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Section 1

1. Defining the institution and framing the analysis

1.1. Institutions and natural resource management

Over the last two decades, the discussion of institutions for natural resource management has been drawn from two predominant theoretical schools; new institutional economics (NIE), particularly the work of North (1990), and the principles and "rules"[2] for sustainable management developed within common property resources (CPR) theory and elaborated by Ostrom (1990), in particular.

In proposing that the institution must operate to reduce transaction costs (the costs of securing decisions and of ensuring their enactment) the NIE school offered a potential framework for institutional analysis and provided a mechanism by which institutions may be consolidated or threatened. This view of the institution as a minimiser of transaction costs suggested that only those institutional arrangements that work to constrain the costs of policing or enforcing decisions (relative to the potential gains from management) will continue to function. This would imply that high transaction costs could be accommodated by institutions operating in high-value and productive contexts, while low-value or variable resources might only support institutional arrangements where less time and resources are expended as transaction costs (see, for example, Scoones, 1999).

However, framing the institution in relation to transaction costs is problematic because it risks generating tautologous definitions:-

> *At the extreme, this results in definitions along the following lines, as paraphrased by Harriss et al (1995:7): "existing institutions minimise transaction costs because transaction cost minimisation is their function"."*
>
> (Leach *et al*, 1999)

Perhaps the most significant way in which NIE moved the discussion forward, however, was by differentiating between "organisations", as structures, from the rules (cultural, social, economic etc.) that shape their performance and give them meaning. North's (1990) definition of institutions as the "rules of the game in society" was significant because it recognised that the environment in which organisations operate is complex and can itself shape performance and outcomes. Extending the analogy further, North described the organisations as players within a game pre-defined by these "rules"[3]. In summary, NIE highlighted the fact that the performance of the

[2] The term "rules" is used throughout as it is within CPR theory – to denote agreed or enforced prescriptions which permit or forbid specific actions by groups of individuals (after Ostrom, 1986). Oakerson (1992) has expressed some of the CPR theory and its use of "rules" as a model or framework for institutional analysis and design (IAD). The framework highlights links and feedback between the bio-physical setting and the set of operational rules (rules dictating harvesting, effort controls etc.) and decision-making rules (the process by which other rules are agreed) which are followed. However, Oakerson does not expand on the character of the relationships between the components of the framework and in this regard, the framework provides a visual representation of the system rather than a predictive model.

[3] Leach et al (ibid) contest this definition by highlighting that organisations can continue to function and outlive the rules that made them relevant from the outset and initiated their development.

organisation, with its pre-defined responsibilities and structures, is influenced by a nebulous set of institutions (or "ways of getting things done").

Although grounded in game theory and collective action dilemmas, the CPR approach has tended to view the institution in a very similar way - principally as a mechanism to constrain irrational or selfish behaviour. However, while NIE implied that institutions perform the function of minimising inefficiency in the market, CPR theory views the institution as a constraining mechanism that can help control NRM by preventing individualism, free-riding and chaos. As Metha *et al* (1999) observe, the CPR school developed in response to Hardin's (1968) gloomy prediction of the "tragedy of the commons" and drew on empirical observations of apparently sustainable, traditional or community-based NRM and tenure arrangements (see for example, Dahl (1988) or more generally, Berkes (1989)).

The key theme and purpose of CPR theory, however, has been to suggest that appropriate institutions are not only the historic product of some "noble savage" but that new institutions as management systems and "rules" for use can, in fact, be crafted and implemented. Central to this work has been Ostrom's (1990) "design principles" for robust institutions which have provided a reference point for discussion and analysis and have been adopted by some analysts as a means to evaluate the suitability of existing NRM arrangements and to suggest modifications (Box 1) The link between the NIE and CPR approach, then, is that the institution is seen as a mechanism to control undesirable practice and outcomes.

Box 1 Ostrom's design principles for robust NRM institutions (adapted from Ostrom (1990)).

Ostrom's Design Principles for robust NRM Institutions

Clearly defined boundaries - defining the boundaries of the resource (and those who are entitled to use it) is considered a vital precursor to successful collective action. "Outsiders" who have not invested in the CPR (and share none of the costs of its use) must be identifiable.

Site specific appropriation rules – rules for allowable resource use should be tailored to the local context and may not be suitable for replication nationally.

Active participation – Those interacting with the CPR should have some role in modifying rules of operation, appropriation and sanction.

Effective monitoring – Some form of feedback on performance is required and this should be conducted by appropriators or by stakeholders accountable to them.

Graduated sanctions – penalties are graded in relation to the severity and impact of the violation. Ideally, benefits derived from fees and fines are internalised and received by other appropriators or those accountable to them.

Conflict resolution – CPR institutions should posses some form of in-built conflict resolution mechanism. Although some conflict is inevitable in NRM it should be diffused or channelled into collectively agreed change.

A degree of autonomy – External or national modes of NRM should complement rather than challenge local-level rules and institutions.

and in larger, more complex systems;

Nested organisation – Smaller scale institutions or authorities are embedded within larger, overseeing structures. The system as a whole is layered and hierarchical.

The CPR theory and literature has both supported and been supported by numerous community-based management case studies. Although providing the basis of the analytical framework and discussion of NRM institutions, the CPR school has started to receive greater criticism as the discussion of the local realities of NRM, its relationship to society and *de facto* outcomes becomes more considered.

A key problem with the CPR approach, for instance, has been its apparent reliance on the notion of "community" as a homogenous and bound entity (e.g. Metha *et al*, ibid). This type of geographic definition of the "community" has been challenged for ignoring the impact and role of power structures and the fact that many "communities" do not, in fact, manage local resources well (see Agrawal & Gibson, 1999). Although this treatment of the "community" is now considered outmoded, its legacy has been to shape the way in which the role of the "local" institution continues to be framed by the NRM researcher. Several of Ostrom's design principles ("autonomy", "site-specific rules" etc.) directly or indirectly infer a prioritised role for the local institution relative to state regulation and management, for instance. The role of the state took greater prominence in the subsequent discussion of co-management during the 1990s, but in attempting to identify arrangements to bridge national and local management objectives the emphasis was still on identifying and introducing the right "rules" as a tool for management.

Several commentators (notably Campbell *et al* (2001), Metha *et al* (ibid), Cleaver & Franks (2002) and Cleaver (2000)) have criticised the treatment of the institution as derived from CPR theory and, in particular, what they see as a rather functionalist and prescriptive focus on "institutional crafting" and "getting the institutions right" for NRM.

> *"Institutions emerge as sites of social interaction, negotiation and contestation comprising heterogeneous actors having diverse goals. This suggests a need for interventions that have a processual rather than product-oriented character, encouraging rather than undermining institutional flexibility. Knowledge uncertainties emerge as central to contested areas of natural resource management. This suggests a need both for inclusionary, participatory decision-making processes and for approaches to institutional learning that make best use of a plurality of perspectives. The reconceptualisation of how, in the context of uncertainty we see resources, their management and their interaction with local livelihoods raises a range of fundamental questions about institutional dynamics. These touch on issues of property rights, legal systems, and governance, as well as broader questions of knowledge, power and control."*
>
> Metha *et al* (ibid)

Similarly, Campbell *et al* (ibid) argue that too great an emphasis has been placed on the corrective or regulatory ability of formal rules for resource use when the reality is that multiple forms of control, based on tradition and cultural norms, influence resource use. In essence, the focus has been on bureaucratic or adversarial forms of control rather than "negotiated reconciliation". The institutional environment is further complicated by the fact that these informal systems are, themselves, continuously contested and individually interpreted. Both the NIE and CPR schools have tended to overlook the impact of pre-existing and informal institutions on new or NRM-specific institutions, in this regard. As Metha *et al* (ibid) state:

> *"…their (NIE and CPR) conceptualisation of collective action tends to promote a corporate and homogenous view of "community", downplaying*

issues concerning difference, power and politics. These approaches have also presupposed a non-interactive divide between formal and informal institutions, neglecting the "messy middle" where different institutional domains overlap and are beset by ambiguity."[4]

Probably a consequence of simplistic case study commentaries, rather than the underlying theory, there has been a tendency to view institutions for NRM as discrete sets of rules with discrete functions and objectives. The reality, however, is that several "institutions" impinge on NRM, management decisions and behaviour. Cleaver (2000) argues that it is not enough to focus on introducing structured and NRM institutions with "pure" and "perfect" rules of operation. Pre-existing interests and institutions will interact with these structures and modify them.

Although apparently pessimistic, the contributions of these critics should be viewed as constructive, rather than obstructive. For instance, the debate has highlighted the prospect of accommodating or proactively incorporating pre-existing institutions in NRM (institutions that may have previously been considered peripheral to NRM)[5]. In addition, the debate should remind the analyst of the dangers of superimposing pre-defined and simplistic units for management, such as those based on hydrology and water catchment, for example[6]. Essentially, the message is that "*imposing rigid resource management boundaries on existing structures runs the risk of ignoring the social realities of resource use* " (Cleaver & Franks, ibid).

In the context of rural development project and programmes, the discussion may also help move the debate forward with respect to the purpose of new forms of resource management institutions (RMIs). In the case of CB-NRM, for instance, its dual goals are normally considered to be the establishment of collective management and decision-making for improved management, in tandem with some form of in-built capacity for conflict resolution (Turner, 1999). However, in acknowledging that the "community" is in fact heterogeneous with multiple and often conflicting interests, it is necessary to be aware that introducing new forms of decision-making and dispute resolution can work to reinforce existing power differentials and inequity[7]. Once again, it may be possible to learn from existing decision-making mechanisms that relate to wider livelihoods and social issues. As Cleaver and Franks (ibid) state; - "*...there may be social preferences for a convenient opacity in collective arrangements, for non-confrontational and socially supported forms of decision-making and conflict resolution*." In this case, conventionally valued characteristics (transparency and accountability, for instance) may not be locally desired.

In summary, Cleaver (ibid) believes that suitable arrangements are likely to represent some form of assortment, or "*bricolage*", of pre-existing institutions (in the broadest sense of the word) linking fluidly with new, evolving institutions where rules and structures are flexible and adaptable. Again, due attention to pre-existing institutions, such as local NRM initiatives or dispute-resolution platforms (e.g. the *mathbor* in

[4] This last point is particularly relevant to the purpose and approach of this research and is taken up later.

[5] In the context of IFM in Bangladesh, local initiatives have been shown to undertake simple seasonal decision-making and collective action with general support and local legitimacy (see Annex B-i).

[6] Cleaver and Franks (2002) discuss how conventional river basin management based on physical boundaries can be sub-optimal. For instance, water is a multiple-use resource, administrative boundaries do not coincide neatly with cultural and social networks and needs etc. Extending this observation to fisheries management, the Hoggarth *et al* (1999a & 1999b) model for fisheries co-management in Bangladesh would appear to assume neatly bound hydrological and administrative units and seems to overlook conflicting water uses and objectives.

[7] In this sense, there is a real danger that manipulative elites can manipulate structures like this and so transform "formal authority into formal domination" (Islam, 2002).

Bangladesh), may be instructive here. The function of these institutions may be to ensure appropriate local coping strategies and may work to consolidate social capital[8]. The social function of these institutions may result in outcomes that represent *"a compromise between social acceptability and appropriateness and resource management effectiveness*".

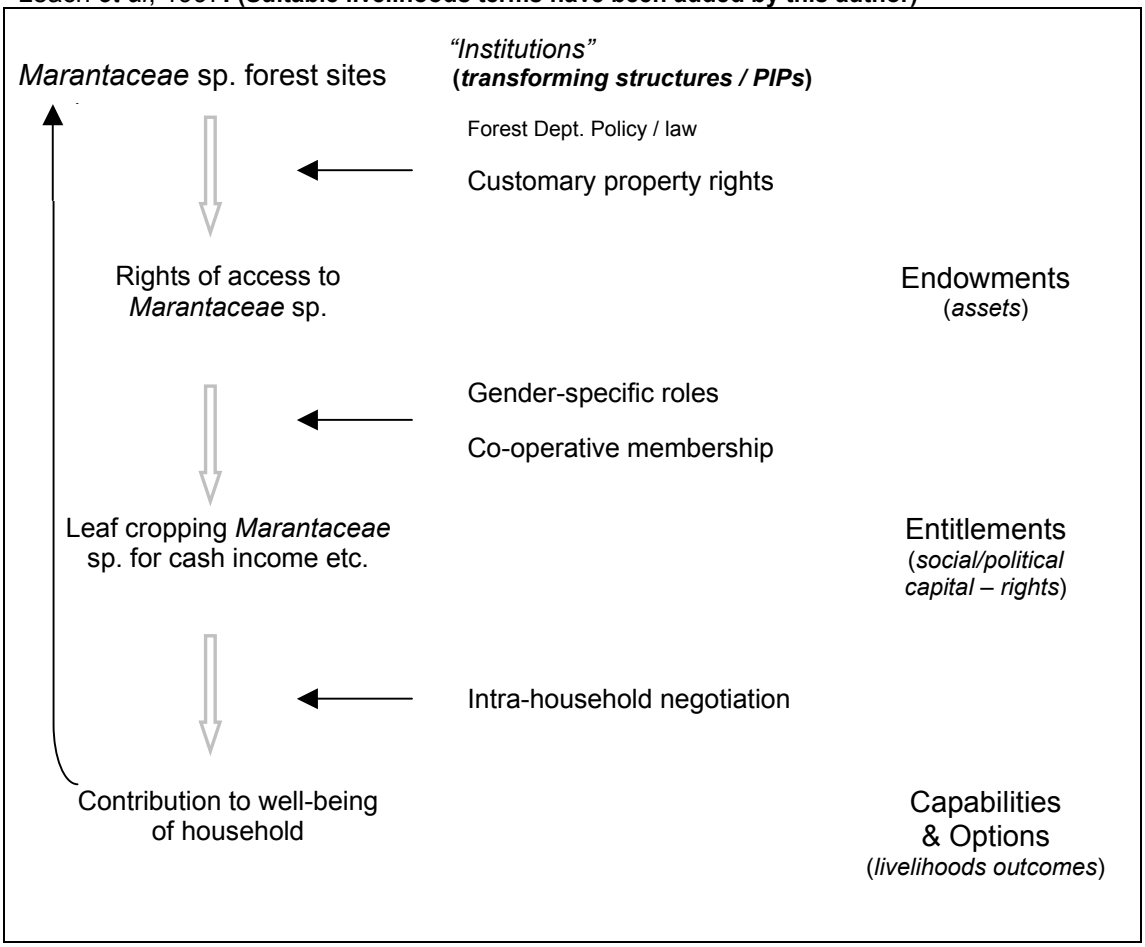
In drawing from NIE and CPR theory then, the tendency has been to view NRM institutions as purposively regulating structures and to construct rather simplistic representations of the links between people and the environment. Leach *et al* (ibid) have proposed an alternative treatment of the "institution" which is intended to incorporate a rather more sociological and anthropological dimension and draw in societal norms and patterns of behaviour. Leach *et al* (ibid) argue that the people-environment relationship is too often viewed as static and linear so that the sole impact and role of the "community" is merely to reproduce positive or negative impacts on the environment. Leach *et al* highlight the parallel between the analysis of famine and the analysis of NRM institutions - the latter had been (and generally still are) couched in terms of supply and production of the "resource", with little consideration of social differentiation with respect to access and control. They propose an approach to NRM institutions based on Sen's (1981) seminal work on famine and, in particular, his concepts of "entitlement" and "endowment"[9]. Leach *et al* argue that the way in which the individual's array of assets (endowments) can be utilised is mediated by his or her level of legitimate control and access to them (entitlement). In turn, the ways in which endowments and entitlements are used are mediated by institutions.

In principal, it is possible to "map" the array of endowments and entitlements and how they interrelate with formal and informal institutions. Leach *et al* provide the example of leaf harvesting of *Marantaceae* plants in southern Ghana to demonstrate how different sets of institutions permit or restrict access to this resource and to the benefits from its collection and sale. This case study demonstrates that the factors that shape access are a combination of formal, macro-level institutions such as law and informal and micro-level institutions such as customary tenure rules and intra-household dynamics as "ways of getting things done" (Box 2).

[8] In the case of Bangladesh, for instance, the *mathbor* courts are capable of maintaining compliance to "rules" which both relate to religious and social notions of duty and to good NRM practice (see Section 1.1.3: *The institutional environment and reality of rural Bangladesh*).

[9] Sen highlighted the importance of distribution and recognised that different individuals have varying degrees of access or "entitlement" to resources in times of stress – relating closely to the concept of social capital. Sen's notion of "entitlement" is equivalent to the range of possibilities open to the individual. "Endowments" can be considered as the individual's starting point (the range of physical or social attributes he/she may draw on in order to achieve their entitlement). In this way, endowments are analogous to livelihoods assets (physical, human, social etc.) while entitlements might be viewed as potential livelihood outcomes/options.

Box 2 The interaction between environmental entitlements and institutions: modified from Leach *et al*, 1997**. (Suitable livelihoods terms have been added by this author)**



In deconstructing NIE, CPR theory and more anthropological approaches, Leach *et al* arrive at a simple definition of the institution which seems to be all embracing and useful. Rather than rules, themselves, they argue that institutions can best be viewed *as "regularised patterns of behaviour that emerge from underlying structures or "sets of rules in use".*

Following this, it is quite simple to differentiate between formal and informal institutions:

> *Formal institutions may be thought of as rules that require exogenous enforcement by a third party organisation. The rule of law is an example, usually upheld by the state through such organisational means as law courts, prison and so on. Informal institutions, however, may be endogenously enforced; they are upheld by mutual agreement among the social actors involved, or by relations of power and authority between them. Recent work on institutions stresses the socially "embedded" nature of informal institutions, or the multiplicity of institutional relations in which people are engaged at any one time. In short, institutions of various kinds, ranging from the informal (e.g. social norms) to the formal (e.g. the rule of law), interlock to form a matrix within which people live their lives.*
>
> Leach *et al* (ibid)

From a pragmatic perspective these definitions conveniently encapsulate the set of influences that interact to shape livelihoods outcomes (for people operating in the forest-savannah of Ghana or the floodplain of Bangladesh). In this context, the approach of Leach (ibid) links well to the SL framework, acknowledging an important social and political function of the institution and its role in influencing NRM, access and livelihoods outcomes for individuals and society[10].

Finally, the notion of institutions *as "regularised patterns of behaviour between individuals and groups in society*" conveniently encapsulates the mosaic of formal (project and government bodies etc.) and informal (social mechanisms) processes that influence NRM. As such, this overarching definition has been applied to the analysis and discussion within this research project.

1.2. Institutions in the context of livelihoods

One of the most important functions of the sustainable livelihoods (SL) approach has been to shift the debate from financial considerations of poverty to a wider, multi-dimensional one that attempts to incorporate the social and political environment of the poor. The early emphasis of researchers and practitioners was to analyse or boost the five forms of capital assets representing the livelihoods pentagon. However, it was obvious that these assets were not situated in a vacuum and that different stakeholders demonstrated varying ability to utilise these assets and to convert them to sustainable livelihoods. As discussion on the wider socio-political environment of the poor developed, the SL terminology moved away from the rather abstract notions of "vulnerability context" or "transforming structures" to a more thorough consideration of the political and institutional context.

In grouping policies, institutions and processes (PIPs) together, the SL framework acknowledged that political, social and cultural issues interact and shape one another. Developing this theme, meaningful policy analysis require an understanding of processes (or "ways of getting things done") and how these interact to shape real outcomes and impacts on the poor. Analysis has tended to focus on narratives and statements emanating from the centre but the complex and significant bottle-necks that restrict their impact are, in the broadest sense, institutional. The role of bureaucratic, political and personal (motivational) factors should not be underestimated, for instance.

The SL framework, implicitly touches on these issues in its definition of "process";

"If structures (organisations etc.) can be thought of as hardware, then processes can be thought of as software"

Sustainable Livelihoods Guidance Sheets (DFID, 2000)

However, Cleaver & Franks (ibid) argue that most discussion on NRM within the SL framework tends to view institutions in terms of corrective or constraining structures. Research and development projects have tended to focus on achieving the "right" structures (rules and roles) and the "right" norms (relations of trust and co-operation) with the assumption that this will necessarily provide desirable outcomes.

[10] The approach also relates closely to Röling's (1994) definition of "platforms for resource use negotiation" as statutory or voluntary (formal and informal) decision-making arrangements representing interdependent actors.

By expanding SL and acknowledging the role of PIPs, donors are starting to turn away from viewing NRM in isolation and to consider prospects for change in governance, more generally. In particular, there is now a focus on "access to voice" through existing or new institutions for people's representation. The new emphasis on consensus building for NRM, for instance, is a reaction to the poor performance of production-oriented interventions and a recognition of the need to consolidate social capital for sustainable and mutually-beneficial practice (see Barr & Dixon, 2001). In this regard, it may be necessary to expand our use of SL and PIPs further so that access to voice and influence becomes a primary development objective of its own. In the context of rural Bangladesh, there is little doubt that the ability (or inability) to access political influence plays a central role in shaping people's options and, ultimately, their livelihoods. In this regard, Baumann (2000) argues that "political capital" should form a sixth livelihoods asset rather being represented as an external entity within the surrounding environment of PIPs.

Participatory research has uncovered some of the formal and informal institutions that the poor recognise as enabling or disabling. A study under R6756 of the problems faced by different NR stakeholders in 'making a living' on the Bangladesh floodplains demonstrated that the poor perceive their major constraint to be lack of access to *natural capital*, due to local institutions. These respondents did not mention poor stocks of natural capital *per se*¸ but recognised a trend in declining productivity. This analysis showed that fishers, along with women and the landless, perceive transforming processes as lying at the root of many of their problems and that these processes tend to favour men, the landed and those with higher social status professions (rather than traditionally low-caste fishing). For fishers, local institutions (i.e. the "rules of the game": cultural norms and social mores) prevent them from converting their environmental endowments into environmental entitlements (Leach *et al*, ibid).

1.3. The institutional environment and reality of rural Bangladesh

1.3.1. Ubiquitous institutions and power structures

There is now growing acknowledgement by donors, GoB and learning NGOs that local "processes" tend to shape NRM interventions in unpredictable and often undesirable ways. In the project context, for instance, initial objectives may be locally re-aligned as obstacles are encountered and new problems arise. In addition, where project objectives have been achieved, unforeseen impacts and externalities may result.

The work by Toufique (1997) in analysing local power structures, the way these are manifested and the way in which these structures influence access, has been particularly influential in this respect and has changed the way in which NRM in Bangladesh, particularly with respect to fisheries, is viewed by researchers[11]. Toufique explained that it was clearly insufficient to target "genuine fishers" by providing preferential access to jalmohals because *mahajans* (moneylenders) would continue to dictate the distribution of benefits[12]. A variety of similar forms of control over access and distribution of resources operate throughout rural Bangladesh, however, and they are not unique to issues of NRM. A combination of "legitimate"

[11] Although Toufique's work has stimulated a discussion of appropriate local interventions, there is little evidence that it has influenced the approach within the fisheries sector and the DoF (see Section 2.3.1 and Annex B-iii).

[12] In fact, the transaction costs incurred in gaining and maintaining the leasehold were too great for poor fishers to bear so that the *mahajans* performed an enforcing role on behalf of these groups.

mosque-oriented institutions (norms and rules) and the relatively recent emergence of a new entrepreneurial elite dictate access to resources and to the benefits derived from them (see below).

Donors and international NGOs have attempted to realign their approaches in the light of several interesting reviews and studies of Bangladeshi society and power. While the World Bank report "Consultation with the Poor" (un Nabi et al, 1999), highlighted the importance of local formal institutions to the livelihoods of the poor (access to health, education and political representation etc.), subsequent work commissioned by CARE has attempted an understanding of the social and informal structures which affect both individuals and formal structures, themselves.

DFID Bangladesh has also turned its focus to the social and political sphere in which the poor are situated in an attempt to understand the processes that might both cause and remove vulnerability (see for instance, Toufique & Turton, 2002).

The recognition that policies, institutions and processes (PIPs) play a crucial role in shaping access to sustainable livelihoods has increased the volume and sophistication of debate on the role of local level institutions in pro-poor development. While it may be useful to disaggregate PIPs for the purpose of describing and reviewing the national context, in reality PIPs merge at all levels, so that formal and informal institutions cannot be properly analysed in isolation. Informal institutions, such as social networks and culture, obviously shape the reality of politics and policy, for instance. At the local level, the overlap of PIPs can be particularly pronounced. As discussed, policy tends not to produce predictable outcomes or translate simply to the envisioned improvements in local, formal institutions and local practice (informal institutions) and, in part, this relates to the mosaic of existing institutions and interests that influence access to, or denial of, assets and services in rural Bangladesh.

Brigide Bode (2002) describes in detail how Union level institutions can be described as either formal or informal but how, in reality, they tend to function together, often reinforcing existing relations rather than challenging them. While formal institutions such as the Union Parishad and village level committees exist to represent notions of democratic governance, representation and accountability, an informal institutional network of social and political power relations also operates. In many cases, this informal tier or *"net of power relations"* (CARE Bangladesh, 2002) and its origins, pre-dates formal government structures. Bode warns against viewing them as distinct and independent entities, however, and in doing so, reconfirms the notion of PIPs as synergistic and inter-reactive:

> *"The purpose of the distinction between 'formal' and 'informal', however, is not to propose the existence of a dual system, i.e. tradition vs. modernity or a 'higher practice' vs. a 'local practice'. Rather, this analysis emphasises that formal and informal institutions function not as opposites, but together. The relationship between the formal and informal reveals the ways in which informal institutions have adapted to and now permeate democratic forms of governance. As such, focusing on the relationship between formal and informal institutions sheds light on the ways in which local configurations of power operate."* (Bode, ibid.)[13]

[13] Bode identifies three informal institutions that are particularly influential at the Union and village level in Bangladesh. The *gusthi, jama't* and *samaj* relate to the respect and power afforded familial hierarchies, worshipping congregations and local brotherhoods based on residence and religion, respectively.

Islam (2002) highlights how informal institutions, particularly the *samaj* and the *salish*, dominate people's lives and livelihoods in rural Bangladesh. The *samaj* permeates society and represents "*an institutional space for collective worship, performance of rituals and festivals*" but its impact and influence is much broader than this. Crucially it represents a mode of social control relying on "*psychological coercion or manipulation according to socially constructed notions of honour and shame*." According to Bertocci (1996) the *samaj* operates to coordinate activity centred on the mosque, to dictate access to significant social events, to form a bridge for negotiation between external agencies and the local group and to influence voting behaviour. In addition the *samaj* and the *salish* are intrinsically linked, so that the *samaj* may influence decision-making and the outcomes of disputes. In this last regard, the *samaj* can act as both a social basis for new institutions and as a potential constraint to their performance if *samaj* groups create factionalism within new institutions and make them ineffective (Bertocci, ibid).

The *salish* is essentially a village-level judicial system comprised of local leaders from different social strata (the *mathbor*) and is virtually ubiquitous in Bangladesh. Although the salish is still frequently used for fast and inexpensive dispute resolution, its composition appears to be changing as new *strategic actors* such as Union Parishad representatives and others with party political interests start to play a greater role (Islam, ibid). However, NGOs are targeting the *salish* as a potential platform for gender-sensitive and egalitarian negotiation.

Briefly, the institution of the patron-client relationship should be acknowledged. Poverty in Bangladesh, and the failings of many development initiatives, have frequently been explained with reference to the "patron-client" relationship (see for instance, *Poverty and Behaviour in Bangladesh* (Maloney, 1986). While there are obviously complicated relationships between different sections of society based on power, access to resources, labour and favour, Islam (ibid) explains how conventional notions of patronage are becoming outmoded. Rather than the traditionally held image of the landlord-peasant (feudal) relationship, there now appears to be a new form of patronage evolving and one which "*is more to do with the penetration of macro-politics into the rural space and people's need for protection against escalating violence*".

Finally, these informal institutions do impinge on NRM issues, either directly or indirectly. So-called "local initiatives", relating to IFM interventions such as seasonal water management, overlap with these institutions, both in terms of the individuals involved and the process by which decisions are made, for instance[14].

With respect to rural development then, we might argue that these pre-existing institutions should at least be acknowledged, and perhaps incorporated into policy or project design and approach. Goldman (1992), for instance, argues that local institutions tend to be by-passed or weakened by development initiatives.

There are positive messages to be taken from this discussion of informal institutions. For example, although the *samaj* has been shown to be remarkably resilient in the face of social change, as social constructs, themselves, the *samaj* and other local informal institutions can be influenced and modified because their grip on behaviour does not go unchallenged (Khan, 1996). In addition, the institutional awareness of people in rural Bangladesh is already sophisticated:

[14] Local *mathbor* may dictate the timing and character of interventions or mosque committees, representing the *samaj*, may stipulate rules of resource use, for instance (see Section 2.1).

> *"There is a tremendous pool of governance capacity among people at the grassroots level. This capacity is displayed spontaneously and within the framework of short-term collective action. It was found that people could identify eight functional domains pertaining to governance and development: dispute resolution; maintenance of law and order; disaster coping; protection from harassment; development; social asset maintenance; environment management; and social welfare. People could also identify leaders and institutions most appropriate for each of these domains."*
>
> (Rahman & Islam, in press)

The "*net of power relations*" need not be stifling. Bode (ibid) highlights the spontaneous forms of public demonstration against local injustices (*gheraos*) that can erupt in rural Bangladesh. The *gheraos* indicate that a certain level of political energy and motivation does exist to force change and to challenge illegitimate control of resources (particularly state-funded resources)[15]. Bode suggests that a better understanding of the dynamics of these sorts of group demonstration (their structures, leadership and other roles) may help with local level strategising for CARE. The reaction of formal institutions (UP members MPs etc.) towards these public actions could also be instructive. For instance, it may be possible to map the incidents of positive action by political representatives in order to identify sympathetic and dynamic political networks (democratically-minded officials, progressive administrative areas etc.) as targets for future development partnerships.

1.3.2. "Facilitated" natural resource management institutions relating to IFM

There is a considerable volume of literature that champions a key role for community-based natural resource management (CB-NRM) and highlights its potential advantages over market-led or centralised forms of NRM[16]. The central tenet of these arguments is that locally-constructed rules are better able to incorporate locale-specific characters (both resource and social characteristics) and, in turn, because they are perceived as relevant, they are more likely to be enforced and complied with. In addition, it is often implied that "community" investment of time and effort in the development of management structures, their rules, and their enforcement can engender a greater sense of ownership of the resource and a sense of responsibility for its future status.

Although CB-NRM approaches have their equivalents in the developed world (political representation for producer organisations or local committees within the fishing industry, for example), the approach is particularly persuasive for donors operating in the development context. This is because the approach appears to embrace several concerns and obligations simultaneously. Firstly, CB-NRM appears to provide a mechanism intrinsically linked to the participatory process (development and change directed by the poor, on behalf of the poor) and secondly, it could theoretically by-pass ineffective government structures and avoid the "problem" of state responsibility, capacity or reform.

The large volume of CB-NRM case studies has drawn from this proliferation of isolated interventions by national and international agencies with or without NGO

[15] In this context, Bode (ibid) argues that publicising people's rights may be more productive than approaches that attempt to consolidate their "political space" through new institutions.

[16] The interest in CB-NRM grew out of the impact of Schumacher's (1973) "Small is Beautiful". It gained political credence with the "Brundtland Report" (WCED, 1987) and the 1992 Earth Summit which stipulated a role for subsidiarity within Agenda 21.

facilitation. Although in most case intensively facilitated and supported, CB-NRM has represented a popular *modus operandi* because it is a cost-effective way to promote and publicise apparent flag-ship successes.

In the context of aquatic resources management in Bangladesh, CB-NRM has been applied in an attempt to meet several inter-related requirements of the state[17] and donors[18]. The competition for land and resources, the density of the rural population, and the externalities and impacts felt by some user groups from the activities and livelihoods of others, make conflict a permanent feature of NRM in Bangladesh. This is compounded by the complex spatial and temporal aspect of access and ownership that results from the flood cycle. In this context, CB-NRM in Bangladesh has been promoted as a means to achieve mutual gains through collective action by avoiding conflict, rationalising resource use, and so preventing Hardin's "ruin".

However, the overriding responsibility and remit of national and international stakeholders is to reduce poverty and to increase food security. With respect to the management of aquatic resources in Bangladesh, ambiguity surrounding ownership and access rights, together with pre-existing and stubborn institutions ("ways of doing things") have provided obstacles to staking collective claims and often undermined the potential of local IFM structures. Despite this, those initiatives where donor objectives and national, sectoral expertise coincide have provided relatively robust management arrangements19.

Turner (1999) has observed that CB-NRM initiatives tend to exhibit dual goals: "*to reduce the level of conflict over these resources*" and "*to maintain or improve the productive potential of local natural resources*". In the context of Bangladesh, the latter goal has been the driver while conflict resolution (as cooperation and collective action) has tended to be viewed as a positive outcome of CB-NRM, rather than a necessary pre-cursor to it[20].

There appear to be several distinct models of local level IFM applied in Bangladesh and these are characterised by the identity (and so approach) of the facilitator and by their intended outcome (Table 1)

[17] The GoB Fifth Five Year Plan (1997 - 2002), for instance, identifies the need for improved social and economic conditions for fishers and fish farmers, improved institutional management mechanisms, improved environmental management, and improved rice and fish production. Similarly, the GOB draft Perspective Development Plan (1995-2010) goal for the fisheries sector and its development is 'to increase production of fish, manage and conserve fisheries resources to sustain benefits to present and future generations, to encourage private enterprise, increase overall economic growth, and generate employment and incomes, particularly for the rural poor and unemployed youth of Bangladesh.'

[18] The current (1998) DFID-Bangladesh Country Strategy Paper confirms its objective to "*continue to give priority to the livelihoods of the rural poor, enhancing their access to technologies and land and water resources*".

[19] Project-specific NRM institutions have a poor record with respect to sustainability or long-term positive change, however (see Section 2.3).

[20] Project review within this project revealed that increased production (agriculture and fisheries) tended to dictate project design and that conflict, rather than conflict resolution, was a common feature of IFM interventions (see Annexes B-ii and B-x).

Table 1 **The four basic approaches to local IFM in Bangladesh.**

	Fisheries	Water Sector	Environment	Local Initiatives
Facilitator	DoF	BWDB	National NGOs	Elite or mathbor
Interaction	Group formation & light support	Group formation & planning	Continuous, advisory	Annual discussion
Purpose	Increased fish prodn.	Flood management % agric. protection	Habitat management	Rational resource use
Structures (institutions)	Fixed groups	Fixed, hierarchical groups	Resource management & AIGA groups	Links with mosque or mathbor

More recently, CB-NRM (or more crucially the tools and approach applied) has been seen as an opportunity for institutional or political change that might extend beyond NRM and encompass rural livelihoods, generally. In this context, participatory CB-NRM is seen as a vehicle to develop political and social capital. However, to date, specific efforts to consolidate political and social networks have tended to operate as discrete activities within large, existing NRM projects (e.g. the use of participatory action plan development (PAPD) within CBFM-2).

1.3.3. The formal institutional environment and its relation to NRM in Bangladesh

Although it is unwise to view formal and informal institutions in isolation, the informal processes that represent norms and behaviour in rural Bangladesh interact with a network of government and non-government formal structures, so shaping their performance[21]. This interaction is most manifest at the local level where the role and impact of policy and central government is superimposed by other dynamics and concerns (representing Metha *et al*'s (ibid) "*messy middle*"). Thornton (2002) identifies four key types of local, formal institution: local state and bureaucratic institutions; NGOs and CBOs; civil society and; the private sector.

National formal institutions and IFM

Although the remits and approaches of numerous GOs relate to (or impact on) NRM and IFM, there appear to be four key ministries which cross-cut IFM, in particular: the Ministry of Land; the Ministry of Fisheries and Livestock; the Ministry of Water Resources and; the Ministry of Agriculture[22].

[21] Once again, the merging of the formal and informal institutional network should be stressed. As Bode (ibid) states: "*Formal institutions, the vehicles through which the devolution of allocation over resources and benefits are to be achieved, however, operate within the context of local political culture and the firmly entrenched social practices* ..[the samaj and salish etc.]".

[22] This project does not attempt in-depth analysis of national level GOs in Bangladesh. For a detailed account of the GOs which relate to IFM, and particularly fisheries, see Muir (2003).

The Ministry of Land (MoL) holds a key position in that all government land comes under its jurisdiction and it is responsible for the administration and collection of revenues from the jalmohals. The remit of the MoL obviously cross-cuts the responsibilities of the other ministries and there several key policy issues surrounding the future approach to leasing and its role within large co-management initiatives such as the Fourth Fisheries Project and the Community-based Fisheries Management Project (CBFM-2) or local community-based initiatives.

The Ministry of Fisheries and Livestock (MoFL) has the responsibility to form sector specific policies and plans according to broad government policy guidelines. The institution with most obvious role with respect to IFM is the Department of Fisheries (DoF) which has a technical remit of implementing the National Fisheries Policy and national fisheries legislation, largely centred on maintaining or increasing fisheries production.

With the publication of the Water Act (2001) and the National Water Management Plan (2002) the Ministry of Water Resources (MoWR) now has huge potential as a central body around which IFM might be negotiated (Muir, 2003). The NWMP is extremely cross-sectoral, incorporating the national fisheries plans of DoF and stipulating appropriate negotiation mechanisms for likely inter-agency disputes. The Bangladesh Water Development Board (BWDB) is a key institution within the MoWR and conducts most local level project activity for flood control and drainage projects.

The Ministry of Agriculture (MoA) is significant with respect to IFM because of the overlap between fishing and farming livelihoods in Bangladesh. Muir (ibid) suggest that the role of the MoA in IFM could increase as more people are excluded from traditional fisheries activity (through monopolisation of jalmohals by new entrepreneurs or by project interventions that exclude part-time fishers, for instance) and there are already encouraging examples of local coordination between the Department of Agricultural Extension Block Supervisors and Upazilla Fisheries Officers. The agricultural extension system is extremely well developed (with approximately 12600 Block Supervisors) and Muir (ibid) suggests that DoF should consolidate local linkages and learn lessons from this network.

Local formal institutions

Although the ruling party has paid lip-service to introducing lower tiers of government, the only government structure currently at the local level is the Union Parishad (UP). The UP has distinct mandatory functions and structures (supposedly comprising 13 members, at least three of which must be women (Rozario, 2002)) but in reality, the UP tends to be an allegiance of local power brokers rather than a fixed entity. In this regard, the capacity of the UP to conduct its remit and to undertake is very limited. Currently, most decision-making centres on road building and the administration of the Food for Work Programme (Muir, 2003). However, UP representatives do possess political influence through informal channels and formally via representation at the Upazilla level, particularly as members of the Upazilla Development Committee[23].

The Upazilla (formerly the Thana) is probably the most important interface between central agencies relating to fisheries or agriculture and local-level representatives. The Upazilla is presided over by the Upazilla Nirbahi Officer (UNO) who is selected from the UP Chairmen and, according to Thornton (ibid), represents the lowest

[23] Thornton (ibid) suggests that UP Chairmen, in particular, are starting to exert influence over Upazilla level planning and at the local level though contact with agriculture block supervisors, teacher etc.

bureaucratic tier of government. The UNO has a coordinatory role for disaster and development activities rather than autonomous planning. The key concern of the Upazilla is really the allocation of state funds (and personal favour) as allocated via the District level.

The proliferation of NGOs in Bangladesh has grown out of the state's inability to adequately provide services and strategic changes on behalf of donors. The NGO sector is now characterised by a small number of powerful, national organisations an ever-increasing number of smaller groups, predominantly concerned with micro-credit. Thornton *et al* (2000) note that the larger NGOs are now beginning to show similar characteristics to government – becoming centralised and bureaucratic, with little accountability and disconnected from the local level.

There is little indication that NGO activity is well coordinated (between NGOs and with local government) and it is common for several NGOs to operate (and compete for clients) in the same village[24].

Community-based organisations (CBOs) operate at the local level, either as the product of NGO interventions via community-organisation or autonomously as self-organised groups such as cooperatives or credit management groups. Whereas the local level groups tend to be self-help in character and with no formal allocation of responsibility, Thornton (ibid) notes the existence of "civil society structures" at the district level which are often highly organised and professional. Various forms of charity and lobby group have evolved around policy or environmental issues (social issues in the Chittagong Hill Tracts, environmental impacts of shrimp farming in the Southwest etc.) and are often coordinated across districts.

Improved communications appear to be facilitating a dramatic change in local level markets. Although there are no formal regulatory structures below the district level, national suppliers are active locally and, according to Thornton (ibid), the private sector is becoming an increasingly important factor in relation to rural livelihoods:

> *"Market forces are emerging as a more significant element of rules of the game. Relations between the private sector, NGO, UP and Government officials are tentatively being explored. Health Watch and other consumer voice groupings supported by NGOs are still rare examples, but these, and other forms of popular voice, are beginning to surface. UP members are playing stronger roles as chairs of formal and unofficial committees and bodies. Decisions that affect the village are increasingly being made in the village (in the UP office, at the NGO centre, by a large employer). These process are embryonic in their development but there is a shift in the balance between the influence that informal and traditional power bases and the more transparent and formal processes have on the rules of the game. However, informal institutions and deep social norms still prevail and at times are amplified (e.g. rent-seeking and corruption) by the developments that are taking place."*

[24] Thornton (ibid) suggests that many local NGO interventions are counterproductive – undermining the role and capacity of pre-existing and autonomous samities (cooperatives) and CBOs through competition for clients.

1.4. The Research Approach

1.4.1. Matching the approach to deliverable outputs

The project design was intended to examine several institutional aspects of IFM simultaneously. The institutional "chain" represents numerous stakeholders and the methodology deliberately applied different analytical approaches to engage with the full range of players (Table 2). By applying a combination of qualitative and quantitative methods, the approach allowed the validation of observations from each research activity and the eventual synthesis of feedback through triangulation.

Table 2 **The review topics and the approaches adopted.**

Review Topic (OVI)	Knowledge source	Methodology
1. Institutional arrangements (PD) Annex B-i	• Donor, GO, NGO, research institute staff • Grey literature & reports	Interview & literature review
2. Transaction costs of IFM (KV) Annex B-iv	• Reports & local NGO staff • RMO members	Field level structured questionnaire Cost analysis
3. Process documentation & pro-poor analysis (RL, MA, PS & SR) Annexes B-ii & B-iii	• National/local GO,NGO staff • Grey literature & reports • RMO members • Targets / non-targets	Interview & literature review Field-level structured interview (field staff) Structured questionnaire (IFM targets/non-targets)
4. Local success criteria (PS, MA & RL) Annex B-v	• Local stakeholders at case study sites (RMO members and non-members)	Focus Group Discussion (by stakeholder group)
5. Up-scaling issues (PS & RL) Annex B-vi	• Project managers & staff	Semi-structured interview
6. Participatory planning (RL & SR) Annex B-vii	• Project staff • Grey literature & reports	Interview & literature review
7. Integration & livelihoods focus (PD) Annexes B-viii-x	• Donor, GO, NGO, research institute staff • Grey literature & reports	Interview & literature review

MA - Mahbub Alam (BARCIK, Dhaka, Bangladesh; PD - Peter Dixon (Department of Anthropology, University of Durham, UK); AI - Anisul Islam (CNRS, Dhaka, Bangladesh); RL - Roger Lewins (Independent Consultant, Oxford, UK); SR - Sarah Robens (ITAD, UK); PS - Parvin Sultana (Independent Consultant, Dhaka, Bangladesh); KV - Kuperan Viswanthan (WordFish Center, Penang, Malaysia)

Review topics 1-3 relate to the analysis of existing IFM institutions (Section 2 of this report) and review topics 4-7 relate to the implementation and up-scaling of IFM initiatives (Section 3).[25]

1.4.2. The IFM Case Studies

The research team selected nine core IFM case studies for discussion and analysis based on discussions with target organisations and a preliminary review of past and present IFM approaches [26]. The selection was intended to represent the range of IFM interventions with respect to the agencies involved (GO, NGO and autonomous arrangements), sectoral focus (fisheries, water and environment) and their current status (part of the project cycle). In this last regard, it was considered important to review the progress of local institutions that may have outlived the course of external project support and funding, for instance. The case studies are outlined below (Table 3)[27].

Table 3 **The range of case study sites and their respective RMOs.** (*Although literature or interview suggested most RMOs were functioning, in these case it was unclear prior to process documentation.)

Case Study	Sector	Facilitating agencies	Lifespan
Oxbow Lakes Project, Jessore	Fisheries	DoF (local NGOs & BRAC)	1991-1997
Jalmohal Project (Barbila site)	Fisheries	DoF (NFC*)	2002-2004
MACH (Sherpur site)	Fisheries	Winrock (BCAS, CNRS, Caritas)	1999-2004
CPP, Tangail	Water	BWDB	1990-2000
Dampara Water Management Project	Water	BWDB (CIDA)	1998-2003
Khulna-Jessore Drainage Project	Water	BWDB (ADB)	1994-2002
Early Implementation Project	Water	BWDB	1980-2000
SEMP (Chanda Beel site)	Envirmnt	BCAS (IUCN)	1998-2004
Local Initiatives, Laksmi Prasad Beel	-	-	-

Additional IFM case studies were included where logistics required it (i.e. the availability of project staff for interview) and to maintain the range within each research activity[28].

1.4.2.1. The Oxbow Lakes Project

The Oxbow Lakes Project (OLP) was an experiment in the co-management of stocked baors in southwest Bangladesh. Since its inception in 1991, MoL has granted exclusive management rights to DoF and the formally registered Lake Management Groups (LMGs) at 23 baors. The project started as a joint initiative between the MoFL and BRAC, with funding and technical support provided by IFAD and DANIDA. Although donor support was completed in 1997, BRAC and DoF have maintained their respective roles in credit provision and technical support while the long-term lease arrangements and surviving legislative arrangements have helped to sustain project activities.

[25] Process documentation revealed no examples of formalised "plans" in the case studies (see Annex B-ii). The log-frame term "plan" has been replaced with "initiative" to represent new IFM approaches, generally.

[26] See Annex B-xi: *Assessment on potential case studies of functioning water management/floodplain/fishery management institutions*.

[27] For detailed case study descriptions see Appendix iii: *Process documentation and pro-poor analysis.*

[28] These additional case studies included; the Community-Based Fisheries Management Project (CBFM-2), the Small Scale Water Resources Development Project (SSWRDP) and the Fourth Fisheries Project (FFP).

1.4.2.2. Fisheries Resources Development Project in Open & Closed Jalmohal

The "Jalmohal Project", operated by DoF at 16 open-water and 15 closed jalmohals across 25 districts, aims to improve the socio-economic condition of local participants by providing assistance to "genuine fishers" and additional employment opportunities through training in new fishery-related activities. The project was intended to run from 2000 to 2003[29] but delays in implementation have restricted project activity from 2002-04 (Begum Anwari, Project Director; pers. com.).

The premise was that increased fish production from the jalmohals would translate into poverty alleviation and general socio-economic improvements at the sites. DoF was to operate through the National Fishermen's Cooperative (NFC). The NFC was to be central to the Jalmohal Project, apparently nominating "genuine fishers" as members and providing some input into training. The listed fishers were to pay lease money for secure access to the jalmohal and to benefits from the interventions

1.4.2.3. Management of Aquatic Ecosystems through Community Husbandry

MACH aims to demonstrate the local value and relevance of community participation in the management of wetland systems. The target groups of the project are those most dependent on these natural systems for their livelihoods and most at risk from their degradation. Although good participation with local stakeholders is attempted and the livelihoods of the poor are considered, the major objective of the donor is the maintenance of biodiversity and the conservation of viable wetland habitats. The project operates at three sites selected as representative of the wetland ecotypes of Bangladesh (Hail Haor in Moulvibazar District, the lower Bangshi/Turag River Basin in Gazipur and Tangail District and the Malijee-Upper Kangsa River Basin in Sherpur District).

By engaging with primary stakeholders at the sites a broad range of management issues and problems across large wetland systems are considered and MACH sets out to actively include secondary stakeholders such as government bodies at Upazilla level. Vertical integration of the project (its structures and IFM message) with local government institutions is considered key to the sustainability of natural resource management at the local level. In this respect, MACH does attempt IFM through co-management. The majority of project activities tend to be fisheries related as the livelihoods of fishers and their impact on the wetland systems are seen as central to local resource management, but MACH also recognises the significance of the wider institutional environment.

1.4.2.4. The Compartmentalisation Pilot Project

The Flood Action Plan was a direct response to the catastrophic floods of 1987 and 1988 and, as a consequence, its various projects tended to emphasise flood control rather than flood management. However, the Compartmentalisation Pilot Project (CPP) in Tangail differed from most FAP projects in that it represented a concerted attempt to promote (or institutionalise) flood management. A mosaic of interconnected land units (compartments and sub-compartments) was established, each of which could perform some function in the regulation of water use. The

[29] The majority of the project outline here is taken from the official project proforma - the only literature collected by the research team for this project; (DoF (2000). Fisheries Resources Development Project in Open and Closed Jalmohals under New Jalmohal Policy (Project Proforma, 2000).

premise was that coordinated water management would protect agricultural land, improve marginal land for additional production and, by incorporating community decision-making, ensure that the timing and extent of water management was locally appropriate. CPP was not just to represent a geo-physical model for water management, then, but also a model for institution building that would include guidelines, training and demonstrations between compartments. The project was operated in conjunction with BWDB between 1990-2000 and with Dutch and German support.

1.4.2.5. The Dampara Water Management Project

The Dampara Water Management Project (DWMP) is located in the flash flood zone of the Kangsha River in Netrakona district. Historically, seasonal flooding has caused considerable damage and hardship in the project area but the extent of localised flooding had been exacerbated since the Kangsha River Project. This project resulted in floodwater being trapped between the project embankment (the Netrakona-Durgapur road) and the river itself, causing significant local damage to *aman* crops, homesteads and infrastructure (Dampara Water Management Project, 1996). The DWMP was an attempt to ameliorate flood damage to crops and to protect Netrakona town, an area of about 15, 000 hectares. The project was jointly funded and implemented by BWDB and CIDA between 1998-2001. An early decision was made (apparently in consultation with local stakeholders) that the DWMP would focus on the construction of an embankment close to the Kangsha River. The project placed great emphasis on the role of participation, both in the identification of appropriate technical interventions and in the subsequent management of project areas.

1.4.2.6. Khulna Jessore Drainage Rehabilitation Project

The Khulna Jessore Drainage Rehabilitation Project (KJDRP) operated across about 100,000 ha of the Ganges-Brahmaputra delta system. The area is characterised by sediment laden rivers and, in recent years, severe drainage congestion as sediment is transported by the upstream flowing backward tide of Bay of Bengal. KJDRP was implemented by BWDB and supported by the Asian Development Bank between 1994-2002. The principal objective of the project was poverty reduction through increased agricultural production and creation of non-farm employment in the project area and this was to be achieved through;

- beneficiary participation in design, implementation and subsequent O&M of project facilities
- the rehabilitation of existing drainage infrastructure to reduce congestion and protect the project area from tidal and seasonal flooding
- additional agricultural extension services for recovery of flood damaged land and,
- improved fisheries management for the artisanal / subsistence sub-sector.

Although the focus of KJDRP was to deliver technical solutions to the drainage problems, the participation of local stakeholders in the design and O&M of interventions was a key feature of project design.

1.4.2.7. The Early Implementation Project at Polder 22

The recent history of water sector interventions at Polder 22 reflects the evolution of BWDB's approach over the last decade. Although large numbers of Flood Control and Drainage/Irrigation (FCD/I) projects have been undertaken there were obvious limits in the ability to institutionalise arrangements for long-term O&M. The general

pattern of events was for a gradual decline in infrastructure then leading to more serious and longer-term damage through neglect. O&M of FCD/I projects was interpreted as a technical issue until the System Rehabilitation Project (SRP) and the use of Routine Operation and Maintenance (ROM) within the Early Implementation Project (EIP) where the role of local stakeholder representation in design, implementation and O&M became a consideration.

The experience and lessons learned from EIP (1974-2000) and SRP has led to the formulation of a new project, Integrated Planning for Sustainable Water Management (IPSWM), the main objective of which is to ensure a better functioning water management system with a formal commitment to O&M and a sense of ownership by all stakeholders. The project intends to expand the role of participation and social inclusion and operates in Polder 22 and 43/2.

1.4.2.8. Sustainable Environment Management Programme

The Sustainable Environment Management Programme (SEMP) was a five year programme initiated in January 1998 and supported by the UNDP. The central implementing agency is the Ministry of Environment and Forestry but 22 different ministries, departments and NGOs are involved in the programme. However, the major community-based management and participation focus of the project is within the floodplain and haor activities coordinated by IUCN. This case study focuses on local level processes as facilitated by the Bangladesh Centre for Advanced Studies (BCAS) at Chanda Beel in Gopalganj district. SEMP and the previous BCAS projects were operated rather as demonstrations of sustainable wetland management and Chanda Beel represents one of the most important habitats in Gopalganj.

Chanda Beel is interesting from an ecological and social perspective. As one of the least modified habitats of Gopalganj, biodiversity within the 10,000 hectare site is very high and the local population of around 58,000 breaks down to about 77% Hindu, 16% Muslim and 7% Christian. In addition, operating in parallel with BCAS activities, there is a huge NGO presence in the area with at least 28 organisations operating on behalf of about 400 community groups and representing a four-fold increase in numbers since 1994 (BCAS, 1999). The objective of the work at Chanda was to achieve the sustainable management of the beel and to arrest environmental degradation. It was assumed that the participation of user groups will lead to increased awareness and the promotion and spread of sustainable practice.

1.4.2.9. Local initiatives at Laksmi Proshad Beel, Charan

This case study examined the local initiatives that have evolved to perform simple water management functions at Charan village. Laksmi Proshad is typical of many such waterbodies in providing numerous livelihoods options for people in neighbouring villages and, in particular, in providing options for the poor in times of hardship. There are no village-level formal institutions for the management of the beel and its resources but small local initiatives are conducted for the purpose of water management.

The initiatives at Laksmi Proshad centre around an allegiance between 40-50 very poor households and the landowners of some of the marginal areas of the beel (areas semi-submerged during flood). Although these poor are predominantly rickshaw pullers, labourers and sharecroppers, they diversify their activities during the monsoon and target the beel fishery for subsistence. Landowners enlist the labour of this poor group to cut drainage channels and help drain water from their land. Water may be drained from all but the deepest parts of this land so that only

katha pits are submerged and these provide a source of water for boro irrigation in later months and a fishing opportunity after the flood has receded. Access to this fishery is shared between landowners and this poor group.

1.4.3. Methodological issues

The discussion of the role of "institutions" in IFM and livelihoods in Bangladesh highlights the complexity that might confuse project approach and outputs. However, although it is acknowledged that livelihoods and NRM are shaped by a complex range of interrelated processes (relating to culture, religion, gender etc.), there is a need to anchor analysis and focus the research activities on real and tangible entities, recognisable to the target organisations. In addition, the project is intended to uncover opportunities for improvements through positive and pro-active change rather than identifying apparently intractable social and political constraints.

As a result, the primary focus for much of this research was to investigate the formal institutions (as visible entities with distinct functions or responsibilities relating to IFM) but to consider their role and performance within the wider social, political and informal institutional environment alluded to above. In other words, the formal IFM institutions - GOs, NGOs, projects and especially local resource management institutions (RMIs) - were the subjects of analysis but, where possible, the potential and suitability of these institutions was discussed in relation to the informal processes that operate throughout rural Bangladesh[30].

The emphasis was on pragmatism, so that the analysis and discussion related to recognisable forms of national and local-level institutions and that the issues raised might, in some way, be realistically addressed. Open-ended interpretations of the "institution" which encompass behaviours and norms can be problematic for the researcher, research partners and respondents:

> *The analyses in most locations were not as satisfactory as planned. It was difficult to arrive at an operational definition of institution that could be easily understood by rural and urban communities. Although there is a Bangla term for institution, that did not help the facilitators much in pointing to at least an indicative meaning of institution. The definition of institution intended to cover rules and practices embracing both individuals and organisations. But in reality, it was not easy for the discussion groups to grasp how practice could become an institution. Examining the roles of institutions was a new experience for the facilitators and they were not able to explain the concept reasonably. In most cases they resorted to some local example from the local community to lead analysis which largely influenced the identification of institutions. Thus the institutional analysis in all locations ended up in locating institutions featured by structure (for instance, school building) and persons (for instance, school teacher) whereas ignoring many of those predicated on norms and practices (for instance, dowry).*

Consultation with the poor: participatory poverty assessment in Bangladesh (World Bank, 1999)

Discussion with this project's target organisations would suggest that policy and development stakeholders and practitioners in Bangladesh tend to hold a simpler and

30 This has been the dominant approach in most discussions of informal institutions and their influence on NRM (see for instance Mehta *et al* (1999) for a discussion of globalisation and increasing uncertainty on formal institutions and at the local level, Toufique (2000) for a description of local power relations and their interaction with legitimate, private ownership of fisheries).

broader understanding of the terms "formal" and "informal" in this context. The working definitions are more pragmatic so that formal institutions are taken to mean legitimate and officially recognised or registered bodies and informal institutions are generally taken to mean groups such as fisher samities or resource management committees within projects (rather than more abstract aspects of rural society such as the *samaj, salish* or local power relations and social processes, for instance).

Although Islam (ibid) claims that the *samaj* is essentially autonomous (having no specified relationship to other religious or secular institutions), Bode's (ibid) observation that the formal and the informal shape one another is relevant here. Since formal and informal institutions are so intimately linked in this context, a methodological issue arises as to whether it is necessary, or useful, to attempt to disentangle them. However, formal structures represent the most logical focus for analysis and discussion.

Finally, the research approach acknowledged that proposed change might best be adaptive and gradual rather than revolutionary. There is a growing recognition that the institutional environment for NRM is, itself, dynamic and that it may be more appropriate to support reflective and adaptable arrangements rather than proscribed and fixed models. As Metha *et al* (ibid) state, the previous emphasis "on getting the institutions right" was based on the design features that suggested themselves from the prominent CPR and NIE theory. It may be as appropriate to identify "what not to do" as to formulate blue-print pronouncements on "correct" arrangements for IFM.

The majority of research activities focussed on formal local level structures and process (institutions).

1.4.3.1. The RMO as the focal point of local analysis[31]

Most proponents of government facilitated community-based NRM as co-management emphasise the need to develop the political space between the state and the community. This "meso-level" is seen as a key political node that could provide an interface or bridge for communication and coordination responsibilities. However, in the context of Bangladesh, the significance of intermediate government bodies such as the District appears to be receding (CARE, 2002). One place where the potential interface or intermediary role appears to be growing, though, is at the local level, or what is commonly referred to as the "grassroots" or "community" level. There is a new prominence given to the formation of community-based organisations (CBOs) which, although largely donor-driven, is influencing the approach to the complete range of rural development activities. Generally, CBOs are formed by a third party (normally a NGO but sometimes a GO) in order to deliver pre-defined sets of project activities to target beneficiaries such as credit provision or training for alternative income generation.

In the case of IFM, a resource management organisation (RMO)[32] may function as an interface between local project staff and primary stakeholders. The intended purpose of these bodies may vary, however. Sometimes the RMO is expected to represent the interests of a narrow target group and focus on the delivery of distinct and proscribed project actions. Elsewhere, the RMO may be intended to represent

[31] The following section is adapted from the process documentation project report (Annex B-ii) and is expanded to explain the focus of all local level research activity.

[32] The term resource management organisation (RMO) is used here in its broadest sense to represent local and formal affiliations of stakeholders for a distinct NRM purpose. This working definition encompasses the project-specific terminology in the grey literature (resource management committees (RMCs), resource user groups (RUGs), water user groups (WUGs), fish farmer groups (FFGs) etc.)

the project to the wider community, include secondary stakeholders and, by emphasising participation, reach consensual agreement and inclusive management decisions.

The quality of the performance of these RMOs is likely to be a function of;

- ***Intended design***

The allocation of new rights, responsibilities and powers, the approach to participation, intended linkages, and crucially, purpose.

- ***De facto interaction between RMO and existing institutions***

Formal (Union Parishad, Upazilla, NGOs etc.) and informal (*salish, samaj* etc. and local networks of power) institutions and how they function to legitimise or challenge RMOs.

- *De facto interaction between RMO and intended beneficiaries*

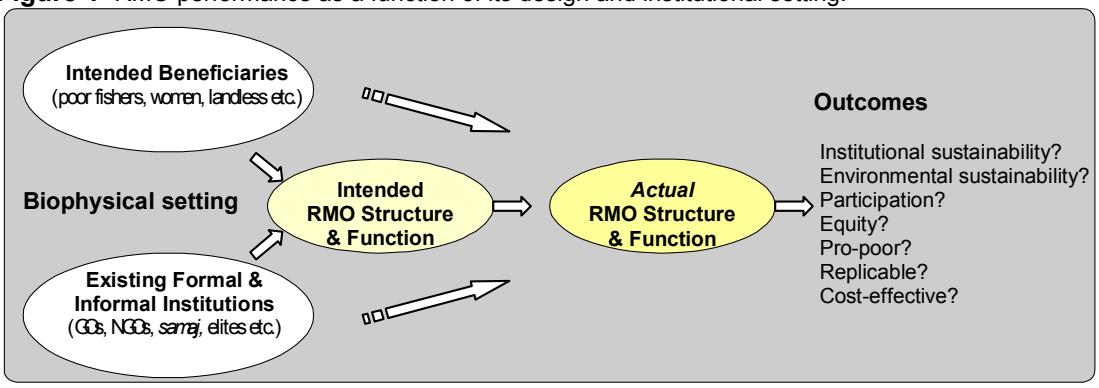
The ways in which target groups actually engage with the RMO and influence management decisions.

- ***Biophysical setting***

The manner in which local characteristics of the floodplain, or the specific "resource" targeted for management, influence the management options available – whether the site is permanently or seasonally bounded and issues of scale, for instance.

The factors that might be expected to influence institutional performance are represented within these four basic components. The components might shape the form of institutions that develop and influence their performance, and so outcomes (Figure 1).

Figure 1 RMO performance as a function of its design and institutional setting.



In relation to IFM then, this research project acknowledges that local institutions (planned activities, the ways things are to be done, representative structures and their rules etc.) tend to evolve new and unforeseen characteristics over time that may, or may not, interfere with the desired project goals. These changes might result from participatory design and the active input from primary and secondary stakeholders but other developments may result from the influence of specific interests or individuals. This may also be true of "local initiatives" that arise autonomously to meet distinct NRM functions.

Although it is important to document institutions in relation to the pre-existing institutional and biophysical context, and with respect to intended purpose, the key

units of analysis at the local level were the intended and actual RMOs. One reason for adopting this approach related to logistics – the focus on the RMO provides a convenient point around which local opinion can be triangulated because most stakeholders interact with, or are aware of, these new structures. For instance, the RMOs are generally intended to link with project staff and primary and secondary stakeholders. RMO members, themselves, may have a good understanding of the degree of permanence, support or resistance to these new institutions (or "new ways of getting things done"). In addition, it is evident that little is known about what makes local IFM structures apparently so variable in performance. This variation seems to be as marked within projects as between them and there is a growing recognition by project managers, themselves, that this is in fact the case (P. Thompson (CBFM2), M. Daplyn (Fourth Fisheries) and B. Anwari (DoF Jalmohal Project), pers. coms.).

The methodology adopted for the local initiatives case study was rather less mechanistic because the institutionalisation of decision-making for water management interventions operated within the existing informal networks as and when they were required. The approach here was perhaps more anthropological and an attempt was made to understand the significance and background to these social allegiances in a wider, community context, rather than in relation to IFM in isolation. As a proxy to the RMOs, the focus of the research here were the decision-making *mathbor* or landowner groups that organised meetings, took decisions and coordinated collective action.

Section 2

2. Performance analysis of existing IFM institutions in Bangladesh

2.1. Institutional arrangements in local, informal IFM

This input was intended to reveal institutional arrangements in a number of local informal floodplain resource management institutions in Bangladesh (here termed 'local initiatives'). Issues pertaining to resource integration, livelihoods orientation, the nature of participation in decision-making, collective action, and institutional sustainability were considered. The majority of the review draws from reports developed by BWDB under the SRP at Chaptir Haor. In this case, local initiatives were seen as a potential solution to the problem of sustainable O&M of water management infrastructure.

2.1.1. Local initiatives in the haor context

Haors are areas of low lying ground which are prone to flash floods at the beginning of the monsoon. The Chaptir *haor* SRP sub-project noted that flushing and drainage of the embankment protected area had been achieved through numerous 'local initiatives' (e.g. 'public cuts' in the embankment), demonstrating that active local WRM was, in fact, being practiced. The project attempted to incorporate this local knowledge designing embankment repairs that would accommodate surface drain outlets and irrigation inlets where farmers were annually cutting the embankment. Although it was recognised that large farmers and landowners were likely to be the principal beneficiaries, it was hoped that increased crop production would also support increased labour employment, incomes and general economic conditions in the area.

The Feasibility Report: Chaptir Haor (BWDB SRP, May 1994) provides details of how user participation in system management would be achieved within SRP project but gave no indication of how these local initiatives were organised and whether or not this was informal action by interest groups or whether there was any wider, formal organisation behind these WM activities. The focus at his stage was on stressing the role of people's participation for SRP success and of the desired institutions (WUGs, WUAs, fisher groups, and their higher Associations, a sub-project Advisory Committee). However, the reality on the ground proved to be somewhat different and the post-SRP survey (Datta & Soussan 1998) indicated that in 60% of projects there was no beneficiary involvement in O&M. In fact, the majority of local people knew little about their supposed involvement in O&M activities, even though more than half indicated willingness to be involved in them. The post-SRP survey (Data & Soussan 1998) indicated that many supposed members had never heard of the O&M organisation they had been signed up to.

During the SRP, there was a pressing need to find a solution to sustainable O&M with, ideally, costs defrayed to beneficiaries but a number of studies have since indicated the continuing failure of BWDB programmes to establish the appropriate institutional arrangements for sustainable and integrated floodplain management. This failure led to interest in investigating and learning from the experience of local initiatives.

As discussed, SRP's Chaptir *haor* project had taken some account of local initiatives in relation to the needs of different stakeholders and as expressed through 'public cuts'. The proposal recognised the need for resectioning the embankment to a height to keep out flash floods and flood debris which threatened agricultural production, yet allow later flooding of the area for fisheries through overtopping of the embankment. These innovations in infrastructure design and location, which mimicked local initiatives, proved to be acceptable to local people and went a long way towards solving the earlier 'problem' of 'public cuts'. However, the problem of post-project O&M institutional failure continued to be an issue. It was hoped that lessons could be learned from the experience of local initiatives at Chaptir *haor* which could contribute to the design and establishment of exogenous institutions for IWRM schemes in the future.

2.1.2. Lessons learned

Early local initiatives (embankment/ crossdam) at Chaptir *haor* were a response to a perceived constraint to agricultural production. Given the biophysical constants of the area, local people were restricted to one rice crop a year (during the *boro* season), but this crop (and local livelihoods) were vulnerable to early flash floods and to drought during the growing season. Embankments gave some protection against flash floods but kept water out which was needed for fisheries production - another vital component of people's livelihoods - and for irrigation later. Although crossdams helped solve some of these problems, embankments tended to hold stagnant water in low lying areas, limiting agricultural production and obstructing boat traffic. 'Public cuts' were local initiatives to regulate ingress and egress of floodwater where and when needed. That is, 'public cuts' did not remain open, but were filled in again or reopened at a later date.

Tazim (1997) notes that local people have traditionally implemented a wide variety of small WM initiatives without external assistance (e.g. the numerous irrigation ditches, *khals*, channels and so on. 'Public cuts' are only the most obvious, and from BWDB's perspective the most 'damaging', of a whole range of WM initiatives over a range of scales. Most WM is of the micro variety with, for example, small irrigation channels and drainage ditches being constructed between fields. Since water is multifunctional and there can be externalities for other's livelihoods from its use, there has to be a degree of collaboration over WM at most scales. For example, in fields the problem of seepage means that farmers in a command area of an irrigation channel need to collaborate over their choice of crops (cutting off supply if they want to grow onions, increasing it if they want to grow rice). At greater scales farmers and fishers need to collaborate over their use of flood water for irrigation or for the fishery. 'Public cuts' are just one of the most striking of this range of WM practices.

2.1.3. Collective action and livelihoods aspects

The building of an embankment by BWDB in 1977-79 under the Food for Work programme did not change the biophysical constants of the area, but once built did pose a constraint to the livelihoods of some groups. The solution for local people, after the engineers had left the area, was to adapt the structure to meet different groups' requirements at different times of the year. 'Public cuts' were opened and closed in response to need and based on local knowledge of dynamic and seasonal hydrological conditions linked to the socio-economic interests of different occupational groups.

The ‘public cuts’ also required collective action but it is doubtful that motives are purely altruistic. The opening and closing of 'public cuts' and crossdams follows

seasonal change so that water has either to be kept out to protect the *boro* crop, kept in for irrigation and fisheries purposes, let out for drainage purposes or for early or final fishing, and crossdams and embankments cut to enable wet season navigation. Tazim (ibid) suggests that local WM initiatives are traditionally taken by farmers and *beel* leaseholders and, importantly, that no formal organisation is involved. For closure of a cut, for instance, those near it are primarily involved, while village *mathabars* have a role: '*After informal meetings to agree a date, rich farmers send their domestic labourers, and small and marginal farmers contribute their own labour. If materials other than earth are required, rich farmers contribute money to purchase it. Day labourers are not involved unless they are paid*' (Tazim ibid).

Although Tazim (ibid) suggests that many 'local initiatives' such as the opening and closing of 'public cuts' are small-scale and instigated by the interest group primarily concerned, communities can, however, mobilise collectively (e.g. when all are threatened collectively by embankment collapse), and for larger scale works such as the construction of new embankments. This latter requires the initiative of a few influential (and rich) farmers who are able to mobilise others collectively and organise the necessary contributions (labour and money) to achieve the common goal. In this respect, it is interesting that collective works for WM are particularly common in the *haor* area where common interests are strong due to natural threats, and less common elsewhere where they are less so.

Wider groups can act collectively, however. Duyne (1998), for example, notes that some local initiatives may be paid for from community (*panchayat*) funds (e.g. by selling fish from community ponds (dhoba), or communal swamp forest products),[33] but that people usually contribute to the work in proportion to the benefit they are likely to receive from it. Collective efforts to raise embankments generally occur at a moment of crisis (e.g. an immediate threat of flood.), and most of such initiatives were found in Chaptir *haor* which is highly vulnerable to flash floods. Normally those who are most likely to be affected mobilise, sometimes involving several thousand people headed by a committee, with contributions in labour and in the raising of funds from villages in relation to their socio-economic condition. Duyne also notes that the committees may develop into permanent organisations to ensure regular maintenance of *bundhs.*

The diversified nature of the majority of livelihoods is also likely to engender community solidarity and the mechanisms for mobilising this. For instance, whilst Tazim's (ibid) study identifies stakeholders as farmers, fishers, traders, the travelling public and boatmen, in reality many would have had these occupations as seasonal strategies within broader livelihoods 'portfolios'. These groups would have all been aware of the need for opening and closing 'cuts' to match broader seasonal needs. Additionally, elites' livelihoods were also likely to have been broadly diversified so that the elite from a local area would have networks of connections with each other and with supporters across different NR sectors which they would be able to call upon when wider collective action was called for. A general finding of many anthropological studies in Bangladesh is that it is elites who organise action, either by mobilising their 'clients' (servants, employees and *somaj* supporters) and /or employing wage labour, while poorer people (those without natural capital) look to access opportunity both through patrons and in the wider labour market. In addition, while poorer people can mobilise collectively, this tends to be short term, and around a specific opportunity for all involved (e.g. 'mass angling', embankment rehabilitation work paid for by BWDB). The transaction costs of trying to mobilise other poor people appear to be too high otherwise.

[33] See also Amin and Islam (in press)

In brief then, it is specific elite, with a collective interest in resolving a specific problem at a particular time and place, who mobilise the necessary resources and labour with which to accomplish the task. Poorer people normally have an interest in the problem only as 'clients' of their 'patron' (who has the primary interest) and/or for the opportunity it offers for employment. The exception to this is when the poor people's own immediate livelihoods and property are threatened. As with smaller scale WM (e.g. the choice of crop to grow in the command area of an irrigation channel) so with larger 'public cuts', the 'collective interest' masks the reality that different people may well have differing interests (e.g. upstream farmers wanting to grow rice but downstream farmers wanting to grow onions). There are always negotiations between 'stakeholders', and trade-offs have to be made.

The remarkable thing is that for most of the time floodplain WM proceeds with very little actual physical conflict between individuals and groups. Partly this may be determined by the power of elites to maintain order in communities even though they may be in competition with each other. It may also be determined in some contexts in part by the seasonal nature of floodplain opportunities as, for example, in the *haors.* Here there is an inevitability in the flooding of the *haor* at some point in the year, and an inevitability that the flood will recede again at a later date. Agriculture must at some point, therefore, give way to fishing, and vice versa. The exact time at which this occurs is, however, the purpose of infrastructure to determine and the timing over which different stakeholders negotiate.[34]

Power and influence are clearly involved in this negotiation. Wealthy landowners have more power (the ability ultimately to mobilise - via their *somaj* and the market - more people to defend their interests) than do fishers and boatmen. WM is likely to be skewed in favour of landowners rather than fishers and boatmen in this context, and a 'public cut' to let water into a *haor*, for example, will not be made until landowners' *boro* crop has been harvested. Similarly, if fishers and boatmen make a 'cut', farmers may ask them to deposit money with village *mathabars* as insurance for its closure before the next monsoon.

The social contract would seem to be that a stronger need/interest plus the ability to press one's claims (i.e. the power to enforce interests - or *de facto* 'rights'), and a recognition by others of those needs/interests as being stronger than counterclaims at a particular time, leads to a generally conflict-free WM system.

There is little need for formal negotiation between these stakeholders over when a 'cut' should occur or who should be responsible for it. Rather it is likely to be the outcome of routinised practice. Fishers and boatmen 'knowing' (by watching for the harvesting of the *boro* crop) when they will not be opposed by farmers if they start to make a 'cut', and knowing more or less the time each year when this will occur. If farmers need to relieve water congestion, those in the command area are likely to 'know' from year to year when they must make a 'cut'. None of this needs any formal institution to organise the action.

2.1.4. Resource integration, institutional sustainability and potential relevance

[34] Choosing the optimal time for allowing water ingress and drainage is of course the rationale behind FCD/I schemes and evaluations of the total economic benefits to be gained from choosing one date over another for these events.

Even though individual NR stakeholder groups in Chaptir *haor* practice WM motivated by their own sectoral interests, the overall outcome is IFM. IFM (and the floodplain landscape) emerges from, and is a function of, the totality of individual decisions made by NR users and as such is market related. The price of commodities (rice, wheat, vegetables, fish and so on) influence the use resources are put to. Change in commodity prices influence behaviour and thus change in NR use. It is possible to say that the overall outcome is still IFM, but the nature of the landscape produced will be different.

Since the totality of individual decisions made by NR users is the institutional framework within which the poor must make their livelihoods, it is rather meaningless to talk in terms of sustainability or unsustainability. But it is useful to note that different interest groups are making WM decisions on a regular basis all the time and usually on an informal basis, and to contrast this with the fact that WM and FM projects have normally included the formation of some sort of group or committee - often by NGOs. These organisations have usually proved unsustainable as soon as external/ NGO support is withdrawn.

In the case of WM in the haor context, Duyne (ibid) suggests that these organisations 'have externally defined functions and organisational structures, which are generally defined without consulting people at the local level on whether they conform with their own organisational practices'. Duyne (ibid) observes that while BWDB projects responded to local need, BWDB's top-down culture had prevented the delivery of appropriately designed projects.[35] BWDB's centralised approach, lack of public participation in the project cycle, and inadequate attention to the institutional framework required for O&M was criticised by NGOs, donors and GoB at the beginning of the 1990's, and particularly in the context of the FAP. To address these failings, the 1994/5 GPPs were developed after a lengthy process of consultation.[36]

Additionally, Duyne (ibid) emphasised that unless 'ownership' remained with local people, they were unlikely to accept responsibility for O&M. As she says: *'The key…is local control, transparency, accountability and a cost effective use of scarce resources*.' Duyne also made a strong case for abandoning the earlier approach to 'participation' in WM (based on exogenous WUOs), and for relying instead on informal village-level organisations which were more effective and consistent with indigenous organisational practices. As she notes, most local initiatives have a very local impact and are taken by people in the same local area: '*Accordingly, they do not need to be organised anew or to meet in formal gatherings…*' Decisions are taken informally or in meetings called by *mathabars.*[37].

Duyne (in EGIS 1998) also questions the role of NGOs in WM projects. She notes that they have little experience of WM or, surprisingly, of meaningful 'participation'. NGOs are contracted for the work with communities because they have an impressive record of forming groups and establishing *samiti* (through which resources are channelled to the groups they form), but they have less experience of soliciting community participation, and indeed can be as hierarchical and top-down as GoB agencies. 'They are as aloof to local initiatives as many GoB agencies.[38]

[35] Many local initiatives sought to adapt BWDB infrastructure to local conditions, implying the need for more effective participation in project design, and the incorporation of LK.

[36] However, in retrospect the GPPs had a number of failings. Most importantly they did not appear to lessen the gap between local people and the bureaucracy.

[37] This of course can mean that, unless poor people's interests are directly threatened, decisions are most likely to be taken by influentials - but it is precisely because influentials' interests are affected that local initiatives are taken.

[38] For a detailed discussion of the role of NGOs in IFM, see Annex B-viii.

Finally, Duyne's paper also concludes that LGIs (e.g. UPs) have a significant role to play in WM. The research found that UPs had the capacity - and *de facto* often do - manage small scale schemes, while there were instances of UP chairmen successfully implementing locally identified projects by combining local and external resources (e.g. Food-For-Work funds). This recommendation was incorporated into the GPWM where LGIs were given responsibility for supporting communities develop small-scale improved WM interventions. However, despite the SRP team making a strong case for recognising UPs as capable and legitimate representatives of local stakeholders, LGIs were only tasked with supporting local communities and not with acting on their behalf. No doubt GoB had concerns that UP Chairmen, who were normally members of the elite, might abuse their position.

However, while UPs have a critical role to play in more devolved WM, there can be doubts as to whether LGIs would promote the interests of minority and poor stakeholders or would collude with elites. There can also be doubts as to how far UPs (and LGIs) are likely to practice an integrated approach to pro-poor natural resource development (IFM) without some support.[39]

This leads on to one final question; how far are local initiatives pro-poor, and, if they are not, how far can they become pro-poor? As noted earlier, most local initiatives are, understandably, instigated by elite for their own purposes. As such they do not have a pro-poor orientation. For poor people to have a say in this social framework it must be through support for other elite who better represent their interests. It is difficult (and risky) for individual poor to stand up for their own interests, or for poor to act collectively (see Devine 2003). Additionally, elite, like the majority of floodplain stakeholders, are on the lookout for new opportunities and resources, which projects bring with them. It is not surprising then that there are many reports of RMOs established by projects later found to be dominated by elite.[40]

However, as Duyne (EGIS 1998) notes, the reality is that local (endogenous) initiatives involve heterogeneous groups of people and are usually led by traditional rural elite. Since these will still be there after project staff and NGOs leave, and are likely to seek involvement anyway, there is a need to include them in programmes for pro-poor IFM. In doing so, their positive qualities could be drawn upon while seeking to block their negative qualities and moderate their influence within the RMO. Project R7562 FTR Vol.1 (Barr and Dixon, 2001) argued that, with safeguards (e.g. linkage to LGIs), elite could provide the leadership for community-driven development which they had traditionally given in any event.

[39] For a detailed discussion of the role of LGIs in IFM, see Annex B-viii.
[40] See for example, projects feedback from the fisheries cases studies (in particular, Annex B-ii).

2.2. Transaction cost analysis of IFM institutions

2.2.1. Background

The focus on a potential role for community-based organisations (CBOs) in NRM is partly based on the prospect of devolving the financial burden of management from the state to the direct users. The approach has been particularly attractive to donors and government in the developing world where the command and control approach to NRM has frequently failed (a result of low investment, lacking information, knowledge and skills, and fractured lines of control).

Transaction costs theory indicates that elaborate and costly forms of decision-making and enforcement are likely to break down unless these costs are compensated by overall returns from the management system in question. New forms of IFM that utilise specially-formed RMIs must be efficient enough to formulate and enforce rulings, whilst providing benefits to participants.

This review was intended to quantify the transaction costs within five distinct NRM projects at specific sites (CBFM-2, Dampara Project, Khulna-Jessore Drainage Rehabilitation Project, SEMP and the Oxbow Lakes Project).

A questionnaire-based survey was designed to uncover the local costs relating to three major management tasks;

i. *Information costs* – the costs associated with collecting and sorting information for the purposes of management. In the IFM context this might include the costs of fisheries monitoring or establishing the legal status and ownership of jalmohals, for instance. Theory suggests that these costs decline overtime as users become more experienced and efficient in the management of information.
ii. *Decision-making costs* – the costs associated with holding meetings, conducting discussions, reaching consensus and finally making decisions. Coordinating inputs and opinions of diverse stakeholder groups in IFM might be expected to be time consuming and so costly.
iii. *Operational costs* – the costs of enacting management decisions. There are three distinct forms of operational costs, each associated with a different aspect of the management system. Monitoring, enforcement and compliance costs include the costs of guarding, conflict management and the enforcement of rules. Resource maintenance costs include the cost of maintaining access (legal status etc.), maintain the quality of the resource and enhancing habitat. Resource distribution costs include the costs of allocating benefits to participants, electing leaders and maintaining other forms of infrastructure such as community buildings.

Information was collected from a range of different stakeholders at each of the case study sites (project participants, committee president or secretary, for instance) so that findings could be presented according to the costs incurred by managers and other participants as primary stakeholders. It is likely that investments of time do, in fact, incur a financial cost and these costs need to be estimated. Opportunity cost estimation provides a basis for comparison with values of work time.Group discussions were held to help identify the total number of people associated with each activity and the total costs incurred (see Annex B-iv) for a fuller explanation of methodology and outline of findings).

2.2.2. Findings

Information costs were found to be considerable at all project sites with participants expending most time (44-66% of their time allocated to project-related activity) establishing the rules and controls that impact on them such as fishing effort controls and access arrangements. Less time (and opportunity cost) was expended collecting price and market information (31-33%). In both cases, informal mechanisms of information exchange operated (discussion in village tea shops etc.) in parallel with formal project meetings).

As might be expected, collective decision-making costs in these NRM projects were considerable. The costs incurred included the resolution of participant's problems, relinquishing income-generating activity during meetings, constructing rules and regulations, communicating decisions to the community and coordinating tasks with local authorities (Table 4).

Table 4 Nature of communication activities at the different project areas by project participants. Adapted from Annex B-iv.

Communication Types	**Frequency of responses (project participants)**				
	CBFM (open beel)	**Dampara**	**KJDRP**	**Chanda Beel**	**OLP Baor**
Communicating decision with fishers	6	1	3	0	2
Communicating and liaison with GOs	3	1	2	0	2
Networking with other institutions	1	0	2	0	1
Buying supplies for the organisation	1	0	0	0	1
Guiding visitors, NGO/GO etc.	6	3	0	1	2
Total	17	5	7	1	8

Training was an important component of decision making costs and these costs were incurred by the facilitating body (organisation of workshops etc.) and by participants themselves through their opportunity costs.

With respect to collective operational costs, feedback suggests that participants sacrificed considerable time and effort for monitoring and enforcement activities at the sites (Table 5). Resource maintenance costs were found to focus on fisheries-related activities such as stocking and guarding and so were highest .

Table 5 Monitoring activities at the case study sites. Adapted from Annex B-iv.

Monitoring activities	Frequency of responses (project participants)				
	CBFM (open beel)	**Dampara**	**KJDRP**	**Chanda Beel**	**OLP Baor**
Guarding the resource	6	3	0	0	2
Water use	3	2	3	0	0
Stocking fingerling	1	1	0	0	2
Marketing and selling	1	1	0	1	2
Total	11	7	3	1	6

Each of the case study projects apply a form of community-based management via a RMI and the time spent by appointed members and other participants in resource distribution was considerable (Table 6). Record-keeping was the dominant activity in this regard and analysis of costs revealed that most committee members are provided cash compensation to carry out these duties.

Table 6 Time allocated to organisational activities at the case study. Adapted from Annex B-iv.

Activities	Time spent (hours)				
	CBFM (open beel)	**Dampara**	**KJDRP**	**Chanda Beel**	**OLP Baor**
Keeping records & attendance book	108 (61.4 %)	15.9 (23.1 %)	-	-	31 (13.1 %)
Keeping Accounts	20 (11.4 %)	3 (4.4 %)	8 (13.8 %)	30 (100 %)	86 (36.3 %)
Distributing income & other shares	48 (27.3 %)	50 (72.6 %)	50 (86.2 %)	-	120 (50.6 %)
Total	176 (100 %)	68.9 (100 %)	58 (100 %)	30 (100 %)	237 (100 %)

2.2.3. Summary

Project participants as primary stakeholders, rather than elected committee members, were found to contribute a substantial portion of costs in time and earnings forgone. In the CBFM and Dampara projects, for instance, fishers were found to contribute the majority of information costs (gathering catch and fishery data) and about 25% of the total transaction costs of running those management systems. To this extent, these case studies confirmed that management tasks and responsibilities were quite effectively devolved to local users and that these users were currently investing their time and effort for successful management.

The study found that monitoring and enforcement costs were particularly high, especially in CBFM where the management of the water body and the controls on access were particularly detailed and novel. With regards institutional sustainability, it might be expected that the cost of enforcing decisions might decline overtime as benefits from the new form of management are realised and local people accept rules and regulations limiting access to the resource, for instance[41].

[41] This assumes that increased gains can lead to consensus. However, process documentation (see Section 2.3.1 and Annex B-ii) suggests that local support and compliance are probably related to the

The research team acknowledge several limitations with this study. It would have been preferable if a comparison of transaction costs between different waterbodies and sites had revealed institutional weakness or strengths (e.g. generalisations based on bio-physical conditions and committee design). However, because these sites differed so greatly with respect to scale, the design and age of institutions, it was not possible to identify common themes or produce definitive recommendations. Although the study was able to break down the costs expended on gathering information, decision-making and operating the management system, analysis of the significance of these costs was hampered by a lack of knowledge of the productivity at the sites.

Finally, it proved difficult to triangulate the findings from this research with the other project activities. Other local level review, especially "process documentation" (Annex B-ii) revealed the complexity, or "messiness", of IFM institutions. What Cleaver and Franks (ibid.) refer to as a *bricolage* of imposed structures and pre-existing ways of doing things, makes the adoption of transaction cost methodologies problematic. In other words; "where does the *institution* begin and end?". In additon, because the sample size was small, the analysis of the significance of differences between the sites was not comprehensive. Over-interpretation of the significance of these differences would have been dangerous without additional knowdge of local context. What is required in future analyses of institutions in rural Bangladesh (economic or otherwise), is an acknowledgement that institutions at different project sites will operate in very different ways and that this reflects local (and project) history, individual and group capacity, skills and motives, the character of relationships with external facilitators etc. as much as it does committee design and bio-physical setting.

distribution of these benefits. Where returns are high but commandeered by small numbers of entrepreneurial individuals, intended project structures and activities appear more likely to break down.

2.3. Process Documentation and Pro-Poor Analysis of IFM Institutions

2.3.1. Process Documentation of IFM Institutions

The purpose of process documentation was to uncover the local realities of IFM institutions and their operation. Of particular interest at the case study project sites, was the way in which project activities and structures had (or had not) influenced IFM and what *de facto* institutions had evolved. The institutions were gauged against generic and community-identified performance indicators but the feedback was also intended to provide an understanding of how effectively projects engage with the range of stakeholders (both targets and non-targets) at the local level and how successful arrangements might be sustained or supported. As such, findings from process documentation were intended to provide a basis for developing recommendations for alternative institutional arrangements for IFM (see Section 4).

As with all local level studies within this project, the focus of the analysis was the RMO or, in the case of local initiatives at Laksmi Proshad Beel, the landowner *mathbor* as decision-makers.

The approach was drawn from previous process evaluation work within R7562 which was applied to review the perception PAPD by local residents and as such was largely attitudinal. However, process documentation here was intended to uncover issues relating to sustainability, participation, equity and transparency. These issues are inter-related and do rely largely on local support. Participation and sustainability are perhaps more likely to result where there is collective and local support due to perceived (rather than measurable) benefits.

2.3.2. Lines of enquiry and incorporating suitable criteria

The Power Tools series developed by James Mayers at IIED provided guidance on the key issues to explore along with suggested methodologies to reveal important features (see http://www.iied.org/forestry/tools). In particular, “The Four Rs” helps unpack the PIPs into “rights”, “responsibilities”, “relationships” and “revenues”, whilst recognising that these attributes must be assessed together rather than in isolation. The approach to process documentation used here focussed more on those issues relating to rights, responsibilities and relationships.

The main focus, however, was the character of relationships. As Mayer states, relationships can be catalogued according to their formal structure (an organogram perspective of the system) and according to their character. Process documentation here focussed on the latter because the generic and community-identified criteria for evaluation stressed the importance of the “quality” of relationships.

The methodology incorporated this checklist of issues but, for the purposes of comparative feedback and replication between sites, example lines of enquiry to staff and structured questions for primary stakeholders were developed (see Annex B-ii).

The research team had previously consulted local stakeholders at the majority of the case study sites on their criteria for “successful institutions” or how a successful RMO might be recognised[42]. This project intended to review institutions with respect to the generic criteria often quoted as indicative of “good performance” in NRM institutions – specifically *“equitability, transparency, accountability, process quality, and*

[42] See Annex iv.

sustainability". The methodological approach was to ensure that these criteria were represented in the discussion and reporting formats, whilst acknowledging that they are actually interrelated[43].

Interestingly, there was some commonality between the desirable, generic criteria and those identified by the community. For instance *"unity / harmony"* relates to notions of participation and equity and the desire for *"regular meetings"* relates to institutional sustainability. However, community-identified criteria tended to concern social support and personal allegiances rather than organisational performance (*"honesty", "to do the right and fair thing"* etc.)

Four key levels of informants were targeted – local project staff, RMO members, project target groups and non-target groups. Developing the approach adopted in R7562 and keeping with Mayers' recommendation to pay special attention to the *"strength of relationships, relating to the frequency and intensity of contact"* it was the interaction between these four levels, with the RMO situated as a central interface between them, that formed the focus of the approach.

The methodology was piloted at the Oxbow Lakes Project site at Hamidpur Baor, Jessore (see Annex B-ii for a detailed discussion).

2.3.3. Findings

It was possible to identify several themes operating across the case studies. This section distils some general observations from the case study institutions and their performance in relation to their sector, facilitator and the project activities undertaken, their biophysical character and scale, and their social context[44]. Feedback from all nine case studies was synthesised and an ordinal score for each of the generic and community derived evaluation criteria was established (Table 7). The scoring system was established retrospectively (worst performances denoted a "1" and best performances a "5") and was based on overall feedback from the research team.

2.3.3.1. Sector, Facilitator & Activity

The case studies were specifically selected to represent fisheries and water sector interventions and in this respect the two main contrasting groupings were DoF-facilitated fisheries projects (OLP and the Jalmohal Project) and BWDB-facilitated water management projects (CPP, Dampara, KJDRP and EIP).

The main characteristic of the fisheries projects was that they centred on direct attempts to introduce new forms of production, rather than on negotiated forms of management[45]. Stocking was to be introduced by pre-defined management structures and a fixed notion of what constitutes a "genuine fisher". With respect to facilitation, the DoF projects did not appoint any project personnel with specific project responsibilities. In the Jalmohal Project, the time of the UFO and his

[43] It is reasonable to assume, for instance, that process quality is a function of transparency and accountability, in addition to other criteria such as participation, representation and perceived fairness. In turn, in any given context, if we recognise good quality processes, by our own definition, it may be fair to assume the prospect of sustainability.

[44] This range of characteristics provides a convenient framework for discussion but it should be noted that these categories are intrinsically linked. For instance, the biophysical character of a beel site may influence the diversity of livelihood options and so the social character of a site. In addition, the sector-specific character of an intervention will influence the type of activities undertaken.

[45] The Fourth Fisheries Project has retained this emphasis on production and stocking but has attempted to set up negotiated local management structures (Fisheries Management Committees and their by-laws).

assistants was shared between normal DoF duties, facilitation of the project and its meetings. There were indications that there were insufficient professional and personal incentives for full engagement by these staff. Direct facilitation by DoF was a means to by-pass the costs of NGO involvement (Anwari Begum, Project Director Jalmohal project, pers. com.) and probably as means to publicly represent autonomy and capacity to other agencies. Process documentation and interview with the project director suggests that the use of the National Fisherman's Association (NFA) as local coordinating partner has been problematic. The NFA is as much a politically-aligned body as it is an organisation with community organisation and project management skills and experience, and its dubious performance in appointing "genuine fishers" appears to have reduced the locally perceived legitimacy of the project[46].

The BWDB interventions differed in that their remit and impact was rather more expansive (flood management over large areas). To varying degrees, the BWDB hierarchical model of Water Management Organisations and guidelines on participation were applied. However, despite this apparent built-in emphasis on participation these projects seemed to suffer from the lack of skilled and continuous facilitation by staff with the required socio-economic and community organisation capability. Process documentation reveals that while group formation and facilitation was relatively thorough and intensive during the project's funded period (especially where the BWDB was externally supported, as with CPP and the Dampara projects), the groups appeared to disintegrate post-project. Unlike OLP, there appeared to be

[46] A similar stocking project by DoF, the Choro Beel Development Project in Southwest Bangladesh, has appointed the District Fisheries Officer as project Director, as in the case of OLP. In addition, this project by-passes the NFA and any NGO involvement (Anwari Begum, Project Director Jalmohal project, pers. com.).

Table 7 Summary table of process documentation at the nine case study sites. **Institutions at the sites are given a nominal score against "generic" and "local" performance criteria. Key: 1= poor (institutions have failed to achieve +ve change) → 4= good (institutions have provided +ve change).**

	OLP (1991-97) Hamidpur / Fisheries	Jalmohal (1999-) Barbila / Fisheries	MACH (1999-04) Sherpur site / Fisheries	CPP (1990-2000) Tangail / Water	Dampara (1998-2003) Netrakona / Water
Biophysical character	Permanent, bounded 10 ha waterbody & 6 ponds	130 ha jalmohal with land and excavated pond areas	Kangsha-Malijhi river basin (flash-flood prone)	Mosaic of linked land units (sub-compartments)	Flash-flood area parallel to River Kangsha (15,000 ha)
Objective // Target group	↑ fish prodn, group stocking // "genuine fisher" group & ♀ members	↑ fish prodn, training/loans for stocking & fish sanctuaries // 268 registered "genuine fishers"	Local wetland management & AIGAs // users (7 RMOs & 100 RUGs)	Flood management to protect & improve land // agriculture stakeholders	Flood control & crop protection // agriculture stakeholders & EGs
Management Plan	No written plan – formulaic procedure	"resolutions" book of guidelines & proceedings (stocking decisions)	Project-level plans & verbal RMO-level agreements	No plan operating – BWDB may re-establish groups/plans	No plans operating – repairs based on need
Generic Criteria					
Equity	2 small target group	1 elite control benefits	3 wide approval	1 landless & fishers adversely affected	2-3 approval (no fisher gains)
Transparency & Accountability	3 set rules but little feedback	1-2 communication has declined	3 good & wide understanding	1 loose affiliation of landowners (no feedback)	2 unclear feedback mechanism
"Quality" & Sustainability	3 & 4 not open, but rigid institutions	1 & 1 financial/social sustainability issue	3 & 2 intensive but unclear incentive	- discussions will continue for sluice gate management	3 & 2 sustainability depends on NGO future
Local Criteria					
Unity / Honesty	3 general consensus	1 poor level of local support	3-4 general consensus	1 perceived as exclusive	3 perceived consensus
Decision-making	2 fixed decision types	2 formal meetings occur regularly	3 action agreed during meetings	2-3 monsoon agreement made by richer	3 EGs make decisions regularly
Attention to poor	2 not community-wide	2 not effectively targeting poor fishers	3-4 fishers (poor) perceived as main focus	1-2 no representation for fishers & landless	2 fishers considered excluded
Delivery & Frequency of Interaction	3 regular DoF involvement	2 UFO is stretched, ↓ interaction	3 regular meetings but opportunity costs prohibitive	1 discuss during monsoon only	3 actions taken regularly by NGO (tree-planting etc.)

Table 7. (continued).

	KJDRP (1994-2002) Khulna & Jessore / Water	*EIP (1980-2000)* Polder 22 (Khulna) / Water	*SEMP (1999-04/5)* Chanda Beel / Environment	Local Initiatives Laksmi Proshad Beel
Biophysical character	Activity across 100,000 ha of congested delta system	A 1500 ha flood protected area of 12 villages surrounded by 3 rivers	11,000 ha open beel including 17 jalmohals and 18 khals	A seasonal beel. The smallest of three inter-linked beels at Charan.
Objective // Target group	Improved agriculture via post-monsoon drainage // all agriculture stakeholders	Water mngmnt to ↓ salinisation & siltation, ↑ agricultural potential // all agriculture stakeholders	Sustainable use of beel via education, community mngmnt & AIGAs // 1° users	↑ fish & farm prodn. by water mngmnt // Charan village residents (esp. 50 households).
Management Plan	Some surviving WMOs have by-laws & cooperative rules	No plans, NGO-facilitated groups have loose maintenance protocol	Project-level plan – no written VRMC plan in evidence, verbal agreement	No plan – verbal agreements each year between landowners
Generic Criteria				
Equity	1-2 large owner benefit via access to khas	2-3 landowners gain most but ↑ agricultural livelihood potential	3 most stakeholders included	4 all stakeholders benefit
Transparency & Accountability	1-2 No communication channel	1-2 as CPP & KJDRP- no mechanism	2 no active communication	3 good understanding of purpose
"Quality" & Sustainability	- no financial support for formal structure	- IPSWM may use previous groups	3 & 2 long-term incentives unclear	3 & 3 poor are directed by landowners, unclear social threats, alternative uses
Local Criteria				
Unity / Honesty	2-3 groups unite to query BWDB	2-3 perceived community benefit	3 wide approval	4 actions are set and fully supported
Decision-making	3 monthly agreements made	2 regular during project, now ad hoc needs based	3 meetings lead to decisions on activities	3 richer groups decide timing
Attention to poor	2 land-owners key beneficiaries	2 as CPP & KJDRP, fishers excluded	3 seasonal impact, but poor benefit	3 poor benefit but do not lead
Delivery & Frequency of Interaction	2 during project (very little coordinated action now)	1 no regular mechanism for 1° stakeholders	2-3 action ↓, mostly monsoon meetings (opportunity costs to poor)	3 annual activity only

few long-term incentives for group decision-making and planning, or the financial means to overcome associated transaction and opportunity costs.

In summary, the impact of the DoF and BWDB interventions relate directly to their remits - increased fisheries production, on the one hand, and water management/flood control on the other. The emphasis was technical, so that distributional and social issues resulting from the projects were, to some degree, beyond the GO's concerns.

In contrast, the role of NGO facilitation within SEMP and MACH was central to project activity. BCAS and MACH staff were actively involved in RMO formation and meetings and local activities at all stages. The central role of the projects was community participation in wetland management rather than sector-specific intervention. However, although both projects worked through RMOs, the activities within MACH had a far greater emphasis on fisheries management. MACH Resource User Groups were supported through training and credit, but Village Resource Management Committees at Chanda Beel were as likely to be involved in AIGAs and training as they were fisheries related activity. There are two potential outcomes of expanding the range of activities in the project context: i) it may function to gain greater support and legitimacy across stakeholder groups and prevent the kind of co-option of processes that occur where activities are very focussed and output oriented or ii) it may inadvertently function to confuse the message and purpose of the project, as appears may be the case with SEMP.

If the long-term objective of projects is to instil the capacity for community-based management, it may be advisable to limit sector-specific and production-oriented activities to flagship examples of what can be achieved through consensus and collective action[47].

2.3.3.2. Biophysical and scale issues

Theoretical considerations of sustainable common property resource management highlight the importance of identifiable, delimited or well-bounded management units (see Ostrom's "design principles", 1990). The physical characteristics of resource units (or their management) are very important because they dictate how groups can monitor or control access to their initiatives and so influence the distribution of benefits.

It is obvious that most of the case study projects have not consciously considered this issue in their design. In part, this is because the agencies that facilitated the projects neither had the expertise or, in fact, as technical agencies, the remit to do this. The practicalities of fingerling stocking and harvesting have led DoF to stock discrete baors and fish ponds under the OLP and Jalmohal Project but this does not appear to be through concern for sustainable institutional arrangements – rather the containment of increased fish production. The fact that the well-bounded character of the OLP sites (including the identity of participants and wide understanding of their roles) has permitted a degree of sustainability at the baors is probably coincidental.

The CPP and Dampara projects demonstrate a distinct spatial split in their externalities and impacts on other areas and their stakeholders. Embankments in both projects have established a physical barrier between those that benefit and those that are impacted negatively from the interventions. It was clear that there were

[47] This is essentially the approach adopted by CNRS (and now ITDG within R8103) in the application of PAPD. Physical and visual outcomes and benefits are reached so as to provide an incentive for future cooperation.

some serious impacts on livelihood opportunities (especially fisheries related) and health and hygiene issues of the poor outside project target areas (see Section 2.3.2 below and Annex B-iii).

The water management projects have other quite distinct spatial characteristics that probably impact the extent to which they can articulate local stakeholders and build enthusiasm and awareness. The extensive impact of KJDRP, for instance, coupled with limited staff capacity and numbers on the ground, probably undermined the working of the hierarchical model of Water Management Organisations that was intended. In this case, the sheer scale of the intervention and the inability of the staff to properly facilitate post-project groups would appear to have led to the virtual cessation of activity within the Water Management Groups.

The multiple level RMIs within the MACH project are highly facilitated and quite active. The project design attempts to vest some management control (revenue management and decision-making) in quite small and local groups such as the Resource User Groups. The three MACH sites represent rather different hydrological characteristics (river basin and haor systems) but it is unclear how these impact the performance of project institutions and activities. While it may be expected that project RMOs at different levels within the river basin may have different management objectives and greater constraints in realising local benefits, it was unclear whether this has played a significant role at the Malijee-Upper Kangsa River site. The most harmful impacts and externalities from upstream activities relate to the chronic siltation from huge sediment loads (partly due to commercial sand mining) that threaten several of the beels within this project site (MACH 4th Annual Report, 2003). Unfortunately, the site-specific approach of the process documentation methodology did not reveal interdependencies and relationships between the different RMOs at this site or the role of river impacts.

However, general observations can be made with respect to NRM management in the river context. Process documentation within R7562 revealed that CBFM activities at the Titas Ka site in Brahmanbaria District had been particularly problematic, for instance. The main problem here, as at all the river sites, was the inability to secure ownership of project activities, exclude non-participants and reduce conflict. The GoB abolished the jalmohal status and leasing system of rivers in 1995, effectively leaving them both *de jure* and de facto open access (see Thompson *et al*, 2000).

2.3.3.3. Social Context & Issues

Two of the case studies are discussed with respect to the pre-existing social context that may explain the apparent level of local support and three case studies are discussed in relation to conflict that has resulted from the interventions.

The relative consensus in the context of SEMP at Chandal Beel and the support for local initiatives at Laksmi Proshad, is probably attributable to the relative social homogeneity at these sites. There are three forms of social sub-divisions that appear *less* significant at these sites than at the others: socio-economic stratification (discrepancies in interests related to wealth), related to this; livelihoods diversity (the number of competing activities relating to NRM) and; ethnic or religious diversity and conflict.

At Laksmi Proshad Beel, the “community” is not particularly stratified in socio-economic terms and the 40-50 households directly involved in the initiatives exhibit a limited range of NRM livelihood strategies (see Annex B-iii). The key players in the initiatives (farmers, part-time fishers and labourers) represent the majority of local

households and have a mutual (and individual) interest in action, rather than inaction or free-riding. In addition, Alam's (2001) discussion of the social history of the area indicates a traditional role of Hindu *jele* fishers which has only recently been threatened by alternative arrangements (in particular, illegal lease control by outsiders). At Laksmi Proshad, there are indications that the local initiatives of the majority Hindu community are permitted by a more powerful Muslim faction for their mutual benefit (this new group represents many of the landowners that benefit from the initiatives).

The social context may have relevance to future RMIs in the charlands context. Displaced or migrant communities are often considered to lack the cohesion and social capital required for collective decision-making and action but Project R8103 has found that the people of the Jamalpur chars have migrated collectively within distinct kinship or *gosthi* groups. It is thought that understanding these groups and their role in local power structures will be key in institutionalising sustainable local initiatives such as those planned via PAPD (Stuart Coupe, ITDG, pers. com.).

In the context of SEMP at Chanda Beel, the PD and additional observations by Mahbub Alam again suggest an important social role. The interests and roles of the local population appear to be rather less differentiated than at many of the other case study sites. Both the Hindu and Christian residents of the Chanda Beel area alternate between part-time fishing opportunities and agriculture related activities such as labouring and share-cropping. The residents can be considered homogenous, both in regard to the types of livelihoods activities they are involved in and to the low socio-economic condition of most local people (in particular, project target groups). Although there appeared to be general local support for SEMP and other BCAS-facilitated projects at Chanda, the sheer number of NGO activities in the area and overlapping project objectives and RMIs did confuse participants and non-participants.

In contrast the OLP, Jalmohal Project and CPP sites demonstrated conflicting interests between different stakeholders that almost certainly did *not* pre-date project interventions. With respect to the two fisheries projects, GO-facilitated activities and subsidised inputs have attracted outsiders and newcomers to the management of the waterbodies. In the case of the OLP in Hamidpur, a mastaan group is illegitimately dictating decision-making within a Hindu Lake Management Group[48]. Profits are siphoned away by this group but it is not clear that this is impacting the institution's viability or long-term sustainability (it appears that all parties, including DoF and the local NGOs, are locked into a complex relationship that is sub-optimal as a pro-poor activity but, ultimately, apparently quite stable).

At Barbila, the Jalmohal Project has attracted entrepreneurs from outside the area that now operate as influential members of the coordinating committee. It is unclear what role the National Fisherman's Cooperative (NFC) has in this process but the election of members is not transparent and there were numerous complaints by primary stakeholders regarding the conduct of the NFC. In both these DoF projects, subsidised activities (government-supported access to the resource through preferential leasing arrangements or fingerling supply etc,) have attracted newcomers, caused conflict and interfered with sustainability and pro-poor objectives of the project. A very similar scenario has occurred at many of the Open Water Fisheries Sites within the Fourth Fisheries Project (Mike Daplyn, Socio-economist, Fourth Fisheries Project, pers. com. and Aeron-Thomas (2001)).

[48] *Mastaan* networks appear to be particularly prevalent in Jessore district (Alam, pers. com.).

The CPP has profoundly changed the landscape and the pattern of livelihoods that are practised. A new hydrological regime has resulted in an increased emphasis on agricultural activity and diminished the fishing opportunities of professional and part-time fishers. The social issue that has developed since compartmentalisation centres on the differential impact, polarisation of interests and *de facto* representation in decision-making – some villages outside the embankments and some poorer groups within the compartmentalised area are negatively impacted while landowners commandeer sluice gate management decisions.

See Annex B-ii for a discussion of "The methodology in retrospect".

2.4. Pro-Poor Analysis of IFM Institutions

Monitoring and evaluation is now an integral part of project design, performing the dual function of internal performance evaluation for NGOs and GOs, and external reporting to supporting agencies and donors. As such, the lifespan of each of the IFM projects in the case studies incorporated some form of impact monitoring and documentation. The depth and focus of this monitoring varies according to project objectives. As the emphasis on participation increased, many NRM projects began combining community-identified indicators or proxies for positive outcomes, with the performance criteria of the donors. However, review of the grey literature in R7562 found that the emphasis within three large community-based NRM projects was still on quantifiable change within the target sector and target population[49].

In some cases, projects may pro-actively engage with vocal and locally-respected stakeholders specifically to achieve some form of diffusion of knowledge or practise within the community (the *"spread effect"*). However, methodologies to assess these horizontal relations and the knock-on positive and negative impacts of projects are not well developed and directed and systematic attempts to understand the impact of new project institutions and RMOs are lacking. The existence of a community managed project institution is normally represented as a positive indicator in its own right but *de facto* RMO activity (rather than proscribed "log-frame" functions) are rarely reported.

The application of process documentation within this research project acknowledges that institutional design and the purpose of project structures are likely to affect the degree of local support and project activity – or, in other words, function and design will go some way to dictate the sustainability of project activities and structures (institutions). Following this, a pro-poor assessment is required to check that where projects or their "institutions" *are* in fact active, they are active in delivering suitable and effective change on behalf of the poor. The piloting of the process documentation methodology in this project indicated that where project structures and RMOs have outlived projects they may, in fact, have been modified by local interests to perform new functions (see Annex B-iii; Box 1). It is obviously important to gauge whether these new functions and relationships can benefit the poor.

Because the aim of this input was to independently assess the extent of pro-poor outcomes, both during the life-span of the projects and since their completion, the emphasis was on context[50]. Site-specific characters of the case studies were

[49] Specifically, OLPII, CBFM and Promoting Grassroots Participation through Advocacy in Improved Management of Environment and Natural Resources in Chanda Beel (operated by BCAS).

[50] This approach acknowledged that the quality of IFM institutions may have a strong site-specific component based on a wide range of factors such as the biophysical and socio-political character of the

acknowledged and the real experiences and attitudes of local people to project outcomes were described. A major difference between this approach and that of project-led monitoring and evaluation is that neither the stakeholder groups nor the range of impacts investigated were to be pre-defined. In addition, consultation occurred as a one-off event where the quality of feedback was dependent on recall and the depth of knowledge of the informants. There was no opportunity to track change over time.

The methodology essentially had three stages:

1) ascertaining the range of both positive and negative outcomes as identified by a random sample of informants in group discussion
2) identifying the poorest livelihoods groups at the site and
3) uncovering the impact of these positive and negative outcomes on this poor group and eliciting discussion on the differential impact of these outcomes (why certain outcomes are significant for the poor and not others etc.).

Although, this approach might reveal some issues relating to RMO processes (in fact, it did - see below) the main purpose was to reveal the effects of the IFM interventions on the poor. In this respect, much of the feedback related to project activity or purpose and the way in which resources, and access to them, has been transformed. As such, respondent feedback represented a commentary on the wider influence of the interventions which went beyond an analysis of the formal institutional arrangements adopted.

To ensure sufficient detail, a sub-sample of the eight IFM case studies were selected. SEMP, the Jalmohal Project and CPP were selected to represent the environment, fisheries, and water sectors and to represent various stages of the project cycle (respectively, project completion, implementation and post-project phases). In addition, it was considered important to represent one of the local IFM initiatives that operate outside the project/programme context and independent of GO/NGO support. The local initiative at Laksmi Prasad, Charan, was selected for review[51].

Overall findings, together with and positive and negative impacts on livelihoods assets are presented in Table 8.

2.4.1. Findings

The case studies were selected to represent the range of NGO, GO and autonomously-facilitated interventions for IFM in Bangladesh. There are several interrelated issues that seem to influence the impact on local stakeholders, including the poor, here. In particular, the sectoral focus tends to dictate the *type* of intervention which, in turn, relates to the skills and the remit of the facilitator.

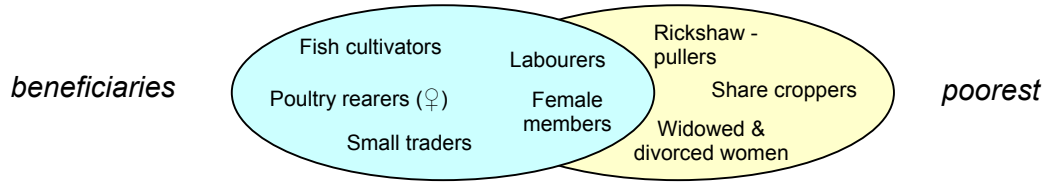
SEMP at Chanda Beel is an example of a NGO-facilitated project with a holistic “environment” or wetlands management objective. Considerable time and resources are invested in the participatory aspect of the project through group-formation and the overall facilitation of project activities. A suite of project activities are undertaken by overlapping sets of participant groups (a range of activities that are perhaps more fixed than the grey literature would suggest), including training and credit for AIGAs,

site, in addition to the skill and motivation of certain key facilitators. As such, this case study approach required care in selecting representative sites (and avoiding unusual examples) and considered thought in interpretation of the feedback.

[51] See Annex B-iii for methodological guidelines in full.

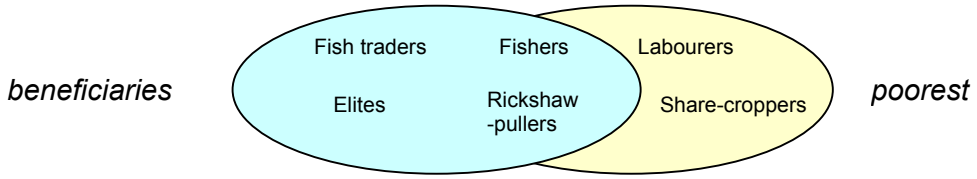
environmental education, the establishment of tree nurseries, and pond stocking. A relatively broad range of stakeholders are direct beneficiaries but it was unclear how pro-actively the poorest were engaged in activities (Figure 2).

Figure 2 SEMP beneficiaries and the "poor" (defined by group discussion)



The Jalmohal Project drew on DoF's expertise and experience with stocking. Each intervention was to be delimited by the jalmohal and participation was to be dictated by DoF and the NFA in their selection process for project participants. In this case, the assumption was that stocking in distinct and controlled waterbodies will help to meet the DoF objective of increased fisheries production. Because DoF expertise lies elsewhere, institutional issues relating to the distribution of benefits and social sustainability of the project are rather overlooked (Figure 3).

Figure 3 Jalmohal Project beneficiaries and the "poor" (defined by group)



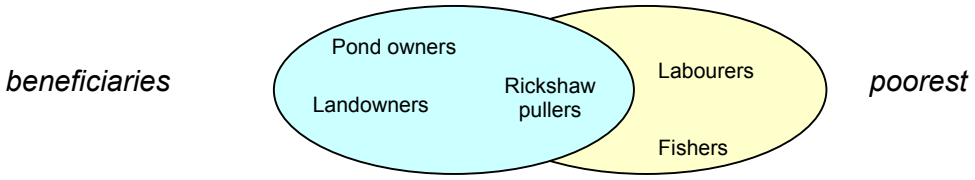
Activity within the CPP related directly to the large-scale water management (or rather, water control) character and emphasis of BWDB and to the technical and engineering expertise of its personnel. In this regard, it represented an intervention intended to fundamentally alter the landscape. The assumption was that residents would benefit from increased agricultural security and reduced risk of damage to crops and structures.

In contrast, the local initiatives (LIs) conducted at Laksmi Proshad Beel by the residents of Charan village are verbal and informal agreements between different stakeholders to conduct group action for the mutual benefit of local farming and fishing interests. There may be a link here between these LIs and social capital (social capital may be required to ensure the completion of the "social contract" and/or, cooperation by participants in the LIs may actually function to consolidate social capital in the village – Mahbub Alam, pers. com.) but the interventions, themselves, relate to distinct periods, in this case the "draw-down".

In summarising the feedback, it is important to acknowledge the differential impacts of the project interventions. Combining the findings of this review with information gathered through process documentation it is apparent that richer stakeholders were never disadvantaged by the interventions for two principal reasons. Firstly, in the case of SEMP and especially CPP, the interventions were directly or indirectly linked to agricultural production. Land-owning elites, farmers and share-croppers were first

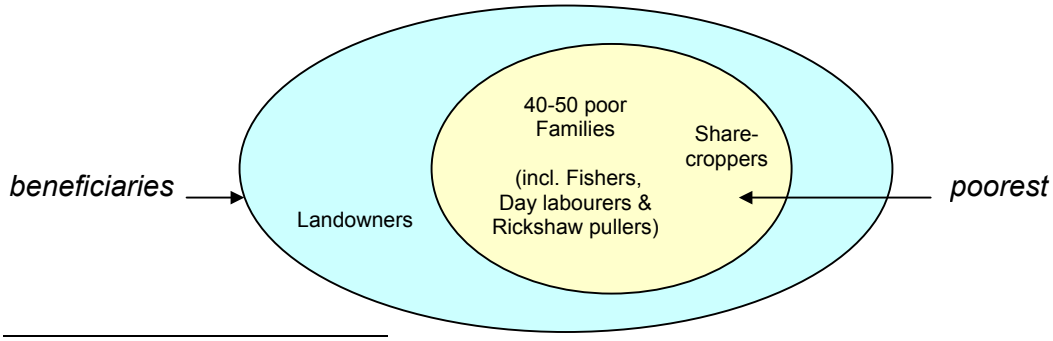
to benefit from changes in the production cycle, increased crop security, availability of amman paddy etc.[52] The poor sometimes cited increased labour or trading opportunities but the poorest respondents (particularly *jele* fishers at Tangail) were often negatively impacted by these interventions. Secondly, it is widely acknowledged that the benefits from project interventions are generally more easily appropriated by influential and wealthier sections of the local population. In this situation the advantage does not relate to control over the targeted resources, but to social capital or influence relating to locally legitimate and informal institutions (the *samaj* etc.) and/or through the threat of violence or more subtle persuasion (*mastaan*, ethnic group, party politics etc.)[53]. The visible influence of these local power structures is particularly marked where project interventions provide sudden inputs and benefits to the vicinity. In the case of the Jalmohal Project, entrance to the fishery and the stocking scheme is subsidised by DoF resulting in additional (non-fisher) entrants and conflict. At Tangail, the CPP has radically altered the hydrology of the area and introduced new issues of conflict between low-lying and high land-owners. The poor are essentially spectators to the major negotiations in water management (Figure 4).

Figure 4 CPP beneficiaries and the "poor" (defined by group discussion)



The LIs provide an interesting contrast. In this case, the interests of the various stakeholders (drainage for landowners, labour and fish-trapping by fishers and the poor) are so interrelated that they manifest themselves as concerted action (Figure 5). In contrast with the CPP intervention at Tangail, these LIs represent a sort of "control" for this institutional review. By modifying the drainage regime and the landscape, CPP seems to have polarised differences in the interests of farming and fishing stakeholders. It is possible that the pre-intervention scenario at Laksmi Proshad Beel Charan village might provide an indication of the type of cooperation and mutual gains available at other sites. It is likely, for instance, that the interests of landowners and landless fishers would have coincided rather more than they do now, where jele fishers are effectively being excluded from privatised fisheries.

Figure 5 Local initiative beneficiaries and the "poor" (defined by group



[52] This review did uncover some related agriculture-related benefits for the poor, however. Increased crop diversity at Tangail has translated into greater labouring opportunity for some and new entrants into share-cropping enterprises.

[53] In addition, the poor cannot afford to be entrepreneurial (to invest and to take risks) or to afford the opportunity costs of allocating time to new decision-making meetings or institutions. Although, SEMP is quite proactive in targeting the poor there were indications here, and from the process documentation, that wealthier individuals were taking a lead in VRMC decision-making.

Finally, the institutional character and performance of these case studies is discussed elsewhere (Section II.3.1) but the impacts on the poor appear to correlate less with the design and actual performance of the institutions than the form and objective of the intervention, itself (see Table 9). This is partly a function of the failure of Jalmohal and CPP project institutions to sufficiently represent the interests of the poor and, in the latter case, to remain democratic and outlive projects. However, it may be misleading to attempt to untangle the impact of interventions (project activities and procedure) and the impact of new, project institutions. As stated above, there is an obvious relationship between project focus, the facilitator and the purpose and approach to institution-building.

Case Study (site & sector)	Biophysical character	Objective // target group	Current 1° beneficiaries	+ve impact on poor*	-ve impact on poor*	Summary
SEMP (1999-04/5) Chanda Beel Environment	11,000 ha open beel including 17 jalmohals and 18 khals	Sustainable management of the beel via awareness raising, community organisation and new IGAs // primary stakeholders (users)	New pond fish cultivators Women in project groups Some rice farmers/share-croppers (via Aman rice)	N ↑ **wild plants (medicinal)** ↑ fish population (snails?) F poultry/duck husbandry by some women ↑ fish trade - rickshaw pullers pond excavation, planting labour	F **seasonally restrictive access rules** Credit mismanagement (induced hardship) Opportunity cost of group meetings	Focus on sustainable practice impacts the poorest (fry & snail gatherers etc.). Some project participants benefit but not always the poorest. Can SEMP activities last long enough to provide community-wide improvements?
Jalmohal Project (1999-) Barbila Fisheries	130 ha jalmohal with land and excavated pond areas	↑ fish production via training/loans for stocking & fish sanctuaries // 268 registered "genuine fishers"	268 project members 17-member committee (with non-fisher influence)	N ↑ fish population (illicit catches by poor non-participants) P New, project-sponsored, road	F seasonally restrictive harvesting rules for poor members (monsoon fishing ban) Fishing ban for poor non-members S Increased conflict & threat of violence from new mastaan	Demarcating a semi-private, enhanced (subsidised) fishery has attracted elites & mastaan. The 268 members may benefit (access to fishery & loans) but leadership is not by poor
CPP (1990-2000) Tangail Water	Mosaic of interconnected land units (compartments & sub-compartments)	Flood management to protect agricultural land, improve marginal land // stakeholders directly dependent on agriculture	Landowners in low-lying areas Pond owners Rickshaw pullers	P road communications have improved (embankments) F ↑ employment for day labourers during construction and since diversification of agriculture Some evidence of labourers taking on share-cropping activities	N no longer an open access fishery The river is no longer navigable to Tangail - - - - - - - - - - - - - Poor outside embankment P water-logging of houses N **damage to crops (water-logging & plant disease)** H potential sanitation problems	Compartmentalisation had a large impact on local activity (diversification/intensification) Some poor have benefited from increased labour demand. Poorest (jele fishers) lost access to fisheries (river shrinking & new ponds privately owned). People outside the embankment suffer from water-logging
Local Initiatives Laksmi Prasad Beel Agriculture & fisheries	A seasonal beel. The smallest of three inter-linked beels at Charan.	Extend fishing & farm production through collective water management // residents of Charan village (particularly 40-50 households).	Landowners & farmers Poor, local residents (40-50 households) incl. labourers, rickshaw pullers, & fishers)	F increased employment for labourers (maintenance etc.) Domestic consumption & fish sales N water retention extends land available for rice share-cropping S may consolidate social capital between local residents	Apparently no disadvantaged stakeholders	The evolution of isolated initiatives such as these may relate to social & biophysical setting (social cohesion & lack of threats for alternative uses and new entrants). Not altruistic action, however. All would lose from inaction.

Table 8 **Pro-poor outcomes of the IFM case studies.** * The "poor" were defined through local focus group discussion.

(Key: N =Natural capital, F = Financial capital, P = Physical capital, S = Social capital, H = Human capital)

Table 9 **Institutional and intervention impacts on the poor - summary table.** (Additional information was gleaned from process documentation (Annexes B-ii) and primary stakeholder criteria for successful management/institutions (Annex B-v).

Case Study	Intervention Type	Institutional Structure	Intervention / Institutional impact on poor
SEMP	Large NGO-facilitated, CBM project	Village Resource Management Committees to run AIGAs and awareness activities etc.	*Intervention:* Some AIGAs, community-based sanctions & controls limiting access to the poorest *Institutions:* Representation by richer individuals (opportunity costs?) & mismanagement of credit
Jalmohal Project	DoF stocking project at distinct jalmohals (support with lease & inputs)	Jalmohal Management Committee to manage membership and stocking activity	*Intervention:* Increased production but reduced access to many poor fishers & violent conflict with newcomers. *Institutions:* Legitimises exclusion of poor and consolidates role of elite newcomers.
CPP	Large, structural water project implemented by BWDB	Remnant Chawk Committees to organise O&M, timing of operation	*Intervention:* Increased labouring opportunities but reduced fishing area. Inundation of poor homesteads outside compartments. *Institutions:* Relatively little impact – decisions made annually by landowners (highland vs lowland farmers interests).
LIs at Charan Village	Collective drainage management (cuts & repairs), farmer / fisher cooperation	Informal allegiances & annual verbal agreements between stakeholders	*Intervention / Institutions:* Extended farming (labour) & fishing season & increased production.

Section 3

3. Implementation of IFM initiatives in Bangladesh

3.1. Local Stakeholder Criteria for Successful IFM

This input was intended to check IFM performance from a local (primary stakeholder) perspective. Feedback was used to form "community-identified" criteria for process documentation. There is a likely relationship between the local perceived legitimacy of IFM institutions and their performance and in this regard the review set out to consult the range of local stakeholders with respect to *"successful management*" and *"suitable institutions".*

As the first activity conducted within this project, the selected case studies varied slightly from the nine reviewed in detail elsewhere[54].

Rapid stakeholder analysis with key informants helped identify stakeholder sub-groups and focus group discussions were held to identify and then rank "indicators" of successful IFM and institutions[55].

3.1.1. Feedback

Most of the responses related to broader water management issues rather issues relating to fisheries, paddy or discrete technical considerations with general water management criteria represented 49% of the responses (see Table 10). In particular, the conservation of dry season water and better use of surface water for irrigation were frequently prioritised by all stakeholders. In terms of institutional requirements, feedback could be split into five basic categories representing leadership, decision-making, constitution and status, regular meeting and delivery and representation of the poor (see Table 11).

It is possible to draw some general themes from the feedback. In particular, several types of intervention appear to have polarised the management and institutional requirements of the various stakeholder groups. Whereas non-project sites practising autonomous local initiatives revealed a general overlap of concerns and requirements, project interventions that have altered livelihoods activities (and inadvertently local concerns / issues) seem to have established two or more distinct interest groups. In other words, project interventions have created differences in management/institutional requirements. This seems to evolve for two reasons. Firstly, the project interventions always attempt to build RMIs and these quickly take on a local and political significance. There are perceived and real differences between the groups represented by these institutions and many of the responses from the focus group discussions did, in fact, relate to perceived problems at the RMI level (dishonesty, lack of attention poor, lacking transparency etc.). Rather than treating the question of "good institutional performance" in isolation, respondents framed the discussion in relation to existing project institutions and their current experiences. In the case of institutional requirements, then, the issues identified tended to relate to the sectoral focus of the project.

[54] The case studies were selected to represent the range of NGO, GO and local initiatives across a range of waterbody types. They included seasonal and open beel sites within CBFM (Goakhola Beel and Ashurar Beel, respectively), MACH, Dampara Water Management Project and local initiatives at Chaptir Haor and Charan Beel.
[55] Notions of "good" organisations and institutions" were discussed with each group and translations were recorded.

Secondly, differences in opinion seem to relate to project activities and issues related to project outcomes. This might be expected to be most extreme in the case of large engineering interventions. The CPP was the only strictly water-specific project visited in this review[56]. In this case, the landscape and the pattern of livelihoods have been profoundly altered by compartmentalisation. Differences in institutional and management requirements by fisher and farmers stakeholders related directly to the changes and impacts resulting from the project. Within the CPP area, the main issues concerning fishers were access to fishing sites and representation within the Chawk Committees which are predominantly controlled by landowners.

With respect to themes in management requirements, these again took on some project-specific issues. At Chanda Beel, for instance the VRMC and female stakeholders expressed the need to properly implement AIGAs and other project-related activities. Where management committee stakeholders were consulted on resource management requirements, their feedback tended to emphasise a need to consolidate the work of their institutions, either through greater local, community support or assistance from government agencies (see Box 3.). Adequate funding and support for RMIs was frequently quoted, in fact.

In summary, then, any divergence between stakeholder objectives and concerns appear to be widened by project interventions. This may occur both because new institutions are seen to represent distinct interests at the expense of others, and because the physical interventions, themselves, reduce the opportunity for mutual gains and consensus.

Box 3 Resource and Institutional success criteria – key themes.

[56] Discussion at the Dampara site focussed around the BMC which was partly facilitated by the CBFM project.

Table 10 Integrated floodplain management - primary stakeholder-identified success criteria.

	Floodplain -Charan	LIs – Chaptir Haor	LIs - Charan	MACH	Dampara WMP	Goakhola Beel (CBFM seasonal)	Ashurar Beel (CBFM open)	SEMP	CPP	*f*	∑
Water Management											
Better surface water use	√	√		√	√	√	√			6	
↑ dry season fishing area	√	√		√	√	√	√			6	
Timely planning	√	√		√		√	√			5	
↓ flood crop damage		√		√			√			3	
↑ irrigation water	√	√		√	√	√	√	√		7	
Paddy dried properly		√								1	
Water management by RMO	√	√			√	√				4	
Timely harvest of paddy		√					√			2	
Excavation between beels etc.			√				√	√	√	4	
Timely drainage of water		√		√		√	√			4	
No bund in the river	√	√								2	**44**
Environment/biodiversity											
Lost/rare species visible		√		√		√	√			4	
More grasses and trees		√					√			2	
↑ fish & biodiversity	√	√		√	√	√	√	√	√	8	
Clean water-no pollution	√			√			√			3	
Beels used as sanctuary		√					√	√		3	
Use of organic fertilizer									√	1	
Limited use of pesticide	√			√			√			3	
↑ local variety of paddy		√			√		√			3	
Control of some gears								√		1	**28**
Livelihoods / access											
Plan for access & sustainability	√			√	√	√	√	√	√	7	
↓ labour migration		√								1	
↑ resource user livelihoods				√		√				2	
Credit for AIGAs		√						√	√	3	
↑ livestock		√					√			2	
Local decisions / GO support			√					√	√	3	**18**

Table 11 **Resource management institutions – primary stakeholder-identified success criteria**

	Floodplain -Charan	LIs – Chaptir Haor	LIs - Charan	MACH	Dampara WMP	Goakhola Beel (CBFM seasonal)	Ashurar Beel (CBFM open)	SEMP	CPP	*f*	∑
Respected leadership											
Honest & just	√	√	√	√	√	√	√	√		8	
Interested, enthusiastic, educated & respected	√	√		√	√	√	√		√	7	
Unbiased, non-political	√	√		√	√	√	√	√		7	**22**
Decisions / transparency											
Members united			√	√		√	√	√	√	6	
Resolutions in place				√		√	√			3	
Adaptable decisions, rules, agreements & leadership	√					√	√	√		4	
Adaptable to risk – environment-fees, risks	√			√	√	√	√			5	
Local rules for IFM	√	√		√	√	√	√			6	
Committee transparent and accountable to all		√		√	√	√	√			5	**29**
Constitution / status											
Committee registered				√		√	√			3	
Rules flexible	√						√	√		3	
Fund available for RMO		√		√	√	√	√			5	
Structured committee (re-selection members possible)		√		√		√	√			4	
Specific responsibilities for each committee member		√		√			√			3	
Committee leased jalmohals				√	√					2	
Set criteria for membership						√	√			2	
Agreed constitution of RMO		√		√	√	√	√			5	
Local/GO/NGO coordination				√			√			2	
Local support from GO/NGO		√				√	√			3	**32**
Regular meeting/decision											
Regular/timely meeting	√	√		√	√	√	√	√	√	8	
A fixed place for meeting		√				√	√			3	
Early decisions (plan ahead)		√	√				√			3	**14**
Represents the poor											
Traditional fishers in the RMO					√		√			2	
Community-wide / pro-poor	√	√		√	√	√	√	√	√	8	
Justice / fairness			√						√	2	
Capacity building for members							√			1	**13**

3.2. Up-Scaling IFM initiatives – evaluating constraints and opportunities

There is a strong demand from both donors and GoB to increase the impact of NRM development initiatives in Bangladesh but despite several decades of project-based interventions, there are few examples of widely dispersed successes. Where development activities have resulted in long-term beneficial change they have tended to occur as isolated events, with limited geographic spread and influence[57]. Nationally, the GoB is under pressure to halt environmental degradation, increase food security and meet its poverty elimination targets while donors and other implementing agencies must now justify existing policies and approaches in terms of value and coverage. In the case of DFID's NRSP, for instance, the onus is now on promoting the uptake of research outputs and new knowledge and transferring these to new programmes as they come on line. Given the modest achievements and limits to up-scaling, this input attempted to identify prospects and opportunities for the future.

3.2.1. Prospects for Up-Scaling

Hancock and Poate (2002) have identified several basic approaches to up-scaling that cover quantitative, qualitative and efficiency characteristics of development initiatives. Taking their working definition of up-scaling as "*to efficiently increase the impact of development initiatives from small to large scale coverage*" it is obvious that this will include geographic area, numbers reached, sustainability, depth of impact and issues of cost (Table 12).

Table 12 **The potential forms of up-scaling. (Source: Hancock, J and Poate, D. (2002) *Scaling-up: Issues & Options for the World Bank Rural Development Strategy.* FAO & ITAD.)**

Type of Up-Scaling	Approach
Scaling-out *Horizontal scaling-up*	Dissemination Direct spread Replication Expansion of model
Scaling-out	Replication between countries
Spontaneous scaling-up	Spread
Scaling-up *Vertical scaling-up*	Institutionalising Mainstreaming Policy change – directly Policy change – through advocacy
Scaling-down	Decentralising Devolving
In summary: *Scaling-up*	***Increase from small to large impact***

Approaches to up-scaling have tended to focus on the quantitative, geographic or horizontal aspects of development impacts, probably because changes in coverage over time and space are easier to monitor and record. However, up-scaling has a second, more qualitative aspect that relates to vertical and institutional impact[58]. Gündel *et al*. (2001) stress that these two threads are synergistically related (institutional spread impacting coverage and vice versa) but it is possible to untangle several basic strategies for up-scaling. Hancock and Poate (ibid.) identify four strategy types;

- *Replication / expansion -*

[57] At the local scale, success may be attributable to the quality of processes such as participation and RMO formation and to favourable social or bio-physical starting conditions.
[58] The institutional impact of development projects could also be sub-divided into formal (organisational) influence and informal institutional change such as new forms of cooperation and relationships or approaches to local livelihood activities. These latter relate directly to "process" and the evolution of new ways of "getting things done".

replication of model projects or organisational growth and learning

- *Devolving and decentralisation -*
  supporting partners or developing integration

- *Building partners' capacity -*
  NGO-government partnerships, capacity building etc.

- *Influencing policy change -*
  advocacy and disseminating concepts and models

Up-scaling strategies in the past have tended to adopt the replication and expansion model but some obvious limitations to this approach have emerged over time. In particular, the growing emphasis on participation in development has identified a need to recognise locale-specific social, political and bio-physical characteristics and to avoid a "blue-print" approach to interventions. The expansion and replication model assumes the universal suitability of new, set approaches.

More recently, attention has turned to the latter three models that target change or modifications in current organisational or political structures and to policy itself. This relates directly to the new donor interest in providing a suitable framework of supportive policies, institutions and processes.

Farrington and Boyd (1997) argue for an integrated approach to project or programme design and management that essentially applies these models in parallel. By incorporating capacity building and links with policy formers in early stages, the long-term ability of the relevant institutions to adapt to context-specific needs and change should be strengthened. Farrington and Boyd suggest that the potential for up-scaling relates strongly to the design phase of projects and programmes. Experience from the Indo-German Watershed Development Programme in Maharashtra, India, suggested five key precursors to up-scaling:

- *Careful site and partner selection –*
  In this case, the sites represented realistic opportunities for improved water management. Existing cropping regimes were suited to restricted water use and the sites were neatly bounded as distinct hydrological units. NGO partners were selected on the basis of their local history and track record of commitment to long-term capacity building with communities.

- *Design of local level participation leading to implementation –*
  Early phases of this project stressed input from local farmers in the selection of suitable land and this was disseminated in local language to village groups and NGOs for discussion. A one-year Capacity Building phase was built in whereby plots were operated by local farmers in parallel with project staff as a means to transfer new skills and practice gradually.

- *Early mobilisation of political and administrative support –*
  The project engaged with regional government early on and, by building on this rapport, managed to gain national policy commitment to Joint Forest Management.

- *Design of a screening mechanism for individual proposals –*
  A nationally-respected organisation was included in the project vetting team to ensure continuation when foreign funding finished.

- *Design for future, post-project, linkage with technical expertise –*
  The project pre-empted the increased demand for agricultural extension services and advice that would result from increased yields. Project design incorporated a role for a national body

already expert in the technical management of rehabilitation projects and with the required knowledge of local and national service providers.

Farrington and Boyd concluded by stressing the need to move beyond what they call open-ended "process" approaches which tend to evolve in isolation from experiences elsewhere, making them expensive and unworkable. The emphasis, they argue, should be on "structured" attempts at multi-agency partnerships that build in experience and expertise from previous work and that pre-define the desired roles, objectives and outputs of all those involved.

This focus on process, over prescriptive, models for up-scaling would have evolved in parallel with the participatory approach to rural development that became established in the 1980s. As Gow and Morss (1988) state:

> *"This particular* [process] *model can provide guidelines for both design and implementation. Among its more important characteristics are the following:*
>
> - *An emphasis on an extended, collaborative design process that builds a coalition of actors committed to the project.*
> - *A concern for participatory decision-making and avoidance of a rigid management structure.*
> - *A reward system consistent with a learning orientation and an evaluation focus that goes beyond resource disbursements and production targets to emphasise the accumulation of local capacity.*
> - *A redesign orientation, such as periodic revision of project organisation, project objectives, and job descriptions of project personnel."*

Given the subsequent two decades of experience with participatory development and community-based management approaches, recent debate has moved away from project and programme design to the task of institutionalising good practice and successes on a national scale. Binswanger and Aiyar (2003) present three key stages to the up-scaling of community-driven development (CDD). The *initiation stage* centres on building on previous experience with participation or establishing small-scale examples where such initiatives have been lacking. This stage would also normally include developing a dialogue on decentralisation. The *scaling up stage* involves the piloting of suitable tools (or management practices) in particular districts with a view to developing operational and training manuals that can be adapted for rollout across all districts. Finally, a *consolidation stage* may involve the improvement of CDD design and participation at the local scale, capacity building of the relevant supporting agencies and the expansion of piloted approaches to the national level.

The following table presents a synthesis of the recurring themes in the up-scaling literature (Table 13).

Table 13 **Precursors and strategies for up-scaling NRM development initiatives (compiled from Binswanger & Aiyar (2003), Hancock & Poate (2002), Farrington & Boyd (1997) and Gow & Morss (1988).**

Scale	Up-scaling precursor / strategy	Examples
National	Strong political commitment	Receptive GOs, NGOs and dynamic civil society
	Policy change	Sector reform, decentralisation & subsidiarity
	Capacity building	Institutionalising new linkages, use of new skills & approaches, utilising past links & reinforcing existing GOs/NGOs
Meso-level	Suitable & directed guidance	Detailed but adaptable manuals and guidelines for implementing agencies
	Replication	Attempting expansion / repetition of "islands of success" or "boutiques"
	Ensuring efficiency	Reducing costs through subsidiarity & localised O&M – efficient logistics
	Good knowledge-sharing	Ensuring two-way communication flow & local level awareness (PME etc.)
Local level	Appropriate incentives	Stressing participation & building in financial incentives *after* good local results
	Building in sustainability	Working on fiscal, asset, environmental and social sustainability – internalising responsibility
	Improving accountability	Raising local awareness of existing institutions and secondary stakeholders (e.g. PAPD)
	Ensuring adaptive processes	Ensuring process monitoring is built in & allows refinements

3.2.2. Existing Solutions to Up-Scaling for IFM in Bangladesh

The objective of this input was to compile a generic list of those characters most often perceived as providing obstacles *and* opportunities for up-scaling and then to analyse the performance of these projects in relation to these stated criteria through interview with IFM project managers. The criteria were then analysed with respect to project-specific characters (sector, biophysical context, GO or NGO focus and project objective) and with the generic up-scaling criteria identified from the literature.

The projects chosen for review represented both donor and GoB-managed projects within the fisheries and water sectors – the Community-Based Fisheries Management Project (CBFM-2), DoF's Jalmohal Project, Integrated Planning for Sustainable Water Management (IPSWM) with BWDB at Polder 22 and the Small Scale Water Resource Development Project (SSWRDP) of LGED (see Annex B-vi).

Successful up-scaling will have national, meso-level and local components and discussion with project managers was intended to reveal key project-level issues that might span these three levels. Additional detailed insights were provided by Paul Thompson (Project Manager, CBFM-2).

3.2.3. Feedback

3.2.3.1. CBFM-2

In moving from discrete waterbody sites to waterbody clusters, much of CBFM-2 relates to issues if up-scaling, particularly institutional linkage and knowledge sharing. The manager identified a range of critical issues - policy and lease value assessment, government and NGO commitment, NGO flexibility (the capacity to change strategy on the basis of local needs) and institutional sustainability. The manager believed that NGO and project strategy was critical from the outset and that care was required in communicating the purpose of CBFM to a broad set of local stakeholders. The other main issue of implementation, the transfer of waterbodies from the MoL, has already been met for the proposed project sites. Presumably, if CBFM was to be up-scaled through replication, this transfer process would have to be expanded and institutionalised, itself.

The performance of project partners and the various management models was considered variable and these NGOs had other local activities and interests that clouded the CBFM message. The post-project period also appears to be critical and suitable exit strategies and agreements need to be identified by implementing agencies. In the case of waterbody clusters, it is hoped the cluster committee agreements will be applicable for all the waterbodies within the region.

In conclusion, up-scaling CBFM will require political will and commitment and there must be an in-built flexibility (largely on behalf of the implementing NGOs) to modify project structures to local contexts.

3.2.3.2. The Jalmohal Project

The design and activities of the Jalmohal project do not lend themselves well to up-scaling. Sustainable arrangements would seem to rely on limiting access to the initiative rather than encouraging participation and this was supported by feedback from the discussion. The directors identified the issue of distribution of benefits as key for up-scaling. Presumably, it was thought that project activity could not be sustained or spread if participants do not perceive any gains. Currently the benefits are probably too small to support continued project activity (a compulsory Tk. 60 payment per month off-set by approximately Tk. 10-15 per day) and the directors considered this issue critical.

The Jatiyo Matsajibi Samity (JMS)[59] appears to dominate local management. This will have to be addressed if improved fisheries management (on behalf of poor fishers) is to be promoted and up-scaled. An appropriate input from a NGO may be helpful here, to direct and organise the project with (and on behalf of) fishers and to attempt to direct benefits to genuine user groups[60].

Currently, up-scaling the activities or "institutions" of the jalmohal project may benefit the elite more than fishers, themselves, however. The current problems documented at Barbilla Jalmohal (see Appendix iii: section 2), and possibly occurring throughout the project, probably relate to DoF's limited experience or concern with local institutional issues. In hindsight, for instance, it was insufficient to incorporate the JMS. Rather, if the JMS is to be the focus of the project at all, the role of the organisation should have been modified and controlled to ensure delivery of community-wide benefits and project support.

In retrospect, up-scaling through replication may be possible but the current model of activity appears to not to be pro-poor or institutionally / financially sustainable.

3.2.3.3. SSWRDP

The key institutional constraints to up-scaling appeared to be the limited capacity of local GOs in properly establishing sustainable local groups and their inability to maintain linkage into the future. The issues of funding, skills and commitment are interrelated and the project managers imply that these are the major bottle-necks to improving coverage and impact.

Another key issue identified was the variability of NGO performance and group facilitation (an issue also central to CBFM). The mangers expressed a need to understand the most suitable institutional arrangements (suggesting that these have not yet been identified) and also a need to work with existing local institutions such as WMAs.

3.2.3.4. IPSWMP

The discussion revealed that it was considered crucial that benefits from the BWDB infrastructure and interventions should be widely distributed if future project activity was to be effective in the polder. In particular, it was hoped that new inlet and outlet pipes would increase access to freshwater over the area.

Institution-building should ensure input from the whole range of beneficiary groups and stakeholders because most of the past conflicts have resulted from disparities in access. To avoid past mistakes, NGO selection is critical and future partners must have sufficient water management experience.

3.2.4. Summary

Much of the feedback related to project management issues and constraints to project activity. In this regard the comments focused on constraints rather than opportunities and were concentrated on local rather than national issues (the role of local NGOs, elites, knowledge of GO agencies etc.). Because feedback was project-oriented (largely a function of the interview approach) there was a tendency for project managers to stress "horizontal scaling-up" i.e. issues relating to replication or expansion of existing models. However, the type of responses did relate to the type and scale of the project in question - the CBFM leader expressed a need for improved political and national level support, while the Jalmohal Project directors were more concerned with local management issues, for instance.

[59] Also known as the National Fishermen's Association.
[60] This is impossible within the Jalmohal Project. DoF neither has the finances nor political will to commission external support for this project.

The range of identified opportunities and constraints to up-scaling from the CBFM project leader spanned national to local-level issues (see Table 14). The experimental character of CBFM (the range of NGO partners included and the range of local contexts engaged) partly accounts for this spread of key factors. Significantly, the feedback also suggests that there are multi-level opportunities and constraints in attempting co-management but that the key areas seem to be national and local, rather than meso-level[61]. In particular government support (legislative, policy and bureaucratic cooperation) and the local institutional environment (NGO ability, LGO inclusion, consensus and community support) were identified as key requirements.

The meso-level opportunities for up-scaling identified from the literature stress the coordination and training of sector-specific service providers in order to increase efficiency in extension or the delivery of new practise and forms of technology. Few meso-level constraints and opportunities were identified by the project managers and this may relate both to the design of the projects in question (for instance, nationally-coordinated co-management initiatives that work directly with national NGOs, but at local level), and the perceived lack of capacity of District-level GOs to delivery change locally. Where meso-level opportunities were identified, they tended to relate to knowledge sharing between NGOs and projects rather than to a new role for GOs.

The emphasis on project-specific problems and issues was also evident in the feedback from the Jalmohal Project directors. As an independent DoF initiative, the Jalmohal Project provides an interesting contrast to the other case studies. The project neither has the resources nor the will to interact with NGOs and several of the manager's observation related more to scaling-down processes to ensure financial returns for limited numbers of participants. As with the Oxbow Lake Project and its strict limits to membership, the production emphasis of the Jalmohal Project seemed to require a reduction in coverage at each site . The directors recognised that there is an equity issue in terms of the distribution of the benefits and the apparent control by committee leaders. Participation and equity were acknowledged as key for local sustainability. The remit of the SSWRD project was also reflected in the feedback for the managers. In this case, the emphasis is on linkage with LGOs and existing Water Management Organisations to ensure collaborative but small technical interventions. Feedback stressed those national and local level GO constraints to success, particularly resources, manpower and skills. The perceived requirement for inter-agency linkage and communication, long-term planning and adaptability at the local level were emphasised and, in this respect, resembled CBFM up-scaling requirements.

[61] "Meso-level" is used here to represent regional structures and agencies. The "political space" at the meso-level is often identified as a key fulcrum for up-scaling responsive and participatory forms of NRM. The structure of government and development initiatives in Bangladesh is such that regional (or District) level GOs are less directly involved in project activity than more local structures such as the Union Parishad or Upazilla.

Table 14 **Project manager feedback in relation to precursors and strategies for up-scaling NRM from the literature.**

Scale	Up-scaling precursor / strategy	Case Study Responses (Project Manager feedback)
National	Strong political commitment	**CBFM** - Greater GO, NGO support & links
	Policy change	**CBFM** – change to key policy (leasing).
	Capacity building	**SSWRDP** – improved GO (BWDB) focus & improved skills via training.
Meso-level	Suitable/directed guidance	-
	Replication	**Jalmohal Project** – expanding no. of sites through negotiated lease arrangements.
	Ensuring efficiency	-
	Good knowledge-sharing	**CBFM** – current problems sharing records. **SSWRDP** – knowledge-sharing with related projects.
Local level	Appropriate incentives	**CBFM** – a need to spread benefits, locally. **Jalmohal Project** – a need to ensure financial gains (to "genuine fishers").
	Building in sustainability	**CBFM** – ensuring cost-effectiveness for the project & for local arrangements (CBFM leasing versus alternative local uses etc.). **Jalmohal Project** – improving distribution of benefits to help social sustainability . **SSWRDP** – working with existing WMOs & building links to other LGOs & RMIs. **IPSWMP** – widen distribution of benefits.
	Improving accountability	**CBFM** – incorporating LGO roles & responsibilities.
	Ensuring adaptive processes	**CBFM** – flexibility in models & NGO activity **SSWRDP** – a move from rigid templates, towards flexibility of NGO partners.

As a geographically focussed intervention, feedback from the IPSWMP at Polder 22 focussed on sustainable local institutions and the wide distribution of benefits to the range of local stakeholders. Other key issues included the capacity of local level NGOs and BWDB and the financial sustainability of Water Management Organisations. As with CBFM, local level power issues were identified as significant obstacles to project activities and longer-term change.

The priority areas across the cases studies related to local level support (power issues, conflict etc.), NGO performance and the sustainability of project institutions (particularly financial viability and local support). Where projects operated nationally, or in parallel with GoB partners, national level constraints and opportunities such as inter-department integration and knowledge-sharing were stressed. Extra comments provided by the CBFM project leader provided a useful insight into past constraints and potential opportunities (see Box 4). Several of these issues are interrelated and, again, focus on local processes rather than national or meso-level factors. In particular, the need to instil sustainability and momentum via visible and carefully facilitated

activity is seen as crucial. Interestingly, the project leader believed that it is inevitable that high input / high return activities such as stocking will attract powerful individuals to the decision-making process. It is suggested that membership should be rotated to counteract this type of problem but it is important to recognise the type of local conflict that can result from any attempt to re-align old allegiances and "ways of getting things done".

Box 4 Up-scaling lessons from CBFM activities (derived from discussion with Paul Thompson, WorldFish).

1 Resource management activities - essential.
Although actions such as stocking, closed seasons and fish sanctuaries might be termed outcomes of CBFM, they are also important in helping to establish viable institutions. Without any agreement or ability to initiate a visible action to improve their fishery, and without an activity to see, fishery communities may become disinterested in the investment of time needed in the form of meetings and elections to make organisations work. Where the majority of the fishing community took part in actions and were actively involved in decision making, the activities have persisted and formed a focus for fishery management and helped to strengthen the institutional arrangements.

2 Facilitation – very important/essential.
All of the CBFM-1 beels had full-time NGO facilitators and demonstrated better results than rivers. Progress was better in developing local organisations and fishery management actions in one river where DoF staff took the initiative. One NGO did not post full time local organisers for CBFM and in general made little progress. Individual NGOs were more rigid than expected, with each adopting its own approach and making limited modifications to fit with local circumstances. Skilled staff, dedicated to helping communities organise and build the capacity of local management committees, are vital. NGOs have a comparative advantage over regular government staff in community organisational skills. They have a greater degree of flexibility compared with government agencies, but more emphasis on feedback and learning is needed. NGOs have a tendency to rely on staff with existing, high workloads – organising resource management groups is often an additional burden for personnel.

3 External forces – very important.
An important limiting factor on establishing CBFM is external forces and threats, for example from powerful individuals or groups who try to obtain the rights to a fishery, or conflicting uses of a wetland, or non-traditional fishers starting to fish. The lack of any concerted external efforts to capture the resource at two open beel sites within CBFM, contributed to their successful performance.

4 Property rights – diverse but very important.
Payment of government revenue (lease) gives the lessee the right to set local fishing rules. In the rivers, when revenue collection ended there was no legitimacy for local management committees to set rules limiting fishing. Now with formal recognition of CBFM-2 in some rivers, the communities are setting rules but difficulties remain because access rights are unclear and tend to favour the powerful. In closed beels, past leaseholders controlled access and stocked carps and the fishers organised by CBFM have continued this practice. In open floodplain beels such as Goakhola-Hatiara, there is no jalmohal and no lease to pay but there is traditional common property access for the surrounding community who can agree on, implement and comply with conservation measures.

5 Homogeneity and community characteristics – often important.
Homogeneous communities are more likely to establish effective community fishery management. These may be Hindu or Muslim, full time or part time fishers, and preferably landless and small farmers. However, outside influentials have prevented CBFM in some areas with traditional Hindu fishing communities.

6 Building on existing institutions – not essential.
Fisher cooperatives were the basis for CBFM in some beels - the NGOs then worked to add poorer fishers who had been excluded and to push out members who were not actively fishing. Problems of internal factions arise when NGOs promote more transparent and accountable leadership including elections to executive posts. This results in a set of new leaders who see the NGO as their source of power, and a set of old leaders who see the NGO as a threat and look towards DoF for support (having built good connections in the past with government officers in order to retain the lease). Experience indicates that it is important for the sustainability of such organisations that either the leadership is fixed (which tends to concentrate power and give an inequitable distribution of benefits) or that leadership can rotate frequently through a democratic and transparent process (e.g. by elections every 1-2 years, so that power does not become polarised with one faction). In some sites traditional Hindu fishing communities were unable to lease the waterbodies in the face of lessees who were financially and politically more powerful. New organisations representing all of the members of these fishing communities have been formed, and the same principles are applied as in the reformed cooperatives. But similar leadership problems emerged and are probably inevitable when there are relatively large costs and returns from stocking fish handled by a few people on behalf of all users.

Continued below.

7 Boundaries, scale and type of fishery – not essential.
Smaller clearly defined fisheries are not necessarily more successful in CBFM. The larger more open and unbounded rivers were generally unsuccessful in CBFM-1, because of changing or unclear property rights. CBFM was unsuccessful in two closed beels despite the user communities being well-defined and limited. CBFM can be successful in larger open beels.

8 Partnership
NGO-research institute-government partnerships can bring complementarities and mutual benefits, but the inherent differences between the groups that make these partnerships desirable are also the basis for inequalities and tensions. Problems include; the temporary fund-driven nature of partnership and its use in competing for resources, top-down government agencies, limits to partnership, lack of empowerment of farmers in the process, and gaps between large and small NGOs. Establishing trust is a slow process. In each site only one NGO was active, avoiding any direct conflicts over working methods, and placing smaller NGOs on an equal footing in meetings. The scope for communities to be full partners in the project as a whole was limited, but annual workshops where the management committee chairpersons along with local NGO and DoF staff each presented their progress and participated in working groups to address issues and the solutions resulted in some role for the fishers in guiding project direction.

9 Time needed and Sustainability
Local institutional arrangements for CBFM in Bangladesh have only existed for 7-8 years in the oldest sites, and few of these are able to function without some outside advice and support. Establishing local institutions and organisations for floodplain fishery management takes time, facilitation resources are needed for probably not less than 8 years on average, but there is no fixed time scale. Partners (NGOs) need to have a clear strategy for the project end and how to ensure that people's organisations would be sustainable.

10 Linkages and networks
It is too early to draw definite lessons, but two aspects of networking are being tried in CBFM-2 and appear to be important. Firstly, a higher level of management body is being applied to co-ordinate local management in clusters of waterbodies that form larger linked wetland systems. Secondly, networking among local CBFM organisations to strengthen CBO knowledge and connections appears important to increase the chance of continuing activities after project funding.

11 Scaling up
Financial resources are not key – limited numbers of capable staff constrain NGO and DoF capabilities and management and coordination is now more complex as additional sites are included within CBFM2. The tendency to follow fixed approaches may make up-scaling easier but also less likely to fit local needs.

3.3. Participatory Planning and IFM

The purpose of this input was to highlight the role played by participation in IFM initiatives in different contexts. As may be expected, there are often discrepancies between project proscribed mechanisms, their intended role and purpose, and the situation that unfolds at the ground in reality. For this reason, the review complements feedback from project-level interviews and literature with additional observations compiled during process documentation (Section 2.3.1).

The discussion approaches the case studies as representative of three distinct types; GO-facilitated initiatives by DoF and BWDB, NGO-facilitated initiatives by BCAS and MACH and autonomous, locally-facilitated and autonomous initiatives (for greater details of participation within the case studies, see Annex vii).

The participation process adopted within these case studies can be reviewed with respect to several criteria. Pimbert and Pretty (1994) have developed a typology of participation that focuses on the role played by the actual participant. There is a range of potential roles played by the participant, from "*passive participation*" where stakeholders are totally directed, to "*self-mobilisation or active participation*" where people undertake initiatives in complete isolation from a third party (see Table 15). The three broad categories referred to above (GO-facilitated, NGO-facilitated and locally-facilitated initiatives) differ in the approach they adopt to engage participants, the function that participation is intended to provide and, related to this the duration of the participation process.

Table 15 **A typology of participation in natural resource management.** (Source: Pimbert and Pretty, 1994).

Form of participation	Characteristic
Passive participation	People are consulted or directed & with no feedback mechanism from stakeholders. Information gathered is for the 3rd party.
Participation in information giving	Information is extracted but not cross-referenced with stakeholders.
Participation by consultation	Stakeholders are consulted on their opinion of pre-defined options for pre-defined problems. Stakeholders are not required to enter into decision-making.
Funded participation	Stakeholders have cash or food incentives for participating but these incentives may be short-lived.
Functional participation	People participate within externally-facilitated groups, often later on in the project cycle.
Interactive participation	People interact with facilitators to deign locally-appropriate groups ore refine existing ones – potentially cross-sectoral.
Self-mobilisation/ Active participation	Initiatives independent of a 3rd party but perhaps unable to challenge *status quo*.

A review of consensus building for NRM in Bangladesh revealed several distinct "types" of approach which reflected both the character of the intervention (the identity of the facilitator, the approach adopted etc.) and, crucially, the desired end-point (Lewins *et al*, 2001). In this latter regard, there appears to be a gradient between those projects that have predefined objectives and technical targets and require participation to ensure their objective, and those that apply the participatory process in an attempt to identify locally acceptable and sustainable activities and institutional arrangements. In turn, the purpose of participation tends to relate to the facilitator, and so the sector. It is possible to demarcate the case study approaches to participation as a function of their purpose, character and the structures deployed (Table 16.).

3.3.1. Passive participation in GO-facilitated initiatives (DoF)

As a large Danida-supported project, OLP was able to establish formal roles for BRAC in credit provision and management at the level of the Lake Management Groups. In contrast, although training and technical support are provided under the Jalmohal Project, there is no external expertise available for group formation or other modes of participation. Upazilla level DoF staff have the main responsibility of establishing project meetings and discussion but these duties must be carried out in parallel with the normal DoF remit.

The current, post-project, situation within OLP may be described as one of "light facilitation" on the part of credit providers and DoF staff. The linkages have been institutionalised over time and there are small but tangible incentives for all these stakeholders to maintain links. The project cannot claim participation as a central theme either during its funded period or post-project, however. The directed and blue-print approach to project management started as early as group formation with DoF's pre-defined "*Criteria of Poverty*" and the exclusion of non-genuine fishers and the strict ceiling on participant numbers would have been divisive. The project literature later outlined additional livelihoods training and support to women and non-fishers but there appears to have been little or no facilitation in this regard. Concerted attempts were made to establish female fisher groups for the management of ponds, however, and these have been relatively successful (Niaz Apu, Socio-economist, Fourth Fisheries Project, pers. com.)[62].

The Jalmohal Project appears to be poorly facilitated with no formal direction to DoF staff or NFA personnel with regards to remit or relationship building. DoF provide their technical expertise in stocking but have no responsibility or skill in negotiating community-wide interventions. NGO facilitation has been deliberately avoided.

3.3.2 *Consultative/Functional participation in GO-facilitated initiatives (BWDB)*

The various water sector guidelines on participation are detailed and well-considered but their function and effects need to be analysed in a political and administrative context. Participation was to perform the dual function of ensuring locally-relevant and acceptable interventions and long-term support and local O&M – both of which relate to issues of efficiency. By championing the role of participation, the water sector has effectively been broadening the range of stakeholders responsible for successful and sustainable management (socio-economists, NGO community-organisers, local government institutions etc.).

Participation was also an attempt to improve the O&M of water management structures which has historically been problematic. In part, this reflected the project cycle and the emphasis on O&M in latter stages of project interventions – by the time project funds, and so the presence of BWDB declined, O&M mechanisms were still to be put in place. However, the emphasis on participation appears not to have had the desired impact on institutional sustainability and O&M. Soussan (ibid.) comments how the institutional structures appear to lack the capacity to undertake cost recovery and O&M responsibilities.

3.3.2. Interactive participation in NGO facilitated participation

There is little doubt that the MACH and SEMP projects aim to achieve some form of interactive participation. Although the structures, their remits and their mode of interaction with project staff and the wider community are rather proscribed, the projects attempt to institutionalise local decision-making on behalf of a relatively wide range of local stakeholders. This is particularly the case with MACH, which has developed a detailed exit plan aimed to consolidate project institutions and their links with local government (D. Deppert, pers.com.).

[62] Initial resistance to these female groups has resulted in some conflict or the inclusion of male members, however.

As foreign-supported and facilitated projects, MACH and SEMP have added stability and the capacity to engage skilled NGO partners. As a result, interaction between project staff and participants is relatively intense and focussed (partners have distinct remits relating to group formation and facilitating the contributions of these groups to the management of the project).

It may be more accurate to describe interaction in these projects as *de facto* "functional" participation, however. Donors and project managers probably have greater pressure to establish and document participatory NRM than GOs do and the most efficient mechanism for rolling-out these structures is to have their function and mode of operation pre-defined. However, structures and approach must be considered in relation to project objective and in the case of MACH and SEMP, it is probably necessary to fix RMI responsibilities to pre-defined sub-sets of wetlands/fisheries and AIGA management.

As with all externally-facilitated NRM interventions, the role and character of post-project participation is less clear. MACH intends to formalise the various RMI tiers through registration and by establishing detailed modes of operation with local government institutions. In this context, there are issues relating to representation and incentive. At present, the emphasis is on consolidating small habitat management activities in local resource Management Committees that are financially-self-supporting. Without external facilitation, however, it is unclear that formal structures can either maintain the interest of the wide range of local stakeholders or counter-balance more powerful and less representative interests.

3.3.3. Self-mobilisation within locally-facilitated and autonomous initiatives

Three examples of local initiatives (LIs) with NRM functions were considered in the discussion of local processes - swamp forest management in Sunamjang and water management at Chaptir Haor and Laksmi Proshad Beel (see Appendix iii). The examples differed with respect to the role of different groups in decision-making and action. In the case of the mosque committee at Sunamjang, participation, in its widest sense, really only extends to local adherence to committee rules and decisions. The decision-making process, itself, appears to be exclusive to the *samaj.* The management arrange would appear to work because the *samaj* has the necessary social kudos or respect to enact decisions. In this respect, this LI is in keeping with Pimbert and Pretty's definition of *self-mobilisation / active participation* that stresses that existing assets and power (the status quo) may go unchallenged.

The other LIs discussed have less formal structures and are more significant on a seasonal basis. Embankment cutting and repairs at both Chaptir Haor and Laksmi Proshad Beel are largely the result of declarations by loose affiliations of landowners or farmers. In Chaptir Haor, these discussions may be formal in the sense that they take place at pre-defined locations, such as school buildings, and with locally-recognised mathbor leaders and elites. The process is on a smaller scale and rather less structured at Laksmi Proshad but the outcomes are similar. What make the LIs interesting and significant with regards participation, is the wide range of interest groups that willingly take part in actions. As discussed elsewhere, it appears that in these case the local water management issues cross-cut the interest of most stakeholder groups so that fishers, labourers, share-croppers have mutual concern to complete the work. Although it may be possible to free-ride and enjoy the benefits of other people's labour, there would appear to be personal incentives for participating.

The situation is in contrast with the way local management decisions are made at water sector interventions and the apparently low level of participation within WMGs. This may relate to the way in which structural interventions have polarised the interests of local stakeholders (damaged fishing opportunities or intensified agricultural production for landowners etc.) and inadvertently reduced the potential for collective action through consensus.

Table 16 The participation process within the IFM case studies as a function of their purpose, character and the structures applied.

Participation Type	*Passive*	*Consultative or Functional*	*Interactive*	*Self-mobilisation*
	↓	↓	↓	↓
Case study	**OLP Jalmohal Project**	**DWMP / CPP KJDRP / EIP**	**MACH / SEMP**	**Local Initiatives**
Sector & Facilitator	Fisheries (DoF)	Water (BWDB)	Fisheries/Environment (MACH NGOs & BCAS)	(elite, mathbor & mosque)
Purpose	Maintenance of new stocking regimes	Early planning on alternatives O&M of technical interventions	Early consultation, local awareness building Sustainability of RMIs	Seasonal resource maximisation or community sanction
Character of Interaction	Early, 3rd party group formation & light facilitation	Community meeting for planning & inception Group formation & instruction	Continuous, frequent interaction & guidance (conflict resolution, advice, mediation with GOs)	Annual *ad hoc* landowner discussion / formal mathbor groups / samaj – related discussion
Structures	Fixed groups & committees	Hierarchical units based on hydrological scale (WMOs)	Beel, river or village management groups & AIGA-based groups	Loose allegiances between different stakeholders or decisions within pre-existing mosque committee etc.

increasing flexibility in activities

In summary, the character and purpose of participation within the case study initiatives relates to the objective of the intervention and the remit of the facilitating agency. In the externally facilitated initiatives, the purpose of the participation process, and the institutional structures that develop, become more subtle and sophisticated as they move from implementing pre-defined, sectoral and production objectives to broader community-based NRM issues.

3.4. Cross-sectorality, livelihoods and prospects for pro-poor IFM

3.4.1. The wider institutional context influencing floodplain management

This section considers the broader institutional and policy context within which local floodplain management organisations operate. It first considers donors' development interests, in particular as expressed through the sectors they are currently, or have expressed an interest in, investing in. Donors continue to be major drivers of development in Bangladesh, even though their share of development aid as a proportion of Bangladesh's overall development budget continues to fall.[63] These investments were appraised in relation to their pro-poor livelihoods-orientation, the extent to which they seek NR integration, and the opportunities and constraints to this. The section then considers GoB's current rural development strategy, and the implications this has for its line ministries and for local governance arrangements. It then looks briefly at the NGO sector to consider where these presently, and may in future, fit into the delivery of pro-poor Integrated Floodplain Management (IFM). It then briefly considers community based Resource Management Organisations (RMOs) and the contribution they can make to this goal. Finally the section ends with a discussion of what is needed in the present policy and investment climate to further pro-poor IFM.

3.4.2. Current donor plans and activities of relevance to pro-poor IFM

3.4.2.1. Drivers

The main drivers influencing donors are the urgency to meet the MDG's as regards Bangladesh, the I-PRSP between GoB and the World Bank which sets a coherent strategy for headcount poverty reduction and a framework for budgetary support to GoB by donors, the SWAPs approach through which donors can bring coherence to sector support, and greater integration in donor strategies and support through the LCG.

3.4.2.2. The Social Sector

The overall impact of these drivers has been that social development sectors are seen as most likely to achieve multiple objectives targeted on the poorest, and most easily accomplished in the medium term. As a result, there is support to health and education sectors by most donors through SWAPs approaches at the technical assistance level, with pressure on GoB by the LCG to deal with the structural constraints to improved livelihoods through legislation.

Additionally, there has been a clearer identification of who the poorest are and where they are located. The greater proportion of the poor are located in rural areas disadvantaged by location, by physical vulnerabilities, lack of infrastructure, poor access to social and economic services, inadequate governance provision and a general lack of social and economic opportunity. Examples are the charlands and the coastal zone and a developing approach to meeting the MDGs on poverty alleviation has been to target such areas through more integrated area-specific development programmes.

A significant proportion of the poorest have been identified as being women and a large constraint to meeting the MDGs is the recognition of structural impediments to poor people's and particularly women's access to services (especially education and health services). Gender, as a cross-cutting theme, is found in the above sectoral approaches in most donors' strategies, while in DFID's most recent Country Assistance Plan (CAP 2003-6) it forms the central plank of the strategy, with sectoral interventions being designed to increase the number of women meeting UNDP's HDI thresholds.

[63] DFID's CSP (1998) noted that aid finances 45% of the development budget compared to 85% a decade ago.

3.4.2.3. The Rural Non-Farm Sector

The main opportunity for a reduction in the proportion of poor with respect to income measures is seen to lie in the rural non-farm sector (RNFS). Most of the poorest are functionally landless but supporting agricultural growth and assuming 'trickle down' of benefits has not achieved major gains for the poor. Projections (see BCAS 2003) suggest that the agricultural sector cannot absorb anything like the numbers coming onto the job market over the next 20 years, and that the rural-non-farm sector will have to take most of the new entrants. There is evidence that the sector is growing fast and most donors have seen this as an opportunity to clearly target the rural poor, build on what they do have (human as opposed to natural capital), and support this both through health and education programmes, access to credit facilities for micro-enterprise and then SED. GoB also intends to support the RNFS sector. The problem with the overall approach, however, has been that donors and agencies (particularly NGOs), in implementing projects, have focused on the direct delivery of services to poor people and have side-stepped both the issue of the institutional failure of government to fulfil its proper role in this respect, and the issue of local power relations which threaten the sustainability of project outcomes.

3.4.2.4. The Agricultural Sector

As a consequence of donor focus on individualised service packages, and given their concern to target the poorest, interest in the agricultural sector by donors has waned. The push to increase agricultural production through better WM (via FCD/I schemes), allied to the introduction of HYVs and inorganic fertiliser use, has largely been achieved. Besides gains for national food-security, livelihood benefits have largely accrued to the better off. Since the FAP, donors have rapidly withdrawn from the WM sector, except for some residual interest in WATSAN (a key MDG).

Bangladesh is now more or less self-sufficient in food-grains production and the constraints to the food security and nutritional health of the poor are now seen to lie 'beyond the farm-gate' (in lack of access to the food available due to lack of financial assets, distributional constraints etc.) The solutions to these constraints are now seen to lie in reducing vulnerability through disaster preparedness, distributional efficiency (infrastructural development) and building the assets of the poor.

3.4.2.5. The inland fisheries

The only renewable NR sector in which donors have a real continuing interest is the inland fisheries. This sector fits with a number of donor, MDG and other goals. Most of the poor and near-poor fish at some point during the year, particularly during the monsoon season when opportunities for agricultural employment are much reduced by the annual flood. The nutritional well-being of these subsistence fishers is dependent on access to the resource which may be reasonably secure since much of the floodplain is under water for part of the year and is a *de facto* CPR. Parts of the fishery may be 'privatised' by elite for fish aggregation or fish culturing and support to this sub-sector is seen by donors and GoB as addressing the need for a ready and sufficient supply of fish to the market to support the nutritional status of the population in general. The needs of full-time fishers have also been a priority for donors and GoB, partly because they are often amongst the poorest of the rural population and, being Hindu, face constraints to entry to other sectors.

The main threat to fishing livelihoods is seen to be to the declining quality of the resource through over-exploitation and negative impacts from other sectors on fish habitats. The main approaches have been to consolidate livelihoods through support full-time fishers' rights to fisheries and to reduce pressure on the wild resource from part-time fishers (and landless Muslims entering the sector full-time) by supporting alternatives. These include support to the rural non-farm employment sector, culture fisheries, and other NRM to improve capture fisheries sustainability.

Part of the latter thrust has been directed at the development of legal and institutional frameworks for the prevention (or mitigation) of non-fisheries sector development in the inland fisheries sector. As a result, there has been a wide ranging review of the fisheries sector, new legislation for the agricultural and water sectors and the production of new Guidelines designed to enhance people's participation in floodplain development. The main challenge will be implementing these and securing compliance.

The threat to the fisheries from over-exploitation may be reduced by the provision of alternative opportunities to the rural poor (particularly in the non-farm sector) and the development and enforcement of sustainable management practices. The threat of non-fisheries sector impacts such as habitat conversion may be less easily dealt with, however. In rural areas (the main focus of inland fisheries), the main threat is likely to come from the agricultural sector. Intensification of agriculture and a shift to higher value crops is likely to lead to pressure to reduce the temporal and spatial extent of the annual flood. If this does occur, wealthier landowners are likely to seek greater flood control to maximise their investment.

At present it is uncertain as to how such IFM will be secured. While rural elite are overwhelmingly agriculturalists, the livelihoods of the rural poor are characterised by highly diversified production and income earning activities including agriculture, small trade, livestock, and day labour and expenditure-saving strategies such as seasonal fishing. Full-time fishers are also poor and - being Hindu - socially disadvantaged. The power differentials between elite and poor are significant. Current GoB policy is to devolve NRM, primarily through IWRM, to LGIs, and legislate for the inclusion of all primary stakeholders on an equal basis in the decision-making process for WM. However, the outcomes are likely to be disappointing unless counter-measures are taken to prevent capture of IFM bodies by elite. The present framework does not allow for the containment of workings of power at the local level, or for the potential for collusion between occupational, political and local government elite.

3.4.2.6. Institutional development

The other main sector that donors have shown interest in (particularly since the mid-1990's) has been the institutional. The weakness of institutional structures, lack of capacity of GoB line ministries and local government and widespread corruption at all levels, are seen as major constraints to civil rights, greater economic growth and to the achievement of the MDGs. Currently much donor activity is at the macro level, assisting GoB in policy development, but increasingly donors are becoming concerned with meso- and micro-level issues. Interest in institutional matters is seen as particularly valid not only because reform can increase opportunities for the poor through projects, but also because it can change deeper social structures and entrenched behavioural norms.

However, experience has shown that while institutional change may be legislated for at the national level, it is particularly hard to implement at the local level. The culture of the civil service, let alone that of local stakeholders, has shown remarkable resistance to change and is likely to do so into the future. Donors and NGOs have sought to link GoB policy-making and legislature to a rights based approach in order to secure the entitlement of poor and disadvantaged groups to public goods and services, but lack of awareness of rights and of the power to secure them pose major challenges. Constraints surrounding community-driven and LGI-supported IFM must be tackled if the rural areas are not to be lost to the interests of an agriculturally-based elite.

In this regard, DFID's re-thinking of its approach to development in Bangladesh should be acknowledged here. There have been a number of studies of aspects of the aid programme in Bangladesh and the DFID-UK global aid programme, in general, which are crystallising thinking in DFID-UK and contributing to an on-going shift in practice by DFID country staff. This is likely to influence other donors via the LCG.

The theme of these studies has been that in order to meet the MDGs, Bangladesh (like other countries) needs to address the key constraints that prevent its citizens from climbing out of poverty. In particular it needs to improve access by its citizens to a range of different services which may be provided by different agencies (state, private or NGO).

However, rather than enabling better livelihoods, government and its agencies are seen as getting in the way. In the words of one commentator; '*Bangladesh's development is hamstrung by a highly dysfunctional government. Public agencies are profoundly corrupt, wasteful and inefficient. Countless reports on administrative reform had made little difference*' (Landell-Mills 2002).

Landell-Mills (ibid) identifies a number of reasons for this failure by government, including lack of capacity, endemic corruption in the civil service, and a culture of clientism endemic in society (summed up in the phrase 'the patron state'). While much of the discussion has focused on corruption and illegal rent-seeking by elites, just as important is the centralised and hierarchical nature of GoB line ministries which militates against devolved decision-making. The sclerosis of the public sector is further embedded through a hierarchical organisational culture where individuals and groups of lower status are regarded as being either clients or supplicants rather than as citizens with rights and valid claims on services which government should enable.

However, as Landell-Mills (ibid) has discussed 'The success of private businesses and the NGOs suggests that, with the appropriate institutional incentives, it is possible to overcome the constraints that continue to encumber the public sector,' while public sector devolution could bring service delivery and accountability closer to the people. Indeed the occasional success with public sector bodies (e.g. LGED and REB) suggests that other public sector bodies can be reformed too (see World Bank 1996: Chapt. 3).

3.4.2.7. From beneficiaries to citizens (rights-based approaches)

During the 1980's and early 1990's, the donor approach to the problem of government was largely to bypass it. More recently it has been realised that, while this approach might have some impact on the headcount number of those in poverty, service provision through NGOs alone is unlikely to have sufficient impact to meet the MDGs and, as importantly, has little impact on government or civil service culture.

Donor acceptance of a rights-based approach to poverty elimination and acceptance of the need to work through different service providers (public, private, and NGO) in order to get country-wide cover, has led to a greater focus on institutional relations and on partnerships in service provision.

The rights-based approach has also led to a concern with governance issues *per se*, including a greater insistence on reform of the public sector by GoB. However, it also includes greater attempts to change cultural behaviour, particularly that linked to patronage, in the belief that both poles of the hierarchical patron-client relationship are exploitative. Patron-clientism is regarded as 'corrupt' by donors and donors have increasingly sought to change these 'status' relationships to 'contractual' ones where public sector providers are held accountable for provision, and citizens are expected to hold them accountable. Hence the continuing debate over the nature of participation by poor people in projects. In the early 1990's 'participation' was understood by most GoB line ministries (e.g. BWDB) as meaning poor people 'taking part' in project activities as 'beneficiaries' (embedding the patron-client relationship). Only most recently, with the publication of new *Guidelines for Participatory Water Management* (2000) is the concept of participation as 'local people taking part in project activities as (empowered) citizens', and as equal partners with rights and responsibilities, beginning to be accepted.

As a result, donors are increasingly seeking to strengthen the voice of the poor in holding service providers accountable. 'DFID-B's management and advisers are increasingly aware of

the need to support fundamental change in the political and social systems in Bangladesh to achieve long term development' (DFID-B CSP Review 2002). As DFID's CAP (2003) puts it:

> *'It is therefore important for DFID to continue to work with influential agents of change in Government and civil society to ensure that key reforms are put in place. To do this effectively requires a balanced portfolio supporting a variety of approaches to amplify demand (on the state), support competition (to the state), assisting political processes (within the state), and enhancing the response capacity (of the state)…all programmes need to both institutionalise citizens' voice and the capacity of government to hear and respond*…'

3.4.2.8. Sustainable livelihoods (SLs) and institutional development

At the same time as a rights-based approach was being taken up by donors in the late 1990's, the Sustainable Livelihoods (SL) approach was being developed. There was a realisation that a greater understanding was required of the livelihoods of the poor, of their vulnerabilities, needs, assets and capabilities, and constraints to their being able to escape from poverty - a need which was further reinforced by the World Bank's *Voices of the Poor* study (see un Nabi *et al* 1999 for Bangladesh).

In particular the SL approach led to a more people- rather than product- or sector-oriented development approach. As DFID-B's CSP Review (2002) noted:

> *'The SL framework encouraged attention to different dimensions of poverty, broader than income measures. This led to a re-thinking of DFID-B's large Natural Resources and Fisheries portfolio away from sectoral technical interventions to addressing broader rural development outcomes. Such projects were previously top-down and supply driven…'*

How far DFID has been able to influence GoB in this respect is less clear; DFID-B's CSP Review (2002) notes that government remains driven by production targets, rather than by livelihood outcomes for the poor (for example in the fisheries sector). Additionally, the utility of the SL approach was taken as indicating the need for dealing with the vulnerability context of poor people, and with building their asset base (the 'five capitals' of the SL Framework) - thus reducing their vulnerability to seasonality, shocks and trends as they climbed out of poverty.

More recently, however, it has been accepted that much of what donors have been providing are public goods and that there is a need to look more closely at the reasons for the inability of poor people to access these and/or their non-provision by government agencies. As a result, increasing attention has been turned to the PIPs box (Policies, Institutions and Processes) of the SL framework, and so governance issues again, as either enabling or constraining livelihood opportunities.

According to DFID-B's CSP Review (2002) 'the 1998 CSP outlined a broader governance and rights agenda'. DFID-B has come to focus more fundamentally (and bravely) on the need to tackle governance issues (and particularly issues surrounding the implementation of policy, and the operationalisation of a strategy to achieve this.) Indeed, while DFID's CAP 2003 stresses that tackling governance issues is critical to achieving fundamental change (which should translate into increased access to services and opportunity, growth and headcount poverty reduction), it nevertheless still regards projects as a major mechanism for influencing GoB:

> *'Our existing programme in Bangladesh has a focus on enhancement of livelihoods and basic services for the poor, for example in health, education and agricultural extension. Underpinning the sectoral focus, we seek to promote better governance, more effective institutions and improved realisation of human rights, especially for women...Almost all our existing and planned projects and programmes address governance issues in one way or another*…'

At issue here is the question as to how much DFID projects are complementary to what GoB is doing itself, and how much are they truly innovatory with implications for public sector agencies as regards improvements in governance, access etc. Another fundamental question for the aid programme concerns 'influencing'. If projects are seen as 'experiments' rather than merely 'service delivery mechanisms', then service agencies (the targets for outcomes) need to be 'learning organisations', and 'influencing' is about getting them to become so and to upscale project lessons more broadly through their programmes.

One conclusion is that DFID-B and other donors need to do more to influence public sector reform. As DFID-B's Review of its Country Strategy 1998 - 2002 (DFID-B 2002) notes, the CSP was strongly influenced by Wood and Davis (1998) 'path-breaking analysis of governance in Bangladesh' to the effect that 'more programmes in all sectors started to aim at "creating an enabling environment".'[64]

> The first steps have been to achieve change in policy and legal frameworks and there have been various changes over the years. However, as noted in many reports, progress has been slow, there has been considerable resistance by government, even after policy documents have been written, and this does not necessarily translate into changed practice on the ground.[65]

There is a need to move from rhetoric to more effective implementation or, as the Bangladeshi proverb says;

'*Kazir guru ketaba acheye, kintu goaleye nei*'
(Kazi's cow is in the book, but not in the shed').

3.4.3. GoB plans and activities of interest for implementation of pro-poor IFM

3.4.3.1. Food security

GoB's plans for the NR sector have historically revolved around the need for national food security and the need to feed its growing population. As the economy is predominantly agrarian (farming and fishing) - with agriculture contributing around 35% of GDP and being the source of much of the small industrial sector's raw materials - it is highly vulnerable to natural disaster and economic growth rates are erratic.

The overriding objective of GoB agricultural policy, then, has been to achieve self-sufficiency in food grains. The policy has meant that production targets have largely been met, but it has also led to an increase in inequality due to 'exploitive intermediation' (i.e. rent seeking) by the better off (see Jazairy *et al* 1995). Agrarian and institutional structures have also been constraints to achieving greater poverty reduction. That GDP growth has not commensurately benefited the poorest is indicated by Bangladesh's 144th place on the UNDP's Human Development Index (HDI) ranking.

While Bangladesh is now reasonably secure as regards carbohydrate food, there are worries about the nutritional status of its population which has historically been secured through eating fish. The inland capture fisheries are seen as particularly important not just for the national

[64] However, as the Review frankly admits, 'civil service reform has not been a fruitful area for donor engagement…It has proved easier to forge such partnerships and exert influence on other development agencies than it has on national stakeholders, government or NGOs,' while 'a striking conclusion is that there are few DFID-B projects with government that are making a higher-level impact for poor people.'

[65] As DFID-B's CSP Review (2002) notes: 'There is a very wide consensus on key problems and what needs to be done to address them. Much of this consensus is recognised in the Government's own policy and strategy documents (e.g. NWPo 1999). The continual and almost universal failure is to turn these strategies into plans of action. Even where action is promised implementation is often ineffective… Government lacks the political commitment and capability to put policies into practice…'

economy and for the livelihoods of millions of f/t and p/t fishers, but also because millions more poor people (subsistence fishers) depend upon them on a seasonal basis and as an environmental 'safety net' of last resort.

There has been a range of initiatives aimed at increasing food security and most of these have been concerned with production enhancement with line ministries delivering services to producers. This has continued up to the present with some services (agricultural inputs etc.) and the marketing of produce operated by the private sector. In consequence important line ministries (such as BWDB and DoF) have remained supply-driven, while the state sector in general has become bloated and inefficient. This has been a constraint to the economy and a constraint to the poverty reducing impact of economic growth.

3.4.3.2. Institutional reform

The World Bank sees the key to accelerating economic growth and reducing poverty as being reform of the public sector through streamlining operational processes, deregulation and privatisation, and through enhancing the accountability and responsiveness of public institutions to citizens. A particular theme of this 'good governance' agenda is the perceived need (by the World Bank and donors, if less readily in some parts of GoB) to bring government closer to the people through 'subsidiarity', 'local management', and 'devolution'. Here 'citizenship', 'rights', 'participation', 'responsibility and accountability' are central themes.

The pace of reform has been slow, however, and there has been resistance not only from central government but also from many of the powerful line ministries. GoB has found it easier to make policy decisions than to implement them. Removing subsidies on agricultural inputs and privatising their supply has been one of the easier policy reforms in the NR sector but getting public sector bodies, such as BWDB and DoF, to be less top-down and more client-oriented has proved a long and arduous task.

Both GoB and donors (e.g. World Bank 1996, 2000) see poor governance as a severe constraint to development in general and to a reduction in poverty levels in particular, while the size of the civil service has become an increasing burden on public expenditure. GoB has therefore begun to streamline the civil service which has doubled in size since independence (see World Bank 1996 for figures), and to outsource many of the functions that it previously undertook. This process is continuing.

In this climate of downsizing and change, line ministries have been reviewing their functions. In the water sector, BWDB is moving towards being a regulatory body rather than one delivering WM products. As per the GPWM, communities will commission small-scale WM infrastructure, while LGED and others are likely to be responsible for the delivery of WM products. It is hoped that through such devolution and getting communities to be responsible for their own development, O&M of schemes and cost recovery will improve. It is still uncertain whether the local WMOs that are emerging will be tiered (as per the CPP) or whether they will link to LGIs. However, BWDB's new function as a regulatory rather than service delivery organisation will mean a change in its culture and personnel. This will require a change in its establishment with a reduction in the number of engineers and an increase in the number of socio-economists.

The fisheries sector is also going through a process of change (see the *Fisheries Sector Review and Future Development;* Muir, 2002). As might be expected DoF believes that it has inadequate human and financial resources to fulfil its mandate, which now not only includes management of the fisheries sector (where there are a number of different organisations with overlapping responsibilities), but also poverty alleviation (in which it has no professional capacity). In the current climate DoF is unlikely to receive any increase in establishment, and has therefore had to rethink its role and review the means by which it will achieve this.

3.4.3.3. Local government institutions (LGIs)

LGIs might provide an opportunity for GoB line ministries to devolve some responsibilities for delivery of technical services, leaving them free to focus on strategic issues and regulatory management.

There are three tiers to local government, the Union *Parishad* (UP*)* being the lower, the *Upazilla* (or Thana) the middle, and the *Zila Parishad* (or District) being the highest. A fourth, lower tier (the *Gram Sarkar),* at village level is being considered. The UP is an elected body, with three seats reserved for women, but answers to central government through the higher local government tiers. The *Upazilla* and *Zila* are administrative organs of central government rather than policy-making bodies to which government functions are devolved. The *Zila* is very much an organ of central government with its operational and planning bodies under the direct supervision of the Deputy Commissioner. Between 1982 and 1991, government policy was to devolve more resources and authority to these bodies so that smaller infrastructure was the responsibility of Upazila.

With the development of an I-PRSP with the World Bank and donors, GoB recognised that decentralization and developing local government institutions would be key to improving accountability of public service delivery[66].

The Bangladesh Development Forum (BDF) noted in May 2002 that the Government was 'committed to its constitutional obligation to ensure effective participation of the people in local decision-making', and to holding elections for all tiers of Government. The BDF noted in May 2003 that the structure for decentralisation remained unclear while in May 2004 it remained 'eager to hear more details of the GoB's strategic plan for implementation of decentralization, including clear indications of prioritization and sequencing of reforms. In addition, details on the mechanisms for fiscal decentralization, including means to ensure accountability of expenditure should be included'.

As noted elsewhere, LGIs in Bangladesh have historically received little support from central government, while the frequent changes of direction as regards their freedom for decision-making, has severely weakened their capacities. In particular, the focus on the deconcentration of functions but limited devolution of authority has engendered a hierarchical, patron-client oriented culture similar to that in other government departments. Globally, such cultures have historically proved sclerotic in their decision-making as lower tiers of government wait for those above them to make decisions and for these to be passed downwards. Such systems have been slow to react to changing local conditions with development being supply-led and 'blue-print' in kind, while the needs of ordinary citizens and those in government tiers below their own have remained unsolicited and unheeded. This has engendered both widespread non-compliance with law and policy by citizens, and widespread corruption in government as poor people use extra-legal measures and patron-client ties to solicit goods and services.

While GoB is now moving towards greater devolution, then, unless the de-concentration of functions is matched by an equal devolution of authority and fiscal responsibility, any change from supply-led to demand-led floodplain development which takes account of all stakeholders' needs seems unlikely in the near future. Quite simply, without appropriate powers, functions and budgets, LGIs, like other government agencies, will be unable to respond effectively to the demands for support directed to them by their constituents.

[66] The present Government (the BNP) is currently considering the composition and functions of the *Upazila* and the role that local MPs should play. Legislation, in the form of the *Zila Parishad* Act (2000), provides for *Zila* with an elected Chair, 15 members and with 5 seats reserved for women. These were to be elected by representatives from the Unions, *Upazila* and municipalities but the Act has still to take effect.

In summary, while LGIs are seen by many as having the potential for playing a co-ordinating and supporting role in pro-poor integrated rural development (and IFM), since they have a continuous presence in localities which projects and their implementing bodies do not have, much more will need to be done to build their capacity to carry out those functions. As DoF (2002) notes, UPs have very little capacity - 'The UP has very little control over its work programme and has little power or capacity to plan for development' (DoF 2002)[67].

3.4.3.4. Local government and local elite

One of the critiques of the decentralisation to local government approach in South Asia, is that almost by definition, elite tend to dominate local government (see Barr and Dixon, 2001: 43, 55-57). It can, in effect, be 'a formula for funnelling resources from above into the hands of local elite' (Blair 1996).[68] At heart all concur that leadership is a function of power and influence obtained from wealth, a large and reputable patrilineage *(gushti)*, the support of the members of one's *somaj* (a group worshipping at the same shrine or *jama't*), and the capacity for personal violence[69].

Elite use their power and influence to obtain access to and control over natural resources, with the benefits of this being reinvested in power and influence. Poor people, who have low levels of 'political capital' and poor access to 'natural capital' are dependent on those who possess this capital to grant them access. In doing so, they will not only have to transfer some portion of the benefit gained from using the resource and contributing their own labour to the grantor, but will implicitly recognise the socio-economic terms of the ongoing patron-client relationship which is reproduced through the transaction (see Devine 2003). Given the power differential, poor people find it particularly difficult to resist the power of elite to monopolise access to NR.

Local elite are political actors in their rural communities, and naturally some gravitate towards new sources of wealth and influence - such as local government. As Mitra (1991) has said, the elite lie at the interface between the modern state and traditional society and as a result there is doubt at many levels about the ability of local officials to manage floodplain resources in a sustainable or equitable manner. However, the view that elite always seek to 'capture' resources, would suggest that some, particularly where they are charged with a role in local government, can and do commit their superior personal resources into creating and maintaining successful local management institutions (see Blair 1996). The task will be in designing local institutions which use the beneficial aspects of local elite while restricting the temptation for excessive rent-seeking. This theme is returned to later.[70]

Whether LGIs can achieve the change from being directive to supportive and empowering of community action remains to be seen. Nevertheless, government is likely to focus on strengthening LGIs and to focus particularly on the UP tier for service delivery as the least politically challenging of the three tiers.

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[67] As DFID's *Supporting the drivers of pro-poor change* (2002) study notes:
'Local governments are very weak and offer poor quality services …They have few resources, little authority to raise revenue, and almost no influence on how central government uses its resources in their areas...Past experience of decentralisation has been poor…To strengthen bottom-up accountability, mechanisms in addition to elections (which are easily manipulated in a clientelist system and therefore a poor instrument for accountability) will be needed to overcome local government weaknesses.'

[68] The following, amongst others, have described the political-economy of communities in rural Bangladesh: Thorpe 1978, Maloney 1988, Rozario (2002), Toufique (1997), Bode et al. 2002.

[69] As Toufique (1997) has said: 'The social power of agents becomes crucial in determining their abilities to maintain property rights over resource systems on which their livelihood is crucially dependent. Such conditions open up the possibility of these rights being passed over to more powerful users of the resource or to those agents who are socially powerful but not the direct users of the resource.'

[70] However, while elite represent both an opportunity and a threat to poor people's access to natural and other resources at all levels, it is not suggested here that LGIs (with whom elite have strong connections) should actually manage floodplain resources on their own. Rather I argue later that, with the development of CBNRM, the intention would be for LGIs to support communities in this rather than to direct them in management.

There has been some success outside the UP, however. For example, LGED has taken over some of the responsibilities for delivering small infrastructure for FCD/I schemes, and is well thought of by donors. Donors have recently been developing projects which focus on building the capacity of LGIs (and linkages between LGIs, NGOs and CBOs) to deliver services to local communities (see Annex ii; MACH case study).

3.4.4. The NGO Sector

In Bangladesh the NGO sector is large and complex, ranging from large international and national NGO (such as CARE, BRAC, Proshika, Caritas) to smaller local NGOs[71]. The greater proportion of NGOs has been co-opted by donors to a service-delivery role. This began when donors distrusted government's capacity to deliver services to the poor, and is likely to continue for the immediate future until local government institutions develop a capacity to deliver.

The NGO sector is overwhelmingly concerned with poverty alleviation but the mechanisms used differ. A number of NGOs are active in the NR sector but most are not holistic in their approach either as regards livelihoods, or the natural resource sector. Few are concerned with, or have the present capacity to, address institutional issues at the local level.

As the 'Supporting the Drivers' study notes:

> *'NGOs have achieved a great deal, in terms of both advocacy and service-provision, but the picture is complex. Weaknesses exist, including that: patrimonialism in society is to some extent mirrored in NGOs…'*

There are instances of local NGOs being set up specifically to capture resources from the centre and there is also a concern that when NGOs and other agencies establish CBOs for NRM and seek to exclude elite from membership, they effectively become an elite themselves. This is particularly likely among those NGOs acting as service providers as they tend to develop the same hierarchical cultural style as government agencies. As Rao and Hashemi (1995) say 'large NGOs are a centralised, bureaucratic, and hierarchical as government agencies…'

Some of the weaknesses that can be identified for many NGOs (particularly smaller ones), despite is that they are (1) service oriented, and usually offer a set 'menu' of products (i.e. are supply- rather than demand-led), (2) sectorally-oriented, (3) project led, and (4) mimic the patronage approach of society rather than supporting poor people to speak for themselves (see Devine 2003:23).[72]

While there are dangers that NGO-driven development engenders a culture of dependency, it can also lead to a power vacuum which local elite may fill when NGOs withdraw at the end of projects. Indeed, Rao and Hashemi (1995) suggest group sustainability is often 'contingent upon the political brokerage and support of NGO's.

Reform of the NGO movement in Bangladesh is a vast topic that has been addressed in several reports, most notably *Pursuing Partners in Development: A Review of Big NGOs in Bangladesh* (DFID 2000) which has influenced DFID-B's approach to the NGO sector and required:

> *'more support for organisations that are the voices of (rather than for) the poor…*
> *This meant DFID-B engaging with NGOs to encourage more rights based approaches, which aim at improving governance at local and national levels…'*

[71] Both DFID-B's 'Big NGOs' (2000) and 'Supporting the drivers of pro-poor change' (2002) studies stress the need to distinguish between different types of NGO - between those focused on service delivery (micro-credit, agricultural inputs, social sector services), on social mobilisation, or on advocacy and empowerment.
[72] See also Thompson and Sultana (1999:1) regarding Caritas, and BRAC.

(*Review* of Bangladesh CSP 2002).[73]

There is thus a need to support efforts to strengthen NGOs' own governance and accountability systems and (like public sector bodies) change their organisational culture. At the local level, NGOs with the appropriate advocacy as well as service delivery credentials, and with support from the centre, will be needed. However, since their presence in a location is normally short term, and since they normally only have sector-specific skills, it will be important to encourage them to create linkages with the developing LGI sector and between it and local communities. They will need to facilitate partnerships for CBIFM while also perhaps being included on any multi-agency forum for floodplain development. Here they would provide a pro-poor counter-weight to public sector agencies' technical and project-led mindset, and help to counter the influence of elite who may seek undue influence on LGIs.

3.4.4.1. Communities and community-based organisations (CBOs)

DFID's *Supporting the Drivers of change'* study notes that ' Rural-based organisations continue to develop, and warrant further support both to strengthen the voice of rural citizens and poor people in particular, to combine to strengthen access to markets and services, and for common property management.' As with other DFID documents, there are few suggestions as to their preferred role, however. Nevertheless, there is growing recognition globally of the potential for CBOs as links in the development chain between development agencies and poor people and between the state and its citizens.

This vision has become one of the cornerstones of the World Bank's Comprehensive Development Framework, with its increasing emphasis on empowerment. However, there are many writers who are sceptical as to whether the institutions promoted can deliver what they promise or whether projects can be properly implemented (see Cooke and Kothari 2001).

Nevertheless, GoB has determined to place local CBOs at the centre of floodplain development and IFM. The GPWM (2000) produced by the Ministry of Water Resources makes clear that the objective of the Guidelines is to give local stakeholders a decisive voice at all stages of water management and thereby improve stakeholder participation/ involvement in water management. WMOs, 'representing the stakeholders, who will be the driving force in water resource management', are firmly placed at the centre of an organogram with public and private sector agencies and NGOs linked to them in a supporting, facilitating and co-ordinating role.

As is now well accepted, communities are not homogeneous but are made up of different socio-economic groups (local stakeholder groups) differentiated by occupation, wealth, gender etc.[74] Different groups may co-operate or be in competition with others over access to resources. Indeed the very notion of a group suggests internal coherence and co-operation between its members and a differentiation from others. In this context, the World Bank 1996 *Participation Sourcebook* is correct in noting 5 characteristics of CBOs, in answer to the question 'What Makes Community Organizations Work?' viz:

- *The group addresses a felt need and a common interest;*
- *The benefits of working together outweigh the costs.*
- *The group is embedded in the local social organization.*
- *The group has the capability, leadership, knowledge, and skills to manage the tasks.*

[73] It has also led CARE for example, to adopt a new approach 'that emphasizes the importance of strengthening needs-based approaches towards development through rights-based programming' and seeking a better understanding of the political dynamics that characterize union-level governance (see Bode et al 2002).

[74] For a discussion of 'Community': the 'C' in CB-NRM' see R7562 FTR (Barr and Dixon 2001:48-55). See also Cernea (1989), Leach *et al* (1997). The main point to take from this in relation to the discussion here is that the Bangladesh village (the geographical community) is not a solitary unit (see Bertocci 1996), but is made up of competing individuals, families and factions.

- *The group owns and enforces its rules and regulations.*

However, it is exactly these characteristics that groups use to ensure distinctiveness in order to make claims to specific rights. CBOs can, therefore, be established in order to secure access to NR and to deny access to others, and can have either beneficial impacts for poor people if they are inclusive of them, or can have negative impacts if it excludes them. CBOs, like other institutions, must therefore be considered case by case to see whether they are pro-poor and enable integrated and sustainable floodplain management or do not.

In order to alleviate poverty, and achieve the MDGs, it is necessary not only to prevent any monopoly by elite of the opportunities that NR represent, but also to ensure that poor people, as citizens with rights, have an equal say in how these are managed. For example, since WM systems do not affect agriculture alone, 'all people, regardless of their gender, occupation and socio-economic status are legitimate stakeholders of FCD-Systems' (MoWR 1997). Thus in general, CBOs for NRM should have representatives of different local stakeholder groups on them.[75] As the GPWM (2000) stress the membership of WMOs is open to women and men belonging to the households of different local stakeholder groups 'who are influenced directly or indirectly and positively or negatively, by project or schemes,' while 'members of vulnerable groups (i.e. women, landless, sharecroppers, PAP) must be included as general members.'

Where there are CBOs for NRM which are inclusive of representatives of all local stakeholder groups there is the potential for better IFM with the prospect of gains for poor people. It is at this point, however, that the worries begin concerning the capacity of these bodies to be sustainable and to deliver pro-poor outcomes. The characteristics required by groups, which the World Bank's *Participatory Sourcebook* (1996) detail (above), are what are necessary if a CBO is to function. However, each characteristic can change with time due to circumstance, external threat and internal weakness or division. The following in particular may been noted in the literature: a CBO's loss of common interest/rational (leading to disintegration), external threat from elite (leading to collapse or 'capture'), lack of capacity (leading to collapse or search for support from others), inability to enforce rules (leading to collapse or search for support from those who can).

3.5. Prospects for sustainability: the function of long term support

A number of project reviews have noted that CBOs either collapse or are taken over by elite after project end (in the fisheries sector see OLP, CBFM, FFP). The root problem here is that project staff and NGO support is withdrawn at project end, while GoB agencies have a poor record and few resources with which to continue technical support and to enforce rights. In the OLP case, the support of the NGO BRAC post-project was also unsatisfactory - in particular as regards the provision of loans, which might have eased women's groups' working capital difficulties. It has been noted by others that NGOs are often only present at a site for a short time and are frequently more at ease servicing their clients rather than undertaking conflict resolution. As DoF (2002: section 2.6.1) states:

> *'The success of CBOs depends largely on the effectiveness of the NGOs involved, but even where these are good there is…little evidence that the CBOs established for fisheries resource management can survive the inevitable withdrawal of NGO support*.'

As Nathan and Apu (2002) and DoF (2002: section 2.6.1) stress, there is a need to design post-project support measures into projects. They suggest that GOs rather than NGOs, 'who view projects as a "contract period", are better suited to this role of support, monitoring and extension because they are permanent organisations,' and here they are thinking particularly of support from local government institutions (LGIs). DoF (2002: section 2.6.1) suggests that 'continued

[75] Yet there are many CBOs, both endogenous and those established by projects, which seek to limit access to particular resources to a specific group.

NGO support is a prerequisite for sustainable fisheries CBOs', but also that partnership with local government would seem more appropriate as is being attempted under the MACH project.

3.5.1. Local government

The World Bank in Bangladesh: Government that Works: Reforming the Public Sector (1996) has previously pointed out the untapped potential of local government in Bangladesh. Historically, however, despite donor pressure and GoB's stated intentions over many years regarding public sector reform and devolution of powers to LGIs, these have remained weak with little local accountability. Nevertheless, there are increasing indications that LGIs will be strengthened in order to provide supporting, facilitating and co-ordinating assistance to NRM groups (see for example the recent Guidelines for Participatory Water Management 2000) (GPWM) and DoF (2002:5). However, much more needs to be done in this respect, both to strengthen LGIs and ensure they have central government support and the resources with which to undertake their new responsibilities.[76]

Devolution will also require a change in culture and organisation of central government agencies, such as DoF, BWDB and others. An important part of this change will come from a shift of function from supply-driven providers of technical packages via 'projects' (which, as noted above, engenders a lack of involvement with the socio-cultural aspects of development and with post-project issues), to their being facilitatory and 'regulatory' bodies overseeing development and holding the parties involved accountable.[77] The *Guidelines for Participatory Water Management* (2000) envisages Water Management Organisations (WMOs) as being at the centre of water management development, with local stakeholders having a decisive voice regarding this via their WMOs, and with BWDB and other agencies playing supporting roles.

However, since WMOs will be the site of power struggles between primary stakeholders over the direction of floodplain development, and since there will also be considerable power differentials between WMOs and the secondary stakeholders involved, there is a clear need for regulatory support to 'hold the ring', and to ensure GoB requirements regarding economic efficiency, social equity and environmental and institutional sustainability are met. BWDB is being pushed towards a more regulatory role, as is DoF (see DoF 2002). Yet the GPWM and recent project experience suggest that, despite having had a socio-economic unit for many years, this became a rather isolated unit within BWDB (see EGIS 1998) with most senior staff continuing to think within 'project' and 'hard science' sectoral parameters. DoF appears to be similar. For example, DoF (2002: section 2.2.1) notes that DoF was resentful of the allocation of the IFAD funded Community Based (fisheries) Management project at Sylhet to LGRD rather than to DoF, and 'was (and may remain) highly suspicious of the livelihoods approach and the participatory role of socio-economists and communities.' Whether these large GoB agencies can change or not remains to be seen.

If GoB agencies such as DoF and BWDB are unable to achieve organisational culture change, then others will need to take responsibility for overseeing floodplain development. In practice, as DoF for one recognises (DoF 2002:3), GoB is unlikely to provide DoF with the resources to permit the expansion needed to take on responsibility for the sector that the National Fisheries Policy (NFPo) places upon it. It has, therefore, reappraised its priorities and has suggested that hands-on management and administration be left to others with DoF acting as a central co-ordinating agency.

3.5.2. NGOs

While LGIs have been suggested as performing a pivotal co-ordinating role at local level, in reality it will probably need a combination of LGIs, communities and public sector agencies (such

[76] General accounts of the Local government system can be found in Rahman and Islam (2002), and Siddiqui (2000), and CARE (2002). A brief synopsis can be found in DoF (2002).
[77] As DoF (2002:3) puts it, 'moving from a "producing " to a "promoting" role'.

as BWDB, DoF, DAE, BRDB, DoE, LGED, and others) in partnership to achieve pro-poor IFM. Importantly, any forum should also include NGOs.[78] However, as discussed elsewhere, and as Nathan and Apu (2002) among others have noted, NGOs have historically taken a 'project' approach as providers of services, with negative consequences for the sustainability of institutions after project end. There will either need to be long term resourcing of NGOs in order to maintain their presence as a counter-weight to local elite after project end, an expensive option when going to scale, or alternatives will need to be considered.

3.5.3. Local stakeholders

The GPWM (2000) draws attention to the need for all local stakeholder groups to be represented on WMOs. They also stress that 'representatives from the concerned LGIs will be included as Advisors to the WMOs.' In other words, while public sector funded interventions must start with the local stakeholders and must be demand rather than supply driven, the state is a legitimate partner in such interventions. Interestingly while MoWR is keen to stress the need for community-driven WRM with support from a variety of agencies, DoF appears to be more circumspect. Thus DoF (2002; 4) notes that, due to doubts over the sustainability of CBOs established by NGOs in the fisheries sector, 'the most sustainable approach is likely to involve co-management', (with LGIs supported by central government staff) 'rather than management by communities and NGOs alone.'[79] DoF (2002:section 2.6.1) details the negative fisheries sector experience in this respect (e.g. one NGO reporting that over 50% of groups formed for aqua-culture development collapsed when project inputs ceased and returns on investment became too small).[80]

It is a little surprising that DoF are so pessimistic about the potential for achieving sustainable CBOs in the sector when their record of CBO sustainability is no worse than that in the water sector and they have, like BWDB, identified some of the factors contributing to CBO failure (as outlined above)[81].

Here DoF (2002) follows Campbell and Thompson (2000) who concluded that there is no point in following a blue-print approach since almost every community is different in terms of the factors determining CBO formation. However, while recognising the socio-economic and biophysical distinctiveness of individual locations, it is possible that generic principles for pro-poor sustainable institutions for IFM can be found, but this requires greater attention to a range of spheres including formal legal frameworks, the informal local political economy of power, the biophysical context, and the process of establishing and supporting CBOs.

While legal frameworks can support pro-poor CBOs, in the context of the state's poor ability to enforce rights, it seems better to recognise and work with, rather than against, local political realities and local custom and behaviour, and pay more attention to these in drawing up legal frameworks. Secondly, as noted above, a number of authors have suggested that longer-term support after project end is likely to improve the chances for CBO sustainability by building their

[78] As DFID CAP (2003) points out 'Neither the non-governmental nor the Government sector alone can deliver services to the poorest in Bangladesh at least in the short term. They are not therefore alternatives. Thus a rapid improvement in services depends on a partnership between governmental and non-governmental providers… The role of civil society, broadly defined, is not only in partnering the state but also in holding it accountable….DFID's focus is therefore to facilitate Government/NGO partnerships.'

[79] DoF's position here may perhaps be interpreted as a plug to lever more resources - for capacity building at field level (thereby 'helping to reshape the relationship between NGOs and government agencies…').

[80] See also Nathan and Apu (2002), and Fourth Fisheries' difficulties in establishing CBOs that are likely to be both equitable and sustainable, while DoF (2002) expresses doubts about the capacity of most NGOs to support CBO development.

[81] DoF (2002) suggests that: *'The bottom line is that adopting a policy of community-based fisheries management may not alone prove to deliver the expected long term benefits to rural communities in Bangladesh. Community-based systems are likely to be highly location specific and require long term support to become established. The message seems clear, there is often no existing platform in communities that can be used as the basis for fisheries-oriented local institutions'*.

financial and managerial capacity and countering elite capture. Which agencies should be responsible for this has still to be determined. Meanwhile, Project R7562 has developed a process (the PAPD process) for community-wide consensus-building leading to CBIFM plans to which all local stakeholder groups can contribute, and (theoretically) can lead to CBOs for better and pro-poor floodplain development.[82]

3.5.4. Elite leadership

Additionally, as the R7562 FTR points out (Vol.1: 56, 64), while egalitarian co-operative societies in many countries have had a poor record of sustainability, performance could be improved through agency support and through recognising and cultivating CBO leadership. The latter might emerge from within a CBO, or might be engineered through gaining the support of more 'benevolent' local elite. R7562 FTR vol.1 (Barr and Dixon 2001:64) argues that while some rural elite may misappropriate resources intended for the poor, development projects fail for many reasons, and there are also many 'benevolent' elite who contribute as much to society as they take from it[83].

A recent World Bank review of Community Based Development similarly found that 'a distinction between potentially "benevolent" forms of elite domination and more pernicious types of "capture" is likely to be important for understanding project dynamics and outcomes' (Mansuri and Rao, 2004).

DoF (2002) is incorrect is suggesting 'there is often no existing platform in communities that can be used as the basis for fisheries-oriented local institutions'. Historically, the inland capture fisheries were managed under the *Zamindari* system and then under its successors. While more recent fisheries leaseholders have been regarded as capturing the major benefit of the resource, historically f/t and subsistence fishers normally had access to the resource if they paid a fee, as well as having access to finance for working capital and the support of powerful elite. Leaseholders needed fishers for harvesting the resource; fishers needed leaseholders for working capital and for support to exclude competitors. More recently, the more sustainable fisher *samiti* (co-operatives) appear to have been those where a leader has emerged to organise and manage the group and, becoming an elite (with supporters), has been able to negotiate with other community leaders (those backed by their own *somaj*) over NRM - if necessary in the local *salish* or higher court.

There does seem to have been a move towards this kind of 'informal' arrangement at some CBFM sites (e.g. Arial Kha), with the majority of fishers appearing to be reasonably content with it.[84] Indeed, rather than condemning all CBOs and RMOs where elite appear to dominate, as representing elite capture, it would be better to investigate them on a case by case basis ('triangulating' opinion on the situation with different stakeholders) to see whether indigenous institutions (with elite) can be built on. Similarly, if new institutions need to be crafted, which elite might it be best to involve, and how should they be identified? CARE is already taking this forward with its GO-INTERFISH project in NW Bangladesh, where Bode (2002) note that 'Go-

[82] See also Dev *et al*. (2003) on the Micro-level Action Planning methodology for improving FUGs performance in Nepal community forestry. Like the PAPD methodology, this methodology is empowering, and builds cohesion and community capacity enabling a growth in demand for better service from government agencies. However, the authors also stress that support is needed from these agencies to (a) to set up FUGs, and (b) post project to keep them going and meet their needs.

[83] Dev *et al*. (2003), in their discussion of FUGs in Nepal, note that: *'It is true that the more wealthy and powerful assumed dominant roles in the FUGs, but they were often not the traditional feudal elite. Rather, they may genuinely have been chosen as the best leaders, as they had the most time, higher social status, better networks of contacts outside the village, and more 'clout' at district level. Control of the FUG by elite, therefore, did not inevitably mean domination and manipulation for their own interests*.' (see also Springate-Baginski *et al*. (2003).

[84] See R7562 FTR Vol. 1 (Barr and Dixon) on the emergence of *de facto* local level institutions for NRM in contrast to the state's *de jure* ones.

Interfish is planning a mapping process of the local state agencies that are relevant to its beneficiaries.[85]

3.5.5. CBO capacity building

However, the following improvements need to be institutionalised to make such arrangements more efficient, sustainable and pro-poor:[86]

1. Negotiation of a better division of benefits between all parties with gains for those contributing wage labour.[87]

2. Greater transparency in the management of CBO affairs, with election of CBO officers.

3. Better management of factional conflicts within communities, with the intention of inclusion of all rather than exclusion of some. Management can then focus on issues surrounding the sustainability of the resource on which all livelihoods depend. (The PAPD consensus-building methodology developed under R7562 provides one tool for social inclusion and gives poor people a greater 'voice' in NRM planning, in this regard).

4. The security of tenure for poor p/t and subsistence fishers' in terms of access to CPR resources (and resistance to others' attempts to change these rights).

5. Better management of potential NR conflicts that are wider than the water body. (Here the biophysical context is significant. As Hoggarth el al.(1999) have said, it is likely that exclusion of 'free-riders' will be easier in smaller water bodies whit clear physical boundaries (e.g. closed *beels* and *baors*), than in those where their extent and the local rules concerning access to resources (land, water, fisheries) are seasonally flexible (e.g. open floodplain *beels*). However, as previously pointed out (R7562 FTR Vol.1:66), power can ensure orderly access to NR even in these latter circumstances.[88]

As Dev *et al.*(2003) have note with regard to the development of community forestry in Nepal:

> *'Local people can be the most effective managers of forests, given the right institutional arrangements and conditions…This study found that the 'right institutional conditions' for successful forest management are: Participation based on an authentic sense of ownership…Clear formation procedures [for FUGs]…Consistent post-formation support and guidance from the DoF [Dept. of Forestry] field staff*.'

Achieving the right institutional conditions at community level will require attention to three kinds of decision-making protocols - at Constitutional, Operational and Activity level (see Ostrom (1993) - and which take into account the need to achieve economically efficient, pro-poor and environmentally sustainable outcomes.

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[85] Similar mapping exercises of local political realities were undertaken by BWDB's socio-economic cell when undertaking social appraisal of sub-projects in the mid to late 1990's, but it is not clear to what purpose the information on elite and their *somaj* was put.

[86] Evidence suggests that decentralisation alone will not necessarily produce pro-poor outcomes without preconditions to ensure the capacity of local organisations to manage access to NR and to be accountable to citizens (see Manor 2000 - www.livilihoods.org).

[87] R7652 FTR (Vol.1: 66) argued that, if we accept heterogeneity in the social formation as a reality, then we can accept that costs and benefits can be allocated differentially between resource users. The argument then becomes more about what proportion of benefits and costs should be allocated to whom rather than an ideological insistence on equality in all things. That is it is an argument for equality of access but not necessarily equality of outcome.

[88] As the R7652 FTR notes (Vol.1: 66), 'Evidence on the ground (e.g. the *Zamindari* system in colonial Bengal, see Pokrant and Rashid (1997) attest to the role of power/authority in organising the management of commons which do not meet Ostrom's (1990) conditions.

3.5.6. Co-ordination mechanisms

While the above discussion has stressed the importance of internal governance relations germaine to CBOs, what is missing is any discussion of governance relations, or 'co-ordination mechanisms', linking CBOs to external agencies. A critical issue then is 'forging links' between CBOs and support agencies. This requires clarification of the responsibilities of, and institutional arrangements between, all parties.[89] In this respect GTZ's Guide *Governing Maintenance Provision in Irrigation* (2001) is useful. While the Guide is only concerned with maintenance provision for irrigation schemes, it provides a useful guide to the issues to be addressed in any social contract, and thus is a guide to relations of support between agencies, NGOs and CBOs of different kinds. As the Guide notes, 'Disincentives for adequate maintenance [provision]…are especially strong in centrally-managed bureaucracies where the government still acts as the primary provider, rights-holder and payer of …services.' As regards water users, GTZ (2001) notes that incentive deficiencies include: infrastructure being regarded as government property and responsibility, no relation between payment of water fees and maintenance quality and quantity, no clear water rights, and no prior involvement of users in priority setting for maintenance.

The Guide also points out that key questions surrounding service provision are often not discussed by the parties involved. One reason for this is an undue focus on the technical rather than institutional aspects of provision - what the Guide calls 'the production perspective.' Rather the Guide calls for attention to institutional questions including; *'Who provides what to whom? What other stakeholders are involved, what are their functions and what do they provide? What mechanisms govern relations between stakeholders as regards provision? Do these provide incentives to engage in the relationship, and how can non-compliance be enforced?*' These and other questions relate to institutional arrangements and are at the centre of a perception GTZ refers to as 'the provision perspective.'

There have been increased efforts in recent years to address these issues in both the water and fisheries management sectors in Bangladesh, with mixed results. It is, however, early in the process and change in organisational and individual culture and practice does not happen quickly. It will only be when all sides accept the responsibilities they are 'contracted' for, and can be held to account by others (i.e. when 'contracts' can be enforced), that CBOs for NRM will have a better chance of being sustainable.[90]

In this respect, even when the contractual details between providers and users are clearly established, there will still be a need to react to corruption and associated practices which undermine contractual relations. As Grindle (1980:18) has noted, for the majority of poor people in developing countries 'factions, patron-client linkages, ethnic ties, and personal coalitions [i.e. status] are the most common mechanisms used to solicit particular policy goods and services.' Nevertheless, people in Bangladesh enter into formal and informal contracts all the time (both as individuals and collectively) on the basis of trust (see Maloney 1988).

There is no reason in principle then why, with the appropriate support, CBOs and RMOs in Bangladesh should not be able to develop the capacity for pro-poor IFM. The restructuring of GoB line ministries and devolution of responsibilities for NRM to the local level, GoB's and donors' increasing support for LGIs and CBOs, NGO's increased awareness that supporting poor people to speak for themselves rather than speaking for them, and an increased awareness that 'beneficial' elite may have a role to play in local development, together provide the opportunity for pro-poor rural development. These changes will help to bring decision-making closer to local people where NRM is likely to be more integrated than that undertaken by hierarchical line agencies. Whether such NRM will be pro-poor will be dependent on all parties

[89] Such arrangements can be formal or informal.

[90] They will of course still face other threats, and it should be recognised that organisations my cease to exist (and not necessarily 'fail') for a number of reasons besides 'avoidance of contractual responsibilities' (see e.g. Mosse 1996).

being able to collectively provide the appropriate support and incentives to CBOs and RMOs for them to develop capacity, resist capture by rapacious elite, and manage in a pro-poor and environmentally sustainable way.

3.6. Fisheries and water sector projects reviewed[91]

3.6.1. Oxbow Lakes Project (OLP) 1988-97

Baor are permanent water bodies which are semi-closed in the dry season. OLP has been an interesting experiment in the co-management of stocking in the baors of south-west Bangladesh with partnership between DoF, credit-providing NGOs, fisher management groups and, previously, Danida.

Of particular interest are the tenure arrangements secured on behalf of "genuine fishers" and the design of the Lake Management Groups (LMGs). Apu and Middendorp (1997) note the importance of appropriate tenure arrangements to fisheries management, and in particular that short lease periods are not conducive to investments which fructify over a period of time while fixed term leases have the danger that maintenance will not be carried out towards the end of a lease. Under OLP licensed members of LMGs have up to 50 year leases for secure access to the resource. The next step was to establish fishers' rights vis-à-vis former leaseholders and to exclude certain other categories of persons from access. This has not proved easy (indeed under OLP II it took 5 years to bring 23 *baor* under control). (As to whether such confrontation with elite threatens institutional sustainability, see below and Section 4 and Annex B-ii).

Another tenure issue that OLP had to address concerned the exclusion of certain categories of persons from sharing in the resource. Firstly, when intensive stocking began, cultivators sometimes claimed areas inundated during the wet season as theirs (and claimed the right to fish there). Secondly, with the establishment of LMG rights and the increased value of the fishery through stocking, there was increased demand to join LFTs, and when that failed to poach. Given the extent of poaching and the inability and cost of guarding the fishery, the strategy was to include more people from all villages surrounding *baors*. This strategy appeared to be successful since 'it eliminated mass poaching.'

As with instances of 'mass poaching' mentioned elsewhere (e.g. *Bauid* fishing at Dikshi *beel* under CBFM I, see Thompson et al 1999), such action by OLP to exclude local non-fisher groups from fishing is to violate 'customary rights' and is likely to meet with protest by those excluded. Given the costs of enforcement of the new rights, and the relative weakness of holders of these new rights, leaseholders are usually forced to compromise. As with many projects in the WM sector there is a need for projects to pay more attention to customary resource access rights, rather than impose a top-down institutional and resource-led solution based on institutional theory.

3.6.1.1. RMO issues

The OLP was initiated in 1988 in 5 districts in the south-west of Bangladesh by DoF using BRAC as the main NGO with the aim to put poor fishers in management control. The main target group consisted of poor fishers organised into Lake Management Groups (LMGs). The members of LMGs were to be poor but 'genuine' fishermen who fished for a living, had little or no land and earned under an annual 'thresh-hold' income. *Thana* fisheries officers (TFO) were tasked with identifying and finalising lists of fishermen according to these criteria. BRAC then selected fishers for LMGs so that fishers had to be members of the Village Organisation (VO) taking part in BRAC's Rural Development Programme (RDP).

[91] Detailed listings of project characters ("stakeholder issues", "sustainable organisation issues", "participation issues", "resource integration and cross-sectorality", "pro-poor sustainable livelihoods orientation") are presented in Annex B-x).

As Apu (1992) notes, LMGs were designed as institutions (RMOs) through which members could participate in decisions for lake management, could be made aware of their rights, and could develop team spirit and solidarity. LMGs were to operate as fishers' management bodies (arranging the sharing of fisheries benefits, marketing fish, purchasing stock and so on), and as group savings mechanisms. LMGs were to have a set of bylaws as a foundation for cohesion and as 'a buffer against external forces' (e.g. attempts at elite capture).

Of the 14 LMGs operating in 1992, a survey found discrepancies between their desired structure and function and the reality on the ground. There was a low rate of awareness of the role and functions of LMGs among ordinary fishers and LMGs were generally not keeping systematic records of stocking or of income distribution. There were also financial irregularities and this undermined the transparency which the project sought, and provided the opportunity for embezzlement and corruption. Transparency in all matters was sought by the project, but the monitoring of each other's actions was left to the fishers themselves, and they gradually evolved a system of monitoring and sanctions to curb the worst excesses (see Apu and Middendorp 1997).

Early problems included the irregularity of meetings and the inclusion of influential non-target fishermen on membership lists where individuals had secured committee posts and were often elected uncontested. In general, neither BRAC nor TFOs were well informed about the project at this stage and there was a tendency for voters to polarise according to their membership of different villages (see OLP 1994).

All this suggests that the patron-client relations prevalent in Bangladesh were operative here too. The contestation over elections for LMG officers, the continuing lack of transparency in LMG affairs, and the conflict between LFTs at many sites (see Apu 1992: Annex 1), suggest that fishers regarded LMGs as a mechanism for securing greater benefits for their faction rather than for managing the fishery in a fair and equitable fashion to the benefit of all fishers.[92]

3.6.1.2. Fish Farming Groups (FFGs) for women

A subsidiary component of the OLP project, which sought to improve the livelihoods of poor women through fish culturing, began in 1994. It was based on the principle of allocating long term lease rights (of 10 years duration) to ponds on government *khas* land in *baors* to poor women's groups, with DoF and NGOs providing technical support (see Nathan and Apu 2002). This component of the OLP project is interesting because it illustrates some of the social and institutional problems that are to be found at the local level when access to valuable natural resources is involved, and points towards some of the measures that are required if they are to be overcome.

From a theoretical standpoint, the literature suggests that the participatory management of smaller water bodies with well defined boundaries should be easier to manage than larger ones. Hoggarth et al (1999: Part 2, p104), for example, say that *'it is easier for a householder to manage his own small pond than it is for one or more communities to equitably divide up the resources of a large, shared lake….Water bodies such as household ponds, village ponds, or ox-bow lakes, which are fully enclosed clearly offer better management possibilities than other water bodies such as floodplain rivers.*' Given mobile fishery resources, this is undoubtedly true, but social factors are equally important. In the case of the women's FFGs, while there was no internal group discord, there was conflict with external actors which was fatal to management. The resolution of this conflict was through allowing non-fishers from villages around water bodies

[92] The same tendency of individual LFTs to seek to gain greater benefits while sharing costs equally with other LFTs was apparent in the initial opposition from leaders to the project's condition of equal sharing of a day's net income. The reason was that traditional Hindu fishers had a better knowledge of fishing (and perhaps better gear) than poor Muslims, and thus generated a greater return for fishing effort than Muslim LFTs. They were unwilling to forgo this advantage.

to take part in fishing and have membership of LMGs - what Apu and Middendorp (1997) call 'social fencing'.

While the degree of enclosure of a water body is important for the technical management of the resource, management is as importantly about establishing the social boundaries of schemes (not the physical boundaries of water bodies) and identifying who the primary stakeholders are within them.

The potential opportunity for income generation was widely recognised and was expressed in the opposition shown by men organised in lake management groups (LMGs) and wealthier village men who not only thought it inappropriate for women to hold such assets but wished to secure the leases for themselves. Most O&M of the ponds was carried out by the women themselves and expenditure and income were shared equally. The benefits were used to buy assets - mostly in their own names rather than their husbands - and marked a significant change in their economic status. After the end of the project, however, it was found that most of the women's groups had collapsed with men's groups managing the ponds instead, or that they were subleasing ponds to men's groups and so receiving far less income than they should have been.

Nathan and Apu (2002) note the initial opposition of men to women gaining the leases to ponds and suggest that after project end, women were unable to stand up to men's groups. As with LMGs, women initially had powerful allies (DoF, DANIDA, and locally the NGO BRAC) and support in enforcing their lease rights against others. However, with the end of the project this support fell away as project staff left. Additionally, there was local political pressure to drop women from leases and replace them with young men who supported the new ruling party. The local fisheries officer and the DO refused, but ponds were later looted by young men and the fisheries officer was redeployed elsewhere.[93] In other cases, partly due to 'shocks' (e.g. disease decimating their fish stock) or inexperience in managing a business, and partly due to the high lease fee that DoF required of them, women groups found that they had insufficient working capital for restocking of ponds.[94] They were usually forced to lease out their ponds to men for a low fee[95].

Nathan and Apu (2002) stress that 'grabbing productive assets or looting the income of women requires a number of factors, which men alone have in Bangladesh' - these include connections with elite in the political and administrative spheres, organisation in local groups (e.g.*somaj*), and the ability to use or threaten substantial coercion or violence. (In fact these are potential features of most hierarchical relations in Bangladesh.) A counter to this, as Nathan and Apu (2002) note, is to build alliances with other strong agencies. In short, project staff and NGO's gave powerful support to enforce women's rights against others during project life, and the same needs to be done over the longer term after project end. 'Good governance means sticking to government commitments and rules, and enforcing them, if the sustainability of groups is to be achieved' (Nathan and Apu, 2002:385).

[93] As noted by others, local resource access can become inextricably linked with patronage and national politics in Bangladesh, with political power being used to leverage access to natural resources, and access to natural resources being allocated to secure political support (see Bode, Howes, et al., 2002; and Bertocci 2001). As Nathan and Apu (2002) say 'Winners of elections seek to use their powerful networks to overturn the legal rights of others', while others (e.g. *mastans*) use force.

[94] A problem that was similarly faced by poor male LMGs, and has been remarked on by others in relation to f/t fisher groups in general.

[95] Process documentation of OLP within this project did reveal apparently functioning FFGs at Hamdipur Baor. However, there were some indications that husbands of female members were making management decisions on their behalf (see Annex B-ii).

3.6.1.3. Community Based Fisheries Management (CBFM) I 1995-2000

The Bangladesh inland capture fisheries are a source of employment and income for full-time fishers, an environmental 'safety-net' and source of food for subsistence fishers, of animal protein for the wider population, and a important component of GNP. However, there have been indications of declines in overall catch, fish size and species diversity. There are also concerns that while the fisheries are a main income source for poor fishers, most open water-bodies have become controlled by non-professional rent-seeking elite who manage them for revenue optimisation.

CBFM I is one component of a broader strategy between donors and GoB to reverse trends and secure the future sustainability of the fisheries with gains for fishers and the poor. The intention is to give use rights to 'genuine' fisher groups under long-term leases and to conserve aquatic resources for national food security.

CBFM I has been working as a pilot project since 1995 to develop arrangements by which fishing groups (organised as resource management committees) can take primary responsibility for the fisheries. The assumption is that those with a history of involvement with the sector, a dependency on the resource for their livelihoods, and clear rights to manage it and share its benefits, will be most likely to seek its sustainability and should therefore lead in fisheries management. Projects have therefore focused on the fishing 'community' (primarily f/t fisher groups rather than p/t or subsistence fishers), and as part of GoB's drive to devolve NRM to the local level and to achieve greater returns to fishers for their labour, have focused on the community level. Recently, and particularly under CBFM I, arrangements have been tested to enable poor fisher groups to secure leases and to manage GoB-owned water bodies (*jalmohals*). Issues faced have included whether fishers and the wider community can agree on and establish fisheries management arrangements which secure the sustainability of the resource while achieving greater returns to fishers' labour. The results of CBFM I (as documented in DoF 1999 and Thompson et al. 2000) suggest that they can establish acceptable management arrangements where fishers' legal rights are clearly established and the latter are given appropriate support. However, success in this respect has been more limited where rights have not been formally allocated to fisher groups (as in flowing rivers), while the limited duration of the project has precluded any conclusion as to the sustainability of management arrangements after project end. The project identified the need for further work (proceeding under a second phase, CBFM II) 'to determine the sustainability of existing local community management arrangements and the benefits of community initiatives', and the need to test arrangements in larger fishery-wetland systems such as floodplains “clusters”.

This study is not concerned with assessing the success or otherwise of CBFM I in terms of its mandate, but with drawing on project experience as regards community participation in integrated sustainable management of terrestrial and aquatic floodplain resources and the identification of institutional environments that support pro-poor IFM.

3.6.1.4. Fishers, excludability, subtractability and local custom

The project concentrates, primarily, on f/t fishers since these fishers have been organised for some time into co-operative societies controlled under the Co-operative Societies Act and able to bid for *jalmohal* leases, draw upon micro-credit facilities and other development inputs extended to co-ops. However, the number who fish most inland open-water fisheries in Bangladesh is far larger than this group, and includes p/t fishers, subsistence fishers and occasional fishers.

Leasing arrangements seek to assign exclusive rights of access to and use of the resource within defined boundaries to an individual or group using specific types of gear. Where the water body is small and the boundaries are clearly defined, excluding 'free-riders' from access, and controlling illegal gears is more manageable. Where the water body is large and the boundaries

are ill-defined, it becomes more difficult and costly to exclude potential users and to prevent the use of illegal gears. The difficulties of controlling free-riders is made more acute by the seasonal shift of many inland waters from defined leased areas to CPRs during the flood season, and the mobility of most fish species between dry- and wet-season locations (e.g. from river or permanent lake to floodplain). While there is legislation, the Protection and Conservation of Fish Act 1950, which restricts certain gear and the fishing for juvenile fish, it remains poorly enforcement due to lacking incentive to change the *status quo*.

Fortunately, since it is costly to exclude non-lessees, the twin problems of excludability and subtractability have historically been dealt with according to local custom (see Barr & Dixon, 2001). Where individuals or groups have invested they expect to derive maximum benefit from their investment, and will seek to exclude those they have not subcontracted fishing rights to - if necessary by force. Where an individual or group feel they have clear use rights to water, and have the ability to enforce compliance, they may charge a fee (or toll) on those who fish, and fine those who are caught doing so without permission. Where waters are, or have seasonally become CPRs, they essentially become open-access - though this may be limited in general to the communities around the waters. Over-vigorous attempts to exclude seasonal and subsistence fishers from waters they regard as a CPR, may result in '*gheraos'* a form of 'mass angling'.[96]

These customary rules again point to the need to take into account the needs of different types of fisher, as well as other stakeholders. This is particularly the case when trying to derive livelihood benefits for a group (f/t fishers) who are poor and have limited power to enforce rules of exclusion. *Real politik* requires that they reach a *modus vivendi* with their more dominant and usually more well-connected neighbours.

There is a lack of evidence of CBFM I partners taking account of other stakeholders beyond fishers, (e.g. agriculturalists), while the needs of fishers have been rather narrowly interpreted as rights to fisheries (leaseholds), the supply of inputs (fish stocking, credit), and certain 'threats' to the resource (*Kuas* in particular) and mitigation measures (sanctuaries), rather than dealing with issues which may have a bigger impact on the resource and on livelihoods (e.g. the impact of floodplain infrastructure on fish migration, habitat conversion, water abstraction for agriculture, etc.). As Thompson et al (1999) say with regard to the NGO Caritas' work under CBFM I at Dikshi beel: '*The Caritas model, based on support for management by group members only, is inadequate where there are multiple stakeholders.' Not only are there conflicts between fisher factions, but 'wider conflicts over water and drainage for agriculture have not yet been addressed.*'

DoF's interests have historically lain in the management of production from the fisheries but there is a case for greater advocacy by, and partnership between, DoF and NGOs with environmental concerns in order to address wider scale-dependent issues. This could feed down to and support groups seeking community-based IFM.

As in other sectors (e.g. water management), the project approach and dependence on donor aid for development projects, has meant that many efforts in the fisheries sector are also short-term. Effort goes into developing projects, with a focus on technical components (such as stocking), with more difficult socio-economic aspects (such as establishing local fisheries management bodies) being subcontracted out to others (usually NGOs). As in the water sector, insufficient time is allocated to establishing appropriate local management bodies and

1. [96] These can be regarded as spontaneous protest movements which may become a 'tradition' occurring annually - a form of civil disobedience directly challenging the perceived illegitimate appropriation of resources and asserting poor people's rights of access - see Bode (2002). Thompson et al (1999) give a similar example from Dikshi *beel* where it is called *bauaid* fishing. Here large numbers of fishers and non-fishers from elsewhere come to fish in Dikshi *beel* but refuse to pay the BMC or DoF a fee. They do this every Saturday and Tuesday from mid-December until mid-February.

developing their management capacities. In consequence, while project intentions may be pro-poor the reality, on the ground is frequently that fisheries management committees are no more than lists of names or, if they are formed on socially inclusive grounds, soon collapse after project end when NGO support is withdrawn.

3.6.1.5. A sectoral versus systems approach

CBFM I, like other DoF projects (and those in other sectors), has tended to take a project rather than programme approach and to focus too narrowly on the sector rather than taking a broader systems approach. As a result, DoF, like BWDB, tends to treat water-bodies as discrete units excised from the rest of the landscape, rather than recognising them as embedded in systems, not only water systems (requiring integrated water resource management), but wider natural resource systems (requiring integrated floodplain management) and human activity systems (requiring detailed understanding of social and institutional aspects). DoF (and many NGOs) appears most at ease dealing with bounded elements (a technical package, a discrete water-body, one kind of stakeholder group (e.g. f/t fishers)), rather than with the socio-biophysical reality of the floodplain[97].

3.6.1.6. CBFM I project experience

DoF's narrow sectoral focus and NGO partner limitations meant that a systems (acknowledging the role of non-fishers etc.) was lacking. This had implications for the management institutions established under CBFM I, and for the activities undertaken. The aim of the project was to help fisher's groups to organise or be represented in local management bodies for each of the project water bodies (DoF 1999). Institutional arrangements were expected to evolve and to perform differently at the different project sites, partly as a consequence of the socio-biophysical differences between closed *beel/baors*, open floodplain *beels,* and rivers (DoF 1999:7-9, Tables 3, 4, 5 give details.)

3.6.1.7. Semi-closed beels

In four of six semi-closed *beels* and *baors,* Beel Management Committees (BMCs) functioned, but were not inclusive of all stakeholders - only representatives of the NGO-organised groups of fishers were members, and NGOs concentrated on organising poor households who fished for an income. The project reported that participants managed activities effectively and efficiently. This was, in part, because management decisions involved the annual stocking, guarding and harvesting of the fishery.

NGO-organised groups of fishers established exclusive rights to the fishery and were able to access credit from their NGO patrons. DoF (1999) reported, however, that this exclusivity '*has been at the expense of reduced access for subsistence fishing for non-members*' and that while co-operation was '*generally high among participant fishers who share common interest in the fish they invest in*', the main conflicts were between fisher factions, with outsiders over poaching, and with outside *mastans* over control of the fishery. The project enabled some poor to improve their living standards, but had little impact on non-participant households, and even restricted access to opportunity for many.

3.6.1.8. Open floodplain beels

DoF (1999) notes that BMCs have been established, *'but the experience is more mixed, reflecting the extensive subsistence fishing, a wide range of stakeholders, their capture fishery nature, and ill-defined property rights*.' In two *beels,* the partner NGO only included fishers recruited into its own groups in BMCs and only at one site were subsistence fishers and landowners included along with women and male f/t fishers in the BMC.

[97] Yet, as Bean et al. (1999) have stressed: *'floodplain fisheries are complex systems requiring a highly integrated management strategy whereby the various management roles and responsibilities are shared between different collaborators, and whereby the needs and interests of the different stakeholders involved are adequately considered.'*

Unlike semi-closed *beels*, where the benefits of fishery enhancement through stocking largely accrue to the group that holds the lease and invests in stocking, the flexible (rather than 'ill-defined') nature of property rights in open floodplain *beels,* and the seasonal mobility of the resource, mean that stocking is not a priority. Management activities have instead focused on conservation of the natural resource and enhancement of catch weight through sanctuary delineation and protection, habitat restoration, and closed season and gear restrictions. While there may be infringement of rules by 'free-riders', the control of fishing effort rests on all equally, as do the potential benefits when fishing is permitted. The only potential 'free-riders' of note may be landowners who construct *kuas* on their private land in the hope of benefiting from the increased wild stock due to the BMCs' conservation efforts, and 'mass angling' by outsiders at the time of final fishing.

Project experience in the context of open floodplain *beels*, from a pro-poor and institutional perspective, may be more encouraging than CBFM I staff may have thought. The flexibility of property rights occasioned by the seasonality of water body extent, and the mobility of the resource, mean that it may generally be impractical and too costly for any one group to seek to monopolise the fishery in totality (though there may be conflict between fisher factions for the best fishing stations, and competition for the best leases). Additionally, since floodwaters extend over private agricultural land during the monsoon, and offer both an opportunity to benefit from the fishery (for landowners via their construction of *kuas),* and a threat to the sharing of those benefits (from the perspective of non-*kua* stakeholders), BMCs are likely to become more inclusive and seek IFM.

In this context there will be a need for flexibility in management, and customary rules for resource access are likely to apply. The fact that there is equality of opportunity to fish means that more stakeholder groups in the community (and including non-fishers) are likely to support better *beel* management. This is particularly likely if it is linked to other development initiatives (e.g. access to micro-credit) and the management body set up considers non-fishery as well as fishery-related NR issues. As DoF (1999) notes *'there is evidence of increasing fish diversity and catches, and increased social cohesion among a very diverse local population*.' The challenge for NGOs, DoF and other GOB agencies will be to ensure that where BMCs are established, they are inclusive of all stakeholder groups, and that (as is needed of other exogenous floodplain management institutions) their decision-making is fair and transparent, seeks consensus-management, and BMC officers are accountable.

3.6.1.9. Rivers

Being effectively open-access, rivers became a site of intense competition between different groups including traditional fishing communities, increasing numbers of p/t and subsistence fishers, rich landowners investing in *katas* (and effectively 'privatising' sections of river), and other influential groups (DoF 1999, Thompson, et al 2000).

At the time of the 1999 report, CBFM staff had had little experience of establishing River Management Committees (RMCs) due to both DoF reluctance to give support when there was no central government mandate and strong divisions between stakeholders. However, in 1998 both agreed to facilitate the establishment of RMC involving all stakeholders despite their having no clear mandate or authority. The 1999 report was not positive: ' *… the RMCs have had no effect where stronger outside influences have taken control of the fishery…Consequently some of the RMCs are no more than lists of names.*'

Despite this seemingly discouraging situation, at one river site (Arial Kha) where a local NGO (CRED) had strong links with local councils and leaders, an RMC was established in 1997. This body included both local leaders and fishers, and the strong support of local elite and influentials was regarded by CBFM I staff as significant to enabling the RMC to take management decisions (e.g. the establishment of a fish sanctuary) and secure compliance by all fishers.

The situation at Arial Kha suggests that fisher leaders in partnership with non-fisher leaders recognised that a managed fishery was preferable to (i.e. more valuable than) an unmanaged one, and persuaded other fishers to comply with this - no doubt in exchange for a fee (or toll) payable to the BMC[98]. This indicates that communities can mobilise for better NRM and overcome constraints - in this case, *de jure* open access. In this respect it is similar to 'public cuts' in the water sector (see Section 2.1). As importantly, the example does indicate that leadership (influence and the ability to enforce compliance) may be as important at the local level as *de jure* rights. Given the weak enforcement ability of the state, local management rules are likely to emerge over time in any event either due to force (via *mastaans*) or influence (via elite and consensus).

Given the state's weak enforcement ability, if *de jure* rights are to be framed they will need to better reflect local realities. As with local initiatives in the water sector, there may be questions regarding the pro-poor livelihoods stance of the Arial Kha RMC, its inclusiveness of all stakeholders groups, the transparency of its decision-making and accountability of officers, and its maintenance of access to the resource and distribution of benefits to all stakeholders. However, if indigenous institutions are thought to be preferable and more sustainable than exogenous ones, then it would seem better to seek to develop better management qualities in existing institutions than start afresh and risk their collapse after project end.

3.6.1.10. The role of NGOs

CBFM I was designed to test and assess alternative models of GO-NGO-fisher collaboration. In extending credit facilities to the groups they formed there was a tendency to encourage a dependency culture while excluding others from access to opportunity. While NGO group members reported increased participation in decision-making, the involvement of non-NGO participants was very low.

NGOs may be more pro-poor and empowering than indigenous elite, but the issue is whether they merely become another rung on the patronage ladder and do not sufficiently challenge the patronage system itself. The fact that many NGOs are alternative providers of services without clear strategies for building the capacity of the groups they form to manage their own affairs suggests they have accommodated to the prevailing system rather than challenged it.

Interestingly, DoF (1999:68) reports that: '*project experience is that larger NGOs find it easier to work in the culture-based beel fisheries where their groups have exclusive group access, and have difficulty working with management bodies that include other stakeholders. The smaller NGOs have shown greater flexibility to mix traditional credit and training support…with facilitation of community-wide management bodies.*'

3.6.2. Fourth Fisheries Project (FFP) 1999-2005

Of the Fourth Fisheries Project (FFP) components, of particular relevance to the institutional aspect of IFM is Component 1;- community-based inland open-water fisheries management.

The gap between the rhetoric of project 'justification' reality on the ground is, as with most projects in Bangladesh, considerable. Begum (2002), for instance, highlights the type and magnitude of social and institutional constraints restricting fishers' legal rights of access to open water bodies and which affect their livelihoods and argues that major institutional changes are

[98] As such, the arrangement would seem little different to that prior to 1995 when a local fisher leader took the lease to the fishery and fishers paid the lease fee direct to DoF. This arrangement might be regarded as elite resource capture (via the RMC charging fishers a fee for fishing or (possibly) as landowners having highly productive *katas* (see DoF 1999:35)), and thus as not meeting CBFM's aims for management which channels more of the benefits of the fishery to fishers.

needed to protect and secure fishers' legal rights. Project experience, claims Begum, calls for a pro-active role by DoF in demonstrating genuine commitment to sustainable pro-poor fisheries and a change to the current leasing system, fixing more appropriate and affordable lease values, securing long-term tenure of water bodies, and making provision for the long term services of skilled external 'catalysts' (both NGOs and government agencies).

3.6.2.1. Organisational issues

At the Batch 1 sites, a two tier organisational structure is being used, a lower tier Village Development Committee (VDC), and a higher Fisheries Management Committee (FMC) as the RMO at water body level. The intention has been to form one VDC in each village within the project area. The VDC should consist of members from all social and occupational groups in the village, and should have an executive committee nominated by members. A major function of the VDC is to mobilise resources, implement fisheries management plans and act as forums for addressing broader social issues. NGOs are expected to play a key role here in mobilising resources from GO and NGO contacts.

An FMC's main function is to develop a fisheries management plan (an operational strategy) for the water body and co-ordinate its implementation. Crucially, this Plan should go beyond technical considerations to ensuring access of poor fishers to the fishery.

However, there has been limited success in forming RMOs at Batch 1 sites due to a flawed and rushed RMO formation process which allowed non-fishers and local 'influentials' to dominate them. Genuine fishers and landless poor have a nominal presence on RMOs and some FMCs did not have a single fisher represented. In response to this 'failure', it was decided that for Batch 2 sites, Fisheries Sub-committees (FSCs) should be formed at village level rather than VDCs and that the membership of these should consist 75-80% of f/t/ fishers.

The inclusion women at all sites was extremely problematic:

> *'These groups are less educated, enjoy a lower social status, are less articulate, and lack a voice on important decisions made at the community level that affect their lives. Even a well-intended democratic approach can fail to include these people in the CBOs as the local power structure creates obstacles for them to exercise their democratic rights to be self represented'* (Begum 2002:6).

Poor (and less powerful) people may be unwilling to speak up in public, and indeed may prefer to be represented by local elite in the public sphere due to local power structures (see un Nabi 2001, Devine 2003). However, when members of these groups are given the opportunity to meet in smaller, homogenous groups in private, they are able to articulate their needs and contribute their own knowledge (e.g. the PAPD methodology provided one such forum; see Barr and Dixon, 2001). As such, one of the problems that Batch 1 RMOs faced was of their own making - trying to introduce an exogenous institution without attention to local ways of managing social relationships and the knowledge/power nexus. With respect to RMO design, then, constitution etc. should be 'fit for purpose' rather than formed in an idealised and blueprint fashion, and that requires attention to what the management arrangements are intended to achieve and for whom.

In some cases, pre-existing Fisheries Co-operatives were unwilling to participate. Such resistance to new arrangements which potentially dilute benefits a group has secured under previous fisheries policy is understandable. However, it again raises the question as to what the appropriate membership of RMOs should be. Again, this will depend on what the functions of specific RMOs are, and what operational strategy they choose. For example, if it is intended that an RMO manage a whole water body, then it will need to be inclusive of all fisher stakeholders - particularly if the operational strategy is stocking, since benefits may (as with *kuas*) be lost to others who have not contributed to the investment cost. On the other hand, a larger water body may be split between a number of RMOs if the operational strategy is capture fisheries.

Begum (2002) highlights the opportunity costs incurred by f/t fishers and landless poor within the RMOs while “influentials” have a greater incentive to attend and appropriate the associated benefits from external interventions. The NGO (BRAC) tasked with RMO formation had too many activities to undertake to manage RMO formation in a way that would have countered the threat of elite capture.

3.6.2.2. Social Issues

A survey of fisheries resource control patterns found that non-fisher local influentials dominated, irrespective of the type of waterbody (Begum, 2002). In the river context, government policy led to temporary open waters but a fisheries management regime has evolved that *de facto* disenfranchises the poor and favours rent seeking by elite, who extract the greater proportion of the benefits of the fisheries through their greater ability to invest in production and assert their rights to do so through their influence[99].

The general finding of the FFP survey of 25 sites (Begum, 2002) was that fisheries management, access to fisheries and benefit from the fisheries were dominated by wealthy elite, most of whom were non-fishers. The intention of FFP was to manage the fisheries for the benefit of fishers through the removal of elites from management but there is little evidence that this has occurred[100].

3.6.2.3. Institutional Issues

Begum (2002) argues that pre-project there was an absence of *'an institutional framework conducive to a pro-poor, sustainable, community-based fisheries management system'*, and that this was *'a critical factor in determining the sustainability*' of the CBFM system. In addition, and as noted by FFP, donors and DoF are well aware of the negative impacts of the leasing system - particularly the rate of increase in the lease value which threatens the profitability of the fisheries since *'it is unrealistic to expect the productivity of water bodies to increase at the same rate…*,' and could threaten the sustainability of the resource through increased resource mining[101]. However, while a more appropriate lease value might reduce pressure on fishers' cash flow, reducing or abolishing the lease value would not necessarily prevent elite domination, as CBFM's and FFP's experience of open access rivers indicates. As rent-seeking middlemen, it is control of the resource and the ability to pass on costs and extract a profit which are important to them, not the level of the lease value. A higher lease value may actually suite elite both by reducing the number of potential competitors for the lease, while ensuring poor fishers are dependent on them to raise the lease value and provide the access needed for their livelihoods.

Lastly, Begum (2002:19) notes the process of forming RMOs and ensuring their sustainability was deeply flawed under FFP. Setting aside the threat of elite capture which undermines the whole rationale for CBFM, the period within which RMOs were expected to develop the capacity to manage the fisheries was far too short. RMOs organised under FFP were expected to be self-sustaining within 3-4 years while NGOs were only contracted to work at their respective sites until the end of the project (December 2004). Given the ever-present threat of elite capture, the present RMO model used by FFP, and the need to build alliances with local government

[99] There appeared to be little difference in management outcomes before and after the change to open access of rivers in 1995. Influentials no longer had to pay a license fee to government, but often had to contribute money to local mosques and schools and to government officials to maintain the illegal arrangement. The FFP was a direct threat to this, and local influentials were successful in lobbying politicians for FFP to cease activities at these sites.

[100] It is possible that the poor have been unwilling to give up such patrons because, as un Nabi (2001) says, 'although they cede a portion of their incomes to the *ijaradars* [leaseholders] for fishing access, they regard their supporting *ijaradars* as protectors of their fishing livelihoods (see Kremer 1994). In these circumstances, *jeles* [fishers] in general see the wealth and influence of the *ijaradars* as an advantage rather than an obstruction to their access to the fishery.' Something noted by FFP too.

[101] In fact, as un Nabi (2001:111) has argued, it is the state's rent-seeking through lease value inflation which is a chief cause of over-exploitation of the resource, since the leaseholder has to pass on the cost of the lease in order to make a profit, while fishers have to increase fishing effort to meet the additional cost. In short, any increase in lease value is an increase in costs for fishers and means they must increase fishing effort to compensate.

institutions (LGIs) which will provide appropriate support for CBFM rather than colluding with elite, a longer contractual period for NGO involvement would seem appropriate.

One issue though concerns up-scaling of the model. FFP found that difficulties with RMO formation at early sites were in some measure a function of poor NGO capacity given the number of sites and the number of tasks they were contracted for. Any rapid up-scaling of the CBFM model as proposed by FFP would face the same difficulties. In this respect it is worth considering whether indigenous RMOs might not have a role to play. Although elite dominated, not all elite are self-interested and rapacious and they may possess many of the skills and local connections that are thought necessary for achieving sustainable RMOs.[102] As Hoggarth *et al* (1999: Part 2, p.110) have stressed:

> *'…inland fisheries present a unique problem to management, in that they are often large and communications in them are poor. In this physical context it is especially difficult to manage a fishery without the active participation of either the majority of the people fishing it, or of the most powerful people in the fishing communities.'*

If the suggestion that more should be done to take advantage of the skills and knowledge of 'beneficial' elite, as well as those of fishers and other stakeholders in Bangladesh, is thought to have potential, implementing partners will need to work hard to establish checks to the abuse of position which are a constant temptation for RMO office holders. They will also need to create links with LGIs to oversee RMO propriety after project end. Since the intention is to establish pro-poor institutions, RMO constitutional protocols will need to make provision for reserved places for different categories of poor and conduct its affairs according to principles of good governance and democratic rights (transparency in RMO affairs, good information flows, rights of all stakeholders to be represented in RMO meetings, voting rights, election to office, the accountability of office holders, and so on).

Many studies have suggested that participation by stakeholders in decision-making that affects them can improve projects and NRM institutions. However, such participation must be construed not just as 'stakeholders taking part in activities', but as 'empowered stakeholders' having a voice in NRM decisions which affect them.[103] Such participation for effective and equitable institutions does not just happen. As Manikutty (1998) has said in a study of community participation in WATSAN projects in India, 'the essential theme to emerge from this study is that participation, to be meaningful, has to be planned and managed…It appears from our study that it is not so much the different local conditions as the clarity of project design that matters…' and the way a project is managed (emphasis added).

3.6.3. Early Implementation Projects (EIP) 1975-97

This BWDB project, with its numerous sub-projects, extended through 5 Phases and over more than 20 years. In consequence, its goals and approach to project implementation have changed considerably over the years in response to BWDB and donor learning from EIP and from other water sector projects, together with their changing priorities. This section is intended to draw out lessons concerning factors which might influence the establishment of sustainable institutional arrangement for IFM and leans heavily on the report by EGIS (1998) *Learning lessons: 20 years of EIP experience* both for general information concerning the EIP project in its various phases, but also for the perspective of the study team on the issues involved.

[102] Again see Mansuri and Rao (2004).
[103] As the FFP notes many fishers in elite dominated Co-operative Societies felt they did not have any voice in their management even though the Societies' decisions affected them.

EIP began as a bilateral project of GoB and GoN, in response to the need for rehabilitation and relief after a devastating flood in 1974 and the war of independence in 1972 which had ruptured the national economy.

3.6.3.1. Phase 1 (1975-81)

National goals of food security and job creation meant that improvement in agricultural sector livelihoods was the main rationale behind projects. Farmers were the principal target beneficiaries. The poor were expected to benefit from increased jobs and wages as agriculture 'took off' (i.e. according to 'trickle-down' theory). Negative impacts on non-agricultural livelihoods were discounted.

There was little evidence of any effective participation beyond involvement in construction works, however, and at this stage BWDB was a large, technical, centralised organisation with a strong implementation bias.

3.6.3.2. Phase 2 (1981-86)

Small and marginal farmers and landless labourers increasingly became the target groups for sub-projects, while it was proposed that poor women should be targeted for EMGs. However there was little overall change in BWDB's (technological) implementation approach. In 1983 NGOs were added as project partners, but their role was restricted to 'mobilising' the poor rather than empowering different stakeholder groups for their input to the project cycle.

In 1983, with increasing worries about poor O&M of infrastructure, a standard field level model was introduced consisting of a *khalashi* for each water control structure (with committee) and each mile of embankment. Lack of operational guidelines for committees meant that there was often conflict over, or damage to, sluice gates, while overall O&M remained unsatisfactory.

3.6.3.3. Phase 3 (1986-90)

Women from poor HHs were added as a target group but there was no mainstreaming of gender in BWDB. NGOs with links to BWDB were now seen as an important criteria for the selection of an area for an EIP project, and as potentially supporting O&M organisations, but they had little role beyond their previous one of mobilising the poor for construction work.

Phase 3 intended to increase beneficiary participation in planning and O&M. However, the 1989 Evaluation Mission noted that there was insufficient consultation with local people or *Upazillas* at all stages of projects. However, the 1989 Evaluation Mission noted that despite the socio-economic unit's innovative approach, there was insufficient inter-disciplinarity within BWDB and consequently key issues were overlooked in project design, implementation, and O&M. The Evaluation Mission also noted that BWDB needed to liaise with other GoB agencies, financial organisations and local farmers.

In short, despite the strengthening of the Socio-Economic Unit within BWDB, the latter continued to be dominated by a structural approach to water management and to improving livelihoods. The unit did not develop knowledge for policy formulation for integrating the social with the technical and, as a result, BWDB did not change its basic development model.

3.6.3.4. Phase 4 (1990-94)

Phase 4 saw an intensification of activity by the Socio-Economic Unit and NGOs resulting in the provision of complementary services to target beneficiaries. The use of EMGs, composed of poor women and providing preventative maintenance in exchange for a wage, and with long term contracts and other benefits, became a standard feature of EIP projects. These activities were deemed sufficient to fulfil any requirement for 'participation'. However, there remained little effective or inclusive participation in the planning or implementation of WRM. As regards institutional development for system management, BWDB's focus remained at individual structure level rather than the wider system level. EGIS (1998) noted that EIP projects offered

adequate flood control, but that insufficient attention was paid to drainage problems, and to conflicting farmer-fisher and upper- lower-catchment stakeholder water interests.

Despite increasing concerns by GoB and donors over post-construction maintenance, the suggested formation of an O&M component (by the 1990 Evaluation Mission) to develop the managerial and financial resources required to improve O&M was not taken up. Meanwhile there remained few horizontal linkages to other GoB agencies or projects concerned with floodplain development.

3.6.3.5. Phase 5 (1994-1997)

This phase saw the consolidation of earlier socio-economic activities, particularly to ensure that LCSs targeted poor men, women and landless labourers, and that EMGs targeted poor women.

An EIP study in 1996 suggested that in many projects completed since 1992 there were neither *khalashi* nor active sluice-gate committees, despite individual members being 'on the books'. An earlier Evaluation Mission (Van Woersem et al, 1994) questioned EIP's whole approach (small-scale technical interventions in the water sector), and suggested instead the need for integration at the regional level with medium and large-scale interventions in order to achieve IWRM. The mission also stressed the need for the project to focus more on effective participation and on demand-driven approaches. However, EGIS (1998) noted that consultation with local people continued to be poor, suggesting that BWDB still had a flawed conception of what 'participation' entailed. Finally, a study by Van Woersem et al (1998) noted that there continued to be issues over the sustainability of LCSs and EMGs and that guidelines needed to be developed for these groups.

3.6.4. Overall Assessment of the EIP

3.6.4.1. Cross-sectoral integration

There was little cross-sectoral planning in the EIP approach at any stage. This was revealed in project impacts - agricultural production and demand for labour improved, but there were negative impacts on fishers and boatmen from the loss of fisheries and obstruction to waterways. EIP focused almost entirely on one resource user (agriculture), while environmental, social and gender issues were only considered in terms of impacts and not mitigation or improvement. No effort was made to regulate or reconcile conflicting interests.

Organisations for WRM were *ad hoc* and were not co-ordinated, while there was a failure to integrate gender and other social group findings into the project's larger context. In addition, NGO contributions were restricted to the formation of groups. As EGIS (1998) notes, the centralised management of BWDB militated against co-ordination between projects and local agencies at all stages of the project cycle. Because BWDB took a project rather than a resource planning approach, EIP projects remained isolated and were not linked into a wider IWRM schema.

EGIS (1998) stressed the need for co-management of projects and the need for greater co-ordination between projects and facilitating agencies, suggesting that Local Government could provide this. In general, there appeared to be a need for agencies to move away from their commodity focus, to consider other water users' needs and the systems' inter-relationships to support more flexible and diverse management solutions. This would require greater interdisciplinarity, the participation of all stakeholders, and the linking of indigenous knowledge and modern science.

EGIS (1998) emphasised that EIP, like other WRM projects, was socio-technical in nature, and that an integrated approach was necessary throughout the project cycle if sustainability were to be ensured.

3.6.4.2. Participation

This lack of sectoral integration and attention to different stakeholders' needs partially stemmed from a flawed concept of 'participation'. EGIS (1998) noted that; *'A narrow conceptual framework and lack of participative spirit within the project largely resulted in the exclusion of women and other weaker social groups (e.g. fishers, boatmen, and their families) from project planning and implementation*'. This lack of consultation with local people was a feature of the project until quite late in the project's life. The reasons for this non-participation included lack of knowledge in BWDB of how to manage the process, poor beneficiary organisation, lack of discipline and absence of policy. There was a perennial gap between rhetoric and reality, with the need for 'participation' being a common feature of policy documents after FAP but with the reality of 'consultative participation' on the ground being poor.

As with other BWDB projects, EIP staff appear to have had a functional understanding of participation - of people 'taking part' - rather than being consulted throughout the project cycle and having a significant input to decision-making.

EGIS (1998) stressed the need to recognise all water users not just as beneficiaries or project affected persons (PAPs), but as primary stakeholders who should be consulted and involved in activities throughout the project cycle. EGIS (1998) in particular noted the lack of participation by local people in the planning and implementation of O&M.

3.6.4.3. Sustainability

In 1998 an EGIS report suggested that due to delays in construction works caused by projects' slow land acquisition procedures, projects' Internal Rate of Return (IRR) were negative. The need to speed up completion, however, potentially conflicted with the Socio-Economic Unit's expressed need for time in developing community relations and training groups. The IRR problem was successfully addressed in other later projects (e.g. DWMP) without impinging on the Socio-Economic Unit's time requirements, and has lessons for institutional development.

As regards project sustainability, an increasing emphasis on institutional development for O&M became apparent by the mid '80s. However, the Socio-economic Unit remained isolated from the engineering and planning sections and retained its emphasis on identifying NGOs to form LCSs and EMGs, rather than with wider institutional issues.

Throughout the life of the EIP project O&M remained a significant problem and involvement by beneficiaries remained negligible to the end. Institutional development was weak throughout, and many WMCs and EMGs were inactive. Women and poorer groups were not represented on WMCs, nor were LGIs involved. WMC responsibilities were not well defined and there were inadequate financial mechanisms to ensure their sustainability. In this last regard, EGIS (1998) identified the impact of funding constraints on the viability of O&M groups. It noted that for a variety of reasons, mobilising funds from either GoB or users was difficult. Since GoB involvement was being phased out, and since there was evidence that users were willing to pay, provided they had a say in the use of the funds raised (Datta and Soussan 1998), EGIS proposed that beneficiaries should bear the capital and O&M costs.[104]

3.6.4.4. Summary

Over the long life of this project, and despite the gradual shift in emphasis from technical to socio-economic aspects, and an increasing focus on beneficiaries and social equity, the approach of BWDB remained predominantly structural and agriculturally focused. A strategic

[104] Further work was required to develop the appropriate policy and institutions. The authors suggested that resourcing and sustainability remained issues, and that there needed to be experimentation with different funding models.

approach linking outputs to purpose was not taken. As Soussan et al say (1997) *'there is a need to re-conceptualise project design around social rather than technical dimensions of WRM'*.

3.6.5. Systems Rehabilitation Project (SRP) 1990-1997

The Systems Rehabilitation Project (SRP) was conceived as a vehicle for improving the performance of the BWDB in a number of critical areas. As noted above, a growing concern by donors through the 1980's was with the more efficient use of development funds in the water sector, and in particular with improving O&M of water management systems. The project was conceived to rehabilitate older WM infrastructure, but was also more fundamentally concerned with the organisational change of BWDB and its working practices. In 1990, a World Bank Staff Appraisal Report of BWDB suggested that in order to prevent rehabilitated structures deteriorating again, and so improve project Internal Rate of Return (IRR), there was a need to improve the skills and motivation of BWDB staff for O&M tasks, improve BWDB links to other rural development agencies, and improve the participation of beneficiaries in planning, construction and the O&M of infrastructure. Fundamentally, the project also envisaged embedding in BWDB the concept of O&M as being about the whole WM system rather than merely of individual structures. This in turn was envisaged by donors as assisting BWDB to shift from being a construction-oriented organisation focused primarily on flood prevention, to an organisation taking an integrated and participative approach to all aspects of WRM (and including monitoring O&M performance). This was seen to be a critical issue owing to the growing demand for, and conflicts over, water for competing uses.

The following text draws largely from Datta and Soussan's (1998) critique as to why SRP failed to live up to expectations.

3.6.5.1. Cross-sectoral integration

IWRM and the concept of a hydrological system where intervention at one point and time has implications for users elsewhere appears to have been poorly understood by staff. In particular the socio-economic aspects of WM and the reasons for it were poorly understood. In consequence BWDB staff continued to focus on the technical aspects of individual structures.

This overly technical approach was partly a reflection of the fact that the majority of senior management were engineers and that the Socio-Economic Unit continued to be marginalised. The work of this Unit may also have been misguided with its greater focus on community profiling rather than establishing procedures for accessing local knowledge and experience or challenging proposed structural solutions to water issues. The Unit failed to mainstream anything approaching a sustainable livelihoods or demand-led orientation within what was a hard technical and engineering organisational culture. In brief, despite the growing importance being attached to the human aspects of technical projects, BWDB failed to integrate the two and develop interdisciplinary working.

Additionally, SRP perpetuated the naïve thinking of many GoB agencies that, given the national goal of (rice) food security, the prime constraint to increased production was taken to be flooding during the monsoon season. Staff assumed most people were farmers and/or working in the agricultural sector, and that the best way forward for improving agricultural potential was through flood control. Project externalities with negative impacts on those with different livelihoods were discounted. Gains for the poorest, who were functionally landless, were assumed to flow from project labouring opportunities, and from increased agricultural work post-project.

BWDB's focus on technical aspects rather than system management inevitably led to conflicts between supply needs in different parts of WM systems and to the continuing occurrence of embankment cuts ('public cuts') seen as criminal damage. By contrast, later research by BWDB's Socio-Economic Unit indicated that 'public cuts' and other 'local initiatives' were

attempts by different stakeholder groups to modify project infrastructure, and so manage water regimes to suit their particular livelihood needs (see Section 2.1). Towards the end of SRP greater attention began to be taken of local hydrological knowledge in designing infrastructure but BWDB failed to apply this in order to address the deeper-seated issues of O&M.

The World Bank *Staff Appraisal Report* (1990) envisaged linkages between BWDB and other agencies (DAE, BRDB, and NGOs) which were intended to improve project impact through more demand-led interventions but Datta and Soussan (1998) suggested that there was little effective co-operation between these agencies.

3.6.5.2. Participation

The WB *Staff Appraisal Report* (1990) emphasised the need to increase the participation of local people in project planning, implementation and particularly (given donor concerns about sustainability and 'value for money') local people's involvement in O&M activities. However, staff received little training in participatory procedures.

The technical (blueprint) approach of engineering consultants and short donor timetables resulted in inattention to local needs and local knowledge, and the lack of a meaningful process of consultation and participation. 'Guidelines for Peoples' Participation' (1994) were developed midway through the project to address these failings and strengthen decision-making regarding local needs assessment, project formulation, implementation and O&M. However, these Guidelines appear to have led to a conception in BWDB of 'participation' as local people 'taking part in project activities', a conception consistent with the hierarchical nature of GoB agencies, rather than a conception of 'participation' as the 'empowerment' of local people for decision-making concerning project formulation, implementation and O&M. SRP lacked a coherent vision of what participation means.

3.6.5.3. Sustainability

There were problems with achieving any sustainable institutions for O&M which might have led to the emergence of more pro-poor IWRM. The post-SRP survey (Datta & Soussan 1998) indicated that by then staff had fully accepted the concept of people's participation in projects and responsibility for O&M but that in 60% of sub-projects there was no beneficiary involvement in O&M. Indeed, the greater proportion of local people knew little about their supposed involvement in O&M activities.

The focus on getting the physical structures in place, the lack of experience within BWDB in forming local groups for system O&M, and the time constraints of donor time-tables meant that action to build project O&M organisations was always attempted late on. In an attempt to rectify this, the responsibility for organising WUOs was delegated to NGOs in 1997. Unfortunately, their responsibilities were restricted to the delivery of specific work-packages and they generally remained hydrologically illiterate and innocent of the wider social-biophysical setting.

Following the WB *Staff Appraisal Report* (1990) the need for system management and O&M at system rather than individual structure level was accepted by senior management, and a hierarchy of WUOs (PC, WUAs, WUCs, and WUGs) to manage systems was proposed. However, the translation of this model into practice was seriously flawed with SRP developing new institutions and ignoring existing organisations involved in WRM. The post-SRP survey (Data & Soussan 1998) indicated that many supposed members had never heard of the O&M organisation they had been signed up to while the exact functions, responsibilities and roles of the different WUOs in system hierarchies were unclear.

Datta and Soussan (1998) note that, besides the formation of WUOs late in projects, another constraint to the development of O&M procedures was under-resourcing. Resource allocations to project were paltry, while as O&M did not form a part of BWDB's budgetary responsibility, BWDB staff were disinclined to accept responsibility for it.

The process for developing WUOs was under-resourced and their limited coverage suggest that they were neither replicable nor sustainable. These issues were not satisfactorily resolved during the project period.

Finally, given the confusion over the functions and roles of the different WUOs in system hierarchies, there was a lack of effective system-wide management with the different WUOs largely operating each water control structure independently. However, as Datta and Soussan state (1998); '*the failure to include all stakeholders meant vital issues were excluded from the system, and if it had worked it would have widened, not lessened, local inequalities*.'

3.6.5.4. Summary

SRP suffered similar failings to EIP. While there was greater attention to socio-economic aspects in SRP, and an increasing focus on beneficiaries and social equity, the approach of BWDB remained predominantly structural, and agriculturally focused. Any attempt to reconceptualise project design around social rather than technical dimensions of WRM was limited while the failure to institutionalise a system-wide hierarchy of WUOs with representation by all stakeholder groups meant there could be neither IWRM nor the likelihood of social equity. WM remained fragmented, with individual structures open to capture by particular stakeholders in their own interests, with beneficiaries willing to operate structures but generally unwilling to contribute to the cost of maintenance..

3.6.6. Compartmentalisation Pilot Project (CPP) (FAP 20) 1991-2000

CPP entailed the construction of embankments dividing a large area of floodplain near Tangail town into hydrologically-linked sub-compartments with the aim of enabling inter-dependent water management in each sub-compartment. Ultimately, the goal was to achieve agricultural benefits while interfering as little as possible with the fisheries and with siltation on fields.

However, CPP was about far more than the development of infrastructure for WRM. As CPP *GIS Atlas* (1996) states,

> *'The project has as main objective the development of a new approach to water management, and in particular flood management, for productive activities in floodplains in Bangladesh. Both, new technical methods and institutional procedures, with full participation of people and in full consideration of environmental aspects, need to be tested on its replicability.'* (CPP, 1996).

More ambitiously CPP also intended to put in place local and regional institutions to facilitate local people's participation in the design and O&M of decentralised WM systems, with in particular a more direct link between received benefits and required contributions (CPP *Interim Report,* 1992).

3.6.6.1. Cross-sectoral integration

The project was identified as a multi-disciplinary project to test IWRM and recognised the need to access local knowledge and information on local WM practices. However, various reports suggest the ambitions of CPP as regards cross-sectoral resource integration began to go awry at an early stage.

The CPP *Interim Report* (1992)*: Annex 1.3: MDSC Survey; Main Volume* attempted to uncover socio-economic issues within the sub-compartments. The survey was to be used in planning and design and contributed detailed local knowledge concerning drainage routes, potential interventions etc. and noted that in a number of places there were local WM initiatives (re-excavation of *khals*, building of temporary cross-dams, and 'public cuts'). On the basis of this

PRA, the survey-team made suggestions regarding sub-compartment boundaries, *khal* re-excavations and the siting of culverts and bridges.

However, because CPP was conceived by 'experts' (those external to the human-activity system), it appears that many options were discounted in order to test the compartmentalisation concept. The project considered it necessary to focus on WM issues, and conceptualised these primarily as FCD 'water issues for farmers'. In doing so it pre-judged WM and NRM as the main issues in people's livelihoods, while downplaying farmers' and other stakeholders' interests and multiple livelihood strategies. From a Sustainable Livelihoods perspective, the project was flawed by its super-ordinate concern with IWRM. This 'disempowered' local people, negatively affected the livelihoods of some, and potentially had implications for their further participation in project implementation and post-project O&M.[105]

A different understanding of the complexity of livelihoods (e.g. with a greater proportion of small farmers relying on other occupations during the monsoon season) might have led to a greater appreciation of their (non-agricultural) needs, and a different make-up of WMCs. The impact of flood depth was conceived of as primarily negatively affecting agriculture and farmers, rather than as having (positive and negative) impacts on different stakeholders. As such the CPP was sectorally biased towards agriculture and, while IWRM might have been developed, integrated floodplain management (IFM) was not.

3.6.6.2. Participation

CPP wished to be as inclusive of the needs and preferences of different primary stakeholder (interest) groups as possible. To that end it was underpinned by principles of inclusivity and participation by stakeholders, and developed Guidelines (the CPP 1994 *Guidelines for People's Participation*) to achieve that.

However, as discussed in the *Interim Report* (1992: Annex 5), BWDB's structure had led to 'a rich history' of sluice gate committees, irrigation committees etc. as 'isolated engineering events'. These weaknesses were to be addressed through the establishment of procedures and systems for participation by the various categories of Project Affected Persons (PAPs). Unfortunately, it appears that different agencies (and perhaps CPP staff) had different understandings of what 'participation' meant.

Despite CPP's theoretical attachment to participation as 'empowerment' at the beginning of the project there appeared to have been considerable slippage towards understanding participation as 'getting people involved in project activities' - particularly in system's O&M. The need for the project to test the compartmentalisation concept appears to have led to the effective disempowerment of WMOs during the project.

Fishermen and Landless made up 18% and 2% respectively of ChWMCs, and 8% and 3% respectively of the membership of SCWMCs. The sectoral bias towards agriculture, and farmers then, had the potential for being carried over into action via WMO decision-making.

3.6.6.3. Sustainability

CPP identified the failure of O&M under previous projects as having been due to a lack of involvement and responsibility by local stakeholders and a lack of accountability by participating agencies towards them. The CPP (1992) *Interim Report: Annex 5* laid out a vision in which the end product of CPP would be devolved systems for IWRM in which various government agencies and representatives of local communities would take up new responsibilities. CPP also

[105] This perception is born out by CPP's *Final Report* (2000) *Institutional Development and Water Management* which confirms that in Phase 1 the lowest tier of WMO (the ChWMC) consisted of farmers and NGOs representing landless, women and fishermen. These were reformed in the Final Phase (1997/98) to take greater account of agricultural needs according to land height (inundation depth), but also included women and fishermen. In doing so the project privileged water management for different farmers over that for other stakeholders.

had the ambition of putting in place local and regional institutions to facilitate local people's participation in the design and O&M of decentralised WM systems. The proposed composition of SCWMC's included representatives of primary stakeholder groups, with different types of farmer (based on flooding depth of their land), fishers, landless and women, and secondary stakeholders (GoB agencies, NGOs and LG). The SCWMCs were identified as the public forum for settling disputes and as a bridge between primary and secondary stakeholders within LG.

The *Interim Report* identified the failure of O&M under previous WM projects as being due to the lack of involvement and assumption of responsibility by the various categories of PAPs, and the lack of accountability of participating agencies to them. To shift the responsibility towards primary users, the SCWMCs were to have a central role in managing and controlling budgets.

Unfortunately, a gap existed between CPP's identification of reasons for the failure of previous BWDB projects to establish sustainable WMOs, and CPP's ability to overcome these. The 1994 G*PP* notes that the involvement of all interest groups in O&M would be crucial to sustainability of CPP. The experience and short-comings of SRP were acknowledged but the inputs of most local stakeholder groups were discounted early in the project cycle. This is likely to have undermined stakeholder interest in taking on O&M.

An appraisal of WMOs revealed, however, that the objectives of the WM system were not well known to members and that the needs of low and highland farmers were not being specifically addressed. The CPP (1997) report indicated that these deficiencies were being attended to, yet the urgency to demonstrate the compartmentalisation concept led CPP staff to assume overall control of WM. In effect this left WMCs and individual WM operators (*khalashi)* open to 'capture' by more powerful interest groups and structures more vulnerable to tampering.

The *1992 Interim Report: Annex 5: Institutional Aspects* recognised that institutional arrangements for sustainable WM would be threatened unless CPP could co-ordinate the inputs from the large number of actors involved (e.g. BWDB, BRDB, LGED and NGOs) but it appears that CPP under-estimated the difficulties involved in structuring agency relations given bureaucratic inertia, competitiveness and resistance to change[106].

The CPP (2000) report states that technically and economically the CPP project was replicable but that 'Bangladesh is not a society in which user participation is the norm', and that BWDB typically operates in a top-down, hierarchical way. While CPP might have put in place a WMO structure, it did not deal with the deeper issues of primary and secondary stakeholder relationships (the political economy of power), rights and representation, roles and responsibilities (and means of enforcement), and resourcing (in relation to costs and benefits for different stakeholders) which influence institutions' ability to function effectively or sustainably.

The lack of an exit strategy and of up-scaling project experience via GoB agencies is notable. The *Interim Report (1992: Annex 5)* had suggested that CPP was seeking to change agency practice by drawing them into the project and establishing co-ordination with them. In this CPP appears to have singularly failed.

3.6.6.4. Summary

While CPP did not indicate much optimism concerning sustainability of institutional arrangements, it did not investigate the reasons for their failure. CPP did managed to organise the 'participation' of interest groups in project activities and to arrange (on paper) some division of roles and responsibilities. However, it did not succeed in 'empowering' these groups or their

[106] The project also probably underestimated the hidden costs and time-input local people were expected to contribute to WMOs, the disincentives to poorer people's participation, and the potential for institutional 'capture' by elites and/or sectoral interests.

representatives, nor in practice did it establish roles, responsibilities and accountabilities for and between all actors.

In short, the project failed to break the mould in which GoB agencies understood 'participation'. In doing so it stuck closely to the *1994/5 Guidelines for People's Participation*, which many later recognised as flawed. The nearest CPP came to empowerment was in seeking to incorporate interest groups' views in the planning and design of system infrastructure. While this was skewed towards the needs of farmers and elite, there may, however, still be the opportunity for these elite to take account of minority interests given support by UP and GoB for pro-poor system management. The inclusion of powerful advocacy NGOs in the higher tier WMOs would also help to promote this. At present, the *Guidelines for Participatory Water Management* (2000) appear to preclude this.

Section 4

4. Synthesis and Alternative Approaches to IFM

This section attempts to identify suitable institutional arrangements for IFM by synthesising the key findings of research activities within this project and, where appropriate, observations from related work. The emphasis is on locating opportunities for improved IFM and the potential of adapting existing approaches or utilising new "political spaces" to help deliver pro-poor and sustainable outcomes.

Analysis of local "processes" and the pro-poor outcomes of IFM interventions (Sections 2.3) suggest that modes of interaction (including the identity of the facilitating agency, the approach and the desired purpose) can be as significant in shaping outcomes as the formal, structural design of the institutions themselves. While local RMI design may be important, the *de facto* operation of these RMIs tends to evolve towards rather "fuzzy" arrangements that perhaps reflect more general issues relating to project approach and starting conditions such as the social or environmental context. Given the significance of the character and function of IFM interventions then, this discussion extends beyond considerations of institutional structures in isolation to include overall strategies and approaches.

4.1. The key findings summarised

4.1.1. National, GO & sectoral issues relating to cross-sectoral and pro-poor IFM

4.1.1.1. Current donor plans and activities of relevance to pro-poor IFM

Donor development strategies for rural Bangladesh have tended to move away from natural resource management in isolation to emphasise the social sector and access to non-farm employment opportunities. As a result, the emphasis has been on the provision of health and education programmes, livelihoods diversification and access to credit.

With respect to sectoral themes, agricultural and food security targets have largely been met by a combination of intensification, HYV and FCD/I schemes. However, livelihoods benefits from agricultural expansion have largely accrued to landowners and as a result donors have placed less emphasis on the WM sector since FAP.

In contrast, as a provider of livelihoods opportunities to many of the poorest in rural Bangladesh, the fisheries sector is the most significant renewable NR sector in which donors operate. With an acknowledgement of the complexity of IFM, however, the approach has been to promote Guidelines designed to promote participation in floodplain development and to encourage a cross-sectoral approach within government. The success and uptake of these Guidelines are likely to be highly dependent on local formal and informal institutions and processes, however (see below).

At national level, government frameworks and the culture of the civil service has shown remarkable resistance to change but experience within the private and NGO sector has demonstrated that incentives for institutional change do, in fact, exist and that the devolution of responsibilities for service delivery can create new incentives for better performance.

4.1.1.2. Institutional reform and livelihoods

Since the 1980's and early 1990's, donors have turned their attention to the wider governance issues that underpin service delivery and appear to be bottle-necks or opportunities for up-scaling positive change. In this respect, the PIPs box (Policies, Institutions and Processes) of the SL framework has proved useful in drawing attention to the "environment" in which the poor are situated (if not tools to analyse performance and potential) and of ways to approach subsidiarity devolution.

As donors switch their attention back to government there is increased pressure for change. Within the fisheries sector, for instance, the DoF must now expand its remit to include poverty alleviation and realign its role and strategy accordingly.

4.1.1.3. Local government institutions (LGIs)

Although decentralisation remains attractive to donors there are few indications from GoB and donors themselves on how the process should proceed. To date, progress has focused on the deconcentration of functions without a parallel devolution of power. This has done little to undermine the hierarchical, patron-client culture prevalent throughout the civil service.

In order to expand beyond the replication of blue-print approaches to rural development and to develop capacity for responsive and adaptable interventions it is likely that LGI such as the Union Parishad may require additional authority and fiscal responsibility. Again, the task will be in designing local institutions which might draw on the leverage and influence of locally influential individuals while minimising the incentive for rent-seeking.

4.1.1.4. The NGO Sector

The NGO sector in Bangladesh is extremely large and complex with the majority of NGOs now co-opted by donors to a service-delivery role. There is real concern now that larger NGOs are developing a similar form of hierarchical control to government agencies themselves while local performance and the skills of staff appear to be extremely variable. The majority of local NGOs operate credit schemes and demonstrate little apparent capacity, or incentive, to acknowledge and adapt to the local, informal institutional setting.

4.1.1.5. Communities and community-based organisations (CBOs)

DFID and the World Bank continue to emphasise the role for rural-based organisations in service provision and to strengthen the voice of poor citizens. In the case of IFM in Bangladesh, GoB is taking CBOs seriously and including them within long-term and cross-sectoral plans such as the GPWM (2000) of the Ministry of Water Resources.

The longer term pro-poor development potential of CBOs is likely to be a reflection of their sustainability, however, and new institutions such as these are likely to be threatened by existing institutions (power relations etc.) or reduced interest and incentive for participation over time (see below).

4.1.1.6. Sectoral issues

Several key institutional issues operate locally but are repeated across the country. Feedback within this project and elsewhere has questioned the sustainability and equity of the current jalmohal leasing system. It can be argued that jalmohal lease values could be brought into line with their biological capacity and that lease values should be kept in check to prevent resource mining. However, evidence from CBFM and FFP in open access rivers suggests that linking lease values to the ability of primary stakeholders to pay, and/or to biological productivity, would not necessarily redirect benefits away from elites to poorer beneficiaries.

If RMOs are to provide a key function in project and post-project fisheries management then the process of their development, the time required and the skills and agencies deployed, requires greater thought (see below). Currently, project staff and NGO support tends to be withdrawn at project end, while GoB agencies have a poor record and few resources with which to continue technical support and to enforce rights.

4.1.2. Local level and RMI issues

4.1.2.1. Institutional arrangements in local, informal IFM

'Public cuts' in *bundhs* to manage surface water levels appear to be quite common in rural Bangladesh. Although a range of stakeholders may be involved, it is likely that these interventions are not purely altruistic (participants have more to gain from action than inaction and landowners appear to dictate the timing and position of the cuts).

The opening and closing of 'public cuts' and crossdams tend to follow predictable and seasonal patterns - either protecting *boro* crops from inundation, providing fishing opportunities or irrigation - but these local initiatives are significant for several reasons. Firstly, they demonstrate that communities can, in fact, mobilise collectively for small FM interventions and for larger scale works such as the construction of new embankments. This latter requires the initiative of a few influential (and rich) farmers who are able to mobilise others collectively and organise the necessary contributions (labour and money) to achieve the common goal. In some cases, there is evidence that these allegiances or committees have developed into permanent organisations to ensure regular maintenance of water management structures. In brief then, it is specific elite, with a collective interest in resolving a specific problem at a particular time and place, who mobilise the necessary resources and labour, poorer people normally have an interest in the problem as 'clients' of their 'patron'. Secondly, in most cases, there is little need for formal negotiation between these stakeholders as to when a 'cut' should occur or who should be responsible for it. Rather, as "routinised practice", none of this needs any formal institution to organise the intervention and the overall outcome of these local initiatives can be considered a form of IFM.

Finally, these local initiatives provide an interesting contrast to project-designed RMIs. In the former case, groups are making WM decisions on a regular basis and informal basis, whereas WM and FM RMIs (normally formed by NGOs) have frequently proved unsustainable.

4.1.2.2. Process documentation and the adoption of participatory approaches

The local perception and understanding of RMI performance and relevance might be expected to impact the sustainability of new institutions through the degree of support and compliance to project/RMI activities and decisions[107]. Process documentation revealed that the level of awareness of RMI purpose and procedures during project interventions was generally poor. Decision-making tends to be focused in those groups that can afford the opportunity costs incurred while non-participants, and especially non-target groups, tend to receive confused messages regarding project purpose and benefits. In most cases, post-project institutions were apparently defunct. In the case of water sector projects this related to the limited capacity of BWDB to facilitate groups once project funding had finished. It was hoped that participation during the project life-span would lead to sustainable WMOs and the maintenance of physical

[107] This does, in fact, seem to be borne out by contributions made by the CBFM project leader which suggest that institutional strengthening occurs where large number of local stakeholders are directly involved in the project (see Section 3.2.2; Box 3.2.1).

infrastructure. Because benefits are accrued mainly to landowners, however, this review has not uncovered any fully-functioning, post-project WMOs as they were intended.

In the fisheries sector, the OLP institutions are still functioning six years after the ending of external project support. This sustainability appears to be because the key actors in baor management (DoF staff, NGO credit provider and the primary stakeholders within the Lake Management Groups, themselves) are locked into a mutually-beneficial circle of production and funding. DoF has an additional, reinforcing role in legitimising the management groups, locally, and establishing their formal legal status. This assurance and stability is reflected in the ability of the Groups to retain membership within small factions (membership is fixed and tends to move between family members) and remain viable. However, the production focus of the stocking intervention has tended to attract influential stakeholders rather than the poor and there is evidence at the site examined that Muslim *mastaan* now occupy key roles within the "Hindu" management groups. In addition, the selection process, by design, excludes large numbers of local residents from the outset. The OLP case provides some key insights to the settings and approaches that might build sustainable institutions and reminders of the likely problems and weaknesses associated with strong and rigid RMIs in production-oriented interventions.

The NGO-facilitated interventions examined represented a much broader spread of activities designed to demonstrate improvements across a range of livelihoods groups. Although RMI structures were intended to represent these different stakeholders, it was possible that the project message was being somewhat muddled - as at the SEMP site with its relatively open, "environment" remit.

Informal institutions to make and enact simple IFM decisions as "local initiatives" appear quite successful in that they are long-lived and annually repeated and are of direct benefit to the poor. Their existence probably depends on a combination of social (social capital or homogeneity, for instance) and biophysical characters (perhaps less productive or less easily privately demarcated areas that do not attract alternative and intensive uses, such as at Laksmi Proshad Beel, for instance).

While biophysical and scale issues can be significant (the limited success of CBFM to introduce fisheries conservation activities in open access rivers as opposed to closed beels, for instance) the interrelated character of the sector, facilitator's skill, objective and approach adopted seem to be as significant in shaping outcomes[108]. In this respect the review and typology of participation in the case studies, revealed four basic approaches to realising IFM change according to motive and intended outcome. The review identified a spectrum of participatory approaches ranging from the sector-specific and *"passive"* or *"consultative"* approach to the *"interactive"* forms of participation adopted by NGOs for cross-sectoral activities and long-term institution building. The *"self-mobilisation"* within local initiatives is interesting here, representing an ability to undertake mutually-beneficial action without facilitation, and its potential will be discussed below.

Finally, the formal registration of RMIs with the Department of Social Welfare or other relevant GOs does not appear to be a crucial precursor for long-term success. Although the Water Management Associations and Water Management Groups of the Khulna-Jessore Drainage Rehabilitation Project and other BWDB interventions have been registered there are insufficient incentives (and funds) for continued decision-making and group activities.

4.1.2.3. Analysis of pro-poor outcomes

[108] Although biophysical and scale issues do shape outcomes, it appears that the related issue of the character of local property rights regimes may be more significant. Paul Thompson suggests that open beel sites may embrace and enforce CBFM rules and activities where the right of access to common property is widely accepted. Conversely, project activity at well-bounded and smaller water bodies may be constrained by disputed or confused access rights and local conflict. (See Section 3.2.2; Box 4).

This review encountered some difficulty in disentangling the pro-poor impacts of institutional structures from project interventions as a whole. Principally, it seemed that the approach of the projects (the activities undertaken, the sectoral focus etc.) influenced positive or negative outcomes for the poorest. As might be expected the project case studies were not equitable in terms of access to benefits, either because the projects favoured landowners (as in the case of the water and environment sector cases) and/or they attracted the more entrepreneurial individuals able to invest time (all project cases). According to poor respondents, the environment sector case study was providing subtle, mid-term, benefits to the poor through seasonal controls on the harvesting of beel resources, which produce their own short-term, negative impacts on the poor.

Again, the local initiatives provide an interesting contrast, with all stakeholders apparently enjoying benefits from cooperation. The setting of Laksmi Proshad Beel might be significant here. The limited geographic scale and the overlapping management requirements of local residents, ensures collective action through individual concern rather than altruism. The benefits available to both farming and fishing interests through collective decision-making and water management also overlap the management requirements of the range of local stakeholders, generally (below).

It seems likely that most water sector interventions, especially those with large-scale hydrological impacts, have wide-spreading livelihoods implications that may or may not be pro-poor. The CPP intervention at Tangail, for instance, altered the landscape physically, requiring local poor to re-align their livelihood strategies. In this case it was unlikely that these changes were forecast but, in retrospect, changing agricultural patterns will provide opportunities and problems to residents while the engineering structures, themselves, will alter fishing opportunities and river communications for the poor.

It is widely acknowledged that production-oriented interventions risk attracting newcomers and losing potential benefits to powerful groups and interests. Process documentation and the analysis of pro-poor outcomes suggests that the negative impacts on the poor are often more complex and subtle than exclusion from benefits, however. In particular, there is evidence that the poor may face new obstacles to securing their normal access to resources and that this may be particularly severe at certain times of the production cycle. As inputs are provided and the stakes rise, traditional access may be denied and violence can ensue. This was obvious at the Jalmohal Project case study and has become a serious problem at several of the open-water stocking sites under the Fourth Fisheries Project (Aeron-Thomas, 2003)[109].

4.1.2.4. Local stakeholder success criteria

Feedback from primary stakeholders on the type and form of management required provided some interesting contrasts to the approaches to IFM normally promoted by external agencies. Firstly, the desired management objectives related to general livelihoods considerations, such as the availability of dry season water for both farming and fishing activities. Although responses were sometimes resource-specific, improvements were often non-sectoral in the sense that desired improvements would benefit a range of stakeholders. Only RMI members regularly cite project-specific management objectives and their feedback was more technical and focussed as result.

[109] At some of the sites reviewed within the Beneficiary Impact Monitoring of the Open Water Fisheries Component of the Fourth Fisheries Project, target groups were found to be severely impacted: *"….the cost of the project, in terms of fishing opportunities forgone, was largely borne by the target group that the project was committed to benefiting*." (Aeron-Thomas, 2003).

With respect to desired institutional requirements, human characters such as “honesty”, “wisdom” and “fairness” were frequently identified. Constitutional issues (voting procedure, representation etc.) were predominantly quoted by RMI members.

It is possible that the emphasis on perceived fairness is overlooked in considerations of RMI design. Even if procedures are democratic and fair, feedback here and elsewhere suggests that a good understanding of these processes is rarely achieved outside of the members, themselves. It may be important to dedicate sufficient time and effort to publicising RMI procedures and in keeping these as public and as simple as possible.

4.1.2.5. Up-scaling requirements

Local level factors appeared to provide the key opportunities and constraints to up-scaling (regional-level issues or bottle-necks appear to be less significant in shaping outcomes in the NRM context). Project leader feedback can be broken down into three basic types of observations and recommendations;

- the performance and capacity of practitioners (especially NGOs)
- the potential role of existing institutions and LGOs
- the focus and approach of interventions (activity type and distribution of benefits).

The role of NGOs as partners in development initiatives requires greater scrutiny. Experience within the CBFM project reveals that NGO practises are, in fact, relatively rigid, with each partner adhering to a basic blue-print for engagement with stakeholders and development of activities. The limited capacity to adapt to different contexts probably relates to a shortage of sufficiently skilled local staff. NGOs have a tendency to use the most skilled staff for several functions but RMI formation and facilitation requires considerable manpower and expertise. The task of NGOs in building transparent institutions is made harder by resistance to change and existing affiliations between influentials and other institutions (e.g. with local DoF staff).

Several of the project leaders emphasised the need to incorporate LGOs and other RMIs. In the context of the water sector projects this may mean identifying formal roles and responsibilities for the Local Government Engineering Department or in identifying or consolidating existing Water Management Organisations for participation in project activities.

Although the Union Parishad (UP) may defend the interests of land owners and the elite, previous experience suggests that it is important to attempt to gain the support of this institution. Public fora can operate to sensitise primary stakeholders to the role of the UP and introduce a degree of public pressure for their support of collective decisions and activities[110].

In addition, there may be pre-existing and informal institutional arrangements that may support new IFM options. It was noted that the ability of local stakeholders to enact decisions and to prevent the co-option of benefits by outsiders sometimes relates to the presence of traditional and pre-existing common property access arrangements. This appears to be borne out by feedback from local initiatives at Laksmi Proshad Beel, for instance, which function as long-lived and mutually-beneficial actions, independent of external facilitation and, in part, resistant to external threats.

The identification of potential local partners and establishing their precise roles requires great care. The dubious local performance of the National Fishermen’s Cooperative within the Jalmohal Project suggest that it is insufficient to devolve responsibilities to umbrella organisations without careful regard to their capacity or will to represent the poor, for instance.

[110] This is a key function of the Participatory Action Plan Development (PAPD) implemented within projects such as CBFM, MACH and Project R8103.

Finally, the *type* of IFM intervention (mode of interaction, intended outcome etc.) will impact sustainability and prospects for uptake. Whilst a blue-print approach to implementation can prove efficient for the facilitating agency, several statements by the project managers suggest that the lack of flexibility in approach undermines sustainability by reducing the local relevance of the intervention. It appears important to investigate novel relationships and approaches to ensure financial feasibility and to broaden local support.

Crucially, IFM institutions and activities must attempt to represent a broad range of stakeholders and attempt widely distributed, tangible or visible benefits. Experience within CBFM, suggests that early community-wide success can consolidate RMI performance and future activity very effectively. Once again, sectoral and production-focussed activities such as stocking often fail to secure wide support because they are easily co-opted by wealthier factions.

4.1.2.6. RMI efficiency (transaction costs)

The review of transaction costs within five distinct NRM projects revealed that considerable time and money were expended by individuals to maintain and manage new forms of management and management institutions. This investment in management may be hidden (the opportunity cots of expending time in meetings and forgoing normal income-earning activities, for instance) or purely financial (reduced access to the resource or penalties incurred for infringements). A large proportion of these costs were borne by primary stakeholders (the direct resource users rather than committee representatives, for instance) and of these, the costs of maintaining information on membership and the resource and the costs of enforcement were particularly high. It appears that these costs are highest where project activity is intensive and large numbers of participants are encouraged to apply radical management changes (CBFM costs within a discrete waterbody were much higher than the extensive and declining flood management project at Dampara, for instance).

Transaction costs theory indicates that elaborate and costly forms of decision-making and enforcement are likely to break down unless these costs are compensated by overall returns from the management system in question. Although the study was able to break down the costs expended on gathering information, decision-making and operating the management system (enforcement and guarding etc.), analysis of the significance of these costs was hampered by a lack of knowledge of the productivity at the sites and it was not possible to provide general comments on suitable institutional design and approaches for the future.

4.2. Suggested alternative approaches to IFM

4.2.1. National opportunities

Project review and interview with project managers suggests that the key players for up-scaling pro-poor and sustainable IFM nationally, operate at the meso to local-level. The NGO sector is likely to continue its activities at grass roots level but it should be hoped that this sector will adopt new methods of working in future. In particular, there is a need for greater vertical linkage and a need for meaningful partnership with government and the private sector. In addition, if successful IFM is to be implemented, it is important that change (behavioural, management and institutional change) can occur outside of the project arena and in this regard, the potential role and capacity of LGIs must be developed.

With respect to the NGO sector, there has been a tendency towards sector-specific interventions or worse, a tendency to develop patron-client relations with local people as credit providers. Where NGOs are responsible for community organisation and RMO-formation, however, it may still be necessary to increase their stake and their commitment to performance by establishing

long-term contracts. This may also enable the NGO to establish a meaningful, facilitatory function between primary stakeholders and LGIs. It will be necessary to build in mechanisms and practices that prevent corruption and that resolve conflict. Tools such as PAPD can ensure that these mechanisms are legitimate and widely supported. Finally, given the limits of national NGOs in up-scaling (in particular, the limited numbers of skilled field-staff) it will also be necessary to explore the potential of locally-based RMOs (see below).

With respect to LGIs, devolution will require a change in behaviour and practice of government agencies such as DoF and BWDB and a movement from technical support to projects towards a more facilitatory and supportive role. There is currently pressure for this change (see DoF 2002). In the IFM context, projects such as MACH are envisioning a crucial co-ordinating role for LGIs but change on a national scale may require LGI partnerships with communities and public sector agencies such as BWDB, DoF, DAE, BRDB, DoE and LGED.

With respect to "rolling-out" good management practice, it is possible that certain key concepts and issues can be communicated to the range of GO and NGO stakeholders. Although a blue-print approach to IFM is unlikely to be useful, certain key principles for pro-poor and sustainable institutions for IFM can be identified to provide guidance (see Annex B-vii: Discussion Paper 2: Local Resource Management Institutions – common problems & potential solutions).

In particular, there must be a re-appraisal of the perceived role of the elite in rural development so that the opportunities they provide as advocates of change are properly tapped. Practitioners must be made aware of issues surrounding the elite. There is an extensive literature describing the negative impact of powerful interests on NRM interventions, both globally and in the context of Bangladesh[111]. However, the work of Bode (2002) and others suggests that it is possible (or, in fact, essential) to work *with* local political realities and local custom and behaviour. Greater effort should be applied in understanding these informal institutions and in incorporating them into new legal frameworks. Locally, it is necessary to consider the role of elites within CBOs and RMOs on a case-by-case basis. Bode (ibid) suggests the development of tools such as institutional mapping to represent the networks of supportive and influential actors in any one vicinity.

4.2.2. Local level and RMI opportunities

NGOs tend to be contracted according to their record of group-formation, but they can be "*as aloof to local initiatives as many GoB agencies"* (Duyne in EGIS, 1998). One of the key opportunities that seems often to be overlooked is tapping the local legitimacy and knowledge of pre-existing, informal institutions. Local, formal institutions, too, can act responsibly given appropriate incentive and there are encouraging experiences of UP chairmen acting on behalf of their constituents to link local and external resources.

The elite need to be taken seriously, not just because they can obstruct, but because they can facilitate. In addition, where local (endogenous) initiatives do operate, they are usually led by traditional rural elite on behalf of a heterogeneous set of stakeholders. Since these repeatable

[111] Agrarwal and Gibson (1999) provide a critique of the "community" and emphasise the need to explore the role of power in NRM. Varughese and Ostrom (2001) review the potential impact of heterogeneity in collective action with respect to forestry management in Nepal and empirical evidence from other contexts. Vedeld (1997) investigates the role of power differentials (particularly wealth) on institutional performance in NRM and found that the collaboration of elites with others broke down where institutions and interventions attempted to challenge or cross-cut agriculture and pastoralism interests. In the Bangladeshi context, Rozario (2002) provides a detailed review of the function and impact of the power differential as represented by gender, while Toufique (1997) explains the role of *mastaan* in commandeering new management regimes. In this case, new leasing arrangements were circumvented by "non-user" elites re-asserting power and physical control of the jalmohals.

forms of IFM with are likely to outlive projects there is a need to investigate their potential, case-by-case.

The following section attempts to outline common problems with IFM-related interventions at the local level. Because these problems are interrelated, it might be sufficient to address key areas of the project cycle (or, more accurately, the cycle of intervention).

The range of negative performance characteristics of IFM initiatives and institutions can be reduced to two inter-related and recurrent themes;

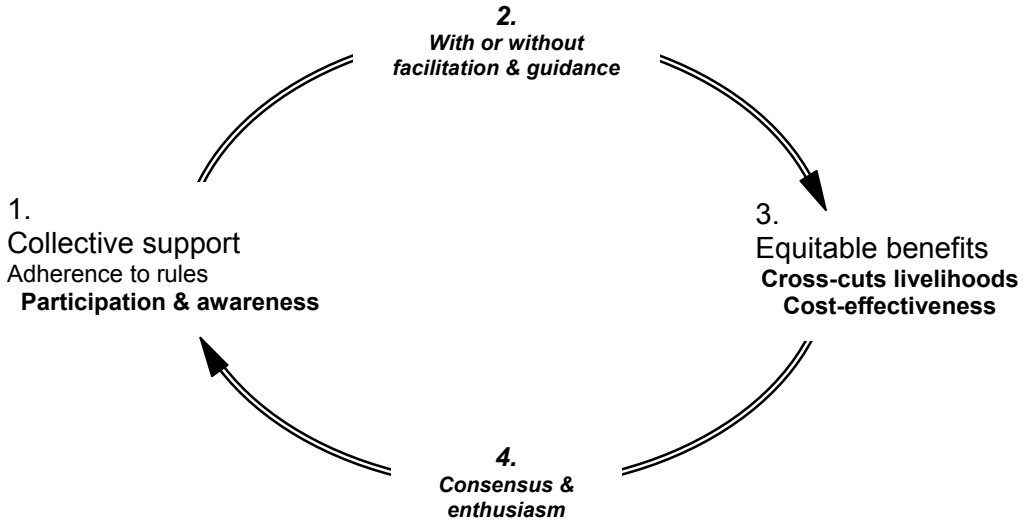
i.) *Low perceived relevance and legitimacy of new activities or RMIs*
(resulting in the inability to sustain participation of relevant interest groups)

ii.) Limited capacity to achieve equitable access to benefits from new IFM

The two themes are intrinsically linked because the perceived relevance of IFM approaches to any one stakeholder group relates strongly to the benefits enjoyed (or impacts endured) by that group. Wider participation may result in expanding the range of potential beneficiaries[112].

These inter-related themes are expressed diagrammatically in a simple model (Figure 6). Although the model risks being tautologous and its component parts being self-fulfilling, in reality, the various stages overlap or merge at any one time, and the model is used here primarily to frame the discussion below. The key principle is that the character of participation, local and external support, and the outcomes realised, are intrinsically linked so that improved IFM arrangements would attempt to tackle these aspects simultaneously and holistically. In addition, there are several key precursors necessary for desired and sustained change. Observations made during field review and interview with project staff suggest that the level of local support and understanding or awareness of initiatives is crucial.

Figure 6 **An idealised cycle of inclusive and pro-poor IFM.**



[112] These two themes represent undesirable outcomes from a pro-poor development perspective but, paradoxically, may not impact the sustainability of new IFM institutions. Community-wide feedback at the OLP site at Hamidpur, for instance, demonstrated exclusion and general disinterest in relation to the performance of the Lake Management Group, while project benefits were certainly not enjoyed by the majority of local residents. However, in this case, local legitimacy is achieved via DoF and the formal, legal acknowledgement of the structure and role of the RMI.

4.2.3. The model – the received wisdom

- Stage 1.

The local initiatives at Laksmi Proshad Beel and elsewhere suggest that collective support can be key to achieving long-term and mutually-beneficial IFM arrangements. In turn, participation in both local initiatives and externally-facilitated interventions engenders a personal stake and interest in the success or failure of outcomes so that operational or RMI (constitutional) rules are more likely to be respected and adhered to.

- Stage 2.

These collective agreements can then be enacted independently (as in LIs) or with external support and facilitation by relevant GO or NGO expertise. This support may be technical and advisory or may relate to overcoming local social or political obstacles (securing access and ownership of local sites, overcoming disputes etc.).

- Stage 3.

If the mode of management and the activities undertaken are well designed (by primary and secondary stakeholders) and properly implemented, then we would hope that IFM will provide sustainable benefits, accessible to a broad range of users and interest groups. Ideally, these benefits should cross-cut livelihoods groups so that conflict or inequitable outcomes are avoided (see Table 17 below). In addition, the benefits, and the mechanisms to provide them (RMIs, special leasing arrangements, registration, secondary stakeholder or GO support etc.), would be self-sustaining and cost-effective. In the idealised model, the benefits realised by each participant would outweigh the transaction and opportunity costs incurred by participating.

- Stage 4.

Finally, the visible and widely available benefits of the IFM initiative would engender enthusiasm and support for the IFM strategy and consensus would ensure continued RMI function and actions.

4.2.4. The reality – problems and potential solutions

The case study reviews undertaken within this project demonstrated variable performance at each stage of this model. In particular, there was little evidence of collective support for the IFM interventions and, critically, little indication that equitable or sustainable outcomes were achieved.

- Stage 1.

The lack of collective support for the IFM projects might be attributable to two main factors, each representing a different stage in the hypothetical cycle of Figure 6. Firstly, wide local support may be lacking prior to interventions because project activities have limited perceived relevance or potential (this may be the case even when interventions do, in fact, have potential). Secondly, support to continue or repeat the approach may be lacking given early outcomes and impacts (negative effects incurred through seasonal closures, gear bans etc.).

Limited support appears to have several impacts. Where RMIs exist, decisions and rules become difficult or costly to enforce and conflict may ensue. This appears to be the case at the Jalmohal Project site at Barbila where poor fishers are physically and violently excluded from the fishery in accordance with local project rules made by an unrepresentative elite consisting of NFC members and their cronies. In addition, lacking support will inhibit any attempt to build locale-specific institutions and to identify suitable local activities through participation. Where

participation is intended to help design sustainable institutions for post-project activity (operation and maintenance within the water sector, for instance) this opportunity may be lost if certain stakeholders are disenfranchised or alienated. Although sector-specific interventions may proactively engage the full range of user groups, there was evidence from each of the water sector case studies that fishers lost interest in activities as their representation and influence within decision-making platforms declined.

- Stage 2.

As endogenous interventions, the local initiatives were the only examples of IFM functioning independently of external support. The other case studies demonstrated a spectrum of facilitative roles by GO and NGO bodies ranging from the identification and organising of project participants by pre-defined criteria to processes of demonstration and negotiation with stakeholders.

A recurrent theme is for the level of "community"-facilitator interaction to decrease with increasing project age. In the water sector this occurs because participation and negotiation is an early phase of the project cycle in its own right. In the fisheries sector, as stocking activities become established, facilitation becomes less intense and interaction is reduced to the collection of "taxes" (lease payments) or to monthly meetings with participants. In other contexts, NGO-facilitated projects such as CBFM and MACH conduct demonstration and village workshop activities early on to sensitise local residents to project purpose etc.

The IFM interventions documented within this project have tended to focus on early participation as a means to achieve "desirable" (and pre-defined) outcomes. Desired outcomes may relate to the maintenance of introduced modes of production (fisheries sector), new infrastructure (water sector) or environment-focussed interventions such as habitat restoration. However, a key finding from interview with project leaders was that the level of support for new initiatives which attempt inclusion and long-term benefits (i.e. CBFM, MACH and SEMP) relates to the level of understanding of project objectives, institutions and activities. In turn, process documentation revealed a disparity between stated project objectives and the understanding of local residents, particularly non-RMI members.

- Stage 3.

This stage represents the objective of IFM in a pro-poor development context. It is acknowledged, however, that, depending on the expertise and remit of the implementing agency in question, this may not be the overriding objective of the initiatives studied. However, process documentation, analysis of the pro-poor impacts of IFM and reviews of other projects elsewhere, highlight the difficulty in delivering benefits to poor stakeholders. Again, there are several interrelated issues that potentially obstruct pro-poor and equitable outcomes. It may be possible to tackle (or at least to acknowledge or accommodate) each in turn.

i.) The issue of elites and power structures

The problem of resource capture by elites, newcomers and entrepreneurial individuals (discussed above) and the role of local power relations in shaping access to benefits from improved IFM is profound.

However, it is important that these power structures are acknowledged by GO and NGO facilitating agencies in two key regards. Firstly, IFM partners and participants should be aware of the ways in which activities or projects have a tendency to evolve. In particular, facilitators should be wary of production-oriented activities that require large investments of capital or are, themselves, strongly subsidised with respect to access (external help in securing property rights, lease of jalmohals etc.) or inputs (credit, infrastructure, equipment or fingerlings, for instance). These forms of assistance may easily be commandeered by small, influential groups because

inputs of time and money are more efficiently organised by wealthier groups able to absorb the accompanying transaction and opportunity costs[113].

Secondly, these local power structures and alliances, as informal institutions, are ubiquitous and interact with and influence formal institutions such as the Union Parishad Committee or project/non-project RMIs throughout Bangladesh. Rather than attempting to circumvent this *"net of power relations"* (CARE Bangladesh, ibid) it is important for practitioners and other stakeholders to acknowledge their role and attempt to develop new ways to accommodate or direct their influence towards pro-poor activity. It may be counter-productive to alienate landowners or obstructive Union Parishad officials, for instance. PAPD can explore potential ways to meet the interests of primary and secondary stakeholders in order to gain the support of these powerful local brokers. Inclusive and participatory decision-making such as this can provide a role for the elite in consolidating IFM initiatives.

In addition, alternative forms of activity, that do not amount to intensive and short-lived support or subsidy should be investigated. More effective and sustainable IFM may be achieved by focussing on lower value, marginal and small-scale units, for instance. Begum (2004) suggests that future local strategies within the Fourth Fishery Project, or elsewhere, should promote activities within "low-cost fisheries management systems" such as small sanctuary areas with no lease value. Ideally, these initiatives will be significant enough to deliver pro-poor benefits to participating groups but would not attract the interests of other groups and would not become threatened with alternative uses.

ii.) A potential role for informal institutions and local initiatives

In addition to the role of local elites, there are at least three other interrelated aspects of informal institutional arrangements that should be considered in IFM – the potential role of the *samaj* and *salish*, the function of pre-existing norms and rules in relation to ownership and access and, related to this, the potential of local initiatives. The *samaj*, as a brotherhood and extension of the mosque, is a powerful influence on people's lives and behaviour. The role of a mosque committee in the local management of swamp forest has been discussed above (see Appendix iii) and it seems likely that the *samaj* commonly influences issues relating to local NRM, either directly or indirectly. In turn, the *salish* (a conflict-resolving structure consisting of respected elders, or *mathbor*) may discuss and negotiate the timing and location of local initiatives on behalf of the wider "community". A fuller understanding of the role of *salish* and *samaj* as key informal institutions would ideally be achieved prior to any intervention. For instance, it may be that these institutions are already contributing to relatively egalitarian forms of IFM, in which case it would be essential that new interventions complement, rather than purposely or inadvertently challenge them. A rather more directed and pragmatic application of the *salish* within IFM might see it perform a role in reinforcing legitimacy or compliance to activities and rules:

> *"This* [the *salish*] *clearly has a potential relevance to community based resource management, for example in the context of poaching in stocked waters, or in fishing in sanctuaries. This potential roles seems to have been little explored to date in fisheries projects, but it will surely emerge as the place where Fourth Fishery Project Fisheries Management Committees go for justice."*
>
> Fisheries Sector Review and Future Development Study (Muir, 2003).

Extending this discussion of the informal institutional environment, pre-existing property rights regimes are a mosaic of national and formal arrangements dictating legal ownership of land and

[113] The CBFM project leader highlights this problem in relation to local constraints to up-scaling (see Section 3.2.2). Obtaining and securing jalmohals on behalf of the poor is problematic because alternative and lucrative uses are publicised:- "… (leadership) *problems emerged and are probably inevitable when there are relatively large costs and returns from stocking fish handled by a few people on behalf of all users*."

jalmohals superimposed by *de facto* access or influence over their use. In reality, local access arrangements may be dictated by the wealthier but are sometimes found to operate on behalf of a broad range of stakeholders. Poor people are directly involved in the local initiatives at Laksmi Proshad Beel, for instance, because they have historically been granted access to the fishery both during and after full flood and this access has been granted by the new *de facto* owners of the jalmohal as it was by the previous landlords. In the CBFM project, the open floodplain beel of Goakhola-Hatiara has no jalmohal status but there is a tradition of common property access for the surrounding community. As a result, local residents can agree on, implement and comply with conservation measures (Paul Thompson, pers. com.).

It would seem crucial to acknowledge the potential for working with existing, local, access arrangement such as these and of fully understanding their role in relation to the livelihoods of the poor - particularly in relation to their temporal aspect and the opportunities they provide at certain times of the year. Some form of social reconnaissance should attempt to map these informal NRM mechanisms.

iii.) IFM within a broader, livelihoods or rights-based, development remit

One way to prevent interference or control by the elite may be to apply approaches that include a broad range of stakeholders and potential beneficiaries. In the project context, a wide range of livelihoods activities (AIGAs, credit provision, training etc.) can provide pro-poor benefits, for instance. Local stakeholder feedback in this project reveals that management requirements of different livelihoods groups are not as frequently mutually-exclusive as normally assumed and that water management decisions can support fishing and farming interests simultaneously, for instance. However, a sectoral focus to IFM can introduce conflicts and polarise the positions of different resource user groups[114]. Adopting a more integrated approach, and by cross-cutting livelihoods groups, new IFM can build relationships and linkage between different stakeholders. The Centre for Natural Resource Studies (CNRS) often apply PAPD in the context of canal re-excavation to help engender mutual-awareness between farmer and fisher interest groups, for instance. In this case, the longer-term objective is to strengthen social capital by demonstrating common needs via shorter-term examples of successful collaboration.

Disparities in access to floodplain resources and production obviously relate to the wider socio-political character of rural Bangladesh. The struggle to realise ones rights, as declared in law, is common to all nation states and in Bangladesh this may manifest itself in spontaneous protest movements or *gheraos* (Bode, ibid.). Bode suggests that the very presence of these public forms of disobedience hints at a weakness in exploitative power relations and provides some prospect of working within new “political spaces”. In other words, power structures and practices that disadvantage the poor (and which have their own knock-on affect on the resource base) do not go unchallenged and are not inevitable. A more general, rights-based approach to development, can encapsulate IFM issues by publicising mechanisms to counteract exclusion or exploitation by powerful interests. Much of the debate has centred on “access to voice”, collective organisation and access to political capital[115] but there are simple rights issues pertinent to the poor in the IFM context. Some of these (continued access to fisheries that may be threatened with alternative uses, for instance) could be promoted by existing, sector-specific GOs such as DoF. A new emphasis on the security of access for poor fishers would safeguard income-earning and livelihoods opportunities for the vulnerable.

Finally, there are inherent risks in withdrawing from focussed and discrete interventions relating to IFM. If activities and outcomes are less focussed and too diffuse, there is a danger that the IFM message and purpose can become muddled, leaving local stakeholders confused, for

[114] See, for instance, the discussion of process at the Compartmentalization Pilot Project, Tangail; Annex B-ii.

[115] Social capital is closely related to political processes (PIPs) and the ability (or inability) to gain influence. Baumann (2000) argues that ”political capital” should form a sixth livelihoods asset rather than being represented as an external entity within the surrounding political and institutional environment.

instance. Process documentation suggests that environment sector projects may be prone to this problem because disparate activities do not communicate simple messages of obvious relevance to the poor. In project R7562, local feedback from the river CBFM site of Titas Ka in Brahmanbaria District also suggested limited understanding of project purpose (Lewins & Mallick, 2001). In this case, the open access regime of river fisheries restricted project activities to discussion and smaller-scale sanctuary activities, rather than large and visible interventions with simple messages and obvious benefits. In summary, an integrated and livelihoods approach is preferable and less likely to introduce conflict but because sectoral interventions have been *de rigueur*, they would also appear harder to facilitate and to communicate simply.

- Stage 4.

Real, widespread support and enthusiasm for new IFM appears to be very uncommon. It is likely that this relates directly to the difficulty in achieving collective benefits available to the range of stakeholders. Unfortunately, IFM interventions have tended to alienate some groups, exacerbate differences in interests and create conflict. Following a more holistic and livelihoods-based approach may avoid this problem and actually function to identify mutual management requirements and interests. Tools such as PAPD or problem census should be applied prior to any IFM changes and should be a part of the participation process at Stage 1 of the model.

Finally, the capacity of any one implementing agency to consider these issues is questionable. Experience within the case study projects, CBFM and the Fourth Fisheries Project, for instance, suggest that while smaller NGOs may have insufficient community-organisation and RMI experience (their normal remit being credit provision, establishing AIGAs, education or healthcare initiatives), local field staff representing large national NGOs may also be inexperienced in this regard.

Implementing agencies should be aware of the types of bottle-necks that tend to appear and of the range of strategies to avoid them. In addition, it is important that progress or problems are reported and discussed. In this regard, training in process documentation could provide a very useful function. The process documentation training provided to CBFM NGO partners provided the dual function of highlighting potential problems areas and their significance in constraining delivery of project objectives, and of establishing methodologies to capture change and gauge performance.

It is encouraging that donors and national practitioners are now openly discussing the problems of resource capture and poor project performance at the local level. The dialogue should now turn from documenting and reporting local IFM performance to preventing the undesirable outcomes from evolving. The discussion above suggests that several approaches or messages regarding IFM design might be applied concurrently and these are summarised in Table 17

Table 17 **Frequent problems within IFM initiatives and potential preventative strategies.**

Cycle Stage	*Frequent problems*	Potential strategies	*Sources*
1 Local Support	Pre-intervention indifference	Simple, public examples (sanctuaries, field demonstrations etc.)	Thompson (et al, 2003) MACH (2003) etc.
	Post-intervention decline in support	Cost-effectiveness for participants & broad beneficiary range *(see stage 3 below).*	Muir (2003) Process documentation (Annex B-ii)
2 Facilitation	Declining dialogue & interaction	Roles for pre-existing institutions (e.g. WMAs, LGED, local initiatives etc.) or new, consolidated RMI-LGO linkage	Project manager feedback (Annex B-vi) MACH CoP (pers.com.)*

	Limited group organisation, participation & RMI-formation skills	Vetting of local NGO partners	Aeron-Thomas (2003)
		Training of local level staff (community organisation, power issues & the approaches below)	Project manager feedback (Annex B-vi)
3 Equitable Outcomes	Resource capture by non-targets	Ensure early inclusive planning	Barr & Dixon (2001) CPP (1994) etc.
		Increase facilitator awareness of power issues ("processes", training in RMI formation etc.)	Project manager feedback (Annex B-vi)
	Negative impacts on some stakeholders	Avoiding strongly subsidised inputs for production	Aeron-Thomas (2003) Process documentation (Annex B-ii)**
		Avoided strongly subsidised access arrangements	As above
		Low-cost, smaller scale interventions (e.g. jalmohals < 20 ha. Via Ministry of Youth and Sports)	Begum (2004) Thompson (*et al*, 2003)
		Reduced geographic coverage (smaller participant clusters)	Aeron-Thomas (2003)
		Working with pre-existing informal institutions (LIs, *samaj, salish* etc.).	Bode (2002), Muir (2003), Amin & Islam (in press) Process documentation (Annex B-ii)
		A change from a sectoral to a livelihoods focus (stressing delivery & interaction across groups)	Aeron-Thomas (2003) Muir (2003) Barr & Dixon (2001)***
		A change from technical service provision to a rights–based approach	Bode (2002)
4 Consensus	Intervention-induced conflict	Early use of participatory planning & consensus building	Barr & Dixon (2001) CPP (1994)
		Dispute-resolution as an integral function of project RMIs	Aeron-Thomas (2003)
		Utilisation of salish	Muir (2003)
		Requires pre-emptive design considerations such as those outlined above (stages 1-3)	

(* Discussion of final stages of MACH and potential role of Upazilla Development Coordination Committee (UDCC). ** Relates to findings of process documentation within the OLP and Jalmohal Project. *** In the context of developing social capital via Participatory Action Plan Development (consensus building).)

4.3 Implications and conclusions

This project has uncovered several key themes relating to IFM-related activities in Bangladesh. While these kinds of problems and issues have been documented before, compiling past and present experience across a range of case studies and scrutinising this at the national and local level has proved informative. A striking feature of these desk-based and field reviews was the recurrence of the same failings across the sites and between both water and fisheries sector interventions. In retrospect, the shortcomings of the water sector case studies (their failure to adopt a participation process to shape activities and their inability to sustain WMOs and O&M,

despite regular and detailed recommendations from national and foreign experts) appear predictable and frustrating. Similarly, problems within the community-based management component of the Fourth Fisheries Project could have been pre-empted at the design stage with a better understanding of the typical bahaviour of local elite and local NGOs in relation to stocking.

Obviously, there is a need to build on this experience, avoid past mistakes and create suitable environments for replicable IFM. At present, there is a considerable discrepancy between what would appear to constitute suitable arrangements for IFM and current approaches to IFM and NRM development initiatives, in general. The guidelines presented within Discussion Papers 1-4 (Annexes B-xvi to B-xix) and produced on behalf of this project's target organisations are an attempt to highlight recurring themes and to suggest the right *types* of interaction or intervention.

One key area which could make lasting difference to IFM, is the dissemination of institutional concepts, knowledge and methodologies to track change or pre-empt negative outcomes. In this regard, dialogue and discussion of the institutional reality of rural Bangladesh with development partners appears to be a good starting point.

Ideally, IFM would operate in an environment analogous to co-management with local GO and NGO agencies providing a supportive framework for adaptive and participatory management able to build on existing knowledge and relevant, pre-existing institutions. Experience from water and fisheries sector projects and programmes, suggests that these forms of supportive networks are rarely established and this study highlights several bottlenecks to achieving such IFM.

The shortcomings of previous water and fisheries sector interventions can probably be reduced to three interrelated aspects of their management;

1) *design* – the intended (and actual) character of activities undertaken and the design of structures, responsibilities and linkage,
2) *knowledge* – the level of understanding of purpose, pre-existing, informal institutions and what actually encompasses positive and negative outcomes and trends, and
3) *behaviour* – the tendency (or otherwise) of development partners to exploit patron-client type relations, a tendency to short-term commitment resulting from projectisation or staffing arrangements, support or confrontation by key primary stakeholders etc.

Although the emphasis on "*getting the institutions right*" can be criticised as overly simplistic, getting the broad package of potential activities and structures right, might be less so. The challenge will then be to jointly-identify opportunities with primary stakeholders that engender enthusiasm across a range of stakeholders without causing conflict - objectives would be widely-understood, well-supported and would not disadvantage target groups. In this regard, a simple model, presenting the interrelationships between understanding, enthusiasm, legitimacy, compliance and sustainability, has been developed within this project and demonstrated to target organisations as a discussion tool.

In many respects, discussion of "what *not* to do" is easier to derive, and also useful. From a training perspective, caricatured or hypothetical examples of undesirable IFM outcomes can be discussed, for instance. Technocratic interventions with no consideration of pre-existing access rights (p/t fishers, perhaps) or no awareness of the reality of relations between local people and LGI officials (patron-client relations, for instance) can be held up to discuss negative outcomes and the reasons for their occurrence.

What is certain is that replicating past approaches will replicate past mistakes. Even those agencies linked with donor-funded and national-level projects and programmes appear to lack an awareness of what constitutes positive or negative institutional outcomes. Report writing and documentation has stressed the collection of technical and quantifiable outcomes so that the more subtle, overarching goals of rural development have been lost to field level personnel in

many organisations. There is now a need to realign the understanding of development partners through discussion of alternative modes of operating and reporting.

Finally, although the case studies, recommendations and guidelines produced, correspond to the particular governmental, social and environmental setting of rural Bangladesh, it is likely that similar institutional bottlenecks for IFM occur elsewhere. In this regard, many problems and potential approaches associated with IFM in Bangladesh are generic. Similarly, the land-water interface of the floodplain system, while providing special problems for consensual management and planning, reflect problems that occur in other NR systems. The sustainability of pro-poor RMIs, for instance, is a major concern elsewhere and it is likely that a new emphasis on understanding existing power relations and informal institutions is needed globally. An awareness of the options for integrated NRM, their potential outcomes and tools to track, modify or support these effects are what is required. The guidelines and methodologies developed during this project, together with the linkage developed with target organisations, suggest that pragmatic approaches do exist and that there is a wide range of interested stakeholders keen to adopt them.

References

Aeron-Thomas, M. 2003. *Beneficiary Impact Monitoring of OWF Component – synthesis of key issues from sites covered 2002-3.* Report No. 15. Bangladesh: Fourth Fisheries Project. [unpublished report].

Agrawal, A. & Gibson, C.C. 1999. Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation. *World Development*, 27 (4), 629-649.

Alam, M. 2001. Access to fishing waters: experience of the Hindu fishers of Charan. *Grassroots Voice: A Journal of Indigenous Knowledge and Development*. 4 (1): 29-68.

Amin, R. & A. Islam (in press). Community driven conservation of freshwater swamp forest: a case study on issues and problems.

Apu, N. A. and Middendorp, H. A. J. 1997. Establishing fisher's groups for self-management of enhanced fisheries in semi-closed waterbodies in western Bangladesh - the experience of the Oxbow Lakes Small Scale Fishermen Project. Paper presented at the *Expert Consultation on the Enhancement of Inland Fisheries* organised by FAO, 7-11 April 1997, Dhaka, Bangladesh.

Apu, N. A., Sattar, M. A., Balarin, J. D. and Middendorp, H. A. J. 1997. A system of fisheries co-management in oxbow lakes in southwestern Bangladesh. *Proceeedings of ICLARM / Danida National Workshop on Policy for Sustainable Inland Fisheries Management*. Dhaka, Bangladesh, March, 1997.

Apu, N.A. 1992. Lake Management Group (LMG): The Rallying Point of Lake Management. *Socio-Economic Studies Report* No. 1. Project Implementation Unit, DANIDA, BRAC. *Beel* and *Baor* Fisheries Development and Management Project, Oxbow Lakes Small Scale Fishermen's Project, Jessore. Jessore, Department of Fisheries, Government of Bangladesh.

Bangladesh Centre for Advanced Studies, 1999. Promoting grassroots participation through advocacy in improved management of environment and natural resources in Chanda Beel. Annual Report, March 1999.

Bangladesh Centre for Advanced Studies, 2003. *Natural resource management: Towards better management.* Dhaka: BCAS.

Barr, J.J.F, Dixon, P-J, Rahman, M.M., Islam, M.A., Zuberi, M.I., McGlynn, A.A. and Ghosh, G.P. 2000. *A Participatory, Systems-Based, Process for Identification of Improved Natural Resources Management for Better Floodplain Livelihoods.* Project Report - R6756. Centre for Land Use & Water Resources Research, University of Newcastle. DFID, London.

Barr, J.J.F. and Dixon, P-J. 2001. *Methods for consensus building for management of common property resources.* Final Technical Report R7562. Newcastle, United Kingdom: University of Newcastle, Centre for Land Use and War Resources Research.

Baumann, P. 2000. Sustainable livelihoods and social capital: arguments and evidence from decentralisation and natural resource management in India. Working Paper 136. Overseas Development Institute, London.

Bean, C.W., Deverill, J. and Felsing, M. 1999. *Floodplain fisheries in Bangladesh: a review* in R6756 FTR. NRSP LWI. London: DFID.

Begum, S. 2002. 'Fishers' access rights to inland open water fisheries resources: some observations from the Fourth Fisheries Project. Project management Unit, Fourth Fisheries Project. Dhaka: DoF.

Begum, S. 2004. *Open Water Fisheries Management Component – Pro-poor Community-based Fisheries Management: issues and case studies.* Bangladesh: Fourth Fisheries Project. [unpublished report].

Berkes, F. (ed.). 1989. *Common Property Resources: Ecology and Community-based Sustainable Development.* Belhaven Press, London.

Bertocci, P.J. 1996. *The Politics of Community and Culture in Bangladesh: Selected Essays.* Centre for Social Studies, Dhaka.

Bertocci, P.J. 1996. Models of solidarity, structures of power: the politics of community in rural Bangladesh. (in Aronoff, M.J., Ideology and Interest: The dialectics of politics. *Political Anthropology Yearbook 1* pp.97-125, Transaction Books, reprinted in Bertocci, P.J., 1996 *The Politics of community and culture in Bangladesh: Selected Essays.* CSS, Dhaka University).

Binswanger, H.P. and Aiyar, S.S. 2003. *Scaling up community-driven development – theoretical underpinnings and program design implications*. World Bank Policy Research Working Paper 3039, May 2003.

Blair, H. 1996. Supporting decentralisation: local governance lessons from international experience – initial concepts and some preliminary findings. American Political Science Association Meetings, 29 August – 1 September 1996, San Francisco, California.

Bode, B. 2002. In pursuit of power: Local elites and Union level governance in rural north-western Bangladesh. CARE Go-Interfish Project. CARE Bangladesh.

BWDB Systems Rehabilitation Project, 1994. Feasibility Report; Chaptir Haor Sub-Project (BWDB), May 1994.

BWDB. 1994. *Guidelines for People's Participation*. Draft. Dhaka: BWDB.

Campbell, B., Mandondo, A., Nemarundwe, N, Sithole, B., de Jong, W, Luckert, M. and Matose, F. 2001. Challenges to proponents of common property resource systems: despairing voices from the social forests of Zimbabwe. *World Development*, 29 (4): 589-600.

Campbell, J., and Thompson, P.M. 2000. *An overview of community involvement in inland fisheries management in Bangladesh.* CBFM II Project. Dhaka: ICLARM.

CARE. 2002. *The NorthWest institutional analysis: summary*.CARE Go-Interfish Project. Care Bangladesh.

Cernea, M.M. 1989. *User Groups as Producers in Participatory Afforestation Strategies*. World Bank Discussion Paper 70. World Bank, Washington, D.C.

Cleaver, F. 2000. Moral ecological rationality, institutions and the management of common property resources. *Development and Change* 31(2): 361-83.

Cleaver, F. and Franks, T. 2002. How institutions elude design: river basin management and sustainable livelihoods. Paper presented at the workshop *Supporting Livelihoods, Evolving Institutions at the Bradford Centre for International Development, 29-30 May , 2002*. 14pp. Bradford, UK: Bradford Centre for International Development. [unpublished].

Compartmentalization Pilot Project , 1996. *GIS Atlas, CPP Tangail Tn96/15*. Dhaka: Ministry of Water Resources.

Compartmentalization Pilot Project, 1992. Tangail CPP Interim Report Annex 1.3 Multi-Disciplinary Sub-Compartmental Survey. Ministry of Irrigation, Water Development and Flood Control, BWDB Flood Plan Coordination Organisation. September 1992.

Compartmentalization Pilot Project, 1992. Tangail CPP Interim Report Annex 1.1 Household Survey. Ministry of Irrigation, Water Development and Flood Control, BWDB Flood Plan Coordination Organisation. September 1992.

Compartmentalization Pilot Project. 1994. *Guidelines on People's Participation in Planning and Design Phase.* May. Dhaka: Ministry of Irrigation, Water Development and Flood Control, BWDB Flood Plan Coordination Organisation.

Compartmentalization Pilot Project, 1998. Semi-Annual Report. Ministry of Irrigation, Water Development and Flood Control, BWDB Flood Plan Coordination Organisation. July-December 1998.

Compartmentalization Pilot Project, Tangail, 1992. *CPP Interim Report: Annex 5: Institutional Aspects.* Dhaka: Ministry of Irrigation, Water Development and Flood Control, BWDB Flood Plan Coordination Organisation.

Compartmentalization Pilot Project, Tangail. 1997. *Follow -Up Action on MoU Donor Review Mission Feb 25- March 6.* July. Dhaka: Ministry of Water Resources.

Cooke, B. and Kathari, U. (eds.) 2001. Participation: the new tyranny?. Zed Books.

Dahl, C. 1988. Traditional marine tenure: a basis for artisanal fisheries management. *Marine Policy*, January, 1988.

Dampara Water Management Project, 1996. Annex E, Environmental Impact Assessment and Environmental Management Plan (BWDB & WARPO), April 1996.

Dampara Water Management Project, 1997. Annex C, People and the Social Context (BWDB & WARPO), March 1997.

Dampara Water Management Project, 2000. People's Participation in DWMP (BWDB), June 2000.

Dampara Water Management Project, 2001. BWDB & CIDA. [Brochure]

Datta, A. (ed.) 1998. Learning Lessons: 20 years of EIP experience. 1998 EGIS Support Project for Water Sector Planning. Ministry of Water Resources, Government of Bangladesh.

Datta, A., and Soussan, J. 1998. *Institutional development impacts, Vol.4 of the community partnership for sustainable water management. Experiences of the BWDB SRP*. Dhaka: University Press.

Dev, O.P., Springate-Baginski, Yadav, N.P. and Soussan, J. 2003. Hamlet-based micro-level action planning: a tool for improving FUGs' planning, decision-making and implementation. *Journal of Forest and Livelihood*. 3(1) July.

Devine, J. 2003. *Ethnography of a policy process: a case study of land distribution in Bangladesh*. Centre for Development Studies, Bath, UK.

DFID, 2000. Sustainable Livelihoods Guidance Sheets. (http://www.livelihoods.org).

DFID. 2002. *'What does Drivers of Change mean for DFID? A draft approach paper'.* Drivers of Change Team, Policy Division. London: DFID.

DFID. 2003. *Bangladesh: Country Assistance Plan 2003–2006; Women and Girls First*. London: DFID.

DFID. 2003. *Better government for poverty reduction: More effective partnerships for change*. Issues Paper. London: DFID.

DFID-B. 2000. *Partners in Development: A Review of the Big NGOS in Bangladesh*. Report prepared for Nijera Kori Social Mobilisation, Voice and Democracy Programme. Dhaka.

DFID-B. 2002. A Review of DFID's Country Strategy for Bangladesh CSP 1998 - 2002. DFID-B.

DFID-B. 2002. *Bangladesh: Supporting the drivers of pro-poor change.* Duncan, A., Landell-Mills, P., Hulme, D., and Roy, J., Oxford Policy Management Report for DFID-B, Dhaka.

DFID-B. 2002. The Chars Livelihoods Programme.' Programme submission prepared for GoB.' London: DFID.

DoF. 1999. *Community Based Fisheries Management and future strategies for inland fisheries of Bangladesh.* Dhaka: DoF.

DoF. 2000. Fisheries Resources Development Project in Open and Closed Jalmohals under New Jalmohal Policy (Project Proforma, 2000).

DoF. 2002. *Fisheries Sector Review and Future Development: Theme study: Institutional Frameworks*. Draft Report June 2002. DoF: Dhaka.

Duyne, J. 1998. Local Initiatives: People's WM practices in rural Bangladesh. *Development Policy Review 16,* 265-280.

Early Implementation Projects on Flood Control, Drainage Improvement and Irrigation, 1989. Report of the Evaluation Mission, June 1989. Governments of Bangladesh, Sweden and Netherlands, Dhaka, Bangladesh.

Early Implementation Projects on Flood Control, Drainage Improvement and Irrigation, 1998. *Learning Lessons: 20 years of EIP experience*. EGIS Support Project for Water Sector Planning. Ministry of Water Resources, Government of Bangladesh.

EGIS. 1998. *Learning lessons : 20 years of EIP experience*. Dhaka: EGIS.

Farrington, J. and Boyd,C. 1997. Scaling up the Participatory Management of Common Pool Resources. *Development Policy Review* 15: 371-391.

Goldman, I. 1998. Decentralisation and sustainable rural livelihoods. In: *Sustainable rural livelihoods: What contribution can we make?* London: DFID.

Gow, D.D. and Morss, E.R. 1988. The notorious nine: critical problems in project implementation. *World Development*, 16 (12): 1399-1418.

Grindle, S.M. (ed.) 1980. *Politics and policy implementation in the Third World*. Princeton: University Press.

GTZ. 2001. Huppert, W., Svendsen, M., Vermillion, D.L. *Governing maintenance provision: a guide to institutionally viable maintenance strategies.* Universum Verlagsanstalt, Wiesbaden.

Gündel,S., Hancock,J. and Anderson,S. 2001. *Scaling-up strategies for research in natural resources management: a comparative review*. Chatham, UK: Natural Resources Institute.

Hancock, J and Poate, D. 2002. *Scaling-up: Issues & Options for the World Bank Rural Development Strategy.* FAO & ITAD.

Hardin, G. 1968. The tragedy of the commons. *Science* 162 ((3859): 115-138.

Harriss, J., Hunter, J. and Lewis, C.M. 1995. Introduction: development and significance of NIE. pp. 1-13. In*: The New Institutional Economics and Third World Development*. London, Routledge.

Hoggarth, D.D., Cowan, V.J., Halls, A.S., Aeron-Thomas, M., McGregor, J.A., Garaway, C.A., Payne, A.I. and Welcomme, R.L. 1999a. *Management guidelines for Asian floodplain river fisheries. Part 1: A spatial, hierarchical and integrated strategy for adaptive co-management* . FAO Fisheries Technical Paper 384/1. Rome: FAO.

Hoggarth, D.D., Cowan, V.J., Halls, A.S., Aeron-Thomas, M., McGregor, J.A., Garaway, C.A., Payne, A.I. and Welcomme, R.L. 1999b. *Management guidelines for Asian floodplain river fisheries. Part 2: Summary of DFID research*. FAO Fisheries Technical Paper 384/2. Rome: FAO.

http://www.iied.org/forestry/tools

Innes, J. E. 2000. Evaluating Consensus Building. Pp. 631-675. In: Susskind, L., McKearnan, S. and Thomas-Larner, J. (eds.). *The Consensus Building Handbook. A comprehensive guide to reaching agreement*. Sage Publications, Thousand Oaks.

Islam, S.A. 2002. The informal institutional framework in rural Bangladesh. pp.97-104. In: *Hands not land: how livelihoods are changing rural Bangladesh.* Bangladesh Institute of Development Studies, Dhaka.

Jazairy, I., Alamgir, M. and Pannuchio, T. 1992. *The state of the world rural poverty.* London: ITP for IFAD.

Khan, A.A. 1996. *Discovery of Bangladesh: Explorations into Dynamics of a Hidden Nation*. University Press Ltd., Dhaka.

Khan, M. S. and Apu, N. A. 1997. Fisheries co-management in oxbow lakes in Bangladesh. ICLARM / Danida Technical Report. October 1997.

Khulna-Jessore Drainage Rehabilitation Project, 2002. BWDB & ADB, March 2002.

Kremer, A. 1994. *Equity in the fishery: a floodplain in NE Bangladesh*. CDS, Bath, UK.

Krishna, A. and Shrader, E. 1999. *Social* Capital Assessment Tool (SCAT). Paper for the *Conference on Social Capital and Poverty Reduction.* 22-24 June, 1999. World Bank, Washington.

Landell-Mills, P., Duncan, A., Hulme, D., and Roy, J. 2002. Bangladesh: Supporting the drivers of pro-poor change. Oxford Policy Management Report for DFID-B, Dhaka.

Leach, M, Mearns, R, and Scoones, I. 1997. *Environmental Entitlements: A Framework for Understanding the Institutional Dynamics of Environmental Change*. IDS Discussion Paper 359. University of Sussex, Brighton.

Leach, M., Mearns, R. and Scoones, I. 1999. Environmental entitlements: dynamics and institutions in community-based natural resource management. *World Development* 27 (2), 225-247.

Lewins, R., Dixon, P.J. and Barr, J.J.F. 2001. *Consensus Building and Natural Resource Management - Literature Review*. DFID Project report. R7562 - Methods for consensus building for management of common property resources. Centre for Land Use & Water Resources Research, University of Newcastle. DFID, London.

Lewins, R. and Mallick, D. 2001. *Co-management and consensus – a survey of three ongoing NRM projects*. Project R7562, Final Technical Report: Section 6.3.

MACH, 2000. 1st Annual Report. April 2000. Winrock International, BCAS, CNRS, CARITAS-Bangladesh, Dhaka.

MACH, 2001. 2nd Annual Report. February 2001. Winrock International, BCAS, CNRS, CARITAS-Bangladesh, Dhaka.

MACH, 2001. Semi-Annual Report. August 2001. Winrock International, BCAS, CNRS, CARITAS-Bangladesh, Dhaka.

MACH, 2003. 4th Annual Report. Feb 2003. Winrock International, BCAS, CNRS, CARITAS-Bangladesh, Dhaka.

MACH, 2003. Management of Aquatic Resources through Community Husbandry: 4th Annual Report.

Maloney, C. 1986. *Behaviour and Poverty in Bangladesh***.** University Press Ltd., Dhaka**.**

Manikutty, S. 1998. Community participation: lessons from experience in five water and sanitation projects in India. *Development Policy Review.* Vol.16 pp.373-404.

Mansuri, G., and Rao, V. 2004. Community-based and -driven development: a critical review. *World Bank Policy Research Working Paper 3209*. Washington: World Bank.

Mehta, L., Leach, M., Newell, P., Scoones, I., Sivaramakrishnan, K. and Way, S. 1999. *Exploring understandings of institutions and uncertainty: new directions in natural resource management.* IDS Discussion Paper 372. University of Sussex, Brighton.

Mitra, S.K.. 1991. Room to manoeuvre in the middle: local elites, political action and the state in India. *World Politics* 43 (3), pp.390-413.

Mosse, D. with the KRIB Team. 1996. Local institutions and farming systems development: Thoughts from a project in tribal western India. *AgREN Network Paper* 64, London: ODI.

MoWR. 2000. *Guidelines for Participatory Water Management.* (GPWM). Dhaka: MoWR.

Muir, J. (ed.). 2003. *Fisheries Sector Review and Future Development – Theme study: Institutional Frameworks*. Dhaka, Bangladesh.

Nathan, D. and Apu, N. A. 1997. Women in fish farming ponds at the shallow part of the oxbow lakes shore. *Proceeedings of ICLARM / Danida National Workshop on Policy for Sustainable Inland Fisheries Management.* Dhaka, Bangladesh, March, 1997.

Nathan, D., and Apu, N.A. 2002. Securing women's property rights: problems of good governance and establishing norms of economic functions. *Gender, Technology and Development* 6 (3).

North, D. 1990. ***Institutions, Institutional Change and Economic Performance.*** **Cambridge: Cambridge University Press.**

Oakerson, R., 1992. Analysing the Commons: A Framework. *In:* D.W. Bromley (Ed). *Making the Commons Work: Theory, Practice and Policy*. Institute of Contemporary Studies, San Francisco. 335pp

OLP. 1994. *Study of the System of Lake Management Committee Elections*. Project Implementation Unit, DANIDA, BRAC. *Beel* and *Baor* Fisheries Development and Management Project, Oxbow Lakes Small Scale Fishermen's Project, Jessore. Jessore, Department of Fisheries, Government of Bangladesh.

Ostrom, E. 1986. An agenda for the study of institutions. *Public Choice*, 48: 3-25.

Ostrom, E. 1990. *Governing the commons: the evolution of institutions for collective action*. Cambridge University Press, Cambridge, UK.

Ostrom, E. 1993. *IFRI Research Programme – Data Collection Instruction Manual*. Bloomington, Indiana, USA.

Pimbert, M.P. and Pretty, J.N. 1994. Participation, People and the Management of National parks and Protected Areas: Past Failures and Future Promise , United Nations Research Institute for Social Development, Geneva.

Pokrant, B., and Rashid, S. 1997. The fishers and fisheries sector of Bangladesh: an anthropological overview. Journal of Social Studies. 76:.32-48. Dhaka University: Centre for Social Studies.

Rahman, H.Z. and Islam, S.A. (in press). *Actors and Roles; Community Capacities and Local Governance in Bangladesh*. University Press Ltd., Dhaka.

Rahman, H.Z. and Islam, S.S. 2002. *Local governance and community capacities: Search for new frontiers.* Dhaka: University Press Ltd.

Rao, A. and Hashemi, S. 1995. *Institutional take-off or Snakes and Ladders – dynamics and sustainability of local level institutions in rural Bangladesh*. Occasional Paper Series No. 30, Intrac, UK.

Röling, N.G. 1994. Platforms for decision-making about ecosystems. pp. 385-393. In: *The Future of the land: mobilising and integrating knowledge for land use options*. Chichester: Wiley.

Rozario, S. 2002. Gender dimensions of rural change. Pp. 121-129. In: *Hands not land: how livelihoods are changing rural Bangladesh.* Bangladesh Institute of Development Studies, Dhaka.

Schumacher, E.F. 1973. *Small is Beautiful: a Study of Economics as if People Mattered*. London, Blond and Briggs Ltd.

Scoones, I. 1999. Ecological dynamics and grazing resource tenure: a case study from Zimbabwe. In: *Transient Institutions in Common Property Management in Africa's Arid Lands*. London and Stockholm: Earthscan and Bijer Institute of Ecological Economics.

Sen, A. 1981. *Poverty and Famines: an Essay on Entitlement and Deprivation*. Oxford: Oxford University Press.

Siddiqui, K. 2000. *Local governance in Bangladesh: Leading issues and major challenges.* Dhaka: University Press Ltd.

Soussan, J. 1998. Community Partnership for Sustainable Water Management, Experiences of the BWDB Systems Rehabilitation Project. University Press, Dhaka.

Soussan, J., Mallick, D., and Chadwick, M. 1997. *Understanding rural change: socio-economic trends and people's participation in water resources management in Bangladesh.* The Environment Centre, University of Leeds and BCAS, Dhaka.

Springate-Baginski, O., Dev, O.P.,Yadav, N.P. and Soussan, J. 2003. Community forest management in the middle hills of Nepal: the changing context. *Journal of Forest and Livelihood* 3(1).

Sustainable Environment Management Programme, 1999. *Community-based haor and floodplain resource management. Inception Report, 1999***. IUCN with CNRS, BCAS, NACOM.**

Tazim, M.T. 1997. *Local Initiatives in Water Management in Chaptir Haor – RWMA Technical Note* No.32, June 1997.

Thompson, P., Sultana, P., Ahmed, M. and Firoz Khan, A.K.M. 2003. Community Based Fisheries Management - Management Phase 2. Annual Report: September 2001-December 2002.

Thompson, P.M. and Sultana, P., 1999. *Overview of the Community Based Fisheries Management Project: achievements and implications* in DoF 1999: *Community Based Fisheries Management and future strategies for inland fisheries of Bangladesh.* Dhaka: DoF.

Thompson, P.M., Sultana, P., and Islam, N. 2000. Co-operation, conflicts and sustainability in community managed fisheries in Bangladesh. Paper presented at the 8th Conference of IASCP, 31 May - 4 June. Bloomington, Indiana, USA.

Thornton, P. 2002. The formal institutional framework of rural livelihoods in Bangladesh. pp.105-111. In: *Hands not land: how livelihoods are changing rural Bangladesh.* Bangladesh Institute of Development Studies, Dhaka.

Thorp, J.P. 1978. *Power among the Farmers of Daripalla: A Bangladesh Village Study.* Dhaka: Caritas Bangladesh).

Toufique, K.A. 1997. Some observations on power and property rights in the inland fisheries of Bangladesh. *World Development*, 25 (3): 457-467.

Toufique, K.A. 2000. *Sustainable Rural Livelihoods in Bangladesh. Summary of research findings.* IDS Research Report 45. Institute of Development Studies, Brighton.

Toufique, K.A. and Turton, C. (eds) 2002. *Hands not land: how livelihoods are changing rural Bangladesh.* Bangladesh Institute of Development Studies, Dhaka.

Turner, M.D. 1999. Conflict, environmental change, and social institutions in dryland Africa: limitations of the community resource management approach. *Society and Natural Resources*, 12: 643-657.

un Nabi, R. 2001. Institutional arrangements and fisheries management in Bangladesh. *Grassroots Voice: A Journal of Indigenous Knowledge. 3* (4) 99-114. Dhaka: BARCIK.

un Nabi, R., Datta, D., Chakrabarty, S., Begum, M. and Chaudhury, N.J. 1999. *Consultation with the Poor: Participatory Poverty Assessment in*
Bangladesh. NGO Working Group on the World Bank, Bangladesh.

Van Voersem, B., Chakravorty, N., Koudstaal, R. and Razzaque, M.A. 1994. *Joint Bangladesh - Netherlands review mission EIP Projects, Bangladesh. Main lines of plan of operations, Final Phase, Final report.* Dhaka: BWDB.

Van Voersem, B., Chakravorty, N., Luijendijk, J., Quassem, M.A. and Siddiqui, M.H. 1998. *Joint Bangladesh - Netherlands review mission EIP Projects. Review mission report, Final Phase (draft 16/2)* Dhaka: BWDB

Varughese, G. and Ostrom, E. 2001. The contested role of heterogenity in collective action: some evidence from community forestry in Nepal. *World Development*, 29 (5), 747-765.

Vedeld, T. 1997. Village *Politics: Heterogenity, Leadership and Collective Action Among Fulani of Mali*. Unpublisehd doctoral thesis, Agricultiural University of Norway [cited in Varughese and Ostrom, 2001].

WCED, 1987. *Our Common Future. Report of the World Commission on Environment and Development.* Oxford: Oxford University Press.

Wood, G and Davis, P. 1998. *Engaging with deep structures: linking good governance to poverty elimination in AMOD's Country Strategy Paper*. Report prepared for DFID-B, Dhaka.

World Bank. 1990. *Staff Appraisal Report: BWDB Systems Rehabilitation Project, Bangladesh.* Report No. 8093-BD Feb 6.

World Bank. 1996. *Bangladesh: Government that Works: Reforming the public sector.* Washington: World Bank.

World Bank. 1996. *Bangladesh: Government that Works: Reforming the public sector.* Washington: World Bank.

World Bank. 2001. *Voices of the Poor: World Development Report 2000/1 on Poverty and Development.* Washington: World Bank.

World Bank. 2002. '*Taming Leviathan.'* Washington: World Bank.

World Bank. 2004. *World Development Report 2004: Making Services Work For Poor People.* Washington: World Bank.