeswax. Contamination by crop pesticides and pest control measures in the hives themselves are known to compromise quality and are of increasing concern to the EU. The spread of *Varroa* mite and the widespread use of chemicals has meant that the demand for wax produced by the European bee is declining. However, the demand for good quality, organic beeswax and other bee products is on the increase. The African bee (*Apis mellifera*, the same species as the European bee) is a particularly good producer of high quality wax and the market potential is significant. The honeybees of Asia are generally less productive, but can adapt to the local ecology and can develop market niches for specialty honey.

Given these global trends and opportunities, it is unfortunate that many tropical bee-keepers have not benefited from these opportunities. In many cases, this relates to the access issue of where poor people live. Potential exporters face high transactions costs, given poor information about bee-keepers and both the low efficiency and unpredictability of making export arrangements in many poorer countries. In addition, there are a number of transaction costs related to importation to richer countries that may provide a significant disincentive for market entry. Existing standards may not fit readily with regulatory frameworks such as the European Honey Directive (European) and the Codex Alimentarius Standard for Honey (global), and organic bee products face similar transaction costs related to certification as those mentioned in the next section on organic produce. Though the demand exists, the vast majority of African bee-keepers throw away potentially very high quality and lucrative beeswax because of the lack of markets, though such markets may have existed in pre-colonial or colonial times.

Policies and extension related to bee keeping development have only tended to aggravate the situation. There has been a common tendency for tropical bee keeping to be understood as being irrational. Extension projects have tried to address this by bringing in 'modern' beehives. Almost all recent interventions such as introducing movable frame hives, or developing adapted hives like the highly promoted Top-Bar Hive have been disappointing (Crane, 1990). However, the assumption of irrationality underlies two basic errors: that intensive bee management is an indicator for 'rational' bee-keeping for all bee races of the world (technical error), and that intensive management can fit with the livelihoods of all bee-keepers (livelihood analysis error). Indeed, Fichtl and Adi (1994) note that traditional bee-keeping in Ethiopia, despite its antiquated appearance to eurocentric bee-keepers, is actually a very efficient undertaking and fits with a range of diversified livelihoods. These basic errors are compounded by the fact that many bee-keeping extension projects have suffered from too great an emphasis on production at the expense of marketing and adding-value.

There are some cases that are worthy of further examination. For example, the case of North West Bee Products Ltd. in Zambia (Wainwright, 2000) is an interesting one and confirms two of the key principles of the sustainable livelihoods approach: a complex analysis defining entry-points (though in this case sectorally restricted), and a concern for sequencing. The company is a market-oriented public-private partnership that was an outcome of a GTZ-supported bee-keeping extension project, which began with a production orientation. An initial analysis of the situation revealed that a better entry-point would be to link traditional supplies from the Miombo woodland to regional and international demand. This would not make headway, given a policy of state-controlled prices that offered little incentive to bee-keepers and thus required the project to become political and lobby for local price control. Once local pricing was brokered, there was a large increase in honey production that required further innovation in institutional arrangements. The company was born and is jointly owned by a bee-keepers association (with about 3000 bee-keepers) and district councils. It sells honey on local and international markets, the latter through a company called Tropical Forest Products especially set-up in the UK to develop the market for fair trade, organic Zambian honey. The company uses extension agents who are bee-keepers themselves, and their main tasks are to maintain a strong information network among local groups and the marketing structure, as well as training for the control of quality. In this case, extension-related activities find meaning in a more open change process that began with policy change and led into innovation in institutional arrangements.

There are clearly public good concerns related to the development of bee-keeping in terms of natural resource protection and the positive externalities that exist from the added-value accrued by bee-keepers and their neighbours through the pollination of their crops. Many tropical bee-keepers are amongst the very poor, living in marginal areas and categorised as those who should benefit from poverty reducing policies. These points suggest that some public sector support for the development of bee-keeping is warranted. This should not be treated as 'business as usual', rather it requires a development dialogue between bee-keepers and researchers, not only on hives and their management, but also on bee-keeping and their relationship to complex livelihood systems. This requires a different emphasis to the role that extension agents play in relation to bee-keeping development. Working with bee-keepers, with their current technology and with their innovations, can begin to take the sector forward (Clauss and Clauss, 1991; Gnägi; 1992). In addition, policy changes may be required to reduce the transaction costs related to linking the many hidden bee-keepers to global demand.

Issues:

- How does bee-keeping and bee product trade fit the livelihoods of poorer and more vulnerable groups? In which ways does the policy environment influence this fit? Is this an area worthy of policy changes and further investment?
- What is the evidence to suggest that bee-keeping can ameliorate the effects of systemic collapse?
- What novel institutional arrangements can facilitate the development of bee products among the poorer? And, in this, what should guide public sector support to extension?
- What innovative examples are there of the intermediary bodies facilitating the link between supply and demand in market-oriented solutions?

3.1.2 Organic produce

Given the dramatic rise in demand for organic produce and the low external input systems of many poorer producers, there are high hopes that organic products may be an appropriate niche for raising incomes of the poor. Many poor farmers already apply *de facto* organic farming methods because of

lack of capital, lack of knowledge, lack of access or general distrust in high external input methods, though some commentators would say that this in itself does not necessarily constitute real *organic* farming. Furthermore, liberalisation and the lifting of subsidies on agricultural inputs has meant that many production systems are using less inorganic inputs than they were some years ago, with a resurgence in traditional crops in some regions (e.g. Fonio in central Nigeria). The cost-benefit incentives have clearly shifted in favour of being organic. Price premiums from 10 to 30 per cent and lower capital investment costs have been cited as additional reasons that poor smallholders in developing countries should be encouraged to enter this growing market. Higher value per volume (especially in commodities such as coffee, sesame and cacao) mean that the transport problems of producers in remote areas are somewhat ameliorated. In sum, the comparative disadvantages of the poor in conventional agriculture can be either lessened or turned into advantages through the marketing of organic produce.

It has often been noted that there is little or no research and extension related to organic production underway in most developing countries. In addition to a general tendency to focus on input promotion as an inherent *raison d'être* for extension, this is also partially due to the common belief that most tropical soils cannot give the production increase necessary for food security without inorganic inputs. The need for phosphate from inorganic sources is a commonly cited case in point.

Since many poor farmers are more or less already engaging in organic production, the main emphasis in promoting this niche has been in finding sustainable certification procedures and in obtaining access to Northern markets. Research and extension have been seen as secondary to the certification and market access issues, though there is still a great need for productivity – and quality – enhancing technical change in organic farming. Global trade in organic produce is a clear example of one of many areas where extension is being forced to adapt to a regulatory and market agenda.

Extension for organic farming must find its place within a continuum of production methods ranging from 'organic by neglect' (failure to use external inputs due to the reasons cited above) to elaborate integrated farming systems approaches. Working with the former involves first a process of legitimising low (no)-external-input farming, which in many cases implies a total reversal of earlier extension approaches⁵.

There are many valid reasons for focusing more on integrated farming systems. Increased use of manure is, in many cases, essential to increased crop production levels. By encouraging a shift from extensive grazing to intensive livestock production methods (e.g. stall-feeding to ensure access to manure), other positive environmental impacts of organic production emerge. Despite this, the difficulties for very poor farmers to mobilise the resources needed to apply many of these approaches are well-known. Also, the difficulties for extension (and research) to provide the multidisciplinary range of information for farming systems production is also problematic. For this

⁵ This may be particularly desirable in cases where inappropriate use of agrochemicals has caused soil and water pollution. Agrochemical inputs can also cause human poisoning. In Malaysia and Sri Lanka, for example, between 7 and 50 per cent of all farmers reported that they experienced poisoning at least once in their lives (Jeyeratnam, 1990 cited in Pretty, 1995). The WHO has estimated that the number of deaths caused by pesticides is 20,000 per year with 25 million cases of poisoning. The high cost of newer, safer agrochemicals is partly to blame for the continuing production and use of more poisonous chemicals. Many developing countries now produce methyl parathion (whose patent has run out) for example, which causes the most incidences of insecticide poisoning of farm workers worldwide. A litre costs approximately US\$7 compared to the cost of the safer and more modern insecticides at between US\$150 and US\$400 per litre (Rosset, 1997). Many farmers are therefore unable to afford new agrochemical inputs and older chemicals are not only more hazardous but also less effective due to pest resistance. These difficulties have fuelled growing concern that high input strategies are inappropriate, and have contributed to a movement favouring low external input (LEI – practically synonymous with "agro-ecological") agriculture. It is uncertain whether traditional extension services (including the agronomists who staff many new private and NGO advisory services) can be expected to make such a paradigm shift given prevailing priorities to promote increased use of inputs.

reason, farmer-to-farmer extension methods have often proved most effective in promoting these methods.

Another issue of concern regarding extension related to farming systems approaches, is that commodity organisations (both marketing and producer organisations) are some of the main channels for promoting organic production, and many have little competence or interest in providing support for other aspects than those in which they already specialise. It is unlikely for example, that a national union of coffee producers will have the capacity or interest to promote integration of livestock production into coffee farming systems, even if this is one of the best ways to maintain soil fertility.

The 'rules of the game' in the marketing of organic produce are widely perceived as not favouring organic exports from poorer countries. The certification issue for example, has often created tension among partners who were previously assumed to be natural partners. Complaints of 'green protectionism' have been raised, as progressive Northern institutions seek to enforce strict entry regulations while expressing suspicion in Southern institutions' capacities of ensuring their products fulfil set import criteria. The credibility of extension in the eyes of farmers and even researchers and other actors may be compromised, if it is perceived as promoting a 'Northern' agenda.

The issue of covering the costs of certification is related to the globalisation trend that accessible areas will benefit more from market opportunities than isolated areas. Much of the 'organic by neglect' production occurs in areas where access and cost of external inputs is high. Similarly, the cost of visiting and certifying farmers in these areas will also be high, particularly as 'organic by neglect' production often consists of a small component (a few coffee bushes behind the house) of the farmer's livelihood strategy. The institutional costs of certification are unlikely to be borne by such a small level of production without acceptable forms of group certification for associations rather than individuals (and so spreading the cost). These factors may provide a *de facto* advantage to more intensive 'farming systems' organic production, at the expense of poorer 'organic by neglect' producers.

On the other hand, the very great uncertainties of the market for organic products and high transaction costs may restrict access to credit, and therefore favour the low-investment 'organic by neglect' producers over the considerably more complex, capital demanding and uncertain farming systems approaches.

There are also issues related to the complexity of the global certification landscape that add to the transaction costs for dealing with organic produce. There are presently different bodies, both governmental and non-governmental, that set different standards. The rules set by the EU appear to be more lenient than the main industry body, the International Federation of Organic Agriculture Movements (IFOAM). However, there are complaints that EU rules do not support the development of organic farming globally. EU regulations are also criticised for hampering the development of domestic inspection and certification bodies in developing countries. This has meant that it is common for organic produce from developing countries to enter the EU through 'the back door', when the EU does not recognise in-country capacity for inspection and certification thereby requiring certification by a recognised EU-based body. Clearly, this is an aspect that would need significant attention for poorer countries and their producers to benefit, but domestic organic certification for export to richer countries is one that is unlikely to be of high priority in countries with chronic food security issues.

Two related niches are Fair Trade marking (primarily in Europe) and Bird Friendly coffee (in the US). Fair trade marking is intended to effectively certify that equity and social justice have been addressed. Bird friendly coffee involves use of low-external-input (shaded) methods. It is likely that

some form of merging of organic, Fair Trade and Bird Friendly certification will emerge in the future (Kortbech-Olesen, 2000). This may simplify the knowledge needed by consumers and help to limit label fatigue, but may perhaps create even more elaborate certification demands for producers. It remains to be seen if, and how, costs may be kept to a low enough level to ensure that concerns about green protectionism can be addressed.

Finally, it should be mentioned that other niches may exist for high-quality, low-external-input production. A Chinese market for ‘organic by neglect’ tea from northern Vietnam has existed for some years. The unique flavour and quality, rather than the fact that it is organic, has created a price premium. Consumer dissatisfaction with the poor flavour of industrial agricultural products may create a market based on quality standards that does not demand complicated and bureaucratic organic certification procedures.

Issues:

- In light of the obstacles and costs of certification, is organic production a viable strategy for poor and isolated farmers, or is it an example of a niche that is best suited to the moderately better-off with relatively good access to markets?
- Certifiers inevitably come face to face with producers. Are there ways in which certification can be linked to extension in light of the need to help producers enter a potentially attractive market without falling into a trap of combining advisory and policing functions?
- What is the potential for traditional public extension services, which have had input promotion as a major aspect of their *raison d’être*, to shift to supporting low-external-input or organic production? Are there other agencies that could sustainably lead this development, perhaps through links with privately-managed contract farming and outgrower schemes?

3.2 Reconstructing/restoring/transforming livelihoods in crisis

One of the most pressing and difficult issues facing extension is how to support the reconstruction, restoration, rehabilitation and eventual transformation of livelihoods facing outright crisis. Despite the grave and growing nature of this challenge, surprisingly little attention has been given to how to re-establish agriculture-based rural livelihoods where pre-existing strategies have collapsed in the face of war, environmental destruction and natural disasters. If there is anywhere that organised support to technological change is needed, it is in places where former approaches are no longer viable. But it is also here where extension has also generally feared to tread.

A strong degree of trepidation is warranted. A complex mix of conflict, vulnerability to natural hazards and inability to pursue former livelihood strategies demands a careful and considered response. It is rare that extension actors have the competence or the institutional linkages to slot into operations led by humanitarian agencies and contexts characterised by extremely weak or illegitimate state structures. A ‘do-no-harm’ approach has been suggested for interventions that risk contributing to conflicts over resources and power, and agricultural land and technology are central factors. The conflict in Tajikistan, where the Soviet cotton production system has collapsed, has been presented as an example of where a ‘do-no-harm’ approach is needed (Anderson, 1999). This lesson is not new, though the reminders are warranted. The ecological collapse of a similar production system in Nicaragua in the seventies, directly preceded the outbreak of the Central American conflicts of the seventies and eighties.

In situations such as these, proposals are often presented for massive non-voluntary population movements. From Ethiopia in the mid 1980s to recent proposals to shift slum dwellers to agricultural lands in Venezuela after the 1999 floods, strong governments have often attempted to

take advantage of a crisis to implement radical agricultural reform agendas through non-democratic or non-participatory means. After Hurricane Mitch, a cry was raised to use the rehabilitation programme to 'transform' the countryside. All hues in the political spectrum supported this call, but there was no consensus on where this transformation should lead (Rocha and Christoplos, 2000). Clearly there is a danger that extension may be taken on as a vehicle for experiments in social engineering and highly polarised political agendas. The risk that poor farmers become the victim of policy polemics from the capital is great. Lamentable as this obviously is, these are places where old systems have collapsed, and where the old adage that the farmers know best may not be valid. A shift to a new and radically different system may be warranted. There is no easy answer to these questions. The conceptual chasm between top-down social engineering and the hubris around indigenous knowledge as the key to development, leaves few models for extension to apply in contexts of systemic collapse.

The current discourse on concepts such as humanitarian principles, developmental relief and the gap between humanitarian and development institutions, raises many questions for the extension agenda. On the one hand, there are those who claim that investment in capacity building (implicitly including all forms of extension, veterinary services etc.) effectively contributes to one or another of the warring parties, thus sacrificing neutrality and the need to focus all resources on immediate human survival (see Macrae, 2000; Bradbury, 1998 etc.). A growing group of researchers are therefore highly critical of any blurring of the development-relief divide through 'developmental relief' or 'developmental humanitarian assistance'. On the other hand, there are those who point out that food aid in conflict situations never covers more than a small fraction of nutritional needs, and that the humanitarian imperative therefore demands support for agricultural production. Many agencies (World Bank, UNDP, UNHCR) are searching for new *modus operandi* for dealing with the institutional gaps between their developmental and humanitarian mandates (IASC, 1999). It is being increasingly acknowledged that the humanitarian imperative (that human suffering demands a response) cannot be ignored by development agencies as simply somebody else's problem (Christoplos, 2000). Conflict and misery are aspects of globalisation that concern development agencies (Streeten, 2000). Apprehensions about blurring neutrality and humanitarian principles are valid, but should not shut the door on creative problem solving. Paul Richards (1996) goes so far as to recommend that "smart relief" should include taking advantage of existing smuggling networks to bring appropriate seeds to producers behind military lines, an approach that is anathema to those insisting that the future of humanitarianism depends on the preservation of a semblance of neutrality.

Despite the dangers of providing extension in zones of crisis, these are issues which poverty-oriented extension must face. Growing sections of the hinterlands are being excluded from the formal global economy. Governments are effectively abandoning these areas due to the high costs of service provision, since they are not seen to be "profitable" or "viable" (Bebbington, 1999). New forms of 'uncivil' society are often filling the vacuum in public authority. Globalisation has been said to produce forms of "durable disorder" wherein drug production and other agricultural niches thrive (Goodhand, 2000).

Systemic collapse can be characterised as situations where social capital may be all that poor people have to draw upon. In practice however, social capital and related institutions may often be very frail. Individualism takes precedence where traditional ties have gradually been weakened by commercialisation and covariant risk amongst those experiencing drought and other shocks. In Malawi, assumptions that the rural poor are more capable of drawing on safety nets than urban dwellers have proven false in the face of widespread destitution (Devereux, 2000). Increasing reliance on diversified and non-agricultural livelihoods has in many cases weakened the social structures that have traditionally held together rural communities (Bryceson, 2000).

These examples point to many profound and disturbing questions, but few answers. There are however, examples of successes as well. The Swedish Afghanistan Committee has helped to build a system of seed production (now co-ordinated by FAO), operating throughout a major part of the country. The lack of a (legitimate) local partner has meant that this system lacks basic sustainability, but it does show the potential of effective international assumption of public goods in a context where private goods are dominated by investment in public 'bads'.

There are other examples as well. Evidence shows that many NGOs have drawn on civil society to establish successful extension programmes in the wake of relief operations (e.g. Lamers et al., 2000). Similarly, where some experience shows a breakdown in social capital in the face of conflict, in other contexts "disaster norms" can create the unexpected formation of social capital (Christoplos, 1998). Judith Tendler (1997) has reviewed successful agricultural extension in an humanitarian emergency. Looking at the involvement of public sector extension in drought relief activities in Brazil, she has noted how the sense of mission around helping neighbours in crisis can galvanise a formerly sluggish and mediocre institution. An emergency is a situation where the 'victims' need help and where service providers feel an overwhelming desire to provide such help. It is furthermore a situation where the 'humanitarian imperative' suggests that those affected have a basic right to assistance, and where extension, as a frontline service institution, has a moral and (perhaps) formal obligation to address such rights. Tendler's study has shown that if extension is given the flexibility to act, a transformed relationship can be forged that may provide a basis for a more regularised service provision in the future.

Tendler's example brings up another seldom acknowledged or analysed role of extension – the *de facto* management of labour intensive public works programmes after disasters, and even as safety-nets during normal food deficit periods. Conventional wisdom has been disapproving of such involvement, but in practice, the expediency of using extension services (not just governmental, but even NGO and private sector agencies) to manage rehabilitation and other public works programmes is common. Tendler's case points to how, when handled effectively, this distraction from 'normal' extension work helps to cement relationships with beneficiaries. In Nicaragua, after Hurricane Mitch, many public, private and non-governmental extension agencies spontaneously mobilised themselves with their own proposals for an array of rehabilitation activities. In other cases (e.g. where such work has become a permanent institution rather than an exciting project, such as in India) this work is seen as an uninteresting distraction (Joshi and Moore, 2000). Whatever its impact on extension services, this is an issue that may become a major aspect of extension's contact with the poorest of the poor, and therefore deserves more analysis. It is an example of a situation where access to agricultural services becomes, not a privilege, but rather a right to basic survival. Calls are being made for new approaches to public works, including alternatives to much criticised food for work schemes (see Clay et al., 1998) that may call for increased extension involvement. Devereux (2000) has recently suggested providing agricultural inputs-for-work in the form of "productivity-enhancing safety nets". Social funds are becoming a common channel for addressing rural poverty, with extension also frequently being dragged in. More pragmatic efforts to make the best of these situations, and solve the problems that emerge in extension involvement in such schemes, may be more appropriate than merely suggesting that public works should be somebody else's responsibility.

Issues:

- Does public support for extension services have a role in contexts of conflict and systemic collapse where there is little consensus regarding the role of agriculture in 'sustainable' livelihoods?

- In light of the massive gap between needs and capacities in many rehabilitation contexts, combined with the lack of consensus on what it is that should be rehabilitated, what is extension's role?
- Can and should public extension services be pulled in to supporting, or even managing, rehabilitation programmes and social funds involving public works components, food for work etc.?

3.3 Contract farming and outgrower schemes

In the wake of globalisation and liberalisation, there are growing numbers of contract farming and outgrower schemes linking smallholders to agribusiness. They are seen as having great potential for raising rural incomes through the application of entrepreneurial private sector solutions to agricultural development. Most arrangements integrate aspects of production, marketing and associated advice through more or less formal contractual arrangements. Commodity companies have been operating outgrower schemes for many years. It is common for commercial enterprises to provide outgrowers with inputs and advice, or guarantee their access to the inputs and services producers require. Extension becomes a component of a more vertically integrated system, the cost of which is either factored into the producer price or deferred to a settlement of the contractual arrangement. This is a very dynamic area that calls for creativity and innovation in new institutional arrangements among the actors and agencies involved. The range and diversity of schemes is enormous, and much research is still required to draw out best practices, particularly in the way that these schemes influence overall poverty reduction.

Some outgrower schemes are operated by commercial farming enterprises that wish to increase profits, but are either unwilling or unable to acquire extra land. A case from the oil palm sub-sector in Ghana helps to illustrate such an arrangement. The privately-owned Ghana Oil Palm Development Company (GOPDC) farms a nucleus estate of 3,500 hectares, leases 1,050 hectares of land to smallholders, and is supported by 11,500 hectares of outgrowers within a 25 km radius of the estate. The company mill – the pivotal enterprise – processes 110,000 tonnes of palm fruit annually, of which approximately 50 per cent comes from the estate, 44 per cent from outgrowers and 6 per cent from smallholders. The outgrowers are increasing at a rate of 1,000 hectares per year. Outgrowers are entitled to a package of inputs and support services, including extension. Credit is provided at a below-market rate of 22 per cent interest, which farmers can repay over a 25 year period. The company employs 22 technical staff, each of which provides services including extension for up to 400 farmers. It is perhaps noteworthy that extension agents receive at least double the equivalent government wage.

There can also be important indirect effects of contract farming on rural livelihood opportunities, as the need for non-farm rural employment tends to increase particularly for those products where rural processing is desirable (Badiane and Kherallah, 1999). In some cases, this development may be more important in increasing the sustainability of rural livelihoods amongst the very poor (who may have insufficient land or poor credit-worthiness) than their direct involvement in contract farming or outgrower schemes. In addition, there is some evidence to suggest that cash crop development can be associated with food crop productivity increases (Govere et al., 1999).

The further development of contract farming and outgrower schemes must face two key problems: contract default and the scale of farmer operations that tend to count against small-scale producers (Coulter et al., 1999). Both of these concerns have a particular influence for the development of entrepreneurial solutions amongst the very poor. In addition, many of the poorest people live in marginal, rain-fed hinterlands where poor infrastructure and market access, together with higher production risks, create substantial disincentives for agribusiness development.

Contract defaulting tends to be worse in situations where produce can be consumed by contracted households or marketed locally, making high-value export crops of particular interest for such arrangements. Some schemes have been affected by 'strategic defaulting', particularly where there has been a local or national history of writing-off loans, common among many public sector financed schemes. The problems of defaulting among smallholders are also exacerbated by a lack of collateral and ineffective or unpredictable legal systems. Further, the more vulnerable producers are less able to overcome shocks in their livelihoods that would comprise compliance with contractual arrangements, given generally weak insurance services.

Operating schemes among smallholders can also lead to higher transaction costs caused by service delivery to, and monitoring of, many more producers. This may be reflected in the lower prices offered to smallholders by export traders, compared to those commercial farmers are able to negotiate for, with one case showing a 30 per cent differential in Zimbabwe. There are also concerns about difficulties in ensuring quality and traceability, though there is some evidence to suggest that smallholders can have quality advantages given more intensive labour inputs (Coulter et al., 1999). Large farmers also have better access to extension services than smallholders, thereby reducing the risk of crop failure. Some schemes also have yield standards that may exclude smaller, weaker producers.

There is clear evidence that producer organisations have the potential to overcome some of the weaknesses described above. For example, lending through groups can reduce the risk of default, provide forms of joint collateral and provide economies of scale benefits in service delivery. Producers also benefit from having a stronger hand in negotiations with companies. Close linkages between producers and traders or processors has been suggested to enhance the sustainability of producer organisations as well as helping them with a stronger business sense, though independence and autonomy may be necessarily comprised in the process. Some have explained such benefits in terms of the more entrepreneurial working the less entrepreneurial. Others relate this more to 'entrepreneurs' having greater access to capital and markets. Whichever way it works, people's livelihood assets become nested in productive and mutually beneficial relationships. Under close linkage mechanisms, commercial agents have a higher incentive to helping ensure the smooth operation of effective groups. Defaulting is reduced where there is good communication between the parties and a good range of high quality services, including extension, are on offer to producers by the contracting agent. Under such arrangements, there are clear, mutually beneficial incentives for high quality extension. This will of course, only relate to the contracted commodity and will not necessarily help consider best choices among alternative livelihood options.

Most producer organisations will differ from those of the traditional commodity co-operative sector, based on federated primary societies that have been much maligned. However, the implosion of much of the public sector determined co-operative societies may well have left a significant amount of latent potential, and many primary societies may re-emerge to take advantage of new arrangements with the private sector.

Some innovative schemes demonstrate that there can be a role for a third party, supporting directly or indirectly contract farming arrangements. There are a number of programmes that have been established to promote outgrower schemes, either by producer organisations, trade organisations, governments or NGOs. These may help establish producer groups and broker relationships with agribusiness. Coulter et al. (1999) highlight the work of two NGOs that specialise in facilitating linkages, the Cooperative League of the United States (CLUSA) and FAIDA, a Tanzanian NGO. The NGOs provide training and offer advice to producer groups while acting as intermediaries between smallholders and agribusiness, thereby reducing risks and initial costs to both parties. This is one area that may justify 'public' funds as a strategic intervention for structural change of the agricultural sector, where the private sector may be slow to act alone in order for smallholders to be

included in new, promising arrangements. However, such assistance needs to fit with local transforming circumstances and long-term dependence on subsidies needs to be avoided. There is also very limited information on the way in which such schemes impact on poverty in their area of operation. Clearly linking such private sector oriented arrangements with poverty reduction goals will require public action. Organisations that wish to promote contract farming and outgrower schemes may also need to give some thought to arranging alternative safety net mechanisms that can operate in times of crisis faced by the poor and vulnerable, enabling them to avoid breaking contract agreements.

Issues:

- In which ways are the poor able to benefit from the emergence of contract farming?
- How can public finance best support the emergence of these private arrangements in a targeted and time-bound manner so that pro-poor distributional objectives are effectively incorporated? Is there a role for underwriting participation of the poor?
- What might be the role of a third party in helping reduce the transaction costs related to involving the poor in contract farming (group formation, brokerage, insurance)?
- Is there latent potential in former co-operative primary societies that warrants greater attention?

3.4 Livestock

The poor use livestock for two basic strategies: for asset accumulation and as a form of savings and insurance to be traded only in the event of a need to mobilise capital. This insurance function has traditionally been perhaps, the most important role of livestock, and has been the source of much of the mismatch between extension messages and producer strategies, since extension has promoted more commercial applications. This mix of strategies may now be changing. New studies suggest that demand for livestock products is destined to grow in developing countries and that this may have positive impacts for poverty reduction. The poor are aware of this, as evidenced by the strong tendency which poor producers have for investing the credit obtained from micro-finance programmes in household livestock production.

The nature of livestock production is also changing. Urbanisation is leading to an increased consumption of livestock products. Peri-urban production is playing a larger role, with consequent regulatory and environmental health concerns. Extensive use of grasslands is giving way to increased use of commercial fodders and intensive use of local feed resources. Landless and near landless are also increasingly investing in livestock (Khan et al., 1993; Mustafa et al., 1993). Low input/risk strategies may be giving way to higher input/risk approaches, with a consequent closer link to markets. The viability of small-scale production, such as dairy and eggs, is coming under pressure from the greater involvement of large and transnational firms in developing countries (both in production and in serving local markets). Where public goods issues have been raised with regards to the poor, they have been limited primarily to the control of disease and the prevention of over-grazing. In both, the poor have often been seen as the villains.

Delgado et al. (1999) suggest four options for supporting livestock production:

- Removing policy distortions that artificially magnify economies of scale;
- Building participatory institutions of collective action for small-scale producers that allow them to be vertically integrated with livestock processors and input suppliers;
- Creating an environment in which farmers will increase investment in ways to improve productivity in the livestock sector; and

- Promoting effective regulatory institutions to deal with the threat of environmental and health crises stemming from livestock.

Beyond traditional extension services, there are four key institutions that influence technological change in livestock production, veterinary services, regulatory/sanitation agencies, marketing structures and finance. New organisational actors are entering into each of these institutions, resulting in changing demands and opportunities for producers.

When reviewing the options for tying these institutions together, it becomes apparent that a *laissez faire* approach carries with it *de facto* subsidies for the rich, who do not cover the costs of pollution and land conflicts. Adopting a more interventionist stance will not be easy in the face of collapsing public veterinary/regulatory services, elite (and sometimes even paramilitary) dominance of livestock producer institutions, and a broad faith in neoliberal market solutions. In most countries, research for small-scale livestock production is very weak. Crop production is perhaps an easier field than livestock to suggest greater intervention, since food security concerns can be more easily justified based on public goods and national security. Livestock have often been portrayed as the *problem* in food security considerations, due to several implicit assumptions:

- That commercial production is synonymous with large-scale methods, and thus provides few options for the poor;
- That grazing land detracts from land available for cereal production for human consumption; and
- That cereal production for fodder detracts from availability of affordable grain for human production.

The main counter-argument to these concerns is that the rapidly growing demand for meat in developing countries is a fact. Discouraging livestock production will not change this. The question is rather how to ensure that the poor benefit as much as possible from meat and dairy production, from consumption (particularly as related to addressing protein energy malnutrition), and from the production of fodder. Since the poor are increasingly concentrated on environmentally degraded areas, many of which can no longer sustain economically viable crop production, the best approach may be to minimise the potential problems of (extensive) livestock production and maximise the benefits.

It is important to analyse the implications of growing national and regional demands for livestock products. In some areas, small-scale producers have shown an ability to compete in regional markets (pork in Asia, cheese in Central America). In others, there is a clear tendency towards stagnation and dominance by large-scale producers (beef in Latin America due to US dominance). With the latter, technological retrogression through extensive production methods may both exclude the poor and contribute considerably to land pressures. New technologies for small dairy producers have emerged in recent years, but so has new competition from transnationals. In both dairy and meat production, sanitation/regulatory issues have come to the fore as quality demands for export markets have increased.

The relationship between rural finance and livestock production has many implications for extension. Micro-finance credit for small stock and dairy production is popular among producers (less so for beef cattle). Livestock has, in some respects, a better fit with micro-finance than crop production due to the less lumpy seasonal nature of demand for capital (Kydd et al., 2000). In some cases, credit has been used as a major incentive for the promotion of new livestock breeds. Credit–extension–veterinary service links deserve greater attention, perhaps by recognising that some extension functions can be taken up by either the former (credit agencies) or the latter (veterinary services). Misfits between livestock and credit programmes may make such programmes

inaccessible for the poor, or may force the poor to take out additional informal (high interest) loans to cover fodder and veterinary costs. Failure to invest in vaccinations increases risk, a danger that is particularly great when credit is involved. Producers may also have to take out informal loans to pay off formal loans when the repayment period is shorter than the production cycle. The poor may be excluded from the potential benefits that larger livestock production (e.g. cattle) may bring, by being unable or unwilling to bear the additional associated risk compared to small livestock. This has led to a tendency to target many poverty reduction efforts on small livestock. This need not be the case however, as the case of Proshika's livestock programme in Bangladesh demonstrates, which focuses on improving the incomes of landless women through cattle rearing. Part of the risk associated with dealing with larger livestock is reduced through a compulsory cattle insurance premium that all group members are required to pay (Khan et al., 1993).

Some NGOs have had success at combining credit, veterinary support and training, for example Proshika and BRAC in Bangladesh (Khan et al., 1993; Mustafa et al., 1993). The need to develop collaborative relationships with governmental providers has proven important, particularly when considering the role of paravets in relation to the broader veterinary service system. There are also cases where community-owned livestock service centres are being set up, for example in Sri Lanka, that provide a one-stop shop for livestock development services. The idea is to have professional management of such centres, which can pull-down the services required by livestock producers from either the public or private sector. These examples highlight the tendency for innovative institutional arrangements to emerge among the various actors and agencies involved, and show that advisors are needed that can explore the organisational as well as technical challenges. Furthermore, they highlight that extension operates best when closely integrated with other services. While not necessarily being supplied by the same agency, the link between the services is closely managed either by an NGO or by a community-owned service centre.

In many areas there is growing competition for land use between those whose livelihood strategies are mainly crop-based, and those who depend mainly on livestock production. This has led to conflict in, for example, many parts of West Africa where traditional pastoralist movements are being encroached upon by a growing number of crop producers or game reserves. Many of these relationships have traditionally been synergistic, for example, cattle manuring fields in exchange for produce. But, there has been a shift in scale that is leading to conflict. This raises issues concerning the way in which different people's livelihoods are influenced and can influence each other, and how this change can be either positive or negative given the circumstances. The issue is highly political. The tendency has been for policy changes to benefit one group over the other, and for policy choice to be less than thoroughly grounded in sound analysis.

Issues:

- Can, and should, extension be linked to other (perhaps more important) livestock related services, such as veterinary care, sanitation and micro-finance? Alternatively, should efforts be made to strengthen the capacity of these other institutions to relate their efforts to markets and changing technological options?
- Conflicts are growing between livestock producers, crop producers, urban dwellers (affected by pollution from peri-urban livestock production) and those engaged in other forms of natural resource exploitation. What is the role of advisors in mediation and brokering collective action agreements among diverse livelihood strategies?

3.5 Micro-enterprise

Micro-enterprise is both an alternative and a supporting function to agricultural development for the poor. It is also an important option for diversified livelihood strategies. Micro-entrepreneurs provide important services for agricultural production (Bryceson, 2000), not least in marketing. Access to an array of intermediate transport facilities (ox-carts, pack animals etc.) can help to overcome the isolation factors that are increasingly beginning to characterise poverty (Bryceson and Howe, 1993). Markets for small producers may be opened. Where new roads have been built, access to small-scale transport and to inputs may enable the poor to enter markets before these sectors and markets are dominated by large-scale actors who are able to organise these services themselves. Streeten has suggested that the role of governments in micro-enterprise development is “to avoid crowding out, and to achieve crowding in” (2000:51).

Processing is also an area where micro-entrepreneurs can contribute to smallholder production. Through smallholder control of processing facilities, the relative power of large commercial producers over smallholders may be reduced. Regulatory demands may also involve linking production and processing in new ways. Organic certification involves certification of the entire processing chain, something that is particularly elaborate with certain crops such as coffee (Kortbech-Olesen, 2000). Specific components of the processing chain may also have major public health implications where extension input is needed, and where public subsidisation is clearly justified. Pollution from peri-urban livestock production or coffee pulping facilities are processing issues that can be handled by micro-entrepreneurs, and where a strong link to technical advisory services is essential (e.g. promoting the use of manure for biogas production). At the very least, extension services should adopt a ‘do-no-harm’ approach and not promote a given production technology with negative consequences elsewhere in the production chain.

Credit provision has an important role in forging links between agricultural innovation and micro-enterprise, and is clearly an important aspect of setting-up and operating various outgrower or contracting farming schemes. It is important to ensure that ancillary services are in place to reduce default risk when credit is directed towards the introduction of new technologies. Traders need access to capital to provide inputs and purchase commodities on a seasonal basis. These lumpy demands imply a need to co-ordinate information, credit and support to small⁶ entrepreneurs. Formal links between finance and input/marketing institutions (much less extension) are anathema to those promoting liberalisation, but may be necessary in areas with a weak private sector (Kydd et al., 2000).

The ‘solution’ to the need to combine credit, processing and transport has traditionally often been assumed to be a matter for producer organisations to handle rather than for micro-entrepreneurs. This issue of the relationship between civil society and the private sector is an area deserving further research.

Issues:

- Micro-enterprise is a key aspect of the changing dynamics of rural development, both in better facilitating agricultural production, and also in providing good exits. Extension services should clearly not remain oblivious to micro-enterprise, but how should they relate (awareness, technological advice on processing etc.)?
- How can extension functions be developed among micro-enterprise entrepreneurs in their relations to poor clients? What does this mean for quality control and for the regulation of advisors who have a vested interest in certain outcomes (e.g. in promoting over-use of inputs)?

⁶ Trading at this level may in many case involve somewhat larger than ‘micro’ entrepreneurs.

- In what ways can the greater exposure to vulnerability that credit creates be internalised through associated insurance schemes or various group approaches to credit provision? What does this suggest for advisors?

3.6. Common pool resource management

One of the preconditions for adopting technical change is that those who invest in it should be able to appropriate what they see as a reasonable share of the benefit. Where resources are privately owned this rarely poses a problem. At the opposite extreme, where management regimes are not in place for common pool resources – i.e. they are ‘open access’ – any individual investing in technical improvements (e.g. to forest or rangeland) will see a large part of the benefit appropriated by others who did not share the investment cost, and so will be unlikely to invest. In terms of predicting what types of innovation will be adoptable and by whom, and how the uptake process can be supported by agricultural policy and by extension, the main difficulty lies in the ‘middle ground’ between these extremes, where common resources fall under a range of common property resource management (CPRM) regimes.

The generally accepted view is that population pressure on the commons has caused many CPRM arrangements to break down into open access. At the same time, efforts to privatise a previously common or open access resource (e.g. the fencing of rangeland in Namibia – Behnke et al., 1995) can have deleterious economic and environmental effects when patterns of pastoral migration are disrupted for instance. Much effort, particularly by NGOs, has recently gone into the re-establishment of CPRM arrangements, and there is now a sound body of knowledge on the preconditions that must be in place for successful CPRM (see Hobbey and Shah, 1998). There are numerous examples of how CPRM has allowed the successful introduction of marketing and processing, especially for non-timber forest products (though in some settings such as large parts of India, these have to contend with monopoly purchasing arrangements). Examples of the successful introduction of technical change under CPRM are rare, except in the case of watershed management (see below).

At least in one case – that of micro-watershed management – the ‘hot spots’ for improvement in technology and resource management under CPRM are located at the interface between private and common resources. Briefly, micro-watershed management is being promoted in some contexts – such as in semi-arid parts of India where it currently attracts large levels of government investment as a means of meeting environmental, production and equity objectives simultaneously. This context is characterised by undulating terrain, in which the commons are typically found in the upper slopes and private agricultural land in the lower. Rehabilitation of the upper slopes requires innovations such as contour terraces and in some cases, the planting of new species of grass and trees. The introduction of these is supported largely by forest officers who provide some extension input with hitherto little involvement by agricultural extension officers. Rehabilitation of these areas reduces rainfall run-off, increases percolation and raises the water table beneath agricultural land, so making it possible to extend the area irrigated, increase the reliability of rainfed farming through supplementary irrigation, cultivate some land for an additional season, or some combination of all of these. The possibility of a second season, and of less risky farming, will create a demand for new (often higher value) crops and varieties with which farmers are unaccustomed.

There is therefore, an immediately obvious requirement for extension to address this gap in knowledge. However, there are a number of more subtle dynamics in this context in which extension can play an institutional support role (Table 1). For instance, grassland in the upper slopes was typically open access prior to rehabilitation. Imposing a ‘closed period’ on off-take permits, re-growth of the indigenous resource, and establishment of any new plantings. There are two

immediate effects of this. One is that those (usually the poorest) who previously relied on the resource lose access to it during the closed period. In principle, they may benefit from employment opportunities created by construction activities elsewhere in the watershed during the 4-year rehabilitation period. However – and this is where agricultural policy and its implementation via extension can play an important role – they will inevitably increase the supply of farm labour, and the new technologies being promoted need to be labour-absorbing. A second effect is that efforts to control or ban grazing in the rehabilitated areas promote a shift in livestock husbandry towards stall-feeding. Cutting and carrying fodder may create a livelihood opportunity for the poor, but extension support may well be needed in respect of choice of species, achieving balanced diets, disease control in enclosed conditions, maintenance of quality of products and so on.

Issues:

Distributional effects relevant to the wider livelihoods of the poor (Table 1), and which pose issues for agricultural and rural policy include:

- There is a tendency for the better-off to have little interest in low-productivity areas under open-access, or under weak CPRM, but to attempt to take over the resource as soon as its productivity is enhanced. What can be the role for agencies offering extension in helping the poor to understand the ‘rules of the game’, predict likely outcomes to rule-based changes, and in brokering agreements on pro-poor arrangements? What role can the development of various user groups play in supporting the actions of extension agencies, particularly in heterogeneous communities?
- There are tendencies among individuals to appropriate the lion’s share of improved resources, such as groundwater, by introducing technology such as deep tube-wells. Appropriate policy here would tax such technology, and extension would promote more equitable alternatives such as shallow wells. In some contexts, it has even proven possible to achieve agreement within villages that farmers will abstain from such technologies, though such agreements are inevitably fragile. What then are the preconditions for extension services to operate effectively in such arenas?

4. Conclusion

Discussing globalisation, Paul Streeten has recently noted that “we are suffering from institutions lagging behind technology” (2000:46). The paradox of public extension services today is that these organisations are specifically entrusted with the task of helping people to overcome the technology lag, and yet they are usually among the weakest performers. Streeten goes on to point out one of the central reasons for ‘institutional lag’ when he notes that “creative institutions are not designed on a drawing board, but are the spontaneous responses to challenging situations” (2000:49). T&V is a textbook example of the limits of drawing board design to address a dynamic field of work.

Reform of the role of the public sector in extension, anchored in a transparent and overriding policy commitment to the reduction of poverty and vulnerability, cannot be undertaken in isolation from the technology-poverty-globalisation link. Furthermore, the challenges of reorganisation in contexts of systemic collapse, ‘uncivil’ society and weak governance must not be overlooked or relegated to simplistic institutional ‘fixes’.

Public extension services have a poor record at following changing technologies and markets. It is essential however, that this failure be addressed as a means for ensuring that the poor have the freedom and opportunity to participate in the global society and economy. The role of agricultural and rural development policy – and of extension as one of their instruments – is to ensure that these *means* of development are equitably accessible. If new strategies are to be formed, the social and economic implications of different technological trajectories must be brought together. Economic interest and public interest in service provision should be integrated, but not be assumed to be interchangeable (Girishankar, 2000).

A new agenda for extension – cognisant of the current trajectories of globalisation, yet clearly reflective of the values of supporting the rural livelihood strategies of the poor – requires more than the methodological or organisational fixes that have dominated extension reform efforts in the past. Neither *laissez faire* acceptance of market mechanisms nor populist participatory schemes will help poor people to access exclusive markets and deal with the ever-increasing shocks to their ways of life. Difficult choices and prioritisations must be made based on bringing together an understanding of who the poor are, where the poor are, and what is the role and capacity of donor agencies and collaborating governmental, civil society and private sector organisations. This involves ‘getting the policies right’ – not only agricultural, but the wider range of rural development policies that impact on the poor in health, education, micro-finance, infrastructure and so on – and forging links between them.

A theme running through many of these choices is the question of triage. Should one strive to reach the so-called poorest-of-the-poor in isolated areas that are increasingly excluded from the international economy, even if their prospects for either subsistence or market production are meagre? If not, what are the consequences, not only for these people themselves, but also for broader society? Can appropriate combinations of safety nets and enhanced production opportunities be created? Can existing trends be supported to achieve ‘good exits’ for the millions who will leave agriculture over the next decade? Is this an important future role for extension – helping people make better choices in the face of structural change? The following are key examples of the decisions that need to be addressed in relating extension to poverty and vulnerability, which will be explored further in the coming empirical case studies. It must be stressed that extension is just one (and often minor) component of each of the rather staggering challenges below. However, in order to move beyond the methodological tinkering and institutional fixes that have recently dominated extension reform, it is essential that consideration of the future

agenda be placed within the broad and difficult choices in the broader reform of rural and agricultural policy.

- Should public expenditure on extension be prioritised with an open acceptance of triage, by focusing on areas that have some opportunity for taking advantage of the opportunities of globalisation, e.g. where new infrastructure has opened access to formerly isolated areas? In this sense, should extension focus on ‘the end of the road’ and give up on the bush beyond? Or can demand-based alternatives be devised for the weaker areas?
- In a similar acceptance of triage, should extension be linked more closely with credit and intensive production methods (perhaps on a contract farming or outgrower basis) and so aim to impact on the poorest as consumers and labourers rather than as producers?
- Is there value in thinking in terms of a separation of poverty perspectives, accepting triage with regard to direct support to agricultural production, while retaining a clear focus on the poorest in indirect strategies (labour intensive technologies for larger farms) and livelihoods (‘good exits’)?
- Can a new cadre of advisors be developed who are skilled at helping poor people make good exits from agriculture by making sound choices about their livelihoods (livelihood counselling)?
- Extension has a rather poor record of providing support to diversification, having had more success with commodity approaches. The poor however, need support to diversify, as their potential for successfully competing in the market and/or meeting subsistence needs through staple and single commodity production is looking bleak. How can this be addressed?
- Do vouchers or other demand oriented financing mechanisms provide realistic options for poor people to pull down a mix of relevant services, or do such schemes fall victim to the same deficiencies as other extension structures in poverty targeting? Is an appropriate array of services in place and accessible to the poor, even if financed by public resources?
- Are producer organisations a solution? Are they accessible to the poor, or is working through producer organisations a *de facto* form of triage if they fail to include the poor?
- Can closer integration with rural finance drive diversification? Are past concerns which de-linked extension from credit still valid, given that taking advantage of new market opportunities almost inevitably links the two?
- Part of the paradox of new forms of diversified livelihoods is that they are a way of spreading risk, but they are also highly risky in, and of, themselves. Information is a major factor in mitigating these risks, but has considerable costs. Poor information is a widespread form of market failure. How far can government (and public sector support for extension in particular) improve access to information by the poor?
- In meeting the dynamically changing and increasingly stringent demands for control of production quality, regulatory and certification agencies are playing a growing role in driving technological change in agriculture. What are the implications for the role of extension in supporting the poor? Are these organisations the extension services of the future? How can a mix of advisory and regulatory functions be handled? Do such agencies, *ipso facto*, exclude poor producers who cannot live up to the demands of, or bear the costs of, these services? What are the implications of this?

- What is the potential for extension to make a more concerted contribution to addressing systemic crisis and collapse, either through information services or through closer links with public works and other safety nets? What are the implications of this in context of weak or illegitimate governance? What are the implications of *not* entering this fray?

In the coming months, case studies will be performed in Uganda, Nicaragua and Vietnam that will shed further light on these questions. These empirical studies will serve to relate an analysis of the policy environment with the micro-level dynamics of change in public sector extension agencies and other institutional actors. The resulting analysis will provide a better understanding, not only of what policies and programmes have been put in place to address these issues, but also how resulting incentive structures have influenced field level institutions in their changing relationships with poor and vulnerable farmers.

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