

GENDER AND THE DFID RNRRS : A SYNTHESIS

Final DRAFT December 2005

Prepared for the AFGRP, University of Stirling

By Dr. Elizabeth Bennett

Abstract	2
1 Introduction.....	2
2 What is gender?	6
2.1 From Women in Development to Gender and Development	6
2.2 Mainstreaming gender in development.....	8
2.3 Gender, women and natural resource use/management	9
3 Methodology.....	10
3.1 The review process	12
4 Gender in key NR areas covered by DFID programmes.....	13
4.1 Livelihoods and Management of NR.....	14
4.2 Management of Forestry Resources.....	16
4.3 Food Crops.....	18
4.4 Small-Scale Food Sellers and Producers.....	21
4.6 Aquatic Resources.....	27
5 Discussion.....	30
6 Conclusions and recommendations	34
List of Project Documents Consulted	37
Other References	39

Abstract

This report is a synthesis of the treatment of gender in the RNRRS projects funded over the past eleven years. The synthesis reviews a discrete number of projects that either directly or indirectly impacted on or addressed the issue of gender/women. Whilst there is a clear difference between ‘women’ and ‘gender’, the synthesis had to look at both issues because they are frequently used as synonyms in the projects under review. The synthesis finds that whilst considerable advances have been made recently (ie in the last five years or so) in terms of incorporating an understanding of gender relations into projects, there is still much to be done before gender can be considered to have been mainstreamed into DFID’s funding of renewable natural resource programmes. The report identifies a number of encouraging signposts however: for example the use of a pre-project gender impact analysis by the CPHP and the AFGRP which has a dedicated ‘gender’ section on its website. The report suggests a number of ways that gender awareness could be better incorporated into future DFID funding of renewable natural resource programmes (in which ever form they eventually exist) but concludes that there is still considerable disquiet in some quarters that addressing gender in development work detracts from the issue in hand.

1 Introduction

Between 1995 and 2006 the DFID Renewable Natural Resources Research Strategy (RNRRS) has funded a wide range of research covering the span of economic activity from fish drying to goat rearing, from integrated pest management to improved chicken feed. Over the course of these 11 years the way women in general and gender in particular has been treated in the RNRRS has evolved. The purpose of this report is to present an overview of how DFID RNRRS research has addressed or impacted on gender in the field of natural resource management. Through a series of project case studies the report highlights the breadth of ways in which DFID RNRRS projects have addressed gender (or at the very least women). The report is mindful of the problems of ‘measuring’ projects against gender ideals and finding the research wanting. Consequently the report takes a more flexible approach to the issue and, by highlighting lessons that have been learned and mistakes that have been made, aims to establish reasonable goals for gender in any future NR research programme.

The report uses a number of yardsticks with which to establish how the RNRRS has measured up to stated government ideals in terms of gender. The following documents are also, to varying degrees, influential in how programme research is targeted and how projects are structured. First, the Government’s White Paper of 2000 which sets the tone for British Government development policy. Second, the Millennium Development Goals (MDG) as defined at the UN Millennium Summit in 2000 – the MDG provide a series of goals that each member of the UN is committed to working towards. Third, the recent Agricultural Policy consultation document “Productivity growth for poverty reduction: an approach to agriculture”. Fourth, the series Evaluation of DFID Development Assistance: Gender Equality and Women’s Empowerment produced by DFID in the first quarter of 2005 and finally the review of gender analysis conducted in 2003 of a number of NRSP projects (Magnus, 2003).

The government white paper (GWP) of 2000 is largely influenced by the MDG and it is useful to discuss the two documents together. Two aspects of gender particularly relevant to the RNRRS are mentioned in these documents. First, both note the importance of reducing the gender gap in terms of access to education. Whilst there are few examples of this goal being addressed in the RNRRS (there are infrequent references to increased incomes being used for school fees), it is arguable that capacity building initiatives across many RNRRS projects are contributing to reducing the skills gap between genders (a synthesis of capacity building in RNRRS projects has been dealt with separately). Second, the GWP emphasises the need to empower women and recognises that greater equity and empowerment of women is needed to further the goal of equitable globalisation. How empowerment is to be achieved and how this will occur without commensurate levels of gender awareness raising is to be addressed in the GWP. The new Agricultural Policy consultant document (APCD) is in consultation at the moment (September 2005) and the final document will set the trend for how future DFID policy reflects agriculture. It is noticeable that, given the high proportion of labour conducted by women in the agricultural sector in many developing countries there is no reference whatsoever to gender in the APCD. Reference is made, however, to women. The document acknowledges that they need additional support (along with other marginalised groups), that men and women interact differently in the market place and in terms of financial security. Yet there is no acknowledgement of the need to address the negotiation of gender roles which are intricately involved in placing women in 'marginalised groups' in the first place. DFID conducted a series of reviews of key gender issues (education, health, governance, ICTs) in 2005. Certain sections of the reviews are relevant to the work done by the RNRRS (particularly the review on governance). The reviews demonstrate that whilst development funding has made considerable progress over the years, gender mainstreaming is still not widespread and gender as a whole is still not adequately addressed across DFID programme. Finally, in 2003 the NRSP commissioned a review of gender analysis in a number of its projects. The review found that whilst the NRSP reported strong to moderate attention to gender in many of its projects (2001-2002), the degree to which gender analysis had been addressed was unknown. A key finding of the report was that gender was often confused with women and that gender analysis tends to get lost in the wider project.

The above documents would suggest that a) the inequality of women and the need to address their empowerment is one element of the government's wider development policy; b) gender is not an identifiable part of that same policy; c) 'getting to gender' is recognised as a goal but there is no clear pathway set out for achieving this – particularly in terms of the RNRRS; d) the NRSP (the programme with the most clear-cut social-science element of all the programmes) is struggling to incorporate gender analysis into its research.

However, a number of caveats need to be outlined.

The goals of the original framework for the RNRRS were to alleviate poverty, promote economic growth and mitigate environment problems through demand-led research. Research was grouped around production systems (semi-arid, high potential, hillside, tropical moist forest, forest-agriculture interface, land-water interface and peri-urban interface) and managed across ten research programmes according to the natural resource (livestock, fisheries, crops etc). As such, the over-arching tenet of the RNRRS was technical or scientific research with production systems and resources at the centre. The introduction of social-science elements (including institutions, markets and business

linkages) to the research began after a major review in 1998 (following the publication of the GWP).

Any review of social science inputs to the research performed under the RNRRS needs to be mindful of the primary (original) goal of the strategy (scientific research) and the comparatively recent introduction of social science disciplines into such research. Consequently there is not a strong explicit gender focus in any of the programmes, yet the rapid rise in projects that at the very least *acknowledge* the key role that gender relations play in the development process is testimony to the shifting focus of the RNRRS.

In many parts of the developing world where the RNRRS has funded research (56% of it in Africa, 32% of it in Asia and the remaining 12% in Latin America) women contribute at least half of the labour to production systems. As a result, many projects have impacted upon the lives of women (albeit unwittingly) and some have gone so far as to address the low status of women (by targeting project activities at women). However, as is explained in Section 2, “women” is not shorthand for gender. Whilst RNRRS projects have certainly achieved a great deal for women farmers and fish workers around the globe, gender roles have rarely been addressed. And it is only by tackling the nature of the unequal relationships between men and women that development is likely to move forward.

Addressing gender roles and relationships is subject to a number of considerable constraints. Gender roles are deeply rooted within tradition, cultural norms and religious legal frameworks. Outside interference in these matters is often taken as ‘cultural imperialism’ and ‘politically insensitive’ and yet this should not be used as a reason for doing nothing and hoping that internal pressures for change will eventually kick in. Poverty can, amongst other things be attributed to corruption and bad governance (both of which are, arguably deeply rooted in cultural norms) and yet development discourse roundly supports movements to remove corruption and encourage good governance. Much the same approach must be taken with gender. That said, we need to bear in mind that cultural change is a long-term process and not one suited to short-term research projects – particularly when the foundation of those projects is scientific research. Accordingly searching for references in RNRRS projects that have set in motion measurable change in gender relations is likely to prove futile. Whilst the schools of thought on whether development should be focussing on women or gender (see section 2 for elaboration on this issue) are divided, it is arguable that the first step towards mainstreaming gender into development research programmes such as the RNRRS is the acknowledgement of the work that women do in many agricultural fields. From there it is possible to ensure that decisions taken about a particular crop or process accommodate the impact that these changes are likely to have on men and women (who neither perceive nor experience change in a similar fashion). And from there it should be possible to encourage cultural change at the grassroots which will eventually erode the barriers and prejudices which result in women being less literate, having less political and economic freedom and more vulnerable to shocks and stresses than men.

This, then is the perspective that this synthesis will adopt: that progress is underway when women are acknowledged as part and parcel of the overall development process even if the *reasons* for their subordinate position are not immediately challenged. By reviewing a number of projects which represent the full breadth of research programmes the synthesis will highlight the progress that has been made since the time when projects bore titles such as “*Mycobacterium bovis* infection of cattle and man in Tanzania” (R7229).

Some lessons valuable to NR research have been learnt (even if these lessons are nothing new within the discipline of gender studies) and from there the synthesis will identify what steps need to be taken in the future to ensure that the momentum generated (particularly in the last 5 years or so) is not lost.

The report's focus is the review of a selection of projects chosen from across the ten programmes. None of the projects funded by the RNRRS specifically addressed gender although a number did acknowledge the role of gender in the development process and an even greater number had women as their key beneficiaries. The projects chosen are by no means all the projects that mention women and/or gender. In addition to this desk-based review programme managers were asked to suggest projects that might yield interesting information. For the most part information was taken from the Final Technical Reports (FTR) where these were available and other projects documents where FTRs were unavailable; whilst this may well have limited the information available time constraints prevented a review of all the output available from all the projects selected. The result is a broad overview of the range of ways that projects have (primarily) addressed the role of women in agricultural activities and in many cases impacted upon gender roles in rural areas also.

The report made a number of key findings which will be discussed in more detail later on:

- Men and women have different perceptions of what is important in terms of decisions they take about their livelihoods and access information on which to take such decisions from different sources.
- Gender disaggregated data is valuable but only if time is spent analysing the data and drawing conclusions from it.
- More attention needs to be given to collecting data on how decisions are taken in the household and how income is shared.
- The failure to include men in 'women only' projects can be destructive in the long-term.
- The goal of empowerment (of women in particular) is rarely justified or thought through: what do we mean by empowerment and what are the consequences of empowering women for the community? Empowerment (of women) has to be conducted in parallel with gender awareness raising.
- Likewise, women are often mentioned as a beneficiary of the project but without any clear indication of how they will benefit.
- 'Community' is often used as a homogenous term which masks the differences between men and women; women often carry the burden of community initiatives yet derive less benefit from them due to time restrictions.
- Gender neutral terms (farmer, fisher) are still much in use and mask (for the wider public) the achievements that RNRRS has made in terms of the inclusion of women and gender issues in projects.

The report is organised as follows. First, some definitions and background are given on gender/women and the evolution of Gender and Development (GAD) from the Women in Development (WID) movement. These are essential if we are to have a baseline from which to evaluate the degree to which DFID RNRRS has addressed the question of gender and/or women in its research. Section 3 describes the framework used to analyse the projects and the methodology used to gather information for the report whilst Section 4 outlines how the 20 selected projects have impacted on or addressed gender on

a number of given issues. Section 5 offers a synthesis of these projects addressed the key constraints facing gender and development whilst Section 6 offers some conclusions.

2 What is gender?

Gender has featured in development discourses for some 20 years yet there is still confusion in some quarters about what it means. “Gender” describes the perceptions, norms and roles that separate men from women; sex (male/female) on the other hand is based upon biology. Davis and Nadel-Klein (1992) describe gender as the separate spheres inhabited by men and women or the difference between power and marginalisation. Whilst sex is a biological (scientific) construct, gender is a social construct. Broadly speaking gender embodies the roles and duties and obligations of men and women which have been reinforced through the centuries by institutions: the household, the market, the community and the state (see Bennett (2003) and Rey Vallette (2003)).

Gender is largely a European, western philosophical construct that often sits uneasily in other contexts (Oyewumi, 2002). Oyewumi (1997, 2002) and Arnfred (2002) for example note that in Africa there is often no concept of male and female roles (father, mother, daughter, son etc): social positioning, influence and power is based on age and seniority, it is about being within and without the clan. Sex and gender, they argue is of little relevance in these circumstances. So, whilst gender has entered development discourses we need to be mindful that the social setting that gave rise to feminism and the pursuit of female and gender related studies in Europe differs from the social setting in many of the countries where development discourses are played out. To assume that gender equity and female emancipation are universal truths and goals would be wrong.

2.1 From Women in Development to Gender and Development

Women in Development (often abbreviated to WID) grew out of the liberal feminist movements in North America and latterly Northern Europe in the 1970s. Advocates of WID argued that traditional development processes were at best bypassing and at worse impoverishing women in developing countries. Technical-fix approaches to rural economies (agriculture, fishing, forestry and so on) were addressing problems faced by men, but ignoring the role women played in rural economies. As the significant productive contribution made by women became apparent so the argument was that development needed to target women specifically in order to better their position. It was recognised that women’s subordination came from their inability to secure access to resources, markets, education and household security. Programme thus emerged which focussed on women’s employment and income-generating opportunities. A process of empowering women to demand change in their access to credit, health, education and resources began. Overall, WID assumed that the lack of development for women was the result of an over-sight by policy makers (Reeves and Baden, 2000:33).

By the 1980s the lack of impact made by WID initiatives led some to argue that a change of direction was needed. Arnfred (2001:74) argues that the shift from women to gender emerged when it was realised that WID programmes were about integrating women into the broader development discourse, rather than tackling the inherent inequalities of power which was the real source of ‘women’s problems’. Placing gender at the centre of

the discussion had two advantages: it tackled the socially constructed relations between male and female and also the question of power (see table 1 for the differences between WID and GAD). What is more, argued Arnfred, gender also addressed the epistemological issues of previously 'gender neutral' terms such as farmer, household and community which the Gender in Development (GID) discourse argued were in fact heavily male-biased.

The shift to GAD has, however, not been without its detractors. Arnfred (2001) believes the move has been detrimental. The WID movement, which had focussed upon the marginalisation of women and their subordination, has been neutered, the struggle element has been dissipated, and the descriptive notion of gender has glossed over the power inequalities.

Another aspect of the women/gender in development discourse is that it often carries with it an implicit understanding that all women are equal and it is their inequality compared to men that needs to be tackled. This is not so. Women are not a homogenous group but fractured along class, social, religious and racial lines like any other group. Women's organisations (in the south) are often staffed by women drawn from the elite who are pursuing policies that benefit them – that is, policies that will not prove to be a threat to their social or political class (Taylor, 2000). Assuming away internal inequalities between and within genders is, therefore remiss.

Table 1: Differences between WID and GAD

WOMEN IN DEVELOPMENT	GENDER AND DEVELOPMENT
The problem	
The exclusion of women (that represent half of the potential resources of production) from the process of development	Relationships of equal power (rich/poor, male/female) that prevent equitable development and full participation of women
The Approach	
Integration of women into the project	An approach to development that aims at men and women
Centre of Interest	
women	Male and female concerns
The Objective	
More effective development	Equitable and sustainable development
The Solution	
Integrate women into the existing development process	To increase the power of the poorest and women to reduce inequalities
Strategies	
Projects for women, increase women's productivity; increase women's revenue; ease the burden of traditional women's tasks	Identify and take account of the needs determined by women and men to improve their situation; take account of the strategic interests of women and the most disadvantaged, support changes at different levels to guarantee a better team

Whilst the accepted discourse is of the power relations between men and women it is difficult to talk about gender without it implicitly meaning 'women'. In many circumstances women are less equal than men (in terms of access to education, health, financial security, economic opportunity and so on) and the central topic becomes 'women' (how to improve their position) with gender (the means of improving their position) taking a secondary role or even forgotten.

There is a mis-placed assumption that gender has become the 'politically correct' term for women. This is not so. Female inequality still exists and is still a topic that merits

discussion – but the solution to inequality is now believed to lie in tackling power relations between men and women rather than solely concentrating on women.

Finally, it is worth mentioning the powerful argument that with poverty alleviation as the primary focus of DFID research, adding women to the mix is a distraction and adding gender simply complicates what is already a complex problem to solve. There is a belief that by reducing the level of those living in poverty gender inequalities will eventually be resolved; the counter-argument to this is that it is gender inequalities that are at the route of part of the poverty problem. This argument is something that was picked up in the NRSP gender review and a common justification still given for not including a gender element to research.

2.2 Mainstreaming gender in development

The World Bank website notes that gender inequality “tends to slow economic growth” for the simple reason that, making up just over half of the world’s population, the “extent to which women and girls benefit from development policies and programmes has a major impact on countries’ overall development success”. Yet the process of incorporating women and/or gender into development discourse and practice has generated considerable debate.

Following the 1995 UN World Conference in Beijing, it was recognised that a piecemeal approach to tackling development through gender was not working and more fundamental institutional change across the broad spectrum of development was needed. The concept of ‘mainstreaming’ gender into programmes and organisations evolved from this debate. Mainstreaming can take a number of forms but, put simply, involves integrating an awareness and approach to gender into the very ethos of the institution so that a gendered-agenda is visible in all programmes and initiatives (rather than just those perceived to be of relevance to women).

Hannan (cited in Arnfred, 2002) argues that the difference between the original concept of involving women in development and mainstreaming them into development processes is one of numbers. In the former, the aim was to raise the number of women involved in projects – almost irrespective of the cultural and social implications of feminising unacceptable areas of social life in many parts of the world. In the latter, the aim is to incorporate the ‘perceptions, experience and interest of women as well as men’ in the development agenda. Quite rightly, Hannan notes that inclusive development policy has to move beyond ticking boxes and counting numbers to changing attitudes and contexts so that men and women and the power relations between the two are part and parcel of the policy making and implementation process.

Yet, the process of changing attitudes and institutions is contentious on a number of fronts.

Arnfred (2003), for example argues that those charged with gender mainstreaming are more taken with the economic efficiency aspects of such moves than the gender improvement aspects. The neo-liberal sceptic argument is that the World Bank’s championing of gender is a ploy to ‘marketise’ women. That is, if gender is important to development and development depends upon economic growth then gender must be

important to economic growth thus reducing women to producers and marketeers. This, argue the sceptics is a double edged sword: women already face the double burden of being prime carers in the home and, in many instances, prime source of income outside the home (effectively holding down two jobs); yet the emphasis on the contribution of gender equality to economic development fails to take account of the home-based roles of women. In other words, the 'unpaid' work done by women is, once more, ignored or dismissed, or as DAWN (Development Alternatives with Women for a New Era) describes it: "the income generating activities of women are promoted but the redefinition of gender roles to alleviate the double burden is ignored" (cited in Taylor, 2000). Such a view of the potential benefits of gender mainstreaming are, however, highly polemic and open to considerable debate.

Mainstreaming gender can arouse a degree of cultural disquiet. As noted above, gender is largely western construct (although it is increasingly being taken on board in other philosophical traditions) and one that does not sit easily in many developing country contexts. In response to this, arguments against dealing with gender are often couched in terms of cultural imperialism and western domination. In a world increasingly sensitive to the role and ethos of Islam (often erroneously viewed as anti-women) the arguments against encouraging cultural change which go against the accepted norms of behaviour are likely to become more strident. The counter argument to this is that change which encourages economic and social development has by its very nature to alter institutions and cultural perceptions. Provided that change comes from within a society (rather than implanted from outside) and is founded in local norms and creeds the accusations of cultural interference are less likely to stick. Clearly strong feelings about the consequences of interfering with power relations between men and women are the cause of accusations being levelled at gender initiatives whereas "good governance" and poverty reduction initiatives, for example, which also have to promote fundamental change in the way society operates, are often free of such arguments.

What is more, the debate appears to have fractured along geographic lines, with the feminists in the south now looking at issues of equality and recognising the shortcomings of the previously north-dominated agendas whilst feminists in the north appear to have 'lost their critical itch' (Arnfred, 2001). The evolution of the Gender in Development discourse, and the mainstreaming of gender issues by the large donors and NGOs appear to have moved away from the grass-roots reality faced by many women in the developing world where inequalities are still as stark as they ever were. This perhaps explains the geographic split between the north and south – the women in the south are still dealing with inequality on a day to day basis whereas the women in the north have seen dramatic changes (at least in terms of legislative frameworks) to their position in society.

2.3 Gender, women and natural resource use/management

The role of women in the management and use of natural resource-based livelihoods in the developing world has long been acknowledged but has rarely been valued on an equal par with that of men. In fisheries, women have traditionally occupied the pre and post-harvest sector concentrating on financing the fleet, processing and marketing the catch. In farming communities women are more likely to be involved in small ruminant husbandry (goats, for example), poultry and milking herds. Women tend to be the custodian of seeds and have traditionally be in charge of growing crops of staple foods (sweet potatoes in Uganda, for example; cowpeas in Nepal).

Despite the apparent illusion of gender equity within natural-resource based economic sectors, much of the work performed by women and the ‘social space’ they occupy has remained invisible to researchers and policy makers. The lack of documentation on women’s role in the natural resources production sectors can be explained by a number of factors. Firstly, production goals continue to dominate national policy agendas, thus research attention continues to be focused on the primary production sector (frequently male dominated) rather than the harvesting, processing and marketing sector (often female dominated); second, research is often ‘gender-blind’ and fails to see the bigger picture. This is compounded by researchers who are often unable to include women in interviews and discussions for cultural reasons, or because they are persuaded that male family members are best placed to speak for them and third, at the national level, fisheries and agricultural data is rarely desegregated along gender lines making it doubly difficult to extract information pertinent to gender.

The projects reviewed below collected a significant amount of data on, amongst other things, attitudes, perceptions and links with social capital (R7856); household level data on occupation (R8196); women farmers (R7828); gender differences on perceptions and preferences on bean varieties (R7569); reactions to training and extension materials (R7569); women’s role in coastal fishing trading and processing activities (R7969) and street-vendors (R8272). All data that will prove useful in reducing the gap in gender disaggregated data relating to rural income generating activities.

3 Methodology

With ten research programmes funding hundreds of research projects and producing many and varied research outputs, a methodology was devised that would be both cost-effective and broad ranging.

First, web-sites for the research programmes were reviewed to establish whether gender has been identified as a specific research issue and/or if any projects were highlighted on the website that indicated a significant gender content or impact (only the AFGRP had any direct references to gender).

Second, www.id21.org and www.bridge.ids.ac.uk were visited and any significant research outputs from the ten programmes that addressed gender issues were reviewed.

Third, available annual reports for each programme were read and analysed with projects identified for further analysis if they a) indicated that they had addressed gender issues as part of the project or b) if the project was likely to have had an impact on gender relations to some extent. This overview produced a list of the key issues (set out in §3.1) that constrain or impact upon gender relations in natural resources and from this preliminary overview 20 projects were chosen for closer review and analysis (see Table 2). Time constraints prevented a review of all projects that fulfilled criteria (a) and (b) but those chosen were thought to provide the widest range of examples of how and why projects impact on and address gender issues in natural resource management.

Table 2: Projects chosen for review

R number and dates	Title	Programme
--------------------	-------	-----------

R number and dates	Title	Programme
Livelihoods and Management of NR		
R7856-05	Strengthening social capital for improving policies and decision-making in NRM	NRSP
R819602-03	Understanding Fisheries Associated Livelihoods and the Constraints to their Development in Kenya and Tanzania	FMSP
Management of Forestry Resources		
R779500-03	Winners and losers in commercialisation of NTFP Commercialisation of non-timber forest products/	FRP
R718798-04	Promotion of indigenous fruit trees through improved processing and marketing in Asia	FRP
R607294-96	Agroforestry manual for illiterate women	FRP
Food Crops		
R827303-05	Improving the livelihoods of small-scale sweet potato farmers in Central Uganda	CPHP
R788500-03	Promoting the adoption of integrated crop management in chickpea by poor farmers in Nepal	CPP
R782800-03	Decentralisation of food grain storage and distribution: development of institutional and technical options at village level	CPHP
R756900-03	Participatory promotion of disease resistant and farmer acceptable Phaseolus beans in the southern highlands of Tanzania	CPP
Small Scale Food Sellers and Producers		
R796901-03	Fish distribution from coastal communities in Bangladesh – market and credit access issues	PHFRP
R779900-03	Changing fish utilisation and its impact on poverty in India	PHFRP
R826103-04	Dissemination of improved bambara processing technologies through a new coalition arrangement to enhance rural livelihoods in northern Ghana	CPHP
R827203-04	Improving food safety for informally vended foods in Southern Africa	CPHP
Livestock in farming		
R752499-03	The use of oil-seed cake from small-scale processing operations for inclusion in rations for peri-urban poultry and small ruminant production	CPHP
R810801-04	Strengthening the contribution of women to household livelihood through improved livestock production interventions and strategies in the Teso farming system	LPP
R763200-05	Increasing the contribution that goats make to the livelihoods of resource poor livestock keepers in the Himalayan forest region	LPP
R735999-01	The Delivery of Veterinary Services to the Poor	AHP
Aquatic Resources		
R7100	Improved management of small scale tropical cage culture systems in Asia	AFGRP
R6380CB95-	Technical, social and economic constraints to rice fish culture in Laos, emphasising women's involvement	AFGRP
R791700-04	Self-recruiting species in aquaculture, their role in rural livelihoods	AFGRP

Note: Because there is considerable overlap between programmes they have been regrouped to follow basic production systems and/or scales of production.

The Plant Sciences Programme (PSP) is the only programmes not to feature in the list above. The programme provided no evidence of a project that had a significant or

interesting indirect impact on gender relations. This is because the majority of the work under taken by the PSP is related to plant biology and as such whilst it is possible to make intuitive assumptions about the impact of new plant strains on the mode of farming and how this may or may/not impact upon gender relations in farming households, there is very little socio-economic information upon which to draw conclusions about how this work addressed gender relations.

The 20 projects chosen range from those that were primarily involved in the collection of information which would then be used to inform the delivery of services in the future; those that were testing a particular technology/plant strain and those that combined the two.

3.1 The review process

In order to review the 20 projects chosen it was decided to employ a 'questionnaire' format whereby each project would be subject to six questions designed to elicit how the project had addressed a number of key criteria related to gender equity. These criteria were health, education, household security, markets, management of natural resources and asset ownership.

Whilst gender relations in some natural resource activities appear more egalitarian than others because the division of labour means that both sexes work and both have access to resources (such as the case of fishing where, by and large, men catch the fish and women process and market the catch, Rubinoff, 1999:633) it would be dangerous to assume that gender equity is based solely upon the division of labour and access to finances. Consequently the criteria used to review the projects needed to be aware of the many areas potentially impacted upon by gender. Criteria were chosen based on the aims of the Millennium Development Goals, DFID's wider development goals (drawn from the White Paper), issues raised in the recent DFID working papers on Gender Equality and Women's Empowerment and the key issues that were raised from the initial review of all project summaries in the annual reports.

The first question related to **health**. Research published on ID21 (Health Insights #5, May 2004) notes that there is an intimate, albeit frequently ignored, connection between food and food production sectors. In view of the fact that to some degree or another all the projects were involved in improved food production/processing/access to food the first question asked "has the project addressed or impacted on the overall health of women/children¹/men differentially?" This question was able to establish not only the potential health implications of improved crops/varieties/access to food but also the implications of those projects which seek to eradicate or control pests and diseases in food/livestock.

The second question concerned **education**. Equitable access across the genders to education is identified as a key Millennium Development Goals. Whilst formal education as such is rarely an output of DFID RNRRS research, capacity building (non-formal education) is a key element of many research projects and thus the question "has the

¹ Given the significant impact that poor health/education for children can have on future generations; it was decided to include an age dimension in this and the following question.

project addressed or impacted on women's/men's education (through capacity building/education/school fees?)” aimed to draw out this information².

Household security was the third question because it is a key factor in the development process and is often an area where acute gender disparities are found (female headed households and those headed by the elderly being particularly vulnerable). Given the emphasis in many projects of promoting new products/markets/income generation efforts it was felt pertinent to ask: “Has the project addressed or impact on the overall security of the house hold and has the ability to capture this security been differential across genders?”

Following on from the above question was question four which established how the income generation aspects of projects had also dealt with **markets**. In so far as there is often a gender divide regarding access to transport, knowledge on markets, and the ability to leave the home compound and given the fact that in many areas women are charged with processing food products and selling them, the questionnaire asked: “how has the project affected access to **markets** for women/men?”

Waterhouse and Neville (2005) note that critical to the goal of good governance is increasing the accessibility of women to the process of governance from the local level through to the national level. This is particularly pertinent to issue of women having a voice in the **management of natural resources**. Question five asked “how has the project addressed or impacted differently on the ability of women to influence the management process of the NR concerned?”

The ability of men and women to claim (and retain) ownership of assets (access/use-rights, animals, technologies etc) is often very different and question six asked “how has the project addressed or impacted on the **asset ownership** of women/women differently?”

Some projects were able to demonstrate more relevance to some or all of these criteria than others and in terms of indirect impact on these criteria much of the assessment was necessarily subjective. Information used in the review is largely from the FTRs for each project, where these were available (some projects are still on-going) and other readily accessible publications. FTRs are written with a specific purpose in mind and to strict DFID prescriptions and whilst they report on the objectives and outputs of the project some key gender information may have been omitted (Kimmins, pers comm. September 2005).

The following section presents the findings from the review and examines how gender has been addressed or impact upon (directly or indirectly) by the key natural resources areas where DFID is currently active.

4 Gender in key NR areas covered by DFID programmes

² It is thought that this information will overlap considerably with the parallel review currently being conducted on capacity building.

There is considerable overlap of issues and resources areas between the DFID RN Research Programmes so it was felt more productive to review the programmes in clusters of similar resources rather than look at each programme in isolation. The following, then, is a review of a number of projects that represent the myriad resources from DFID RN Research Programmes.

4.1 Livelihoods and Management of NR

A livelihoods approach to development has been the focus of DFID research for a number of years now. As such, many projects across the Programmes make some reference to livelihoods/or and the Sustainable Livelihoods Approach (SLA) in their work. Because the SLA incorporates the whole community³ and the wide span of economic activity engaged in by households it should provide ample scope for addressing issues related to gender. In many cases, however, gender is rarely mentioned as a key factor in how natural resources are managed. Two projects R7856 (Strengthening social capital for improving policies and decision-making in NRM) and R8196 (Understanding Fisheries Associated Livelihoods and the Constraints to their Development in Kenya and Tanzania) highlight some key issues related to gender and livelihoods. Overall, given the fundamental role of gender relations in the formation of livelihood strategies from household levels and upwards, it is perhaps disappointing that so little attention has been given to the question of gender in those projects where livelihoods analysis is the focus. R8196 collected information on who was doing what within the household but didn't expand this information to understand why certain tasks were undertaken by one gender or the other. Nor did it attempt to collect information on income – a key factor in determining gender equality in terms of decision making, ownership and security (this failure was acknowledged by the project). R7856, whilst not focussing on gender *per se* certainly recognised the powerful influence of gender relations in communities and the differential access to networks and links enjoyed by men and women. By focusing on the informal institutions related to policy making processes, the project was able to highlight not only how communities as a whole can be better enabled to interact with decentralisation and its supposed benefits, but also how women are often at a distinct disadvantage when it comes to influencing policy. The project incorporated gender awareness training into its activities, although there is no indication of who benefited from such training and whether this training has had any discernible impacts. A key factor noted by the project was that women are often time-poor and as a result are unable to effectively participate in well-intentioned community capacity building initiatives.

Project **R7856** has recently been completed. The purpose of the project was to strengthen social capital, improve local institutions and policies and support the integration of participatory approaches to policy decision-making and implementation so as to improve natural resource management. Social capital is about the strength and quality of relationships between individuals and groups of individuals. The project provided important insights to the inter-relationships between gender, social capital and natural resource management/livelihood strategies. The research found that men and women tap into different bonding and linking networks and build these networks differently. Through a series of household case studies the project noted that “constraints to adoption/compliance with by-laws for different groups, particularly

³ Understood for the time being as all those households within a given geographical area dependent upon the same natural resources.

women, the elderly and the poor included limited access to land (small areas, limited rights of women and migrants) access to labour and time constraints” (page 5)⁴. Women, it noted, often bear the biggest cost burden of the cost of setting up social capital mechanisms (community activities for example) and are often least able to benefit from them. The project recommended that women’s participation in the policy domain needed to be encouraged to try and even up the playing field regarding access to land, labour and capital. In terms of education and the dissemination of knowledge, women were found to be poorly served by many attempts to build capacity in communities. The study found that increased community activities to foster social capital often place an undue burden on women in the community in terms of time (although it is often men that gain more benefit from such activities) or the women are unable to participate as fully as men (because women have less ‘free’ time during the day compared to men). The project did make, however, a clear attempt to foster social capacity building mechanisms: a variety of forums (farmers forums, policy and by-law committees, land user groups etc) were established in the villages with women making up over half of the membership of the farming forums and about a third of the policy/law making forums. Building on the need for capacity building, the project offered support for organisational capacity, leadership and group development training and gender awareness training (page 8) although no indication is given in the FTR about how well women were represented in the leadership/organisational support and how many men/women took advantage of gender awareness training. There was no discernible impact made on **household security** or on **access to markets** although evidence from elsewhere suggests that both these factors will be boosted by increased networks and bonding. Where the study did make considerable impacts was in the issue of women’s access to **management** mechanisms for natural resources. Addressing the ability of women to influence the management process was an implicit objective of the project (by improving local engagement with policy-making and resource management) and women were (as noted above) full participants in the various forums and committees established to feed into the policy and legal processes. Management of natural resources is prone to conflict; the project found that 1/3 of conflicts involve women and thus gender analysis of conflict is crucial to find alternative strategies to deal with the problem. This point is significant in so far as women (more than men) feel that local clan-based mechanisms for resolving conflicts are less effective than local political structures. This is in part due to women being disadvantaged by their comparative lack of bonding and network links to clan groups and thereby finding government structures less biased. Problems with (female) **asset ownership** were clearly recognised by the project and identified as a constraint to development in general and improved social capital in particular. The study notes that certain by-laws (particularly those established to promote environmental conservation) discriminate against poorer households (of which female-headed households form a considerable number) who do not have the assets (capital and labour) to comply with requirements to incorporate water conservation structures into their fields (or example) and women small-livestock owners with little or no grazing land are often disadvantaged by controlled grazing laws (page 10).

The purpose of **R8196** was to develop a better understanding of fisheries dependent livelihoods and identify the nature and sources of constraints to their development so as to recommend measures for improving the livelihoods of the fisheries dependent communities in Kenya and Tanzania. Overall, gender was relevant to the project (in so far as gender is a key part of livelihoods analysis) but little attention was paid to gender

⁴ All page number noted in project summaries refer to the FTR unless otherwise stated.

relations (although information on gender was collected). The study conducted nationwide literature surveys in Kenya and Tanzania to determine the status of knowledge on fisheries and livelihoods (a neglected area particularly for coastal East Africa) and also carried out a number of field-based case studies to establish the extent of dependence on fisheries at the local level. A clear gender split becomes apparent from the field case studies. Fishing is a traditionally male activity whilst post-fisheries work is traditionally female. The project, however, uncovered evidence that very poor women at the Kenyan sites were turning to fishing (including crab and octopus collecting) as a means of increasing their income and women in Tanzania are involved in sea-weed collecting. Whilst men declared that fishing was the most important activity in the majority of the villages, women thought farming was more important and the more significant source of their income. Disagreements over the distribution of resources in households given the different perceptions between men and women over the more important economic activities could be a key focus for 'gender-aware' research. The study produced evidence of the split of male/female economic activities and the importance and/or dependence attached to such activities but no information was forthcoming on the income from these activities (who was making the bigger contribution?), where that income was spent or how men and women differently accessed **household security** and the project notes that more gender analysis is needed on household income and spending patterns. Data was collected on who performed what activities in the household but no discussion was made on the decision making processes surrounding these activities or how resource management was negotiated between men and women. Questions of **asset ownership** were in part addressed by the project's suggestion that further information was needed on how income in the household was controlled.

4.2 Management of Forestry Resources

Women and men have traditionally used forest products to supplement household diets and incomes. And women in particular often use forestry resources for household subsistence and income generating activities. Such activities include collecting firewood, nuts and berries, brewing beer from harvested products, and manufacturing small domestic items. Men are usually involved with activities from forest products including wood carving and furniture making. The FRP has published a book that draws on a wide variety of experience related to the trade in NTFP (Forest products, Livelihoods and Conservation, 2004, Sunderland, T and O Ndoye, eds). The introductory chapter notes that there is a clear male/female split in many activities. They also note that because men are able to travel further from home they often accrue far greater profits from enterprises than women. What is not clear, however, is whether these profits are equally shared in the household or, indeed, whether initiatives designed to increase commercialisation of such projects take heed of the potential for them to (inadvertently) widen the gender income gap. Despite the key role of forestry resources in women's development (and thus in understanding how gender roles in rural areas impact upon wider development issues), the involvement of the key resource users is rarely highlighted although they may be the prime beneficiaries. The following projects illustrate some of the ways that forestry has impacted upon women primarily and perhaps on gender too. R6072 (Agroforestry Manuals for Illiterate women) which aims to redress the lacunae of information available for illiterate women on forestry husbandry; R7795 (Commercialisation of non-timber forest products: factors influencing success, Winners and losers in forest product commercialisation) and R7187 (Promoting

indigenous tropical fruit trees) which investigates the role of home compound resources in household income generating activities.

As one of the few projects that specifically targets women, it is perhaps worth mentioning **R6072** first. The purpose of this project was to research and develop a methodology for producing visual training products on agroforestry and other issues. As indicated by the title of the project, women were the key participants in the project and the key beneficiaries. One of the goals of the project was to provide women with a means of increasing their knowledge and improving their education. As such, the project clearly makes a positive contribution to **education**. What is more, by equipping women with more knowledge they undoubtedly had more capacity to attempt to influence the **management process** of forestry resources (whether they used this capacity or not) and no doubt increased confidence and success led to greater **household security** and improved ability to retain **ownership of assets**. However, whether the project was able to make a positive difference to gender relations overall is debatable. Projects that set out to specifically target one gender over another open themselves to charges of being biased. In this case, it could be argued that in fact illiterate men are equally in need of appropriate training materials to help them improve their farming knowledge and by targeting only women the gender gap is not reduced (any balance of advantage is simply shifted to the other group). What is more the reason why the gap exists is not addressed.

The role played by trees in household survival strategies was highlighted by **R7187**. The purpose of the project was to investigate and promote the use of underutilised indigenous fruit trees (UIFT). UIFT are generally little researched and rarely incorporated into the commercial sector yet are important to the nutritional needs of rural and urban communities. UIFT are generally the domain of women who use the fruit to supplement the family diet, they are often used as weaning foods for infants and women are involved in the decision making about the sale and fruit and their products (jams, for example). Gender is not the focus of the project, yet the significant role of women in the use and management of UIFT means that the project probably made a contribution to women's livelihoods (although that does not, of course, mean that gender relations were impacted). The **health** implications of UIFT are recognised by the project but whether fruit crops are able to make any impact on the gender gap in the provision of health is unknown. The gender implications of **household security** and **access to markets**, whilst alluded to in the project (that investigations are underway into improved processing and marketing of products) were not addressed specifically and leave open the question as to how gender relations over the use of UIFTs may change as the products and trees receive greater marketing exposure. **Management of the resource** and to an extent **asset ownership** was clearly stated as being within the control of women (or the wider household – many trees are grown in household gardens), although it is not known if they are able to exercise any power over this management – or indeed whether any initiatives have been taken to involve men more in the process.

The commercialisation of a variety of non-timber forest products is dealt with by **R7795**. This project set out to identify the impacts (both economic and social) of the commercialisation of non-timber forest products (NTFP) for those dependent on such resources (such as the landless, resource poor farmers, artisans, traders and small-scale entrepreneurs). In terms of overall gender impact, the project did not identify any one group that was being disadvantaged by the increased commercialisation of forest products in Southern Africa, although it did highlight the potential problems for women if men appropriate successful machinery or institutions, causing the women to lose

income. In South Africa, Namibia and Guyana the project noted that increased income from the sale of NTFP was being diverted into **schooling** (among other things) which may have helped reduce the gender gap in this area, although no further details are given. **Household security** also appears to have benefited from the project with sales of Marula and Crabwood in particular being attributed to increased physical capital holdings in the project areas. Again, there is no indication as to whether household security is shared equally across genders or not. The study noted that the brewing and sale of Marula beer (where previously it had been exchanged and used for ceremonial purposes) may have had an impact upon communities which may, in turn, have reduced household security for non-beer producing households. Inequality in **access to markets** appears to be a problem of transportation rather than differential access between genders; although in the case of crabwood in Guyana sales are often made from the home which might indicate that women are able to exercise more control over the market (although the project notes that the market over all is relatively inactive). The study noted that there was room for improvement in marketing arrangement for some products but any effort to move this forward needs to recognise the potential danger of shifting the degree of resource control from women to men if marketing chains are moved away from the household. Further developments in these products would need to establish **ownership** patterns: are the resources owned privately (by men and women or by the head of the household?) or in common (in which case do all users have an equal say in the **management of the resource**?) thus how would changes to use impact upon gender relations? Whilst the project concludes that there are clear benefits for communities from the use of NTFP, there is no acknowledgement of potential disparities which may emerge.

4.3 Food Crops

Research programmes that deal with issues related to the protection and use of crops impact on gender in a number of ways. Firstly, whilst much of the work undertaken to protect crops is highly scientific (investigating pest management, development of new strains etc) the implication of this work is that crops will be more resistant and should thus provide better harvests. As with most agricultural activities there is a sharp gender division in the roles undertaken in the fields with women (and children) often in charge of weeding. Any research that reduces the need for weeding (by developing improved weed-resistance or developing inter-cropping patterns which reduce the quantity of weeds, for example) is likely to have a positive effect on the work load of women. Likewise improvements in pest management which lead to a reduction in the use of pesticides are likely to positively impact upon men (who spend time spraying crops) and upon the household budget as a whole. Where women are able to leave the household compound they are often engaged in the marketing of processed crops. Thus programme activities that improve the quality and/or quantity of crop processing will have a direct impact upon women's income – although this does not necessarily indicate that the gender division in decision making regarding income will change. Women are often the custodians of the genetic heritage held in seeds and this role is addressed directly and indirectly by those projects which seek to improve the storage of grains and seeds. The following projects were chosen to illustrate some of these issues. R7828 (Decentralisation of food grain storage and distribution: development of institutional and technical options at village level) is one of the few projects which directly addressed women's role in crop post-harvest activities; R7885 (Promoting the adoption of integrated crop management in chickpea by poor farmers in Nepal) has made a significant impact on rural incomes derived from chickpea cultivation – much of this

money being earned by women entrepreneurs; R7569 (Participatory promotion of disease resistant and farmer acceptable Phaseolus beans in the southern highlands of Tanzania) demonstrates a sizeable female participation rate in the trials to develop new strains of the ‘meat of the poor’ in Tanzania and R8273 (Improving the livelihoods of small-scale sweet potato farmers in Central Uganda) also had a significant female focus given the central role of sweet potato farming for poor female-headed households. What is notable from the projects is that the gender-neutral term ‘farmer’ both removes the assumption that all farmers are male (much the same way that the term ‘fisher’ does) but can also serve to mask any advances made for women farmers in particular where no distinction is made between male and female farmers.

The purpose of **R7828** was to develop strategies which improve food security of poor households through increased availability, improve quality of cereals and pulse foods and better access to markets. The use of decentralised food grain storage was the focus of the project, yet within that focus the project also worked significantly with women (through a UNDP project which focussed specifically on food security of women farmers). However, gender relations which may or may not impact on the issues related to the management of decentralised grain storage were not addressed (for example, whether there was any resentment at the growing empowerment of women within the community after the installation of storage bins). In terms of **health** the project clearly had a significant impact. The project contributed to the Government of India goal of decentralising grain storage: government run ‘godowns’ have large stocks of grain whilst there is poor distribution and grain shortages in the countryside. Thus, any means of improving the supply of food grain to areas with shortages was likely to have an impact on the diet (and thus health) of communities. In terms of **education**, (women) farmers were involved in storage trials carried out by the project and thus will have benefited from some capacity building in this respect. What is more, it was noted that sangha groups (village based women’s groups) fully promote the education of girls thus the project was able to indirectly support this process through the support to the women’s groups. The impact of the project upon gendered **household security** issues was interesting. Improved grain storage certainly leads to improved incomes (less spoilage) and also to food security for households. The project found that food security in this respect is derived from having more commercial grain to sell rather than using the improved storage for home consumption needs. Women commented that they prefer to grow and sell commercial crops and then buy food for the home from the proceeds of sales. So, whilst the project contributed to improved household security, whether the gender gap in vulnerability was also reduced was not discernible. The management of decentralised grain storage has involved an increasing number of women and, overall, the villages reported increased levels of cooperation as a result of institution building for grain storage management. As such, it is likely that gender relations connected to the traditional **management of resources** have been impacted with management decisions being taken by men and women more equally.

R7885 aimed to regenerate chick pea cropping in Nepal through the use of integrated pest management (IPM). Through the regeneration of chick peas the project would socially and economically uplift poor marginal hillside farmers and fulfil their basic minimum needs. Chick peas, the most popular pulse crop in Nepal, are susceptible to disease and, over the years, yields have decreased putting increasing strains on households. Chickpeas are traditionally farmed by women and the project notes, in the series of publications based on the research, that women have been the main beneficiaries of the project. However, the reports also note that gender disparities in

rural Nepal are wide and, whilst the project no doubt helped improve the lot of women it probably made little difference to the gender relations that underscore poverty in rural areas. Chickpeas are known as the ‘poor man’s protein’ in Nepal and as a result the project has had a significant impact on the **health** of households with evidence that health across families has improved as a direct result of better cropping rates. What is more, villagers reported spending increased income from better harvests on deficit food purchases and medicines – both of which will improve the overall health of the household. **Education** has been widely impacted by the project with villagers reporting that additional income is being spent on sending more children (boys and girls) to school. The two study regions reported that expenditure on education was up by 80% and 51% respectively on previous years. Increased harvesting rates have led to increased incomes which can contribute to better **household security**. Evidence that farmers were purchasing poultry and goats with their increased surplus income suggests that women are building on their household security as a result of the project (poultry and goats and traditionally kept by women in the household). **Marketing** the improved harvests has also been successful with women expanding their business knowledge as a result of greater chickpea production. Because chickpeas are a more profitable winter crop than other pulses, women have been able to gain from increased incomes during the winter months. The project has made no discernible impact on the gender roles in the **management** of the chick peas – except to note that because of the nitrogen-fixing qualities of the crop less money and time is spent on applying fertilizer to subsequent paddy crops (which may suggest that women’s time is freed up). Although the project offers many examples of higher incomes, more expenditure on health and education and women profiting from their harvests, no evidence is offered to suggest that women’s **ownership of assets** has improved at all.

R7569 conducted research to reduce the impact of disease and increase production of beans by resource-poor smallholder farmers by the introduction of acceptable and disease resistant bean types in a sustainable, participatory manner. A substantial part of this project was aimed at understanding the biology of pests yet the impact it potentially had on women in particular, and maybe on wider gender relations, was substantial. Women are traditionally the custodians of seeds and as such any changes to seeds stocks and varieties impacts upon their role. What is more, beans (the ‘meat of the poor’) form an important component in household diets in Tanzania and thus the potential impact on **health** was considerable. Women and men were both equally represented in **training** sessions and in the participatory research conducted by the project on bean preference and disease awareness. What is more, women were also involved in the development of improved bean types (gender analysis of perceptions of important qualities of beans were incorporated into this process) thus giving them some input to the **management process** and **ownership** of the new beans. What is not clear, however, is how the empowerment of women through the project has impacted upon gender roles in general. Improved year on year bean yields have inevitably led to increased **household security** but no evidence is presented about how that security is held between men and women.

Women are the traditional farmers of sweet potatoes in Uganda and thus were the direct beneficiaries of **R8273**. The purpose of the project was to improve the livelihoods of small-scale sweet potato farmers in central Uganda through reduced post harvest losses; the diversification of value added products and increased household incomes. Farmers received **training** and were ‘sensitised’ to new products based on sweet potato (for product diversification). In the process, new knowledge of processes and technologies were disseminated and women and youth in particular were targeted for training in the

production of snacks and baked goods for sale in markets. **Household security** and **market opportunities** were certainly increased through increased yields and increased knowledge and product diversification and marketing techniques, but who gained is not made clear by the project. Specific markets for export were identified and encouraged but it is not clear how the benefits from such increased commercialisation would be distributed. Increased knowledge about farming techniques and post-harvest knowledge have certainly improved the ability of farmers to engage with the **management process** of the crops concerned.

4.4 Small-Scale Food Sellers and Producers

With few exceptions, women are those most likely to be involved in the preparation of food both at home and for the market. The reason for this gender division of labour is related to the ‘female’ attributes associated with cooking (providing nutrition for the family) and also to the physical restrictions placed on women that often confine their economic activities to the household compound. A range of projects relating to the preparation of food are in evidence across a number of the research programmes. These projects include both the primary processing of crops (bambara processing in Ghana, fish processing in Asia) and the preparation of food stuffs there after (biscuits from bambara flour, dried snacks from sweet potato for example). The sale of these products is also a key component of such activities. Religious restrictions can limit the ability of women to sell their products (the case of Muslim women in Bangladesh, for example) but the lack of credit for the very poor is also another significant constraint to the successful marketing of products. Whilst the lack of credit is a common constraint for all resource-poor producers, women are often harder hit because they are unable to provide any collateral from the few assets the family may have. The role of women is very visible across the majority of the projects dealing with food preparation. The role is particularly acute in southern Africa where HIV/AIDS has decimated the adult population and left many families without the traditional male breadwinner – putting additional pressures on women and adolescent children to provide an income. Illustrating the wide variety of activities related to the processing and marketing of food are: R7969 (Fish distribution from coastal communities in Bangladesh – market and credit access issues) which investigates an under-researched area (coastal Bangladeshi fisheries) and highlights the difference in gender roles across the industry and the religious divide (Muslim and Hindu). The division of gender roles in the fisheries sector is very clear: men fish and women process the catch. R7799 (changing fish utilisation and its impact on poverty in India) examines how these roles are having to adapt to an increased demand for fresh fish, increased export markets and declining catches. R8261 (Dissemination of improved bambara processing technologies through a new coalition arrangement to enhance rural livelihoods in northern Ghana) investigates the improved processing of groundnut flour (a staple in northern Ghana) and involved a significant number of women in the project. Finally R8272 (Improving food safety for informally vended foods in Southern Africa) addressed the problems associated with the sale of street food in southern Africa: a growing sector and one which is very important to urban consumers and producers alike.

The trading and credit system for fish products in poor coastal communities was the focus of **R7969**. The project set out to establish a methodology to integrate market and credit analysis with a livelihoods approach and formulate policy recommendations to benefit the poor in coastal fishing communities and throughout the fish distribution chain. With an estimated 10-20% of fish traders in coastal Bangladesh being women, the

project had the potential to impact upon gender relations although this was a minor and consequential outcome of the project. It is arguable that the increased information about marketing and credit chains may result in the bargaining power of fish traders over all being strengthened and this may impact upon how male and female traders interact. Certainly the project identified issues related to **household security** in general and issues related to women involved in fish trading and processing on the coast in particular. The project found that the women engaged in fish trading (as retailers rather than wholesalers) on the coast were Hindu and tended to belong to the hard-core poor, generally sold door-to-door and were also engaged in sorting and grading of fish. Like many fish traders, they are heavily dependent upon the activity for their livelihoods. However, lack of access to credit was identified as a significant problem for poor traders in general and for women traders in particular (women taking on loans often have little control over the household budget and find the money is spent by men in the household). Declining fish catches and rising incidents of piracy are also impacting in fish trading livelihoods. Given the low visibility of women in this sector it may be important to bear in mind the impacts of reduced catches on the most vulnerable (many of whom are women). (page 94, Synthesis of participatory rural appraisals in six villages and assessment of the marketing system). **Markets** were obviously a key focus of the project and the gender division of access to markets was identified by the study. The traditional view in coastal Bangladesh is that women shouldn't be allowed to sell fish. Those that do are generally part of the hardcore poor and frequently widows; they tend to buy from male relatives but if this is not possible they use loans to secure supplies from other fishermen. As women and Hindus they face considerable problems in markets were they suffer abuse from Muslim traders The lack of household security and difficulty of accessing markets both impact upon the ability of poor traders to assert any claims of **asset ownership** – a problem that is particularly acute for women traders as demonstrated by the evidence that loans taken out by women are often commandeered by men. The project noted that much was still unknown about how men and women access and control assets. Overall, then, the project highlighted the role of women in a predominantly male-dominated sector and has opened up the possibility of addressing the gender roles in markets and credit systems further.

R7799 also researched the post-harvest fisheries sector. Here, the purpose of the project was to establish how use of fish in India is changing and how it is affecting the poor. Given the high number of women involved in the post-harvest sector and the importance of fish in coastal livelihoods, the project was able to make a sizeable contribution to knowledge about gender roles in the sector. The **health** implications of changes to fish supply were noted, especially given the fact that poorer groups were being impacted by rising demand for fish and decreasing catch. Although fish consumption over all (in Southern India) appears to have increased the greater part of this increase is attributable to wealthier individuals. Poorer consumers are finding that they now have to buy cheap fish because they are no longer able to afford their traditionally preferred species. In other parts fish is now considered a middle-class food and the poor are seeking their protein from other sources. No observations regarding the gender difference in health effects were noted, however. The effects of changing fish supply in India were having a particular impact on **household security** in general and the poverty levels of women in particular. The project notes that with more landed fish finding its way to large urban centre (as a growing middle class increases the demand for fresh fish) so the amount of fish available to women processors in rural areas is decreasing. In Andhra Pradesh it was noted that women are processing fish for more weeks throughout the year than before in order that they are able to secure an income.

Generalised underdevelopment in some areas was reported to be putting increased pressure on women as was the reported rise in alcoholism (amongst men) and the increased and prolonged migration of men leaving women in charge of households for longer periods of time. (*Major trends in the utilisation of fish in India and their impact on the poor* page 9). Despite the gloomy predictions about the decrease of fish for processing and the impact this is having on women processors, the project also notes that some women are moving into the processing sector either because of poverty or because they are encouraged by the potentially high earnings to be made in the sector. The key changes in the **market** for fish are: increasing opportunities in the shrimp export market and in the supply of fresh fish to urban areas. As a consequence gender roles are changing: women are finding new employment in the export sector as shrimp processors whilst men are taking over (traditionally female) trading roles in local markets. Issues of **asset ownership** are also affected as gender roles change, although these are not addressed by the project except to note that the poor (including female-headed households and the elderly) often struggle to acquire the assets required to adapt their activities to the changes in the sector.

The purpose of **R8261** was to promote bambara processing and improved food security for poor households through effective dissemination of improved processing techniques. High quality bambara flour (made from the bambara groundnut) is a product exclusively used by women and processing the flour represents a full-time occupation for most of the women involved. As such the project, whilst not having an overtly gender or female focus impacted upon women processors in particular. However, as a project undertaken by the CPHP a thorough gender analysis was undertaken before the project began. The gender impact analysis stated that the project was likely to impact upon women more than men (because there are more women bambara farmers than men) at the cultivation level although at the market level both genders would participate equally. Positive benefits for women were outlined as being a reduction in the amount of drudgery associated with processing the flour resulting in a rise in production, income, free time with associated improvements in household nutrition and food security. It was envisaged that men would also benefit from higher incomes from improved cultivation techniques. The gender impact analysis also identified constraints to implementation and management: women often need permission to travel and attend meetings – which would also impinge upon their other household-bound commitments. Bambara is a key source of protein and an important part of rural diets, thus any improvements in the cultivation and/or processing of the crop is likely to have a positive impact on **health** through household dietary needs—although how such improvements would be shared across the genders was not noted. Through the course of the project many women were trained in technology and marketing and thus the project made a positive contribution to the gender gap in access to **education** and/or capacity building. **Household security**, as noted in the gender analysis, was also positively impacted upon with women (and men) able to increase their incomes through improved processing techniques and products for sale. What is not clear, however, is whether the ability to command control of the household security between genders was affected. A considerable amount of research in the product was conducted on the marketing of new food products made from bambara flour and on the flour itself. It would appear that any constraints to marketing are related to the nature of the product rather than to any gender bias. **Asset ownership** was not addressed *per se*, although the significant presence of women in the project – both as beneficiaries and co-participants means that they were able to ‘own’ the process and results of the project.

R8272 is representative of a number of projects which look exclusively at small-scale food producers in urban areas. The purpose of the project was to reduce the risk of food borne disease faced by resource poor consumers of street vended foods, improve the sustainability and reliability of street food vending as an income opportunity for urban poor and ability of government to deal positively and cost effectively with the growth of the informal food sector. Women make up 80% of those selling street food and of those 60% had no other source of income, the potential impacts on women were therefore significant but men, as the primary consumers of street food also stood to benefit from higher hygiene standards. Given the high rate of HIV/AIDS in the countries concerned (Zimbabwe and Zambia) the improved quality and food safety of street vended food is likely to have positive **health** impacts on men in particular (those with HIV/AIDS are much more susceptible to diseases found in poorly cooked food or dirty water). Considerable levels of training in basic food hygiene were given to food vendors thus extending the benefits of **education** to women. A consequence of higher sales as a result of cleaner, safer cooking areas could also be that more money is available to pay for school fees. Many households have been affected by HIV/AIDS and education has been impacted as income levels have dropped. **Household security** was also directly impacted by the project: women are responsible for food purchases and for expenditure related to health and education. Any increase in income – or the ability to secure a more regular income—will have a positive impact on the ability of female-headed households in particular to provide for their families. A common problem of increased income from economic activity is that men appropriate the income or move into the sector thus impacting on women’s **asset ownership**. This was felt unlikely to happen in this case given the cultural prejudice against men cooking food. Women’s ability to enter and influence **markets** was also addressed by the project which provided information on better presentation of product, together with the added marketing benefits of cleaner, safer food preparation.

4.5 Livestock in farming

Animal husbandry is catered for by two DFID Programmes: Animal Health and Livestock Production. Both programmes potentially have an impact on women and on gender. There tends to be a division of gender roles in animal husbandry with women responsible for small-ruminants (sheep, goats) and poultry whilst men are responsible for cattle and buffalo. Women are also usually responsible for milking, watering and feeding animals and in some cases make decision on the choice of drugs to treat disease. Goats and poultry figure in many project because they form an important part of the livelihood strategy of households – providing both a source of food security (eggs, meat and, in some cases, milk) and household security (through the sale of product). The husbandry of goats and poultry also provides women in many communities with a stake in their future, but their ability to make decisions about what to sell and how to sell it are often constrained by culture. Exceptions to this do exist, however. In Nepal women and men both take the decision on when goats are to be sold and the price to be asked. What is apparent from the range of projects consulted is that information on small-ruminants and poultry is often scarce: attention of the scientific community seems to have focused on those livestock targeted by men or those likely to return a better income (exotic species which are often beyond the financial reach of resource-poor households). Projects concerned with livestock highlight the difficulties of men commandeering successful projects – or, in the case of Zimbabwean poultry projects – sabotaging the projects. Women also reported that men are suspicious of women meeting to discuss income generating activities or resource management. The projects chosen to represent

work done on livestock are: R7524 (The use of oil-seed cake from small-scale processing operations for inclusion in rations for peri-urban poultry and small ruminant production) based in Zimbabwe; R8108 (Strengthening the contribution of women to household livelihood through improved livestock production interventions and strategies in the Teso farming system) which directly targeted the role of women in the management of resources, R7632 (Increasing the contribution that goats make to the livelihoods of resource poor livestock keepers in the Himalayan forest region) and R7359 (The Delivery of Veterinary Services to the Poor) which collected a considerable amount of gender-disaggregated information in Kenya⁵. The first and third projects had a major impact on women but also highlight how the role of men is integral to the success of projects: in the first case men were often threatened by women's success and in the last case men were working in cooperation with women. The final project is an excellent example of how gender analysis can be successfully incorporated into research without losing sight of the poverty alleviation goal.

R7524 set out to establish the benefits and constraints associated with the use of sunflower seedcake in maize-based poultry and goat diets. The husbandry of poultry and goats are traditionally roles undertaken by women. Income is derived from the sale of eggs, meat and live chickens (poultry) and meat (goats). Traditionally, chickens were fed maize-based feed whilst goats were rarely given supplementary feeds (being allowed to graze). However, for optimum chicken production high-protein feeds are needed and these are often beyond the means of small-scale resource poor farmers. By using the by-product of the rapidly expanding production of sunflowers/sunflower oils the project hoped to be able to improve the quality of affordable feeds available to poor farmers. Given the significant activity of women in the sector, the project was likely to have a sizeable impact upon household budgets and on women's empowerment overall. From a **health** perspective, an increased supply of meat and eggs (from the birds themselves) and income (from the sale of birds) was recognised as important to food security and nutrition. How such benefits might be distributed across genders, however, was not discernible. Little information had previously been available on the management of small-scale poultry and goats yet the project succeeded in disseminating valuable information and **training** to women farmers who would not normally have had access to such information. The project demonstrated that supplementary feeding improved the product which in turn led to increased income from sales and thus contributed to the **financial** and food **security** of the household. Poultry production is, however, not usually regarded as an 'economic activity' but rather part and parcel of a livelihoods strategy. In other words, it has not traditionally been given any special attention as a source of income over and above other activities which provide the household with food. However, **marketing** of poultry in the regions concerned (Zimbabwe) is a male activity, as is the construction of poultry shelters. The project noted that men have been known to jeopardise women's projects that appear too successful (ie empower or boost the incomes of women and threaten to upset traditional gender roles). The project therefore suggested that men too be involved in the development of such projects so that the benefits are recognised and shared by men and women equally. The training and information provided by the project positively contributed to the ability of women (in particular) to participate in the **management process** of the resource – although it should be noted that increased female participation and input was often seen as a threat by men. Finally, poultry is the one area where women have control over the resource and assets but capital (to buy birds, build shelters) is often hard to come by. Given that

⁵ The Project was carried out in Bolivia and India too but only information on Kenya was available on line.

men control the marketing of birds, it should be noted that any contributions to **asset ownership** for women is always going to be limited by their lack of control over the entire marketing chain.

R8108 addressed the policy and livestock production challenges that women face in the Teso farming system (TFS). The study has a specific focus on the role of women in livestock production and contributed a significant amount of data on gender roles in the TFS, yet those involved in the project acknowledged that by implication men would be affected by the project too; as a result men's views on TFS were also canvassed. The project's most significant gender impacts were on a number of key issues. The Teso farming system incorporates crops and livestock. Within livestock poultry and small-ruminants are very important as sources of milk for expectant mother and children and as a wider source of protein for the household. Therefore any improvements to the productivity of the system impacted upon health (although there is no way of knowing if it will help reduce the gender gap). **Education**/capacity building was improved with the explicit goal of empowering women and providing them with information to improve their farming techniques. Gender training was also given to the participants at workshops so that the reasoning behind targeting women could be understood. Although women contribute around 50% of the labour to livestock production the project found that they were generally unable to affect decision making processes in terms of the **marketing** or disposal of their livestock; distant markets were also found to be a particular problem for women (who are not able to travel far from home). **Ownership of assets** was also a problem: although women make a sizeable contribution to livelihoods in the Teso farming system, they are rarely able to lay claim to assets. This is a particular constraint given the key role that women should be playing in the (much needed) restocking of the system. In terms of **management of the resource** women were encouraged to attend project meetings, although they often complained that men prevented them from doing so. It was suggested that by incorporating men into the project structure there would be less suspicion of what the women were discussing at the meetings.

R7632 was set up to improve the livelihoods of goat keepers through increased goat productivity. An estimated 85% of rural households keep a goat which accounts for about 30% of goat keepers' livelihoods; given that the majority of goat keepers are women, the project had the potential to have a significant impact on women's development and gender inequalities too. Goat milk is not used by humans in Nepal, thus there was no direct impact on **health**, yet increased incomes from improved goat fertility and weight gained will have had an impact on health indirectly as will the use of manure for food crops. The project found that income from goats (and cattle and buffalo) was very important for expenditure on health and education. The project notes the distribution of male and female farmers that participated in data collection, and noted that the head of the household would always consult the owner of the goat (ie unmarried daughter, daughter-in-law etc) before the goat was taken to **market** and men and women agree a price for the goat together. So while the parameters used by women to decide which goats to sell, when to sell them and how to sell them (live or slaughtered) is known, whether those decisions can be taken unilaterally or not was not known. Village participants were invited to a **training** course on goat husbandry – but there is no indication of how many women goat keepers were able to take advantage of this opportunity. The project recorded the **asset** values of the household and the goats but there was no indication as to who held the assets and who was able to sell the assets. This is likely to impact upon the long-term goals of reducing gender inequalities.

R7359 is a good example of a project that incorporates gender analysis into the wider project analytical framework and did experience ‘gender slippage’ as the project progressed. The objective of the project was to develop a methodology for targeting poor livestock keepers, to analyse the role of livestock in food and livelihood security and to explore the parameters important to the delivery of animal healthcare to the poor. The project used a Livelihoods approach which would explain why it was able to incorporate gender so successfully. Whilst previous research undertaken by the programme had focussed on the science of improving the treatment of diseases in animals, this project set out to identify the constraints faced by farmers in accessing such knowledge and how dissemination strategies might be improved. The treatment of animal disease and access to veterinary services are critical to **health** for a number of reasons. First a number of key animal diseases (such as TB) are zoonotic (that is they can pass between animal and human). Access to treatment for these diseases is obviously critical to the health of the entire household – particularly those in close proximity to the animals (often women milking herds). Second, maintaining the health of the herd is also important to ensure the supply of milk and/or meat the household (for consumption) and indirectly to ensure the supply of income (for the purchase of food and medicines) from the sale of animals (which often form the most valuable asset owned by the household). However the project found that households spent the greater part of their income on food and education suggesting that veterinary services were rarely used. Considerable amounts of data on **education** were collected and found that the decision about whether to educate boys or girls was more complex than simply taking girls out of school because their labour was needed in the household. In many cases those least adept at livestock husbandry were sent to school irrespective of their gender. **Household security** was based on the raising of livestock in the majority of cases, with other farm activities also contributing. Women were found to be in charge of the sale of produce (from livestock, vegetable gardens, handicrafts) whilst men were in charge of all other livestock activity. Whilst the project collected significant amounts of data on when and why household assets were sold, no indication was given about how income from the sale of assets was held by men and women. The project made some interesting discoveries in terms of **management** even though information on how decisions were taken between genders and whether women were able to exert influence were not forthcoming. Whereas women and men both tend to buy drugs from the same source men are more likely than women to be able to purchase drugs from major centres (women are constrained from travelling far from home). Women placed trust in the provider of the drugs higher than men did and women tend to focus on curative drugs (needed quickly) where as men focus on preventative medicine (where purchase can be planned in advance). This information will obviously have an impact on where and how information on animal health is disseminated. Findings about resource management also reveal some information about **markets** although here no indication is given about how marketing decisions are made within the household. Analysis of **asset ownership** by gender was incorporated within the project’s analytical framework and found that in Kenya wives inherited livestock on the death of their husbands with the eldest son taking any excess stock. What is not indicated, however, is the security that such ownership implies.

4.6 Aquatic Resources

As a rule at the commercial level (that is all fishing done above and beyond subsistence), men fish and women process the catch; at the household level women and children often fish for the household pot using hand held gears in shallow water or catch more sedentary species (such as crabs). The extent to which women are involved in the

processing of catch is dictated by culture. Many fisheries throughout the West African region are pre-financed by women who, because of their activities in the processing and marketing sectors are the most readily available source of funds. Indeed, in some areas, women own vessels and control substantial sectors of the fleet and women are involved in many complex networks and alliances that enable them to negotiate access to fish and market them successfully. In Asia, on the other hand, women are often far more constrained and will often not be involved in economic activities outside their home. Many of these issues were covered above in the discussion on projects related to the sale of food stuffs. This section is primarily about the primary catching sector. The breadth of involvement of women and men in the sector is described in the projects below. R7100 (Improved management of small scale tropical cage culture systems in Asia) set out to research why numerous cage projects failed early on – the constraints faced by women (the main participants) were found to be a key factor; R6830 (Technical, social and economic constraints to rice fish culture in Laos, emphasising women’s involvement) whilst holding much promise to illuminate women’s role in fish culture makes little reference to women at all; R7917 (Self-recruiting species in aquaculture, their role in rural livelihoods) on the other hand has generated a considerable amount of information on gender even though the focus of the project was largely technical.

The purpose of **R7100** was to assess the suitability of small-scale cage culture (SSCC) for the rural resource poor, particularly women, through analysis of social, technical, economic and institutional issues. Cage aquaculture has been practiced in Southeast Asia for millennia, small-scale aquaculture (which relies upon natural materials for the construction of cages and requires minimal feed inputs) was thought to be suitable for promotion in Bangladesh (where the costs of leasing water bodies is often prohibitive; cages can be kept in rivers which are open access) and continued expansion in Vietnam (which already has a tradition of SSCC). The project was targeted particularly at women yet the reports from Vietnam do not address gender issues at all; the reports from Bangladesh do address gender over all and in particular attempt to identify why women tend to drop out of SSCC operations (a primary reason is women’s ability to operate outside the home being constrained in more conservative areas of Bangladesh). Apart from the obvious conclusion that women need support for income generating activities, there is no indication about why women in particular were targeted for the project. What is clear is that whilst SSCC was regarded by participants as a household activity, the bulk of the work fell to women. Where men and women were involved in the setting up of a SSCC, it was found that women were struggling to incorporate the work into their daily routine; where women alone had set up the SSCC they found it much easier to integrate into their household chores. The project was interested in boosting fish culture for the landless and resource poor who have access to open access fisheries. In this respect then, the project was able to enhance food security for poor households – with the potential benefits that **health** was improved (through a more consistent supply of protein and through increased income to spend on healthcare). Once again, however, there is no evidence about how any increased incomes were spent according gender. For the most part, women were shown to be learning about SSCC through their own networks rather than through formal **education** links/official extension services. Training had not been envisaged as an important part of the project in the original logframe but became an essential part of the research process as the project progressed. It is not clear, however, how women benefited from such training provided. One objective of the project was to boost empowerment of women to help them ‘regain some measure of control over their own lives and improve their level of freedom and status’. Whilst there is little doubt that a degree of empowerment was met through their involvement in the project, there is

little evidence to suggest to what degree empowerment was achieved. Another key objective of the project was to raise the efficiency of incomes (ie that they are able to contribute to **household security**). The study believes that by involving women this goal has been achieved, although there is no information available about how incomes are held within the household and thus no real evidence that women's vulnerability had decreased. **Markets** were not directly addressed by the project (possibly because most of the fish is consumed within the household although the over-wintering of fingerlings is a key economic activity) but the access to credit was addressed by CARE. The role of markets was addressed in the context of Vietnam but no information on the differential gender access to markets was given. The project observed that (in Bangladesh) women had, on the whole, gained greater independence as a result of the SSCC and greater recognition as community members. However, it also noted that, in terms of **resource management**, men still dominated the decision-making process and tend to take the decision to set up a SSCC (with women shouldering most of the work involved). **Asset ownership** was addressed in so far as there is no doubt about the ownership of fish that are cultured in a cage, although whether women are able to assert ownership of cages and/or the income derived from them was not clear.

R6830 specifically targeted the involvement of women in rice-fish culture in Laos. The purpose of the project was to increase sustainable yields from small-scale semi-intensive aquaculture systems through improved management, specifically fish production in rice fields in Laos. Information on options for culture was identified as a key constraint to improved management in this sector. Although the project targeted women, the issue of gender was not addressed in the project (even the FTR notes that with equal numbers of men and women research the gender focus of the project would be addressed, FTR, page 11). Laotian women are traditionally in charge of the household budget and therefore it might be assumed that any increased production from rice-fish culture would accrue to the women who were able to secure the household's **security**. Women are also in charge of **marketing** products, although no information is given on whether men and women equally share the decision to sell produce and at what price. No further information was provided on how an increase in catch was to be marketed, where the markets were, whether they were accessible to women and what the impact of increased production would be on women's daily time commitments. The project collected a significant amount of gender disaggregated information on constraints and approaches to improving the **management** of rice-fish production and noted that they (men and women) have an equal input into the decision making process, but no further aspects of this were given.

R7917 is still ongoing and yet has provided in-depth analysis of how self-recruiting species (SRS) might impact on gender relations. The purpose of the project is to examine the role of SRS in different aquaculture systems and develop management processes that will enable to the poor to gain better access to these resources. The project is also collecting information on the factors that determine the role of SRS within livelihood strategies. The project has identified the differences in labour practices and preferences between men and women involved in the project. It noted that in order for any improvements in the diversification of small-scale aquaculture women have to be encouraged to participate. The corollary of this, of course, is that men have to be encouraged to let women take part. The benefits of aquaculture in general, and SRS in particular to women have been shown to be substantial and the project document dealing specifically with gender issues notes that a key part of the strategy of SRS is to make consumption patterns more equal by increasing the product available. Women in the

project commented that with more fish available they would be able to consume more – thus addressing the discrepancy in the gendered **health** gap. An interesting finding of the research was that men and women choose different species for the SRS with women tending to focus on those species known to be beneficial to children and pregnant women (focussing on their health needs). The gap in **education**/training between men and women was addressed as women were given access to considerable information on SRS such as disease control, breeding habits, fish protection and so on (information which they would not normally have received). **Household security** (particularly female-headed households) has been improved through better knowledge of SRS: capture rates have gone up and there is better knowledge available on **marketing** of products and how to access credit facilities. Men generally make the marketing decisions in the household and cash from the sale of fish is reinvested in crops (SRS forms only a small part of the overall household strategy for most of those involved in the project). From a **management** perspective, the project has contributed to knowledge about who does what in SRS activities (how male and female roles are divided) and the constraints that need to be overcome in order to improve uptake of SRS. The study found that by raising awareness of SRS production aquaculture activities would no longer be the preserve of men but management of new SRS practices would be shared equally between men and women. The project was able to highlight women's groups that were working together to get credit and training so as to stock a shared pond. It was felt that women were more confident in taking decisions. Knowledge of decision making processes and how **asset ownership** is divided between men and women show that whilst ownership of goats, poultry and vegetables was clearly with women's domain, little was known about how SRS would fit within the household pattern of ownership. It was found that in general, SRS were considered to be household assets.

5 Discussion

The breadth of issues covered under projects funded through the RNRRS is vast and in many cases the division of labour between men and women is reasonably clear cut and equal in so far as women bear as much of the responsibility for management of crops and animals as men⁶. Yet the degree to which women and/or the question of gender is addressed is slight. Many of the projects listed above date from the previous 5 years or so and this is no doubt a direct reflection of a) the incorporation of the SLA within DFID research programmes (which allows the question of gender to be introduced into research in a comparatively 'painless' fashion) and b) the growing awareness of the importance of 'gender' and development. Examining the projects through a framework that targets the basic human rights where women are often disadvantaged (health and education) and the key areas that have traditionally constrained equitable gender relations in natural resource usage (access, control and management) helps us to understand the broad range of impacts that the DFID RNRRS has had, albeit indirectly.

With an intimate connection between the supply of food, diet and health, many projects within the strategy were bound to impact upon household nutrition and thus potentially on **health** too. In nearly all cases whilst there was an implicit assumption that improved harvests and/or incomes may have improved household budgets and thus the amount of money available for food and medicines, only a few projects made the link explicit. R7828 clearly improved food security because the women were able to sell commercial

⁶ It should not be forgotten, however, that women invariably carry the heaviest time burden overall being largely responsible for all the household chores on top of their commitments in the fields.

grain to buy food. The promotion of locally important food crops that had previously been neglected was addressed by R7885, R7569, R7187, R7524 and R7100. All these projects researched the improved production and cultivation of food products important to household diet: fruit, chickpeas, beans (these two known as ‘meat of the poor’), chickens and fish. R7799 focused on how changing market patterns were affecting the supply of fish (an important source of protein) in southern India and found that the demand for fish from wealthier households was forcing the poor to change their buying patterns as their preferred fish became too expensive. Direct reference to health effects of projects were, however, rare: R7187 noted the health implications of fruit for weaning foods and R7885 noted that there was evidence to suggest that health across families had improved as chickpea harvests had proven more bountiful. Whereas health references were made mostly about children, nursing mothers and the elderly R8272 was unique in its reference to the health of men in urban Zimbabwe and Zambia. Here, the provision of safe food was noted to have a positive impact on the large population of HIV/AIDS infected men who traditionally rely upon street-vended food during the day. However, despite reference to the potentially improved household diets through increased production no mention was ever made of how food is allocated within the household and which family members would benefit from better harvests (in many cultures male children receive more and/or better food than their female siblings).

Access to **education** in many parts of the developing world is unequal with girls receiving less years of schooling than boys and women having fewer opportunities to acquire new skills than their male counterparts. Education as such was not specifically mentioned in any of the projects reviewed – although a number noted that increased incomes from better harvests had been used to send children to school (R7795, R7885 (which recorded up to an 80% increase in education expenditure and R8271) and the importance of sending girls to school was an important ethos to the women’s sangha in India (R7828). A similar synthesis process is concurrently looking at the issue of capacity building, yet it was felt that the distribution of access to training and/or capacity building was worth looking at. Many projects provided some degree of capacity building or training. Whilst some noted the gender split of participants, others did not, leaving a degree of uncertainty of just how equitable access to skills was. Training ranged from projects which targeted specific skills: hygiene (R8272), grain storage design (R7828), improved bean type selection (R7569), marketing techniques (R8273, 8261) to those that focussed on more ‘community’ skills: R7856 which focussed on engendering leadership skills and fostering community cohesiveness, for example. Training in gender awareness was very rare and, of the projects reviewed, featured only in R7856 and R8108. It is also worth mentioning R6072 which specifically targeted illiterate women – training them in forestry techniques through the use of picture manuals. In the case of R7100 the importance of training was not fully realised until the project was underway and subsequently became a significant output of the research. Overall, the gender gap between male and female access to education has been addressed through many of the projects with real and significant advances being made in how women are able to access information and further their skills. In examining the training element of projects it quickly became clear that in many cases the information being passed onto women was new to them. In many cases the areas of economic activity that women engage in had not attracted the attention of the scientific community before and so there had been no information available (example of the various projects that deal with poultry); in others it was realised that women tend to learn and impart information through very different channels to men (women use family and friend networks, men use the radio, print media

and networks built up around eating/drinking venues) – by disseminating the material in a form that was acceptable to women the information gap was narrowed also.

Household security through raised incomes does not signal an end to poverty, yet the degree of security that men and women are able to achieve does account for some of the poverty gap between the genders. Recent research conducted by Flintan (2003) notes that many development projects fail to recognise the link between household/financial security and development projects that focus on the environment in particular. Women are often disproportionately disadvantaged by policy decisions (over which they have little influence) regarding natural resources. Thus whilst many projects undoubtedly impacted on household security few appeared to be aware of the gender implications of the process. Nearly all the projects under review addressed household security to some extent or another because most of them were aimed at improving incomes through improved harvests (R7569, R7885) more efficient processing (R8261 for example) and better marketing of products (R7795 for example which noted the benefits from improved Marula and crabwood sales; R8273 which investigated product diversification for sweet potato farmers and R8261 which saw products made from Bambara flour more widely distributed). Conversely R7799 noted how household security of the (largely female-headed) poorer households dependent on fisheries in South India were being directly impacted by the increased demand for fresh-fish from middle class consumers. Men are gradually usurping women from their traditional roles as returns to what used to be a low-grade are improving. Other projects aimed to further knowledge about how livelihoods were affected by various market forces. R8196 provided information on how dependent households were on fisheries for their livelihoods in Kenya and Tanzania (although this dependence was never quantified in terms of money); R7969 highlighted the lack of household security that women fish traders in southern Bangladesh have and R7799 underlined the problem of gender roles reversing (particularly as men move in to co-opt successful income generation ventures). However, whilst household security was an obvious outcome of improved harvests, processing and marketing of products no mention was ever made of how this income was to be shared and whether women and men would have equal control over it.

A significant part of improving incomes is improving access to **markets**. Men often have better access to markets and market mechanisms because they are able to travel far from home without permission and they are able to acquire credit more easily than women (men often own what few assets the family may have and they are able to tap into networks which govern how markets are operated). However, the spread of gender roles in the market place varied widely across the projects reviewed. In Nepal project R7632 noted that decisions about marketing of goats was taken equally by men and women whereas in Zimbabwe women are unable to effect marketing decisions of their own livestock (R8108). In Zimbabwe men market produce and it was not unknown for them to sabotage successful women's poultry projects if they perceive them to be too successful (poultry rearing is usually regarded as a household activity and not as a source of income). It was not within the remit of any project to alter cultural traditions that govern how and when women are able to travel from home (although 'gender awareness' initiatives mentioned in a number of projects (see education section above) and R7856 which focussed on social capital and networks will have addressed some of the reasons for this) yet overall the projects were able to move forward the debate on access to markets through a number of means. First, by giving women more information on markets and marketing products – this was particularly evident in R7885 where female traders from the project were awarded national prizes for their achievements and R8273

where women were encouraged to diversify their products to achieve a wider market. Second, by gathering information on previously under researched areas — for example R7969 which collected information on the function of markets for fish in Bangladesh (an area where generally only the poorest women operate).

Information on how access to **management** mechanisms was governed by gender was rarely mentioned explicitly in the projects reviewed⁷. The failure of women to access policy-making decision processes (at all levels of governance) is something noted by many researchers (see Waterhouse and Neville, 2005 for a recent discussion on this problem). Whereas women and men often bear an equal burden in terms of labour input to economic activities in natural resources, it was often not clear whether the ability to affect influence on how such resources were managed was equally distributed. The sole exception to this is R7917 where a significant amount of data has been collected on the gender roles related to the management of fisheries resources. Much of this data is still to be analysed but will hopefully provide a roadmap that will inform future research that tackles resource management processes. At the very least future research needs to encourage a more equitable distribution of decision-making powers. That said a common theme in many of the projects was drawing women into the management process by equipping them with skills (literacy, information, leadership) and providing them with opportunities. R7856 had an implicit objective to encourage more women to take part in management processes. This was achieved by establishing forums and committees in which women were notable participants and providing all members of the community with training to allow leadership skills to be developed. Merely placing women onto boards that are able to influence policy and management processes is no guarantee that their voices will be heard. Indeed R8108 found that although women were encouraged to attend project meetings men often prevented them from doing so. Likewise, it was noted that meetings of women about ‘non-traditional’ female topics (ie resource management) were often treated with suspicion. There is little doubt that many projects provided the foundations for allowing a more equal distribution of management responsibilities across genders (even if this were not their intent). R6072, R8273 and R7524 all provided women with knowledge that had previously been denied them (either through illiteracy or lack of available information). This knowledge may have provided them with the confidence to challenge the *status quo* and wrest some control over how the resource was managed but R7524 in particular noted that increased female participation was often seen as a threat by men. Where resources were clearly identifiable as being privately owned (fruit trees in R7187 for example) management of the resource comes down to how individual households organised their income generating activities; where the resources are owned in common the distribution of management powers is less clear. Women were in charge of the management of grain storage facilities in R7828 and shared equal responsibility for goats as identified by R7632. Ultimately, in many resource sectors men still hold the balance of power in the decision making process irrespective of the input by women: R7100 notes that although day to day management of cage-culture is done by women men tended to take the dominant role in the decision making process.

Closely related to household security and the ability to influence management decision is the **ownership of assets**. Being able to secure and maintain ownership of assets (be they financial or physical) is an important factor in establishing some degree of financial

⁷ It should be noted here that ability to influence management decision is not solely a question of gender (although that is the focus here) – comparative wealth and being a member of a majority (be it racial or religious) are probably more important factors.

security and in being able to exercise influence over how the resource (CPR water bodies, range lands and so on) is managed. Ownership is often dictated by legal frameworks which in many cases place ownership in the hands of (male) head of the household. With many of the RNRRS projects focussing on improving assets (crops, livestock, skills) it is important that we understand how such benefits are distributed and secured by different members of the household. Many project made no mention of how assets were currently owned and how these ownership patterns might affect project outcomes. There were a number of exceptions, however. R7856 noted that women's inability to command control over assets was a key constraint to development. They note, for example, that female-headed households are often disadvantaged by controlled grazing laws because they lack land and labour assets. A similar point was raised by R7799 where women are often unable to adapt to changes in the fisheries sector because they lack the assets (which give them access to credit) to participate. And R8108 raised a similar concern that women's inability to lay claim to assets was a serious constraint to further development in the region. Many projects, whilst collecting large amounts of gender-disaggregated data, failed to collect information on the distribution of assets and income within the household – something that R8196 noted was needed. The only project that had collected information on asset distribution is R7917 although much of this data is still to be analysed.

A number of myths and misconceptions related to the inclusion of women or gender in projects seem to have influenced many of these projects.

A common argument is that development should be **focussing on the alleviation of poverty** and not get sidetracked with complications about women and gender. There is an assumption that gender inequalities will be removed as poverty is reduced. Whilst a number of projects note that poverty is the primary reason why the poor have difficulty accessing credit, decision-making processes and drug regimes (to name but a few) we need to bear in mind that within 'the poor' we have yet another set of constraints that relate to gender. Poor women are generally more vulnerable than poor men. A number of projects make passing reference to women or gender (maybe to placate those pushing for the mainstreaming of gender in programmes) yet do not make a commitment to the issue.

Gender and women are frequently confused in projects: those that target women claim to be addressing gender issues; gender is said to have been addressed by having research teams made up of equal numbers of men and women. There are few examples of projects that have taken on board the need for gender analysis to thoroughly understand why some sections of a community are poorer than others (R7917 and R7359 are notable exceptions).

Gender awareness and gender analysis is not the same thing. The first (which is notable in some projects) indicates awareness that how male and female roles are negotiated has an impact upon poverty. The second indicates a means of studying the process of negotiation in order to better understand gender roles (again, only really touched upon by R7917 and R7359).

6 Conclusions and recommendations

In eleven years the RNRRS has covered a vast array of economic activity related to natural resources and myriad issues within that sector. The projects presented above

represent just a very small sample of the projects funded and those that have had some impact upon gender relations. If we take a hard look at all the RNRRS projects very few if any of them directly tackled gender issues *per se*. However, plenty of examples abound of projects that attempted to improve on the quality and range of information available on gender roles within the RNRRS arena of activity. A prime example is R7359 which held gender roles and the differences between how men and women farmers access and assimilate information as central to the project ethos. Myriad others highlighted (albeit accidentally sometimes) information about gender roles which certainly adds to our understanding of how rural households operate and how information is disseminated.

So, are there any gender lessons that can be drawn from the extensive amount of research that has been conducted into the management of natural resources over the past eleven years? A number of key points emerge; none of the lessons are particularly novel (in the field of gender studies) but they certainly serve to focus future research on natural resources and poverty.

The first and probably the most important point is that men and women have different perceptions of what is important in terms of decisions they take about their livelihoods. These decisions include which crops and varieties to grow, which animal health care provider to use, which diseases they consider the most important (and which need treating with more priority) and which drugs to buy to treat their animals. The information that they use to make these decisions are also derived from different sources. Advances in the understanding of how social capital works has demonstrated that men and women tap into different networks of information and influence (something highlighted by R7856). **Whilst this information is not necessarily new, it is important that how men and women access and assimilate information is critical to the promotion of outputs of DFID RNRRS research and should be incorporated into communication strategies early on in the project.** Recognising how perceptions are divided along gender lines will also impact on how outputs from projects are received.

A considerable amount of gender-disaggregated data across the full range of natural resources has been collected yet there is a danger that this information will be lost unless a central database of such data is kept. Despite the quantitative and qualitative gender disaggregated data collected many projects fail to use this data to its full extent in their reports (although it may be used in more depth in subsequent thesis and peer-reviewed publications). Gender disaggregated data of household activity is only valuable if it is analysed and conclusions drawn from it. A critical element missing from much of this data is how decision-making is shared in the household and how income is held between men and women. **Given the predominance of income generating activities promoted in many of the projects, more thought needs to be given to collecting data on how increased incomes will be used and how they will impact on gender roles in the household.**

A number of projects focus on women (as stated in the title) whilst others cite women as the beneficiaries of the project (stated in the project purpose). Whilst there is nothing intrinsically wrong with projects that place women at their centre, serious consideration has to be given to how these projects will impact upon gender roles. Boosting the role of women will not have any effect on gender relations unless men are also co-opted into the project. A number of projects reviewed in this synthesis note that men will often disrupt successful projects run by women by commandeering the profits, taking over the running

of the project or sabotaging it altogether. Gender impact analysis conducted at the project proposal stage should help highlight where the project may have a detrimental effect on gender roles. **The CPHP currently conducts a Gender analysis at the concept note stage (along with livelihoods and stakeholder analysis) and this is perhaps a template that should be adopted for future research.**

Projects that intend to empower women need to consider exactly what they mean by empowerment and how empowerment will be realised. Empowerment of women without reference to men will only be short-lived; the ideal solution is that gender-awareness is conducted alongside empowerment so that the distance between men and women's understanding of their roles can be reduced. **What is clearly needed for all programmes is a set of clear, easily implemented guidelines on how to incorporate gender (and women) into their projects.**

Gender roles are intrinsically bound up with cultural norms and projects cannot hope to change such norms in the course of a couple of years. As such, a number of constraints will always hamper how successful projects that target women are likely to be. Projects need to be aware, early on, of constraints that either restrict women to the home compound or only allow them to travel from home with the permission of a male relative. The question of whether gender reforms should be prompted from outside or be allowed to germinate naturally from within a community remain unanswered.

Thought needs to be given to the use of blanket, homogenous terms such as 'community'. Just as it was realised some years ago that the 'household' was not a homogenous unit (men and women operating in difference spheres) and that the poor are not homogenous so it needs to be acknowledged that 'community' (for all the problems of defining it) is not a homogenous unit. **Research that intends to bring about change at the community level needs to acknowledge that gender relations are a powerful moderator of community action.** Women may find that they carry the burden of setting up community activities but that they are equally less able to participate fully in them because of restrictions on their time.

In recent years the term 'fisher' has become common place amongst development practitioners working in aquatic resources. The term was coined in recognition of the fact that women do fish (albeit it largely for subsistence and rarely out at sea but in shallow waters with hand held gears). However, in the aquatic resources arena there still exists considerable scope for describing the gender of participants: fish mummies (female); fishermen (male). The same development does not appear to have happened in the agricultural field. Here 'farmer' is still the most common term in use. Only a few projects referred specifically to 'women farmers' in all other cases it was not immediately clear whether the beneficiaries of the project were male or female. A certain degree of logic can be used (poultry and goat farmers tend to be women, sweet potatoes are farmed by women and so on) but for **the most part any contribution that the RNRRS had made to the position of women was masked by the failure to identify the gender of the participants.** Of course a project that only benefited women farmers will not necessarily have any impact at all on gender relations but the fact that women's (significant) role in agricultural production has been recognised and their information and skills needs are being addressed is an important first step.

In conclusion, then, NR research funded by DFID has certainly a considerable distance to go before it can claim to have mainstreamed gender. However, significant advances

have been made over the past 11 years – much of which is surely attributable to the introduction of the SLA which facilitated the incorporation of social science disciplines into what were largely technical/scientific projects. However, no matter the efforts made at the project level and the input made at the programme level, the ethos guiding how projects are structured and how funding is distributed is often dictated by policy decisions outwith the control of the RNRRS (as it stands). The current Agricultural Policy Document, for example, appears to have removed any reference to the SLA, makes no mention of gender at all and reference to women's role in agriculture is sparse. With such blueprint documents failing to place gender roles on the agenda there is little hope that much progress will be made at the programme and project level in the near future.

That said, some fundamental questions regarding poverty alleviation and gender still need to be addressed. Namely, is gender a key component of poverty alleviation or simply a distraction to the problem in hand?

List of Project Documents Consulted

R6072. Learning through pictures: a resource for women farmers.

R6380. Final Technical Report

R7100. Final Technical Report

R7187. Unknown document-type from FRP archive.

R7359. Final Technical Report.

—. The Delivery of Veterinary Services to the Poor: Preliminary findings from Kenya

R7524. Final Technical Report.

R7569. Project Completion Summary Sheet

R7632. Final Technical Report.

R7795. Project Completion Summary Sheet.

—. Sunderland, T and O Ndoye. Forest Products, Livelihoods and Conservation. Volume 2 (Africa).

R7799. Major Trends in the utilisation of Fish in India: Poverty-Policy Considerations. Briefing Note.

—. Major Trends in the utilisation of Fish in India: Poverty-Policy Considerations. Policy Document.

—. Major trends in the utilisation of fish in India and their impact on the poor. Project Outline.

R7828. Project Evaluation Report.

R7856. Final Technical Report.

R7885. Wealth Generation Through Chickpea Revolution. On-farm IPM of Chickpea in Nepal. Information Bulletin no. 66.

—. Empowerment through Enrichment. On-farm IPM of chickpea in Nepal. Information Bulletin no. 65.

R7917. Integrating SRS in Aquaculture: how does it impact men, women and children? A case study from Northwest Bangladesh. 2nd Draft.

R7969. Final Technical Report.

—. Livelihoods in coastal fishing communities, and the marine fish marketing system of Bangladesh. Synthesis of participatory rural appraisals in six villages and assessment of the marketing system.

R8108. Proceedings of a Training Workshop on Improved Livestock Interventions in the Teso Farming System.

—. Presentation of Survey Results and Discussion of Way Forward. Regional Women's Workshop Report.

—. Consultations with District and Subcounty stakeholders in the Teso Farming System to Collect Ordinances and Byelaws.

R8196. Final Technical Report.

—. Annex 1 parts 1 and 2: Review of Tanzania and Kenya

—. Annex 2. Livelihood Appraisal.

R8261. Project Final Document.

R8272. Project Final Report

R8273. Project Final Report.

Other References

Davis, DL and Nadel-Klein, J. 1992. Gender, Culture and the Sea: Contemporary Theoretical Approaches. *Society and Nature Resources* Vol 5: 135-147

Oyewumi, O. 1997. *The Invention of Women. Making an African Sense of Western Gender Discourses*, University of Minnesota Press.

Oyewumi, O. 2002. Conceptualizing gender: the eurocentric foundations of feminist concepts and the challenge of African epistemologies. *Jenda: A Journal of culture and African Women Studies*. 12 (1).

Downloaded 10 September 2003. www.jendajournal.com

Arnfred, S. 2002. Simone de Beauvoir in Africa: "Woman the second sex?" Issues of African Feminist Thought. *Jenda: A Journal of culture and African Women Studies*. 12 (1).

Downloaded 10 September 2003. www.jendajournal.com

Arnfred, S. 2002. Conceptions of gender in colonial and post-colonial discourses: the case of Mozambique. Paper prepared for CODESRIA 10th General Assembly on Africa in the New Millennium, Kampala, Uganda, 8-12 December 2002.

Arnfred, S. 2003. African Gender Research: A view from the North. *CODESRIA Bulletin*, No 1.

DFID. 2000. Eliminating World Poverty: Making Globalisation work for the poor. White paper on International Development. DFID: London.

Flintan, F. 2003 *Engendering Eden: Gender, Women and Integrated Conservation and Development Projects*, IIED: London.

Magnus, E. 2003. Gender Analysis in NRSP. PD123. HTSPE: Hemel Hempstead.

Rubinoff, J A. 1999. Fishing for Status: impact of development on Goa's fisherwomen. *Women's Studies International Forum* 22 (6): 631-644

Taylor, V. 2000. *Marketisation of Governance: Critical Feminist Perspectives from the South*, DAWN: Suva, Fiji

Waterhouse, R and S Neville. 2005. *Evaluation of DFID Development Assistance: Gender Equality and Women's Empowerment Phase II Thematic Evaluation: Voice and Accountability*. DFID Working Paper 7 May 2005. DFID: London.

Williams, S. 2000. *Economic potentials of Women in Small-scale Fisheries in West Africa*. Paper presented at IIFET, Oregon, USA.