



# Livelihoods Synthesis Study: Key Determinants of Poor People's Livelihood Strategies and Natural Resources-related Management Opportunities

Bianca Ambrose-Oji

We wish to thank the India Development Service for supplying the photograph on the front cover



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*DFID Natural Resources Systems Programme*

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## Preface

The Natural Resources Systems Programme (NRSP) is one component of the Renewable Natural Resources Research Strategy (RNRRS) of the UK Department for International Development (DFID). It is a ten-year programme that began in 1995 and its research is conducted through commissioning research projects, with a rolling portfolio of 30-50 projects.

In response to the UK Government's White Paper on International Development ('Eliminating World Poverty: A challenge for the 21st Century') in November 1997, NRSP's research strategy was revised to focus more explicitly on the circumstances around poverty, and the needs of poor people. Accordingly, since April 1999, NRSP has aimed to deliver new knowledge that can enable poor people, who are largely dependent on natural resources, to improve their livelihoods. The new knowledge centres on changes in the management of natural resources that can assist the improvement of poor people's assets and enable them to move out of poverty in enduring ways.

In the context of this aim, during the 1999 period of research re-orientation, the programme recognised that its research on natural resources management (NRM) should cover three inter-related fields. These were: the natural resource (NR) base itself; the integrated and dynamic nature of poor people's livelihood strategies and how these affect their decision-making and capacity to use and manage the NR-base; and the institutional environment in which NR management strategies are designed and implemented.

As the inter-relationship of these fields is a daily reality in poor people's livelihoods, it was apparent that it should be the major consideration in the design and conduct of the programme's research projects. However, in spite of funding several research projects on livelihood strategies of the poor in various poverty circumstances, and having their various findings as a knowledge resource, the knowledge gap was not satisfactorily filled. There was a need for a structured analysis of the projects' findings with respect to the key determinants of livelihood strategies in varying poverty circumstances and an appraisal of the implications these determinants for areas and/or opportunities for NRM research that could best assist pro-poor improvement of livelihoods.

The study that is the source of this publication addressed these two aspects of the knowledge gap to provide NRSP with a stronger basis for decisions on the programme's research priorities.

For various reasons, the study was a demanding task. Even though all projects had the common theme of livelihood studies (either entirely or as part of a project's research design), the projects were of varying lengths; were undertaken in different countries and continents; and used different field methods including varying types of data collection and analysis. In consequence, the identification of common and divergent areas of livelihood strategies in differing settings; the dynamics of the link of

these strategies with natural resources; and determination of the implications of this cross-cutting analysis for NRM research was a complex assignment.

It is in this context that the management team of NRSP express their appreciation of the conscientious and thoughtful work of Bianca Ambrose-Ojo who undertook the study and extend our sincere thanks to her. Even though various factors delayed the finalisation of the study's main report (to 2003), a draft version of the report was available in 2001 and this was used in NRSP's research planning.

Interaction with the leaders of the selected projects was an important input to the study. NRSP thanks the various project leaders who contributed their time for this.

Various members of the NRSP management team reviewed the study's findings, and debated their implications with Bianca. For progressing the report to a publication, the work of Dr Elizabeth Harrison (in her capacity as a member of the NRSP Steering Group) is gratefully acknowledged.

With respect to the production of this publication, NRSP also thanks Sue Hainsworth for her efficient and patient coordination of various inputs, and Bob Eaglesfield for preparing the CD.

**Dr FM Quin**

*Member of the NRSP Steering Group*

*NRSP Programme Manager, April 1999 to April 2003*

July 2004

# Summary

## The context for the study

This booklet highlights findings of a study supported by the Natural Resources Systems Programme (NRSP) of the Department for International Development (DFID)<sup>1</sup>. The study was commissioned to synthesise information on key determinants influencing livelihood strategies of poor people in developing countries. It comprised a desk study of the documentation of eighteen NRSP projects, interviews with project leaders, some fieldwork, and a workshop of key stakeholders. The projects reviewed encompass eight countries and are spread over all the three regions that NRSP covers (sub-Saharan Africa, the Indian sub-continent, and Latin America and the Caribbean). The study focused on the six 'production systems' on which NRSP research on natural resources is based. These are the:

- Forest agriculture interface (FAI)
- High potential systems (HP)
- Hillsides systems (HS)
- Land water interface (LWI)
- Peri-urban interface (PUI)
- Semi-arid systems (SA)

The study identifies factors that influence livelihoods and puts forward proposals for building on these insights through further research. Several critical points also emerge about the extent to which projects have been able to adopt the Sustainable Livelihood Approach (SLA) and Sustainable Livelihood Framework (SLF), now widely supported by DFID.

## Livelihoods in production systems – key determinants

The study identified a number of key determinants of livelihood strategies that are important across all systems. These are:

- **Mixed assets and stores of value.** The ability to accumulate a diverse range of assets, and then hold on to and use stores of value is important. There is also a relationship between stores of value and access to credit and loans, because access to credit is often reliant on both title to land and to the social networks based around resource use and family land holding. Middle-income people are most able to respond to change and make the most of any livelihood opportunities presented.

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1. **Ambrose-Oji, Bianca.** 2003. Key determinants of poor people's livelihood strategies and NR-related management opportunities. *Final Report NRSP Synthesis Study PD 105*. June 2003. Bangor, Gwynedd: Centre for Arid Zone Studies, University of Wales. 42 pp. + 3 annexes (59 + 10 + 2 pages)

- **The capability to undertake labour.** Different kinds of labouring may be undertaken to provide investment capital used to build enterprises. In India and Bangladesh, households are diversifying into lower-value labouring activities with few entry constraints and the derived income is used as investment capital. The ability to labour for income immediately after any livelihood shock is also important, and this ability often ensures access to land and common pool resources (CPRs). The provision of an income stream, rather than relying on loans or gifts as a way of coping, is shown to be more likely to prevent asset usage and to bolster livelihood resilience. A critical aspect of the ability to labour is the health of individuals, and particularly the influence of HIV and AIDS on labour availability.
- **The policy environment and economic context.** Macro- and micro-economic conditions affect the level of economic opportunity and the degree of livelihood disturbance or shock. Also important are the presence of infrastructure such as roads and transport networks, public health planning and service provision, particularly relevant with regard to HIV and AIDS, and the nature of social and political networks
- **Access to credit and loans.** A critical feature of this access is that it should be in the right form at an appropriate time and at the right interest rate. Investment capital, working capital, and safety net capital influence different aspects of livelihood sensitivity and resilience. A common finding is that poor people work to accumulate investment capital. However, it is often the lack of working capital or the need for post-shock income that prevent the use of assets that are intended for, or could be used as, investment capital, and it is this that starts households along more positive development trajectories
- **Knowledge and its uncertainty.** Economic knowledge is crucial to understanding market prices and the quality demands of different buyers and sellers. Technical knowledge uncertainty is associated with agriculture in changing circumstances and the decision-support tools that may help farmers deal with risk and variability. Ecological uncertainty, identified as being particularly significant, is related to the access to and availability of important natural resources and to the effects of group patterns of resource use on the quality and availability of natural resources. Knowledge uncertainties are interlinked, and different types of uncertainty are important at different times. For example, in Kenya, information provided to farmers on a local radio station about the weather is of less interest than information about market prices. Households are more interested in the controllable factors of production than in the less-controllable climate.
- **Diversification of livelihoods.** Livelihood activities may be diversified as a response to either crisis or to opportunity. The cause of this difference may well be geographical: in areas where there is already a downward spiral, diversification contributes to impoverishment, whereas diversification feeding



into a process of accumulation may be identified in countries where there is already some evidence of agricultural take-off. Middle-income people appear the most risk-bearing and dynamic and they consistently score higher diversity measures than poor people. The study does not confirm a widespread pattern of de-agrarianisation but there is evidence to indicate increasing inequality in the distribution of such major assets as land or access to water where the resource is being privatised. Regardless of the patterns of diversification, the natural resource (NR) base maintains an important livelihood role, since a significant set of activities remain predicated on access to natural resources – land and/or water *per se* – and on other benefits, often derived from a CPR.

- **The nature of inter- and intra-household and relationships and membership of social and political networks.** There are important, and often synergistic, relationships between households and kinship groups and between different wealth groupings that have direct impacts on livelihood strategies and outcomes. Whilst the relationships between middle-income or richer people with the poor can be construed as negative or extractive, for some poor people patron/client relationships may be perceived as positive contributions to the management of livelihood vulnerability. Middle-income people often act as brokers between the rich and the poor in the provision of labour in sharecropping arrangements. In many cases this entrepreneurship increases poor people's access to land and agriculture rather than limits it. An understanding of relations of power and the costs of non-market transactions is crucial in this context.

## Opportunities to strengthen livelihoods through research

The opportunities identified are given as generic 'principles' or themes to suggest improvement to research and development in support of livelihoods. They fall into four main areas: building and protecting assets; supporting communication and knowledge flows; supporting poor people through periods of transitional vulnerability; and linking knowledge with policy makers.

### *Building and protecting poor people's assets*

- Identifying ways for the poor to build assets, avoid asset drawn-down and promote investment by understanding and tackling the problems associated with building a secure asset base; understanding the transaction costs of asset management and asset substitution; and understanding and improving the role of credit and loan provision.
- Identifying the institutional forms able to provide poor people with a degree of leverage over the 'social capital' determinants of NR-based livelihood strategies and improving understanding of the impact of processes of 'empowerment' on both livelihood outcomes and the condition of the NR base.

- Research projects should include studies of land tenure and property regimes as they pertain to the asset status and capabilities of poor people. This is likely to involve a consideration of political relationships.
- Understanding the interactions between NR management and health by uncovering the impact of health on the access to and management of the NR base; considering the impacts of demographic changes, morbidity, mortality resulting from HIV and AIDS on the asset status and subsequent NR management options; and the impact of access and entitlement to water, on human health and the productivity of livelihoods.

### *Supporting communication and knowledge flows*

- Exploring the way that the provision of knowledge can serve as an indirect means of building livelihood assets.
- Developing methods and tools that can organise information about livelihoods to identify the form of knowledge and information best suited to the livelihood circumstances of poor people and link this to the research and dissemination systems of institutions at the meso- and macro-levels.
- Supporting the development of sustainable knowledge flows within the community by identifying the ways in which knowledge is circulated amongst communities and how these flows can be better linked to the institutions and services charged with knowledge provision.
- Understanding the implications and impacts of the private provision of knowledge and technology on the livelihoods of poor people and investigating ways in which the private sector provision of knowledge and technology can be made more pro-poor and less open to capture by middle-income and richer people.

### *Supporting poor people through periods of transitional vulnerability*

- Identifying mechanisms to support poor people through periods of transitional vulnerability experienced when changing from one NR-based strategy to another
- Identifying mechanisms to support poor people through periods of transitional vulnerability experienced when changing from NR to non-NR-based strategies.

### *Linking knowledge with policy makers*

- Building flows of knowledge that can push forward policy formulation that includes a consideration of the diversity of system and process
- Identifying mechanisms to build participation in policy formulation as it affects the NR base important to poorer people
- Enabling partner institutions to take forward results of programme and project research.

## Researching livelihoods – challenges and opportunities

The projects analysed have provided useful research insights into livelihood determinants and the means and potential to improve livelihood opportunities. This study's analysis has also provided a better understanding of the challenges faced by livelihoods research and the opportunities to improve this research.

There were some areas of weakness:

- Particular problems emerge over how to identify whom among the potential actors should be included within the research and project process, the inclusion of private-sector partners and actors, and the analysis of private-sector impacts on livelihoods. There are also significant differences in the way the poor are identified and characterised and how these categorisations are applied in the analysis of data
- The SLF provides a framework for thinking about livelihoods but not necessarily a framework for researching livelihoods. Without a properly defined framework structuring livelihoods research there is a danger that research effort may be spread too thinly
- Furthermore, there is a tendency to use the SLF and SLA in a rather mechanistic way; language and concepts need to be examined critically, clearly explained, and only applied if they appear to have real merit. Terms and concepts found to be particularly open to misunderstanding included 'coping and adaptation', 'diversification', and 'social capital'
- Lastly, all of the projects used households as the basic unit of analysis. However, only one project defined what a household was, and indicated how the data collected represent the household as a group of individuals. There is little acknowledgement of the household dynamics structuring livelihood outcomes. These factors result in broad impressions of community-level patterns of occupational activities, income sources and expenditure patterns, at the expense of understanding the decision-making processes that drive these outcomes.

Three main opportunities to address these weaknesses are identified:

- Researchers need to design ways to better characterise the different groups within any given community as they are linked to particular natural resources sets
- More attention needs to be given to the ways in which quantitative and qualitative data are analysed and linked. This means finding and applying research methods that can: analyse context and understand diversity; account for variation over time; record historical experience; uncover power relationships within and between households; and characterise livelihood impacts of policy and politics

- Critical application of concepts and terminology is essential if livelihoods research is to find routes that enable households to escape poverty. Research outputs and materials need to avoid livelihoods jargon, not least because impenetrable or clichéd language quickly becomes obsolete and can act as a barrier to improved understanding and to research credibility.

# The context for the study

## Introduction

This booklet highlights findings of a study<sup>2</sup> supported by the Natural Resources Systems Programme (NRSP) of the Department for International Development (DFID). The study was commissioned to synthesise information on the key determinants influencing the livelihood strategies of poor people in developing countries. The report of the study on which this booklet is based is enclosed as a CD.

NRSP's purpose is to 'deliver new knowledge that enables poor people who are largely dependent on the natural resource base to improve their livelihoods'. Research questions in the synthesis study focused on both the contribution of natural resources (NR) to livelihoods and the opportunities available to enhance livelihood options.

The livelihoods synthesis study comprised a desk study of the documentation of eighteen NRSP projects, interviews with project leaders, some fieldwork, and a workshop of key stakeholders.

The synthesis study analysed a great deal of information about the characteristics of livelihoods in diverse contexts. It also identified some important suggestions for strengthening those livelihoods. These centre on building and protecting poor people's assets, encouraging communication and supporting people through periods of transitional vulnerability. Findings on livelihood determinants are presented in Section Two. In Section Three, these form the basis for recommended research opportunities.

The synthesis study also identifies a number of challenges and opportunities about the ways in which researchers have (and could have) applied the Sustainable Livelihoods Approach (SLA) and Sustainable Livelihood Framework (SLF). These analytical tools have guided much livelihoods-related research in recent years, including that supported by DFID. They stress the importance of people-centred, holistic, multi-level, and dynamic research, that recognises the interconnections between different assets, often called 'capitals'. These include natural, human, financial, physical and social capital. The SLF draws on the work of Amartya Sen<sup>3</sup> on the relationships between people's endowments (what people have), their entitlements (what they can do with their endowments) and their capabilities (what they are able to be or do with their entitlements).

As analytical devices, the SLA and SLF can help understand the complexity of people's lives. However, the synthesis study found that their application could, on occasion, be both mechanistic and lacking in clarity. In Section Four these problems, and some suggestions for addressing them, are discussed.

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2. **Ambrose-Oji, Bianca.** 2003. Key determinants of poor people's livelihood strategies and NR-related management opportunities. *Final Report NRSP Synthesis Study PD 105*. June 2003. Bangor, Gwynedd: Centre for Arid Zone Studies, University of Wales. 42 pp. + 3 annexes (59 + 10 + 2 pages)
  3. **Amartya Sen.** 1981. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford, UK: Clarendon Press 166 pp.

In the following sections, the ‘production systems’ on which the research is based, and the study method, are described.

## Production systems

The livelihoods synthesis study focused on the six ‘production systems’ on which NRSP research on NR is based. These are the:

- Forest agriculture interface (FAI)
- High potential systems (HP)
- Hillsides systems (HS)
- Land water interface (LWI)
- Peri-urban interface (PUI)
- Semi-arid systems (SA)

### *Forest Agriculture Interface (FAI)*

The forest agriculture interface concerns areas that are in transition between primary forest and settled agricultural land use. Two land use dynamics are identified, the first involving initial forest conversion and the second involving the development of subsequent patterns of land use. Features of the FAI vary between target geographic regions. However, a common feature in terms of people’s livelihoods is that interdependency between crops and forests or tree-based systems is important, possibly with livestock as an additional common feature.

### *High Potential Systems (HP)*

High potential systems are found in regions characterised by a favourable climate, relatively fertile soils, and good groundwater resources in some instances. These systems include the small landholdings associated with high population densities. For varying reasons, in spite of the high potential of the NR base, the rural populations in the areas targeted by NRSP are distinctly poor and disadvantaged, presenting a considerable challenge to the ways by which NR management research could assist livelihood improvement.

### *Hillsides Systems (HS)*

Hillsides systems are characterised by farming activities (crops and livestock) on steep slopes where difficult terrain results in poor accessibility, limited infrastructure and markedly impoverished communities. Use of these marginal lands has led to their degradation with soil erosion, declining soil fertility and deforestation all contributing to low productivity. In addressing these land management problems, NRSP adopts a holistic strategy towards the development and promotion of improved farming strategies that meet the needs of marginal farmers.

### *Land Water Interface (LWI)*

Land water interfaces are located in regions where aquatic and terrestrial resource

systems co-exist and overlap, in some instances with marked seasonal changes. The interface targets two ecosystems – coastal zones and floodplains. In NRSP research, in the coastal zone priority is given to the aquatic environment, emphasising coral reefs and lagoons, mangroves and sea-grass beds. In addition, in order to address impacts on that environment, the research takes a wider approach to production constraints and considers land use practices and zoning in coastal ecosystems. In the target areas for floodplains research, a similar conceptual approach is applied to this inland aquatic system.

### *Peri-urban Interface (PUI)*

The peri-urban interface is created by urban development. As urban activities grow and spread, links or impacts upon rural activities in the countryside are created. These cause changes to existing production systems and create new ones that can affect the poor in both urban and rural areas. Opportunities arise from easier access to urban markets, services and jobs, and the re-use of urban wastes. Problems arise from the conversion of land, urban pollutants, farm labour shortages, and the loss of NR-based means of livelihood.

### *Semi-arid Systems (SA)*

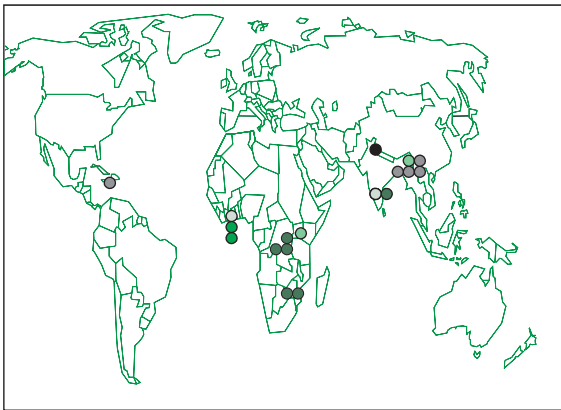
Semi-arid systems characteristically occur where agricultural activities and livelihood strategies are constrained by poor NR (principally low and erratic rainfall and infertile, poorly structured soils). Recently completed projects in Tanzania and India have centred on the understanding of livelihoods of the poor, in respect of coping strategies, dependence on CPRs, and NR management strategies.

## **Project selection**

The projects from NRSP's portfolio screened for inclusion in the livelihoods synthesis study are those that undertook livelihood studies either as the central focus of a project or to establish a context for other research on NR management. Projects of these types are available in varying numbers for each of the production systems. Five of these projects were commissioned before DFID's policy explicitly focused on poverty and the SLA; four contain detailed livelihoods studies and one contains some relevant information. The remaining projects were commissioned from April 1999 onwards when NRSP's overall objective, in line with DFID's policy, focused on the generation of new knowledge relevant to the improvement of livelihoods of the poor

Eighteen projects were selected for the study. As shown in Table 1, they encompass eight countries and are spread over all the three regions that NRSP covers (sub-Saharan Africa, the Indian sub-continent, and Latin America and the Caribbean) and all six production systems. However, it was subsequently determined that the data collected in the one project from the HS production system were not appropriate for the analytical purposes of this study. The study's analysis therefore relates to just five production systems (FAI, HP, LWI, PUI and SA).

**Table 1. Indicative distribution of projects making a contribution to the synthesis study**



### Production Systems

- **Forest Agriculture Interface**  
(2: Ghana)
- **High Potential Systems**  
(2: Bangladesh 1, Kenya 1)
- **Hillside Systems** (1 Nepal)
- **Land Water Interface**  
(5: Bangladesh 4, Caribbean 1)
- **Peri-urban Systems**  
(2: India 1, Ghana 1)
- **Semi-arid Systems**  
(6: Zimbabwe 2, India 1, Tanzania 3)

Project number	Title	Project status	Explicit livelihood focus?	Beneficiary focus
R7446	Shortened bush fallow rotations, Ghana	Ended Feb '03	*	Small-scale farmers
R7516	Bridging knowledge gaps between soils research and dissemination, Ghana	Ended July '01	**	Food-insecure rural people
R7180	Options for the use of power tillers and draught animals, Bangladesh	Ended May '01	***	Not defined
R7962	Linking soil fertility and improved cropping strategies to development interventions, Kenya	Will end Feb '05	*	Small-scale poorer farmers
R7412	Incorporation of local knowledge into soil and water management interventions minimising nutrient losses in the Middle Hills, Nepal	Ended March '03		Not defined
R6755	Sustainable local water resource management in Bangladesh – Meeting needs and resolving conflicts	Ended Jan'00	*****	Small-scale fishers and farmers on the floodplain
R6744	Methodological research into the incorporation of indigenous knowledge into	Ended Nov '99	*	'The poor', planners, regional groups



Project number	Title	Project status	Explicit livelihood focus?	Beneficiary focus
	natural resources research on Bangladesh floodplain production systems			
R6756	Investigation of livelihood strategies and resource use patterns in floodplain production systems in Bangladesh	Ended Nov '99	*****	Small-scale marginal and landless farmers and fishers
R7797	Opportunities and constraints for coastal livelihoods in the Caribbean	Ended July '01	**	Planners, regional groups and coastal communities
R7868	Maximisation of joint benefits from multiple resource use in Bangladeshi floodplains	Ended Mar '02	****	Small-scale marginal and landless farmers and fishers
R7867	Filling gaps in knowledge about the peri-urban interface around Hubli-Dharwad, India	Ended Mar' 02	*****	'The poor', planners, regional groups
R7854	Further knowledge of livelihoods affected by urban transition, Kumasi, Ghana	Ended Oct '01	*****	'The poor', planners, regional groups
R7304	Micro-catchment management and common property resources in Zimbabwe	Ended Nov '01	***	Small-scale and marginal farmers
R7545	Coping strategies of poor households in semi-arid Zimbabwe	Ended Oct '01	***	Small-scale and marginal farmers
R7558	Understanding household coping strategies in semi-arid India	Ended May '01	**	Small-scale marginal and landless farmers
R7805	Understanding household coping strategies in semi-arid Tanzania	Ended Oct '01	**	Not defined
R7806	Human and social capital's role in NR management in Tanzania	Ended Sep '01		Not defined
R7857	Review of common pool resource management in Tanzania	Ended July '01		Not defined

## Issues of analysis and method

### *Characterising and defining people: who are the poor?*

Projects use two approaches to disaggregate communities. The first is wealth ranking, and the second is classification by occupation.

Wealth-ranking methods used by projects fall into the following categories:

- Categorisations based on **community or informant perceptions** and criteria, *e.g.*, wealth ranking on mixed asset, status and land management categories and farmer-based perceptions that mix occupation, social status, income, asset and landholding variables
- Categorisations using **other researcher-applied criteria** *e.g.*, wealth scores derived from inventories of household assets, and categories based on landholding size and land ownership
- **Ex-post quintile/quartile methods** *e.g.*, division by wealth quartiles based on household assets, quintiles based on income levels
- **No formal classification** where assumptions are made based on other household characteristics such as age, gender and ethnicity as proxy indicators of wealth.

Recognising contemporary interpretations of poverty it is worth acknowledging that income based measures of *ex-ante* and *ex-post* characterisations of wealth may miss some of the wider aspects of well being. If income is given a narrow definition to include only cash earnings, then household subsistence activities may not be counted (*e.g.*, household consumption from subsistence farming or collection of goods from CPRs).

In addition, wealth classifications based on occupation cannot assume that all members of a wealth grouping are following the same livelihood strategies. Whilst there may be group exposure to changing circumstances, responses to change will be individual. Consequently within occupational groupings there are still likely to be differentials in wealth and well being levels, and differences in the strategies being followed.

The wealth groupings used in this study can be considered as mainly asset-based (income, physical capital, and household assets). Within the study different sets of people were classified very broadly as **rich**, **middle-income** and **poor**. This broad grouping was based on a subjective assessment and interpretation of the different projects' own classifications. It was not appropriate to try and develop a more-detailed characterisation that took into account the details of all the different ranking and grouping systems employed by the projects.

Whilst the terms of reference for this study required a consideration of the livelihoods of the poor, the boundaries between poor and middle-income people are hard to discern – either within project data or between project datasets. Middle-income people are sometimes 'the poor' or 'the transitory poor', therefore analysing their situations can capture some sense of poor people's livelihoods too.

### *Division by production system: problems of boundaries*

There are problems in maintaining the boundaries between production systems, and overlaps between systems are common. For example, FAI projects in Ghana include some of the same research areas and participants included in the PUI projects in Kumasi. There is also an imperfect division between the SA and the PUI. There are system overlaps between the LWI and HP areas in Bangladesh, whilst the FAI areas in Ghana might have also been characterised as HP zones and be expected to share characteristics with the HP areas of Kenya.

Household livelihood strategies may cross system boundaries. Household members may work and contribute from a base in one system to household members based in another. It is hard to categorise a household that maintains a significant presence in a peri-urban area in pursuit of cash income, in addition to an agricultural base in a rural area, as being part of either the PUI or as part of, say, the FAI as was the case in the Ghana projects. This is precisely the kind of research outcome inherent in using the SLF, that pushes researchers to consider livelihood dynamics outside of system boundaries, and reveals the temporal and spatial relationships between different sectors and locales. Production systems need to be understood within such a wider environmental and economic context.

One method of analysis that could have been used to overcome the imperfections of system boundaries would have been to examine livelihood determinants from a country perspective. However, there are limitations in adopting this approach, not least the loss of a specific environmental or NR dynamic to the analysis. There is considerable value in looking for differences across countries within the same production systems, because it is the analysis of difference that gives strong clues to the real determinants of livelihoods

### *Caveats*

The synthesis study covers material from projects working in a heterogeneous set of countries, ranging from small island economies to densely populated nations that are sub-continentals such as India. In addition, individual projects employ different analytical approaches and research methodologies, cover different time-periods, and produced datasets of varying quality. Some of the projects provide a clearly articulated theoretical framework based on literature reviews in which to set their data collection and analysis, whereas others are more applied and practical in their approach. Some apply a livelihoods focus based on the SLF (or the evolution of the SLF) and others do not.

This diversity of project material obviously makes synthesis a challenging task, not least in the methodological approach to drawing generic conclusions. Whilst it has been important to allude to some of the difficulties encountered, the findings of this study are robust and can inform the work of those engaged in development in arenas where NR and the environment play an important role in the way people manage their lives. Methodological ‘lessons learned’ from this study are outlined in Section Four, and are likely to be of interest to policy makers and research managers who require reliable methods to help them identify the drivers of livelihood change.

# *Livelihoods in production systems*

## *– key determinants*

### Introduction

Project data reveals much information about the determinants of livelihoods in the different production systems. This information is presented in detail, disaggregated by production system, in the enclosed CD. Here, in Section Two, key highlights across the production systems are summarised. Firstly, some of the principal determinants of livelihoods are outlined. These range from the various assets that are key to people achieving entitlements, to the role of policy and institutional factors, knowledge, risk and uncertainty. Issues concerning the role of the NR base in relation to other determinants of livelihoods, diversification, and the vital role of inter-household relations and local economies in livelihood outcomes are also addressed.

### Key determinants of livelihoods

Diversity between and within the production systems exposes a diverse range of factors influencing the strategies and opportunities that affect poor people's livelihoods. In synthesising the project material a number of NR-related assets and processes emerge as of vital importance to poor people regardless of the production system in which they are situated.

It is important to recognise that the determinants outlined here, while they may be important to the livelihoods of poor people at the moment, are not necessarily those that may continue into the future. The conclusions drawn here reflect the existing situation, not the situation as it may be. This is probably most particularly true in the case of the PUI where a number of the NR management considerations will almost certainly not be sustained in the future if processes associated with urbanisation continue to spread to peri-urban locations. Whilst it is not possible to say that any of the particular livelihood determinants is operating specifically in any one of the production systems, evidence gleaned from project material shows that some of these determinants are at work in some of the systems. Furthermore, where components of livelihoods appear to influence the livelihood strategies of poor people, it is not possible to present a case for how important or influential they are, since it was not always possible for research projects to quantify these components of livelihoods.

Components that are important across all production systems (in no significant order) are:

- The ability to accumulate mixed assets, and then hold onto and use stores of value (tangible assets such as land or cash, and such intangible assets as knowledge and skills)

- The capability to undertake, and opportunities for, labour in both agricultural and non-agricultural work. An important aspect is the health status of individuals, and particularly the influence of HIV/AIDS on household labour availability
- Policies, institutions and processes affect the capabilities and capacities of poor people to manipulate their assets as does the wider economic context within which these are situated
- Access to credit and loans in the right form at an appropriate time and at the right interest rate is important in enabling positive development trajectories
- Ecological, economic, and technical knowledge and its uncertainty influences the livelihoods of poor people and their ability to manage changing circumstances
- Diversification is an important feature of livelihoods but its effects vary geographically with income level, and with CPR and/or private property resource bases
- Inter- and intra-household relationships and membership of social and political networks structure access to and management of natural resources, particularly CPRs – both bounded *e.g.*, forest land or grazing areas, and non-bounded *e.g.*, water or migrating animals such as fish, as well as to local economies

### *Mixed assets and stores of value*

As **Box 1** indicates, stores of value often exist as land and resources that have multiple functions and multiple benefit streams but are also held as a form of ‘savings’ that can be transformed into financial and economic goods at a later date (it is interesting to note that this includes soil fertility and education/knowledge together with the more tangible assets). There is a relationship between stores of value and access to credit and loans, because access to credit is often reliant on title to land and to the social networks based around resource use and family landholding.

#### **Box 1. Livelihood security may rely on stores of value with multiple functions and benefits**

In high-potential areas of central Bangladesh cattle are an important store of value. As agricultural enterprises become more commercial power tillers have become more easily affordable and increasingly popular. However, many poorer and middle-income groups continue to keep cattle in preference to power tillers, or where they can, they continue to keep them alongside their mechanical cultivators. The reason for doing this is that livestock or cattle are the preferred form of financial/physical capital because of the flexibility and multiple benefits that can be accrued from them. There is an income stream from renting out animals to other households. There are also cash and subsistence benefits from the supply of milk and manure and the sale of offspring. Cattle can also be used as a means to broker access to other resources, *e.g.*, some landowners perceive

the soil fertility benefits derived from cattle manure as the best way to maintain the value of their natural capital stocks, and will insist on cattle ownership as the collateral needed to effect sharecropping arrangements. In all but the most extreme times of stress, the market for cattle is relatively buoyant and animals can be sold in response to individual livelihood contingencies thereby representing an important form of liquid assets.

Source: **Adam, M.G. 2001.** Options for use of power tillers and draught animals for primary cultivation on small farms in Bangladesh. *Main Report: DFID–NRSP Project R7180*. Chatham, UK: Natural Resources Institute, University of Greenwich. 32 pp.

The synthesis of project material shows how middle-income people are most able to respond to change and make the most of any livelihood opportunities presented to them. Their coping and adaptive strategies are based on livelihood strategies that maintain a mixed asset base of both NR and non-NR components. Maintaining the means to be flexible is the core of these strategies. The relationships between the component assets making up any livelihood are dynamic and reflect the risk management and vulnerability aspects of livelihood strategies. Resilient livelihoods are able to transform assets between one form and another and back again in response to changing social, physical and policy/institutional contexts. An example of this is given in **Box 2**.

### **Box 2. Resilient livelihoods respond to change by transforming assets from one form to another**

In the village of Emuhasti near Maseno in Kenya, a number of farmers have switched out of growing only traditional staple crops such as maize and beans into growing vegetables, and have come together as a small informal group. Vegetable prices are subject to fluctuating prices linked to small changes in climate, supply and season, and livelihood strategies relying on the sale of vegetables are vulnerable to these economic shocks. To increase the resilience of his livelihood one of the farmers used the small profits he made from vegetable sales and the sale of a radio to buy a bicycle. Although owned by one individual the bicycle is shared by several vegetable farmers. Working together the group now uses the bicycle to rush to and from village markets on market days, monitoring prices. This knowledge is then shared with the rest of the group. This puts the group in a position of strength when the traders call at their farms to negotiate prices for their crops. The farmers are now better placed to set prices for their goods more easily. On days when the prices in the village market are too low and the traders do not call, the farmers can use the bicycle for a different purpose; to transport their crops into the main town where they can expect to receive a better return for their labour. The bicycle is also useful for transporting goods back from the town or village, and the farmers have started selling small amounts of goods, purchased using the profits of their vegetable sales, to their immediate neighbours. Patrick, the owner of the bicycle says that if things go wrong and he needs money, he will always be able to sell his bicycle for a good price because it is far more useful than a radio. This adaptive diversification strategy relies on the fluid conversion of social and financial capital into a physical capital asset that is in turn used to build the human, social, and financial capital of the group even further.

Source: Project R7962, field visits, November 2002 (unpublished).

### *The capability to undertake labour*

Also emerging as a common crucial determinant is the sale and supply of labour (see **Box 3**). This may either be on-farm labour, or off-farm non-agricultural labour that may or may not be NR-based and includes such activities as trading, the provision of services, and casual labour. On-farm labour mediates access to land and may also provide contingent access to CPRs. Non-agricultural labour may be employed in realising CPR-related entitlements such as the labour used in gleaning, or collecting artisanal/craft materials. The financial capital flows accruing from labour will depend on the way households trade-off the levels of return from particular activities against the reliability and regularity of those income sources, as illustrated in **Box 4**.

#### **Box 3. Labouring can be both a safety net and an effective coping strategy**

Kefasi lives in the Masvingo area of dryland Zimbabwe. After having migrated out of his village to Gokwe he recently returned to Romwe with his family so that he could look after his bedridden mother. When he returned he reclaimed his crop field from the person to whom he had leased it out. However, Kefasi himself has had little success farming his own land. This is partly because of the deteriorating environmental conditions, but mainly because he is not able to purchase such basic inputs as seeds or to pay for services such as ploughing, since all his cattle perished during the droughts of the early 1990s and he sold most of his other agricultural assets to survive. Instead of putting all his efforts into his own farming, Kefasi now prefers to labour on the farms of other households. The Kefasi family weeds and harvests crops in exchange for either cash or grain. Because he was exposed to the process of cotton growing in Gokwe, Kefasi is in demand by farmers in Romwe who are beginning to take up cotton growing as a way of managing the risk of drought, since cotton has some drought tolerance. Kefasi's knowledge of cotton production practices and his ability to mix and apply pesticides means that he is regarded as a skilled worker who can help his employers learn more about the cotton business. Kefasi has two daughters who have remained in town. They are not formally employed but do manage to find ways to send remittances back home every now and again. Unfortunately for the Kefasi family, whilst labouring may have been first a safety net in times of extreme stress and then a successful strategy accommodating their changing circumstances, it still has social stigma. People believe Kefasi must be 'lazy' and 'idle' if he is seen to prefer labouring for others to labouring in his own field.

Source: **Campbell, B., Jeffrey, S., Kozanayi, W., Luckert, M., Mutamba, M. and Zindi, C.** 2001. Household livelihoods in semi-arid regions: options and constraints. *Draft Final Technical Report DFID–NRSP Project R7304*. Harare, Zimbabwe: CIFOR and Institute of Environmental Studies, University of Zimbabwe, 122 pp. + Appendices.



#### Box 4. Labour can be used to mediate livelihood vulnerability and build livelihood resilience

In southern India the peri-urban interface is a zone characterised by dynamic and unpredictable change, in both the natural resource and the social and political contexts. These disturbances may increase the insecurity of livelihoods, but they also mean that the peri-urban interface presents a rich mixture of livelihood opportunities where new activities can be undertaken and new markets exploited. In the semi-arid and drought-prone peri-urban area around the twin cities of Hubli and Dharwad in Karnataka, a research project worked closely with 64 different households across eight different villages, understanding more about how groups of poor people made a living. For many poor people the expanding city provides openings for skilled and unskilled labour in the relatively well-paid construction industry, and in commercial and service labour. At the same time it prompts changes in the supply of and demand for agricultural products and labouring opportunities – often reducing prices paid for both crops and labour. When discussing how their livelihood strategies had changed in recent times, some poorer households described how they had turned their landlessness and the relative risks of agricultural-based livelihoods to advantage by diversifying their portfolio of activities out of the natural resource sector into the sale of their labour for off-farm and non-farm enterprises. At the same time the role of men and women changed as an adaptive strategy taking advantage of the local markets for labour. Whilst men travelled into the city or close to the city to engage in construction and brick-making, women worked in quarries and brick-making enterprises and in agricultural labouring in areas closer to their homes and villages.

Some of the poorer households went on to describe how their first concern was to develop strategies that secured their basic needs. For many households decisions were made around the level of income different jobs afforded and the security offered by those jobs. Although jobs in the city might provide higher daily wage rates, well-developed labour markets and a ready supply of labourers mean that job security is not assured. However, whilst providing lower overall levels of income, traditional rural-based labouring (both on- and off-farm) offered regular and reliable income streams. Poor households were not necessarily ‘forced’ into low-paid employment: A total of 19% of case study households said they considered higher wage rates as important, but 24% of the sample mentioned take up of reliable lower paid jobs as an active choice and as part of a deliberate livelihood strategy. One family in Shirriguppi village explained how the father was both a trained plumber and a blacksmith, but because city-based plumbing is a seasonal job, he continued working year-round as a lower-paid smith. Another family in Mandihal explained that lower-paid agricultural labouring remains attractive even though it reinforces social perceptions of a household’s poverty, because there is nearly always somebody looking for farm labour close to a worker’s own home. Poor households made tradeoffs between returns to their labour and the reliability and regularity of the economic activities in which they engaged as part of their livelihood strategies, balancing the chance to accrue financial and physical capital against livelihood resilience and insurance against livelihood shocks.

Sources: **Hillyer, K., Patil, A. and Hunshal, C.S. 2001.** A study of the livelihood strategies of the poor and very poor in peri-urban areas of Hubli-Dharwad, and the impacts of urbanisation upon them. *Draft report: DFID-NRSP Project R7867*. Gwynedd, Bangor: University of Wales, School of Agriculture and Forest Sciences: 45 pp. and **Hillyer, K. 2001.** *pers. comm.*



Different kinds of labouring activities may be undertaken to provide investment capital used to build enterprises reliant on the NR base. In India, and in land-based livelihood activities in Bangladesh, households are diversifying into lower-value labouring activities with fewer entry constraints, but the income is used as investment capital needed to overcome barriers to high-value enterprises such as dairying, land purchase or leasing, or capitalising agricultural production.

Another common thread running through the projects is the determining influence of the ability to labour (or the need to sell labour) for income immediately after any livelihood shock. The provision of an income stream, rather than relying on loans or gifts as a way of coping, is shown to be more likely to prevent asset usage and to bolster livelihood resilience (see **Box 5**).

### **Box 5. Income streams can manage livelihood shock and avoid asset usage**

One NRSP project was collecting data about local livelihood strategies when in 1998/9 Bangladesh was hit by severe floods, that covered over 68% of the country. The project documented peoples' response to stress and the subsequent livelihood impacts during this period of flooding in Tangail District in central Bangladesh. As the flood continued many households in the project area were displaced not only by the progress of the flood water itself, but also by the loss of land and homes to bankside erosion. Many families moved into the flood control areas and settled on open-access government or *khas* land where they were not only able to find shelter but also to graze their livestock. When the research project team discussed the immediate aftermath of the floods with 190 of such households, after the immediate need for food, the issue that ranked second as their major livelihood constraint and barrier to coping, was the lack of income-earning opportunities. Without this household income families found it hard to replace the tools, seeds, and other assets they needed to adapt to and manage their changed circumstances. In many cases people were willing to go hungry rather than sell what agricultural and household assets they still owned. It was an income stream, a regular trickle of cash, that people sought to provide them with a route to managing their way through the livelihood shock the flood had brought and away from slipping into a cycle of 'asset draw-down' which they perceived would push them into worse poverty.

Sources: **DFID–Natural Resources Systems Programme. 2001.** Data archive 2000: GIS data and ACCESS data: CD-ROM. *DFID-NRSP Project R6755.* Leeds, UK: University of Leeds, and **Barr, J. 2001.** *pers. comm.*

### *The importance of the policy and economic context*

The capabilities and capacities of poor people to manipulate their assets in support of robust livelihood strategies, depends also on the policies, institutions and processes surrounding each of the component asset types. The most significant of these include:

- Macro-economic conditions affecting the level of economic opportunity and degree of livelihood disturbance or shock
- Nature of social and political networks as means to build entitlement and to mediate vulnerability

- Presence of infrastructure such as roads and transport networks and rural to urban linkages
- Policy impacts of development planning to enable taking advantage of new opportunities around significant NR resources
- Public health planning and service provision, particularly relevant with regard to HIV/AIDS.

An example of how the policy impacts of development planning the macro-economic conditions affect the level of economic opportunity are shown in **Box 6**.

### **Box 6. Accumulating livelihoods may begin with a supporting policy context**

In Tobago and Jamaica, fisheries export and tourism revenues have been the main vehicles for development in recent years. However, a project concerned with identifying the opportunities and constraints for livelihood groups reliant on fishing noted quite different livelihood outcomes for people in the coastal community of Portland Bight in Jamaica from those of coastal people in Scarborough, Tobago. The poorer groups in Jamaica were significantly poorer than those in Tobago, and identified their livelihood priorities in terms of such immediate goals as securing their next few meals. Poorer households in Tobago looked into the medium term and discussed livelihood priorities in terms of their children's education and the island's environmental quality. The project team found that the reason for this lay in both government policies supporting capital markets and the provision of financial services and in peoples' knowledge of these. The general economic condition of Tobago was also having an effect on local livelihoods. The people in Tobago understood far better than their Jamaican counterparts what their government development policies for the fishing and tourism sectors were, and therefore they understood better the nature of livelihood vulnerability and risk. This knowledge allowed them to judge how best to develop their livelihood strategies, which by and large rested on the expansion and consolidation of existing fishing-related activities. In addition to accessing small-scale investment credit the Tobagoans accessed complimentary services that built on other determinants of their human capital, such as literacy, basic book-keeping, accountancy and simple business and business management skills.

Sources: **Willoughby, N. 1999.** Opportunities and constraints for coastal livelihoods in the Caribbean. *RD1: DFID-NRSP Project R7797*. Chatham, UK: Natural Resource Institute, University of Greenwich, 28 pp., and **Hancock, K. 2001.** *pers. comm.*

### *Access to credit and loans*

Examples of livelihood strategies in Boxes 5 and 6 have already hinted at how the provision of credit and finance plays multiple roles. Capital, in three broad forms; investment capital, working capital, and safety net capital, influences different aspects of livelihood sensitivity and resilience. A common thread running through project findings is that poor people work to accumulate investment capital. However, it is often the lack of working capital or the need for post-shock income that prevents the

use of assets that are intended for, or could be used as, investment capital, and that start households along more positive development trajectories. **Box 7** provides another example of how different forms of credit can mediate livelihood vulnerability through times of livelihood stress.

### **Box 7. Credit can mediate livelihood vulnerability during NR management changes**

John farms near to Kisumu in high-potential Kenya, where he has a small acreage and homestead that he shares with his mother, wife, brother, and sister-in-law. He decided that he needed to diversify his agricultural production and move out of maize. Luckily for John he had had some contact with the local research station and extension services and was invited on an exchange visit to see how farmers over the border in Uganda had begun to diversify their production and livelihood strategies. John was most enthusiastic about the profits that could be made from bananas, particularly when some of the Ugandan farmers passed on some suckers to him for free. John has started to crop tomatoes and bananas as his household's main source of income, and he hopes to realise an income from this change after 18 months. John's problem was how to manage this 18-month period of vulnerability and lack of income or subsistence production. In the event, his brother sold his cow and used the money to rent a piece of land (which they can hire either by the season or by the year) on which they grow maize and beans. This will help them to manage with the next harvest season. John and his family are not sure what will happen for the remaining 6 months of the transition period. They hope that they will be able to find some form of working credit or safety net credit from other sections of the community or from an NGO they know is involved in micro-credit advocacy, to see them through a food-insecure period.

Source: Project R7962, field visits, November 2002 (unpublished)

### *Knowledge and its uncertainty*

It is interesting to note the degree to which knowledge has an influence on the livelihoods of poor people. Evidence from NRSP project material points to knowledge uncertainty being important for both men and women. Knowledge uncertainty presents itself in three different forms; economic, ecological, and technical or skills-based. These have varying degree of impact on the ability of households to manage risk and NR-based opportunities in a way that promotes positive livelihood outcomes.

Economic uncertainty is linked to understanding market prices, fluctuations in those prices and quality demands of different buyers and sellers. Technical knowledge uncertainty is associated with agricultural practice and management in changing rather than static circumstances and decision-support tools to help farmers deal with risk and variability. Ecological uncertainty, identified as being particularly significant, is related to policy impacts on the access and availability of important NRs and to the effects of group patterns of resource use or production outputs on the quality and availability of NRs. To a lesser extent, it relates to the ability to monitor and evaluate changes to the natural environment and NR base.

Knowledge uncertainties are also interlinked, and different types of uncertainty are important at different times. In one example from Kenya, information provided for farmers on a local radio station about the weather is of less interest than information about market prices. Households are more interested in the controllable factors of production than in the less-controllable climate. However, in Zimbabwe, knowledge about market prices set alongside an informal system tracking changes to water availability, proved to be a significant decision-support tool for farmers hoping to secure income from higher-value vegetable production. A further example of how different knowledge uncertainties can combine to frustrate adaptive strategies is given in **Box 8**.

### Box 8. Knowledge uncertainties can combine to frustrate adaptive strategies

In semi-arid Tanzania knowledge uncertainty appears to lock households into cycles of production that are unable to respond to either ecological or market conditions. Project data from the Maasai areas of Monduli and Ngorongoro Districts suggest that declining environmental and natural resource conditions have prompted many poor people into making changes to their traditional portfolio of livelihood activities. Whilst the price for cattle has declined the cost of cattle feed has increased. Rather than selling a proportion of their herd to purchase the feed for remaining animals, poorer and middle-income groups have started to grow feed grains for their livestock. This marks a significant change for many Maasai, who have traditionally relied on pastoralism rather than agriculture as the backbone of their livelihood strategies. Lack of technical knowledge about agricultural techniques and the types of feed varieties best able to withstand harsh and highly variable climatic conditions, lack of knowledge about the costs of production and the relative market prices of cattle compared to grain, and uncertainty about the degree of ecological and subsequent livelihood risk involved in agricultural enterprises, have frustrated efforts to secure greater livelihood resilience in this way.

Sources: Lovett, J., Stevenson, S. and Kiwasila, H. 2001. Review of common pool resource management in Tanzania. *Final Technical Report: DFID-NRSP Project R7857*. York, UK: University of York, Norconsult, Institute of Resource Assessment. 18 pp. + Appendices, Mbiha, E.R. 1999. Human and social capital's role in NR management in Tanzania. *RDI: DFID-NRSP Project R7806*. Morogoro, Tanzania: Sokoine University of Agriculture. 28 pp. and Kiwasila, H. 2001. *pers. comm.*

### *Diversification of livelihoods*

Diversification of livelihood activities may be seen as either a response to crisis or to opportunity (**Box 9**). This cause of this difference may well be geographical: in areas where there is already a downward spiral, diversification contributes to impoverishment, whereas diversification feeding into a process of accumulation may be identified in countries where there is already some evidence of agricultural take-off.

It seems that it is middle-income people that are the most risk-bearing and dynamic. Apart perhaps from the profiles presented for the PUI, middle-income people consistently score higher diversity measures than poor people. Evidence showing that either middle-income or poor people are diversifying out of activities and livelihoods

### Box 9. Diversification may be a response to livelihood stress or to opportunity

The research projects working in semi-arid Tanzania, Zimbabwe and India, all reported unfavourable and declining macro-economic conditions and argued these had a significant impact on livelihood outcomes. One of the projects in Tanzania argues that economic liberalisation has concentrated production in areas outside semi-arid zones where more favourable agroclimatic conditions or lower transport costs have a positive effect on yields and market prices. Where they found examples of diversifying livelihoods amongst the poor, project teams attributed this to forced coping and survival strategies rather than to strategies of adaptation and accumulation through choice. The project data demonstrates that as macro-economic and environmental stress increase, households adopt risk-aversion strategies and are forced into non-specialist wage labour as a source of income. Consequently the time and resources available for use on the farm are constrained and their vulnerability increases.

Across Bangladesh there has been a measured decrease in rural poverty since 1992, although there has been a parallel increase in *per capita* inequality of consumption, which is manifested as growing landlessness. However, economic liberalisation of agriculture has brought some tangible benefits to farming in the high-potential areas of the country. NRSP projects have shown that diversification of either livelihood activity portfolios (*i.e.*, an increase in the number of different activities in which people engage), or of agricultural production (*e.g.*, growing a wider range of different crops) is as much a response to increasing opportunity as to livelihood stress. Poor people here reliant on the NR base have benefited from buoyant labour markets and better prices for diary products and high-value horticultural crops such as vegetables and tomatoes. In addition, the rural poor stand to make large gains by moving into the non-farm sector. Activities such as rickshaw pulling, small business, petty trading, and artisanal activities are increasingly important activities that may result in more secure livelihoods.

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Sources: **Shepherd, A. 2000.** Coping strategies of poor households in semi-arid Zimbabwe. *DFID–NRSP Project R7545*. Birmingham, UK: International Development Department, School of Public Policy, Birmingham University: 150 pp. + Appendices, **Marsland, N. 1999.** Understanding household coping strategies in semi-arid Tanzania. *RD1: DFID–NRSP Project R7805*. Chatham, UK: NRI, University of Greenwich. 27 pp., **Mbiha, E.R. 1999.** Human and social capital's role in NR management in Tanzania. *RD1: DFID–NRSP Project R7806*. Morogoro, Tanzania: Sokoine University of Agriculture. 28 pp., **DFID–Natural Resources Systems Programme. 2001.** Data archive 2000: GIS data and ACCESS data: CD-ROM. *DFID–NRSP Project R6755*. Leeds, UK: University of Leeds, **Adam, M.G. 2001.** Options for use of power tillers and draught animals for primary cultivation on small farms in Bangladesh. *Main Report: DFID–NRSP Project R7180*. Chatham, UK: NRI, University of Greenwich.

based on NR is less clear. From the material examined it is hard to confirm a widespread pattern of de-agrarianisation. However, there is evidence to indicate increasing inequality in the distribution of major assets such as land or access to water where the resource is being privatised as indicated in **Box 10**.

Regardless of the patterns of diversification the NR base maintains an important livelihood role, since a significant set of activities remain predicated on access to land *per se*, or on access to land for such other benefits as common grazing, fishing and non-timber products. The project evidence highlights the importance of maintaining

### Box 10. In some production systems there is increasing inequality in the distribution of major natural capital assets

One research project documenting the economics of livelihoods in the southern part of Zimbabwe showed how in the communities of Romwe and Mutangi in Masvingo Province there were significant divisions opening up between the richer and poorer parts of the community. The project's data showed that livestock provided between 30–40% of households cash and subsistence income across all four of the identified wealth groups. However, in recent years cattle holdings have become concentrated in the more wealthy members of society, and today only 20% of the richest households own more than 60% of the total cattle herd and they earn up to five and half times more cash income from their livestock than lower-income groups. Livestock activities are reliant on maintaining access to rough grazing and woodland. With their ability to hire labour and to use donkey-drawn scotch carts to transport water for their animals, the richer 20% of households were effectively able to deny access to smaller herders by making sure their cattle made the most of the common pool woodland. This trend was exacerbated because the same richer sections of the community used their scotch carts to run fuelwood businesses based on harvesting and felling the same woodland resources. In a sense the woodland was being privatised by an informal understanding that certain individuals used particular patches of woodland almost exclusively. These emerging arrangements were also reinforced by the payment of 'commission' to the *sabhuku* or kraalhead – payments which can often not be met by poorer sections of the community.

Source: **Campbell, B., Jeffrey, S., Kozanayi, w., Luckert, M., Mutamba, M. and Zindi, C. 2001.** Household livelihoods in semi-arid regions: options and constraints. *Draft Final Technical Report. DFID-NRSP Project R7304.* CIFOR and Institute of Environmental Studies, University of Zimbabwe: 122 pp. + Appendices.

access to unscheduled land parcels as much as to owned land, of agricultural labour, and as Thirtle *et al.* (2001)<sup>4</sup> emphasise:

'Even for the poorer groups in rural areas who lack access to land, in most cases at least 40% of their livelihoods will be linked closely to farming. No other activity consistently offers the same degree of importance to the rural poor as does agriculture', so that 'it would be perverse to set aside the importance of farming in most rural areas.'

Thirtle *et al.* note the absence of studies that have 'unpacked' the non-farm and farm-based income components of rural households. Data from the projects reviewed in this study, whilst not always providing clear distinctions between non-farm/non-agricultural based incomes, do show that the NR-based component of income – or of livelihood activities – for poor people is even higher than the 40% that Thirtle *et al.* quote. The contribution to poor people's livelihoods within NRSP projects ranges from 40% in PUI, to 60% in LWI, to as much as 60-100% in SA.

4. **Thirtle, C., Irz, X., Lin, L. and Wiggins, S. 2001.** *Relationship Between Changes in Agricultural Productivity and the Incidence of Poverty in Developing Countries.* London: Huxley School, Imperial College, University of London, University of Reading. 33 pp.

*Inter- and intra-household relationships, social and political networks and local economies*

Some relationships between people of different wealth have beneficial outcomes. The tendency in the data is to focus on the negative, for example the costs to the poor as richer people commercialise such CPRs as fuelwood in SA, and to gloss over the positive. However, the richer parts of the community are often responsible for carrying the transaction costs associated with maintaining the NR base. Sharecropping arrangements can be exploitative but there is evidence to suggest that for many poorer people sharecropping can be advantageous since it may be used as a route to access more land and therefore act as the basis of accumulation strategies.

This study identifies important, and often synergistic, relationships between households and kinship groups and between different wealth groupings that have direct impacts on livelihood strategies and outcomes. Whilst the relationships between middle-income or richer people with the poor can be construed as negative or extractive, for some poor people patron/client relationships may be perceived as positive contributions to the management of livelihood vulnerability. Some of the examples in the synthesis show that these relationships can be economically efficient and provide poor people with livelihood benefits, and in other instances can provide informal safety nets in times of livelihood stress, or guaranteed markets for products over higher prices in more risky open markets. The more dynamic middle-income people, for example, often act as brokers between the rich and the poor in the provision of labour in sharecropping arrangements. In many reported cases this entrepreneurship of middle-income people increases rather than limits poor people's access to land and agriculture: An understanding of relations of power and the costs of non-market transactions is crucial in this context, as **Box 11** illustrates.

**Box 11. Community relationships can promote positive livelihood outcomes for poorer people**

A traditional aspect of Bangladeshi society has been the existence of systems of patronage. Whilst these relationships have been characterised as creating a situation of dependency and limiting the livelihood opportunities open to reliant groups, the wider commercialisation of rural economic relationships has begun to change the nature of such patron-client relationships. In recent years different forms of sharecropping are emerging and it is no longer true that sharecropping involves the division of the crop between owner and tenant, nor that it leaves the tenant with insecure property rights. A good example is the accumulative livelihood strategy of Fasqual Huq and his brother who live around Charan *bheel* in central Bangladesh. Fasqual Huq does not own any land of his own. However, by operating a deep tubewell and irrigation pump for a local 'water lord', he has become able to lease land from larger landowners in the locality. He and his brother have become 'professional sharecroppers'; they are ambitious, flexible and highly sensitive to local markets, managing their sharecropping plots in response to prices for labour and wet-season crops. Their strategy is to sharecrop plots in different part of the



local landscape so that they are able to produce a range of different crops. During the wet season Fasqual's brother manages the higher land to grow crops that command a strong price, although the vegetables or spices they choose to produce change according to that year's market conditions. They draw on labour from the pool easily available in the wet season, and they vary the wages they pay according to the price they expect to realise from the crop on which the labourers are working. Fasqual meanwhile buys crops from farmers and trades them to wholesalers: He is therefore well aware of the market conditions for a range of agricultural products. Fasqual and his brother have managed to build themselves a house, in addition to increasing the total amount of land to which they have access for farming.

Source: **DFID–Natural Resources Systems Programme. 2001.** Data archive 2000: GIS data and ACCESS data: CD-ROM. *DFID–NRSP Project R6755*. Leeds, UK: University of Leeds, and **Barr, J. 2000.** Investigation of livelihood strategies and resource use patterns in floodplain production systems in Bangladesh. *DFID–NRSP Project R6756*. Newcastle upon Tyne, UK: CLUWRR, University of Newcastle. 60 pp. + Appendices.

This suggests that there is merit not only in the identification of management options that are poverty-focused (*i.e.*, aimed specifically and exclusively at poor people), but also in building broader-based, pro-poor strategies (*i.e.*, options which benefit the poor but may be taken up by other people or even be reliant on the participation of other people).

Although some of these arguments might be interpreted as a reformulation of the ideas of 'trickle down' that have been widely discredited, there is evidence within NRSP project data to give some credence to the view that interactions between groups and the strength of local economies have positive benefits for the livelihoods of poor people where they seek to accumulate – particularly in PUI, HP and SA .



# Opportunities to strengthen livelihoods through research

## Introduction

This Section identifies the implications of the synthesis study's findings for future research. Whilst NRSP strives to produce knowledge that will improve poor people's livelihoods by improving their capacity to manage the NR within certain production systems, it is worth noting that in some contexts, such as the PUI, it may be higher-level environmental resource management that has the greatest beneficial impacts on the lives of poor people. This wider management may or may not have links to management interventions that can be implemented by individuals and households within a community, and may instead be predicated on higher-order institutional and policy-level changes.

This being said, possible NR-related interventions, need to:

- Clearly show benefits for the poor
- Enhance environmentally sustainable resource use and benefit streams
- Be institutionally sustainable
- Reduce social conflict either between groups or within groups of resource users around a suite of the same resources.

The opportunities presented here are given as generic 'principles' or themes to suggest how future research and development in support of NR-based livelihoods could be moulded.

## Building and protecting poor people's assets

There is a need for fuller understanding of the form and function of livelihood assets of poor people. Four main areas for research and intervention are identified.

### *Identifying ways for the poor to build assets and avoid asset draw-down*

Asset draw-down increases the vulnerability of poor people by impacting on livelihood sensitivity and resilience. This requires research that focuses attention on:

- Improved understanding of the problems associated with building a secure asset base and identifying ways to tackle them
- The transaction costs of asset management and asset substitution over the short and longer terms
- Understanding and improving the role of credit and loan provision as a means to avoid asset draw-down and promote investment in better NR management.

### *Supporting the emergence of new forms of 'social capital' for the benefit of poor people*

Evidence from the projects indicates that whilst social capital is an important determinant of NR-based livelihoods, the form in which supportive social and political networks exist is changing. New institutional relationships are emerging which may either benefit or have negative impacts on the livelihoods of poorer people, either by increasing or by limiting access to the NR base. In cases where access is increased, poor people may be provided with the means to increase either income flows or financial stores of value, but management of the NR base may be more intensive and require the application of new knowledge if it is to remain sustainable and act as a resilient 'store of value' into the future. Where access is being limited the potential exists for the livelihoods of poor people to become more vulnerable, and the management of NR to become more 'diffuse' and less sustainable.

Research is required that:

- Provides a better understanding of the impact of processes of 'empowerment' on both livelihood outcomes and the condition of the NR base under these changing conditions
- Can identify the institutional structures able to provide poor people with a degree of leverage over the social capital determinants of livelihood strategies that have a bearing on NR-based management options.

### *Considering land tenure and property regime impacts on endowments*

Access to land and the value of land to different livelihood strategies of the poor is an issue that cuts across production systems and countries. Land can constitute a contentious asset. In PUI maintaining access to land may not be a sustainable NR intervention, but in HP, SA, FAI and in LWI there is clear evidence to suggest that middle-income and richer people are increasing and consolidating land ownership as their own strategy of mediating livelihood insecurity. The implications for poor people are significant, as are the implications for NR management.

Research programmes should:

- Encourage research projects to include studies of land tenure and property regimes as they pertain to the asset status and capabilities of poor people. This is likely to involve a consideration of political relationships.

### *Understanding the interactions between NR management and health*

Health emerges from the study as a cross-cutting issue. NR management links to health have not been a traditional area of enquiry. However, there are contingent and reinforcing relationships between health and NR management that should be considered. For example, the health status of poor people affects their capacity to build assets and the degree to which they use them, for example, to pay for healthcare and ride through periods of illness. Impacts on their asset base have consequent implications for the way in which they continue to manage the NR resources to which

they have access. Health status also influences initial and continuing access to assets and the ability of the poor to labour. There are also NRs (for example, water) that are often not under the control of individual households. Where little attention is given to the benefits these provide poor people, the livelihood impacts of, for example, contaminated water remain unchallenged.

A strong case can be made for including a health component in livelihoods research. Research is required which seeks to:

- Uncover the impact of health on the access to and management of the NR base important to the livelihoods of poor people
- Consider the impacts of demographic changes, morbidity, mortality and the emergence of high-dependency households on the asset status and subsequent NR management options open to poor people affected by HIV/AIDS
- Consider the impact of wider resource management, most specifically access and entitlement to water, on human health and the productivity of NR-based livelihoods.

## Supporting communication and knowledge flows

Knowledge uncertainty emerges as a further cross-cutting issue. This is closely linked to social, physical and financial livelihood determinants. There are three axes along which opportunities to improve communication and knowledge flows exist:

- Between people of different wealth within local communities
- Between poor people and service agents
- Between poor people and the private sector.

Taking these issues into account, four possible research and intervention options have been identified.

### *Exploring the ways in which knowledge can be used to build assets*

Knowledge is a fundamental part of livelihood strategies. However, as with health, detailed information about the links between knowledge and skills provision and the asset base of poor people is lacking. In some production systems, most notably PUI, HP and FAI, the capacity of poor people to manipulate and manage their NR-based endowments is limited by their lack of knowledge about their legal rights and entitlements, the most secure ways in which to convert assets from one form to another, and strategies enabling them to maintain their entitlements over certain NR.

Research is required that:

- Explores the way that the provision of knowledge can serve as an indirect means of building livelihood assets.

### *Finding appropriate tools to adapt and communicate available technical knowledge*

Although technical knowledge about best-practice management of the NR base in some production systems is missing (SA is perhaps a case in point), in other systems a body of technical knowledge does already exist. This technical knowledge covers both productivity issues and matters concerning the socio-economic implications of changing management practices. In SA, project data indicates that poor people are poorly provided with information on crop diversification and soil fertility management; in LWI and PUI, women in particular complain about lack of knowledge of basic and improved management of livestock; in HP farmers seek information about new agricultural practices linked to improved soil fertility management and growing crops that they know have potential, but about which they lack experience. What is required is the development and adaptation of knowledge delivery in a way that is better suited to the livelihood circumstances and endowments of poor people.

Research is required that:

- Develops methods and tools that can organise information about livelihoods and link this to the research and dissemination systems of institutions on the meso and macro scales
- Develops tools able to identify the form of knowledge and information best suited to the livelihood circumstances of poor people.

### *Supporting the development of sustainable knowledge flows within the community*

Facilitating the adaptation and flow of knowledge between different people may not necessarily rely on existing institutions. There is a case to be made for building new means to circulate knowledge, particularly in a climate of globalisation, improved communications technology, and the retrenchment of government services dealing with knowledge provision.

Research is required that:

- Uncovers the ways in which knowledge is circulated amongst local communities
- Identifies ways in which these flows of knowledge can be better linked to the institutions and services charged with knowledge provision.

### *Consider the implications of private-sector provision of knowledge*

Global changes to the institutional context in which NR management, particularly agriculture, is situated together with continuing advances in the development of agricultural and other NR-based technologies, have far-reaching implications for the environment and for the livelihoods of poor people. Whilst some governments and agencies maintain that these structural changes are likely to have positive impacts on the poor, others argue the opposite. There is a strong case to be made for research to take into consideration these important and novel changes to the specific features of production systems.

Research is required that:

- Provides greater understanding of the implications and impacts of the private provision of knowledge and technology, including such new technologies as genetically modified organisms (GMOs), on the livelihoods of poor people
- Investigates ways in which the private-sector provision of knowledge and technology can be made more pro-poor and less open to capture by middle-income and richer people.

## Supporting poor people through periods of transitional vulnerability

The synthesis of project findings has revealed that there are two aspects to adaptive livelihood strategies. The first is the issue of identifying opportunities, while the second is the capacity to act and manage the transition from one livelihood strategy or set of livelihood activities to another. The identification of opportunities is directly related to knowledge and the exposure to new ideas and new skills and perspectives. The capacity to act is linked not only to knowledge but also to stocks and flows of livelihood assets that can bridge the vulnerability gaps to which livelihoods are exposed during changes in circumstances.

### *Mediating livelihood vulnerability during NR management changes*

By way of an example, Kenyan farmers in one project who diversified production, did so after they were exposed to the farming systems of Ugandan farmers during exchange visits. Supported by technical assistance from extension agents they were then able to make the transition to new cropping patterns, but a principal factor was their ability to manage the income and food supply gap during the transfer from a maize/bean system to a plantain/vegetable system.

Research is required that:

- Identifies mechanisms to support poor people through periods of transitional vulnerability experienced when changing from one NR-based strategy to another.

### *Supporting livelihood transitions out of NR management*

In some production systems there may be a need to find ways of supporting poor people to move their livelihood dependencies away from NR-based activities. For example, in the PUI in India, artisans reliant on the production of NR-based goods are suffering from serious declines in income. There are two reasons for this. The process of urbanisation to which they are exposed includes changes in tastes and expectations. In addition, a peculiar peri-urban effect is that the production of these artisanal goods is becoming increasingly expensive. It takes artisans longer to collect materials as the resource base declines, and it costs them more to purchase raw materials from the city markets. The overall effect is one where the final product

price increases. However, whilst the costs of producing these goods are rising, markets are importing similar products from alternative rural areas where prices are lower and in some cases decreasing. Seeking alternative livelihood strategies that are not dependent on the NR base may be a more positive strategy for poor people in such production systems, and in areas of other systems that lie close to urban centres. Supporting poor people through a transition from relying on one set of economic activities to another requires the provision of knowledge, and the building of a strong asset base and social networks.

Research is required that:

- Identifies mechanisms to support poor people through periods of transitional vulnerability experienced when changing from NR- to non-NR-based strategies.

## Linking knowledge with policy makers

Significant gaps exist in understanding the flows of knowledge and information from the micro to the macro level and in understanding the impacts of macro- to micro-level policy implementation. There is less of a challenge in the flows of knowledge from research projects into the international domain. The challenge remains in linking the community/project level research and development outputs up through to target institutions and into the policy process. Both programme development and research project actions are needed to overcome these gaps.

Action and research is required that:

- Aims to build flows of knowledge that can push forward evidence-driven policy formulation that includes a consideration of the diversity of system and process
- Identifies mechanisms to build participation in policy formulation as it affects the NR base important to poorer people
- Enables partner institutions to take forward results of programme and project research.

# Researching livelihoods – challenges and opportunities

## Introduction

This study reviewed material from projects that were conceived and implemented, when the SLA and the SLF were evolving. Nonetheless projects have drawn on both the SLA and SLF, either in terms of their initial design, or *ex-post*, in the analysis of results. In Section One, some caveats were made about the nature of available data and gaps in both data collection and analysis. The comments also refer to the application of the SLA and SLF, and there are broader lessons on the ways in which NR research is both designed and undertaken. Section Four comments on the main issues emerging from the application of SLA/SLF and provides a checklist of suggestions for improving future research.

## Challenges: emerging issues

### *Holism, multiple actors and multiple levels*

The demands of applying the SLA are high. Most projects struggle to identify whom amongst the potentially large number of actors situated in different sectors should be included within the research and project process. Particular problems emerge over the inclusion of private-sector partners and actors, and the analysis of private-sector impacts on livelihoods. Research managers point to the heavy demands of interdisciplinary/multidisciplinary and multi-partnership teams as a significant limitation on their ability to include actors and analyses from less-familiar sectors. Furthermore, there are significant differences in the way the poor are identified and characterised and how these categorisations are applied in the analysis of data. Obviously, different schemes facilitate different analyses of the livelihoods of different groups, but those that are really successful illuminate the livelihood links between groups of people.

### *Bounding research and identifying research priorities*

One of the inherent dangers of the SLF is spreading research effort too thinly. Without a properly defined framework structuring research it becomes difficult to identify priority issues and areas for investigation. Too thin a research coverage can result in a little bit of information being gleaned about everything, leading to a limited understanding of livelihood dynamics. The reverse is also true. Lack of a framework can lead to the collection of voluminous and unrelated data that are difficult to use to improve understanding. In addition, most datasets are cross-sectional rather than longitudinal, and this limits research that tracks responses to shocks

### *Critical appraisal of terminology and concepts*

Researchers need to apply the SLF and SLA at more than a discursive level; language and concepts need to be examined critically, clearly explained, and only applied if they appear to have real merit. Terms and concepts found to be particularly open to misunderstanding were:

**Coping and adaptation.** For the majority of projects ‘coping’ was simply assumed to be what you do if you are poor and ‘adaptation’ what you do if you are not poor. In addition, ‘adaptation’ was often assumed to equal diversification. Understanding what coping and adapting might be and how these decision-making pathways are played out, is fundamental to furthering knowledge and understanding about livelihoods and how people interact with the NR base.

**Diversification, on- and off-farm.** Documenting diversification, as lists of activities and indices of diversity, is not a magic bullet to understanding livelihood strategies. These lists may present an impression of the diversity of activities undertaken by people at community level, but produce little information about livelihood strategies at an individual or household level. Within households, individuals may be following different livelihood strategies that may or may not be based on diversification. In other households individuals may be changing activities rather than diversifying *per se*. In other cases individuals may always have been involved in a suite of different livelihood activities as a means to manage seasonality for example; the fact that a researcher now records these different activities does not mean that they have suddenly ‘diversified’.

However, there are qualitative differences in types of diversification. Livelihood diversification is not necessarily the same as agricultural diversification. Even within agriculture there are different forms of diversification. Without a more rigorous exposition and application of the term, that takes into account the different forms of diversification and risk management outlined, our understanding of the role of diversification and the types of livelihood outcomes it engenders will remain limited. This problem is compounded by the use of the terms ‘on-farm’, ‘off-farm’, and ‘non-farm’ interchangeably and with little specification of their meaning. In addition activity lists give little indication of the relative contribution or importance of the NR base to livelihoods.

Assets, activities and income segmentation are complementary measures of diversification behaviours (Barrett *et al.*, 2001)<sup>5</sup>. Most of the projects present data about diversification of activities. A smaller number of projects include information and data about income segmentation. Better information about the degree of reliance on, and the importance of, the NR base, comes from more-detailed quantitative studies of household income flows. Some projects produced data showing the relative proportion of household income derived from different activities. The display of income portfolios provides a clearer picture of the importance of various income sources to

5. Barrett, C. B., T. Reardon, and P. Webb (2001). *Non-farm income diversification and household livelihood strategies in rural Africa: concepts, dynamics, and policy implications*. Food Policy 26(4): 315-331pp.



sections of the community. But neither average values nor variations about a mean help to infer either the strategies being followed, or the variations needed for analysing differences between coarse groupings.

**‘Social capital’.** Although it was widely used by projects included in this study, social capital was the SLF concept least well understood and applied. The term is either defined by proxy measures such as the numbers of groups to which people belonged, or by the catch-all phrase ‘social and kinship systems’. Since all projects refer to the importance of social capital, a deal more effort needs to be applied in deconstructing and decoding this term and what it means to particular projects in particular contexts.

### *Households as units of analysis: individual and gendered livelihood outcomes*

All of the projects used households as the basic unit of analysis. However, only one project defined what a household was, and indicated how the data collected represents the household as a group of individuals. If, as has been argued, livelihood outcomes apply to individuals rather than households, the most important implication of this is that livelihood determinants for some sub-sets of the poor are not being exposed.

There is little acknowledgement of the household dynamics structuring livelihood outcomes. These factors result in broad impressions of community-level patterns of occupational activities, income sources and expenditure patterns, at the expense of understanding the decision-making processes that drive these outcomes.

## **Opportunities: addressing weaknesses**

### *Characterising the community and sampling robustly*

In order to address which actors need to be included in NR livelihoods-based research, researchers must design ways to better characterise the different groups within any given community as they are linked to particular NR sets. Researchers need at the same time to maintain a focus on the characteristics of poverty. Using these methods stakeholder analyses can then be used to support the building of robust sampling strategies. NR-based livelihoods research should be based on a strong sample design that integrates poverty criteria.

### *Answering ‘why’ questions: integrating robust quantitative and qualitative data*

Both quantitative and qualitative data are useful in providing descriptions of what different groups of people may be doing, or may have done, to make a living. Much can be done to overcome the limitations of ‘thin’ research and the constraints of cross-sectional research by developing the ‘what’ descriptions given by quantitative data and by applying ‘why’ analyses. Unravelling the ‘why’ questions requires rigorous application of qualitative approaches and methods. Participatory and qualitative research has matured in recent years to provide tested and reliable means of extending quantitative descriptions.

The best characterisations and understanding of livelihoods came from those NRSP projects that:

- Quantified the relative importance of different assets and entitlements to different sections of the community, using more continuous measures such as income rather than ‘counts’, scores, or ranks
- Used clearly developed household characterisations that combine quantitatively derived wealth groupings with more qualitatively understood household or stakeholder groupings as the basis for analyses
- Undertook case studies as a way of researching livelihood strategies and reported observed changes in a detailed and qualitative way.

### *Build capacity into research teams*

The identification of NR-based research priorities and opportunities for livelihood improvements requires clear identification of the drivers of change; who the most-effective change agents are and what impact they have on poor groups, together with the incentives needed to induce change. The research expertise needed to explore these avenues may lean towards political economy, governance, and business. NR-based livelihoods research may require extending the multi-disciplinary approach to include disciplinary partnerships that are relatively novel and progressive.

### *Applying appropriate research tools*

Particular attention is needed to find and apply research methods and tools that can:

- Analyse context and integrate diversity
- Account for time and variation over time, and record historical experience
- Uncover power relationships within and between households and between the different people present in communities
- Characterise livelihood impacts of policy and politics
- Drive research efforts and research findings into the policy process at the interface between people and policy institutions, while including ways to understand and take account of diversity.

### *Pay attention to words, ideas and language*

Critical application of the concepts and terminology is essential if livelihoods research is to find NR-based routes that enable households to escape poverty. Research outputs and outreach materials need to avoid livelihoods jargon, not least because impenetrable or clichéd language quickly becomes obsolete and can act as a barrier to research credibility and to the support of progressive research and development agendas.



The Natural Resources Systems Programme (NRSP), of the UK Department for International Development, undertakes research on the integrated management of natural resources. This encompasses the social, economic, institutional and biophysical factors that influence people's ability to both use and maintain the productive potential of the natural resource (NR) base over a relatively long timeframe. The intended outcome of the research is that NR-related strategies for improving people's livelihoods, that are of proven relevance to poor people, will be delivered in forms that could be taken up by the poor themselves and/or by development practitioners operating at a range of levels, from grassroots to senior policy level.

**Livelihoods Synthesis Study: Key Determinants of Poor People's Livelihood Strategies and Natural Resources-related Management Opportunities** summarises a study of the factors influencing livelihood strategies of poor people in developing countries. The study synthesises eighteen NRSP projects that researched livelihood strategies in eight countries. It is based on a desk study of project documentation, interviews with project leaders, some fieldwork and a workshop of key stakeholders. Findings were used to identify how research for development can support livelihood opportunities of the poor, the challenges faced by livelihoods research, and the opportunities to improve this research.



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