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Resources – A common pool for whom and how? A review of NRSP's past and current CPR-related projects

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Resources – A Common Pool For Whom And How?

(A review of NRSP's past and current CPR-related projects)

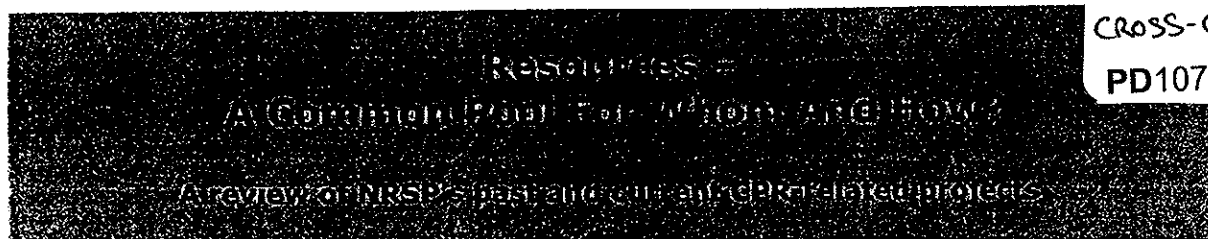
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1. Scope and Aims

The second part of this paper (Annex D-ii) contains 24 review summaries of current or recently completed research projects funded by DFID's Natural Resources Systems Programme (NRSP) concerning Common Pool Resources (CPRs). They are grouped under three systems and three regions. The systems are the **forest agriculture interface**, the **land water interface** and semi-arid lands. The regions are **Africa**, the **Caribbean** and **South Asia**.

In each case the core project documentation on which a review is based is listed. Many projects have produced additional publications, some of them numerous. However, it has not been possible in the short time available for making this review to read additional publications. The first part of this paper identifies and addresses the issues that transcend the systems and regions and are therefore of central concern to all projects. These overarching issues include: the **complex nature of the problems surrounding CPRs** – uses, users and managements; **major project findings and observable gaps** in the research to date; how research **responds to DFID's priorities**; project research designs and methodologies; and dissemination of project results and uptake of findings.

2. Natural Resources and Common Pool Resources

Some of the projects under review use the terms natural resources and common pool resources interchangeably. But it is argued here that the first is an objective name for all resources irrespective of the presence or absence of humans. The second is subjective, implying things that exist in relation to human society, which has designated only parts of all natural resources as belonging to a pool to be held and used in common by them. Natural resource management (NRM) is, again, a more embracing concept covering all forms of private, governmental and other resource managements, whereas CPR management, with all its diversity, represents only a part of NRM. The acronym CPR too stands in need of clarification, being used also to mean Common Property Regime – i.e., the management of common property – rather than the common pool resources themselves.

Two trends are identifiable in the present situation. On the one hand population growth, with an increasing percentage of poor people occurring, and on the other, loss of biodiversity and depletion or degradation of natural resources. CPRs are depicted in many research projects as the domains where these trends meet and clash with a particular intensity. It is from this situation, and sensing a potential role in its alleviation that CPR research derives its legitimacy and urgency. When Elinor Ostrom prepared her book, *Governing the Commons*, the CPR literature had grown rapidly from 1,000 to 5,000 case-studies (F. Martin 1989, cited Ostrom 1990, xv). How many does it contain today? Whatever the exponentially-expanding number in the third quarter of 2001, the case-studies of the present projects stand as an archive of data that contribute in specific, and sometimes unexpected ways, to our understanding of the issues surrounding CPRs, their sometimes idealised pasts, their troubled presents and threatened futures.

3. How Common are the Common Pool Resources? Major Findings of Project Research

Projects in all three regions and systems group themselves around the following CPR issues:

- those documenting the **diminishing CPR base** and/or identifying ways to increase it sustainably
- those concerned with **poverty and marginalisation** and the potential roles of CPRs in alleviating them
- those identifying **ways to change social attitudes**, build consensus and reduce conflict
- those studying CPR management structures in order to **improve their capacities**. Some projects are intentionally designed to respond to more than one of these questions and, in fact, all projects implicitly relate to more than one.

Across all the systems and regions, project research shows, with some local exceptions discussed below, a decline in the extent of CPRs. In the sense that common means frequent, CPRs are less and less common. Increased desertification of the semi-arid systems is causing a contraction of the usable resource base. Unsustainable rates of logging and the encroachments of agriculture have reduced both the extent and the biodiversity of the forests, while the resulting soil erosion impoverishes agriculture on the forest margins. At the land water interface, water pollution, loss of aquatic biodiversity and degradation of reefs all point in the same direction. As these common pools of resources contract and competition for their benefits sharpens, many projects address a second meaning of "common" – shared, mutual, reciprocal. They ask, how equitably are the common pool resources shared? What can and should be done to increase the management voices and the benefit shares of the economically, geographically or socially marginalised people: the poor, the tribes, the lowest sub-castes, isolated communities and women from all those groups? These are the very people who depend most on CPRs. What can be done to mitigate the conflicts among multiple users of the same (contracting) pool of common resources?

4. Positioning with Respect to DFID's Present Policy Priorities

All of the projects reviewed have a pro-poor, pro-sustainable livelihoods and environments as their immediate or ultimate focus. To this extent they do respond to DFID's present policy priorities. Many projects have contributed something to a clearer understanding of the causes of poverty. More remains to be done, however, to explore the multiple causes of poverty, the complex nature of poverty traps and the heterogeneous nature of poverty itself. Scant acknowledgement exists in the projects so far of the fact that some of the sharpest conflicts taking place around CPR use today are not the poor against the rest, but the poor against the poor.

Because they depend most on CPRs, their conflicts are the most desperate. Only a minority of projects has distinguished ways to alleviate poverty. They have done so in several ways:

- by **exploring and validating innovations to increase the common pool** in particular locations with resources that will benefit the poor (e.g. aquaculture in Bangladesh and the Eastern Plateau of India)
- by **creating and testing procedures** that should improve the access of the poor to existing CPRs.

One of the latter projects (in Nepal) includes methods for monitoring institutional success in achieving those aims. Another in Bangladesh focuses on consensus-building to facilitate effective and inclusive CPR management, while a third in the Caribbean develops a "trade-off" procedure to achieve the same ends. In short, many projects urge inclusivity of CPR management structures and decision-making processes as ways to reduce conflicts and improve equitability, but only a minority has demonstrated in detail how these desirable states can be achieved.

A further question yet to be addressed by the projects is: where, how and by whom are the limits of inclusivity to be drawn? In the interests of effectiveness, it seems that a fine and necessary line exists between a broadly-based but coherent CPR management assembly and an amorphous, fluctuating assemblage of users of resources open to all, managed sustainably by no-one. Management regimes have to construct rules that include some and exclude others.

5. Major Findings on Diversity among Common Pool Resources

One of the documents reviewed argues that 'Tanzania is basically a nationalised CPR ... from which various bits have been appropriated by the state, companies and individuals, and by communities (only 5%).' If so, this must surely be an upper limiting case where the extent of CPRs is more or less co-terminous with the extent of the state. There is no lack of limiting cases at the lower end of the scale, where access to very modest additional CPRs (e.g. new fish stocks suited to small ephemeral ponds in eastern India) can nonetheless have a significant impact seasonally on the livelihoods of the poorest, especially women.

In all regions covered by these projects, three resources dominate the common pool: water, land and forests. Each of those resources, or production systems, contains immense diversity. Water comprises seas, lakes, rivers, ponds (perennial and seasonal), man-made reservoirs and wells and the aquatic life in them. Land is waste, pasture, arable, horticultural and fallow, and includes the land on which forests, lakes, habitations and reservoirs stand as well as the wild and domesticated animals actually or potentially dependant on it. Forests are notional as well as real, for their repertoire runs from degraded wastelands that were once wooded to dense hillside forests, and includes isolated patches of scrubby bushland as well as many vitally important non-timber forest products. A number of projects have explicitly made the point that these resources are interconnected. When studying water conditions and potential, one needs to look at the watersheds upstream and the downstream land; land assessments are meaningless without solid data on water. The actual and potential bio-physical conditions of forests can only be understood in the contexts of water and land. Thus several projects have made a plea for holistic rather than production systems research.

6. Major Findings on Diversity of Structure and Effectiveness among Management Institutions of CPRs

Apart from the seas and lakes, all three great resource groups exist under state, district, local and private ownership and as common property regimes. Many have changed their status within recent decades, some more than once. In addition to the effects of environmental diversity, two factors may directly underlie the great differences of structure and effectiveness that projects find among the management institutions of common pool resources. They are, firstly the history of common and/or codified law relating to these resources in particular societies and secondly the cultural and socio-

economic history of local peoples, whether expressed in villages and village rights, in ethnic groups of tribes, castes and sub-castes or in socio-economic classes. Both of these kinds of legal and social traditions are themselves immensely varied in time and space: none has pursued a unilinear pathway of gradual change unaffected by disruptive, sometimes violent events in the pre-colonial and colonial eras and during the radical changes of policy in post-independence history. Only rarely has attention has been paid to these underlying factors in project research (a recent exception is project R7975 in Nepal), yet their contribution may be fundamental to a secure understanding of the present institutional structures and capacities – or incapacities – of CPR management.

Records of the activities of village-based irrigation committees in Andhra Pradesh and Tamil Nadu go back to the 7th century AD, while the institutions themselves were probably much older. Members were elected for 360 days only, but in that time had considerable power: to distribute water, settle disputes, employ labour, carry out repairs and improvements, remit, collect and invest water taxes, fine and punish defaulters and even to seize and sell the lands of persistent offenders - termed 'gramakantaka - village thorns' (Stargardt 1990, 134-7, 394). Records such as these reflect, not only the details of traditional communal water arrangements but still more importantly, the historical depth and robustness of the village societies standing behind them. The recent Andhra Pradesh case-study (project R7877) has shown that a contemporary trend to private tube wells has undermined the power of the traditional water committees and seen the decline of the communal water tanks. But interestingly, some tradition of communal access to water survives in Andhra Pradesh even when that resource is now privately owned.

While such evidence may have great significance for understanding CPR management institutions in Andhra Pradesh and perhaps in other parts of India, is there any reason to think that it is of over-arching significance? It is argued in a Tanzanian case study (project R7973) that 'the village has never been a meaningful unit for governance ... until recent, as yet unevaluated, legislation.' The picture given by research in Zimbabwe at the Romwe micro-catchment in Chivi District (project R7304) seems to be mixed: on the one hand, many cross-cutting rights about access to water have been found to bring about conflict or stalemate. On the other, the social capital to support negotiators through these thickets is said to exist. Both the India and African sets of evidence throw light on CPR institutions, their performances and transaction costs in particular contexts. CPR institutions are not fixed like insects in amber. Project research shows that, whether in the relatively 'new' culturally and economically mixed villages of the Caribbean, or in the 'old' village societies of Orissa, they are in a constant state of flux. Their shared commitments and activities are always either gaining or losing in strength. The examples above suggest that the underlying historical depth or weakness of village institutions are indeed relevant factors in the capacities – or lack of them – of CPR institutions. The whole picture, however, also needs to take into account contemporary factors that motivate socio-economic groups for or against cooperation in the management of common pool resources for or against common benefits.

Is there, then, a typical 'life-cycle' in CPR management institutions? A number of case-studies reviewed here show CPR management of longer-term investments to be dynamic and moderately inclusive in its early stages, at risk of being captured by internal or external elites around the mid-point of the investment cycle and gripped by internal conflicts or helpless in the face of external raiders as the investment comes to fruition.

If these are recognizable constraints, what are the features that enable some institutions to withstand this cycle? Some relevant factors emerge from the research:

- the ability of a CPR institution to find acceptable methods of including dissent
- the availability of sympathetic support when needed from outside institutions such as Land or Forestry Departments
- the robustness of underlying village institutions in the fields of patrolling CPRs and successfully punishing raiders.

One study of CPR management differs from all others under review in that it is concerned with self-initiated organizations, some of which have a very long record. Project R6787 provides a limiting case of CPR management institutions on the issues of status, institutional diversity, longevity, effectiveness, conflict and its management and environmental impact. Its subject is a sample of 43 out of the astounding total of 2,000 to 4,000 self-generated community forest management (CFMs) structures in the State of Orissa (NE India), 33 protecting and 10 non-protecting communities. These examples are untainted by the 'black box syndrome', i.e., they are not institutions set up by external agencies according to externally generated criteria, that may exhibit unsustainable transaction costs as soon as the external support is withdrawn. The data contained in the review abstract of this project (refer Annex D-ii, page 7) suggests the following key points. Clearly, in spite of the legal twilight in which the self-initiated CFMs have existed until now, Orissa has at the least officially tolerated them (in practice, attitudes of the Forestry Department vary across districts and individuals from supportive to indifferent to hostile). In turn, the numerous CFM successes have encouraged a continuing and expanding local tradition, which seems to owe most to the underlying strengths of community organizations. Some of the most interesting features of these CFMs are that they can be based on a variety of social and ethnic bases, both homogeneous and heterogeneous. There is a high incidence of conflict in the CFMs but an equally high ability to manage it given time. This is sometimes achieved by subdividing the protected forest and the CFM. At other times Orissa CFMs do collapse, but have demonstrated their ability to start to work effectively again, sometimes after an interval of years. In general, forest conditions in Orissa have improved under CFM management although the total volume of forest in the state is declining.

Turning to the last underlying factor affecting the management and effectiveness of CPRs: political will and policy-making at the local, district and state levels. Many projects have addressed the task of acquiring data in order to enable better-informed decisions about CPRs and social equity to be made. Such data are inherently valuable. There is nothing axiomatic, however, about their incorporation into government or NGO policies. Between the data and the political will to use them, there is scope for other agendas to interpose. One project (R7973) addresses this problem directly and in the broad comparative context of India, Zimbabwe and Tanzania. A number of projects have anticipated this problem by the ways that they have constructed their methodologies to facilitate, from an early stage of project work, communication, dissemination and uptake among all stakeholders, but especially among policy makers.

7. Key Features of Research Design

Participatory Methodology and Uptake of Project Findings

Responding to the current debate about participatory methodology, a number of projects have emphasized the importance of making this methodology part of their research design and adopting it from the outset. The implementation of participatory methods seeks to involve all stakeholders in continuous processes of shaping and assessing project activities. It provides opportunities for regular communication to exist among those involved and, in some situations, has been shown to create new channels of communication among stakeholders themselves. Project results suggest that participatory methods do enhance the chances that project findings will be taken up by policy makers in GOs and NGOs because they have seen them evolve and have had opportunities to see their views and priorities represented among project findings.

With local stakeholders, these observations also apply and there are additional implications as well: proposals to increase the inclusivity of CPR management are more likely to be appropriate if they have been shaped by inclusive research methods. Participatory interaction between projects and user-groups during research should reveal any problems likely to affect the sustainability of the programmes proposed at the end of its work, in terms of livelihoods, environmental impacts and, notably, including the transaction costs of future CPR institutions. One project (R6778, Nepal) that paid close attention to participatory action research throughout its activities, took the further step of devising a micro-action planning process to assist users' groups of forest CPRs in monitoring their own performances and recognising when they were likely to need outside help. A second project in Nepal (R7514) is currently attempting a similar approach but extending to communities that have not formed Forest User Groups.

Projects that have forged close relations with DFID's bi-lateral or regional programmes in their field from an early stage have had considerable success in having their outcomes taken up as parts of DFID policies and programmes. In several instances DFID field offices have requested project findings and/or methodologies to be written up as manuals for distribution through its networks. All these approaches are intended to bridge the gap between project findings and the will to implement them

Interdisciplinarity of Research Design

All projects reviewed had a strong socio-economic aspect, which took two main forms: the compilation of case-study data on livelihoods and surveys of CPR management institutions. A minority of projects integrated newly acquired biophysical data on specific environments into their studies of livelihood strategies in those contexts. The projects that did this showed the benefits of their interdisciplinarity through the convincing detail of their findings on livelihoods, securely anchored in the ways that the environments would permit livelihoods to be sustainably improved.

Although case-studies contain a great number of economic data, no project has so far focussed specifically on detailed economic analyses. The data have always been approached through the combined socio-economic perspective of livelihoods studies. The DFID criteria on sustainability of livelihoods, CPR managements and of the environments themselves do, however, ensure that economic issues are regularly addressed, albeit in this broader socio-economic context. Three projects integrated complex modelling into their environmental and socio-economic surveys (R6756, R7868 – both Bangladesh, and R6919 – in the Caribbean). They demonstrated that this was an effective way of

communicating with all stakeholders in the course of participatory research procedures. It lent itself particularly well to laying a variety of policy options and their implications before stakeholders. In the Bangladeshi floodplains it has shown itself also to be a tool with considerable predictive value. Any model is, however, only as good as the data put into it and the modelling procedures addressed to the data. The above projects were notably transparent in their discussions of the merits and demerits of all their research procedures including their modelling.

Relations between RD1s, MTRs and FTRs

All research is about asking questions and searching for answers. It is therefore cumulative and evolutionary in character. The RD1 application form demands as much project detail as possible, particularly in the statement of outputs and their succinct description, including some measure of quantification, in the project's logframe. It is a real test of applicants' abilities to formulate their research targets clearly and to consider, in advance, a) the steps to be taken towards reaching those targets and b) what will be the likely outcomes at the end of the project. All this is self-evident to the project leaders whose work is under review here. Less evident is what to do when either the project leader or the person/team carrying out the mid-term review becomes aware that the processes of research are not leading where it was thought they would, and that both the logframe and the planned outputs really need to be reformulated in order to reflect what the project is actually doing by this stage.

If RD1s and their contents are not to become cages imprisoning evidence-led processes of research, then project leaders need to feel confident that they can maintain a dialogue about where their research is leading and that some degree of reformulation of project targets is acceptable when well-founded evidence indicates that it is necessary.

Upscaling and Wider Applicability

The methodologies discussed above: participatory, consensus-building, trade-off techniques, surveying and modelling all have a high potential for wider and larger scale applicability, provided the same degree of rigour is maintained. Projects that have utilised these methods show considerable success in communicating their findings widely and in achieving some uptake of their proposals.

It could be a valuable research exercise to look for and, if found, to study self-initiated institutions of CPR management in southern Africa and to make comparisons of the evidence from Africa, negative or positive, with the situation in Orissa discussed above and to seek the reasons for similarities and differences.

8. *Is there a Project Life-Cycle? In Lieu of a Conclusion*

The components of the project cycle are considerable:

- the commissioning process – project design, negotiations and approval
- project implementation – field surveys to identify target groups, samples and localities, initial workshop, preparation of questionnaires, characterization of and interactions with households, studies of livelihood strategies, environmental surveys and modelling, submission of on-going results for participatory assessments and suggestions to all stakeholders and DFID's country or regional field office
- NRSP monitoring – inception and quarterly reports, mid-term review and responses to the MTR
- further field studies and participatory interactions with stakeholders and DFID

- final workshop and submission of findings for final participatory evaluations and suggestions; preparation and submission of draft Final Technical Report; discussions leading to revised FTR
- dissemination as widely as possible of revised findings, including creation of videos, CD Roms and presentations on local television, radio and newspapers.

Is this a recognizable description of the life cycle of CPR projects from the egg to the fully developed butterfly? It is one attempt to characterise it, based on the privileged perspective of four weeks of reading and reviewing all the current and recent NRSP CPR projects.

Many projects are impressive in the scrupulous articulation of their objectives, the continuous and rigorous re-assessments of the methods by which they intend to achieve them. The sketch above shows how many projects reconcile several levels of activity: the home-institution, partner institutions in the field, all stakeholders, data collecting, participatory critiques and modifications to project agendas, more field research, more interaction with stakeholders, more critiques right up to the preparation of the final outcomes. Most projects have moved understanding on CPR issues, like environmental and institutional constraints, forward. Most have added something to our understanding of the causes or nature of poverty. Some have distinguished ways to alleviate it.

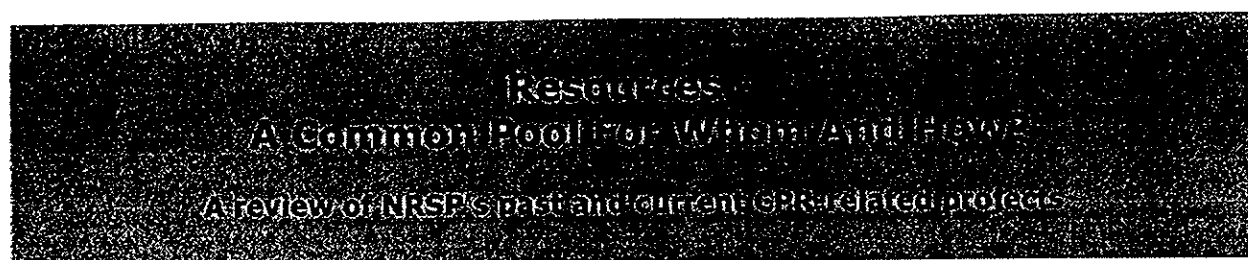
A concluding observation is that the alleviation of poverty may appear to western researchers and aid workers to be like the labour of Sisyphus: the stone is desperately hard to set in motion and will always roll down again. Yet some project research has demonstrated that real changes can be made. Others have noted that small changes take place. Sometimes such changes are reported without much importance being attached to them by researchers. But for the poor themselves, small changes can be of immense importance to their daily levels of nourishment. If the stone moves even slightly, it may indicate the directions in which bigger movements can be made to occur.

9. References

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- Ostrom, E. 1990: *Governing the Commons; the evolution of institutions for collective action*. Cambridge, Cambridge University Press.
- Stargardt, J. 1990: *The Ancient Pyu of Burma. Vol. I, Early Pyu Cities in a Man-Made Landscape*. Cambridge, PACSEA in association with ISEAS, Singapore.

Dr Janice Stargardt undertook the review of NRSP's CPR projects (refer Anex D-ii) and wrote this overview paper.

Dr Janice Stargardt is Senior Research Fellow and Affiliated Lecturer in the Department of Geography, University of Cambridge. Her background is in science-based archaeology, combining the environmental with the social sciences and approaching the past via a close study of the present. She has many years' fieldwork experience of the past and present of the three major systems of this workshop: the semi-arid in south-east India, Sri Lanka and Burma, the forest agriculture interface in south-east India and South Thailand and the land-water interface in South Thailand, Bangladesh and Cambodia. Her research is supported by the Royal Society and the British Academy.



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* / For convenience, the projects are ordered by their project reference number. This means that they are not clustered by production system or region or main CPR theme/issue addressed (refer Annex D-i, pages 1-2, Sections 1 and 3). To assist the reader to position the project with respect to these 'identifiers', this information is provided in the opening part of each review report and the footer also indicates the main research theme.

R6386 – Review of Common Property Rights, Tenure and Access Rights in Relation to Land Use Management and Planning at the Forest/Agriculture Interface

Theme: Understanding CPR Management Structures, Tenure and Access

Production System: Forest Agriculture Interface

Region: General, Africa and South Asia

Documents reviewed: NRI Research Project Form; Final Report 1995 – Shepherd, Kiff, Robertson

Main Outcomes of Project Research:

Theoretical and practical overview of CP issues on land and tree tenure systems and access to forest resources.

Analytical discussion of CPRs and management from stakeholder perspective, including disparities between gender involvement in daily management and representation on decisive institutions, local knowledge and sustainability. Innovative table on CPR Myth and Reality. Major annotated bibliography (up to 1995) of 210pp in 4 sections: Tenure, Management, Collaborative Management and Forest-Agriculture Interface.

Distinctive/Unique Research Findings and Wider Applicability:

Tried to define (and refine from Ostrom 1990, 90) the characteristics and conditions favouring durable CPR local management institutions.

Proposed use of above to predict viability of these institutions, or need for outside intervention and institutional strengthening.

Has influenced other FA projects, especially in Nepal and India.

Interdisciplinarity of Research Design:

This project was conducted before interdisciplinary elements became a central requirement of research design, but it contains interdisciplinary elements, e.g.

- Integration of remote sensing proposed for resource monitoring.
- Search for linkages rather than clashes between conservation and development.
- Recognition of gender and generational differences in possession of knowledge on CPRs.

Positioning of Project with Respect to DFID's Present Policy Priorities:

Overall thrust of project was towards enhancement of self-help and local management institutions that would alleviate poverty. Project does point to need to address gender imbalances on CPR institutions, which would help to address female poverty/hardship in daily conditions of work; other internal differentiations within the poverty group not made.

Project argues in 'Myth and Reality' and elsewhere for need to respect and preserve social capital in forms of local, partly gender and generationally based knowledge of environments and sustainable exploitation – a good approach susceptible to further nuances. Potential research locations were not identified (an unfulfilled objective) and discussion of CPR issues at local levels was limited to illustrations of more general arguments. But this project has influenced others that have confronted micro studies of user groups.

R6756 – Investigation of Livelihood Strategies and Resource Use Patterns in Floodplain Production Systems Based on Rice and Fish in Bangladesh

Theme: Understanding CPRs

Production System: Land Water Interface (floodplain)

Country: Bangladesh

Documents reviewed: RD1; Annual Reports 1998-1999, 1999-2000 – Julian Barr; FTR – Julian Barr

Main Outcomes of Project Research:

The project conducted detailed soil, land and water resources survey in 2 research areas – one each on the Yamuna (Brahmaputra) and Padma (Ganges) Rivers respectively.

Resource users were classified into 7 socio-economic strata and involved in a participatory census of problems and discussions of project results.

The project has carried out very intensive monitoring and surveying of its sample, acquiring a large amount of valuable case-study data and converting them into well-designed models, tables, maps and diagrams.

Bio-physical and socio-economic data have been integrated with the intention of creating systems models of floodplain production. The PL concludes cautiously that, by the end of R6756, a good understanding of the functioning of the floodplain system in its parts and as a whole had been gained, but that the conceptual model is best illustrated through specific cases. He modifies with frankness one of the proposed outputs of the original logframe: "to use the systems modelling framework to develop a robust, diversified and integrated strategy for floodplain production", saying that instead specific development options have been explored with the target users that would contribute to strategies for better floodplain management.

The models have nonetheless permitted a) the precise delineation of the spaces, times and resources where the sharpest conflicts occur, b) that delineation has led to some increased awareness among users of the multiple needs and management strategies for the same resources and some increased willingness to cooperate, c) the models have been used successfully to demonstrate to all stakeholders alternative management strategies and their implications for different sets of users – e.g. delaying the timing and/or spatial spread of flooding and d) the models have had considerable predictive value.

Distinctive/Unique Research Findings and Wider Applicability:

Detailed discussions and self-critical evaluations of research methods are useful to other projects.

Farmers perceived water volumes and timing, rather than differences in soil fertility/inputs as the greatest constraint on their yields.

Enterprising small farmers owning from 1 to 2.49 acres (category 4 out of 7) played a big role in injecting dynamism into the rural sector: a) by exploiting new crops (e.g. onions) on share-cropping lands, b) by providing sources of seasonal employment to landless (categories 1, 2 out of 7) and c) by contributing rents to the top categories (6, 7 out of 7). Potentially they could impact still further on the rural economy.

The annual inundation cycle of the research areas involves some extreme levels (up to 3m flooding for 2-3 months) and drying out for 5 months, with the lands of the poorest socio-economic categories flooded longest – these levels may be specific to Bangladesh, but the finding has more general relevance. The poorest are also the most dependant on fishing.

Interdisciplinarity of Research Design:

This project is firmly and transparently established on the interdisciplinarity of its concept and design and they are germane to the results obtained: detailed work has been done on soil surveys, water audits, household ranking, production and consumption surveys, problem census and detailed studies of methods of crop cultivation and yields, efforts and catches in fishing with surveys of fish marketing and consumption by volume, species and prices.

In addition it has absorbed many of the findings of a parallel anthropological study (R6744) on indigenous knowledge and perceptions of the above subjects into the work of R6756.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

This project addresses the realities of poverty in their complexity and has developed multiple approaches to its alleviation.

Its work on aquaculture is one approach to the need for improved and sustainable livelihoods for the poorest in a sustainable environmental context.

It has met with some success in its efforts to promote the local uptake of its findings by the communities, other researchers, NGOs and bi-lateral aid donors.

R6759 – Integration of Aquaculture into the Farming Systems in the Eastern Plateau of India

Theme: CPR Management

Production System: High Potential

Country: India

Documents reviewed: RD1; Annual Reports 1998-1999 – Graham Haylor; Annual Reports 1999-2000 & 2000-01– James Muir

Major Outcomes of Project Research:

Production of systems commodities (fish) increased through optimisation of inputs and outputs.

Participatory strategies developed and promoted to introduce improved stock.

Understanding and prioritising key researchable constraints to the integration of aquaculture and agriculture in the research areas - Orissa, Bihar and West Bengal.

Identifying opportunities favouring the integration of aquaculture and agriculture.

Developing and promoting the above.

Distinctive/Unique Research Findings and Wider Applicability:

The project contributes to the wider debate on the potential of India's rainfed farming systems to make a significant contribution to the food needs of the rapidly growing population.

The project strategies aim at intensification and diversification of food production without pollution through chemical additives.

The project has identified underutilized seasonal water bodies and introduced fish species suited to these specific environmental and local market conditions.

Aquaculture not practised prior to this project now established in 57% of 231 target villages – techniques of locally suited aquaculture spreading spontaneously to other villages.

Multipurpose use of previously underutilised water resources, including fish culture, have become a dynamic part of livelihoods in project area.

Interdisciplinarity of Research Design:

The project contains a small measure of interdisciplinarity in that it studies aquaculture, agriculture, and institutional links.

Positioning of Project with respect to DFID's Present Policy Priorities:

The project's target areas are characterised by poverty, inequality, land alienation and seasonal migration. The scheduled castes and tribes of this area are among the poorest communities of India.

The project is testing the sustainability of aquaculture as an improvement to livelihoods.

Its work aims to be environmentally neutral.

R6778 – Community Forestry in Nepal: Sustainability and impacts on Common and Private Property Resource Management

R7889 – Dissemination of Research Findings (of R6778) Regarding Community Forestry in Nepal

Theme: Methodologies and management options – User-group management

Production System: Forest Agriculture Interface

Country: Nepal

Documents reviewed: R6778 – RD1; FTR; 'Impacts of Community Forestry on Farming System Sustainability in the Middle Hills of Nepal.' Dougill, Soussan et al.; Final Report – O. Springate-Baginski et al. R7889 – RD2; 5 papers based on R6778 – O. Springate-Baginski

Main Outcomes of R6778 and R7889:

Many valuable data on micro-levels of community forestry collected from a sample of 14 locations across the mid-hills of Eastern Nepal by R6778 and written up in R7889; quickly accessible in numerous tables included in Final Report and Annexes. Project R6778 developed Participatory Action Research (PAR) methodology to involve a sample of 11 communities with forest users' groups (FUGs) in evaluating their formation, how they function and their impacts. This outcome reveals much about the complexity of perceptions (including self-perceptions) and measurable realities e.g., forest conditions are mainly seen as improving since formation of FUGs, while many FUG members (especially the poor and women) and non-members have strong reservations about aspects of FUG performance.

Through the PAR consultations a list of 31 indicators for evaluating community forestry as a process emerged, of which the 4 indicators most-cited by users were: hamlet-level interaction, effective forest protection, active forest management and women included in FUG functioning.

Project R6778 also developed a Micro-Action-Planning (MAP) process as a self-help tool for FUGs in monitoring and improving their performance and helping them to recognise when they need outside support.

Project R6778 produced data on soil fertility and nutrient management, forest-agriculture interface (published separately) and on livelihoods. Main emphasis fell on institutional aspects of users' groups.

Distinctive/Unique Research Findings and Wider Applicability:

These projects have devoted a lot of attention to the practical development and extensive reporting of two important procedures: the PAR procedure and the MAP process. The first is clearly intended to help researchers involve 'the researched' in interactive roles in project formulation and assessment from an early stage and is suited to wider applicability (cf. Estrella et al., n.d.) if continually reappraised in the light of local conditions and sensibilities. The second has the stated aim of providing users' groups with a tool for progressive self-assessment, but would lend itself equally well to external assessments of FUG performance, again potentially on a wider scale. They contribute strongly to the wider debates on participatory monitoring and evaluation.

Interdisciplinarity of Research Design:

Explores forest agriculture interface effectively. Primary data extremely useful to a range of disciplines e.g. development economists, agronomists, geographers, sociologists and anthropologists.

Positioning of Project with Respect to DFID's Present Policy Priorities:

Project R7889 argues strongly for more inclusiveness of all users among FUGs and builds them into PAR and MAP. This would lead to better representation of the interests of marginalised members such as the poor and women, and of groups currently excluded from FUG membership such as seasonal workers and blacksmiths.

Outcomes like PAR and MAP should facilitate take up of project's work. PAR and MAP should enhance the viability of FUGs after the project has ended.

R6787 – Effective Local Management of Forests: Learning from Self-Initiated Management Organisations in India

Theme: Management options – User-group management

Production System: Forest Agriculture Interface

Country: India

Documents reviewed: RNRRS Project Completion Summary Sheet; FTR – Czech Conroy; Discussion Paper, Feb. 1999 – Czech Conroy, Abha Mishra, Ajay Rai

Main Outcomes of Project Research:

Against a striking background of between 2,000-4,000 self-generated community forest management (CFMs) structures in Orissa over the past 60 years, this project studied a sample of 33 protecting and 10 non-protecting communities in or adjacent to forests, spread over six districts of Orissa state. The sample was chosen to reflect different forest types, tribal and mixed caste communities, different organisational forms, motivations and periods of protection – the oldest having started in 1940, the latest in 1992. This project has amassed valuable case-study data presented in District Overviews, numerous publications, and in a series of compact tables and texts in the FTR.

Diversity exists among the socio-economic bases of the protecting organisations, which arise from single hamlets or villages and from a cluster of villages or hamlets - the most common being single villages. Protecting organisations function through village committees, special forest committees, youth or elders' clubs.

The main factors behind the initiation of forest protection have been both immediate and underlying: the most immediate being degradation of the forest and a decline in forest biodiversity. The underlying factors (which contribute notably to longevity and success) have been strong community institutions (especially to patrol and punish); low competition for the land from agriculture; lack of alternative sources or substitutes for some forest products; support from the Forest Department; and identification of the communities with the Revenue Forests of Orissa.

Equally interesting are the factors inhibiting the initiation of forest protection, most frequently identified by the surveyed communities as: lack of scarcity of forest resources, threats from nearby or bigger villages (or smugglers) and lack of consensus within the community.

Self-generated organisations have no formal legal status, but they carry out multiple activities including acquiring and managing revenues from fines and sales of forest products.

The project prepared a Framework for Partnership between Communities and the State to strengthen the status of the CFMs and achieve a co-operative sharing of rights, responsibilities and benefits.

Distinctive/Unique Research Findings and Wider Applicability:

The impressive longevity of self-initiated CFMs in Orissa and their equally remarkable ability to survive periods of conflict (usually internal to village clusters) and breakdowns of CFM activities – highly relevant to general CPR management issues and CPRs of JFMs.

The ability of ethnically mixed communities to manage their forest resources.

The high potential for conflicts of which the majority are eventually and effectively managed by community organisations.

Membership of CFMs seen in terms of ability to contribute to protection (in cash or kind) - disadvantages women and the poorest, BUT Orissa CFMs accept joint memberships from a group of poor households.

Forest condition and biodiversity generally improves under CFMs – often strikingly.

Interdisciplinarity of Research Design:

Includes data on the diversity and condition of the sampled forests.

Provides socio-economic data on the populations studied, including percentages of tribals, scheduled castes and main livelihood enterprises.

Uses remote sensing to provide data on rates of forest regeneration from 1992-96.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

Findings contribute to knowledge on sustainable livelihoods and management, improved management of the natural environment, facilitating access of the poor to resources and the prevention and management of conflict.

R6919 – Evaluating Trade-offs between Users of Marine Protected Areas in the Caribbean

R7408 – Building Consensus amongst Stakeholders for Management of Natural Resources at the Land Water Interface

Themes: Land Water Interface (coastal zone)

Production System: Methodologies

Region: Caribbean

Documents reviewed: R6919 RD1; FTR Katrina Brown et al. R7408 RD1; FTR Katrina Brown, W.Neil Adger, Emma Tompkins

Major Outcomes of Project Research:

Moving into a situation of long-standing conflict and mutual suspicion among stakeholders over uses of the protected marine environment of the Buccoo Reef of Tobago, this project created a multi-criteria analysis of the situation to enhance decision making, planning and managing a valuable resource.

Its methods were participatory in specifying and prioritising the criteria, emphasising in the process the possibilities and advantages of "trade-offs" among stakeholders. Four development scenarios for south-west Tobago were created for a 10-year time frame. Criteria for their impacts were identified and modelled. Sustainable management options crystallised out of the consultative process with stakeholders and received priority ratings at the final consensus-building workshops.

From an initial situation of conflict among stakeholders, there was some measure of convergence in their views by the time of the final consultative workshops. This is most noticeable on the key questions of social issues and the health of the reef as an ecosystem.

Distinctive/unique Findings and their Wider Applicability:

It is striking in the work of these two projects how short the administrative distance is from the local to the national level, and how successful the projects were in involving interested members of the Tobago House of Assembly in their on-going stakeholder consultations. This point has wider applicability to projects in other small states.

The projects have developed tools of consultation and decision-making that have injected change from stasis over a key CPR to some degree of consensus and dynamism.

The second tranche of this work (R7408) is concerned with the uptake of "Trade-off Analysis" by an additional number of institutions: firstly in Tobago, secondly on a Caribbean-wide basis through links with a DFID bi-lateral project, and thirdly through the creation and dissemination in the region and elsewhere of a manual on trade-off analysis for participatory coastal zone decision-making.

Interdisciplinarity of Research Design:

R6919 collected biophysical data in some detail to make persuasive models of the marine environmental as well as other impacts of the 4 management options laid before stakeholders.

Positioning of the Projects with Respect to DFID's Present Policy Priorities:

The projects have contributed to all of DFID's goals within the RNRRS Production System.

R7150 – A Synthesis of Two Case Studies on Common Property Resource Management where Tourism, Wildlife and Pastoralism Interact in Kenya

PD099 – Southern Kenya Ecotourism Project (Follows up R7150)

Themes: CPR management in a multi-use context

Production System: Semi-arid

Country: Kenya

Documents reviewed: RD1; Annual Reports, 1998-1999 and 1999-2000 – Viv Lewis; FTR – Stuart Coupe; RD2 for PD099.

Major Outcomes of Project Research:

This project set out to make two detailed case studies in contrasting pastoralist and environmental settings, under the following headings: a categorisation of the target populations; an evaluative record of economic contribution of CPRs to livelihoods by category of population; an indication of relations between stakeholders along the spectrum of co-operation/competition/conflict; an enhancement of policy analysis skills among partner organisations.

The ultimate objective was to create a set of criteria for good practice in the development of successful social and economic interactions between tourism, pastoralism, wildlife and other CPRs.

In fact this project reached the conclusions that the case-study locations had "low tourism potential".

Also "the wildlife conservation interventions there had neither strengthened the livelihoods of local pastoralists, agro-pastoralists and farmers, nor significantly conserved wildlife," and illustrates these conclusion with 11 detailed, negative observations of local conditions and 5 recommendations of issues to which attention must be given if wildlife conservation projects are to succeed.

Distinctive/Unique Findings and Wider Applicability:

The operation of this project was tragically affected by the murder of its field director and the illness and death of one of the key field officers involved in data collection.

Some very good case-study data are briefly presented in the FTR. They serve to indicate the insights into livelihoods that might have been achieved had the database as originally conceived been accomplished.

Regardless of the negative general conclusions as to the feasibility of the original goals, such data would have been inherently valuable.

Interdisciplinarity of Research Design:

This project was designed with an interdisciplinary structure, combining bio-physical with socio-economic and institutional data and analyses.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

The basic concepts of the project were firmly and innovatively located within the parameters of DFID's policy priorities of pro-poor initiatives, management of conflicts among multiple users of the same resources, sustainably enhanced livelihoods and environments.

R7304 – Zimbabwe: Micro-Catchment Management and Common Property Resources

Themes: Understanding CPRs; Methodologies; CPR management; Policy linked research

Production system: Semi-arid

Country: Zimbabwe

Documents reviewed: RD1; NRSP mid-term review report; revised logframe; various project publications

Major Outcomes of Project Research:

The project has studied local formal and informal institutional arrangements for natural resource management. Results for water management indicate that existing arrangements are adaptive and effective. A similar situation also applies to forests, and the reasoning and arguments for this finding are the subject of a published journal paper.

The project conducted a household survey that examined the livelihood strategies of individual households in the communities of the two target micro-catchments and plans to place the database of this survey in the public domain.

In the target micro-catchments, the key linkages amongst their NR components have been analysed. As this study is based on longitudinal biophysical monitoring, a relatively complete and robust understanding of NR interactions has been developed.

The project has engaged in dialogue with some key policy actors at District level throughout the project period and achieved a good level of engagement with relevant local government organisations. It has also maintained close links with the NGO, CARE, that has projects in the area such that some of the project's findings have transferred directly to this target institution.

Distinctive/Unique Findings and Wider Applicability:

When the project began, water was perceived as a limited resource that could benefit from better management through such measures as in-field water conservation practices and controlled (restricted) water extraction. Long term monitoring of groundwater reserves in one micro-catchment and shorter term monitoring of reservoir water resources in the second established that the scope for more intensive management of these water stocks was limited. Indeed, rather than promoting conservation of water, increased use of water as long as stocks were available was a rational strategy.

The project successfully communicated this revised understanding of a more opportunistic response in water management strategies to the community of one micro-catchment. Agreement to expand garden area (i.e., more persons with garden plots) that rely on communally managed water points was transacted with the local community through existing institutional mechanisms.

There are strong indications that the existing arrangements for the management of other CPRs in the micro-catchments e.g., forests are satisfactory or at least not susceptible to more intensive management. This 'no-change' scenario arises mainly because the transaction costs would outweigh the benefits in this marginal setting.

Interdisciplinarity of Research Design:

This is a wide ranging project that has achieved some convergence between several different disciplinary approaches.

At conception, the research was grounded in the hypothesis that productive water points in semi-arid areas could make a significant positive impact on household livelihoods and provide an entry point for the management of a broad range of CPRs. The contributions from different disciplines were built around the acceptance of this hypothesis although the contributions of other CPRs to livelihoods were also studied.

As explained above, water resources were shown to be important, but not as robust an entry point for micro-catchment management strategies as was originally envisaged.

Curiously, whilst the disciplinary contributions to the project brought forward new findings on the options for water management, they were not as instrumental as might be expected in exploring other options for improving livelihoods, based around other micro-catchment CPRs.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

The data of the livelihood survey enable identification and characterisation of specific groups of the poor in what are, in general terms, poor communities living in dry marginal areas.

These data could be a rich source of information on the dynamics of livelihood strategies in communities that are essentially marginalised in respect of livelihood circumstances and opportunities for positive change.

R7514 – Development of Monitoring Process and Indicators for Forest Management, Nepal

Theme: CPR management – User-group management

Production System: Forest Agriculture Interface

Country: Nepal

Documents reviewed: RD1; various internal reports

Major Planned Outcomes of Project Research:

A generic methodology for developing participatory forest management indicators.

A framework with a range of indicators to help monitor and assess the impact of forest management at the local level in 10-15 community forest sites in Nepal.

The project outline suggests considerable overlap with R6778 and R7889, to which it does not refer although one paper by Springate-Baginski, Soussan et al. arising from R6778 is included among the references. As R7514 is intended as a preliminary year in a longer study, differentiation from R6778 and R7889 can be expected as the results from those projects are more widely disseminated. Indications that this is already latent appear in the following points proposed in the RD1 of R7514:

An emphasis on livelihoods' systems approach, including the dynamics of change and more emphasis on non-FUG members than previously;

A participatory evaluation of biodiversity that goes beyond utilitarian criteria;

Identifying and developing silvicultural techniques and practices (esp. for Schima-Castanopsis forests) useful to forest users' groups (FUGs).

Distinctive/Unique Proposed Research Findings and Wider Applicability:

This project positions itself in the wider debates on livelihoods, silviculture and participatory evaluation and monitoring.

Interdisciplinarity of Research Design:

It is implicit in the range of activities outlined.

Positioning of Project with Respect to DFID's Present Policy Priorities:

The project aims to produce monitoring processes to assess livelihood enhancement for poor forest users.

The project is constructed so as to give priority to participatory monitoring and evaluations, which should facilitate uptake.

R7559 – Improving Coastal Livelihoods in the Caribbean: Institutional and Technical Options

Theme: CPR management (sustainable livelihoods)

Production System: Land Water Interface (coastal zone)

Region: Caribbean

Documents reviewed: RD1; NRSP mid-term review report

Major Outcomes of Project Research to Date:

This project has four planned Outputs:

- To test and document methods for participatory planning and management in small coastal communities of the eastern Caribbean by means of a series of experiments with small sample groups;
- To identify, test and refine technologies for sustainable resource use which will at the same time contribute to local economic development – again utilising an experimental methodology;
- To disseminate the methods and technologies of enhancing coastal livelihoods while reducing coral reef degradation, so as to enhance the contribution of coastal resource management to the goals of poverty elimination and environmental sustainability;
- To enhance the capacity of research institutions (in the first instance the two partner organisations IDS, Sussex and CANARI, St Lucia) involved in the participatory management of natural resources for sustainable development.

The MTR found that whereas other projects have been concerned with developing tools for participatory involvement in coastal resource management, this project is utilising existing participatory approaches and assessing their efficacy.

It commented on delays and a degree of imprecision in the design and implementation of the experiments and in project methodology generally, but finds these can to some extent be related to the participatory nature of the project and that the fourth output proposed is already being realised.

Interdisciplinarity of the Research Design:

In the sample area – Laborie Bay and 21 households selected, the project aims to provide a baseline understanding of natural marine resources, livelihoods and poverty and related institutions and organisations. Thus it intends to provide a holistic account of the biophysical, social and management aspects of the study area. It did not include economic aspects but will include an Environmental Entitlements Analysis, as developed at the Institute of Development Studies, University of Sussex.

Positioning of the Proposed Research with Respect to DFID's Present Policy Priorities:

The project was found in the MTR to address social issues in a livelihood context related to natural resources and to fit well within the DFID/NRSP context.

The central NR focus is on reduced reef degradation.

R7562 – Methods for Consensus-Building for Management of Common Property Resources

Themes: Methodology of Consensus-Building and Strengthening of Management Institutions (grows out of R6756)

Production System: Land Water Interface (floodplain)

Country: Bangladesh

Documents reviewed: RD1; NRSP mid-term review report; FTR – Julian Barr et al

Major Outcomes of Project Research:

This short-term project identified the process of consensus-building as crucial to eventual success in implementing the CPR approaches formulated in the preceding project. It therefore concentrated on how best to develop participatory action plan development of this process (PAPD) in pilot areas. Levels of consensus were surveyed before and after the PAPD process.

The methodology was developed and tested at 4 sites with an important fishing activity, funded under bi-lateral agreements by DFID-Bangladesh. It was refined through internal review, presented at community workshops. Results were studied to see whether the process was measurably building consensus (which is here seen as analogous to some forms of social capital). It emphasises the importance of arriving at lists of problem-priorities agreed by the communities as a result of transparent, inclusive processes.

The project finally developed 8 criteria for evaluating consensus-building processes.

The post-PAPD evaluation showed participants in the workshops felt that they had been relevant to them and/or to their community, that new relations of understanding had been fostered and, significantly, non-participants also knew a lot about the workshop's activities and composition (a majority of these wished to become participants).

Further NGO facilitation was seen by participants as necessary to the replication of the process.

The second objective and outcome of the project was to achieve an improved awareness at a policy-level of the issues in and methodological approaches to consensus building. Through the close involvement of this project and its predecessor with a range of NGOs, bi-lateral donors and the scholarly community, this project has received commitments to take up its methods by unofficial and official organisations in present and future projects including by the Department of Fisheries of Bangladesh.

Distinctive/Unique Research Findings and Wider Applicability:

This project has set out to develop processes of consensus building that will have a wider applicability. Its reports and publications discuss in detail the methodology adopted, alternatives and modifications and these materials are valid and relevant to other researchers. Points made in the MTR were useful to the progressive refinement of the methodology.

The project distinguishes between 'trade-off' techniques employed, for instance, in Caribbean conflicts over CPRs and consensus building and discusses them in some detail.

It aims to situate consensus-building in a potentially dynamic situation where participants are not so much engaged in exchanging slices of the pie, but in arriving at an understanding that their livelihoods are interdependent and that it may be possible to share a bigger pie.

Interdisciplinarity of Research Design:

Interdisciplinarity was a background feature of this project inasmuch as data from a variety of disciplines, including indigenous knowledge, were influential in the framing of the surveys, questionnaires and problem census.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

The ultimate objective of this project's work is to strengthen the chances of success of CPR management through the explicit recognition by all stakeholders of the importance of consensual processes. Such processes will, if successful, assist the poorest and most marginalised members of society who are most dependent on CPRs.

R7797 – Opportunities and Constraints for Coastal Livelihoods in the Caribbean

Themes: Understanding CPRs (livelihoods)

Production System: Land Water Interface (coastal zone)

Region: Caribbean

Documents reviewed: RD1; NRSP mid-term review report; FTR – N.G. Willoughby

Major Outcomes of Project Research:

This project's main focus was on creating a multi-faceted data base: a) reviewing previous studies (since 1970) on a Caribbean-wide basis - on the basis of abstracts and citation indices - and to assess their areas of strengths and weaknesses in both qualitative and quantitative terms, b) providing detailed indicator data for most of this region, and c) compiling resource data for the region - this target was not realised to the project's satisfaction.

The project created and maintained regular electronic contacts with a 'Virtual Steering Group' (VSG) consisting of a group of senior Caribbean personnel, who were asked to rank the issues emerging from the literature review in terms of regional, national and local criteria.

Case study surveys leading to stakeholder analyses were carried out at two contrasting sample areas: Portland Bight, Jamaica (big island case – 48 interviewees) and the whole island of Tobago (small island case – 32 interviewees), questionnaires devised by project/surveys conducted by two NGOs already active in each area. Data from the surveys were cross-checked at workshops in Portland Bight and Tobago.

The FTR concludes that surveys and workshops yielded a range and depth of quantitative data not frequently found in the literature on Caribbean coastal communities and suggested new indicators for comparing the needs of different livelihood groups.

Surveys and local-level workshops produced lists of issues and priorities that diverged strongly from those produced by the VSG, and the project noted the implications of this finding for management action.

Distinctive/Unique Findings and their Wider Applicability:

This project addressed the task of trying to obtain a regional perspective on an environmentally and linguistically heterogeneous region, which has been very unevenly researched.

It concludes that more attention in the past has been paid to the study of the natural resources than to the study of human resources and people's struggles to win a sustainable livelihood from those resources.

It makes a set of recommendations, based on project findings, that future Land-water interface studies should consider. They summarise as: a) blending regional, national and local projects, b) taking an holistic approach to human and natural resource issues, c) making carrying-capacity studies on both thematic and systems issues, d) developing more appropriate coastal poverty indicators, and e) paying attention to scalability.

Interdisciplinarity of Research Design:

This project set out to include bio-physical and socio-economic information in its database but decided to give main emphasis to socio-economic (livelihood) data.

There is an apparent (but perhaps not real) contradiction between the project's finding that more research attention has been paid until now to natural resources than to human and its inability to complete the resource database for lack of published source materials covering livelihoods and natural resource use.

The Positioning of Project Research with Respect to DFID's Present Policy Priorities:

This project has been planned from the outset with the policy priorities of DFID, NRSP Land-water interface in mind as they concern livelihoods. Its findings ultimately serve other issues such as better-informed and more inclusive management of CPRs.

R7805 – Understanding Household Coping Strategies in Semi-Arid Tanzania

Themes: Understanding CPRs (livelihoods)

Production System: Semi-arid

Country: Tanzania

Documents reviewed: RD1; FTR – Mike Morris

Major Outcomes of Project Research:

Surveyed the current state of knowledge on livelihoods and coping strategies in semi-arid Tanzania and identified key knowledge gaps.

It developed new knowledge relating to poverty and elucidated some poorly understood livelihood strategies, including multiple off-farm and individual activities, with repercussions on community and household traditions and traditional divisions of agrarian labour.

The project confirmed the demand for new livelihood options and assessed emerging pointers for future strategies.

Distinctive/Unique Findings and Wider Applicability:

The livelihoods' analyses of this project contain some valuable micro-study data which argue persuasively for points with macro-levels applicability: in situations of agricultural intensification and extensification, the poor are squeezed the most; they experience great difficulty in achieving subsistence levels of food production for a full year and cannot cross the threshold to the marketing of cash crops and other forms of accumulation.

The poorer households are increasingly forced into non-specialist wage labour on and off-farms and thus have decreasing time and labour to spend on their farms and food production.

There is a growing dichotomy between the coping strategies of the poor and other socio-economic groups in the same semi-arid environments.

This project emphasises the high importance of social capital for all income groups, but especially for the poor, in supporting their interactive coping strategies with other individuals and socio-economic groups.

Interdisciplinarity of Research Design:

This project accepts existing biophysical research on the semi-arid zones of Tanzania and does not contribute new research.

It is strongly socio-economic in research orientation.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

The project contributes key data and considered more general critiques to the Sustainable Livelihoods framework.

It has isolated 8 areas of key gaps in existing knowledge on coping strategies, which can be grouped as the need to establish "longitudinal livelihood data", and should be considered in future research.

R7806 – The Role of Human and Social Capital in NR Management in Tanzania

Theme: Understanding NR management

Production System: Semi-arid

Country: Tanzania

Documents reviewed: RD1

Major Planned Outputs of Project Research:

To describe current management of catchment resources.

To identify the key factors in management practices in relation to human and social capital investments.

To synthesize and disseminate assessments of improved resource management strategies, with cost-benefit analyses at the catchment level, implications for local institutions and effects on livelihoods of the poor

Note

The FTR for this project was received just at the time when this report had to go to press, hence commentary on the research findings could not be included.

The omission will be corrected when this report is posted on the NRSP web site.

R7857 – Review of Common Pool Resources Management in Tanzania

Theme: Understanding CPR management

Production System: Semi-arid

Country: Tanzania

Documents reviewed: RD1; Fieldwork Report – Village Profiles – C. Quinn (ed.); Draft Final Report – Jon Lovett et al

Major Outcomes of Project Research:

This project has carried out research on a carefully selected sample of 12 villages in the semi-arid zones of Tanzania, where 14 development programmes of significance to CPRs are taking place under the auspices of a range of GOs and NGOs. It locates the results of these surveys within the context of recent policy changes at the state level, embodied in legislation on forests (1998), wildlife (1998) and land (1999).

It has collected a body of case-study data (survey methodology and data well reported in the "Village Profiles"), showing among many other insights, that land was the first common pool resource mentioned by villagers, followed by water then forests. Yet the project also shows that there are not any/adequate land records at the national, district and local levels of authority.

The project identified sharp conflicts of interest between pastoralists, wildlife conservation, and sedentary farmers over use of the same CPRs.

It also identified the intercutting of older and more recent systems of authority at village levels and tensions between one or both of these and the district-level authorities. The realities of present land allocation, land use and increasing competition for diminishing resources suggest the absence of clear lines of authority and generally accepted rules.

Many cases were recorded where the benefits of development programmes and wildlife reserves (with associated revenues from tourism or hunting) were not being equitably shared among, or even received at all, by the local communities.

This project has identified 3 researchable constraints to the effective management of CPR resources in Tanzania. They relate to: making decisions on which land-use is preferable; on whether transaction costs prevent sustainable CPR management institutions; and on what are the socially optimal forms and levels of institutional interactions.

Distinctive/Unique Findings and Wider Applicability:

This project provides a succinct concluding overview of the constraints on improved CPR management in the Tanzanian context, measured against Ostrom's 8 general conditions.

Its frequent references to the complex administrative heritage of Tanzania as it affects CPRs, identifying elements from the pre-colonial, colonial and various phases of the independence period, provide valuable insights into a specific situation that may also prove relevant to understanding other post-colonial societies.

Interdisciplinarity of Research Design:

The case-study data collected by this project bring together the relevant biophysical with socio-economic aspects of each village surveyed. The main thrust of the project is institutional, with the ultimate aim of improving management and thereby, livelihoods.

Positioning of the Project with respect to DFID's Present Policy Priorities:

The emphasis of the project falls on sustainably improved managements of CPRs, and this affects sustainably improved livelihoods and environments.

R7868 – Maximisation of Joint Benefits from Multiple Resource use in Bangladeshi Floodplains

Theme: CPR management; Policy linked research

Production System: Land Water Interface (floodplain)

Country: Bangladesh

Documents reviewed: RD1; NRSP mid-term review report

Major Outcomes of Project Research

Guidelines for the sustainable multiple-use management of floodplain resources in Bangladesh will be produced. The guidelines are meant to guide both future action research (short and medium-term interventions) as well as floodplain planning (long-term flood control strategies).

The guidelines will be based on the project activities of: gathering information on existing land use management strategies and on how to evaluate them; undertaking a modelling exercise to determine optimal management strategies; evaluating these management strategies with local stakeholders and key policy actors; and disseminating the project findings.

Possible development of a management tool based on the models developed during the research.

Distinctive/Unique Research Findings and Wider Applicability:

Although the project site, central Tangail is well-studied, the project aims to generate more widely applicable management strategies.

The testing of strategies identified in the land-use (macro) model in the micro-level Social Accounting Matrix means that implications of decisions and events at the macro level can be modelled at the micro-level.

Interdisciplinarity of Research Design:

The project will make use of macro and micro modelling techniques and aims to bring about an iterative interaction between the two.

Links with relevant institutions and NGOs have been made.

The project brings together the research from previous interdisciplinary work in a systems framework.

Outputs of the model are evaluated by various specialists and their feedback is used to make further modifications to the model.

Positioning of Project with respect to DFID's Present Policy Priorities:

The project aims to lead to sustainable improvements in livelihoods on the Bangladesh floodplain. This will be done by influencing sectoral programmes by enabling public sector institutions to perceive interactions between sectors and between different stakeholders with the information gathered through livelihoods analysis

It also takes into account of DFID's the poverty alleviation objective.

R7877 – Common Pool Resources in Semi-Arid India – Dynamics, Management and Livelihood Contributions

Theme: Understanding CPRs

Production System: Semi-arid

Country: India

Documents reviewed: RD1; Indian CPR Literature Review – AE1 – authors: Adolph, Conway, Dixit, Korwar, Mishra, Mishra, Morris, Osman, Rama Rao, Ramachandran; Report on Case Studies of CPRs in Gujarat – compiler: Ashok Kumar Gupta; Report on Case Studies in Andhra Pradesh – co-ordinators: Anwar, Ramachandran Rao

Main Outcomes of Project Research to Date:

Valuable review of the CPR literature for India and of the main issues surrounding CPRs in post-independence period provides strong foundation for in-depth studies in two semi-arid states.

Important data bank in preliminary state reports on Gujarat and Andhra Pradesh - compilations of work carried out by relevant NGOs, not this research group - but document the complexity of CPR preservation, exploitation and current management and underpin the project's findings.

Distinctive/Unique Research Findings of Project to Date:

In Gujarat, new religious movements can provide motivation for effective CPR creation and management.

In both Gujarat and Andhra Pradesh, the poor are heterogeneous. Destructive rivalries/conflicts take place between sub-caste groups, between them and tribals, also gender disadvantages are rife. The Andhra studies suggest concept of "conflict management" realistic and reject "conflict resolution" as unattainable - concept lost however in the conclusion of this work.

In Andhra Pradesh, encroachments on CPRL are linked to failure of government's land reform policies to take surplus land from the rich, instead distributing "waste lands" (CPRLs) to the poor for dwellings and use. Low/no demand for reversal of encroachments/privatisation of CPRL.

Though not explicitly stated, there appears often to be a "life-cycle" of successful CPR management groups, whereby the benefits of years of successful management are lost as the projects come to maturity a) because of inability to protect them against raiders, and/or b) because of conflicts within management groups.

Transition from traditional CPRW management to new structures and technologies can be beneficial to environment, productivity and livelihoods if inclusive.

Interdisciplinarity of Research Design:

Proposed biophysical studies of CPRs and innovative solutions to CPR management problems not yet available. Stakeholder involvement in progressive project assessments and findings and promotion of uptake are integrated into project structure.

Wider Relevance/Applicability of Findings:

CPRs of land, water and forest environmentally linked; need to be treated holistically not sectorally.

CPRs in general degraded and reduced in scale yet still significant in livelihoods of women and the poor.

Population pressures increasing while CPR diminishing – crises impending.

Need for stronger institutionalisation of variety of local management structures for CPRs.

R7957 – Poverty Dimensions of Public Governance and Forest Management in Ghana

Theme: Understanding CPRs with policy links

Production System: Forest Agriculture Interface

County: Ghana

Documents reviewed: RD1

Major Planned Outcomes of Project Research:

This new scoping project will address the complexity of the institutional arrangements that can control rights over natural resources, especially on the forest margins and the interface with agriculture.

It will examine ways that recent reforms in local government and innovations in forest management relate to this institutional context, in particular seeking to elucidate the institutional aspects of local livelihoods, identify gaps in the existing knowledge on the linkages between sustainable livelihoods, forest conservation and use, and poverty.

It will explore the types of changes needed to optimise the potential for simultaneous improvements in, or negotiated agreements between resource conservation, livelihood security and poverty alleviation.

It will examine conflicts of interest between different agricultural systems – the cultivators of yam vs. maize, cowpeas and vegetable crops in relation to forest use and in-field tree preservation – or different socio-economic interest groups: e.g. government agricultural extension services, the chiefs, charcoal makers, local women.

Distinctive/Unique Planned Findings and Wider Applicability:

This project aims to increase understanding of the social and institutional implications of natural resource management at the forest-agriculture interface in Ghana, and this would be of wider relevance to similar situations of dynamic change – physical, social and institutional.

It hopes to identify appropriate participatory management approaches to benefit the poor and to disseminate its findings among stakeholders.

Interdisciplinarity of Research Design:

This is a scoping project, but does plan to include botanical aspects such as the tree-conservation needs of yam farming, and an evaluation of commercial teak plantations. Its main disciplinary thrust is socio-economic.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

This project aims to address, mainly through its successor project, the priorities of poverty alleviation, sustainable livelihoods and environments and improved and sustainable environmental management strategies.

R7973 – Policy Implications of Current Knowledge about CPR Management in India, Zimbabwe and Tanzania

Theme: Policy linked research

Production System: Semi-arid

Countries: India; Tanzania; Zimbabwe

Documents reviewed: RD1; Workshop 1 Report – Bill Adams, Bhaskar Vira, Dan Brockington, Jane Dyson, Kanchan Chopra, Issa Shivji and Marshall Murphree

Major Proposed Outcomes of Project Research:

This new project aims to achieve an overview of the crucial problems affecting CPRs, their uses and their users, based on the latest findings of CPR research carried out in three distinct countries: India, Zimbabwe and Tanzania.

It will supplement these sources by both theoretical and case study literature from other geographical regions.

In the course of its work, and in particular through its interaction with numerous stakeholders, it aims to develop a network of governmental and non-governmental agencies committed to CPRs for interaction with DFID in the pursuit of its developmental goals.

Distinctive/Unique Planned Findings and their Wider Applicability:

This project aims from the outset at the wider applicability of its work.

It aims to tease out the bigger story from CPRs in the named countries that experience multiple-use of the sort generated by the competitive consumption pressures of local, regional, national and international stakeholders.

It hopes its findings will enable natural resource managers in these target countries to be better informed about the implications of their decisions when creating regimes for the exclusion from, and exploitation of CPRs so as to provide better opportunities for providing sustained livelihoods for the poorest members of the communities affected.

Interdisciplinarity of Research Design:

This project does not aim to carry out new research, but rather to draw threads together from previously isolated research findings. In this way it will draw upon interdisciplinary research to reach over-arching goals of a socio-economic character.

Positioning of the Project with Respect to DFID's Present Policy Priorities:

This project will provide new thinking and accessibly broad findings on the following DFID policy priorities: sustainable livelihoods, sustainable environments, and the issues surrounding CRP management and its successes and failures as an instrument for the alleviation of poverty.