POWERFUL RELATIONS:

THE ROLE OF ACTOR-EMPOWERMENT IN THE MANAGEMENT OF NATURAL RESOURCE CONFLICTS

A CASE OF FOREST CONFLICTS IN GHANA

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PREFACE

> In no social phenomenon can power be studied than in conflict situation (Tedeschi, 1973: 30)

I was privileged to serve as the President of the International Forestry Students Association between 1998 and 1999 where I had the opportunity to participate in some international forestry dialogue processes, most importantly IFF-3[1]. As a young forestry student observing proceedings and negotiations and how the participants were divided into groups, 'North' and 'South', and how delegates 'fought' over commas and single sentences, I left the meeting appreciating that international forestry dialogue processes involve politics. As I conducted my MSc field research in Ghana on how local communities were represented in negotiation processes with timber companies regarding their interest and social responsibility obligations for logging in 'their' forests, I encountered similar politics and power-play even at the village level. It was interesting how chiefs represented communities, in many cases dictated their interests even at the dissatisfaction of other legitimate community authorities and how timber merchants could influence community leaders to 'smoothen' the negotiation, ostensibly without adequate consultation with community members. Having spent three months on the field and having interacted with timber merchants, farmers and forestry officials, I became aware of how timber merchants wield influence over not only farmers but even forestry officials to get their interests satisfied.

My experience with the Ghana Association for the Conservation of Nature (GACON) working with communities on conservation projects also showed me power struggles at the community level and how some of the elite attempted to 'privatise' community projects. From then, I became convinced, as a student of forest policy that, sufficient attention should be given to understanding the politics of natural resource governance if we could manage the numerous conflicts. I began to ask myself some questions. First, where is the boundary of forest politics and how does its policy implementation cope with established power structures and struggles in specific socio-political arenas like a community. Who actually makes important decisions outside the established institutional structures and why are some of these structures subordinated to others in moments of decision making. Why do we experience *de jure* and *de facto* authorities in the implementation of public policy? With all these questions, apparently arising from experiential insights, I came to the conclusion that we can never make strides in forest policy if questions of power in the daily struggles in natural resource management are not given serious research attention. In short, my conviction was that forestry and for that matter forest policy and all the normative notions that go with it such as sustainable forest management, should be studied as a political field and the time has come for serious attention to be paid to the political dimensions of resource governance. Indeed if policy making is a social bargaining process for regulating conflicts of interest and if forest policy is that social bargaining process which regulates conflicts of interests in utilising and protecting forests (Krott, 2005), then

[1] Intergovernmental Forum of Forest, 3rd session in Geneva, Switzerland

forest policy is nothing short of politics and it is naturally entangled in the web of power.

Looking for a context to focus my developed research interest, I found natural resource conflict, particularly forest-related ones as an appropriate one. This is not necessarily only because of my academic background but also my observations and experiences with the unending conflict in forest management, in terms of multiple access demands against legal restrictions, conflicts over policies and decisions, political representation in such processes and a host of others. Shortly after starting my PhD programme, I found out that the 'problem' of natural resource conflicts was not only characteristic of resource policy and management in Ghana but seemed to be a global one. Building on various studies, it became even clearer that the question of power is central and rather than getting myself into the hot epistemological debates, I ended up following a pragmatist approach using a concept of actor-empowerment to investigate the play of power in forest conflicts. When I started little did I know that our understanding of forestry, as a political field, will be so deepened by considering forest policy and its implementation as a conflict and political phenomenon in which actors continually mobilise resources to take influence strategies that ultimately turn the linear construction of the policy cycle into a complex and dynamic chamber of actor politics. I then began my exploration on gaining insights into natural resource conflict and the role actor-empowerment can play in conflict regulation and interventions.

1. INTRODUCTION

> The larger public interest in conflict has neither been matched by a more sophisticated understanding of its origin and dynamics nor by increased insight into how to deal with it in policy and practice (CERES, 2001:1)

Recognising that conflict and power are pervasive social phenomena, one would expect that the use and control of natural resources in specific social settings cannot escape these phenomena. Admittedly, sustainable forest management has been observed to be inherently a conflict phenomenon. However, with the determination to shape a sustainable path for the use of natural resource for the benefit of current and future generation, mechanisms for stakeholder collaboration and conflict management continue to be searched. For a study dedicated to understanding the role of power in natural resource conflict and conflict management, a search for the missing links is needed. This chapter is dedicated to introducing the study, first by clearly highlighting the problem, justifying the context, and delineating the general approach and intent of the study in order to position the exact role the study is intended to play in the on-going scholarly adventures into natural resource conflict management.

1.1 PROBLEM STATEMENT

That natural resource management has been associated with conflicts due to the multiple actors with diverse interests, perceptions, values and claims involved in the use and management of these resources is well documented. Increasingly, the literature continues to build up highlighting several dimensions such as causes, social and ecological impacts and approaches to management (see Walker and Daniels, 1997; Buckles, 1999; Castro and Nielsen, 2003; Turner 2004; Niemela et al. 2005). These studies have highlighted negative and undesirable impacts such as social and political tension and violence, resource degradation and mistrust among stakeholders. However this does not mean that natural resource conflicts have always resulted in negative effects as it is traditionally associated with conflicts in general. There is increasing evidence in several case studies where conflicts have yielded positive transformation and change in terms of improving equity and justice among forest users (see cases in Buckles, 1999, Doornbos et al. 2000 and Castro and Nielsen 2003). Thus conflict, in general, can be perceived also as a means of social learning in which predominant practice or current state of affairs can be contended and new lessons for improvement proposed (Hirschman, 1994; Burgess and Burgess, 1996). In that sense, natural resource conflicts can be perceived as having both positive and negative capabilities, a notion that has for the past few decades contested the conflict avoidance and belligerence schools of thought suggesting a conflict capability paradigm (Glasl, 1999).

In the context of natural resource conflicts, there has been a call for conflict management rather than resolution since natural resource conflicts often involve complex issues that cannot be completely resolved (Delli-Priscoli, 1988, 1997). Thus increasingly, conflict management is used as the dominant terminology and approach in natural resource management literature. Daniels and Walker (1997) summarise this

when they contend that natural resource conflicts are not only inevitable and unavoidable, but also desirable to the extent that it can lead to negotiated and innovative agreements among stakeholders. Thus, the desire for conflict management in natural resource conflicts is for conflicts to be regulated within constructive limits. In forestry for example, one continually encounter in sustainable forest management literature that, given the complexity and conflicting perspectives on interests and values underlying forest use, the viable way forward is to shape an integrated approach to forest management. One of the key dimensions of the desire for integration is how to bring the multiple stakeholders with varying interests together in planning and implementing sustainable forest management (Brown, 1995), a desire embodied in concepts such as stakeholder collaboration and co-management (Buckles and Rusnak, 1999; Borrini-Feyerabend et al. 2000). However, while these emerging paradigms continue to gain acceptance, collaboration means increased co-operation as well as increased complexity. Ayling and Kelly (1997) explain that mechanisms are required to promote understanding and cooperation of an increasing number of stakeholders, especially if resources are to be sustained to support present and future generations.

Notwithstanding these desires, conventional approaches to managing natural resource conflicts have not always been successful in regulating conflicts within constructive limits as evidenced by outcomes of several conflict management case studies (see for example Buckles 1999; Upreti, 2001; Nielsen and Castro, 2003; Wittmer et al. 2006). Not surprisingly, the need for innovations and scientific enlightenment for successful regulation of conflicts within constructive limits continue to be echoed in natural resource management literature (Daniels and Walker, 1997, Buckles and Chevalier 1999).

As the discussion on natural resource conflict and management continues to expand, it is almost universally evident that ‘power’ is central and that how power is played out in specific conflict contexts is an important dimension to the conflict management problem (see Buckles and Rusnak, 1999; Upreti, 2001; Castro and Nielsen, 2003). This is because it is on contested issues of mutual interest that power relations manifest themselves (Jacobsen and Cohen, 1986). Natural resource use and management often involve such contested issues such as who have rights of access, use and control, when and under what conditions. For example, after a comprehensive review of environmentally related conflicts, Bryant (1992) showed that politics, which is inescapably implied in almost every eco-social problem such as natural resource conflict, should not be overlooked. He showed how complex the mobilisation of political, social and material resources is carried out during resource conflict. He pointed out that, in many cases, political and economic-elite as well as other actors do not act unanimously but with the support of the state and/or other parties outside the location of the conflict. Furthermore, the mobilisation of political representation of some stakeholders may complicate issues of power in natural resource decision-making processes. Wittmer et al. (2006) for example have observed such complexities with regard to demands for political participation by claiming to represent inanimate components such as ‘wildlife’ or ‘future generation’ rights and interests. Other studies (see McCharty 2000) have shown how state and private sectors network in the exploitation of natural resources.

Another emerging dimension of natural resource management and conflict is the importance of spatial scale and cross-scale linkages in actor interactions (Wilson et al. 2005; Louis et al. 2005). With the increasing portrayal that natural resource ecosystem services are becoming public goods with a value to national and global society (Dietz et al. 2003), there is a recognition that 'institutions at all levels, from resource users to international organisations utilise cross-scale linkages to further their own interests and agendas within their management systems whether they are dominant or are simply resisting change' (Adger et al. 2005:8). In this respect, Louis et al. (2005:2) writing on the politics of scale, position and place on resource governance, have argued that 'power is reflected in and reproduced by the capacity to control and capture resources from different levels'. Consequently, arguments have been made for the consideration of spatial setting and factors in resource conflict in our bid to understand the play of power in resource conflicts.

The import of these studies has been that actions and outcomes of natural resource conflicts pervade spatial and institutional boundaries, set rules and sometimes, subvert established rules and norms, as a result of mobilisation and counter-mobilisation of influence and control not only by 'powerful', but also less powerful stakeholders. In this respect, the centrality of the notion of power in conflict regulation and management is well reflected in the answer given by Mack and Snyder (1975: 242) when, about three decades ago, they posed the question, 'what are the implications of the power factor for the problem of resolution and control of conflict'? They response was that:

"To the extent that the function of conflict is the clarification and stabilization of power relations, modes of resolution, which omit or cannot basically affect these relations, are likely to be ineffective".

Unfortunately, in spite of the vast recognition by many scholars that power is central to conflict and conflict management, the subject has not received deserving attention in natural resource studies though impressive gains have been made in interpersonal, interstate and civil conflicts (see Van de Vliert, 1997; Walt, 1998; Kuenne, 1989; De Dreu, 1995; Werner, 1999; De Soyasa et al., 1997). For example Buckles and Rusnak (1999) reviewing the question of power in natural resource management observed that 'although in many settings marginalised groups must be empowered to undertake problem analysis and formulate strategies for negotiation, change will only come about if the powerful are moved to act on the causes of marginalisation, inequity and mismanagement'. They however lamented:

"The conditions and related pressures needed to accomplish this movement are not well understood and rarely studied (1999: 6).

Thus, even though power is central to conflict regulation, what is not well understood from such a lamentation is how actors in natural resource conflict play the power drama and how it influences the conflict toward constructive or destructive ends. The implication is that our appreciation of the role of power is not sufficient until how it plays itself out and affects the regulation of conflict can be understood to enlighten conflict management interventions.

In spite of the crucial need for understanding power play in conflicts, conventional approaches to studying conflict do not help to grasp power, at least for two reasons. The first is because the concept of power itself is highly contested and, as observed by

Wolf (2001), perhaps the most polymorphous and pervasive repertoire in social and political discourse. This makes it extremely difficult to measure power in practice (see Wrong, 1979; Lane and Stenlund, 1984; Cheater, 1999; Arts and Tatenhove 2004). Consequently, the tendency has been to take a simplistic view that places stakeholders into groups as 'powerful' or 'marginal' depending on their status, resource dispositions or as a result of some form of patterned domination. This dichotomous view is especially problematic as it has been shown to mask a web of complex power relations. Some recent studies have shown how the so-called marginal actors have demonstrated significant influence and control, through diverse forms of 'weapons of the weak' over powerful actors in conflict (see Scott, 1985, Leon 1994, Bavinck, 1998). Heclo (1978) echoed this long ago when he wrote:

Obviously questions of power are still important. But for a host of policy initiatives undertaken in the last twenty years it is all but impossible to identify clearly who the dominant actors are…looking at the few who are powerful, we tend to overlook the many whose webs of influence provide and guide the exercise of power (:20).

Second, our understanding of the dynamics of power has been impaired because natural resource conflict studies have not focussed on a systematic attempt to explore the subject. It can be argued that such exploration has been impaired because more often than not the conflicts have not been studied as a pattern of episodes that unfolds over time. In this sense, Van de Vliert's caution of our approach to conflict study is appealing:

It is about time that conflict handling is conceptualised as a complex pattern of behavioural components rather than as a pure and single behaviour (Van de Vliert, 1997:153)

Against the background of such complexities, it may be useful to explore the power game by understanding the intentional actions of conflict actors to influence each other and the resources they mobilise to take such actions. Jacobsen and Cohen (1986) for instance have hinted that the answer hinges on a clear distinction between power resources and potential power, explained as the capacity to influence outcomes regarding specific contested issues. How such resource mobilisation is deployed in location-specific struggles has been observed as one of the crucial questions for research (Bryant, 1992). This conceptualisation of power which focuses on actors' resources and strategies can be called actor-empowerment; but this is not used in the same interventionist' sense as the term 'empowerment' has been dominantly used in development and feminine literature and discourse. This conceptualisation of power suggests that actors in conflict, in so far as they take steps to respond or manage the conflict, are already 'empowering' themselves through this mobilisation. Clegg makes a beautiful summary of this insight in his frameworks of power when he contended that:

"Rather than imputing interests on whatever theoretical basis, the approach favoured here is aligned to perspectives, which seek to demonstrate how networks of interest are actually constituted and reproduced through conscious strategies and unwitting practices constructed by the actors themselves (1992: 204)".

Such a transactionalist perspective which focuses on individual actors and how they 'empower' themselves to deal with others makes the actor-empowerment framework follow a more Foucoldian ideology of power:

"Individuals …are always in the position of simultaneously undergoing and exercising this power. They are not only its inert or consenting target; they are also the elements of its articulation…the vehicles of power, not its points of application" (Foucault 1980: 98).

Coleman (2000) also makes a summary of the concept of power in the context of conflict which further enlightens such actor-empowerment conceptualisation for investigating power play. He wrote:

"Power can be usefully conceptualised as a mutual interaction between the characteristics of a person and the characteristics of a situation, where the person has access to valued resources and uses them to achieve personal, relational, or environmental goals, often through using various strategies of influence (2000:113)"

The actor-empowerment conceptualisation for investigating power means following the actions of specific interacting actors over time; thus grasping the chronological sequencing of actors' actions and reactions. Moore (1995: 132) observed that 'to move toward studying conflict processes require that we model them with respect to time, because these conflicts unfold over time'. This naturally calls for an approach that focuses on actors, their actions and interpretations, also termed as actor-oriented approach by Long (1992). However, existing natural resource conflict studies have focussed their analysis too much on holistic narratives neglecting reconstruction of conflicts over time in order to understand patterns of power play. Such narratives seem to suggest that conflicts are discrete events without history and future patterns and do not allow understanding patterns of actions (strategies and resources) unless chronologically reconstructed.

Following the notion that conflicts have both positive and negative capabilities, such a chronological construction of the respective actor-empowerment processes can also allow for a search for assessment of effectiveness of actor-empowerment regarding the direction that it leads the conflict. Consequently, it is wondered whether an understanding of such patterns will not be informative to contribute to innovations in conflict management and where necessary policy intervention.

Thus with regard to power, what matters at the end, following the language of Buckles and Chevalier, is that 'there is adequate understanding of how power differentials, local and institutional, play themselves out in particular situations of environmental conflict management' (1999: 10). Particularly, understanding the power strategies different actors' use during conflict and how they regulate the conflict towards constructive and destructive ends is urgent. The emerging challenge is to encourage a scientific and policy rethinking of conflict management intervention processes, in such a way as to allow for a better understanding of the dynamics of actor power strategies that open up space for self-organising processes. To understand the dynamics is to understand how power is played within a conflict episode over time.

Against this background, the scientific objective of this study is to understand actor-empowerment in natural resource conflict and the role it can play in conflict management in general and policy interventions in particular.

1.2 CONTEXT: FOREST CONFLICTS IN GHANA

The arguments so far suggest that that an appropriate natural resource context for understanding actor-empowerment is one that is characterised by conflicts where there are dynamic actor interactions and that such interactions can be systematically studied in clear historical, social and political contexts within which to place outcomes. By following up with a brief overview of forest conflicts in Ghana, it is argued they provide a suitable context for studying actor-empowerment.

First, forest conflicts in Ghana occur at different geo-social scales, mainly at the local and national levels given the location of forest resources and the wider political and institutional structures of governance, which confine policy-making and resource management respectively to the national and local domains. Following the development of 'scientific' and commercial forestry in Ghana till date, forest policy and management have been characterised by conflicts. Several issues have underpinned these conflicts ranging from reservation policy in colonial days to allocation of timber rights and sharing of benefits today. A classical review of the contested grounds upon which conflicts have occurred in the evolution of forest policy in Ghana has been made by Kotey et al. (1998). First, recognising the economic importance of cocoa (Theobroma cacao) to the national economy[2], the colonial government decided to establish permanent forest estates in order to maintain climatic quality, protect watersheds and ensure conducive agricultural environment for cocoa production. Attempts to impose reservation of forests were fiercely resisted by local chiefs and communities as this approach was considered as an attempt to remove land and land use decisions from their control. Prominent in this conflict was the issue of land ownership and control[3] since the institution of chieftaincy in Ghana is 'empty' without ownership and control over lands (Berry, 2001). Suffice to say that the reservation agenda was successful with two conditions:

1. The colonial government guaranteed by law (CAP 157, 18(1)) that the ownership of land within the proposed forest reserve shall not be altered
2. substantial economic interests in timber production and forest protection were guaranteed to the chiefs, including the provision of royalties and bounties in order to secure their support for forest reservation (Smith 1999: 9)

Second, consequent to the reservation policy, the issue of benefit-sharing became an important source of conflict and has remained so till date. Prior to the Concessions Act of 1962, landowners and timber concession holders directly negotiated concession agreements. Royalties were collected by local revenue collectors on behalf of the chiefs, landowners and the people acting through the traditional councils. With the passage of the Administration of Lands Act (1962), the determination, collection and distribution of royalties was centralised and administered by a Lands Department. This change, according to the account of Kotey et al. (1998), brought three significant issues around which conflict arose. First, through this system, the chiefs and landowners 'lost' their right to negotiate concessions on stool land which hitherto was in their purview. Second, it meant loss of jobs to the many local revenue collectors who could not be absorbed by the new

[2] It is important to note that Ghana has been a leading cocoa producer in the world, currently second to Ivory Coast. Cocoa has been the leading export commodity since colonial days contributing for example about 39% of total export earnings in 2004 (ISSER, 2005)

[3] Although landownership will be dealt with later, it is important to note that in Ghana, lands belong to communities and not the state.

centralised, 'formal' state institution. Third, there was a clash of the roles of the various forest-related institutions. The Forestry Department, which had management responsibilities for trees and forest, obviously wanted a higher royalty rate to be able to effectively undertake its task. The Lands Department was not seen as having high stakes in the level of royalties. The impression was that, it was, in the words of Kotey et al. (1998:80), 'only supervising the liquidation of a wasting asset rather than being an active manager of stool land for national development'. Obviously, the institution of both the Forestry Department and the Lands Department posed a challenge to the traditional council system, which had direct control ('power') over forest revenue.

After succeeding to put forests under reservation, the state used several legislations and administrative decisions to centralise its control over forest revenue with increased reduction in the share of revenue flowing to landowners. For example, in 1960 the Forest Improvement Fund (FIF) Act (Act 12) abolished all individual forest reserve accounts and all existing agreements in the Working Plans which required accountability of revenue to landowners by the state (Smith, 1999). Again, in 1976, strapped for funds and unable to secure from Parliament an increase in the timber royalties paid by the concessionaires (for reasons of high political influence), the Forestry Department took an administrative decision to increase its share of the royalties retained for forest reserve improvement from landowners from 30% to 70%'' (Smith, 1999). The struggle between landowners and the state agencies on revenue has continued till date. As observed by Treue (2001:141), 'the numerous letters to the Forestry Department from disgruntled traditional and elected leaders of local communities from all over the high forest zone indicate that the problem has prevailed a long time'. Moreover, industry and Forestry Department have since the centralisation of collection of royalties (now stumpage fee) also been involved in conflicts particularly on the determination stumpage rates of specific timber species and it has usually been difficult for the state agency to increase this. There have been a number of attempts by donors to cajole the Ghana Government to update rates. The World Bank has tried to include royalty revisions as an element of the 1989 Forest Resource Management Project (NRMP) loan conditionality but this was resisted by the timber industry and not enforced (Awudi and Davies, 2001). Demands for lands for farming and mining in reserved forests have also resulted in conflicts. For example, with the increasing cocoa frontier in the western regions of Ghana, high demands for plantation farming is known to have resulted in substantial invasion of some forest reserves. Recently, demands for allowing commercial surface operations in some forest reserves found to contain commercial quantities of mineral resources also resulted in conflicts among government, civil society and private mining interests. In the off-reserve areas of the high forest zone of Ghana, timber operations have and continue to create conflict related to crop damage compensation between timber operatives and farmers.

These conflicts have had both negative and positive effects. For example, the account of struggles surrounding the invasion of forested areas for cocoa farms culminating in a joint Forestry Department and military action to destroy such farms created heightened social tension, in the words of Kotey et al.(1998), 'a real war situation'. Such forceful actions resulting in social tensions have also been reported in conflicts between communities and timber companies (Marfo, 2001). Aside social unrest, forest conflicts in Ghana have also resulted in destructive coping practices. For instance, it has been reported that infuriated farmers have retaliated in such conflicts as the

'Operation Halt' (Kotey et al. 1998) by 'silently' destroying planted timber trees in return by loosening the seedlings within the planting holes or pouring boiled water on them to simulate death from bad planting or natural cause. In other cases such as compensation payment conflicts with contractors, farmers have also been reported to deliberately kill young regeneration of timber species or illegally sell them to chainsaw operators (Amanor, 2000, Lambini et al. 2005). These conflicts have generally created mistrust among stakeholders, a condition that does not provide incentive for cooperation and collaboration in the planning and implementation of policy and management decisions (see Ayling and Kelly 1997, Egestad 2002). Conflicts over timber resource access have resulted in rampant 'illegal' timber logging with high social (tensions, violent clashes), economic (loss of revenue) and ecological (indiscriminate logging) consequences (Nketiah et al. 2004).

However taking a retrospective view, forest conflicts in Ghana have had some positive effects especially in provoking some policy, regulatory and administrative reforms in the forestry sector. Specifically, one can argue that the long standing conflicts between forest-fringe communities and timber companies regarding benefits influenced the introduction of the 'compulsory' negotiation of Social Responsibility Agreements (SRA) which defines codes of conduct and social responsibility obligations before timber rights are granted. Currently, landowners and communities' benefits, at least from off-reserve stumpage revenue, have increased as a result of government's policy reform to reduce its share from 60% to 40%. Other positive effects have been the admittance of farmer/landowner rights of approval for timber exploitation on their lands. One can further argue that as a result of the long demands by some non-public actors such as NGOs, donors and landowners, there has also been increased transparency and stakeholder consultation in the forestry sector. For example, since about 2002 the Forestry Commission has been publishing stumpage fee disbursement to stakeholders which hitherto had been hidden from public scrutiny. Besides, at least the introduction of competitive bidding, rather than discretionary administrative judgements, for the allocation of timber rights may provide a first step towards further negotiation for transparency in timber allocations. It is important to note here that, all these positive outcomes have resulted in the management of long standing conflicts, either through self-regulation by the actors or through intervention, particularly by the state and NGO and civil society advocacy.

Forest conflict management in Ghana has, besides self-regulation, involved the use of conventional interventionist conflict management approaches such as court adjudication and mediation. Nonetheless, there is compelling evidence that conflict management has not been very successful in regulating many conflicts within constructive limits[4]. This claim is supported by the fact that there is increasing evidence of negative outcomes of resource management in spite of the large body of laws and regulatory policy instruments. The cumulative effect of these negative outcomes is embodied in the social, economic and ecological consequences. Few examples may clarify the point:

- There is no compelling evidence that mistrust between farmers and state forestry agency and loggers has improved (see Inkoom 1999), in spite of the use of self-regulation and mediation efforts by state forestry agency. Recent

[4] Outside Ghana, Wittmer et al. (2006) have also recently observed that traditional mechanisms such as juridical system in European societies are increasingly considered to be insufficient to meet environmental conflict management challenges.

studies (Amanor 2000; Lambini et al. 2005) on compensation payment conflicts confirmed that farmers continue to use negative coping practices to deal with crop damage conflicts.

- Even though the state forestry agency has largely depended on court actions and punitive measures to address forest offences such as chainsaw lumbering and 'illegal' use of forest reserves for farming, these have not resulted in decline in these activities. This observation is well echoed in the accounts of Tufour (1993), Kotey et al. (1998) and Asante (2005) with respect to judicial law enforcement in Ghana and that chainsaw lumbering and invasion of forest reserves continue to escalate with high social and economic cost to the state (see Nketiah et al. 2004).
- Moreover, even though state interventionist strategies such as the negotiation of Social Responsibility Agreement between timber right holders and forest-fringe communities have opened up space for collective bargaining, they have not been generally effective at addressing community-company tensions (Marfo 2001, 2004b; Forestry Commission, 2001).

These management 'failures' have been due to a complexity of factors including multiple context factors and more importantly, the role of power. That the Ghanaian forestry setting provides a context for studying the play of power in conflicts is well supported by the history and current circumstances of forest policy formulation and implementation since the days of forest reservation and commercial timber exploitation. First of all, that the forestry policy and management have, and still, involve interaction between different actors with diverse dispositions to political, social and economic resources is well documented (Kotey et al. 1998; Smith, 1999; Asante, 2005). Treue (2001) and Asante (2005) for example give a clear account of the politics involved in the forestry sector and where there are clear conflicts, how rules have been subverted and renegotiated, alliances with powerful political structures formed and used and plans of others including government constrained. For example giving account of the evolution of forest policies in Ghana about a decade ago, Kotey et al. (1998:81) lamented that:

"The timber man held fast to the attributes of political and financial clout. They could influence policies, stall legislation and modify some working plan prescriptions and were largely responsible for the tardy revision of royalties'… 'No cocoa farmer could do that".

The World Bank (1999) has also observed that the Ghanaian Forest Service and political parties remained dependent upon clientele's relation with timber interests. Commenting on timber lobby, Inkoom (1999: 103) observed:

"Timber merchants have traditionally wielded enormous economic as well as political power and as such it has been very difficult to implement forest management practices which in many instances were contrary to their economic objectives. Consequently, forest management measures have not enjoyed the support of powerful timber merchants, and various governments appear not to have been able to implement policies that will hurt their interests in the forest resource".

From the foregoing, it can be established that forest policy and management have been characterised by conflicts and the outcomes of these conflicts have depended on mobilisation of diverse resources and bias to influence procedures and other actors and to create constraints to the regulation of the conflict. In all this, the conflicts have thus not escaped power-play. However, even though these accounts highlight the

powerful-marginal dichotomy, they fail to illuminate the concern as to whether the powerful have always 'dominated' and if so why for example, have the state and timber loggers not always succeeded at implementing their decisions as clearly exemplified in the case of chainsaw lumbering (see Marfo, 2004a, Nketiah 2004). How do the various actors achieve capacity to deal with confronting situations and others in specific conflict scenarios?

Although many forestry-related studies in Ghana have mentioned the prevalence of conflicts and the attendant issues of power, few have explicitly focussed on a systematic analysis of power-play in these conflicts. However, these few studies (example Kotey et al. 1998, Marfo 2001, Asante 2005) have only described some of the conflicts, more as a narrative and sometimes expounded on their consequences. There has not been a systematic approach following the chronological sequencing of specific episodes, neither has there been a systematic attempt to analyse power play looking at actor strategies and resources and their effectiveness in course of the conflicts and how it directs the conflict. What is rather encountered in existing studies has been the conventional dichotomous labelling of some actors (such as timber industry) as powerful and others (like local communities or farmers) as marginal or less powerful. An exemplary statement from Kotey et al. (1998:81) summarises this point:

"The timber man (*powerful)* held fast to the attributes of political and financial clout. They could influence policies, stall legislation and modify some working plan prescriptions and were largely responsible for the tardy revision of royalties. No cocoa farmer (*less powerful*) could do that".

As has been elaborated above, such a rigid view covers a web of complexities and does not offer a deeper understanding of power play in empirical settings and hence do not enlighten innovations in conflict management and policy interventions. Thus, one can argue that Ghana provides a good setting and forest conflicts in Ghana an empirical context for studying actor-empowerment in conflict.

1.3 RESEARCH OBJECTIVE AND METHODOLOGICAL BACKGROUND

We have established that studying conflicts as episodes over time focussing on actors' power strategies and resources and their effectiveness can help us to understand power-play. Therefore, based on the reconstruction of specific conflicts, the following research questions can be formulated:

1. To what extent are patterns of actor-empowerment in the course of conflict recognised with regard to episodes?
2. To what extent are patterns of actor-empowerment in the course of conflict recognised with regard to power strategies?
3. To what extent are patterns of actor-empowerment in the course of conflict recognised with regard to power resources?
4. To what extent is actor-empowerment effective at sustaining conflict interactions and/or managing impairments?
5. Does actor-empowerment differ in local, reserve and national level conflicts?

It is expected that a search for answers to these questions will help enlighten our understanding of power-play in conflicts and the role actor-empowerment can play in conflict management and policy interventions.

An approach to studying conflict actions over time may lead to perspectives that build our understanding of actor-empowerment in specific contexts or to generalisations that seek to predict responsive actor behaviour in conflict. The latter objective seems to have dominated power studies leading to generalisations that pattern and predict actor strategies and behaviour in conflict (Cosier and Ruble, 1981; Tedeschi, 1973; Van de Vliert, 1997). In this study, the former objective of seeking enlightenment is pursued rather than attempting to generalise on actor empowerment behaviour, let alone attempt to formulate predictive patterns. It is argued that, since the systematic study of power in natural resource conflict is scarce, it is helpful to begin such investigations focussing on case study scenarios to enlighten current knowledge on the subject rather than starting with attempts at universal generalisations. This point of epistemological departure naturally suggests a case study approach focussing on few specific conflict cases. Moreover, understanding conflict as a process and actor-empowerment requires exploratory, descriptive and explanatory inquiry and this can best be achieved when empirical investigation is focused on specific cases that provide context within which a comprehensive overview can be elaborated (Yin, 1984; Verschuren and Doorewaard, 2000). Such a paradigmatic position suggests an investigative inquiry that employs qualitative methods to acquire 'data' on how conflict actors undertake their conflict actions over time under specific situations (context). However, as noted by Read and Marsh (2002), other factors such as nature of research problem, besides one's ontological and epistemological orientation, are important for determining methodology for empirical research. In the context of the research problem, understanding chronological patterns of actor-empowerment for example may require that further quantification of text and graphical display of data to increase the power of their description be made. This is because it has been well noted that the descriptive superiority of quantitative data has high heuristic value for representing social phenomenon (Miles and Huberman, 1994; John 2002). Thus, the formulation of the qualitative data may benefit from using quantitative representations and formats to improve the analysis of the data. Specifically, where the analysis can benefit from quantitative analysis using statistical tests for example, it will be used to strengthen the work. Increasingly, Read and Marsh have observed that the trend of combining both methodological approaches is gaining grounds in current research practice and that 'the traditional philosophical division between them is increasingly becoming viewed as a false dichotomy' (2002:235).

Generally in addition to attempting to explore power-play in conflicts, the study also partly assesses the appropriateness of the conceptual approach of using the notion of actor-empowerment to study power. Thus the study is not aimed at providing blueprint or rules of thumb for the management of conflict; nor does it aim at designing new conflict management or intervention tools. Rather it is expected that the lessons can enlighten the design and implementation of conflict management strategies on what may enhance or constrain regulation of conflicts within constructive limits, either through self-regulation or intervention mechanisms.

To work the study through to the point where such enlightenment can be made the study proceeds with a theoretical framework in chapter 2 where the central concepts to studying actor-empowerment in reconstructed conflicts in empirical contexts will be elaborated. Chapter 3 will expand the methodological approach introduced here and elaborate on its justification. Particular attention is paid to data collection and

analysis approaches. This will be followed by four empirical chapters that will summarise the results of the case studies, dedicating one chapter to one case. Chapters 4, 5, and 6 are written in the style that introduces the conflict context and a brief clarification of the empirical assessment including data collection and analysis techniques specifically employed for that case. Chapter 4, 5 and 6 will respectively be dedicated to presenting the results on the forest-mining conflict at National level, Forest Reserve level and compensation payment conflict at the Local level. Chapter 7 will focus on presenting the results from all the case studies in chapters, 4, 5 and 6 in a comparative perspective. The results will be discussed in chapter 8 in the light of the theoretical concepts and arguments that will be introduced in this work. The major conclusions of the study, particularly their implications for conflict intervention and future research are recapped in chapter 9 to end the substantive content of the study. References, summaries (English and Dutch versions) and annexes of the work follow in that order.

2. THEORETICAL FRAMEWORK

> "We know a great deal about power, but we have been timid in building upon what we know (Wolf 2001: 383)
>
> "I know of no method that resolves the scientific puzzle surrounding the concept of power but that does not imply that each definition is as good as the other or that approaches to power may not be improved upon" (Lane and Stenlund, 1984: 396)

Following from chapter 1, an investigation into actor-empowerment in reconstructed conflict episodes requires a clarification and delineation of the theoretical concepts underpinning the research questions. Obviously the concepts of conflict, power and for that matter actor-empowerment are contested fields and continue to divide social and political scientists. Therefore, any study into these areas definitely demands a clear theoretical framework to guide the empirical and analytical aspects of the research. This chapter is dedicated to this task. First, the chapter attempts to develop a conflict model that will allow for conflicts to be studied over time, as a sequence of episodes giving particular attention to elucidation of conflict actions. This is followed by developing the conceptual aspects of the dimensions of actor-empowerment by clearly defining the boundaries of power strategies and resources. Finally, the chapter is concluded by integrating the theoretical concepts into a model that can assist empirical reconstruction of conflict episodes, elucidate actions and hence actor-empowerment over time. This is argued to be a helpful framework to studying patterns of the various dimensions needed to answer the research questions in chapter 1. The theoretical framework is bounded in the disciplines of political psychology and social and political anthropology of natural resource use and management

2.1 CONFLICT MODEL

The literature on conflict is very rich; this has resulted in several definitions of the concept (see reviews by Fink, 1968; Lewicki et al. 1992; Walker and Daniels 1997). However, the increasing interest in the study of conflict has not been equally matched with the development of models for the study of conflict. This is primarily because though several studies have been done on conflicts, many of them seem to take a departure by simply defining conflict or assuming a universal understanding of the term. Relatively, few of these studies have attempted to elaborate on models for studying conflict and yet none seems to dominate as a 'universal' model of conflict (Lewicki et al. 1992). Examples of these models are the Dual Concern model (Ruble and Thomas, 1976 and Pruitt and Rubin, 1986), Conflict cycles model (Walton, 1969) as well as that which Lewicki et al (1992) describe as the most cited, the organisational model by Pondy (1967). These models for studying conflict have been formulated based on the antecedent conditions for the construction of the concept of conflict and the predictable course or pattern conflict follows; a point well synthesised by Lewicki et al. (1992). Lewicki et al. (1992) have synthesised these models and their conclusion point to the fact that most of the concepts, in one way or the other, are subsumed in Pondy's argument. Not surprisingly, some recent studies such as Niemela et al. (2005) observe Pondy's model as the most popularly cited conflict model.

However, the exploration for a suitable model to serve the research needs of the concept in this study must meet two fundamental conditions in the light of the arguments advanced in chapter 1. First, the model must clearly delineate the notion of conflict from other antagonistic social phenomena in order to provide a basis for empirical application of the term. Second, the model should help us to follow conflict actions over time. This will help us to follow the chronological sequencing of conflict actions in order to be able to ascertain patterns of actor resource mobilisation and strategies over time. Given the popular scholarly acknowledgement of Pondy's model, it can be useful to begin our exploration with it. Pondy (1967) postulated an organisational model of conflict, in which he basically pointed out that conflict, should be studied as a sequential process of episodes, going through five stages. These stages start from latent conditions, and then move to perceived conflict (cognition), then to felt conflict (affect) which leads to manifest conflict (behaviour) and then conflict aftermath (condition)

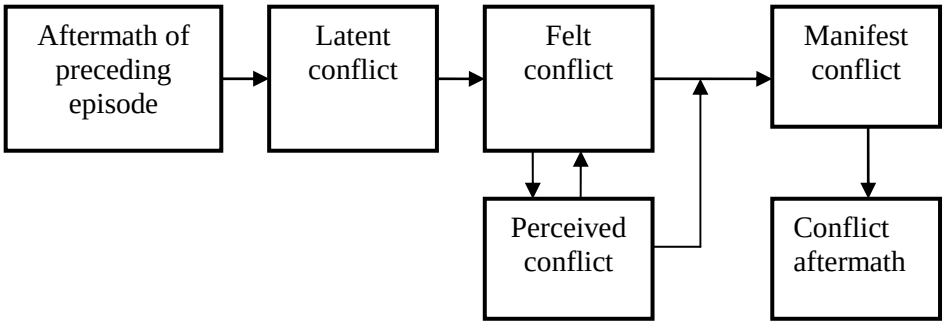


Figure 2.1 schematic diagramme of Pondy's organisational model, 1967

Although this model seems to give a broad cognitive and behavioural range for the study of conflict, it does not clearly delineate the concept of conflict. In this sense, it presents the same difficulties associated with an empirical application of the concept as the other definitions that look at conflict as presence of incompatibilities in behaviour (see Walker and Daniels, 1997). Second, it does not explicitly delineate conflict as a behavioural phenomenon which places conceptual demands on conflict studies to include other aspects of antagonism at the cognitive and emotional levels. These aspects fundamentally flaw Pondy's model as a starting one.

More lately Glasl (1997) developed a conflict model between two individual actors, conceptualising conflict as perception or experience of impairment by an actor as a result of the behaviour of another due to differences in perceptions, emotions and interests. Even though Glasl's model was developed to study interpersonal conflicts (with psychological process underlining) instead of social conflict such as natural resource conflicts with interest underlining, yet, it offers comparable advantage, at least for three important reasons. This is especially so when the current need for a model is not primarily concerned with conceptualisation of causes or antecedent conditions for natural resource conflict but with following conflict actions. The comparable strengths of Glasl's model are elaborated in the light of aforementioned conceptual needs.

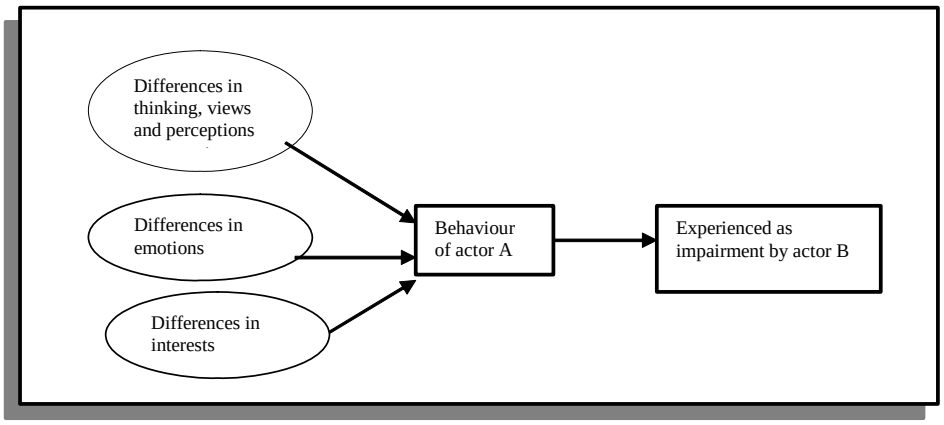


Figure 2.2 Glasl's model of conflict

First, Glasl's model allows for a clearer delineation of conflict from other social and politically antagonistic processes such as competition (Dahrendorf, 1958) and politics of interest (Cochran 1973). Moreover, even though there seems to be consensus within mainstream conflict literature that the term describes incompatible behaviours (see Fink, 1968; Lewicki et al. 1992; Walker and Daniels, 1997), the operationalisation of conflict phenomenon for empirical research is more robust with the proposition of conflict as the presence of defined impairment to one's goals, interest, values etc. For whatever intended reasons serving as antecedent condition for conflict, such as competition over scarce resources and demands for control (as proposed by Pondy, 1967) or the relative concerns for others (Dual Concerns Model) or ideological clashes (Debate Model), the notion of conflict can only be conceptualised for empirical studies when there is some sort of perceived or experienced impairment. Without such element of impairment, the operationalisation of conflict will be difficult as it will not be clear then, 'what is not a conflict' reducing all behaviours of social incompatibilities to conflict.

Secondly, Glasl's model concentrates the conceptual scope of conflict on behaviour or action, a correlate of Pondy's manifest stage. The advantage of limiting conflict to manifest behaviour, irrespective of causal factors or antecedent conditions is that, it allows one to follow the actions of conflict actors, both in on-going and historical conflict settings. In this sense, if one follows the usual defence of criticisms for the application of Pondy's model that 'only some part is used' (Lewicki et al. 1992: 214), then there is a consistency between the two models if we are to conceptualise conflict as a manifest phenomenon with perceptions and emotions relegated as causative factors. Although not all conflict actions (following Pondy's broad band conceptualisation) can be acted upon, many studies that concerned themselves with understanding conflict management and strategies have focussed on those that resulted in some steps taken by the actors involved against one another (see Borg, 1992). Glasl's model clearly delineates this behavioural boundary for empirical investigation of actor-empowerment. In this respect, it should be clear now that the most relevant aspect of Glasl's model for the current application is its usefulness in operationalising conflict as an experience of impairing actions and not the underlying causes which are admitted to be limited in natural resource conflict context.

Thirdly, Glasl's model 'forces' conflict process to be studied as a two-actor game, with a pro and a con and also follow respective pro and con interactions over time enabling chronological construction of actors' action-reaction episodes. Even though most natural resource conflicts will usually involve multiple actors, this does not limit the application of a two-actor game model, such as Glasl's, in the study of such conflicts. This is because conflict Scholars have for long observed that there is a persistent tendency to reduce multiple-party conflicts to two-party conflict via coalitions and blocs (Mack and Snyder, 1957). In most cases actors can be grouped into two categorical designations such as proponents and opponents, managers and users and so on based on their interest and positions in a particular conflict issue. However, this also means placing individual 'homogenous' micro actors into a more 'heterogeneous' macro group in multi-actor settings. The question is whether analysis of actor-empowerment in a multi-actor setting can benefit from such two-actor designations without compromising information to understand the dynamics that multi-actor interactions present.

As observed in social and political discussions on actor-designation, Frey (1985) for example admits that conceiving of a more general categorisation that does not sacrifice accuracy or information is undeniably difficult in many cases. Basically, the argument on actor designation in social and political analysis is torn between individualist and group theorists. Bentley (1967:208) announces that 'there is no political phenomenon except group phenomena and that when the groups are adequately stated, everything is stated. Contrary to this group theory, individualists have argued that individuals are the irreducible atoms of politics and Monsen and Canon (1965:5) follow up with a caution that 'the term 'group' denotes one of the outstanding political uncertainties'. The argument has been that any designation of individual micro actors into a macro group should consider internal cohesiveness and its relevance to underlying theoretical motivations (Frey, 1985). For the two-actor model application in multi-actor natural resource conflict settings, the grouping of actors will be based on their interest/positions in the conflict, pro and con. Thus, it is argued that in so far as the interests and positions, pro and con, of the individual micro actors are explicitly identified, their respective groupings provide the theoretical internal cohesiveness needed to follow their empowerment efforts. It has been recognised that depending on the complexity of the system being studied, individual or group actor-designations may be more practical. For example, for analysis involving a small system or limited relationships, a completely individualistic focus is possible against large systems where a group designation is more practical (Frey, 1985). Except for interpersonal resource-related conflicts, most natural resource conflicts can be considered as large systems due to the presence of multiple actors and the complexity of their relationships; hence group designation can be argued to be appropriate in the study of natural resource conflicts. For example, in a recent study on environmental conflict, Suryanata and Umemoto (2005) applied a two-actor designation in a multi-actor environmental conflict involving private agencies, environmentalists, fishers, entrepreneurs, scientists, policy makers and native Hawaiian organisations as proponents and opponents.

To conclude on our conflict model, we can then argue that Glasl's model provides a core framework in terms of conceptual delineation and operationalisation of the term 'conflict' and also allowing for conflict to be studied as a two-actor game. However, this does not mean that other actors cannot be impaired by the behaviour of any of

these two contextual actors; the only thing is that the model helps us to 'isolate' any two actor interactions of interest. Additionally, we can borrow Pondy's idea of conflict as a process in order to be able to sequence Glasl's model over time to allow us to reconstruct a specific conflict as a series of episodes. The notion of episodes thus becomes central to the application of the model in the reconstruction of conflicts and hence the search for patterns. We now turn to elaborate on the conceptualisation of conflict episodes.

Conflict episodes

Given the theoretical focus on actor-empowerment, it remains how patterns can be captured in the reconstruction of conflicts. It has for long been argued that conflict relationship between two or more individuals or actors can be analysed as a sequence of conflict episodes. Pondy (1967) for instance argued that each conflict episode begins with conditions characterised by certain conflict potentials, or specific impairments. Building on Pondy's view, the construction of episodes involves an interface of conflict actions that leaves an aftermath that affects the course of succeeding conflict actions. Put in the Glaslian sense, conflict episodes begin from the specific impairment actions upon which opposing actors react, leading to further impairments that continue the conflict or are managed to 'end' the conflict. Thus, the conflict drama unfolds as a series of episodes where the actors' actions influence not only the outcome of each particular episode but also which episodes are subsequently encountered (Bennett and Howard, 1996:605). Such segmentation is valuable for making sense of what might otherwise be viewed as an undifferentiated outpouring of behaviour (Dillard, 2004). This can be represented, using Glasl's model, as shown in figure 2.3.

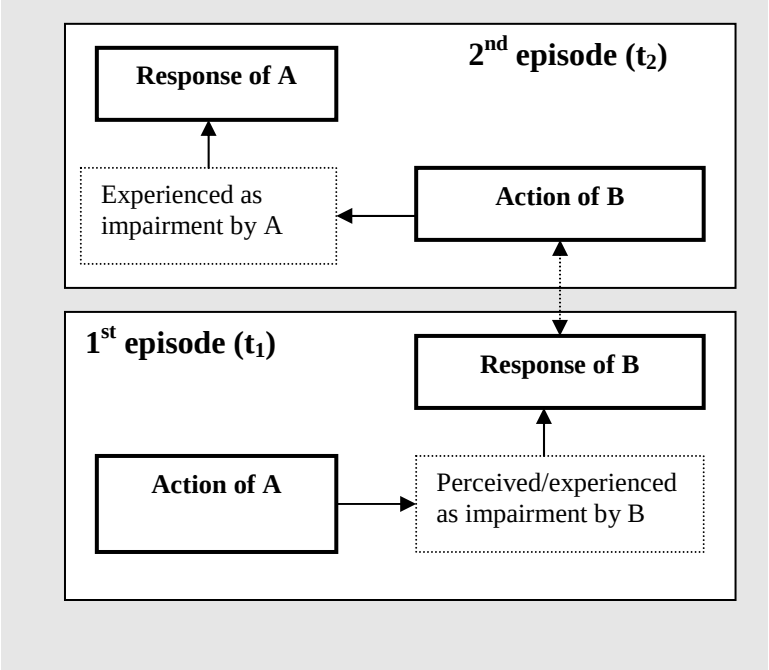


Figure 2.3 a model of conflict episode. Sequencing several of episodes in a chronological order (t_1, $t_2 \ldots t_n$) can help reconstruct specific conflicts.

"But some notion of a single mutual act-response sequence as the basic unit of social interaction is indispensable and applies as much to the asymmetrical interaction involved in a power relations as to other forms of interaction" (Wrong, 1979:69).

From the foregoing, it can be argued that the beginning of an episode should involve a pair of reciprocal behaviours (action-response pairs).This normative construction of conflict episode is expected to give rise to a zigzag pattern where actors' directly respond to each other's action. However, empirically, it is possible that this normative pattern may not be uniform throughout the conflict as it is possible that some empowerment actions of actor A may not directly influence B to react, if B so decides that it is more strategic to do so. Many studies on influence have observed the possibility of this rational pattern (Cialdini and Guadagno, 2004). Therefore, as far as specific 'isolated' episodes are concerned, two main forms of episodic patterns can be observed, reciprocal and serial. Depending on the number of sequential actions taken by an actor before the competing actor responds, i.e. another episode is created, the serial pattern can be labelled by the number of actions. Figure 2.4 shows, respectively, reciprocal and 3-serial episodic patterns for illustration. Overall, the maximum number of action-reaction levels that the entire episodes in a conflict last can be termed as the chronological length.

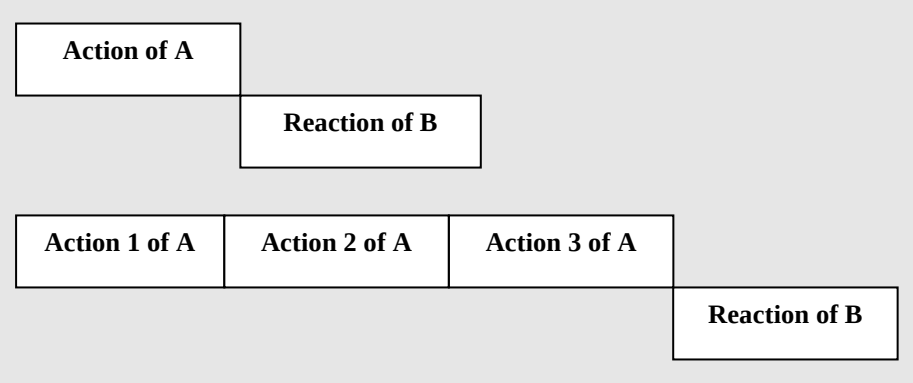


Figure 2.4 diagrammatic illustrations of a reciprocal (upper) and 3-serial (lower) episodic patterns

Based on the expectation that both reciprocal and serial patterns may be exhibited in specific empirical context, two general patterns of all conflict episodes are possible, perfect reciprocity and imperfect reciprocity. In a perfect reciprocity, it is expected that all the observed individual episodes will be reciprocal, such that every action of A is responded with a response from B and vice versa. In imperfect reciprocity, it will be expected that some forms of individual serial episodic patterns may be encountered. The relevance of this is that if such general episodic pattern can display the sequences of actors' action-reaction patterns, then it can give a fair picture of the extent of power play between the actors, if empowerment is related to conflict actions. The greater the proportion of reciprocal episodes, the more dynamic the power play, and the greater the proportion of serial episode patterns, the less dynamic the power play. Thus, a conflict with perfect reciprocity pattern for example can be said to exhibit a highest dynamism of actor-empowerment.

It should be clarified that the notion of episodic patterns and the attendant indications of dynamism of actor-empowerment being advanced here are different from the

traditional concept of conflict escalation; this clarification is useful as the empirical investigation of both concepts follow chronological sequencing of conflict actions. While escalation patterns or models depict the extent of adversity and aggressiveness of the actions in the course of conflict episodes (Kriesberg, 1998, Glasl, 1999), episodic patterns only depicts the pattern of action-reaction sequences and to indicate the extent of their interactions in attempting to influence each other. Thus, a conflict with a lengthy perfect reciprocity pattern will not necessarily mean one at a high escalation level. It is possible for such a conflict to exhibit de-escalation. Therefore, the establishment of the relationship between the two concepts is an empirical question.

Thus far, we have argued that through a chronological construction of the specific actions and reactions of conflict actors, the pattern of the episodes can be ascertained. This is fundamentally important in order to study patterns of desirable variables such as power strategies and resources and also to assess effectiveness of actor-empowerment. These concepts are elaborated in subsequent sections.

2.2 THE ACTOR-EMPOWERMENT FRAMEWORK

2.2.1 Power resources

Categorisation
In chapter 1, a case was made for studying power-play in conflict through the concept of actor-empowerment. As mentioned earlier, an actor-empowerment conceptualisation of power focuses on both the dimensions of strategies and sources or bases (resources) which are used to gain the capacity to take such strategies. Giddens (1986:91) explains the linkage of power and resources when he contended that "power is not a resource, rather resources are the media through which power is exercised and the structures of domination produced".

Power resource can be defined, following Rogers (1974:1425), as "any attribute, circumstance, or possession that increases the ability of its holder to influence a person or group". Several studies (Rogers, 1974; Korpi, 1985; Giddens, 1986; Joutsenvirta, 1997; Hermens 1999; Kurtz 2001; Scott, 2001; Dugan, 2003c) have identified a broad range of resources as the basis for the exercise of power. These range from human endowments such as intelligence and oratory, organised individuals and groups in society, legitimacy and authority of social agents and structures to more ideational elements such as symbols, information and ideologies. As observed by Morgan (1986), "the sources of power are rich and varied providing those who wish to wheel and deal in the pursuit of their interests with many ways of doing so". With such wide range, any systematic study of power resources can only be done with some level of categorisations. However, as observed by Kurtz (2001: 32), "the resources of power are inextricably intertwined in complex equations and can be separated practically only for analysis". Several analytical categorisations have been used to study power resources in several disciplinary domains such as for example the categories of material and ideational domains in the study of politics (Kurtz, 2001), and the tripartite divisions of socio-economic, social and cultural resources in anthropological studies (Hermens, 1999). From a review of the literature

on power resources, an analytical categorisation of sources of power (resources) in natural resource conflicts can be made, putting resources into four groups, namely socio-economic, social, orientational and institutional.[5]

First, following Hermens, socio-economic resources are those that give actors access to means of production. This includes money, property, land, labour and expertise. Korpi (1985) has made an emphatic observation that physical capital in the form of control over means of production is a very significant power resource with a large domain and wide scope. Some studies (example Hermens, 1999) believe it is the most important source of power because it involves control over peoples' livelihood and can mobilise other resources.

Second, social resources lie in the domain of social groups where resources are mobilised through social capital; this is a correlate of Hermens' access to means of organisation or social relations. Increasingly, non-governmental actors and social movements are emerging as social capital in political, social and economic affairs of modern nation states (see van den Hombergh, 2004). In natural resource conflict, the mobilisation of social networks, allies and groups by actors for the pursuit of conflict actions has been well observed (see Brown and Rosendo, 2000; Upreti, 2001).

Third, resources in the domain of cognition such as information (knowledge), symbols, cultural frames, ideologies, beliefs etc that are deployed to shape the conduct of people can be collectively labelled as orientational resources; a correlate of Hermens' cultural and Kurtz's ideational categories. In this regard Few (2000) observes the central role that knowledge play in actors' empowerment effort during negotiation.

The fourth category is resources that are those located in the domain of institutions of control in specific organisational or geo-political settings such as nation states and communities. The institutional domain is where the control of setting in which people may exhibit their potentialities and interact with others is derived. "It is the power derived from this source that enables institutions to define what is expected and what is regarded as 'rational' or appropriate in a given situation (O'Riordan and Jordan, 1999:85)". In its visible form, institutions involve the structures of the state and society where some authority or legitimacy is granted, and the formal rules of procedure, conventions and protocols. This includes the political (executive, legislature and judiciary) and administrative structures of the state, traditional structures, laws, and with increased international cooperation and democratisation of many nation states, especially in developing economies, donors and the media (emerging as the 'fourth' arm of government). Increasingly, there is no doubt that NGOs and civil society movements are taking on important roles in the local, national and global politics. Whiles many studies have praised them and encouraged their continuous recognition, especially in local and national governance (Frantz 1987, Chernela, 2005), there are others who have strongly critiqued their role and cautioned that such a recognition should be approached with care (see Lane and Morrison, 2006); yet others like Kenny (2006) have argued to suggest that nations are 'condemned' to live with NGOs and whatever the case is, they will continue to have

[5] This categorisation has not generally included natural individual endowments and military or paramilitary (material) resources such as weapons since they are to some extent mobilised by one or more of the four categories.

roles to play. It has been shown that NGOs continue to extend their spheres of participation including environmental conflict resolution (Lane and Morrison, 2006). The use of the term 'institution' here is limited to these structures and does not include the notion of sociological institutionalism, which perceives institutions as moral templates and cognitive scripts that offer frames of meaning (O'Riordan and Jordan, 1999; Schmidt, 2005). Such resources are considered more as cultural and orientational resources in the third category. Table 2.1 gives an overview of the main power resources and their sub-categories.

Table 2.1 summary of the categorisations of power resources

Main categories of Power resources (code)	**Sub-categories (code)**
Socio-economic	Wealth Expertise
Social	Social network; Political network; Traditional network; NGOs and civil society network
Orientational	Strategic framing, knowledge, information; ideologies; beliefs Threats; cultural symbols
Institutional	Political state legitimacy; Administrative state legitimacy; Traditional/customary legitimacy Law; Donors; Media

In order to understand the effectiveness of actor-empowerment, another dimension of power resources categorisation which is of analytical significance is a focus on the consequences of the availability of specific resources for the mobilisation and use of others. Rogers (1974) made a useful classification when she distinguished power resources into instrumental and infra resources. She elaborated that:

> **"instrumental** resources are the means of influence; they can be used to reward, punish or persuade…and **infra**-resources are those attributes, circumstances, or possessions that must be present before the appropriate instrumental resources can be activated or invoked; in that situations they are the preconditions or prerequisites without which instrumental resources are useless (1974:1425).

Thus, in so far as the activation or presence of certain resources are perceived to 'enable' or 'constrain' the mobilisation and use of other resources, such a categorisation provides an analytical tool that may help explain the effectiveness or otherwise of specific deployed resources in an actor's empowerment process.

2.2.2 Power strategies

Categorisation

It has been pointed out that power is a highly contested concept (Giddens, 1982; Knights and Morgan, 1991; Haugaard, 1997; Scott, 2001; Galinksky et al. 2003; Arts and Tatenhove, 2004) and a clearer delineation of its use, as a root concept of actor-empowerment, is needed to begin with. Inspired by several definitions particularly those of Katz and Khan (1966) and Wrong (1979), power is conceptualised here as the capacity to exert intentional influence to achieve outcomes where the capacity can be dispositional or mobilised. Thus, in the context of conflict, following Glasl's model, the notion of intentionality is central to operationalising any action as a *powerful* one to the extent that they are undertaken to manage impairing behaviours. Such intentional actions are therefore directed at influencing the behaviour of impairing

actors, and hence can be termed 'power strategies'[6]; though it should be mentioned here that the conception of power has also involved unintentional actions (see Giddens, 1982). The attainment of capacity has been explored under the discussion on power resources, and now the focus will be shifted to intentional actions and power strategies. Giddens clearly posited that "the concept of action is logically linked to that of power, if the latter term is interpreted in a broad sense as the capability of achieving outcomes (Giddens, 1982:38)" and Knights and Morgan (1991) later went far to conclude that the discourse and practice of strategy is distinctively a mechanism of power.

Considering hypothetical actors A and B, using the two-actor game approach, the possible expected actions to be taken by B when impaired by A can be explained as follows in table 2.2.

Table 2.2 Possible intentional actions (power strategies) of an impaired actor

Description of conflict	**Action to combat impairment (power strategy)**
Behaviour of B impairs A	B curtails interactions with A to avoid direct contacts with A in order to sustain the impairing behaviour. This can be called **Avoidance**
Behaviour of A impairs B	B bargains by attempting to convince A to stop or change behaviour. This can be called **Persuasive bargaining (persuasion)**
Behaviour of A impairs B	B bargains by attempting to change the setting to constrain A's preferred behaviour. This can be called **Manipulative bargaining (manipulation)**
Behaviour of A impairs B	B seeks the support of neutral third party for non-adjudicative intervention to find solution. This can be called **Mediation**
Behaviour of A impairs B	B temporally seeks allies purposely to improve capacity to deal with A's behaviour. This can be called **Coalition-building**
Behaviour of A impairs B	B seeks for avenues to get A to jointly agree to seek non-court adjudication intervention. This can be called **Arbitration**
Behaviour of A impairs B	B seeks for court intervention. This can be called **litigation.**
Behaviour of A impairs B	B uses physical force on A to compel A to change his behaviour. This can be called **Force.**
Behaviour of A impairs B	It is also possible to imagine B withdrawing or accommodating in order to 'end' the conflict but these are not considered power strategies as they do not have a direct objective to influence A to change his behaviour.

Although these forms of categorisation of power strategies are conceptually distinct, it has been observed that they cannot be neatly classified in actual experience. The epistemological point here is that all concepts are abstractions from reality and do not describe it in its plenitude (Wrong, 1979). This point reinforces the need for clear analytical distinctions of strategic actions, and from an actor-empowerment perspective, it is difficult to do this without serious attention to the particular forms of

[6] Power and influence have for long been distinguished by some Scholars by seeing influence as demonstrated use of power. Influence is a transaction in which one person (or group) acts in such a way as to change the behaviour of an individual (or group) in some intended fashion (Katz and Kahn, 1966)

resources used. This is clearly exemplified in the discussions on persuasion and manipulation as communication influence strategies, where some scholars collapse the two together as different aspects of persuasion (see Seiter and Gass, 2004) and others separate them (see Ware, 1981; Paine, 1989); all based on functional utility of the underlying symbolic resources employed. In this sense, the analytical distinctions of the various power strategies cannot be addressed well without elaborating on the nature of the resources with which they are deployed. This is taken up in full in section 2.2.3.

In conflict and influence related literature, the exercise of all the possible power strategies has been observed to be directed towards cooperation or competition (see Walker and Daniels, 1997; Rummel, 2003). With cooperation, the strategy is integrative or collaborative, seeking the involvement of the other actor to manage the impairment or at least attempting to cause them to make 'reasonable' choices of behavioural change. Boulding (1989) called this integrative power, a correlate of the so-called 'power with'. With competition, actors seek to dominate (exercise power over), and their empowerment is geared towards achieving a kind of zero-sum outcome. Several factors, such as those identified in table 2.3, have been identified as influencing actors' choice for cooperative or competitive strategies.

Table 2.3 Comparing collaborative and competitive strategies

Factor	Collaborative	Competitive
Goal	Mutual gain	Self benefit
Resource view	Expandable	Fixed pie
Relationship	Valued	Unimportant
View of other	Partner	Adversary
Communication	Open	Controlled
Trust	High	Limited
power	shared	coveted

(Source: Walker and Daniels, 1997:25)

However, this and other studies suggest that the degree of cooperation or competition vary on a continuum of extremities depending on the degree of communication, the level of psychological or physical aggression used and the tendency for a strategy to result in a win-win outcome (Van de Vliert, 1997).

Following the dual concern model of Rubin et al. (1994) for example, various shades of co-operative and competitive choices can be categorised (see figure 2.5). One can observe two main axes, the cooperating axis (from lower left to upper right) and the competing axis (from upper left to lower right).

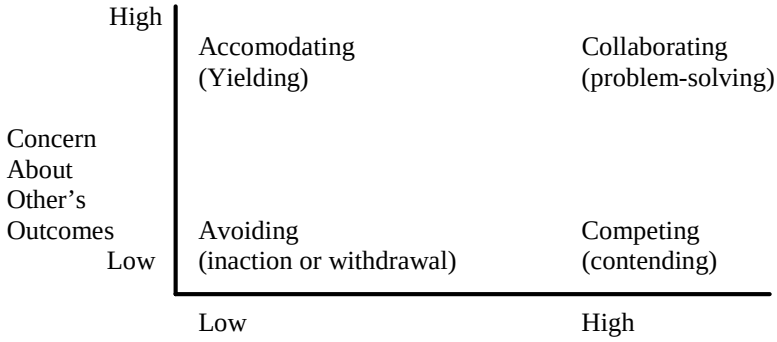


Figure 2.5 The dual concern model (from Rubin et al. 1994)

Assuming that in conflict situations actors may always have a high concern about their own interests and outcomes, then from the model in figure 2.5, actors will either compete (contend) or collaborate (collaborate). This is well summarised in the words of Van de Vliert when he wrote:

"There is a central inescapable tension between cooperative moves to create value jointly and competitive moves to gain individual advantage; this tension affects virtually all tactical and strategic choice" (Van de Vliert, 1997: 57).

However as observed by Walker and Daniels (1997:25):

Co-operation can appear as part of an accommodative, compromise or collaborative strategy. What distinguishes collaboration is the assertiveness of the strategy. It features a willingness to co-operate while remaining principled about one's goals and values (Walker and Daniels, 1997. 25)

The use of the term 'cooperation' in this study is limited to the collaborative sense, thus departing from non-influence intentions or tendencies implied in other connotations of the term such as withdrawal. In order to follow the cooperative or competitive patterns of power strategies in actors' action-reaction sequences in conflict episodes, there is the need to identify whether specific power strategies are cooperative or competitive as 'all conflict behaviour serve integrative (*cooperative*) as well as distributive (*competitive*) functions (Van de Vliert, 1997:58). It has been noted that conflict behaviour is complex as actors simultaneously or sequentially use several strategies with both cooperative and competitive components; this has been referred to as conglomerated conflict behaviour (Van de Vliert, 1997). However, as pointed out by Van de Vliert, though conglomerated behaviours are heterogeneous, their components (specific strategic actions) are homogenous and holistic units of action which are *un*splittable into their cooperative (integrative) and competitive (distributive) content (1997: 103). Thus, all specific power strategies can be categorised as one of the dichotomous cooperative or competitive group based on their content. Therefore in an attempt to map the specific power strategies to specific cooperative or competitive group, emphasis is given to their inherent properties that make one shade of cooperation or competition more dominant.

Given that conflict is a fact of life, one can argue that persuasion is fundamentally cooperative as it is reasonably expected to be the natural reaction to dealing with impairing behaviour in social systems, if human beings are expected to be

'reasonable' beings and act on legitimate claims. This assumption automatically makes all other strategies that attempt influence without appealing to reasons inherently competitive. Thus, manipulation and force as other forms of elementary power strategies (Scott, 2001) are inherently competitive. Moreover, the deployment of 'reasoning' presumes actor interaction (presence bargaining platforms) and therefore any strategic curtailment of interaction can be argued to be competitive as the other conflict actors are constrained to have the opportunity for influence. However, interactive strategies, mainly in the form of bargaining, offer opportunity for actors to deploy influence and that respect strategies such as mediation can be argued to be cooperative as the actors themselves are supposed to have control over outcomes. Predominantly, conflict scholars have used win-win and zero-sum tendencies of the applications of specific strategies to classify them as cooperative or competitive (Deutsch 1973; Bacharach and Lawler, 1981; Van de Vliert, 1979; Lax and Sebenius, 2001). In this respect all forms of conventional adjudication practices such as litigation and arbitration, are inherently competitive since they result in zero-sum outcomes. However, since in the case of arbitration, actors must jointly agree to settle their disputes through an arbiter, one can argue that actors cooperate to compete and hence arbitration can be considered inherently cooperative though it might result in zero-sum outcomes. Lastly, coalition-building is characteristically a unilateral strategy taken by one conflict party and can be usefully perceived as competitive. This categorisation of power strategies into their cooperative and competitive classes is generally consistent with their correlate conflict behaviours elaborated in the theory of conglomerated conflict behaviour using the integrative and distributive dimensions of the dual-concern model (see Van de Vliert, 1997).

Thus, in a typical action-response scenario, one can expect different possible strategy configurations and their corresponding cooperative-competitive configurations. In this respect, one of three possible analytical strategy configurations can be encountered, namely equal (i.e. cooperation-cooperation or competition-competition) (EQUAL), cooperation-competition (COOP-COMP) or competition-cooperation (COMP-COOP).

Patterns of power strategies

Many studies have been done to model the responsive behaviours of influence of actors in conflict. Whiles some have focussed on interpersonal conflicts (Komorita et al. 1991; Bergmann and Volkema, 1994; Ledyard, 1995; Van de Vliert, 1997), others have focussed on civil and interstate conflicts (Stoll and McAndrew 1986, Moore, 1995). Unfortunately, such study on systematic patterning of conflict behaviour in natural resource conflicts is very rare, giving a highly skewed scholarly work on the subject.

Following the arguments by Synder (1978), Tilly (1985) and Moore (1995) that collective action such as one encountered in conflicts is dynamic and that outcomes depend very strongly on the course of interaction, a strategic behaviour model for understanding patterns in actor power strategies seems to be more useful in the study context. Bergmann and Volkema (1994) have, studying interpersonal conflicts, shown that the behaviour at different stages of the conflict can change dramatically. The key assumptions have been that actors will be strategic in their response to opponents in conflict, taking cognisance of past behaviours and the responsive action that may optimally serve their interest.

Two main theoretical schools have dominated the strategic behaviour approach, the rational choice model and the reciprocity model. Reciprocity, according to Keohane (1986: 8) "involves exchanges of roughly equivalent values in which the actions of each party are contingent on the prior actions of others in such a way that good is returned for good, and bad for bad". Such a reciprocity argument may lead us to expect that actors will exchange cooperative strategies or competitive strategies. Ostrom (1998: 10) observed that 'all reciprocity norms share the common ingredients that individuals tend to react to the positive action of others with positive responses and the negative actions of others with negative responses'. Borrowed mainly from economics, the rational choice perspective is that actors are self-interested and short-term maximizers (Ostrom 1998; Williams and McGinnis 1988).). Thus, the rational choice perspective is expected to discount strict reciprocity expectations, leaving specific exchange outcomes to a contextual actor to calculate his optimum gains by employing specific strategies in conflict. Thus, any possibility of cooperative or competitive response irrespective of whether actors are responding to cooperative or competitive strategies could be expected. However, Moore (1995) reviewed some recent studies to show that actors can exhibit both reciprocity and rational expectations. Not surprisingly, Ostrom (1998), after extensive review of theoretical and empirical experimentations of both theories, petitioned for a behavioural approach to rational choice when she conclusively remarked:

> Our evolutionary heritage has hardwired us to be boundedly self-seeking at the same time that we are capable of learning heuristics and norms, such as reciprocity that help achieve successful collective action (Ostrom 1998:2).

Consequently, several hypothetical patterns, drawn from both experimental and real life situations, have been established for the study of strategic behaviour such as power strategies in conflicts. Most of these patterns however, as also observed by Stoll and McAndrew (1986) have been studied in bargaining and negotiation contexts and also in interpersonal, interstate and intrastate conflict settings. These emerging perspectives that actor behaviours are both rationally and reciprocally contingent are consequential to the formulation of expected patterns of actor strategy configurations in natural resource conflict episodes also.

The most prominent behaviour pattern in conflict documented is that actors will tend to reciprocate cooperative behaviours (Jensen, 1984) (soft-line and soft-line). Similarly, in what may be referred to in Prisoner's Dilemma game as 'tit for tat', actors may reciprocate competitive behaviours for competitive ones (hard-line for hard-line). Both scenarios are captured in Stoll and McAndrew's cooperative reciprocity framework (1986). On the other side of the cooperative reciprocity model is, using the term of Stoll and McAndrew (1986) again, the inverse reciprocity where an actor responds to a cooperative behaviour with a competitive one and vice versa. Other studies, such as Komorita et al. (1999) have shown that in inverse reciprocity, using competitive behaviour to respond to cooperative ones is more to be expected than the opposite, arguing that there is a general tendency to exploit others by maximising the payoff difference between self and others.

Thus, taking action-response patterns in conflict episodes, three hypothetical rational choice models for drawing conclusions on patterns of actor power strategy configurations can be formulated:

1. It is expected that power strategies in action-response configurations of conflict episodes between actors A and B will be cooperatively reciprocated. That is, if A uses a cooperative strategy, B will respond with a cooperative strategy.
2. It is expected that power strategies in action-response configurations of conflict episodes between actors A and B will be competitively reciprocated. That is if A uses a competitive strategy, B will respond with a competitive strategy.
3. It is expected that when inverse reciprocity patterns are observed in specific episodes, competitive strategy will be used to reciprocate cooperative strategy and not the other way round. That is, A will use competitive strategy to respond to the cooperative strategy of B rather than using cooperative strategy to respond to a competitive strategy of B.

Using the cooperation-competition scale of observed power strategy configurations, it would be expected that hypotheses 1 and 2 would lead to an EQUAL pattern, while 3 will result in only COOP-COMP patterns.

It is argued that these hypothetical models can be useful for enlightening our understanding of power play in natural resource conflict for at least two reasons. First, it will contribute to a clarification of on-going scientific debate on conflict behaviour and increase our understanding of how the reciprocity and rational choice or their mutual contingency is reflected in natural resource conflict contexts. Second, it can contribute to intervention if for example cooperative and competitive reciprocity hypotheses are confirmed; it would mean that if an actor A can be persuaded to use cooperative strategy, it may induce cooperative response from B. Otherwise, a more rigorous scrutiny into the conditions under which, cooperation for example, can be stimulated in natural resource conflicts would be needed, in that sense provoking formulations of future scientific questions.

2.2.3 Power strategies and resource mobilisation

The concept of mobilisation

In analysis of power, the term “mobilisation” has been used interchangeably to refer to the processes whereby an actor acquires control over power resources and makes them ready for use as well as for the actual use of power resources, i.e. the exercise of power (Korpi, 1985). The term is used in the former sense in this study as the latter seems to conflate the term with the actual deployment of power strategies; thus essentially making mobilisation synonymous to actor-empowerment . In the context of actor-empowerment in conflict, the mobilisation of resources can be argued to be mainly ‘conscious’, though it is possible to imagine accidental or non-strategic mobilisation in practice. Such mobilisation can also be assumed to be episodic rather than systemic since strategies must be formulated to deal with what King (1987) calls the ‘finite problem’. Episodic mobilisation is a temporary unification of people, (and by extension, human-controlled resources) for a limited end while systemic mobilisation is a long-range, ambitious organisation of people for a particular programme (King, 1987). It has been shown that those who employ episodic mobilisation seek out and employ the beliefs of the masses, current cultural

obsessions and time-honoured slogans and shibboleths in buttressing their appeals to get people or institutions to support them (King, 1987). This conscious decision to mobilise people and resources entails the explicit or implicit use of 'discursive means' in the formulation of objectives and in presenting arguments for the decisions taken. Long (1992) shows that these discursive means are not simply inherent features of the actors themselves: they form part of the differentiated stock of knowledge and resources available to actors of different types. For example, particular outcomes of resource mobilisation in social movements have been observed to depend on the ease or difficulty with which different constituencies can be mobilised as well as on the responses of established political authorities and the political structures in which the protest associations operate (Scott, 2001).

By relating the categories of power strategies that actors may deploy to the types of power resources, two relational aspects can be identified. First, specific strategies will predominantly require certain resources to be 'effected'. In discussing the various forms of power, Scott (2001:2) observed that 'while each depends on the use of resources, the type of resource and the ways in which they are used differ'. The term 'predominance' is used cautiously because it is not intended to say that any strict or rigid separation or mapping of specific resources to specific strategies can be made since, as argued before, these resources are complexly intertwined in any empirical setting. However, one can argue that, to use coercion as a form of manipulation for example, an actor needs to deploy 'threat' or in a very abstract sense, 'fear' which is an orientational resource.

The second relational aspect is the pattern of the mobilisation of specific resources for the deployment of power strategies in the course of the entire conflict episode.

"Most forms of power exhibit tendencies of different degrees of strength to change over time, a kind of 'ladder of escalation' from the mildest and most consensual to the most punitive forms of power in order to obtain compliance" (Wrong, 1979:71).

This aspect can be developed further using perspectives from the 'rebuff phenomenon' in persuasion studies. According to the rebuff phenomenon 'when an initial persuasive effort is rebuffed (resisted), follow-up persuasive messages are ruder, more aggressive, and more forceful than the first one" (Hample and Dallinger, 1998: 305; Dillard 2004: 197). Inspired by this phenomenon, the pattern of mobilisation of resources to deploy the various power strategies can be hypothetically formulated by assuming increased mobilisation of the essential dimensions of resources that make specific strategies effective. Thus, it can be assumed that the use of specific strategies in successive stages by specific actors would be associated with increased mobilisation of the required resources, in terms of types and quality. This is because, as most conflicts progress, it is more natural to expect that actors will attempt to use more and higher quality resources than in their previous actions in order to be more effective at managing specific impairments. The term 'type' is used to refer to varieties of resources, either within the same category or outside. For example, using experts in addition to money or media by an actor in successive episodes can be considered as increasing resource mobilisation. Moreover, the term 'quality' is used as resources are known to differ in terms of their dispositional quality to achieve specific ends (Korpi, 1985). For instance, within a hierarchical social or political system such as the modern state, the President, a Minister and a provincial

Governor or Mayor may all possess the same type of institutional power resource, political legitimacy, yet the legitimacy of these officials differ in terms of degree of authority. Thus, an actor who mobilised, say, a provincial Governor in a conflict episode 1 and then changed to mobilise a Minister or a President in episode 2, can be said to have increased the quality of his mobilisation of institutional resource. Having clarified this, the various strategies, their resource needs and the types and quality dimensions of these resources is explored next.

Strategies sequences and resource requirements

- *Avoidance and resource mobilisation*

Avoidance as curtailment of interaction in order to cause opposing actors to 'end' their conflict actions needs a wide range of social and institutional circumstances within the conflict setting to be effective. Thus, it is expected that successive use of avoidance by specific actors will involve the mobilisation of social and institutional circumstances that can maintain or increase the conditions that effectively constrains mutual interaction.

- *Persuasion and resource mobilisation*

First, persuasion aims at influence that employs reasoning, whether based on signification or legitimation, in order to cause a target actor to behave in a desirable or expected manner. Characteristic of persuasive strategy, actors may clarify their positions and demands, justify causes, cite precedents, appeal to relevant laws and regulations, apply logic, argue that justice and the good of humanity are on their side and so on (Rummel, 2003). Referring to this as persuasive influence, Scott (2001) adds that arguments, appeals and reason can cause subalterns to believe that it is appropriate to act in one way rather than another. In persuasion, formulations of grievances or contentious issues are framed in a way that makes the issue receive attention as problem-for-all. In strategic framing (after Zald 1996), actors translate grievances into broader political claims using dominant discourses built on shared norms, values, symbols. Snow and Benford (1992) explain frames as interpretive schemata that simplify and condense the 'world out there' by selectively punctuating and encoding objects, situations, events, experiences and sequences of actions within one's present or past environment. Thus, persuading actors use strategic framing as a communication skill which employs shared symbols, time-honoured slogans, discourses, logic, praise etc in combination with emotional gestures to make the message appeal to the listener. Thus, the mobilisation of orientational resources is indispensable to persuasive bargaining. This is because the process by which A persuades B presumes a bargaining relationship of a sort, thinking of bargaining as an interactive process of influence. Burnell and Reeve (1984:396) emphasise that 'persuasion, involves a process of interaction and an outcome'.

If persuasion involves the actions of A (persuader) to influence the attitude, normative beliefs and behaviour of B (target) then several dimensional aspects to persuasion as an influence strategy can be identified. First, some persuader qualities of A such as kinesics, vocal immediacy, appearance and other 'contact' or personality factors are for example known to influence persuasive effects (Scott, 2001, Andersen, 2004). For these to work, contact between A and B is important and one could expect that contact dimensions such as indirect communication will give way to more direct communication encounters in course of conflict. Thus, contact-dimensions such as the

relative proximity or contact with targets in course of the conflict can be a useful measure.

Second, persuasion will involve intentional orchestration of message quality (both verbal and non-linguistic) in terms of making use of framings, argumentations, gestures etc (signification) that produce assimilation effect and compliance (Gass and Seiter, 2004, Rancer, 2004). Thus, it can be expected that the mobilisation of orientational resources deployed by persuading actors will increase in terms of addition and diversification of message components. Third, beside signification, persuasion is also known to take the form of legitimation, where it operates through the building of value commitments to particular ideas or conditions (Scott, 2001). In this sense, persuaders will be expected to increase their mobilisation of legitimacy symbols of their actions and messages, and hence institutional resources in the course of the conflict. Fourth, for persuasion to work, message 'targeting' should reach not only the intended receiver (primary target) but also the relevant others whose response can directly or indirectly influence the primary target. Paine (1989) has called this dimension of influence 'audience' and may range from specific individuals such as a boss or the 'President' to groups and masses of people such as the 'public' or a 'constituency'. Therefore, in conflict situations, it can be expected that persuaders will increase the scope of targeting (in the form of social or institutional resources) for their message in the course of conflict. The arguments developed so far can be summarised in the form of a hypothetical expectation. It is expected that successive use of persuasion by specific actors will involve increased mobilisation of orientational and institutional resources to improve contact, signification, legitimation or targeting.

- *Manipulation and resource mobilisation*

Manipulation can simply be explained as changing the setting or situation to create opportunity or constraint to cause one to do or not able to do something (Ware, 1981, Paine, 1989). Scott (2001) defined it as a situation where a principal alters the bases on which a subaltern calculates among action alternatives, ensuring that the subaltern's rational choices lead him or her to act in ways that the principal desires. Scott pointed out as a characteristic of manipulation that the intentions of the principal are usually hidden yet the subaltern acts on the basis of conditions that have been set by the principal. For communicative encounters, manipulation can be construed as the opposite of persuasion. An actor is manipulated if he is made to act in a way that is not based on reason but threat, fear, embarrassment or any form of psychological pressure. In this sense, manipulation is similar to coercion. Coercion is used to describe a large number of tactics or mechanisms to coerce or put psychological force such as fear, need or embarrassment on opponents to choose a preferred behaviour. Rummel (2003) explains coercion as the intentional generation of two-alternative negative interests between which a person must choose, where one is generated by a threat in order to make the other a likely choice. He gives examples as actions such as negative communication (oral or written threats and warnings) and sanctions (comprising retaliatory acts, physical expressions of displeasure etc). In this context, the use of physical resources to cause assault, harm or violence is not considered as coercion. Rather, coercion is limited to the communicative level of the use of coercive resources to influence the behaviour of impairing actors. Thus, the deployment of manipulation also involves the effective mobilisation of orientational resources, mainly threat.

Similar to persuasion, it is expected that successive use of threats will increase the scope of consequences by explicating the vulnerability of target to the threat and its consequences. This is informed by the Extended Parallel Process Model (EPPM) (after Witte, 1992) which postulates that targets will accept a threat message if they perceive that they are vulnerable to its effect, that the effect has serious consequences and believe that the recommended alternative in the message is efficacious. Similarly, incentives for rewards can be expected to increase in quality or target scope. It is expected that successive use of manipulation by actors will involve increased mobilisation of discursive resources to improve scope and intensity of threats and rewards.

- *Coalition-building and resource mobilisation*

Coalition-building is a temporary alliance or partnering of groups in order to achieve critical agency for a given purpose. This strategy primarily requires social and institutional agents whose agency is thought of as strategic to a mobilising actor's goals. Many studies have shown that the formation of social network or what Callon (1986) calls actor network is the main strategy of mobilising power resources from the social arena (see Clegg, 1992; Woods 1997). In his 'sociology of translation', Callon postulates that actors form networks to achieve specific outcomes and the methods through which other actors are enrolled into a network for this objective is 'translation' (1986).

Of particular importance to coalition-building as a strategy in actor-empowerment is the systematic way in which, to use the words of Callon, 'the moments of translation' offer explanation to understanding how agents negotiate strategies through complex social and political systems. These moments are *problematization, interessment, enrollment and mobilisation*. According to the postulate of *problematization*, an actor in a conflict who perceives other actors as potential for enhancing his position in the conflict will attempt to enrol their agency by positing the indispensability of his 'solutions' for their 'problems'. This is achieved when these others are channelled through the 'obligatory passage points' of practice which the enrolling agency seeks to 'fix' (Clegg, 1992:204). In his study of conflicts over the ban of deer hunting, Woods (1997) illustrates the obligatory passage points (OPP) of anti-hunting actors as 'the banning of hunting' and for the pro-hunters as 'the overturning of the motion to ban hunting'. He showed that succeeding to define an OPP for a network in itself is a useful and strategic achievement for the actor since other more 'powerful' actors may take over the role of speaking for and defending the interest. The second moment of translation is *interessment* in which, in this study context, the potential others are attracted to the actor's 'project' by blocking other possible alignments; Clegg (1992) puts it as attracting a second by coming between that entity and a third. Woods (1997) further observes that during this moment, specific issues are connected to wider discourses in order to persuade. Arguably, this is a moment that communication and persuasion are effectively used to mobilise support (see King 1987). After successful *interessment*, the other actors are enrolled, where their roles and meaning which they have to fix are defined and distributed. Lastly, there is mobilisation.

'This refers to the set of methods that agencies use to ensure that the representations of interest which other enrolled agencies make are in fact themselves fixed, that the agencies in question do not, as it were, betray or undercut their representative ness and representations (Clegg 1992 :205)"

Therefore, mobilisation is logically connected to legitimacy, which, in democratic societies, is achieved through representation. Woods (1997) observes that successful mobilisation depends on the conviction that an interest of an enrolled agency is indeed representative. This sociology of translation provides a framework for understanding how coalitions are constructed and structured, and the importance of micro-action to the outcome of macro-events (Woods, 1997: 323).

From the foregoing, two expectations can be formulated. First, it is expected that actors building coalition will increase their mobilisation of discursive resources, particularly orientational, in the construction of the OPP for the *interessment* of potential agents. Second, it is expected that generally, coalition-building will increase the critical agency and resource mobilisation capability of the mobilising actor in course of the conflict.

- *Mediation, Arbitration and resource mobilisation*

From actor-oriented perspective, mediation is using the influence of a third party usually to intervene in conflict in order to manage the impairing behaviour of others. The third party may be a social network agent, an authority or an independent professional mediator (Moore, 1996). Thus, the use of mediation requires the mobilisation of social and/or institutional resources. Similarly, arbitration will also involve the use of social or some institutional resources because arbiters may come from some established or recognised institutional agency (such as chiefs, corporate heads, clergy and professional arbiter) or from actors' social networks.

It is difficult to establish a dimension of quality with regard to social and institutional agents who may be mobilised as mediators or arbiters since it may depend on the mobilising actor's level of trust in the capabilities of the target mediator or arbitrator and also on accessibility; in some cases such as with professional mediators, accessibility may depend on payments of professional fees. In the case of arbitration, it may also depend on the competing actor's acceptance of the credibility of the arbiter. In both cases, since the third parties do not have institutionalised rights to enforce agreements or judgements themselves, the degree of expected influence, and hence quality of resource mobilisation cannot be theoretically predicted. Thus, though it is expected that actors' may increase the scope of third parties to mediate or arbitrate in the course of the conflict, any pattern of their resource mobilisation should be ascertained empirically.

- *Litigation and resource mobilisation*

Litigation is the use of state or traditional courts of law and these are hierarchically structured with particular institutional legal systems. Thus, the critical dimensions of resource mobilisation in successive use of litigation can thus be expected to make use of higher courts or higher legal experts. This means that, one can reasonably expect the mobilisation of institutional and socio-economic resources in particular by litigants to increase in the course of conflict.

- *Force and resource mobilisation*

Lastly, force, as the use of negative physical sanctions against opposing actors, characteristically involves the use of weapons, paramilitary resources and all sorts of discursive resources to physically assault and destroy life and property. The effects of these resources may range from psychological injury to death. It is expected that

successive use of force by specific actors will involve increased mobilisation of material resources to increase the effects of physical assault.

The above strategy-resource descriptions can be summarised in table 2.4, noting that other power resources may be used to mobilise the resources indicated.

Table 2.4 a summary of power strategies and their main power resources for deployment.

Strategy	**Resources**
avoidance	Social and institutional circumstances/opportunities
persuasion	Orientational (signification) and institutional (legitimation)
manipulation	Orientational
Coalition-building	Orientational, institutional and social
Mediation	Social and institutional
arbitration	Social and institutional
litigation	Institutional and socio-economic
force	Social, institutional and socio-economic to allow material capability

2.2.4 Effectiveness of actor-empowerment

As introduced in chapter 1, the role of power in conflict cannot be complete without gaining insights into how actor-empowerment regulates or directs the course of conflict. In conventional conflict management and power literature, 'effectiveness' has been used mainly to suggest overall achievement of desired outcomes. For example, using the term in a two-actor conflict scenario, Van de Vliert (1997: 178) defined 'effectiveness' in a glossary as:

Having produced outcomes desired for oneself and for the other party (personal effectiveness). Having reduced the conflict issues or having improved one's relationship with the other party (dyadic effectiveness)

Generally, discussions on power have a connotation that integrates the effectiveness of actors' actions vis-à-vis the attainment of their desired influence or outcomes as part of the conceptual realm of power. In effect, in accordance with this traditional thinking, we cannot impute a definition of power to any observable action if it fails to achieve intended outcomes. This conventional notion of power as action effectiveness can be summarised using Haugaard's illustration:

"In a case of conflict over goals, if A claims to have power over B doing 'x' a demonstration of that power consists of B doing 'x'. If B does 'y' when told to do 'x' we would say that A does not have power with respect to 'x' (1997:119)".

Building on this goal-oriented notion of action effectiveness, we can assess the effectiveness of actor-empowerment in a conflict by 'measuring' how an actor's actions are able to manage a specific impairing behaviour or situation, either by causing the impairing actor to stop his behaviour, withdraw, accommodate or find alternative actions that terminate the conflict. We can call this goal-oriented aspect 'managerial' effectiveness of actor-empowerment. Thus managerial effectiveness can be assessed using three concepts, withdrawal, accommodation and settlement. Withdrawal can be used in situations when an actor stop or terminate his conflict action when he no longer feels impaired. On the other hand, accommodation can be used to describe a situation where an actor is caused to stop his conflict actions though

he is still known to be impaired. The last aspect, settlement, is a situation where an impairing actor stops his conflict action because the substance of impairment has been managed.

However, in the context of conflict, this goal-oriented definition of effectiveness is not complete to embrace the various influences exerted within specific episodes that keep conflict interactions on-going. The goal-oriented conceptualisation of effectiveness is rooted in perceptions that assume interactions as an event rather than as a process of episodes. Thus, from the perspective that conflict is a process involving a series of action-response episodes, another dimension of effectiveness of actor-empowerment can be identified as 'episodic effectiveness'. If an actor's empowerment response is able to sustain conflict interaction in such a way that it provokes reaction from the opposing actor(s), such an empowerment endeavour can be said to be episodically effective. This is particularly important as it enlightens our understanding on the conditions under which certain actors, particularly the more 'powerful', may be constrained to use avoidance or compelled to stay in the conflict. Thus, it is useful to understand which power strategies and resources are able or unable to achieve this level of episodic effectiveness and why. However, since episodic patterns may also be serial, a difficulty can be encountered as to which of the various serial actions and hence strategies should be used to assess effectiveness? This is because in persuasion studies, latter actions are known to build upon the effect of previous actions to increase their effectiveness, an idea known as the consistency principle (Cialdini and Guadagno, 2004). Since in a conflict context, respective actors can be assumed to have already committed each other in the process, it is expected that actors will build upon their intended influence strategies through sequential actions. Thus, in an episode with a serial pattern, the last action of the actor that provokes response from the competing actor can only be said to have a critical episodic effect or utility. It is not assumed to account for the overall episodic effectiveness due to the consistency principle.

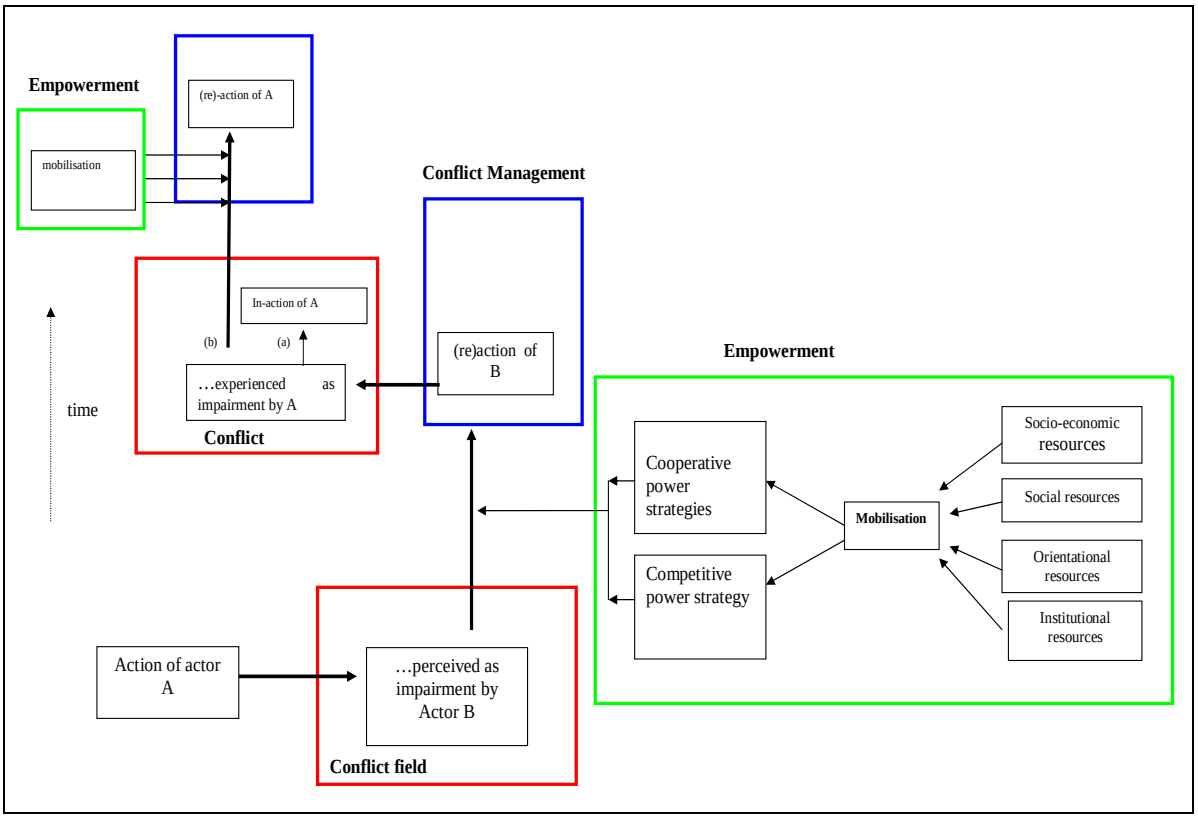
Thus, it has been argued that the effectiveness of actor-empowerment in a conflict context has aggregate and episodic dimensions and it is argued that in order to fully understand the complexities of power play in conflicts, both dimensions should be explored in any empirical work. This reinforces the point that a greater insight into understanding power can be gained when particular conflicts are reconstructed into chronologically sequenced episodes.

2.3 CONCLUSION: TOWARDS A TWO-ACTOR EMPOWERMENT GAME MODEL

In order to understand power play in natural resource conflict, it has been argued that it is more useful to employ an approach that helps to reconstruct conflict episodes over time. Second, it has been explained that owing to the complexities and ambiguities associated with the concept of power itself, a more useful approach to understanding power in empirical conflict settings is to employ an actor-empowerment framework which focuses on the mobilisation of diverse resources to undertake strategies of influence in the course of the conflict. To this end, it has been argued that, Glasl's model of conflict has an advantage in that it assists one to clearly delineate conflict and also forces one to study conflict as a two-actor game model.

Though most natural resource conflicts present multi-actor settings, the possibility of studying them by means of a two-actor designation model has been pointed out.

Thus, by hypothetically assuming a conflict between actors A and B where A's behaviour is originally perceived as impairment by B, we can construct the first episode. Following B's response to manage the impairment, using the actor-empowerment framework, one can conceptualise that B's strategic actions will be deployed either to cooperate or compete with A in order to manage the 'substance of impairment'. The deployment of such cooperative or competitive strategy will require the mobilisation of resources, being socio-economic, social, orientational and/or institutional. The action of B may have several effects that may end the conflict, continue it or even start a fresh conflict with another actor C (thus creating a new conflict field). Focussing on the conflict field involving A and B, B's action may cause A to stop his impairing behaviour, resulting in conflict management. B's action, on the other hand, may also impair A, initiating another episode where A is provoked to also respond to manage B's impairing behaviour. In a bid to respond, A also exercises power through mobilisation of discursive resources to undertake strategic action, which may manage the conflict or lead to further impairments, beginning another episode. Following these arguments elaborated, a heuristic model of actor-empowerment in conflict management can be constructed as shown in figure 2.5.



2.5 Actor empowerment in conflict management using a two-actor game model

Finally, it has been argued that by following specific reconstructed conflicts using the two-actor game model, one can ascertain the chronological patterns of episodes,

power strategies and power resources. Moreover, the assessment of the effectiveness of actor-empowerment, in terms of managing impairments, causing opponents' withdrawal and provoking conflict reactions can be done with greater clarity as one is able to follow preceding impairments and actions better. In short, the model allows for the reconstruction of conflict and the display of patterns in such a way that enhances a comprehensive scanning of the entire episode, thus increasing our ability to have overview of the dimensions of power play in the conflict.

3. METHODOLOGY

> No where is the role of method in determining the findings of empirical investigation more clearly illustrated than in the study of power (Edwards, 1983:50)

Having the conceptual foundations for the study in the previous chapter, this chapter follows, building on the general methodological frame introduced in chapter 1 to outline how the empirical research was conducted. As noted earlier, a case study approach was generally needed for the scientific inquiry advocated for understanding actor-empowerment in reconstructed conflicts. Proceeding from this point, the chapter begins by grounding the approach to reconstructing conflict and follow up with other approaches to collecting, analysing and displaying data and the reasons for such choices. It should be noted that the specific methods used for the various case studies are captured in the empirical chapters under their respective empirical assessment sections. Thus, this chapter gives a general scientific background to the approaches and methodological concepts used in the study

3.1 RECONSTRUCTING CONFLICT

The methodological approach used in this study focused on collecting information about actors in the selected conflict cases mainly by following discourse on the conflict. The study follows the perspective that discourse analysis has an analytic commitment to studying discourse as texts and talk in social practices, thus becoming analysis of what people do (Potter, 1997). Thus, data collection was focused on multiple sources that would inform the study about actors' empowerment strategies and resources. In this study, data collection therefore includes how texts and talk about the specific forest conflicts selected and the actor empowerment process have been captured.

To understand empowerment strategies means to understand causality of events related to the conflict actions. The methodological challenge was to establish the credibility of events as being caused by others. The study followed the view that causality necessarily brings in the question of time as part of an explanation; prior events are assumed to have a connection, more or less, with later events (Abbott, 1992; Huberman and Miles, 1994). Specific to this study context where the chronological sequence of actor actions and reactions were searched for, the entire 'story' could not be grasped without following the course of conflict-related events. The narratives of the conflicts were thus captured using the historian's method of 'followability'' (Abbott, 1992), turning retrospective gathering of events into an account that makes the ending reasonable and believable (Huberman and Miles, 1994).

In the context of the study, both historical linkages of events in the conflict episode and the theoretical coherence and relevance of such linkages are vital to ensuring the much emphasised history-theory relationship in qualitative 'historical' research in social science (Stryker, 1996). Stryker (1996) explains that the theory-history linkage

envisioned by narrativists insists on the mutual theorization of history and historicization of theory. Following Stryker's argument that some stories and ways of constructing stories will promote theory building more than others will, his notion of strategic narrative is used in the planning and construction of the narratives of the studied conflicts. In summary, Stryker argues for the four central aspects of strategic narrative. First, he argues that strategic narratives must build on incorporating particular views of history, of theory and of their relationship where concrete and specific historical events and configurations are conceptualised in terms of abstract concepts and sensitizing frameworks. In essence, strategic narrative employs systematic and explicit use of deductive reasoning to elucidate causal mechanisms.

Second, doing strategic narrative means constructing history as both path-dependent action sequence and as context in a way that responds to clearly articulated theoretical issues. This requires that the reasons for selecting the history be informed by explicitly formulated theoretical questions, how the questions affect the construction and how the constructed history can be interpreted in theoretical terms. Stryker further suggests that doing strategic narrative should involve using primary sources to craft narratives that are likely to feed back into, and modify, theory because they are constructed anomalies or puzzles with reference to a backdrop that is comparative - historical and theoretical. In this sense, the historical narrative should be conditioned by the existence of an extant theory, or, in accordance with comparative knowledge, the events should represent a rare or unique empirical instance of a particular kind of happening. Finally, he suggested that strategic narrative requires the construction of narratives by building and using explicit and replicable concepts, measures and coding techniques consistent with scientific research. In short, the construction of conflict narratives should be strategic in a sense that it aids a systematic search for answers to the underlying theoretical research questions.

In order to construct a strategic narrative in historically ordered manner to ensure true chronology, eventful time, conceptualised primarily as path-dependent action sequence, act or action is used as the basic unit of eventful time. Thus constructed narrative can be perceived as the systematic use of primary and secondary source materials to code sets of acts to produce chronologies of action.

3.2 DATA COLLECTION

As elaborated in section 3.1, to be able to reconstruct conflict actions in chronological order requires 'stories' from both actors and other observers/sources regarding conflict actions. This naturally means the type of data required will be primarily qualitative in character. To obtain qualitative accounts of the conflict means obtaining narratives from the actors. Such narration will benefit if they are acquired through techniques that open up space for actor elucidation and researcher probing, especially in the context of conflict, where contradictory claims may exist. Open or exploratory interviews have been recommended as an appropriate technique (Oppenheim, 1992.) to obtain such actor narratives. Holstein and Gubrium (1995) have raised two relevant methodological issues about whether the responses should be taken strictly as direct 'experience' or as actively constructed 'narratives' involving activities which themselves demand analysis. The constructionist position that the responses that people give in a conflict situation should be further analysed or at least verified to

ascertain the credibility of their narrative is followed. From experience, the tendency that conflict actors will respond to questions in a manner that legitimises their position is high and therefore, one needs to go beyond positivists and emotionalists positions of interviews; rather recognise that accounts are not simply representations of the world but part of the world they describe (Hammersley and Atkinson, 1983). In a conflict study therefore, Holstein and Gubrium's idea of 'the active interview' is inspiring:

> Constructed as active, the subject behind the respondent not only holds facts and details of experience, but, in the very process of offering them up for response, constructively adds to, takes away from, and transforms the facts and details. The respondent can hardly 'spoil' what he or she is, in effect, subjectively creating (1997: 23)

In case of actor narrative, dialogue was tape-recorded when respondents agreed; otherwise notes were taken. The strategy adopted here was not a conventional interview of questions and answers but more of a conversation interrupted mainly where issues of research interest such as 'and how did you respond to that' and 'why did you do this?' cropped up.

However, in conflict studies in particular, accounts by conflict actors can be biased or lack some detail (especially with historical accounts) as actors may depend on their memories. This naturally makes methodological triangulation (Miles and Huberman 1994, Read and Marsh, 2002) a logical approach. In this regard, additional data from documents on, and direct observation of, actors' conflict actions can complement actor narratives. The term 'documents' is used to include all written texts produced either by the conflict actors themselves or other parties without the interference of the researcher Even though, documented data have sometimes been regarded as secondary, Atkinson and Coffey, (1997) have observed that they often enshrine distinctively documentary versions of social reality and their own conventions that inform their production and circulation and associated with distinct social occasions and organized activities. Thus, brochures of actors, annual reports, press releases etc were collected for analysis that provided background information to crosscheck claims relevant to the research. Indeed, these documents served a very useful purpose in validating rumours and claims. In this regard, the position that 'a textual researchers role is not to use, to criticize or assess particular texts in terms of apparently 'objective' standards but rather to analyse how they work to achieve particular effects, to identify the elements used and the functions they play' (Silverman, 2001) was followed.

In addition to documented data, in cases where there is media coverage of a conflict, media analysis can also play a complementary role in obtaining additional detailed information. Hellstrom (2001) has observed that many conflict researches have focused on the mass media since it provides environmental groups a means of arousing public concern and challenging policy commitment. However, with the proliferation of press freedom, one is expected to be conscious of source credibility and impartiality (unless the media itself is part of the conflict) of media data.

Finally, observing contextual actors in specific interactional settings where conflict related actions take place or issues discussed can inform the researcher about certain actions and inactions, which have implications for assessing empowerment strategies

and resources. In this regard, observation has been suggested as an effective technique to complement other data collection techniques (Silverman, 1997; Bernard, 2002).

In all the cases studied, such a triangulation approach using several of the above techniques was employed. The specific combinations of these data collection methods for each case study will be elaborated in their respective empirical chapters.

3.3 DATA ANALYSIS

3.3.1 Coding

Generally, the analysis of the highly qualitative data, in the form of texts and voices into forms that could be used to follow patterns required a systematic data reduction procedure. Miles and Huberman (1994) have suggested techniques for such systematic data reduction approach using contact summaries, different levels of coding and matrix displays. First, data, in the form of texts and voices, collected from actor interviews, media analysis, documents and observations were transcribed and the transcribed texts on events and the accounts of actor actions were arranged chronologically to produce constructed narratives for specific case studies. The constructed narrative, a correlate of Miles and Huberman's contact summary technique, formed the main material basis for subsequent data reduction using coding.

Second, the need to obtain data on the main conceptual themes in the research questions called for thematic coding of the narratives. The coding proceeded on two levels, using SQR N6 (NUD*IST) software. This programme was selected for its flexibility in handling qualitative data, allowing sophisticated operations and its compatibility with other table-compatible software programmes such as SPSS. First, the narratives were coded using themes that were only needed to assist in the organisation of the narrative in a more structured format to make search for patterns easier. These codes included chronological sequence of particular actions, actor category and data source. The second pattern of coding employed conceptual themes central to the research questions, mainly power strategy and power resources. By reading through each document, the selected text unit, which was paragraph (for the constructed narrative) and sentence (for the original data files) were coded intuitively based on the content in relation to the theoretical concepts and their operational definitions elaborated in the theoretical framework of the study.

By using the matrix node search of the software, texts coded at two or more nodes of research interest such as actor-interactions and power strategies were overlapped to capture text of all places containing those codes. Such node reports were exported in tabular form by using observed (1) and unobserved (0) options of the programme. The programme also stores the text of each node search operation and all codes and thereby allowing for reflection on, recoding and decoding of particular texts. By building comprehensive notes on the observed variables, a coding table was built giving numerical codes to the variables. This coding scheme was used to build a data set for empirical observations using Microsoft Excel spreadsheet. Annex 1 shows the codes and their brief definitions for the data set.

The issue of data validity and reliability in qualitative data analysis has been increasingly emphasised as crucial in social scientific research (Hammersley, 1990; Silverman, 1997). The data analysis addressed these issues in the coding of power strategies and resources. For qualitative data analysis, it has been suggested that definitions and coding become sharper when two researchers code the same data set and discuss their difficulties. It has been recommended that initial code-recode reliability closer to 80% is good but eventually both intra and intercoder agreement should be up in the 90% range, depending on the size and range of the coding scheme (Miles and Huberman, 1994). Since power strategy and power resources form the core conceptual variables in the study, separate data reliability checks were performed for each, using independent (peer) coding of the narratives by the research assistant. In all cases, since a sample size of between 30 and 50 have been recommended as representative (Bernard, 1995), a minimum sample size of 30 actions was used for all independent peer coding.

Peer coding of power strategies

The first 30 episodes in the farmer-contractor (compensation) conflicts were selected for independent peer coding. The reliability result of this peer coding was below the recommended minimum of 80% due to the large number of actions not coded. The coding scheme was then explained to the peer, followed by another round of independent coding of the actions that were either not coded or had their coding disagreeing with that of the researcher. The reliability score achieved was higher than the minimum expected. In order to cross check that the coding scheme was sufficiently clear and independent of Researcher's explanation, another peer coding of a different case, the narrative of the national forest-mining conflict, was done. The reliability check was stopped since the independent inter-coder score was finally within the recommended range. Table 3.1 summarises the results of the various steps in the peer coding process.

Table3.1 comparison of Researcher-Peer coding of power strategies to check coding reliability

	Coding without explanation (compensation case)	Coding after explanation (compensation case)	final coding without explanation (mining case)
Agreed (%)	79 (69%)	32 (91%)	37 (95%)
Not agreed (%)	3 (3%)	3 (9%)	2 (5%)
Not coded (%)	32 (28%)	-	

Peer coding of power resources

The peer coded the power resources of the first 30 compensation conflict episodes and in 72% of the cases; the coding of the researcher and the peer's agreed. The pattern observed was that most of the disagreements were between two pairs of power resources that were conceptually similar. After discussions on the codes, it was agreed to adapt the operational interpretations and categorisations in order to reflect the intended meanings. Examples of such adaptations resulted from coding on agency information and strategic framing as well as between traditional legitimacy and network. Both coders agreed in about 96% of the cases after adaptations.

To ensure that there is further reduction in potentially conceptual ambiguities of the coding scheme to inherently improve its reliability, another independent peer coding of power resources, using the episodes in the national mining case was conducted.

After peer coding the 39 conflict actions, the Researcher and Peer agreed on 95% of the power resources assigned to the various actions. However, there was large number of additional codes assigned by the respective coders which were 'ignored' by the respective coders[7]. After discussion, both coders finally agreed on over 90% of the coding for power resources. Table 3.2 gives an overview of the peer coding of power resources.

Table 3.2 comparison of Researcher-Peer coding for power resources to check coding reliability

	Without explanation (compensation)	After discussion and adaptation	Without explanation (mining)	After discussion
Agreed	122 (72%)	163 (96%)	37 (95%)	71 (93%)
Not agreed	41 (24%)	6 (4%)	2 (5%)	5 (7%)
Not coded	6 (4%)	-	-	-

In all cases, the final coding agreed was used for further analysis of pattern displays in the results chapters.

3.3.2 Data displays

For reasons of ethics, simplicity, ease of scanning through data and possibilities for graphical representations, two data display formats have been employed for this study. First, for ethical reasons due to high economic and political stakes involved with the mining conflicts studied, the presentation of the data has been made anonymous. Rather, the innovative style chosen in this work for such sensitive conflict study is to model the constructed narrative diagrammatically. First, the various actions/events of respective actors are written in text boxes and sequenced. Then the sequenced text boxes of each actor are combined to follow the story in the constructed narrative. By this, a chronological sequencing of actor action-reactions could be captured. Such a diagrammatic representation also made patterns mapping more practical. The details of how the relevant information such as indicative event, data source, date and chronological sequence step of actions were captured in such a graphical format is illustrated in figure 3.1. The second format was the spreadsheet using Microsoft Excel to display dataset. This was necessary as data summaries, frequency distribution, graphical and tabular representations were all needed for descriptive statistics to support the presentation of results.

Finally, the specific methods for data collection and analysis for the specific cases studied are captured under the empirical assessment sections of the various results chapters on the cases.

[7] The additional codes ignored by respected coders are printed in **bold** in annex 2. After discussion, those codes which were not agreed upon are printed ***bolded in italics*** in annex 2.

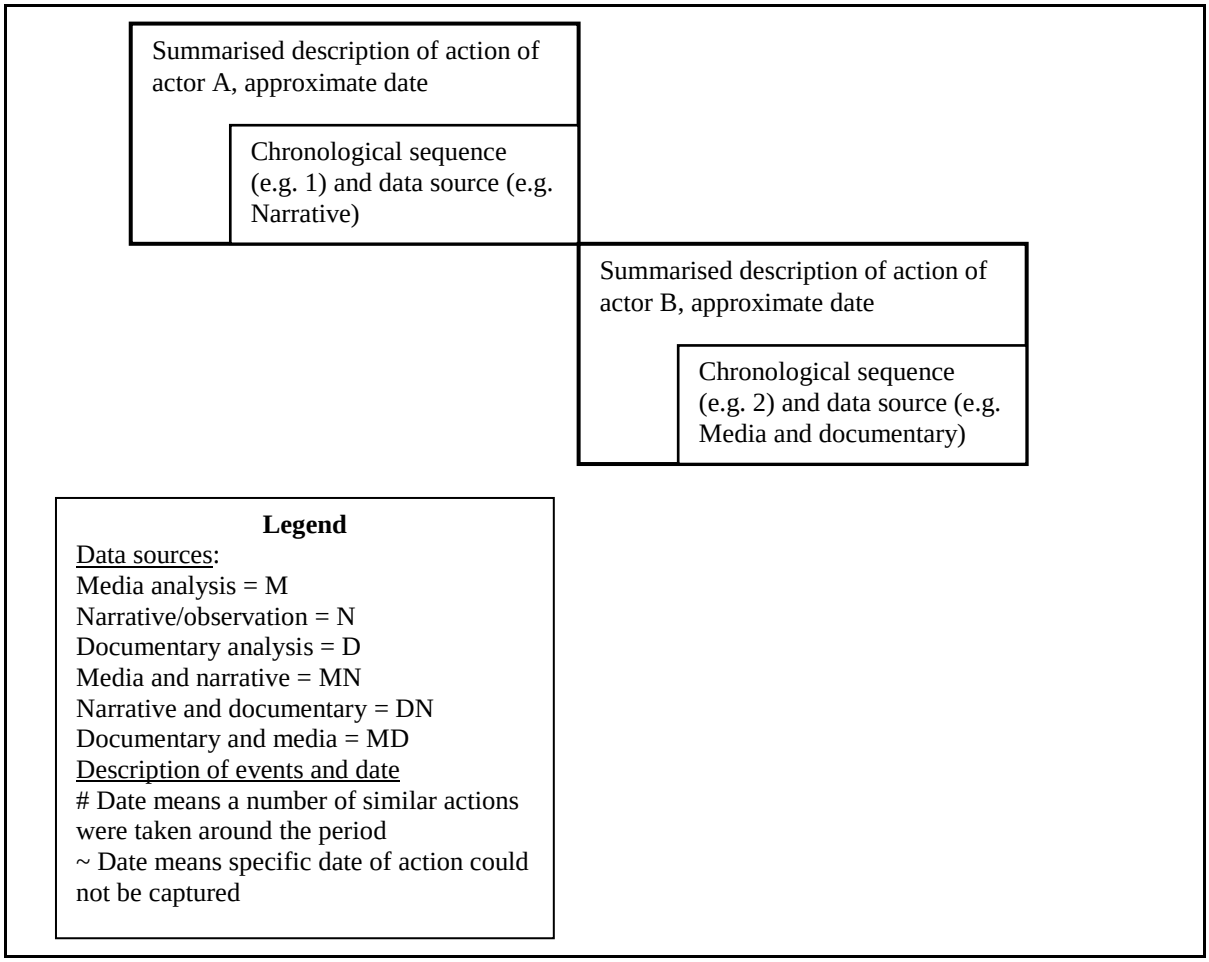


Figure 3.1 illustration of a graphical representation of constructed narratives of conflict actions. It shows samples of text boxes to describe indicative actions/events and a legend to describe their chronological sequences, date of action and data sources.

3.4 SELECTION OF THE THREE CASE STUDIES

Scale considerations

To follow actor-empowerment in natural resource conflicts, it was assumed that a selection of cases from national, local (forest reserve areas) and community levels might be useful. This is because the various geographical scale levels may offer diverse structural opportunities and constraints to the mobilisation of power resources. This is particularly so with regards to institutional resources due to the hierarchical nature of various structures of political, administrative and traditional authority. Generally access to economic and organised social resources might also differ significantly within the various scale levels. Second, conflict cases from the various levels may present different scenarios of complexity with regards to size and diversity of actors involved. At national level, it was expected that conflicts will involve several parties which may come from several interest groups, presenting a case of complex actor-mix. At the resource-base or local level, a similar multiple-actor scenario may be experienced. However, it was expected that it would be easier to identify conflict actors at the local level than national level, thus making the two-actor groupings more explicit. At the community-level, it was expected that specific cases of interpersonal

resource-based conflicts could be identified so that actor-empowerment could be studied in a 'purely' two-actor context.

It was expected that, studying actor-empowerment of conflict cases at the national, local and community levels would allow a comparison to be made. Particularly, expectations were on how the specific prevailing structural and systemic conditions influenced power resource mobilisation and deployment of strategies.

Relevance
Among the various national-level forest-related conflicts, the one related to demands for government to allow mining in some forest reserves was selected as a case to study actor-empowerment. The selection of this conflict for the research was interesting due to its multi-sectoral, multi-scale and policy-oriented dimensions which provide the scenario needed to study actor empowerment in a complex multi-actor national-level setting. Mining in forest reserves in Ghana brings at least three major sectors of the economy to play: the environmental, forestry and mining sectors. Therefore the conflict offers opportunities for understanding the power play in multi-sectoral settings.

In this sense, it represents a typical national-level natural resource conflict. Also, it is a national-level conflict which has had immediate implementation repercussions at the forest reserve (local) level. Thus it offers a more complex empirical case to study the conflict from national to local scale especially as it could eventually allow a comparative perspective on the national and local patterns of actor-empowerment. All these dimensions meant several actors and third party involvement and hence the likelihood of complex scenario for a broader understanding of actor empowerment process. The assumption of multi-actor involvement was informed by the fact that the mining interests were likely to clash with existing land use interests such as farming (communities) and logging (timber companies). Besides, issues of royalties and benefit flows would be involved bringing in traditional authorities, local government agencies and communities. Due to the proposed environmental effects, it was expected that civil society groups such as green NGOs may also be involved. All these comparably made forest-mining a more interesting context to studying actor-empowerment at the reserve area. Three proposed forest-mining projects at three different reserve areas were selected. The selection of these cases was primarily based on their 'visibility' in terms of the extent to which discourse at the national level is being implemented at the local level. Specifically, the guiding question was, is there any practical action towards mining in specific reserves and has this generated any visible conflict? Although in principle, some reserves had been earmarked for mining, only these cases where actual process for mining permits had been initiated were selected. For reasons of anonymity, these have been labelled as R1, R2 and R3.

At the community level, the case of conflicts between farmers and timber loggers was selected, not only because of its prevalence and importance but also, it provided a pure case of interpersonal conflict where actor-empowerment in a two-actor scenario could be studied. The justifications for the selection of these cases have been elaborated at the beginning of their respective chapters.

Aside their appropriateness as empirical cases for studying actor-empowerment, these cases to a large extent also present a representative situation of natural resource conflicts in Ghana. At the national level, resource conflicts in Ghana are mainly policy-related; the forest-mining case fairly captures this as it presents a landuse policy-making context, bringing the major actors involved in public policy in Ghana on board. The forest-mining at Reserve areas also represent a typical resource-based local conflict where other actors with vested rights and interests at the local level become involved in the implementation of policies. This is particularly the case as all forest reserves in Ghana are typically managed by state agencies and are 'spots' for implementing national forestry policies and management plans.

The two major landuse systems in Ghana on forested lands are farming and timber exploitation, given that most rural people are farmers and that the state mainly manages forests for production and protection objectives. Therefore, the logging damage conflicts between farmers and loggers seemed more representative of forest-based conflicts involving two individual actors at the community-level. This has been observed by several studies as the most pervasive and problematic forest conflict at community level (Asare 1970; Inkoom 1999).

4. ACTOR-EMPOWERMENT IN NATIONAL-LEVEL CONFLICT: A CASE STUDY OF FOREST-MINING CONFLICTS IN GHANA

> "The policy environment for natural resources management has changed dramatically in recent decades. Population growth, agricultural settlement and growing trade, investment, and economic activity have increased pressure on all resources…the inevitable conflicts cannot be resolved if the state recognises only one set of legitimate users…a crucial policy step is to recognise that there are multiple stakeholders, with varying degrees of legitimacy, in any situation of contested resource use (Tyler 1999:271)

This chapter presents the empirical results of one of the conflict cases studied: the forest-mining conflict at the national level in Ghana. As a policy-related conflict case, an understanding of the natural resource policy-making and institutional arrangements in Ghana that shape policy formulation is considered important for a greater appreciation of the results and subsequent discussions. Therefore, the chapter begins with a section on the conflict context. In order to appreciate the specific methodological approach used to collect and analyse data for this case study, a section is dedicated to the empirical approach. The actual empirical results are presented, by first outlining the constructed narrative of the conflict to give a chronological perspective of actor-empowerment efforts. In this presentation, graphical representations of the chronological sequences of the various conflict actions that were coded are used to intersperse the textual descriptions. The graphical sequencing of actions is separated by brief descriptions of background information that serve as the milestones in the conflict. The results on the patterns of power resources and strategies are presented. In order to give a logical structure, patterns of power resources are presented first, then strategies before the patterns of resources in strategy sequences is presented. An assessment of actor-empowerment effectiveness is made, both in episodic and management perspectives. The main highlights of the results with regards to the research questions 1 to 4 are summarised in the conclusion section to end the chapter.

4.1 CONFLICT CONTEXT

Ghana is rich in natural resources, with about 35% of its total land area covered with tropical high forest at the turn of the last century (Inkoom, 1999). The exploitation of these resources makes important contribution to the national economy and provides an important context within which to appreciate the dynamics of resources-related conflicts. Particularly, the forestry and mining sectors respectively contributed 3.6% and 4.1% to national GDP with mining leading foreign exchange earning, contributing about 41%[8] (MoFEP, 2005).

Forest-related conflicts in Ghana at the national level have mainly centred on key policy-related issues, especially those affecting land use rights, timber and mining

[8] Gold alone contributed about 93% of total mineral output, earning about USD840 million in 2004 (ISSER, 2005)

rights allocation, timber pricing and benefit sharing. With increasing population growth[9] culminating in increased pressure on land for forest conservation, agriculture and infrastructural development, land use policies continue to be confronted with diverse interests. Particular to forest lands reserved for conservation, there is increasing pressure from communities for farming lands and lately from private mining interests for mineral exploration and mining. This development has called for a shift in land use policy since these reserved areas are legally gazetted areas earmarked for forest conservation.

To understand the context of national level forest-related conflict, one needs also to understand the political and institutional setting that shapes public policy formulation and resource governance in Ghana. First, public-policy making in Ghana is highly influenced by both internal and external factors. Asante (2005), in the context of reviewing deforestation policies in Ghana has observed that donors, foreign business interests, politicians, bureaucrats, and the timber industry have and continue to play significant roles. As a developing economy, the need for donor support and direct foreign investment, especially in the natural resource sector, to boost economic development has positioned donors and foreign investors to wield significant influence in the direction of public policies in Ghana. The structural Adjustment and Economic Recovery Programmes of the World Bank in the 1980s for example are known to have led to increased exploitative policies in the forestry sector (see Owusu, 1998 for a review). Since independence, and perhaps inspired by colonial style of administration, public policy in Ghana has been dominated by politicians and bureaucrats. Under the current constitutional dispensation, the executive wing of government, embodied in the office of the President, wields substantial influence because of the extensive constitutional powers the office is endowed with. Particularly, the provision that allow the President to appoint non-members of the legislature (Parliament) as Ministers has effectively placed public policy-making outside the representative democracy framework and outside the direct participation of the citizenry. Asante (2005) has reviewed the role of bureaucrats in civil and public institutions in public policy and concluded that their role has and continues to be almost indispensable. He further reports that even non-public officers who are confidants of top government officials are well placed to influence policies.

Forest-related conflicts, at the national level have typically exemplified the influences of these major actors in public policy, though other key stakeholders like landowners and the timber industry have played important roles. The Ministry of Lands and Forestry (MLF), headed by a cabinet minister appointed by the President, has overall responsibility for sector planning and policy direction and for monitoring sector programmes towards the attainment of the national goal. Others such as the Ministries of Agriculture and Mines are key players in forest-related issues, especially those involving land uses. The implementation of specific sector policies and programmes is undertaken by the relevant statutory public agencies such as the Forestry Commission (FC) which are headed by government appointed bureaucrats. The Forest Services Division (FSD) as a division of the FC, for example, is responsible for protection and management of the forest resources both within and outside the legally reserved forest estates and it is the leading agency of the Commission in forest-related issues on the ground. Typically, these public agencies operate as a hierarchical

[9] population growth rate is about 3.1% (Ghana Statistical Service, 2000)

bureaucracy with national headquarters headed by an Executive Director, regional offices headed by regional managers and District offices headed by District managers who have technical and field staff working under them. Generally, it has been noted that the institutional setting within which the various public agencies operate is more complex as there are sometimes clashes with institutional mandates both within a particular sector and outside it. For example, policies or programmes with the exploitation of mineral in a gazetted forest estate would involve several sectoral agencies such as the Environmental Protection Agency (EPA) and Minerals, Lands and Forestry Commissions which belong to different Ministries. Many studies have noted that intersectoral agency collaboration in Ghana is often characterised by conflicts of mandates and has not been effective (Marfo, 2002; Indoom, 2005; Asante 2005).

As noted earlier, commercial interests play significant roles in shaping the content of public policy. Each sector seems to have particular dominant commercial interest groups which have achieved some status as 'recognised' pressure groups in the closed policy community. In the forestry sector for example, the two industrial players in policy-related issues are the Ghana Timber Millers Organisation (GTMO) comprising the milling and export companies and the Ghana Timber Association (GTA) comprising of loggers. Their front is sometimes united and sometimes characterised by tension and conflicts especially when they seek to influence sector policies that favour their members, for example on timber rights allocation.

Particular to natural resource policy and conflicts at the national level, traditional authorities who are regarded as landowners on whose behalf the government manages these resources are key players. In Ghana, though lands are owned by communities, all natural resources are vested in the state (Art. 257, s6 of the 1992 Constitution):

"Every mineral in its natural state in, under or upon any land in Ghana…is the property of the Republic of Ghana and shall be vested in the President on behalf of and in trust for the people of Ghana".

Although national and regional representative structures such as the National House of Chiefs exist, their front with regard to forestry issues has been observed to be fractured mainly due to the geographical differences in richness of natural resources (personal communication, *Sefwi-Wiowo* palace, 2004). Nevertheless, by the traditional authority they possess, and their representation in high-level state organs such as the Council of State and Boards of Commissions, they wield substantial influence especially in conflicts related to natural resources and benefit sharing. There are at least sixty-six environmentally-related NGOs in Ghana (Tropenbos-Ghana Programme, 2004) playing diverse roles such as advocacy on human rights, nature conservation and development as well as helping community development projects. However their strength in terms of their advocacy on natural resource policy issues is still weak compared to for example those in the Amazon regions (Asante, 2005). Most NGOs are funded through donor support, either directly through projects or indirectly through government commissioned projects. Until recently, green NGOs in Ghana have operated individually. Efforts for collective action have been observed quite recently under umbrella platforms such as the Natural Resource Management Platform, Forest Watch and the Coalition against Mining in Forest Reserves. NGOs do not have any statutory role in the formal processes of forest resource planning, policy formulations and management. Some studies have shown that local NGOs in

Ghana are not necessarily democratic, representative of local people, independent of formal politics and they have sometimes created conditions for the market to flourish against the interest of civil society (Mohan, 2002).

Increasingly, the media, which was hitherto dominated by state control, is also growing mainly by private participation and evolving as a significant player in environmental discourses and there is growing evidence of this due to the parallel growth of the culture of freedom of expression and political democratisation under constitutional rule since 1992 (see Teman and Smith, 2002). That the media is growing as formidable institutional resource in the social, economic and political life in Ghana is undeniable. There is supporting evidence of the vibrancy of press freedom in Ghana that makes it a potential power resource. As Teman and Smith observed:

"It should be noted that , relative both to Ghana's recent past and to other sub-saharan African countries, the media in Ghana is flourishing…Likewise, on the African continent, where media repression and intimidation remain all too common, Ghana (along with perhaps Senegal) stands out as exemplar of media freedom and democratic development" (2002: 604)

For example, recent studies (see Friedman, 2001; Temin and Smith 2002) have observed the impact of the media on political processes, particularly parliamentary and presidential elections. Given this reality, it is not surprising that some Scholars have already suggested rural FM radio programmes as one of the means to dealing with monitoring land-related conflicts (Fred-Mensah, 1999). Although all accounts on the role of media seem to agree on its impact in urban areas, particularly in the big cities, there seems to be contrasting evidence about the impact of the media in rural settings of Ghana; while for example Friedman (2001:2) praised the impact, Teman and Smith (2002) show that this is minimal. They contended that 'Ghana's media have a significant effect on a particular class of Ghanaians, the urban elites and foremost is the fact that the media are largely inaccessible to people living in Ghana's more remote and rural areas' (:604).

In all, it has to be pointed out that 'policy processes in Ghana is a closed one, dominated by top level politicians, bureaucrats and to a limited extent a small class of business owners and elites (Asante, 2005:79)' and that specific outcomes depend on how they play the bargaining game. This game is conspicuously observed during forest policy-related conflicts and the extent of involvement of specific actors differs from issue to issue, depending on how policy outcomes affect specific interests. To provide a perspective for understanding the national setting vis-à-vis power-play, a brief highlight on two major forest-related national-level conflicts is given. These are related to attempts at increasing stumpage fee[10] (and hence forest revenue) and policy reforms to change from the discretionary system of timber rights allocation to a competitive bidding system.

Donor influence on outcomes of 'controversial' policy issues has been very significant not only in terms of content but also the structural changes that are needed to implement such outcomes. In some cases, they succeed, in others they fail. For

[10] stumpage fee represents royalties to the land owners and charges for the cost of felled timber which provide a basic return to the landowner and the cost of forest management and timber regulation (Regulation 21(2) of L.I 1649

instance, increasing stumpage rates[11] of commercial timber species to reflect economic values has been one conflict area in which donor influence has still not been able to withstand industry's resistance. There have been a number of attempts by donors to cajole the Ghana Government to update rates; the World Bank tried to include royalty revisions as an element of the 1998 Natural Resource Management Project (NRMP) loan conditionality but this was resisted by the timber industry and was not enforced (Awudi and Davies, 2001). However, one conflict area where donors have succeeded in breaking industry's resistance is the system of timber rights allocation. For instance, the World Bank, strongly in disagreement with the concession system and discretional allocation of timber rights (with their attendant consequences for rent-seeking and low revenue generation[12]) made it conditional to the second trance release of funds for the Forest Resource Management Project that the allocation of concessions should be made subject to a tendering process (FRMP, 1988; 55). Prior to this loan conditionality, the idea had often been mooted but never implemented; adherence to such approaches has been consistently undermined by political interference, and is linked with the discretionary allocation of timber rights (Awudi and Davies, 2001).

Another dimension of the policy setting at the national level is that, even if policy outcomes are reached, the implementation usually involves further bargaining games and resistance. For instance, Birikorang (2001) has noted that though the allocation of timber rights based on competitive bidding for the concession is a fundamental feature of Ghana's 1994 Forest and Wildlife policy, yet this measure was thwarted in the final stages approving the Timber Resource Management Act (1997) and its accompanying regulation (L.I. 1649). Again, the timber industry was a prominent player behind the resistance of the implementation of competitive bidding.

Forest-related conflicts at the national level involve huge mobilisation of political interference and this is because the setting is characterised by state-private clienteles. A World Bank report[13] has observed that the Ghana Forest Service and political parties remained dependent upon clientele's relations with timber interests. In addition to this, there is convincing evidence in many studies (see Kotey et al. 1998; Birikorang 2001; Asante 2005) that the mobilisation of political and administrative legitimacy, particularly the Presidency and by extension the Executive and top bureaucrats is crucial to shaping the content of public policy in general in Ghana. By this, those actors who are placed in positions, either as members of the closed policy community or are able to gain entrance, to mobilise or access these state structures are better placed to direct outcomes of the bargaining game.

[11] In Ghana, stumpage fee = Tree volume x Timber Price x Stumpage rate. Stumpage rate for each species is a percentage (depending on demand level) specified by *law* in Schedule 2 of the Timber Resource Management Regulations (1998) (L.I. 1649, Regulation 22(2) and is determined by the Government.

[12] The World Bank estimated that less than 25% of stumpage revenue was collected in 1988

[13] World Bank, Forest Sector Review (New York: World Bank 1999), p. xii, Financial Times, 11 February 2000. 'World Bank sees flaws in forest policy'

4.2 EMPIRICAL APPROACH

The methodology has already been discussed in chapter 3. This study started with a background study by the researcher following a media publication on the issue. This guided in the selection of informants as the paper highlighted the main actors, pro and con involved in the conflict. Specific to this case, actor narratives, informant interviews (using both formal and informal styles), documentary analysis and media analysis were the main data collection techniques. The actor narratives focussed on public relationship officials and leading members of the actor groups. These front-line 'representatives' were selected in order to obtain official information and position on issues. The interviews with informants were mainly informal due to the highly politicised nature of the conflict and were used to clarify and verify media information. It involved public officials from the EPA (one officer from mining office), FC (legal unit), FSD (one officer from top management and operational unit respectively) and MLF (one top technical official). Seven leading members of the NGO coalition who were prominent in the NGO advocacy were selected. The names suggested by the leading NGO of the Coalition were confirmed by this selection. The responsible officer in charge of forestry at the donor's office was also selected as informant because of the role of donors in national land use policy. The public-relation's officer of the corporate network body of prospective miners was also interviewed to ascertain and confirm official actions and positions of the prospective miners. Thus, in all about 15 informants representing the various actors in the conflict were formally interviewed. The identities of these informants have been left out for ethical reasons.

For documentary analysis, official position papers and dossiers, corporate annual reports and official correspondence such as those listed below were used:

- Opponents' campaign dossier, 2002
- A proponent's annual reports, 2001-2003
- Opponent's letters to the donor, July and December 2003
- Opponents' position paper on mining, 2003
- Opponents' letter to Government, 2003
- Donor's letters to opponents, January 2004

The media analysis focussed on internet searches, radio broadcasts, the print media and television broadcasts. Although all these sources were used to corroborate information and cross verify information, particular substantive data for the analysis were obtained or confirmed from selected sources. For the print media, the top newspapers on the Ghanaian news-stand, as shown by Temin and Smith (2002), namely the Daily Graphic, Ghanaian Times, The Chronicle and the Ghana News Agency publications were used. In all about fourteen (14) printed articles published from 2002-2004 which captured the various actors' press statements and activities were selected from these print media. All the three leading television stations, GTV, Metro TV and TV-3 were followed[14] in addition to BBC as a leading international media house. In all, about six (6) news-items were followed from these audio-visual

[14] Aside regular news, GTV's talking Point, Metro TV's Good Morning and Evening Ghana and TV3's Hot Issues programmes were particularly followed in the study period. This is because they were the popular programmes for discussing controversial news and public debate items with high participation of relevant and affect public agencies and people.

media stations. Aside these, sixteen (16) internet sites were selected using mainly word search on 'forest, mining and Ghana'. The selection focussed on dedicated websites of various bodies such as donors (e.g. Bank Information Centre, www.bicusa.org), environmentalist (environmental news, www.ens-news.com) international corporate watch institutions (Corporate Watch, www.corpwatch.org), prospective miners (names withheld) and opposition NGOs (names withheld).

As described in chapter 3, the data analysis followed the systematic reduction procedure. Data were collected on the selected conflict (from 1999 – 2004), and these were used to reconstruct the conflict chronologically. The episodic actions were sequenced using the diagrammatic representation illustrated in figure 3.1 and the mobilised and used power strategies and resources were coded. The result of the coding is displayed in the dataset shown in annex 1.

4.3 CONSTRUCTED NARRATIVE OF THE CONFLICT EPISODES

4.3.1 Issues and Positions: Proponents and Opponents

In this section, the highlights of the conflict actions in the various episodes are briefly presented to give a perspective for following the subsequent presentations on the patterns of episodes, strategies, power resources and the assessment of the effectiveness of the various actors' empowerment processes. Prior to this highlight, a summary of the themes of the various arguments that characterised the discourse is given.

The backbone of the forest-mining conflict in Ghana was the controversy around the permission to mine mineral resources in areas prescribed by law as forest reserves. These reserves were created for the purposes of maintaining ecological, biodiversity and environmental quality of the natural ecosystems of the areas. Following the successful reservations of forest areas in the early 1950s, the forest reserves have been managed for protection and timber production and many activities in the reserves have been prohibited by various laws. Towards the end of the 1990s, following Government's policy of opening the extractive sectors for investment to enhance national development, mineral prospecting increased and mineral-bearing rocks were found to underlie many areas where the forest has been put under reservation. This potentially created a land use problem since allowing mining, especially surface mining, in these areas meant clearing the 'reserved' forests. When prospective mining in forest reserves became a policy issue, it generated a conflict between those in support of forest-mining (proponents) and those who stood against it (opponents). Following the discourses, the bases of the conflicts hinged mainly on substantive issues though some procedural and relationship issues were also involved. The procedural issues mainly cantered on the involvement of green NGOs and civil society groups in the official decision and consultation processes. Mistrust among commercial interests and NGOs and perceptions of corruption of officials and pro-mining lobbyist were the main relationship issues. The substantive issues revolved around three main concerns that pervaded the entire conflict discourse, namely ecological, economic, and legal considerations.

First, ecological concerns were particularly expressed by the proponents regarding surface mining in forest reserves. The opponents started by using the discourse on deforestation in Ghana to argue that there is no justification for allowing further forest degradation through surface mining. It is claimed that Ghana's 8.2 million ha of tropical forest by the turn of the last century has degraded to 1.6 million ha, and this information was extensively used. The proponents counteracted this by positing that, mining 'only' 2% of remaining forests would not significantly influence the trend, blaming deforestation on other landuse practices such as indiscriminate logging. The second point centred on the construction and meaning of term 'forest'. Principally both the proponents and opponents used two lines of ecological arguments. First, it was argued by proponents that forests are landscapes with dense tree cover and that a degraded natural forest can be reclaimed after mining by planting tree species to give green vegetation cover. In this sense, the proponents argued that the critical environmental functions, and services of the forest such as soil conservation, carbon sequestration and provision for wildlife habitat, can be restored after mining. On the other hand, opponents argued that a degraded natural forest cannot be reclaimed or replaced by planted forest since the structure and functions of the two cannot be the same. This line of argument followed the discourse on biodiversity conservation asserting that certain plant and animal species, once eliminated from the forest cannot be restored even if the land is planted. Besides, the forest is perceived as a natural ecological unit with dynamic natural interactions, which cannot be restored once 'nature' is 'destroyed'. The third ecological concern that underlay the conflict was the perception about the size of forest that would be degraded in relation to the proportion that is still reserved. The proponents argued that, putting only 2% of total forest reserve area under mining will not significantly result in forest degradation. This argument was further augmented with the perception that most of the affected forest reserves were already degraded by other forestland use practices such as logging, illegal farming and 'illegal' small-scale mining. The opponents counter argued that, it is wrong to assume that the negative impact of mining on the 2% forestland area will only affect that specific geographical area and that the impact will not affect areas beyond it. Specifically, questions about the pollution of water bodies, the effect of erosion of exposed lands etc have been used to discredit limiting the geographical and ecological extent of degradation to the size of mined forest area.

Second, economic argumentations featured as a major concern in the conflict discourse and were prominently central to the discussions at the national-level. At the national level, the central concern had been the contribution of mining to the national economy against the contribution to rural development at the local level. In the main, the proponents prominently argued that 'mining is the largest contributor of foreign exchange' (about 40% worth USD756.5 million in 2002) to the economy and that its development contribution could not be underestimated. Besides, the economic activities triggered and supported at the local level by the provision of social amenities such as pipe borne water, school buildings etc had been used to support mining as a viable economic activity. The main discourse used by the opponents to challenge this merit of huge economic contribution was the call for 'weighing long-term economic contribution of alternative forest land use options such as ecotourism. They further called for a comparison between the economic cost of the negative social and environmental effects and the real economic benefits to the state and rural populations. Particularly, questions on how much of mining profits stay in the Ghanaian economy to boost domestic capital was prominently raised. Although this

counter economic argument was strongly raised, unlike the original argument, it remained rhetoric as the opponents failed to support this with facts and figures. Therefore, this counter argument was always rejected by proponents as lacking factual credibility and this was labelled as mere assumptions and speculations.

Finally, the conflict discourse featured the legality of putting forest reserves into other land use systems such as mining. The purpose for which forest reserves were established and legalized had been referred to in the debate by opponents. The laws that established the forest reserves stated the purpose for the reservation and the permissible management objectives and activities. The opponents, using the legal line of argument, posited that on the bases of its effects on biodiversity composition and forest cover, forest-mining is in contravention to the letter and spirit of some international conventions ratified by Ghana, citing the Convention of Biological Diversity as example. Moreover, the opponents argued that forest-mining is against the forest and wildlife policy and the objective of the forest reservation agenda. Thus, from a legal point of view, converting forests reserves into mining areas was illegal. The proponents counteracted this illegality doctrine by questioning whether it was forests on paper or on the ground that were to be protected by the law. Making references to official status reports, they argued that many of the so-called forest reserves were degraded and did not have the biodiversity and vegetation richness to qualify them as forests that must not be 'disturbed'. Thus, in the context of the law, the actors were divided into what can be called 'legalistic' and 'pragmatist' factions. The pragmatist opposition to the legalistic perspectives contended that land use policies must be guided by what is 'reality' on the ground and not what is necessarily 'legal' on paper.

4.3.2 Conflict episodes

Having elaborated the bases of the conflict actors' actions, the highlight of the various episodes follows. It should be noted here that the various actors in the conflict are designated as proponents and opponents. The actor network of the proponents consisted mainly of private commercial mining interests (acting under their corporate advocacy body), politicians and public administrative bodies. In principle, the government was assumed to be a neutral 'guardian' but where it acted explicitly in favour of forest-mining; it was incorporated into the proponent's network. The opponent network grew from individual NGOs acting in solo to a coalition acting as a protest group. Although some bureaucrats were initially involved, they withdrew their involvement due to reasons that will be clearer in subsequent sections. In order to make the reconstruction of the 'story' flow, some extracts from data sources are provided where they are necessary. The reconstruction of conflict is presented graphically using action boxes. Some general observations are given to serve as milestones for a greater appreciation of the chronology of the episodic events captured in the action boxes. The legend illustrated in figure 3.1 is used for the graphical sequencing and representation of the various conflict episodes.

The conflict manifested when the Proponents requested for mining permits and legal reforms to allow commercial mining in forest reserves. The Opponents declared forest-mining illegal and commissioned studies into the social and environmental effects of mining using independent experts. The Proponents responded to anti-mining

sentiments by facilitating institutional reforms including preparation of guidelines for mining in forest reserves

'This is a very pleasing result and represents the most positive way forward for the Project (name withheld) in some time. The decision… should be seen as strong commitment by the new Government to promote mining and mineral exploration in Ghana' (source: proponent's website report, 2003)

The Opponents maintained that forest-mining is illegal, using the official position of some relevant public agency reports and published study reports whose conclusion highlighted the negative impacts of mining.

The study was commissioned 'drawing on the services of independent intellectuals… so as to strengthen the knowledge base for advocacy' (preface of published report, 2001)"

The proponents published new guidelines for mining in forest reserves. The opponents responded by publicly rejecting the authenticity of the regulations.

"We have for long rejected the production of this document (the guidelines), was funded by some proponents, and it cannot be trusted since it parrots the wishes of the companies who are interested parties", (interview with leading opponent, 2003).

The proponents did not immediately react to this rejection of the regulations. The opponent followed up by releasing an official paper against mining in forest reserves.

"The explorative companies only applied for exploration permits and government was not under any legal obligation to proceed to granting mining permits whether commercial quantities of minerals were identified or not" (opponent's interview, 2003).

This provoked a response from the proponents who threatened court action against government should the latter continue to pursue the policy of allowing commercial mineral exploitation in the identified reserves. The crux of proponents' argument was that the intention of government to grant exploration permit was to proceed to grant mining permit to qualified investors if commercial quantities of mineral deposits were identified; otherwise government's action was irrational and a shift from this position was going to be addressed through court action. The opponents did not react to this court threat by withdrawing their statement against forest-mining. The proponents followed their court threat by lobbying government for investor-friendly laws. The proponents further organised a high-level social meeting with top government officials.

"The meeting enabled Government and industry to underscore the importance of mining in the country and the need for the mining industry to set the tone for development that identifies and effectively implements good social license' (Proponent's Annual report, 2002)"

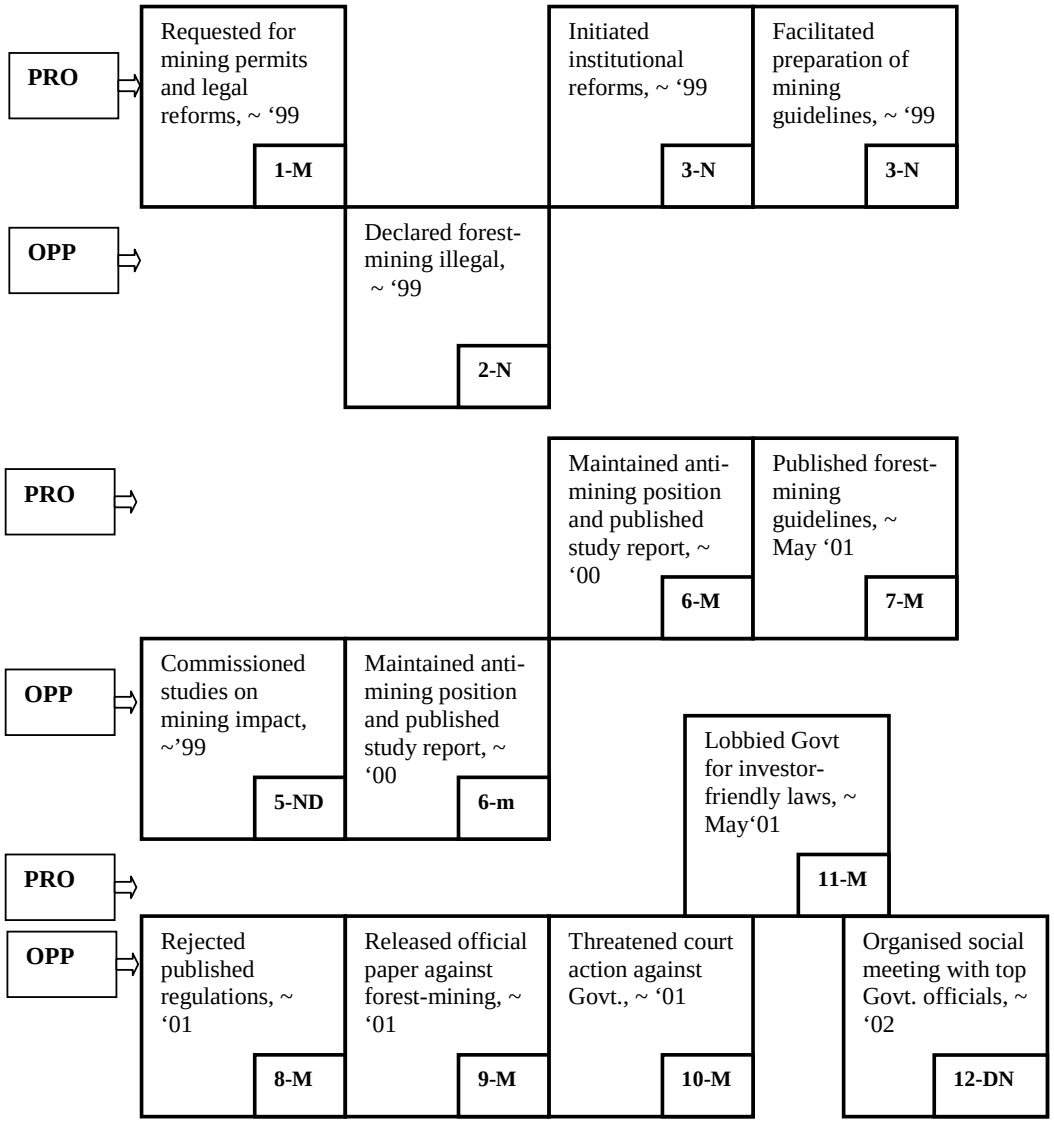
This provoked the opponent NGOs to start a coalition-building. The NGO Coalition issued a position paper on the illegality of forest-mining and prepared a campaign dossier for advocacy against mining in forest reserves. The proponents responded by organising industrial visits for members of parliament and some media houses to 'enlighten' them about mining and its social and economic contributions to the country and communities.

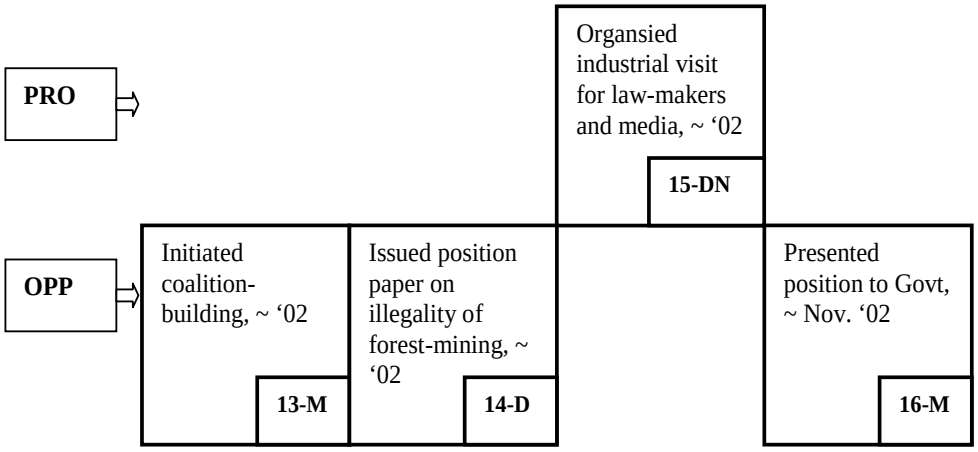
"We (proponent's name withheld) organised mine visits for the media as well as four parliamentary select committees whose activities impinge on the mining industry (Proponent's Annual report, 2002).

Following this, the opponents responded by presenting a position paper to the government through the relevant ministry.

"We call on government not to allow mining in forest reserves and that all mining leases issued must be revoked' (Coalition report, November 2002)".

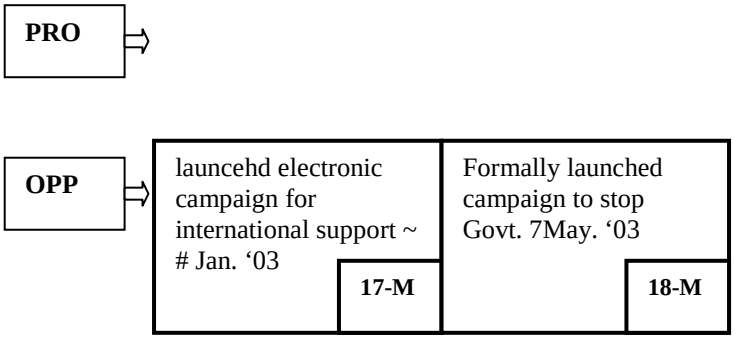
The chronological sequence of the conflict actions is graphically represented as follows:





At this stage government sent a high-level ministerial delegation to some of the proposed forest reserve sites in response to anti-mining sentiments to acquaint themselves with developments on the ground. The visit was also to enable the government to take a final decision on the permit for the mining operations (Daily Graphic, 27th January 2003).

The proponents did not respond to their opponents' call for halting any forest-mining initiatives. The opponents followed their action by launching an electronic campaign on some pro-environmental and community websites calling for international support to insulate government from private mining lobby. The opponents continued their advocacy by formally launching a campaign to stop Government. As part of their public launching, the opponents followed also threatened court suit against government. The chronological sequence of the conflict actions can be graphically represented as follows:



Another high-level government delegation was sent on a fact-finding mission to the prospective sites due to increased media and public coverage of the issue. A press conference comment of one of the Ministers follows:

"The companies were given permits to do prospecting in the reserves by the past administration. All the relevant statutory bodies (listed names withheld) were party to it…it is true that rich gold deposits have been disclosed in the Forest Reserves. Are we justified in saying that the companies should not go into the FR?" (Source: Press statement after the trip on 8/5/03).

Some media houses took over and organised debates in which both proponents and opponents participated. An example is Metro TV's 'Good evening Ghana' programme on May 13, 2003

With some public statements by political proponents which aligned government's position more towards pro-mining interests, the opponents threatened to go to court and continued their call for government to halt pro-mining agenda. The political proponents invited opponents for 'talks'. The opponents responded to the invitation and again rejected proponents' assurances of their preparedness to strictly adhere to regulations. The opponents continued with their media campaign.

"Although the Minister assured the coalition that government is taking every necessary step to ensure that responsible mining is practiced, we could not agree that this will be the case and maintained that no mining should be allowed in Ghana's forest reserves (source: an opponent' interview notes, July 2003)".

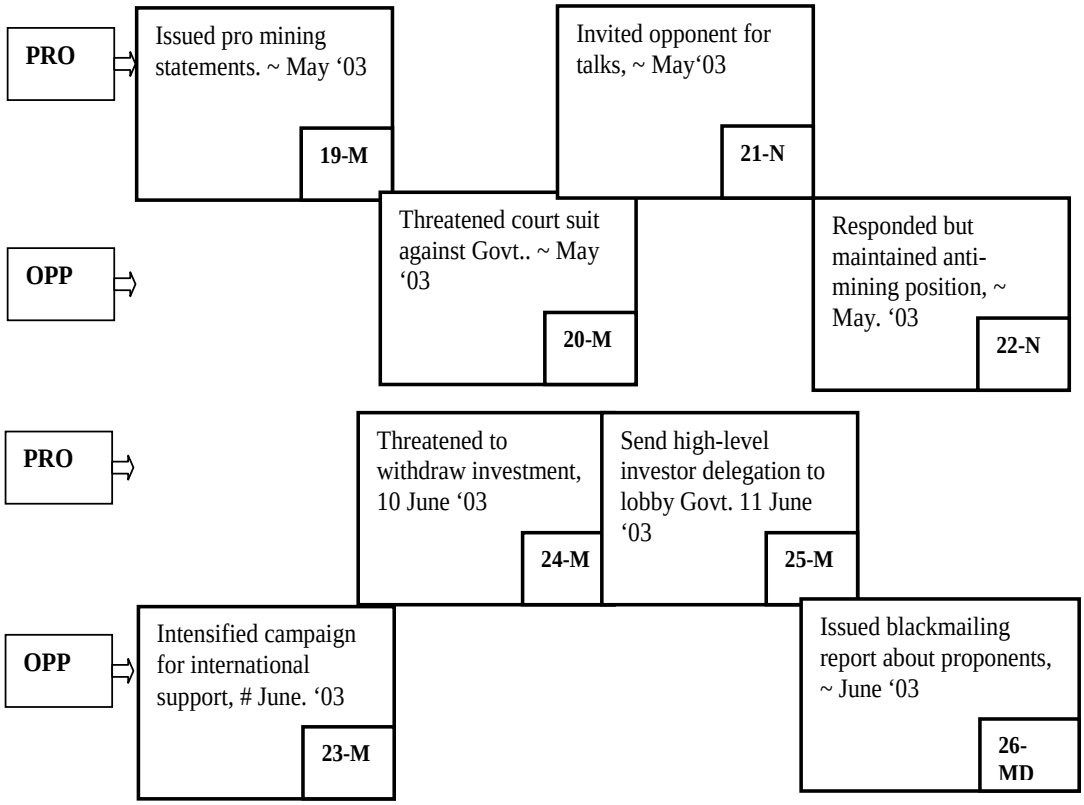
The proponents responded by threatening to withdraw investment and divert to other countries where government is prepared to provide investor-friendly laws. The proponents followed their threat by sending a high-level investor delegation to persuade government and maintained their lobbying on public platforms.

"Mali was poised to take over from Ghana as the second largest producer of gold in Africa if Ghana did not take measures to improve its competitiveness. The delay in passing the mining Bill into law is discouraging investments in the sector, while investment capital continues to flow to other mining countries." (A proponent's statement made at an annual meeting, June 2003).

The opponents responded by publishing blackmailing report about proponents and Government:

"the proponents (enlisted names withheld) are simply trespassing the transparency test in the name of foreign direct investment…they are mobilising some traditional leaders and District Chief Executives to speak positively for their communities support for mining in their areas… they are part of the aggressive campaign and lobby not only to undermine civil society and community campaign against mining in Ghana's forest reserve but also to secure full support from government to mine in Ghana's precious forest reserves' (source: an opponent's website, 2003)".

The chronological sequence of the conflict actions can be graphically represented as follows:



At this stage, there was evidence of intense pressure from both sides on government (such as letters from foreigners to the office of the President, website campaigns and investor lobbying). This provoked government to invite the opponents for dialogue on the issue. The opponents responded but continued to press for government to stop allowing mining in forest reserves.

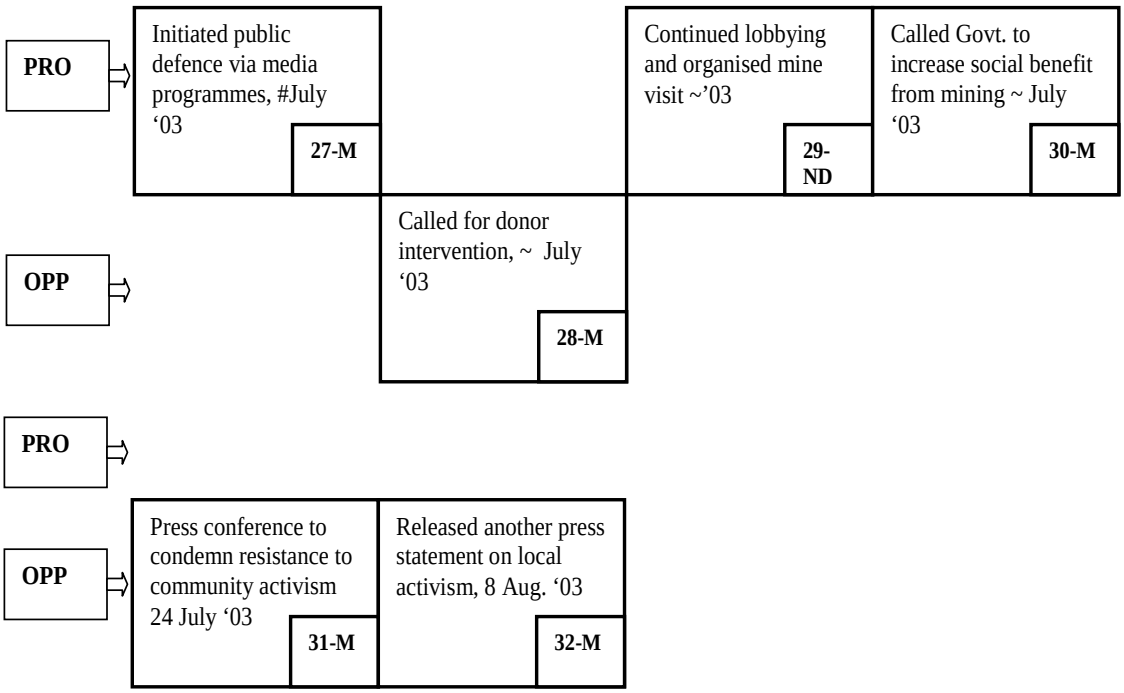
The protest and the public damaging reports provoked proponents to initiate public defence initiatives through media programmes. In the face of increasing pressure from proponents on government, the opponents called for donor (name withheld) intervention to stop government.

"The donor (name withheld) is supporting mining activities in developing countries and we feel it is a strong group which supports the industry. If it is not in support of mining in reserves, it will have a big influence on Ghana Government…we know they listen if the donor is not in favour (an opponent's interview extract, 2003)".

The proponents responded by intensifying their advocacy and organised mine visits for media houses and also called on government for increased benefits to flow to mining communities. This was to shift the blame of corporate irresponsibility which was high on the media agenda.

"The NGOs are only using exaggerated words in public to score points, but we have organised a press conference explaining our position and the benefits that mining in the reserves will bring to the good people of Ghana…We will not engage the coalition in any media war but focus on talking to government (source: interview with leading proponent, 2003)".

However, opponents continued their protest against forest-mining by releasing several press statements blackmailing and condemning proponents as blocking communities' resistance to mining in their areas. The action sequences follows:



Meanwhile the public discussion of the issue continued on radio stations. The Government begun to make public statements to the effect of its intention to allow mining in forest reserves:

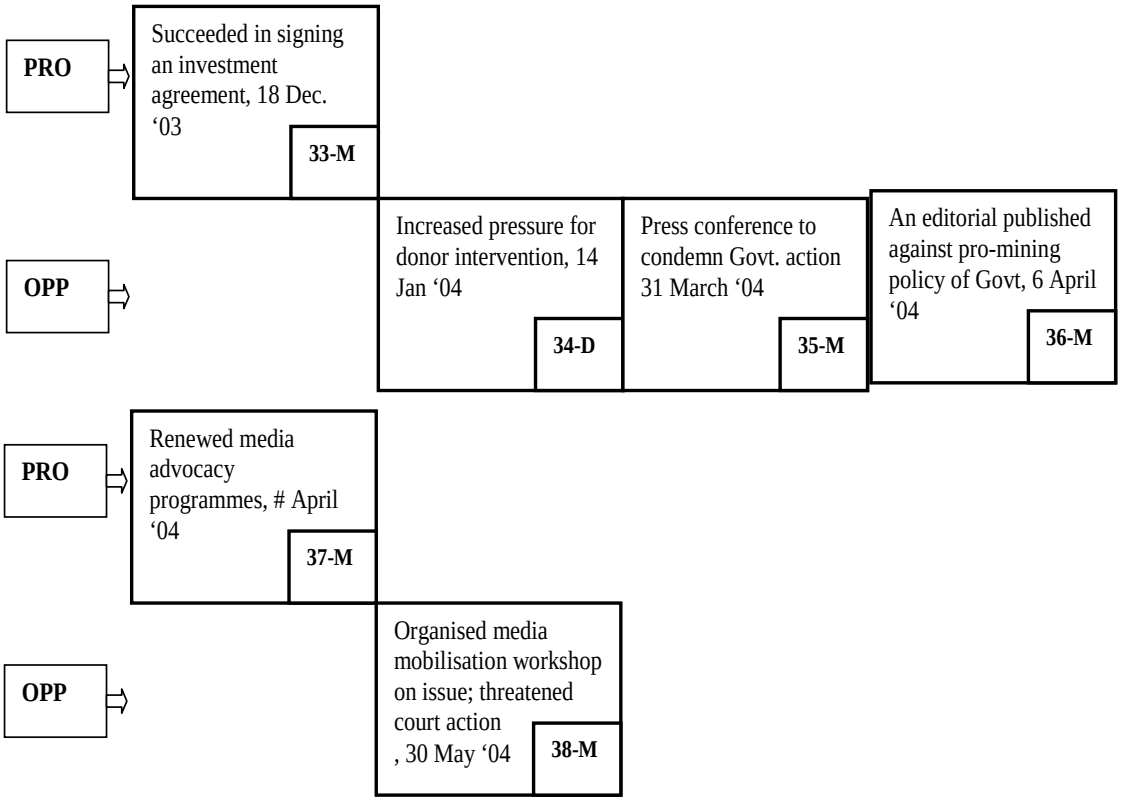
"Government, as a policy would promote the maximum extraction and use of the country's mineral resources for the development of the nation while ensuring a minimum harm to the environment and the forest'… 'Government would grant concession and licenses to credible mining companies to mine in forest reserves only if the environmental impact studies and analysis conducted by the relevant public agency (name withheld) were found to be positive…after all, some of these forest reserves are really degraded by loggers and illegal small scale mining operators because they have huge mineral deposits (Minister of Mines, GTV, 2/9/03)"

The Proponents succeeded at persuading government to allow mining in the targeted forest reserves. When proponents succeeded in mobilising government's support, evidenced by the signing of some investment agreements for mining in some reserves, the opponents renewed their advocacy. They increased pressure on donors for their position on the issue. When the donors 'refused' to take any explicit position on the issue, the opponents continued organising a press conference to condemn government. This was followed by a publication of an editorial in one of the leading newspapers against the pro-mining policy of Government. This publication was responded to with a renewed media advocacy programme by proponents to persuade the public that a pro-mining policy was in the interest of the nation. The opponents organised a workshop for media houses on the issue of mining and development.

"The purpose of the workshop is to equip the media with knowledge and first hand information on mining, the environment and sustainable development so that they report on them with a greater understanding and to bring the issues to the centre of public discussions" (GNA news report, May 2004).

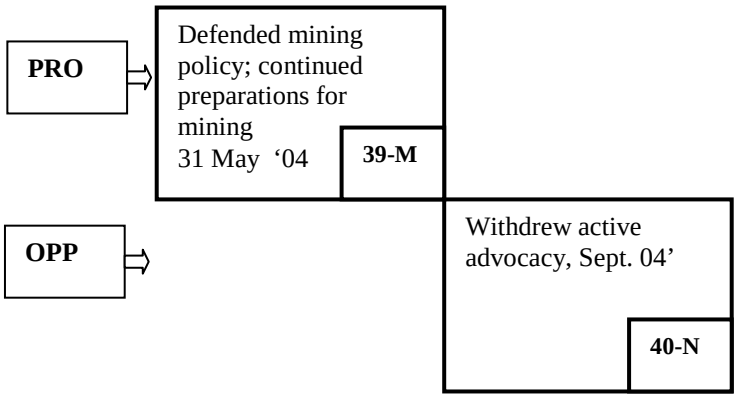
The proponents further threatened court action against government if it does not revoke or stop granting mining permits. Opponents further sought opportunities and

participated in the mining bill consultation process. The described action sequences are graphically represented as follows:



It was obvious at this stage that government's policy supported mining in these reserves as processes such as Environmental Impact Assessment and public hearings in some mining communities had already started.

The proponents responded to increased public and media concerns that the forests of Ghana are being 'wholesaled' for mining interests by issuing an official response to discount such propositions. The opponents withdrew from the conflict by declining their anti-mining advocacy. These last actions are shown graphically as follows:



4.4 PATTERNS OF POWER RESOURCES

4.4.1 Power resource categories

The result of the coding of actors' power resources is also displayed in the dataset in Annex 1. It shows that all categories of power resources were used by the actors in the mining conflict. Specifically, strategic framing (using logic, knowledge and other discursive elements), the law, political and administrative legitimacies, the media, political and corporate network, NGO and civil society network, donors, wealth and expertise were the prominent sub-categories of power resources used. It can be observed from Figure 4.1 that, in general, the proponents relatively used more social and socio-economic resources than their opponents, who in turn more often deployed institutional and orientational resources than the proponents. This general pattern of observation is not surprising given the observations of resource mobilisation by the various actors. For institutional resources, while proponents mainly used structures of political and administrative legitimacy and the media, opponents mainly used the law, donors and the media. The observed difference in proportion of use is due to the fact that, as proponents relatively maintained the specific institutional resources mobilised (except for media) throughout the conflict, the opponents increased their mobilisation, particularly with regard to donors and the media. As the opponents' actions mainly took the form of organised protest, mainly through media actions without substantial organisation of activities, compared to the proponents whose actions almost often involved organisation of lobbying activities with less rhetoric, the observed differences in orientational and socio-economic resource use is not surprising. For social resources, while the proponent acted mainly through the coalition, the proponents used their political network aside their corporate network more extensively in the course of the conflict.

Figure 4.2 provides a clearer picture showing the pattern of use of the resource categories by proponents and opponents as they progressed in the conflict, from episode to episode. The cumulative level of use of the various power resources in course of the conflict episodes is used to clarify the observed patterns. The term cumulative resource level is used to indicate the cumulative frequency of the use of specific resource categories from the beginning of the conflict to a specific episode. It is not a measure of intensity but only indicate how many times a specific resource has been used at a particular sequence point of the conflict chronology.

It can be inferred from figure 4.2 that there was a general pattern of increasing mobilisation of the various resource categories in the course of the conflict. However, it can also be seen that the extent of mobilisation and use of the resource categories differed across episodes as well as resource types. Generally, it was observed that while proponents increased their mobilisation of socio-economic resources, this was not the case for opponents. This is because while proponents focussed on organising activities to lobby support from political, parliamentary and the media, the opponents' advocacy relatively remained rhetoric concentrating mainly on press conferences and media publications.

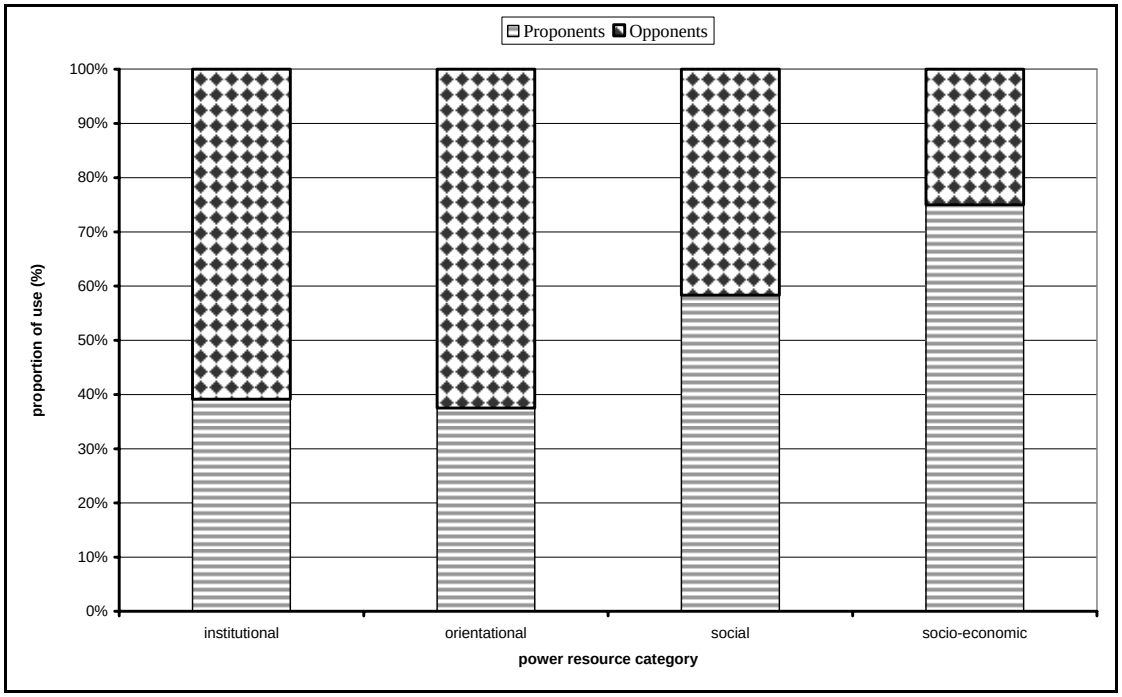


Figure 4.1 the proportion of the number of specific power resource categories used by proponents and opponents. Specific resources belonging to the same category were not double counted. Number (N) of institutional, orientational, social and socio-economic observed = 23, 32, 12 and 12.

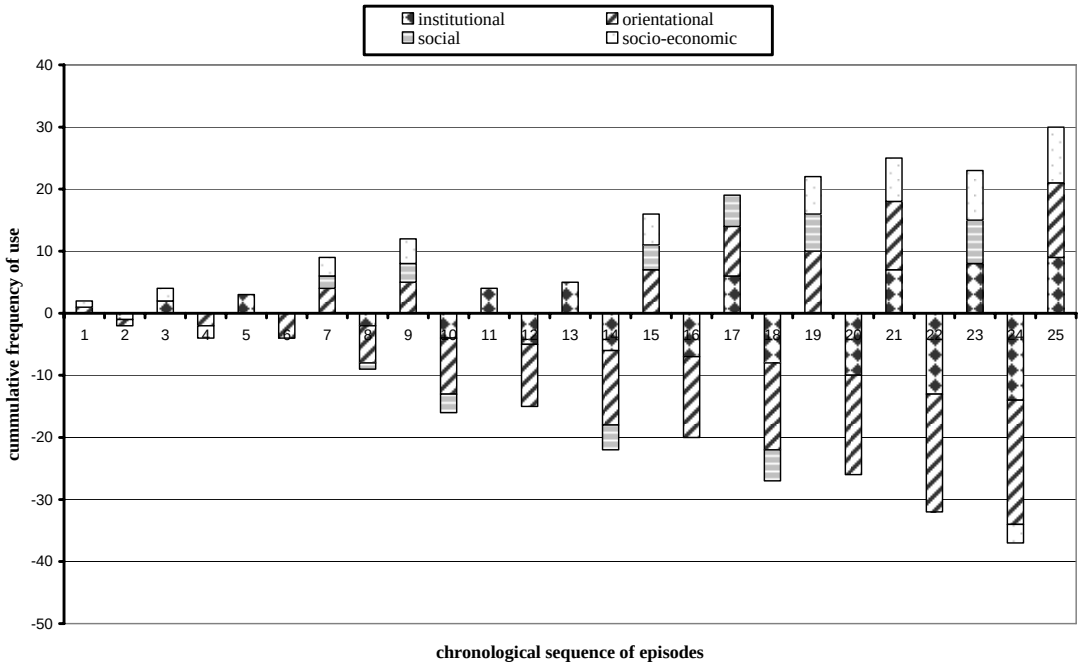


Figure 4.2 patterns of the cumulative frequencies of the various power resources mobilised within specific episodes in course of the conflict. Counting was done by adding unit scores (+1) to previous frequency scores whenever specific resource category was used by actors in course of the conflict. Upper chart is for proponents and low chart for opponents. Cumulative frequency values are absolute.

Otherwise, both generally increased their mobilisation of other resource categories except for opponents' social resource mobilisation. Following the narrative, it can be

observed that the opponents virtually stopped the expansion of their coalition-building after they failed to enrol donors to stop the government from implementing the policy.

4.4.2 Categorisation according Rogers (1974)

Following the resource mobilisation in the conflict and in the light of the categories elaborated above, four main infra resources can be distinguished from the study. These conditions are mainly institutional, orientational and socio-economic resources. First, the study shows that the legitimacy of an actor as a member of a relevant policy community at the national level is important for his resource mobilisation and deployment. This is exemplified by the fact that non-political proponents' empowerment efforts were enabled because they were 'recognised' as a pressure group. On the contrary, NGO opponents could not have easy access to official processes and participate in consultation processes because they lacked legitimate status as a pressure group or member of the policy community. Second, the study also shows that the existence of standards such as criteria for categorising landuse systems is a crucial orientational resource for actor-empowerment. Both proponents and opponents contemplated as to whether the targeted forests were critical ecosystems or not. For example, the NGOs advocacy 'suffered', especially when they wanted to mobilise donor support, because there were no national standards upon which specific forests could be assessed as to whether they were critical ecosystems or not. Third, another institutional resource identified to be of fundamental importance was credibility of state institutions and transparency of official decision-making and consultation processes. It was observed that the proponents' persuasion efforts, using forest-mining regulation, were for example discounted on the grounds that the process of formulation and consultation was not transparent and credible. Moreover, the expression of doubt about the credibility of the judiciary system in handling legal matters involving the government constrained opponents' use of court action. Lastly, the study shows that access to wealth could be crucial for the mobilisation and deployment of other resources. As exemplified in the narratives, the organisation of platforms such as sponsorship of field trips with lawmakers to verify claims required the use of economic resources. While the proponents could do so, the opponents could not due to their lower economic strength.

4.5 PATTERNS OF POWER STRATEGIES

4.5.1 Reciprocity

Following the chronological proponent-opponent strategy sequencing, a summary of the observed strategy configurations in the conflict and their respective cooperative-competitive scale categories is given in Annex 3. Figure 4.3 summarises the grouping of the observed strategy configurations and shows the extent to which relatively cooperative and competitive strategies were used to respond to each other in the reciprocal episodic patterns of the conflict.

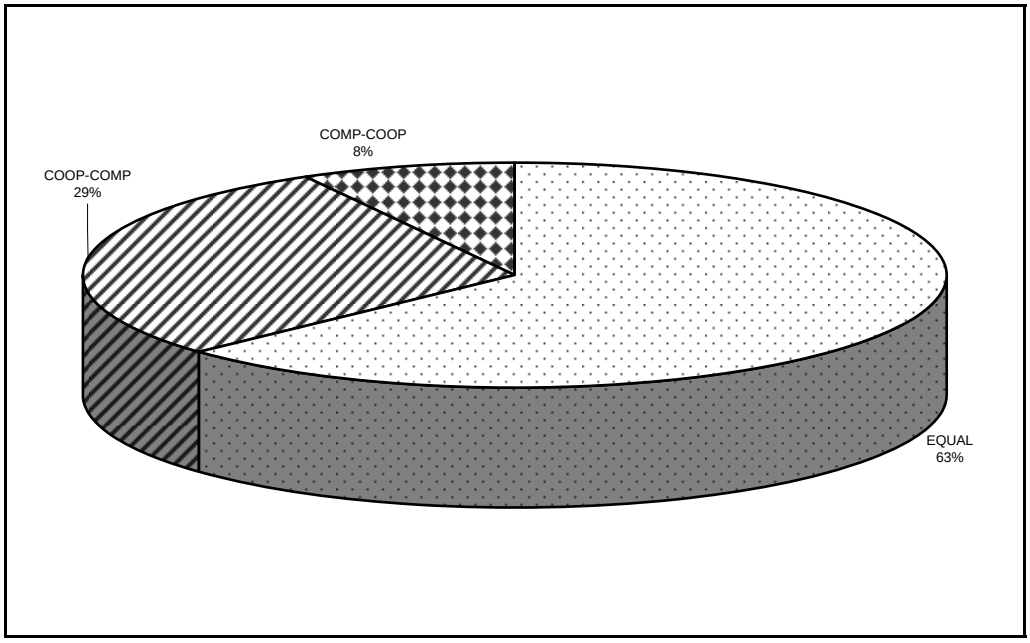


Figure 4.3 the percentage proportion of strategy-pair configurations in the reciprocal episodic patterns comparing their relative cooperative and competitive scale categories. Total number of observed configurations = 24

From figure 4.3, it can be inferred that the strategy configurations within equal cooperative or competitive scales dominated actor interactions. This was followed by cooperative-competitive configurations (29%) and lastly the competitive-cooperative configurations. It was also observed that the use of inverse reciprocity, just like cooperative reciprocity, was not limited to any actor category. In the episodes culminating in actions at chronological sequence steps, 3, 10 and 24, proponents were observed to use manipulation against opponents. On the other hand, at steps 20 and 26 opponents used manipulative tactics to respond to persuasive actions by proponents.

4.5.2 Strategy sequences

The results of the coding of power strategies are shown in the dataset in annex 2 and represented in a chronological sequence in figure 4.4. The conflict was characterised by the use of persuasion and manipulation in the various actors' bargaining actions. As can be inferred from figure 4.4, in about 95% of the cases, actors used persuasion. This was not particularly limited to proponents or opponents. It can also be observed that the opponents started building coalition at sequence step 13 and continued to act as coalition till the end of the conflict. Even though the strategy sequencing in figure 4.4 does not seem to follow any predictable pattern, the pattern of resource mobilisation in the light of expected strategy-main resource match in table 2.4 is enlightening.

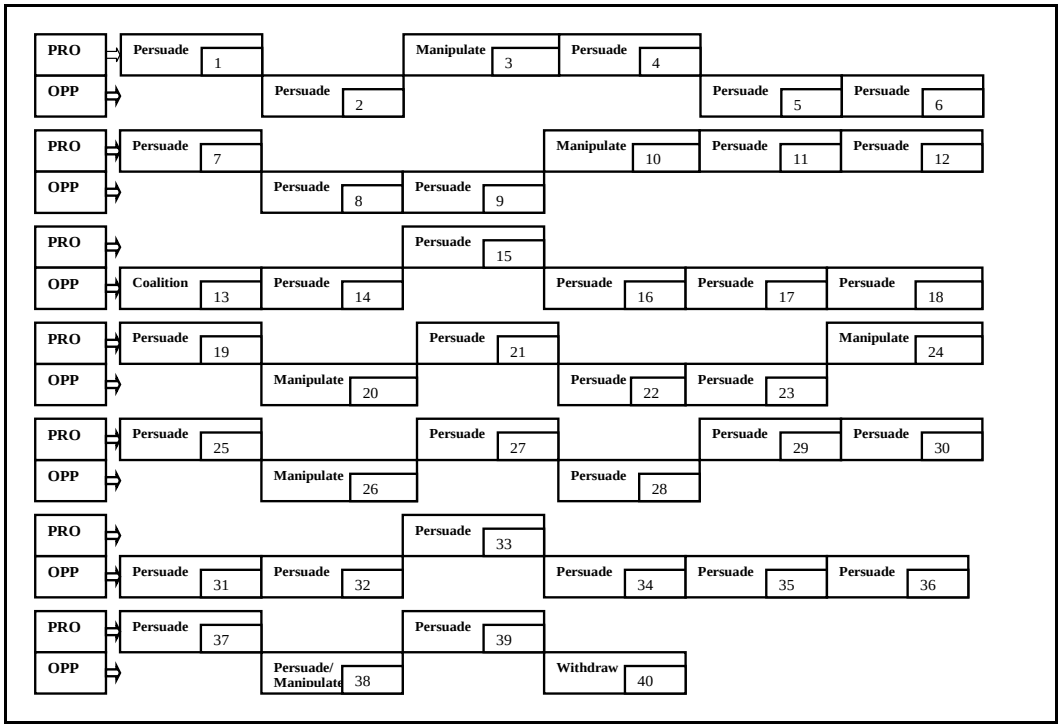


Figure 4.4 the chronological sequencing of actors' power strategies in the national forest-mining conflict. Proponents and opponents are respectively represented as PRO and OPP. Numbers in boxes signify the chronological sequence of coded actions.

Persuasion sequence and resource mobilisation

Against the expectation that actors will mainly use orientational and institutional resources in their persuasive effort, the study shows that the actors also used social and socio-economic resources. Table 4.1 gives an overview of the resources employed by the respective actors in the sequential use of persuasion strategy.

From table 4.1, it can be observed that both the proponents and opponents in addition to the expected use of orientational and institutional resources employed social and economic resources. For the proponents, the increased deployment of social and economic resources was made to improve *contact and scope of targeting.* Thus, aside their efforts to legitimise forest-mining using the existing regulations and potential development benefits, the persuasive efforts needed to reach critical actors such as high-level government officials. It is not surprising then that they increased their mobilisation for persuasion by deploying these additional resources to build important platforms for their lobbying. For the opponents, the need for credible information as a basic orientational resource for persuasion necessitated the deployment of economic resources to commission independent studies.

Table 4.1 summary of resource mobilisation in the use of persuasion by the actors in course of the conflict

Actors	Resource category	Sub-categories	Summary of dimensions
proponents	Orientational	Strategic framing	The economic benefit frame Facts (environmental safety scores. social responsibility commitments) Siding with communities for increased benefit flows
	Institutional	Law (legitimation)	Reference to mining regulations and guidelines as security for responsible corporate conduct.
	Social	Social and political networks	High-level investor and corporate executives Past politician as frontline lobbyist
	Socio-economic	wealth	Organisation of media network, social meetings with politicians and industrial visits
opponents	Orientational	Strategic framing	Illegality and anti-development frame Results of scientific study Social and environmental crisis frame Labelling guidelines process as fraudulent
	Institutional	Law (legitimation)	Strategic representation of members
	Social	NGO networking	Reference to national and international laws/conventions
	Socio-economic	wealth	Building local, national and international civil society coalition Commission of independent scientific study

Besides searching for an information base for their advocacy, the opponents needed to build the 'strength' of their size, at least symbolically, as a force to reckon with. This also necessitated that they continually mobilise social resources in the form of coalition-building. This further demanded the deployment of economic resources in some cases to, for example, mobilise grassroots activists. Not surprising, sponsorship for the organisation of community-based activists was prominent in the coalition-building effort, aside the expected deployment of other categories of power resources in coalition-building.

Manipulation sequence and resource mobilisation

Table 4.2 summary of resource mobilisation in the use of manipulation by the actors in course of the conflict

Actors	Resource category	Sub-categories	Summary of dimensions
Proponent	Orientational	Threats	Court action and investment withdrawal
	Institutional	Political and administrative legitimacy	
	Socio-economic	wealth	Using potential investment funds as a weapon of threat
Opponent	Orientational	Threats embarrassment	Court action Blackmailing reports

It can be inferred from table 4.2 that the observed pattern of resource mobilisation by the opponents in the use of manipulation did not deviate from expectation as only orientational resources were employed. For the proponents, they deviated from expectation by employing institutional and socio-economic resources in addition to orientational resources to increase the *vulnerability of targets*. The use of institutional resources allowed them to manipulate the institutional setting to constrain internal resistance of some public institutions to the pro-mining agenda. In their subsequent manipulative efforts, they used economic resources to threaten withdrawal of their investment as an economic sanction. In effect, the proponents increased the *scope of vulnerability* of government using these threats. This is because the leading proponents were foreign investors whom the government believed in their economic capabilities to execute both threats. Taking the comparative losses government would incur in both cases of threat, it was evident that loosing a multi-billion dollar investment opportunity in an economy that is so much in need of FDI[15] is much greater than loosing a court suit. However, since, as argued by the opponents also, the exploration permit did not contractually commit government to 'automatically' grant mining permit, the outcome of a court suit was not fully certain. This uncertainty was even high, given the international anti-mining advocacy prevailing in the global development discourse and the opponents' increased mobilisation for international support. On the contrary, divesting their 'own' capital to other countries was fully under their control and that threat seemed more real. The scope of government's vulnerability should be understood against the background of her own declaration of the 'golden-age-of-business[16]' and the accompanying stigmatisation of Ghana as an investor-unfriendly country.

"It is true that rich gold deposits have been disclosed in the Forest Reserves…are we justified in saying that the companies should not go into the Reserves…what we have to do is christen these area properly and have the mining companies to work there and make money for the state whiles they reclaim degraded land" (excerpt of two Government Ministers press statements, May and September 2003)".

4.6 EFFECTIVENESS OF ACTOR-EMPOWERMENT

4.6.1 Episodic effectiveness

Looking at the entire action sequencing figures of the conflict as presented before, both direct reciprocal and serial episodic patterns were observed. In all 25 reciprocal episodic patterns were involved, with 13 involving proponent actions against 12 for opponents. This is due to the withdrawal of opponents which 'ended' the conflict. Even though these show that the forest-mining conflict had an imperfect episodic pattern, comparing the percentage ratio of reciprocal to serial patterns (70:30), one can conclude that there was a high dynamism of actor-empowerment in the conflict as about two out of three actor actions provoked some response from competing actors.

[15] One of the proponent alone was expected to invest close to USD 500 million to the economy even before starting mining, and create about 1,000 jobs (source: BBC, 4/2/03), noting that provision of jobs was one of the major campaign messages that brought the new government to power in 2000 elections.
[16] Among the key declarations of the new Ghanaian government in 2000 on assumption of office was that the government was going to support the private sector and business by providing incentives and enabling environment for accelerated growth (President's inaugural speech, 7th January 2001)

To follow up on the perspectives gained on patterns of episodes observed and strategies and resource used, an assessment of the effectiveness of the actors' empowerment is needed to draw concrete conclusions from the case study. Before assessing the overall (management) effectiveness of proponents and opponents actions vis-à-vis their conflict goals and termination of the conflict, the episodic effectiveness of their empowerment is elaborated.

Based on the episodic pattern described, it is observed that the opponents succeeded in provoking reactions from proponents in more than 50% of their conflict actions, meaning that, on the average, at most every two successive actions was effective at provoking a response. On the other hand, in about 67% of their conflict actions, the proponents were effective at provoking a response from the opponents. This difference is not surprising as the primary target of influence, the government, for both proponents and opponents took a position that was more in the interest of proponents. Thus, naturally, it is not surprising that relatively opponents needed to take more actions to sufficiently impair the proponents.

Following the chronological actions of actors in relation to the patterns of the episodes, it is realised that the critical actions that were effective at provoking reactions were many. As expounded in the theoretical framework, due to the consistency principle of successive actions on influence, one cannot attribute effectiveness to the last actor action that provoked response from competing actors. However, since they are assumed to be critical episodic actions, they can be taken to be important actions for analysis of episodic effectiveness. Following the strategy patterns in figure 4.4, it can be inferred that both persuasive and manipulative actions were observed to play critical episodic roles. However, it seems that for opponents, the use of manipulation played significant episodic role as all the manipulative actions of opponents provoked an immediate response from proponents. On the contrary, none of proponents' manipulative actions directly provoked immediate response from the opponent. On the other hand, it seemed that the proponents' persuasive actions had significant episodic effects on opponents as 87% of their persuasive actions provoked direct responses from opponents. However, opponents' persuasive actions did not seem to have such significant episodic utility as only 56% of their persuasive actions provoked direct responses from proponents.

A critical look at the episodic actions show that persuasion, using the 'illegality' framing within the existing institutional and legal framework of forestry laws in Ghana, had episodic efficacy. This is not surprising in a political system such as the one in Ghana where the rule of law has constitutional legitimacy and that the invocation of the law can be expected to trigger responses to manage 'illegality'. Related to this, actions that attempted to institutionalise a legalisation of 'illegal' actions, was also provocative. Thus, it is not surprising that proponent's attempt to sponsor a process to legalise forest-mining by preparing regulation propelled the conflict a step further by provoking reaction from opponents. Another episodically effective action was the organisation of protests using tactics such as the formal public launching of the campaign. Additionally, the mobilisation of influential actors, mainly donors, government, law-makers and media proved to have a significant episodic effect on competing actors. Throughout the narrative, it is clear that whenever there was observable evidence that proponents or opponents attempted to mobilise any of these actors, it provoked a reaction from competing actors. Thus, proponents' actions

such as the organisation of investor-meetings with top government officials, industrial visits for law-makers and media houses (relevant parliamentary sub-committees) and the organisation of media advocacy programmes provoked proponents to react. Similarly, opponents' actions such as the mobilisation for donor pressure on government and media mobilisation programmes (such as special workshops on mining) also provoked reactions from proponents. Particular to media mobilisation, it was observed that when a national media houses took a position on the forest-mining issue, evidenced by a publication of an editorial to explicitly oppose the pro-mining policy, it provoked an immediate response from proponents to initiate a media networking programme. Other actions that proved to have episodic effects were intensive media campaign, especially when they were able to mobilise pressure on 'enemy' or important targets. In the case studied, the high profiling of electronic anti-mining campaign, especially targeting key investors and the evidence of pressure on government from international civil society was sufficient to freeze and divide governmental attention on the issue, which indirectly provoked proponents to intensify their lobbying efforts.

"For the forest-mining issue, I cannot tell you anything now since the whole issue has become political and before cabinet…and it seems they are divided on this' (extract from interview with Government Ministry official, Accra, 2003)"

Another important manipulative action was the publication of damaging reports that blackmailed competing actors and their important targets. Thus, it was observed that proponents responded with defensive media programmes when opponents issued blackmailing reports that virtually labelled them as lacking transparency and integrity.

The use of court threat effectively played direct and indirect episodic roles. First, it is not clear whether the threats of court action by opponents alone accounted for some of the observed episodic effect, as they were used with other actions. However, given the episodic effect of the 'illegality' frame, one could argue that such threats added to the aggregate influence of the persuasive actions. On the other hand, it may also be deceptive to conclude that proponent's threat of court actions did not have any episodic effect on opponents. What is learned from the use of the threat of court suit in particular is its episodic effect on government. When deployed by opponents, at first, it provoked governmental proponents to invite opponents for talks and in the second case, provoked public defence of the pro-mining policy decisions by governmental actors. In the former case, government's responsive action to this threat 'indirectly' provoked mining investors (proponents) to issue the counter-threat of withdrawing investment. It is not surprising that non-governmental proponents did not respond to governmental proponents' reaction to opposition threat in the second instance, since a definite policy decision had already been reached. Although the effect of threat of a court suit by proponents on opponents, as far as episodic response was concerned, was not directly observed (actually refuted as legally baseless), it had some significant effect on governmental actors.

"I learned that the investors are threatening to take government to court if it refuses to allow mining in the forests for wasting their capital on mineral exploration…this is also a problem to some politicians especially (names withheld) who favour the investment" (extract informal talks with public officer, 2003)".

The above assessment has provided some insights into the episodic effectiveness of actor-empowerment in the forest-mining conflict, pointing to the fact that, the play of power, as far as deploying influence through actor strategies and resources were concerned, was dynamic and both sides were mutual forces to reckon with. Taking the assessment deeper, our understanding of actor-empowerment effectiveness in this case will further be enhanced if we confront the analysis with why the conflict ended the way it ended. The proponents 'gained' by succeeding to get government to take a pro forest-mining policy and opponents 'lost' by withdrawing their protest. The effectiveness of the two sides with regard to this is explored, highlighting reasons behind the direction the conflict took, especially with regards to constraints to actor-empowerment.

4.6.2 Management effectiveness

Looking first at proponents, their empowerment process was ultimately effective because of the institutional and economic disposition of its membership and their successful mobilisation of actors who were relevant to the policy process in Ghana. First, the corporate network under which the investors acted had gained institutional membership into the policy community and evolved as an influential member, with key top officials as former politicians. Thus, the private corporate proponent had, politically speaking, gained the status of a pressure group. The significance of this is that, this policy-community membership gave the corporate actor access to important official processes that otherwise would have been difficult for them to participate. An important example was their active involvement in the preparation of guidelines for mining in forest-reserves, a process that the protest opponent group could not participate in. Besides, right from the beginning of the conflict, some top government and relevant public agency officials had publicly declared their support for a pro-mining policy and investment. After government took a decision to allow mining in the selected reserves, it essentially became a member of the proponent network. Thus, in terms of capacity to participate and influence public policy, the proponent network was far stronger right from the beginning of the conflict.

Second, the economic resource disposition of the leading proponent, as an economic actor contributing the highest foreign exchange, was a significant force behind the proponents' ultimate success. This particularly was significant given the number of important lobbying activities that were organised, from media network programmes to organising industrial visits and breakfast meetings with top government officials. All these provided platforms for direct contact with relevant journalists, politicians and bureaucrats. Third, proponents succeeded because of the effectiveness of their mobilisation of relevant actors especially the executive and legislative wings of government. Besides, they succeeded at mobilising the media to highlight their profile in terms of their contribution to national and local economies to contain the opposition anti-mining campaign in the public domain. So, while they mobilised the media for influencing public opinion, especially against heightened threats of anti-mining actions such as demonstrations, they succeeded in pushing the bureaucratic processes on towards a pro-mining policy. Lastly, proponents succeeded in the midst of opposition's illegality' and anti-mining frames because it was able to use what can be called 'economic benefit frame' that essentially made increased mining investment and exploitation indispensable to the country's economic and development

challenges. The core of this economic frame was that it is not economically wise for any country to live in poverty when it is blessed with rich mineral resources which could be exploited to generate economic wealth; while doing this, one can take precautionary measures against potentially adverse impacts. This argument, incidentally, has wider support both from the government and the donor community in general.

The opponents' empowerment was constrained due to similar factors such as the institutional and economic disposition of their members, their failure to mobilise relevant actors, inability to convert threats to action and the lack of counter-organisational capability of important events. First, from the beginning to end, the membership of the opponent network mainly involved only NGOs and civil society groups (CSG). The coalition-building was necessary to gain legitimacy of opponents' actions as a protest group. Besides legitimacy, they decided to protest with a coordinated front. Although the coalition-building was successful, in terms of organised membership, it was not effective at penetrating the state policy and administrative system as it still lacked status as a policy community member. This still blocked the coalition's chances to access platforms for official decision-making on the issue within the state policy and administrative system. Thus, compared to their corporate counterparts who had gained legitimacy as a pressure group, as far as who can participate or who will be invited to important decision-making processes were concerned, the NGO Coalition was, right from scratch, at a disadvantage. Another dimension on membership was that though the coalition was formed, the composition in terms of number was not very significant to symbolically represent a voice for all the green civil activists and groups in the country. There are at least sixty-six environmental NGOs in Ghana (Tropenbos-Ghana Programme, 2004) but the Coalition consisted of, on the average 14 local members (according to their list in official statement to government). Some proponents criticised the Coalition on this grounds that they were only a small group pretending to be speaking for all green NGOs and the civil society. There was indication that the Coalition 'failed' to mobilise some prominent green NGOs in Ghana. An interview with one of these 'uncommitted' NGOs revealed that though it was against mining in forest reserves, it did not subscribe to the approach of coalition protest. However, 'gossip' in the Coalition circles revealed that it was for the NGOs own strategic interest since it usually benefit from government conservation projects and did not want to antagonise this strategic relationship.

Second, aside the representation issue, the opponents were not financially disposed to match their corporate proponents in any mobilisation ventures that needed huge and sustained economic resources. This is mainly because the coalition did not have any structured system of funding the anti forest-mining campaign as they depended on voluntary funding from members. Not surprisingly, the Coalition could not engage proponents in counter-organisation of events to mobilise support of critical actors such as law-makers. For instance, even though much rhetoric on negative environmental and social impacts of mining was used in their framing, the opponents did not organise a field visit for law-makers, media houses or government officials to prove their point in the course of the conflict, as was done by the corporate proponents. Similarly, lobbying activities such as meetings with top government officials could not be organised. Of course this was not only a matter of financial resources but also political network. Compared to their corporate proponent

counterparts who had large political network, with former government ministers as part of their top officialdom, the leading activists in the opponents' network were mainly civilians with no strong political affiliations.

Third, the Coalition protest suffered because it was progressively losing credibility of force, especially when it failed to execute actions such as threat to court suit, or convert its public protest to actual actions such as public demonstrations. Interestingly, it was identified that there were several uncertainties with the court suit option and these involved, beside the huge financial implications, uncertainties about winning a legal suit case in Ghana against the government which is perceived to have substantial influence over the judiciary. Besides this, as to whether the existing legal code provided compelling reasons for winning a court case was also uncertain among the Coalition members. Finally, The NGO Coalition's empowerment strategies also failed to mobilise critical national and international actors who possessed the institutional and economic resources to resist forest-mining in Ghana. Two of these actors, apart from top government executive and bureaucrats, were the donor and the law-makers. Although there were some attempts to present their position to parliament, Coalition narrative indicated that it never materialised due to scheduling problems (clash of agendas) and thus much cannot be said about this. However, following developments with the Coalition's attempts at mobilising donor pressure reveals an interesting observation. Donor mobilisation was 'unsuccessful' as donors used technical or scientific information gaps to isolate and 'neutralise' themselves. Referring to some scientific studies, they provided a frame that connoted that there was 'scientific information crisis' regarding what is a critical ecosystem and without such information, they could not take a position for or against any possible forest-mining policy. Two extracts will summarise this point.

"we will not invest in a project that will degrade a national park, if it is a primary forest I do not think we will go there, if it means destroying a forest reserve then no, if it's a secondary forest, then we will see…if it conflicts with international conventions on biodiversity and nature conservation, then no' (source: donor interview report, Anane, 2003)"

"Our Natural Habitats Policy does not allow significant conversion or degradation of critical natural habitats…As concerns Ghana, we do not have all the information necessary at this time to determine whether the country's proposed mining areas might be classified as critical natural habitats or whether their biodiversity would categorize them as vulnerable or sensitive. I believe that for the sector to be placed on a sustainable path we will **need to generate precisely this kind of information**, to inform management of the sector by the authorities (source: Donor's letter to NGO Coalition, January 2004)"

Finally the donor admitted that the protest is healthy but concluded with a statement that essentially support government and proponents' position, especially after successfully preparing environmental regulations for mining.

"… I believe that public debate is good for the sector, enhancing governance and providing direction on how to transform the extractive industry so that, while it contributes to growth and poverty reduction, mining operation will be done in conformity with laid down environmental and social regulations and standards".

Moreover, even though the mobilisation of international civil society pressure seemed to heighten in the course of the conflict and resulted in verbal protests from both within Ghana and outside, at least before government decided on pro-mining policy, they were scattered, uncoordinated and did not possess critical political mass to exert pressure on government to decide against forest-mining.

However, the coalition protest was effective at least in some regards. First, in terms of episodic significance, it delayed government's decision, allowing for NGOs to bring many issues to the public and government's attention. This was confessed in a donor's information website.

"The campaign, which has grown significantly in size since its initiation, has succeeded in delaying the licensing process for the five companies (*proponents*), who had expected to begin mining earlier this year (source: Bank Information Centre[17])"

Second, in terms of media highlight of the issue, the coalition was successful at provoking intense public debate and media coverage, again, this was confessed by the donor in its response to the proponents.

"…I am also aware of the public debate on radio, television and in the newspapers on mining and the possible impacts on the environment, safety and health of people… (Source: Donor's letter to NGO Coalition, January 2004)"

Third, the NGO coalition advocacy provoked a couple of high level government and official inquiries and fact-finding missions, irrespective of whether they were symbolic or substantive. In terms of outputs, it can be observed that the Coalition protest was effective at 'stimulating' for example a passage of mining regulation guidelines and alerting the public, setting the stage for civil monitoring and further public debate.

4.7 SUMMARY AND CONCLUSIONS – CASE STUDY

The following conclusions can be drawn from the results presented so far in the light of the research questions and theoretical expectations. First, the conflict exhibited an imperfect reciprocal pattern, suggesting that not all the conflict actions had episodic effect. The study showed that the mobilisation of certain resources were critical to episodic effectiveness of conflict actions. For example, the critical factors observed in this case were structures of political legitimacy (particularly the executive and legislature), donors, the media and threats of court action. Second, the deployment of power strategies did not follow any predictable pattern, though they generally involved increased mobilisation of power resources.

Third, the study shows that both direct and inverse reciprocity patterns characterised actor responses, suggesting that both reciprocity and rational behaviour influenced actor actions. Even though cooperative reciprocity (mainly persuasion-persuasion) dominated actor strategy configurations, the hypothetical expectation on direct reciprocity is not fully supported by the study. Second, competitive reciprocity was not observed as none of the observed manipulative tactics were directly reciprocated with manipulative actions. On the other hand, the inverse reciprocity pattern was observed, as sometimes persuasion was responded with manipulation and vice versa. However, the expectation that competitive strategies will be used to reciprocate cooperative ones in case of inverse reciprocity is not fully confirmed in the study. In about 8% of the cases, actors' used cooperative strategies to respond to competitive

[17] http://www.bicusa.org/bicusa, cited on 20th July 2004

strategies even though about thrice that proportion confirmed the hypothesis. Concluding on the hypothetical expectation of strategy configuration, it can be said that though direct reciprocity dominated actor behaviour, none of the expected strategy configuration patterns was fully supported by the study.

Fourth, all categories of power resources were used by both proponents and opponents. However, while proponents dominated in the use of social and economic resources, the opponents dominated with the use of institutional and orientational resources. This is not surprising as the opponents mainly used rhetoric in their advocacy employing mainly verbal argumentations and the media. Unlike the opponents, the proponents heavily used wealth (economic), corporate and political network (social) to organise several lobbying platforms. This affected the patterns of resource mobilisation as the proponents were able to increasingly mobilise critical institutional resources such as the executive, legislature and the bureaucracy.

The study further shows that the management effectiveness of actor-empowerment, in a policy-context, seems to depend on certain critical resources. These resources were mainly economic and institutional. The mobilisation of wealth, political and administrative structures and membership of relevant policy community were particularly effective power resources. Lastly, the consistency of an actor's frame to the dominant development frame and agenda of structures of the state, particularly the executive was fundamentally crucial as exemplified by the 'illegality' and 'economic benefit' frames described above.

Following these observations of patterns of power strategy-configurations, it can be concluded that both the notions of reciprocity and rationality seem to influence actors' strategic response, irrespective of their position in the conflict.

5. ACTOR-EMPOWERMENT IN RESOURCE-BASE (LOCAL) LEVEL CONFLICT: A CASE STUDY OF FOREST-MINING CONFLICTS IN GHANA

> "Relations of property and power, like those of kinship and community, are central to the way people mobilise and use resources, not as parameters that define individuals' options or channel their interactions into structured patterns of cooperation or command but as sources and subjects of ongoing debate, negotiation, and practice" (Berry, 2001:200).

This chapter presents the empirical results of one of the conflict cases studied, the forest-mining conflict at the reserve levels in Ghana. As a policy implementation-related conflict case at the resource-base locality, an understanding of the political, administrative and traditional systems of governance and institutional arrangements prevailing in Ghana is considered important for a greater appreciation of the results and subsequent discussions. Therefore, the chapter begins with a section on the conflict context, paying particular attention to forest and land ownership rights and the chieftaincy institutions due to their peculiarity in the Ghanaian situation. In order to appreciate the specific methodological approach used to collect and analyse data for this case study, a section is dedicated to the empirical approach. The actual empirical results are presented, by first outlining the constructed narrative of the conflict at the various reserve areas to give a chronological perspective of actor-empowerment efforts. In this presentation, graphical representations of the chronological sequences of the various conflict actions that were coded are used to intersperse the textual descriptions. The graphical sequencing of actions is separated by brief descriptions of background information that serve as the milestones in the conflict. The results on the patterns of power resources and strategies are presented. In order to give a logical structure, patterns of power resources are presented first, then strategies before the patterns of resources in strategy sequences is presented. An assessment of actor-empowerment effectiveness is made, both in episodic and management perspectives. The main highlights of the results with regards to the research questions 1 to 4 are summarised in the conclusion section to end the chapter.

5.1 CONFLICT CONTEXT

The wisdom of forest reservation existed in Ghana prior to the origination of formal forestry in Ghana. This is evidenced by the presence of traditional protected areas such as burial grounds, sacred groves and patches of forest at headwaters and along river courses. Therefore, there was an indigenous management system existing before the colonists introduced their 'scientific' forestry which was based on a tradition of manipulating trees and the soil principally to produce a sustained yield of timber (Kotey et al., 1998). Recognising the economic importance of cocoa (Theobroma cacao) to the national economy, the colonial government decided to establish permanent forest estates in order to maintain climatic quality, protect watersheds and ensure a conducive agricultural environment for cocoa production. Although attempts at reservation of strategic forests were fiercely resisted by local chiefs and

communities (see Kotey et al. 1998), today there are over 200 forest reserves nationwide. Historically, conflicts have characterised forest management owing to a plethora of issues from landownership rights, concession boundary, and expansion of farmlands to access to these forests by local people to harvest Non-Timber Forest Products (NTFPs). In order to understand actor-empowerment in conflicts at reserve areas, one needs to appreciate the formal and traditional political structures, landownership and management rights as well as the general geo-political and social setting within which these forests are situated. First, the political and administrative setting will be briefly introduced, highlighting the implications on the issue of forest land ownership, control and management. Substantial, but brief, attention will be given to the structure of chieftaincy due to its particularly important role both in social and political life in Ghana (Owusu, 1996, Firmin-Sellers, 2000). Second, an attempt is made to describe the geographical, social and political context within which local communities are related and participate in control and management of natural resources. Lastly, a brief overview of examples of some forest-related conflicts at reserve areas will be given, which will attempt to capture the actors and how the contexts mentioned earlier are reflected in such conflicts. Forest governance at the reserve level is enmeshed in three layers of governance regimes, the traditional or customary, the state forestry administration and the local political administration. Thus, three authoritative structures interplay in forest-related matters: chiefs as landowners, District Chief Executives (DCEs) or Assemblymen (depending on level of decision) as local representatives of central government and the Forest Service Division (FSD) as the public administrative authority for forest management.

The political and administrative structure of reserve areas

The political structures at the local areas in Ghana involve the local government and traditional authorities. Ghana has a decentralized local political administration in which the central government is represented by the District Chief Executive (DCE) who is appointed by the President in accordance with the 1992 Constitution (Art. 240). In addition to the DCE, other elected and appointed members from the electoral areas in the district constitute the District Assembly (DA) which is the highest political authority in the district with deliberative, legislative and executive powers. Typically, each community (village or town) may be represented by one or more elected persons, depending on the number of electoral areas in the community, to represent it in the District Assembly, hence the common title 'Assemblyman'. At the community level, the Assemblyman in addition to other elected and government-appointed people, all from the community, form the unit committee (UC), which is the central government's political unit at the community level.

Administratively, each forest reserve is under the management of a particular district forest office. A common paradox here is that, by geographical location, a particular forest reserve may be under a particular political administrative district (or even fall under two districts) and also be under the management jurisdiction of a district forest office which is located in a different administrative district. Simply put, forestry administration and political administration at reserve (local) level is not tied together such that every forest reserve will be under the same political or forestry District.

The traditional political structure and forest land ownership

The institution of chieftaincy and the traditional system of land ownership in Ghana cannot be separated and both are preserved in the 1992 Constitution of Ghana (Art 267). On one hand, there is the state which has vested management of all natural resources in the President, and on the other hand, the ownership of these resources remains in the hands of traditional authorities. To understand the role of traditional structures in resource conflicts in Ghana, one needs to understand land ownership rights vis-à-vis the complexities of the traditional chieftaincy system and territorial jurisdictions[18].

Land in Ghana is held by various stools (skins) or families or clans, which are the allodial owners. A stool is a wooden carved chair, which symbolically represents a community[19] or family including its properties both movable and immovable. The occupant of the stool, the chief, is thus the traditional leader of the communities or families represented by the stool and are conventionally recognised as the landowner. The State holds lands by acquisition from these traditional allodial owners. The allodial title is the highest title in land recognized by law and in many traditional areas acknowledged as being vested in its stool or skin only. Many stools in Ghana have allodial title to stool lands, hence their occupants commonly referred to as landowners (Da Rocha and Lodoh, 1999). For this reason, the constitution of forest reserves did not change the allodial title holders and hence the ownership status of the forests.

"The ownership of land within a proposed Forest Reserve shall not be altered by its constitution as a Forest Reserve (CAP157, 18(1))".

However, the complex traditional chieftaincy system in Ghana does not make such admission of traditional authorities as 'landowners' a simple linear issue. Another related aspect worthy of brief mention is the importance of stool land revenue for the maintenance of chiefly status and influence.

Typically, areas in the high forest zone are categorized into traditional areas headed by a Paramount chief or *Omanhene (*literally meaning the chief of the state). A traditional area is an area within which a paramount chief exercised jurisdiction[20] (The Chieftaincy Act, 1961, Act 81). Therefore, traditional areas are not predefined and not linked with state district administrative boundaries but their creation is contingent on the existence of a paramount chief. Hence, traditional areas continue to be created even till today. Typically, a traditional area consists of towns and villages with each community having its own chief. Such Chiefs are subordinate to the Paramount Chief. The statuses of these chiefs are not the same; they follow some hierarchy. The lowest status is called the *Odikoro*, a caretaker chief who is normally appointed as a traditional leader in a village by the chief who owns the land of the village. Next on the hierarchy is the *Apakanhene* (palanquin chief literally meaning the chief who is qualified to sit in a palanquin) or commonly known as '*Ohene*' or

[18] For a fuller account of the struggles of land ownership and chieftaincy, see for example Berry (2001)

[19] It should be noted that most African countries are basically village and small-town societies rooted historically and culturally in kinship, family and chiefship (Owusu, 1996).

[20] The exception is the *Asanteman*, which is headed by a super-paramount chief who is also the King of Asanteman called the *Asantehene*. Asanteman is the geographical entity for all territories that fall under the Asantehene. This includes the whole of Ashanti and part of Brong Ahafo Regions of Ghana.

chief. A palanquin chief occupies a stool with its own stool lands. The Paramount chief and all the sub-chiefs (both palanquin chiefs and caretaker chiefs) and their elders in a traditional area constitute the traditional council, which is presided over by the *Omanhene*. The various paramount chiefs in specific administrative regions form the Regional House of Chiefs and five elected members from each regional house of chiefs in turn form the National House of Chiefs (Art 271 of 1992 Constitution). The implication is that only paramount chiefs qualify to belong to a house of chiefs. Every chief, notwithstanding his status, has councillors who advise him on the discharge of his duties. They participate in certain acts (which are invalid without their consent) particularly the alienation of stool land and participate in the chief's election and removal from office (Woodman, 1996). Customarily, all the land in a traditional area is under the paramount stool.

'Any transaction purporting to alienate or pledge any stool property shall be voidable unless made or entered into with the consent of the Traditional Council concerned (The Chieftaincy Act, Act 370 art. 37)

However, both customarily and in practice, paramount chiefs do not have absolute right over all stool lands under their traditional jurisdiction (see Owusu, 1996; Berry, 2001). This makes the definition of 'ownership' complex since there are multiple claims associated with land and for that matter forest lands. Paramount chiefs are powerful traditional authorities for several other reasons. First, it is the most prominent chiefly status that can allow a chief to be involved in higher traditional politics beyond his traditional area, such as sitting in regional or national house of chiefs or becoming a member of their judicial committees; and this makes it an enviable position. Second, paramount chiefs play significant roles in the creation of traditional areas in their areas of jurisdiction and in the promotion of ordinary chiefs to paramount status. In practice (except in Asanteman), it is almost impossible for a chief to be elevated to paramount status without the support of his paramount chief (Registrar, Juaben traditional council, pers. Comm.)

Although chiefs are not expected to be involved in party politics (Art. 276 s. 1 and 2 of Ghana's 1992 Constitution), they wield a lot of political power and have often been regarded as voter-brokers. They possess the power to persuade their subjects to take particular political action. This is because outsiders often see chieftaincy as a kind of authentic, primordial, pre-colonial indigenous and local and therefore appropriate institution of community representation (Ribot, 1999). After studying some West African Sahelian countries, Ribot (1999:34) made this firm conclusion:

"While chiefs cannot often oblige governments to take any positive action, however, everywhere in Africa they possess the power to hinder government policies by showing - as discretely as they wish- that they do not favour popular co-operation"

Particularly to the Ghanaian context, Aidoo (1978: 48) explicitly proclaimed:

"You cannot go to any village and…start propagating an ideology or political programme or anything in the air…the chiefs are very important if we are going to think about participation of all the people in Government…we have to use them from the grassroots to the national levels"

Stool land revenue and chieftaincy

The main source of income to any stool is revenue accruing from the stool land, mainly land sales, ground rent, royalties from natural resource exploitation such as timber harvesting and mining and fines charged from local offences. Therefore, in Ghana, the size of a stool's land and its natural resources endowment determines the wealth of that stool and for that matter its occupant, the chief. In rural communities where land sale is rare due to the customary freehold rights of their members and low external demand for building and development projects, royalties from timber and mineral exploitation is a significant source of revenue to stools.

Chiefs are not paid but are involved in all kinds of expenses and one can list a host of routine and occasional expenses born by chiefs and their elders. Chiefs' palaces are normally the first place of visit by visitors and custom demands that visitors are offered some water and drink, usually alcoholic gins. On special days, such as *dabone* (in the Akan language literally meaning 'evil day'), chiefs are expected to perform rituals using alcoholic gins, food and depending on specific custom other things such as eggs, sheep, goat and cattle. In addition to such expenditure, chiefs are expected to maintain the physical beauty of the palace by periodic renovation, decoration with traditional crafts and so on. Besides, the chief and his elders are expected to appear neat and in beautiful traditional regalia on occasions and this involve cost. In short, the maintenance of the status of a stool is an expensive responsibility of its occupant. Against this background, Ghana's constitution recognizes, in Article 267, s. 6 (a) that 25% of stool land revenue should be paid to the stool 'for the maintenance of the stool in keeping with its status'. Thus one can conclude that any thing that blocks or impedes the flow of stool land revenue to their chiefs can create conflict.

In all, a typical forest reserve may be located on land belonging to one or more stools and depending on whether all these stools (or the chiefs) are under one or more traditional councils, there may be one or more paramount chiefs who exercise jurisdiction over the forest area.

Forest-fringe communities

Forest reserves are usually surrounded by several communities which may belong to different administrative and traditional areas and which may have different rights to the forest. For instance, while some may be classified as native, others may be regarded as settler or migrant communities depending on whether they have free hold rights to land or not. As a right and by virtue of an individual's membership to a community with allodial title to a land, that individual(s) holds a customary freehold to a portion of the land he cultivates first or is allotted to him by the community. The holder has the right of occupation, which may devolve upon his successors ad infinitum. Therefore, until his succession fails, i.e. there is no successor to him, the interest and right is of no definite duration (Da Rocha and Lodoh, 1999.). Many native people hailing from forest-fringe communities have a customary freehold interest in their farmlands as have been passed on from their predecessors to them.

However, forest-fringe communities (FFCs) in general depend on forest resources to support their livelihood. Inkoom (1999:154) for example observed several forest-based economic activities in one district to include carpentry, wood carving, mat making, NTFP collection, palm wine tapping, gold mining, farming, basket weaving and chainsaw lumbering. That FFCs depend significantly on forest (lands) for their livelihood in Ghana is well echoed by many (Arnold and Townson, 1998, Fortmann,

1985, Amanor, 1992, Dei, 1992). It is in the process of pursuing these various forest-based livelihood strategies that conflicts result between communities and forestry officials or other agents with commercial interests. Particularly, chainsaw lumbering and small-scale 'illegal' mining (popularly known as *galamsey*) have become prevalent in forest areas, creating conflicts (see Nketiah et al. 2004; Ghanaweb, 2006).

FFCs have no formal roles in land and forest management decision-making. Conventionally, local people participate in official land use processes through community leadership structures. The accountability and communication between community representatives and their people have been observed to be weak (Marfo, 2001; Amanor, 2005). In Ghana, forest reserve localities are well involved in micro-politics, even within the same community. In a study of community representation in Social Responsibility Agreement (SRA) negotiation for example, it has been observed that among local traditional (chiefs) and political leaders (Assemblymen and unit committees), their interest and position on specific forest-related issues may differ and depending on who can represent the community, private interests can be universalised in moments of negotiation (Marfo, 2004b). An important dimension that affects power-play in forest conflicts at the local arena is community representation since important official decision-making processes at the reserve areas are structured on mass representation of communities.

Forest-related conflicts at Forest Reserve areas

Since the creation of forest reserves in the colonial days till date, conflicts have been prevalent in forest reserve areas. Given the multi-layer systems of authority and control, multiple demands on forest lands and resources, spatial distribution of communities and the clash of state and customary laws (legal pluralism) at the local arena, these continuous struggles are not surprising. Typically, conflicts have centred on several issues. First, it has been observed that the most common conflict associated with forest reserves is between the Forest Service and people who enter the reserves to farm illegally or to harvest non-timber produce (Agyeman, 1994.). Under the working plans of all forest reserves, communal rights to collect non-timber forest produce are admitted by permit. However, as observed by Agyeman (1994), contrary to the expectation of communities for less restricted access to the forest, this has not been so due to the cumbersome procedure for acquiring permits. The issue of farming in forest-reserves is perhaps the most serious one since it involves clearing of large tracks of land for farms. Kotey et al. (1998) give a detailed account on how the growth of the cocoa frontier resulted in the invasion of many reserves[21]. An aside new invasion, another dimension of the forest-farming conflicts is the expansion of admitted farms[22]. Due to unclear boundary points on the ground, many farmers are said to be expanding these farms resulting in confrontation with the FSD (see Ohene-Djan, 2004).

Second, the exploitation of other resources such as minerals in forest reserves, normally the small-scale 'galamseys' and lately corporate explorations for large-scale commercial mining has created conflicts. The main actors have been private mining interests, local people, traditional and political leaders and relevant public agencies.

[21] In the 1990s forest invasion was so serious that it culminated in a national programme, titled 'Operation Halt' involving joint FSD and military efforts to destroy all 'illegal' farms in forest reserves

[22] Admitted farms are those farmlands that are lawfully admitted to be farmed because they existed before the prescription of the specific areas as forest reserves (Ohene-Djan, 2004)

One forest-related issue that often creates conflict at the local arena is the distribution of social responsibility benefits from private corporate bodies such as logging companies. For example, recently, FFCs were expected to negotiate a Social Responsibility Agreement (SRA) which is expected to address the problem of benefit flows with logging companies but this has been observed to encounter several problems, particularly on community representation (Forestry Commission, 2001). Which of the numerous communities are to benefit? Even the interpretation of the policy as to whether it is an extension of benefit to landowners or to communities is problematic (Marfo, 2001). The spatial, cultural and political organisation of (FFCs) is a complex setting, far more than it seems to have been taken in official policy discourses. For instance, it has been shown that the negotiation of SRAs has resulted in some conflicts because of the loose definition of these communities in official regulations, which provide grounds for multiple interpretations and segregation of the 'natives' and the 'immigrants' (Marfo, 2001). The over simplification of the local setting in constructing this geo-social space is reflected in definitions such as:

"To provide specific social amenities for the benefit of the local communities that live in the proposed contract area (L.I.1649, s10d) and "An undertaking by the holder to provide social facilities and amenities for the inhabitants of the contract area (L.I. 1649, s14(1)l)"

Typically, the role of FFCs in forest conflicts at the local area has been collective action against external agents such as private companies. Examples of this have been SRA conflicts between some communities and timber companies, farming communities and FSD such as those that occurred in the 'Operation Halt' (Kotey et al. 1998) and recently those between some communities and mining companies.

Conflicts related to benefit flows to communities continue to be prevalent in many forest areas in Ghana. Due to the complex hierarchical structure of the traditional authority system, the sharing and distribution of royalties from natural resource exploitation is also a source of conflict. Such conflicts mainly occur between paramount chiefs and other sub-chiefs. Due to the association of forest resources with land and for that matter ownership rights, this conflict is related to the nature of land ownership rights and compounded by the constitutional arrangement for sharing royalties among chiefs:

(a) twenty-five per cent to the stool through the traditional authority for the maintenance of the stool in keeping wit its status;
(b) twenty per cent to the traditional authority
(c) Fifty-five per cent to the District Assembly, within the area of authority of which the stool lands are situated (Art. 267, s. 6, 1992 Constitution).

Two main issues have usually underpinned the conflict. First, a situation where a chief does not receive the expected apportionment and second, where a chief and his council do not receive any money or feel the amount received is inadequate from the appropriate traditional authority. This conflict is usually related to situations where the questions of land ownership and chieftaincy status are contested (personal comm. Office of Administrator of stool lands, Kumasi[23]). However, it has to be noted that, in

[23] In one of such conflicts which is still pending in court, a stool land chief is challenging the practice of paying stool land revenue through the paramount chief since the definition of a 'traditional authority', in Act 418, is broader in scope than that of a traditional council.

any case, the direct beneficiaries of natural resources exploitation are mainly the traditional authorities (chiefs) and local government structures and this provides an important context within which their participation in resource-related conflicts should be understood.

5.2 EMPIRICAL APPROACH

In following the conflict, key events which could be followed and around which relevant accounts of actor actions and strategies could be captured were ascertained using the institutional procedures for granting mining permits, particularly the Public Hearing. This approach is taken because if any decision regarding the allocation of mining permit will be taken, these requirements are likely to be the observable event spots that all actors were likely to influence in order to pursue their agenda in the conflict. In a similar environmental conflict study, Suryamato and Umemoto (2005) observed that the 'Environmental Impact Assessment (EIA) process is often the focal point where the concerns of multiple stakeholders formally converge and where conflict can become muscle-bound as disputing parties mobilise resources to influence decision makers' (: 755).

As elaborated in chapter 3, actor-narratives, media and documentary analysis and observation were used as data collection techniques. The actor narratives focussed on informants such as company community-relationship officers, chiefs, district forestry, mining officers and community opinion leaders who could give 'official' positions as 'representatives' of specific actors. Informal conversations with others such community members and field technical officers were also made to cross check official information and gain a perspective of the entire discourse on the ground[24].

Table 5 .1 summary of informant sources for data collection

Case study area	**informants**
R1	All 3 paramount chiefs with claims over ownership rights 2 sub-chiefs actively involved in conflict company's community-relation officer 3 District forestry officials including District Manager 1 top national forestry officer 12 anonymous community members
R2	District Forestry Manager 3 community activists 1 Assemblyman involved in the conflict 2 officials of a leading community-based NGO involved with mining and community conflicts
R3	District Forestry Manager Company community-relations officer 3 representatives of paramount and opposing chiefs 2 anonymous youth activist

The documents that were analysed were mainly relevant company correspondence and annual project report (2003) obtained from company websites in case of R1. Data was also obtained from the media coverage and press releases of some of the local actions.

[24] Informal interactions with lower-level informants such as palace servants and technical forestry officers were very useful in providing detailed insights and 'gossips'.

Table 5.2 summary of media sources for data collection

Case study area	media
R1	Ghanaian Times (May 9 & 12, 2003), Daily Graphic (January 27, 2004), company website (withheld)
R2	5 press releases at www.twnafrica.org/news
R3	-

*media publications in national debate also captured aspects of reserve-level conflicts

Finally, owing to the importance of Public Hearing[25], as the official process at the local level for stakeholders and the general public to submit grievances on such projects, the Researcher participated in the respective hearings in all cases, carefully observing and following both content and style of the discussions.

Table 5.3 summary of data collection from observations

Case study area	informants
R1	2 Public hearing meetings, 2003 community durbar with government delegation, January 2003
R2	1 Public hearing, 2003
R3	2 Public hearings, 2004

The data collected from all sources were assembled, tagged with dates and used to reconstruct the conflict. After coding, the power strategies and resources used by respective actors were put in a dataset (refer to annex 2b)

By following the action-response sequences and their corresponding power strategies and resources in the dataset, patterns of the episodes and the action-response strategy configurations could be followed. The dataset also enabled counting and summarisation, using graphical presentation, of the observed strategies and resources. Following patterns of resource mobilisation, both the dataset and the original ethnographic and constructed narratives were used. In order to give a graphical presentation of the pattern, unit scores were added to particular resource categories any moment such resources were used. The scoring was cumulative from episode to episode. We now turn to the empirical results, first by outlining the various conflicts.

5.3 CONSTRUCTED NARRATIVES OF CONFLICT EPISODES

Issues and positions – proponents and opponents

In this section, highlights of the conflict actions in the various episodes of the forest-mining conflict at the selected Reserve areas are presented to give a perspective for following the subsequent presentations on the patterns of episodes, strategies, power resources and the assessment of the effectiveness of the various actor empowerment processes. The presentation of the narratives is only a summary; a substantial part of the original ethnographic texts is used in other parts as quotes or explanatory texts. Prior to the actual narrative of the episodes, a brief background of the conflict,

[25] By regulation (L.I. 1652 of 1999), projects with adverse public reaction, or involving dislocation, relocation and resettlement of people and with extensive environmental effects are expected to have a public hearing at the location of the project where key stakeholders can officially register their grievances. This is organised by a public agency (Environmental Protection Agency).

highlighting the context and actor networks, is given. In order to follow the narrative, to gain the chronological perspective of the episodes, the conflict actions are graphically presented in their chronological sequence steps, using the legend in figure 3.1.

5.3.1 Issues and positions at R1 – proponents and opponents

The forest reserve in question was constituted by law in the general scheme of forest protection devised in the interests of agriculture, maintenance of water supply and watershed protection and future timber and firewood requirements of the people (District forestry office). The reserve, hither to the conflict, fell under two traditional councils, meaning two paramount chiefs were the owners. Following the mineral exploration prospecting of a prospective mining company, it was shown that a substantial amount (about 85%) of gold resources for the project was identified in the reserve. However, under the current management scheme, there is a ban and complete prohibition of timber and other physical interventions in the whole of the reserve. Incidentally, this forest reserve has a history of 'illegal' invasion by farmers for cocoa plantations. There had been several attempts, sometime ago, by government to evict the invaders using force[26]. This generated intense conflict between the farmers and the state forestry agency. Therefore, the prospect of mining in the reserve was another issue which had several social, political and ecological implications.

The proponents included a multi-national mining company, one of the paramount chiefs who 'own' the reserve and other chiefs. The opponents were mainly the paramount chief who also 'owns' the other portion (bigger) of the reserve and some of his sub-chiefs and their farming communities. Incidentally, one of the communities which significantly suffered under 'operation halt' belonged to the opponents' network. A brief chronological account of the episodes follows; where there is the need to give echo a point, it is done either by quotation or by providing some background information. Overall, the intention is only for the reader to gain a perspective of the 'story' in order to appreciate the results presented in subsequent sections but not to give a detailed account of the entire constructed narrative.

Conflict episodes at R1

After identifying commercial quantities of gold-bearing rocks from a mineral exploration, the proponent initiated the process for obtaining mining permit from the relevant state agencies. The leading opponent expressed opposition to any mining activities in the forest reserves. From 2002, the company reported of Government's support for the project.

'…has received approval to fast-track the environmental impact statement (EIS) and has also been notified by the relevant state agency that the Mining Lease Application will be fast-tracked'…we plan to move ahead as swiftly as possible to commence work on initial stage of EIS, the Scoping study and terms of reference for the project later this month' (Company report, 2002)

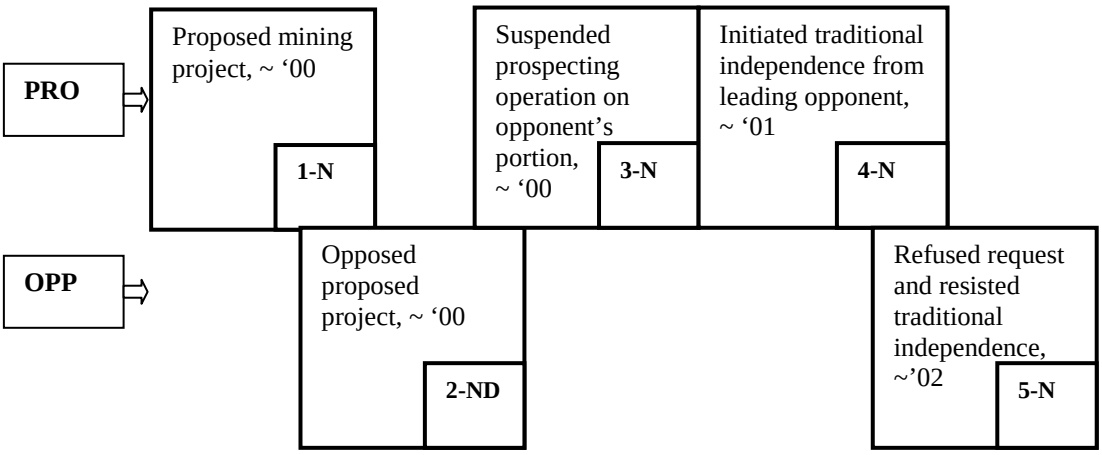
With growing imminence of a mining project being cited in the hometown of the Ghanaian counterpart investor, the opponents maintained their opposition to the project. With a growing tension, the prospecting was shifted from the part of the

[26] This reserve fall under those areas which were earmarked for the 'Operation Halt'.

reserve which is owned by the opponent to the main reserve which is owned by the proponent paramount chief.

It is important to note that if mining in the reserve was going to be economically profitable, the mining in the portion belonging to the opponent (paramount chief) was indispensable as he owned a larger portion of the reserve.

The proponents demanded that the stool of the community where the company is to be cited be elevated to a paramount status. Though this was resisted through litigation, the proponents succeeded to mobilise the relevant institution to elevate the chief to a paramount status. The actions described can be chronologically sequenced as follows:



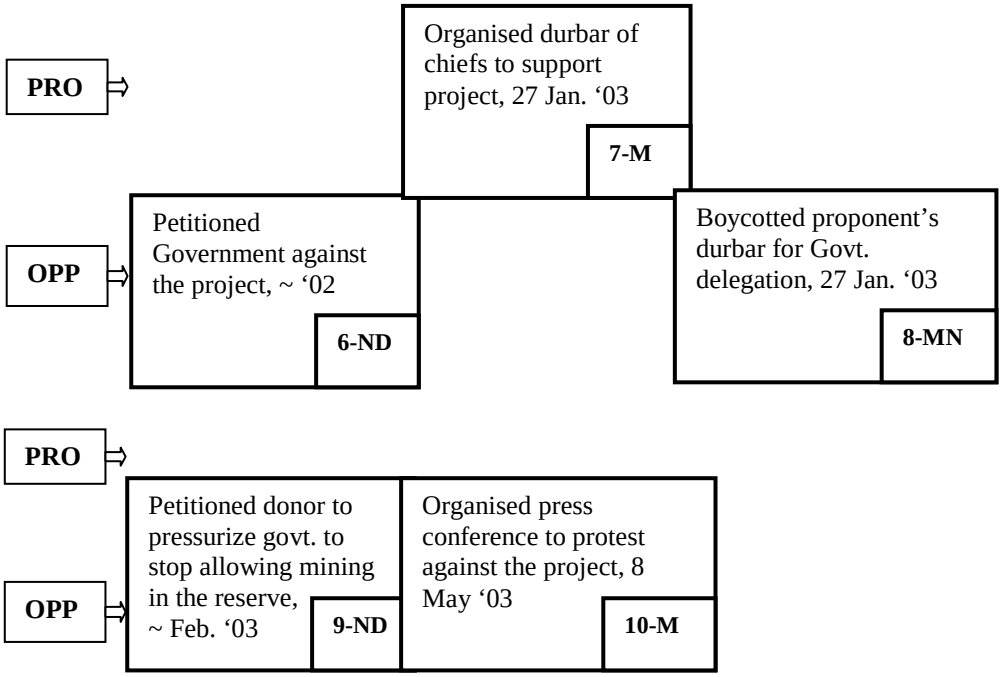
This elevation had significant implications to the conflict. First, as a paramount chief, the proponent becomes 'autonomous' and gains independence from the formal traditional council and does not any longer 'serve under' the opponent paramount chief. Second, this meant he had equal traditional status with the opponent, which gives him similar political and traditional legitimacy (authority) in decisions concerning land use and management in the area including the forest reserves.

The opponents petitioned several high-level political figures including the President of Ghana and some Ministers not to allow mining in the reserves. These petitions in addition to national level anti-mining advocacy provoked a high-level government fact-finding mission to the reserve area. The proponents organised a community durbar to interact with the government ministerial delegation and the traditional authorities spoke for their people in support for the project. The opponents boycotted this meeting. This ministerial visit and the accompanying statements by the Ministers gave some assurance that government was in favour of the project. This observation further impaired the opponent chiefs.

"Government will listen to the plea of the chiefs and people of this area to enable the company to take off successfully" (Minister's statement reported by press, 2003)

The opponents petitioned a prominent donor group asking them to stop government from allowing mining in their forest reserves, citing cultural, procedural and social and environmental impact reasons.

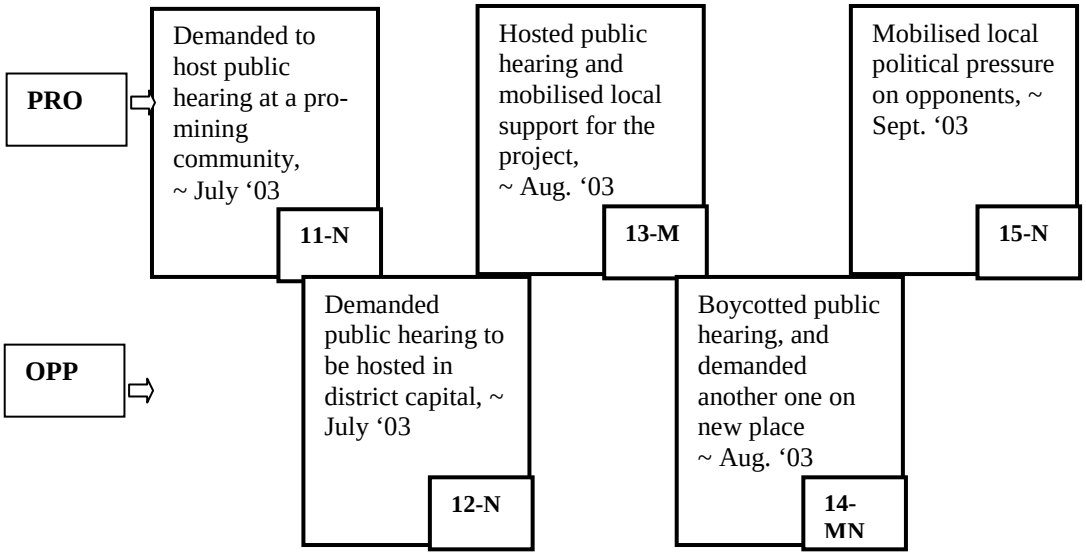
The opponents followed their actions with a press conference calling on government not to grant mining permit to the Proponent Company citing lack of proper consultation, environmental and cultural reasons. This received wide national print media coverage. The chronological sequencing of these actions can be graphically represented as follows:



Owing to the emerging public concerns about mining in the forest reserve, a Public Hearing was organised by a responsible state agency in accordance with the regulations on EIA

The proponents demanded the public hearing (PH) to be hosted in the location of the company. This location was the territory of proponents as the chief was the one whose status had been elevated as a paramount chief. The opponents rejected this and requested the public hearing to be hosted in the district capital which is more accessible to many of the communities and also to people coming from other areas. Besides, given the declared position of the chief and people of the proposed community (which was quite remote and in the heart of the forest reserve), they argued that a neutral ground was needed for open discussions. The PH finally took place at the community requested by the proponents.

The opponents boycotted the public hearing but the proponents mobilised support from chiefs and local political leaders and participated and attempted to persuade the public and the officials about the immense benefits to be derived from the mining project. The chronological sequencing of these actions can be graphically represented as follows:



Following a massive support from the chiefs and political leaders in the area for the project, the opponents rejected the outcomes and demanded for another public hearing on the district capital. This time round the public agency complied and organised a second PH in which both proponents and opponents participated.

The proponents organised local politicians to talk with the opposing paramount chiefs. They indicated to opponents that their actions were against government's investment drive and that they were making the government unpopular.

"Once government has gone ahead to issue permits, we cannot fight against our own government; you know I am known to be a member of the ruling party" (interview of on opposition chief, 2004)

The proponents attempted to persuade opponents to accept the option of a joint consultative committee comprising members of both sides to be a standing body to dialogue on concerns. The opponents finally accepted this and a joint community consultative committee were formed and a leading opponent was made vice-chairman of the committee.

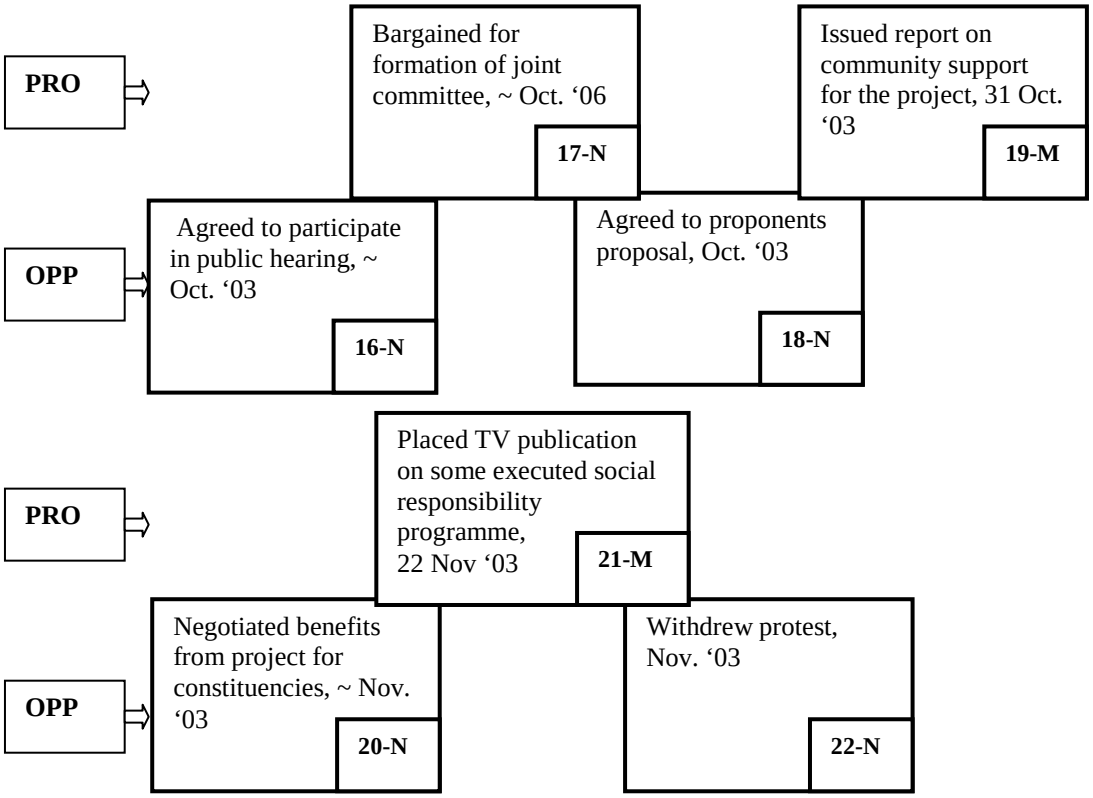
The proponents issued a report that community support had been secured for the project. The opponents, taking advantage of the new situation, negotiated social benefits for their communities in order to ensure that they also did gain from the project.

"We talked with the company to also provide social amenities for our communities otherwise our people will blame us for not taking advantage for development projects from the company, especially when they are going to mine on our land" (opposition chief, 2004)

The proponent provided some social benefit to some mining communities and gave a wide television coverage staging for example schools with teachers and pupils receiving books from company representatives with appreciative gestures. From this point the opponents withdrew their anti-project actions. A leading opponent commented:

"We were the ones who resisted mining but if government has decided to go ahead, what can we do. The mining company has assured us that our water will not be destroyed, so we are watching" (2004)

The chronological sequencing of these actions can be graphically represented as follows:



5.3.2 Issues and positions at R2 – proponents and opponents

This Reserve was located in a mining area where there had been mining operations outside the reserve area for a long time. Prior to the mining prospecting in the reserve, there were some local tensions between some communities and the mining company. Incidentally, the same company was a leading proponent for the prospective project which had operated in the area but seeking further land (which falls in the reserve) for mining. There had been several conflicts between some communities in the area and the mining company and the studied conflict was related to the prospects for further mining in the forest reserve.

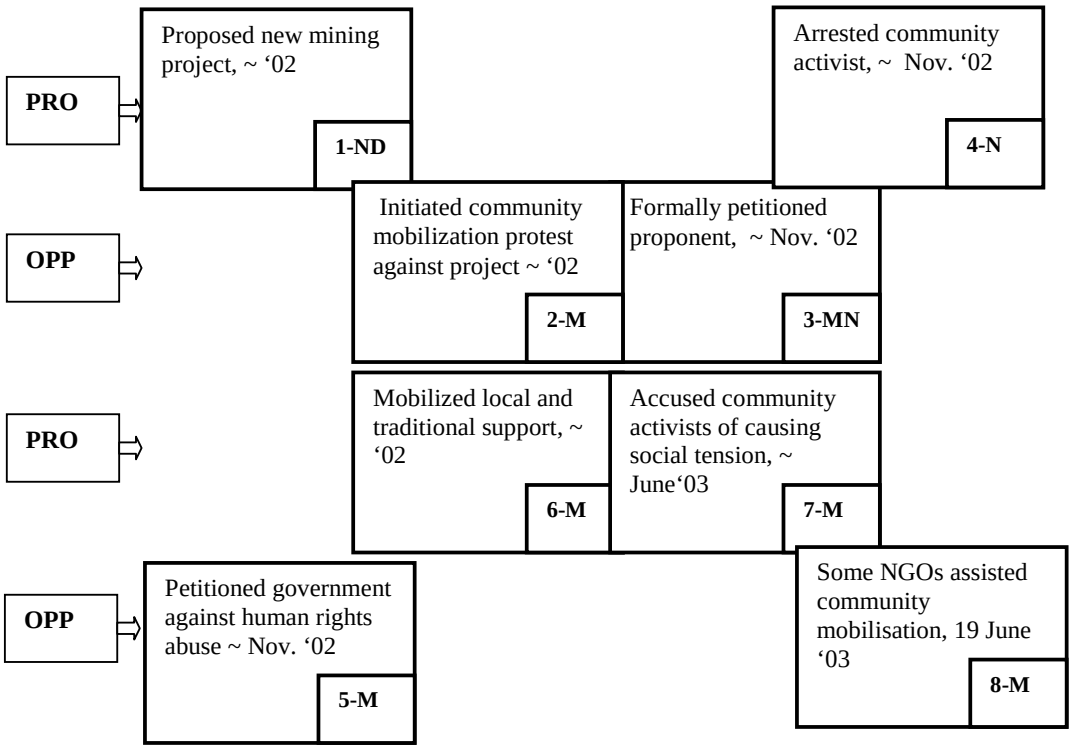
Conflict episodes at R2

The proponent network comprised mainly the mining company and high-status local traditional and political leaders. The opponents' network consisted of mainly local anti-mining civil activist, who were part of a larger national-level coalition of NGOs and civil society groups against mining.

Some local civil activists, impaired by claims of environmental destruction of the proponents' operations and its associated human rights abuse and economic injustices, initiated community mobilization by educating community members about the negative effect of mining on their lives. The opposing community formally petitioned the proponent through its civil activist and the proponents arrested the civil activists on proponent's corporate premises when the community petition was being delivered.

Following the arrest, the opponent responded by persuading government in a petition to the President to intervene accusing the proponents of human rights abuse. By this action, the opponents expanded the geographical scope of the conflict by involving national actors. Government responded by directing its local representative (District Chief Executive) to handle the situation

The proponents mobilised local political and traditional leaders to cause the leading activists to stop their advocacy. This was followed by actions from some proponents who accused community activists of causing social tension and unrest. The chronological sequencing of the conflict actions can be graphically represented as follows:



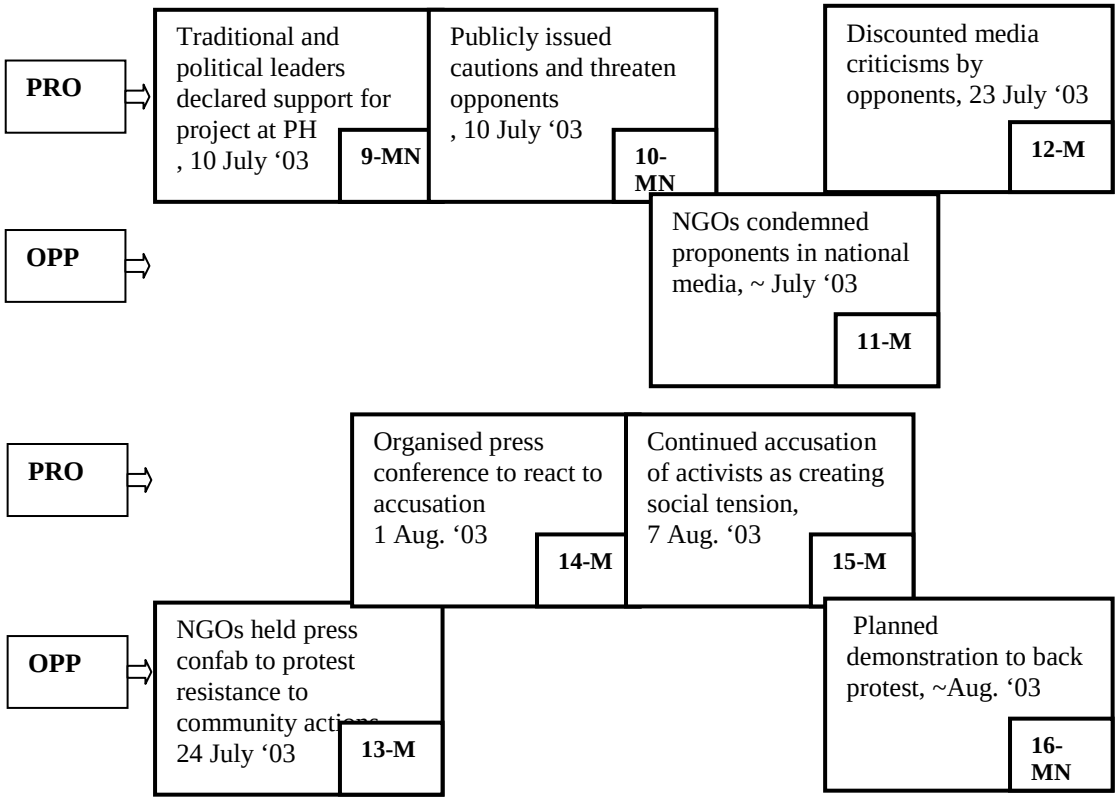
This resulted in police arrest of some leading opponents but they were released with no charge. Around the same time, public hearing for the project was organised by the relevant state agency in one of the mining communities.

Some external NGOs assisted leading activists with the mobilisation of the community to prepare them for the pro-mining pressure to mobilise community support at the forthcoming public hearing. The proponents mobilised high level political and traditional leaders, including the paramount chief of the area, to support the project during the public hearing. The proponents also confronted the activists during the public hearing and virtually set a rule requiring official permission from the local government representative before any advocacy group could enter any mining community. Even though some opponents were present at the public hearing, none of them was able to confront or counteract the messages of the traditional and political leaders to support the project.

A high-status proponent summoned one of the opponents and threatened him to stop his anti-mining advocacy. The activist, by tradition, was compelled to render apology

to the chiefs and elders for petitioning the President and the government on human rights issues related to mining. The opponents continued their advocacy, condemning proponents as part of their national level campaign. This national level advocacy against the proponents at the R2 was responded to with media counteraction, labelling NGO opponents' claims as false accusations.

Given the combined pressure on local activist from the high-level proponent network, the national NGO coalition as opponents to the project, intervened by organizing a press conference to bring government's response to local advocacy to the public and to condemn pro-mining actions at the community level. The proponents within a week held a press conference to react to this public accusation. Not happy with the representation of the issues by the company in its press conference, the opponents mobilized some youth in the community to demonstrate against the proponents and to draw public attention to their situation. The chronological sequencing of the described conflict actions can be graphically represented as follows:



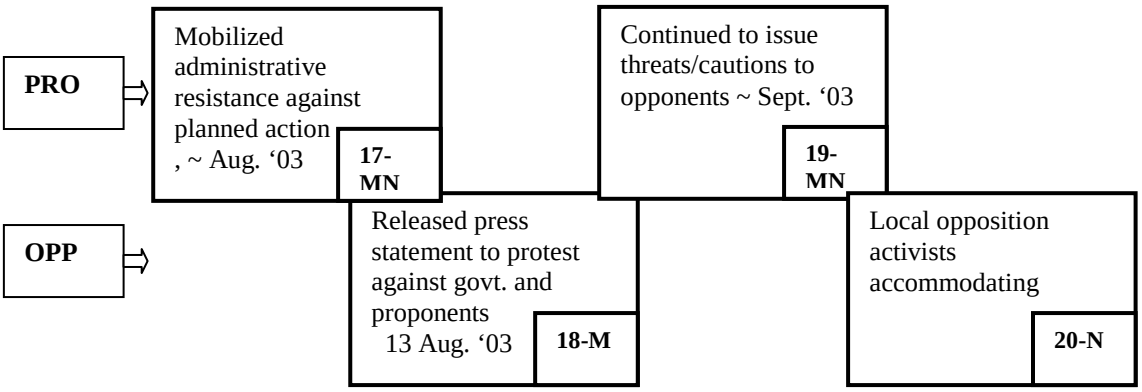
The mobilisation for public demonstration failed as opponents could not secure the necessary police permit based on security reasons connected with planned political activities in the District.

The proponents using their political agencies responded by attempting to coerce the opponents with accusation and cautions. The accusations were framed in a form of creating tension in the community. The threats were metaphorically embodied in the words of the traditional leader 'fighting the company is like fighting our people'.

The opponents continued with their advocacy by releasing a press paper in which it condemned the local government officials, some traditional leaders and public institutions which they thought were pro-mining and supporting the anti-mining

actions at the communities. They made an explicit call on government to respond to the petition of the community.

Following this development, the conflict seemed to have subsided, though one could not conclude that the opponents had withdrawn or that the conflict had been managed. Rather, the conflict had assumed a form in which the national NGO opponents had taken over the role of the local opponents and hence actual conflict actions at the local area seemed to have 'ended'. The proponents continued to issue threats such as of police arrest and this seemed to calmed direct anti-mining actions in the communities. The actions are sequenced as follows:



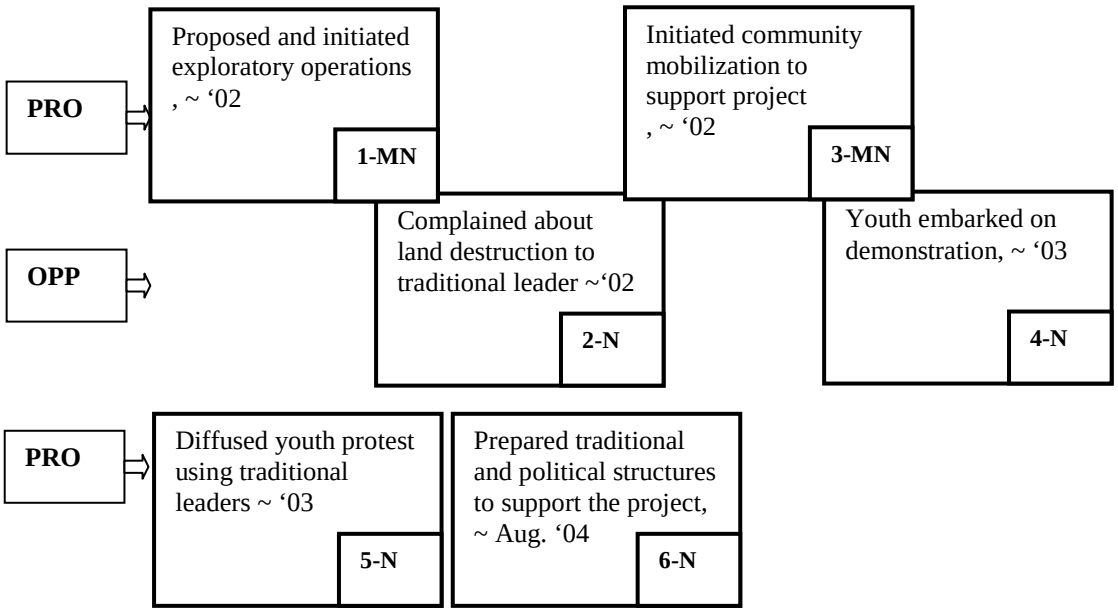
5.3.3 Issues and positions at R3 – proponents and opponents

This case involved another local case of mining in a forest reserve. The forest reserve in question has an official condition score as 'mostly degraded', though it is important as a protection reserve. It is surrounded by farming communities who depend on community lands for farming. The prospective mining had implications for claiming farming lands and some residential cottages. In this case, 13% of the forest reserve was estimated to be affected by the mining project. However, it had some social relevance as it lay in the catchments of some of the streams that were used by some local communities. The reserve fell under the jurisdiction of one traditional council. The area had no previous experience with mining and the mining posed a land use threat to farming. Most of the mining exploration and mining activities were to be done outside the reserve but this meant a huge impact on farmlands.

The proponent network from the beginning of the conflict involved the prospective mining company and grew to involve traditional leaders and local politicians. The opponent network involved one chief, some youth and some farmers whose farmlands were affected during the exploration activities who claimed that compensation rates were not adequate.

Conflict episodes
When the exploration work was started by the mining proponent, aggrieved farmers complained to their traditional leader about farm destruction and objected to the project. The proponent started embarking on community focus group discussions to persuade the community about the viability of the project using hired experts. In the

process the community offered promises of job opportunities for the youth in the catchment's area and the potential opening up of the area for other economic activities. Some aggrieved youth (opponents) revolted as they claimed the proponent had failed to fulfil promises for jobs. The proponent mobilised traditional leaders to diffuse the protest. The proponent immediately started preparing traditional and political leaders to support the project. They used promises for material benefits, jobs, development of community infrastructure and organised field trips to other mining areas to show them cases of reclaimed mined lands to put away their fears.

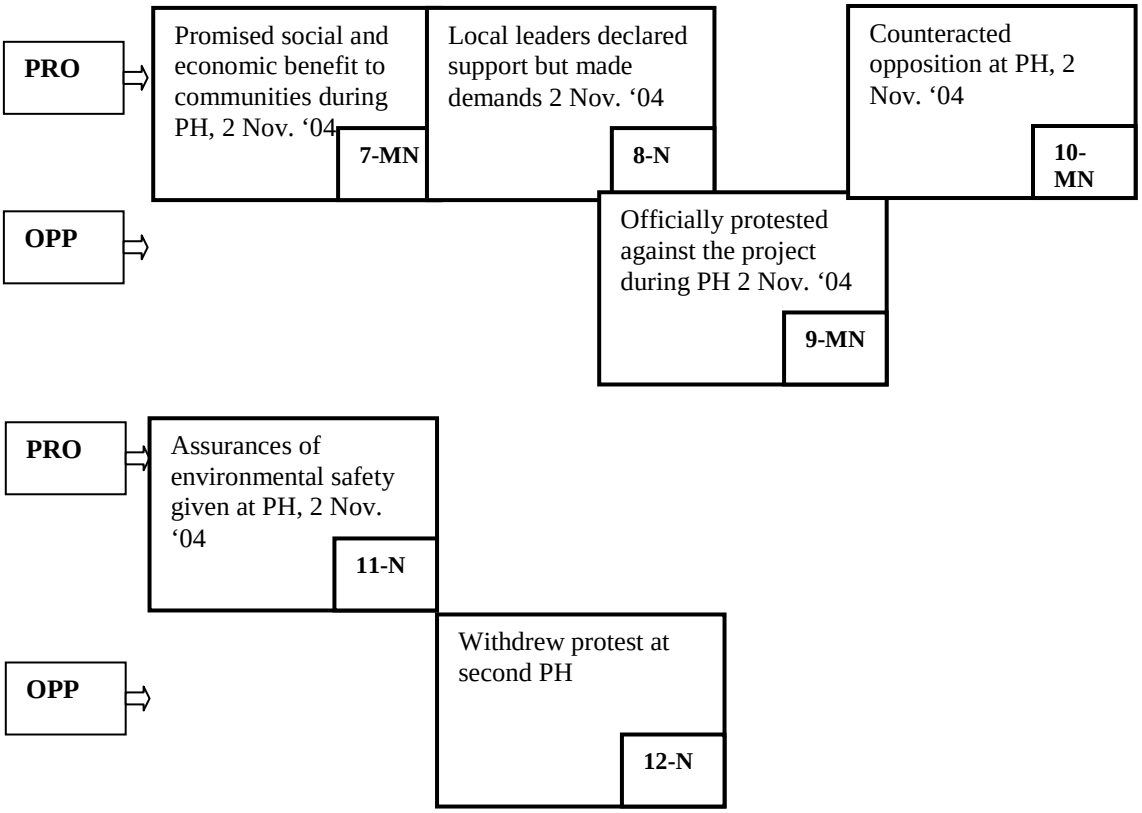


A public hearing was organised by the responsible public agency in the form of a public durbar. Both proponents and opponents participated. Chiefs, Assemblymen and members of surrounding communities were transported from their various communities to the durbar ground by the proponent.

The proponents attempted to persuade the public of the viability of the project, giving technical information, social benefit and impact management packages. Most of the traditional leaders and local politicians supported the project.

The opponents, speaking through legal experts, officially opposed the project claiming that despite its short term benefits, it has long term cost to the communities and the people of the area. The proponent chiefs counteracted this position using complex historical and customary narratives. The proponents followed up by giving assurances for further negotiation with the opposing side. Surprisingly, though some national NGO opponents were present but did not use the opportunity to campaign against the project. They mainly asked questions bothering on the environment and clarification by the company. This was at the time national opposition was subsiding.

The opponent did not publicly respond to counteraction by the superior chief. They seemed to have accommodated. The actions are chronologically sequenced as follows:



A second public hearing was organised at a latter date but this time no opposition to the project was observed, though the opponent participated. The meeting was mainly involved with bargaining between traditional authorities and the company on specific benefits and community projects. At this time, opposition to the project seemed to have 'ended'.

5.4 PATTERNS OF POWER RESOURCES

5.4.1 Power resource categories

General patterns

The dataset in Annex 2b shows that all categories of power resources were deployed in the conflict episodes at the reserve areas. The specific power resources used were *wealth; strategic framing; threats; social, traditional, political and corporate networks; media; NGOs; and political, administrative and traditional legitimacies*. Figure 5.1, shows the relative proportions mobilised and used by proponents and opponents. Generally, it can be observed that except for socio-economic resources, proponents and opponents did not differ significantly in respect of the frequency of use of the various power resources. The wide gap in the use of socio-economic resources is not surprising, given the large number of organised activities such as press conferences, community durbars, parties for delegates, field trips for community leaders and engagement of technical and social consultants, not to mention the amount of money spent on mobilising local and traditional leaders; all these required economic resources. For opponents, their deployment of economic resources was

mainly on hiring legal experts and pursuing court suit which were not even frequent. With regards to institutional resources, both actors made use of the media and traditional legitimacies but proponents more often mobilised and used political and administrative authorities. While both actors significantly deployed strategic framing, proponents additionally used threats and technical and legal information. Mainly, while proponents used traditional and political networks as their social resources, opponents mainly used civil society, NGOs and 'ordinary' citizens of their social networks. As mentioned earlier, given the actors in the respective proponent and opponent actor-networks and their social and institutional positions, these patterns or observed disparities in the types of specific institutional, social, economic and orientational resources mobilised and deployed are not surprising.

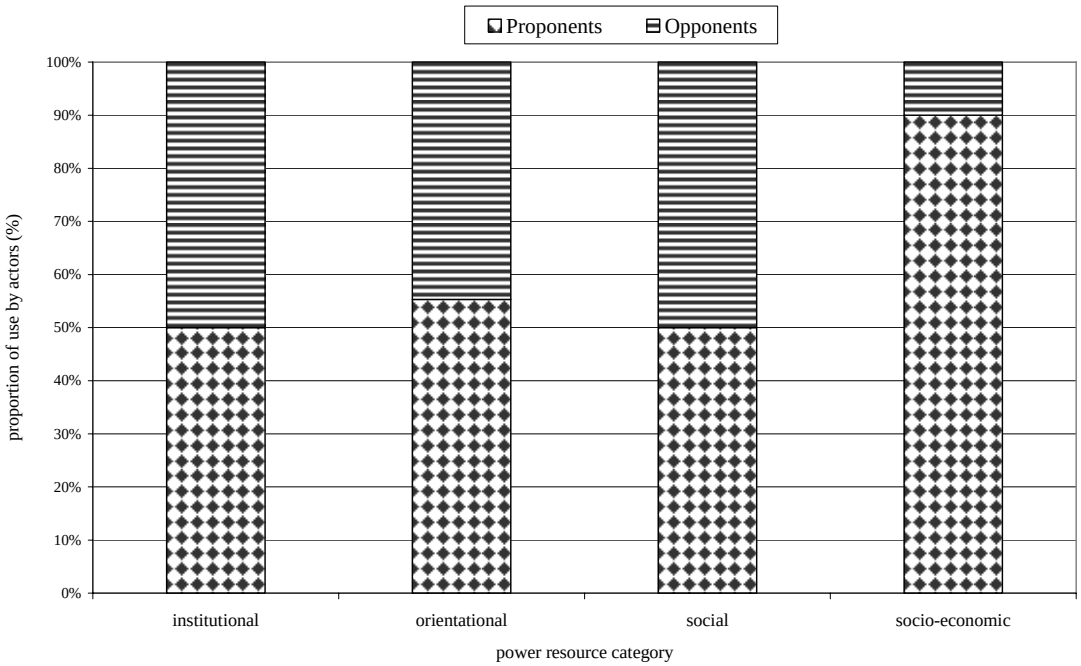


Figure 5.1 a graph showing the proportion of the various power resource categories used by proponents and opponents at all the Reserve areas. Specific resources belonging to the same analytical category were not double counted (full results in annex 1, N of institutional, orientational, social and socio-economic respectively = 28, 47, 28 and 10).

Patterns of power resources mobilisation at Reserve 1

To give a perspective to follow the general trend of resources mobilisation in strategy deployment in the course of the conflict, figure 5.2 depicts the cumulative frequency of use of these resources by respective actors from episode to episode.

First, it shows that though not all resource categories were mobilised at all levels of the conflict, there was a general increase in resource deployment in the course of the conflict as expected. Generally, opponents were more consistent with the use of institutional resources than proponents while orientational and social resources did not seem to differ between the two. While proponents used structures of political and traditional legitimacies at the beginning and latter parts of the conflicts, the opponents' use of their traditional legitimacy was consistent since it was the main power resource used. Both actors consistently deployed social resources in the forms of traditional networks and corporate networks in their empowerment efforts.

However, more socio-economic resources were deployed by proponents than opponents. This is reflected in the huge mobilisation of institutional resources and organisation of mobilisation activities.

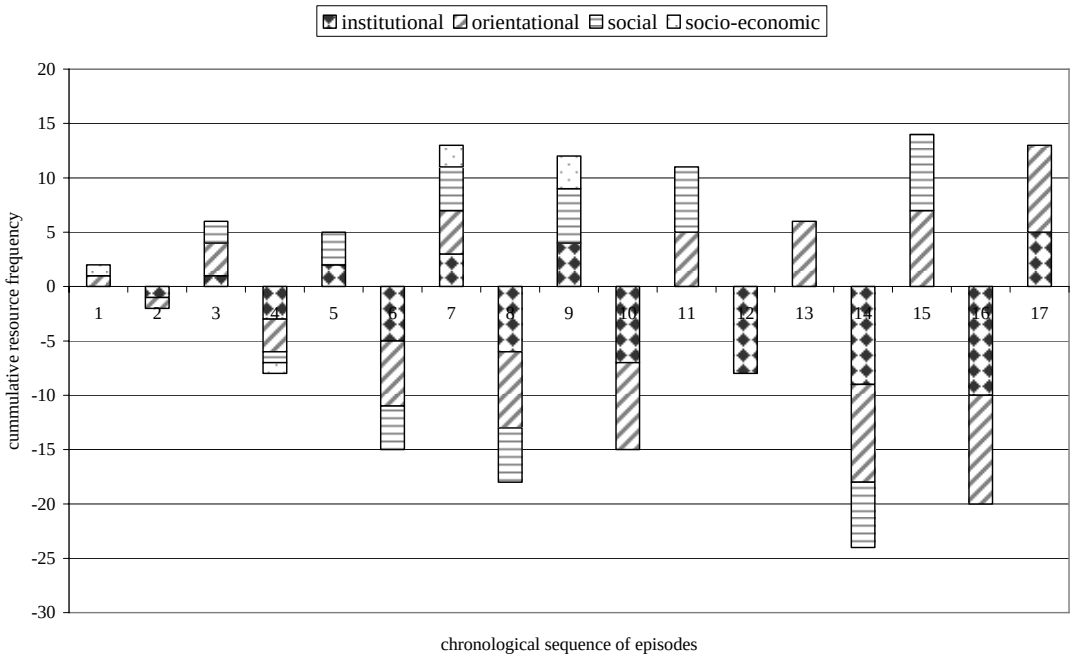


Figure 5.2 a graph showing the cumulative frequency of use of the various power resources mobilised within specific episodes in course of the conflict Reserve 1. Counting was done by adding unit scores (+1) to previous frequency scores whenever specific resource category was used by actors in course of the conflict.

Patterns of power resources at R2

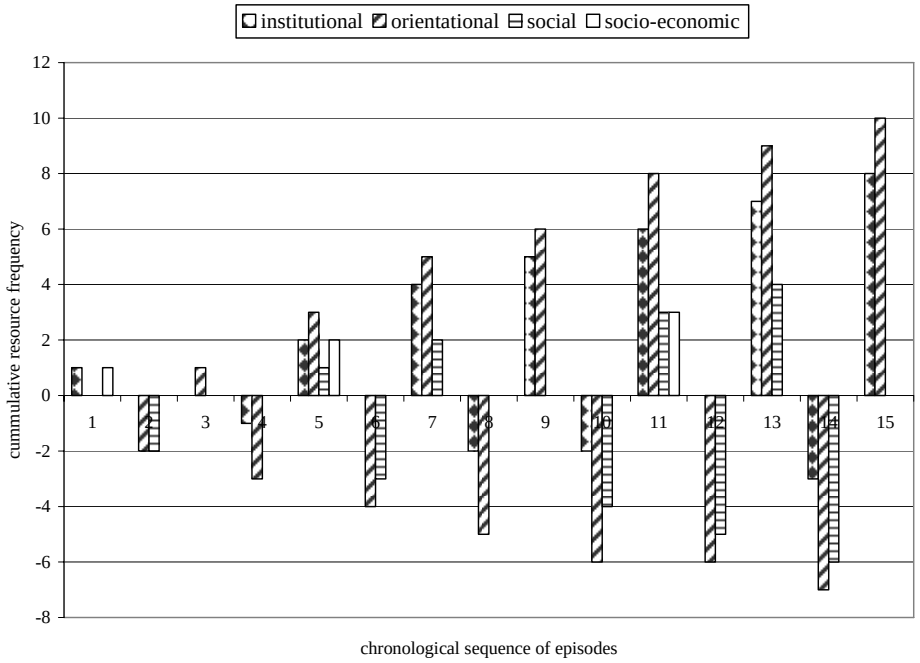


Figure 5.3 a graph showing the cumulative frequency of use of the various power resources mobilised within specific episodes in course of the conflict at Reserve 2. Counting was done by adding unit scores (+1) to previous frequency scores whenever specific resource category was used by actors in course of the conflict.

Figure 5.3 summarises the cumulative frequency of resources used by the respective actors from episode to episode to give an overview of trend of resource mobilisation in R2. Generally, orientational resources were prominently used by both actors given their progressive increase across episodes. This is not surprising owing to the fact that the conflict was at high discourse level with several persuasion encounters such as press conferences all requiring the deployment of symbolic and information resources. However, the use of institutional resources was more prominent with proponents than opponents due to the consistent mobilisation of local political and traditional leaders in proponent's empowerment actions. On the contrary, opponents used more social resources, in the form of social networks and NGOs than proponents. Socio-economic resources were mainly used by proponents in the mobilisation of institutional support and its deployment was not consistent in the conflict. This not surprising, as most of the conflict actions took place after official support for the project had been secured and no further 'buying' of institutional support needed.

Patterns of power resource mobilisation at R3

The patterns of use of the various resource categories by actors at R3 is graphically summarised in figure 5.4. Generally, resource mobilisation increased in the course of the conflict with orientational resource dominating due to the highly discourse character of the conflict episodes. Proponents progressively increased their use of socio-economic resources mainly to mobilise local leadership support and organise pro-mining support activities to enhance their persuasive efforts. The use of socio-economic resources by the opponents was not consistent as it was mainly used to hire legal services for the Public Hearing.

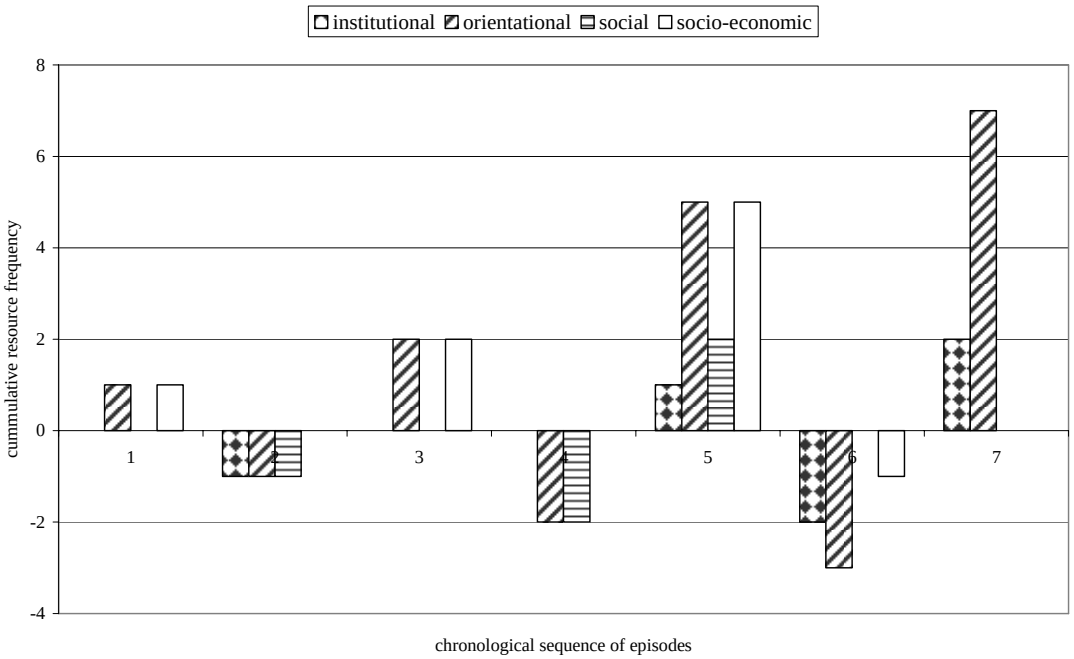


Figure 5.4 a graph showing the cumulative frequency of use of the various power resources mobilised within specific episodes in course of the conflict at Reserve 3. Counting was done by adding unit scores (+1) to previous frequency scores whenever specific resource category was used by actors in course of the conflict.

5.4.2 Categorisations according Rogers (1974)

In all the reserve area conflicts, two prominent conditions can be categorised as infra-resources for successful mobilisation and deployment of the various resources described in section 5.4.1. These were legitimate membership in the institutionalised local policy and decision-making community and high mobilisation of high status political and traditional leaders. In all cases, the mobilisation and deployment of the various resources of actors who did not belong to local policy community were constrained. For example, in R2 and R3, civil activists like impaired farmers and advocates and even a chief could be not actively participate in the official public hearing meetings. As will be made elaborated later in this chapter, even when a chief attempted to use traditional legitimacy as a representative of his people, it was subordinated by a paramount chief. As indicated in earlier, this is because in terms of official representation of communities, especially regarding land-related matters, paramount chiefs are those who really matter. This is buttressed by the observations in R1 when for example a sub-chief had to be elevated to a paramount status to be able to counterbalance an opposing paramount chief. Even then, it was realised that political pressure had to be mobilised in addition. As will be elaborated under the section on effectiveness, the governance culture of local decision-making vis-à-vis natural resources places civil activists and even lower-status political and traditional leaders at a disadvantaged. This is mainly because their participation is often assumed because of 'their' representation by the high-status political and traditional leaders such as DCEs and paramount chiefs.

5.5 PATTERNS OF POWER STRATEGIES

5.5.1 Reciprocity

Following the conflict actions in the three Reserve areas as displayed in annex 3, table 5.4 summarises the observed episodic patterns.

Table 5.4 Summary of patterns of conflict episodes at the various reserve areas

Reserve area	No. of reciprocal patterns (% frequency)	No. of serial patterns (% frequency)
R1	17 (85%)	3 (15%)
R2	15 (79%)	4 (21%)
R3	7 (78%)	2 (12%)
Total	39 (81%)	9 (19%)

It can be observed that the actor-empowerment process in the various conflict cases was dynamic as in about 8 out of 10 cases, competing actors' actions can be said to have provoked direct responses from others. This notwithstanding, the various conflicts did not exhibit a perfect reciprocal pattern, and hence it can be enlightening by exploring respective episodic actions to understand what contextual conditions and empowerment efforts can result in episodic effectiveness or otherwise. This will be taken up later when the effectiveness of actor-empowerment is being assessed.

Regarding the chronological proponent-opponent strategy sequencing, a summary of the observed strategy configurations in the conflict and their respective cooperative-

competitive scale categories is given in Annex 3. Figure 5.5 displays the cooperative-competitive scale groups of the observed strategy configurations.

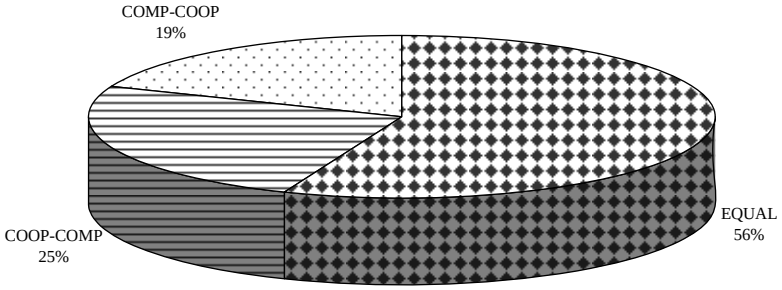


Figure 5.5 percentage frequency of occurrence of action-reaction strategy configurations comparing their cooperative and competitive scale categories (N = 36).

In order to explore the patterns of the use of power strategy further, the respective strategy configurations in the various reciprocal episodic patterns observed are assessed against the hypothetical expectations regarding reciprocity behaviour in conflict actions. It was observed that no particular strategy was always reciprocated, even though the results seem to point to persuasion which accounted for 50% of all the configurations observed. However, since 25% of the observed configurations involving persuasion were not reciprocated, any generalisation would not be made here.

Overall, direct reciprocity dominated, accounting for about 56% of all the observed configurations. However, this was dominated by cooperative reciprocity contributing to 90% of the cases of direct reciprocity as against 10% by competitive reciprocity. It can be inferred that our expectation of cooperative reciprocity is not fully confirmed here. Inverse reciprocity accounted for 44% of all observed cases, with cooperative-competitive configurations dominating (25%). The high proportion of inverse reciprocity further weakens any tendency to generalise significance of direct reciprocity in conflict behaviour in this case. Lastly, the expectation that in case of inverse reciprocity, cooperative-competitive configurations are more likely to be observed is also not totally confirmed as in about 43% of the cases of inverse reciprocity (19% in all), competitive-cooperative configurations were encountered.

This pattern is not surprising as in many cases; both proponents and opponents counter-persuaded each other in their episodes. The deviation from this was the use of avoidance, manipulation and force as competitive strategies to respond to persuasive efforts. The mobilisation of resistance and protest by proponents and opponents respectively, mainly triggered deviations from the persuasion reciprocity pattern. The detailed pattern of actions that generally accounted for these shifts will be explained at the section dealing with episodic effectiveness of actor empowerment.

5.5.2 Strategy sequences

Strategy sequences at R1
Figure 5.6 captures the strategies that were used by the actors at R1 in course of the conflict. It can be inferred that persuasion dominated actor strategies in this conflict.

Persuasion sequences and resource mobilisation
Following the use of persuasion by the proponents in course of the conflict, the pattern of resource mobilisation was consistent with the expected trend. They generally increased the deployment of orientational resource. However, the proponents increasingly mobilised social and economic resources in their persuasive efforts contrary to expectation. First, economic resources were used to mobilise institutional resources, mainly local traditional and political structures to support persuasive efforts. Example of such mobilisation was the organisation of a durbar of chiefs to rally support for the 'community development frame' of the proponents when government delegation embarked on fact-finding mission to the reserve area. Second, the proponents, confronted with a formidable traditional opposition, capitalised on the geo-social situation to cause the official Public Hearing meeting to be held in a community that supported the project. At the most crucial episode, the Public Hearing, social and economic resources were used in addition to the other expected resource categories.

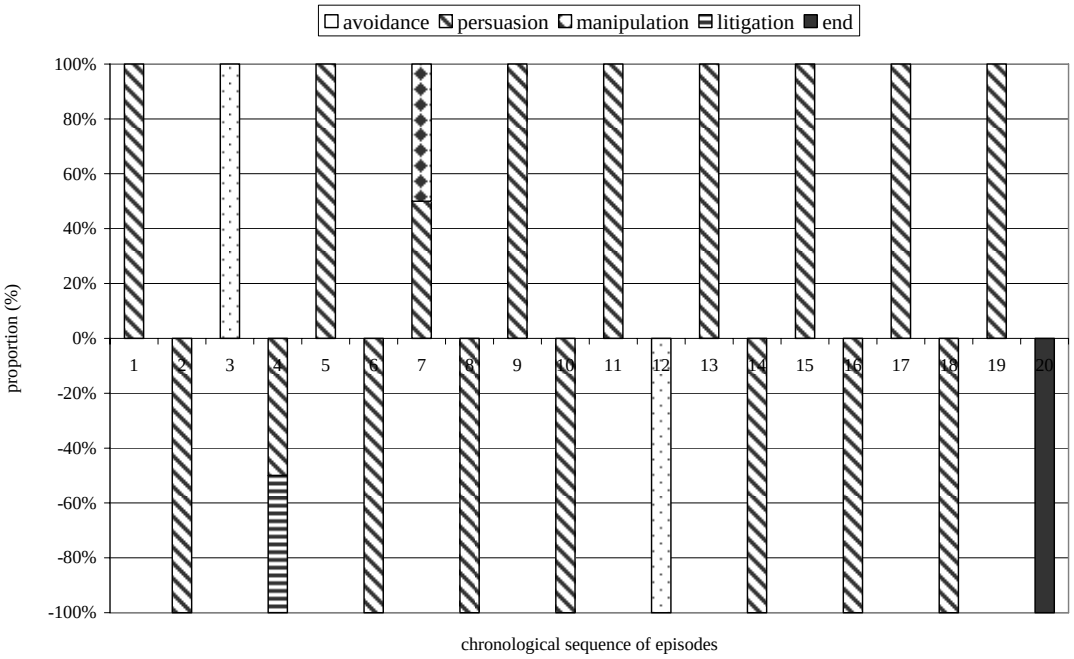


Figure 5.6 the number of strategies used as a percentage proportion of strategies used by proponents (upper chart) and opponents (lower chart) at the different episodes at R1 in a chronological order. 'End' indicates point of termination of conflict actions and not actually counted as a strategy. (N depends on number of strategies used at specific episodes)

They extensively used their mobilised social and institutional resources, to provide massive support for the project. Several repertoires were mobilised by these authorities to frame and legitimise their support. Some excerpts of the various speeches follows:

"we should not make the mistake to reject this project, because even if we don't allow mining now, somebody will do so in the future…and so we should do and enjoy the benefit now" … "We, the paramount chiefs in the district give our consent to the mining project"…"we thank this government for a speedy approval of the project…some people have said the forest is the abode of the gods, but we should know that the gods have given their approval that is why gold could be detected; otherwise they could have hidden and resisted the exploration" (this demystification and re-mystification logic received a large applause).

Notwithstanding the enormous support mobilised for the project during public hearing, the absence of the opponents, particularly the paramount chief, as the owner of a larger portion of the forest, had significant implications for the legitimacy of the process. In their next persuasion attempt, the proponent mobilised institutional resources such as high-level political personnel to directly contact the paramount chief (*improving contact dimension*). They added another dimension to their persuasion by framing the opponent's position as frustrating government's efforts at bringing development to place. Having dealt with local opposition, the proponents' increased the *scope of their targets* by employing institutional resources (e.g. media) to broadcast some developments in opposition communities to the public, thus expanding the *scope of influence targets*; the public that was also a target of national anti-mining campaign.

It should be noted that the proponents' had to deal with the opposition at beginning of the conflict by manipulating local power structures before setting the ground for the above persuasive efforts. This was done by deploying economic and social resources to respectively fund and supports the elevation of a lower and subordinate chief to a paramount status. This elevation was needed to counter-balance the high-level opposition power and obtain equally high institutional status personnel to support the pro-mining lobby.

The pattern of opponent's mobilisation of resources in their persuasive efforts did not differ from that of proponents. Aside the expected increased in the use of institutional and orientational resources; the proponents also employed social resources to empower them for persuasion. Prominently, the opponents used 'the forest as the abode of the gods and the ancestors' and 'environmental conservation and services' frames in their strategic framing.

The deployment of the social and other institutional resources by opponents were made after they faced eminent force by proponents especially having failed to stop the elevation of a sub-chief to a paramount status. The opponents increasingly mobilised social (traditional networks) and institutional (political structures such as the Presidency and donors) resources, thereby increasing the *quality of target*.

Consistent with the hypothetical expectation, the mobilisation of institutional and socio-economic resources was increased by opponents in litigating against the elevation of a sub-chief to paramount status. The mobilisation of institutional resources moved from Regional to National Houses of Chiefs.

Strategy sequences at R2

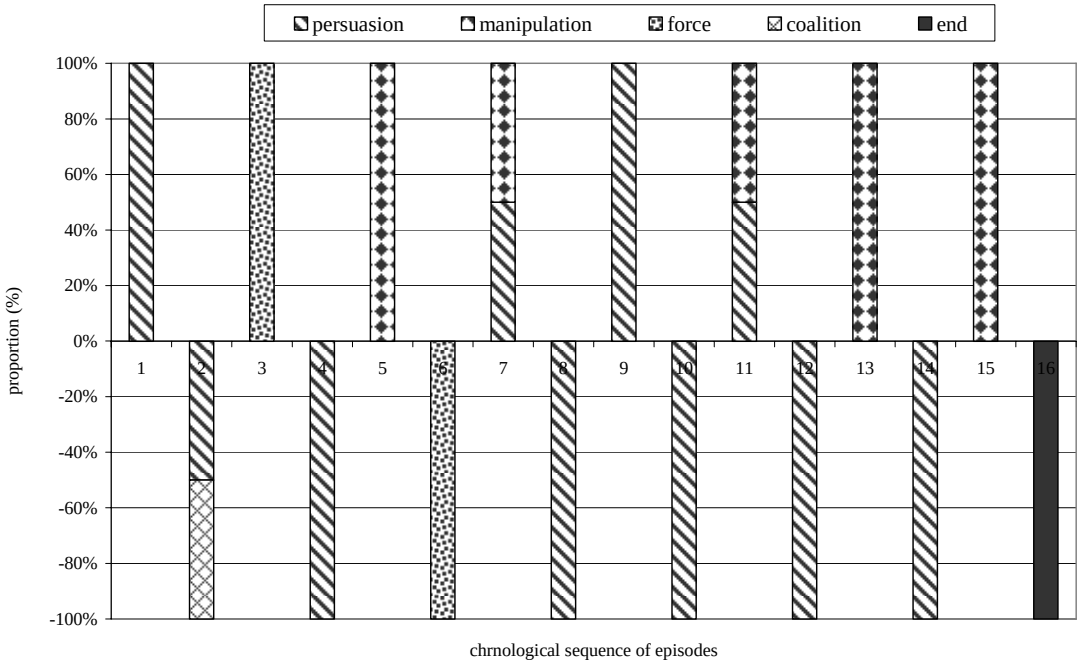


Figure 5.7 the number of strategies used as a percentage proportion of strategies used by proponents (upper chart) and opponents (lower chart) at the different episodes at R2 in a chronological order. 'End' indicates point of termination of conflict actions and not actually counted as a strategy. (N depends on number of strategies used at specific episodes)

Figure 5.7 captures the strategies that were used by the actors at R1 in course of the conflict. In all, persuasion, manipulation, coalition-building and force were the observed strategies that the actors used.

For the use of persuasion, the proponents increasingly mobilised and used both orientational and institutional resources in the course of the conflict as expected. However, faced with growing opposition from some community activists and NGOs, the proponents added social resources, particularly traditional and political network, in their empowerment efforts. The legitimacy of these social resources, as the representatives of the communities was needed to enhance the symbolic dimensions of the proponents' persuasion efforts.

Manipulation was a significant strategy for proponent at R2. With some sort of community-NGOs coalition protest by the proponents, the proponents responded as expected, by largely using orientational resources (threats and sanctions). Unexpectedly, they mobilised social and institutional resources (local political and traditional networks, administrative) in the course of the conflict. They essentially used threat of withdrawing development projects from communities of targeted chiefs as a sanction if they do not stand up to stop activism against the corporate proponent. This improved their manipulative efforts. For example, a prominent chief caused the arrest of an opponent and in addition, a top local politician publicly issued a threat (cautioning against community mobilisation campaigns) to opponents during the public hearing meeting. Against expectations, the opponents continued their manipulation by mobilising their additional social resources (national corporate

network) to build the strength of their social resource. Further to this, they added institutional resources to resist opponents as exemplified by the blocking of the planned youth demonstration by the local security administration.

The opponents progressively increased the mobilisation of power resources in their successive persuasive encounters. First, as expected, the use of orientational resources was prominent with increasing attempts to improve the dimensions of framing and legitimation. However, unexpectedly, they increased their mobilisation of social and institutional resources. With regard to persuader size, they increased from individual activists, to mobilised community coalition to a coalition with national NGOs, following successive threats by proponents. This was made possible as a result of their mobilisation of social and institutional resources such as national NGOs and the media. In the subsequent persuasion efforts, responding mainly to local threats and media counteractions, the opponents increased the quality of their media mobilisation, starting from pasting media report to repeated press conferences. In their subsequent use of the media, they increased the scope of 'attack' in the eye of the public, first accusing the corporate proponent, then adding local political and traditional leaders and finally including government in their last press statement. The opponents' persuasive efforts were also scaled up by attempts to move from words to action, this was exemplified by the planned public demonstration. This involved increased mobilisation of social resources for the planned youth action.

Strategy sequence at R3

Figure 5.8 shows that, the actors in R3 used only persuasion and force in their empowerment efforts.

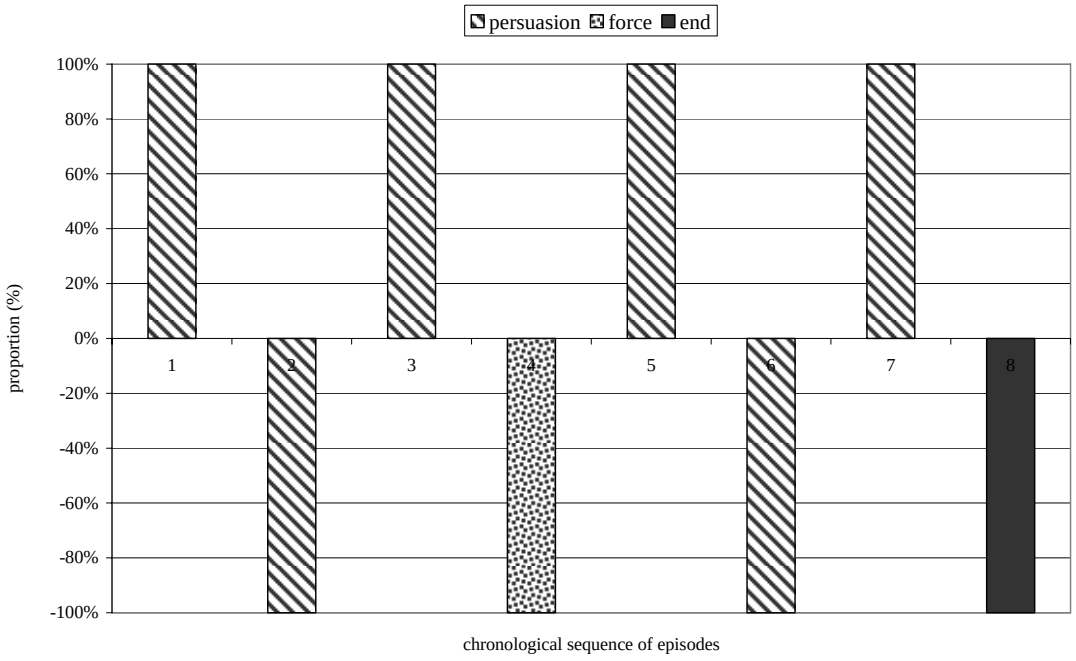


Figure 5.8 the number of strategies used as a percentage proportion of strategies used by proponents (upper chart) and opponents (lower chart) at the different episodes at R3 in a chronological order. 'End' indicates point of termination of conflict actions and not actually counted as a strategy. (N depends on number of strategies used at specific episodes)

Generally, the proponents increasingly used orientational resources in the course of the conflict to improve the quality dimensions of their messages as expected. Additionally, though unexpected, the proponents deployed socio-economic and institutional resources to improve their persuasive efforts. For example, when confronted with complains about destruction of farmlands and crops during exploration, the proponent engaged the services of community relation experts to design compensation schemes and elaborate the overall benefits of the projects, including promises for jobs. They deployed funds to organise field trips to other mining sites for these leaders, using experts all along to explain processes and to see the giant industrial infrastructure and community projects that other mining communities have benefited. This was an important intervention by proponents since mining was very new to the people in this area, unlike the other two cases. With regards to institutional resources, the proponents used local politicians and traditional leaders in diverse ways, for example to diffuse the youth protest. They also used them, as community representatives, to support the project during the various Public Hearing meetings. At the Public Hearing, the symbolic quality of the framing for community support was enhanced as most chiefs, not to mention high-status ones, and top local politicians publicly declared support for the project. Other proponents used comparative situations arguing that other areas (mentioning examples) have become popular and progressive due to mineral industries over there. By so arguing, the leaders created a relative deprivation to serve as a moral pressure on the people to demand change in their lives by supporting the project. Significantly, the representative of the paramount chief of the area[27] finally spoke (as traditional courtesies demand) and concluded his speech as follows.

"I … and my people have welcomed the project given the immense benefits that we and our children will enjoy"

Although his speech was short, it was symbolically even weightier than all that had been said. First, by emphasising his stool name, he was reinforcing his position as the voice of the paramount chief, which must supersede all other traditional voices. Second, my using collective framing, he translated his speech from his own opinion to represented opinion of all the people in the traditional area.

For the opponents, the use of persuasion involved orientational, social and institutional resources. As expected, they improved their deployment of orientational resources to improve the dimensions of framing and legitimation. Unexpectedly, they additionally used socio-economic resources, especially during the first official PH meeting. For example, they deployed socio-economic resources to hire a lawyer (expertise) to articulate their position, thus enhancing the symbolic quality and legitimacy of their message.

General overview of strategy sequences at all Reserve areas

The various power strategies used by proponents and opponents at all the Reserve areas in course of the conflicts are graphically summarised in figure 5.9. First, proponents prominently used persuasion and manipulation strategies (power mix) in course of the conflict, following a somewhat zigzag pattern in between their first and

[27] It should be noted here that the entire range of lands including the forest reserve was under the jurisdiction of one traditional paramount chief.

last conflict actions. No coalition-building and overt use of force was deployed by proponents unlike opponents. This is not surprising given that the entire conflict occurred in a national setting of national level campaign against human rights abuses by corporate mining interests at community levels. Moreover, by succeeding to enrol traditional and political leaders into their network, proponents did not face 'stronger' forces of opposition to warrant real coalition-building efforts, except at R1 when one can argue that sponsoring elevation of sub-chief to equal status with opponent is a form of 'soft' coalition adventure. Opponents in general used a wider mix of power strategies with persuasion being the most dominant.

Most of the strategies used with persuasion, such as coalition-building, force and litigation were deployed at the early stages of the conflict. For proponents, in cases where opposition was significant such as in R1 and R2, the use of manipulation was already observed in their second episodes. Again, where proponents used avoidance (R1), it was a kind of strategic 'withdrawal' to mobilise resources to deploy manipulation as both strategies were observed to have a serial pattern. For opponents, several context situations explain the general pattern observed. For example, the coalition-building was used by civil activists as opponents who did not possess institutional legitimacy as members of the local policy community in R2, unlike their counterparts in R1 and 3 who were traditional authorities. It is thus not surprising that they intensified their coalition-building by networking with national opposition actors. Moreover, the use of force by opponents at R3 at relatively early stage is not surprising as proponents actions involved failure to implement promises of employment. The use of litigation by opponents at R1 was also provoked by a proponent's action that threatened his scope of traditional legitimacy which was the main power base for his 'legitimate' actions in the conflict.

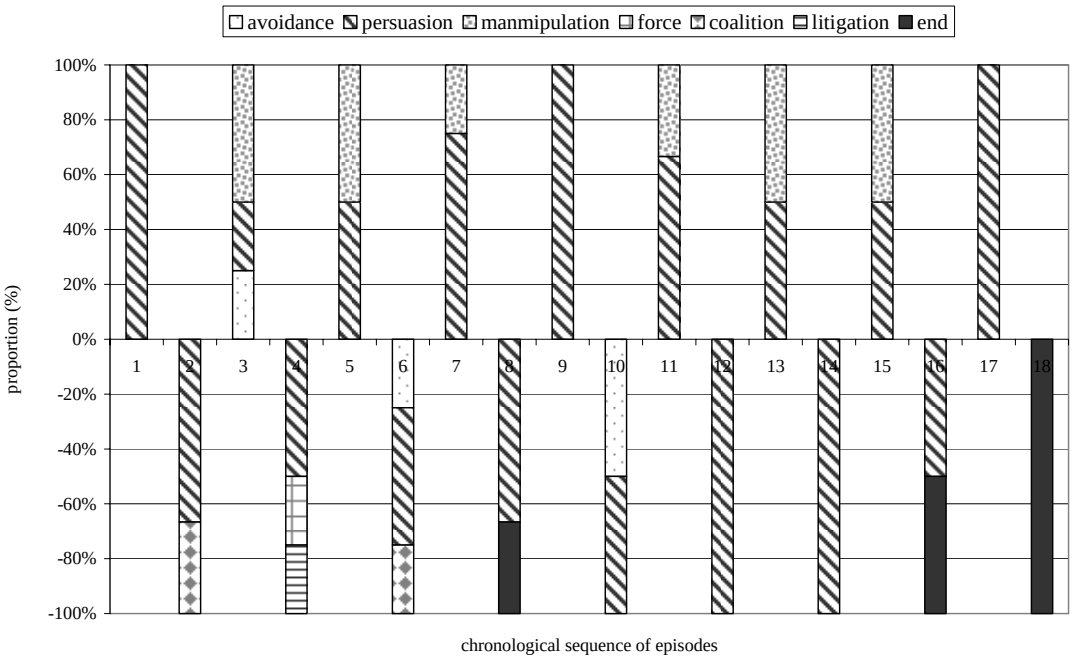


Figure 5. 9 the number of types of strategies used as a percentage proportion of strategies used by proponents (upper chart) and opponents (lower chart) at different episodes at all Reserve areas in a chronological order. 'End' indicates point of termination of conflict actions and not actually counted as a strategy. (N depends on number of strategies used at specific episodes, 100% means only 1 strategy was used at the specific episode)

Following this, it is also not surprising that opponent at R1 used avoidance in subsequent episodes. In strategic sense, this was necessary to delegitimise 'official' processes (durbar of chiefs and public hearing) that expressed consensus of key community representatives was so much needed to establish the credibility of allowing forest-mining. Thus, contrary to the general expectation that more competitive (adversarial) strategies will be used as conflict progresses over time, these observations seem to point to the fact that strategic response depends more on prevailing context situations that are interpreted as potential threats and constrains to desired actions and power bases.

Having explored the trend of resource mobilisation in actor power strategy deployment, an assessment of the effectiveness of these efforts, both episodically and in managing or ending the conflicts is now elaborated.

5.6 EFFECTIVENESS OF ACTOR-EMPOWERMENT

5.6.1 Episodic effectiveness

The following actor-empowerment efforts had direct episodic effect, though as has been mentioned, one cannot discount 'built-up' effects of previous actions due to the consistency principle.

First, by using litigation, actors were able to 'drag' competing actors to interact as exemplified in the adjudication tussles between opponent paramount chief and sub-chief in the case of R1. This is so commonly expected that one may be tempted to argue that it does not fit our exploration of episodic effectiveness in actor empowerment as competing actors are 'compelled' by law to 'show up'. However, it is important to start a discussion on episodic effectiveness with this, as the mobilisation of the law and use of litigation is not openly accessible to all. For example, even though an elder of opposition group at R3 discounted the traditional argumentation which purported to subordinate position of the opponent chief to that of the paramount chief on customary grounds, they could not take the issue to court, especially surprising, as they employed the services of a legal practitioner. For whatever reasons, since an actor may be constrained in his empowerment to use court action, successful employment of litigation should be seen as episodically effective in actor-empowerment. Second, a common pattern of actions with episodic effects were visible actions of mobilisation of high status institutional agencies. In case of R1 and R2, opponents' petitions for government intervention provoked reactions from proponents. The term 'visibility' is used intentionally as attempts to mobilise donors to pressurise government did not provoke reaction from proponents. It was observed that the letter to the donor was not circulated to government and since donors were not, agentially speaking, part of proponents' network, it was more likely that the proponents did not get to know about such mobilisation. Third, actor actions that mobilised resources to threaten the power base of competing actors were episodically effective. This was particularly exemplified at R1, where attempts to promote lower chief was challenged and use of political pressure and its implications for maintaining

chiefly status resulted in compromise for participating in official meetings. The opponent paramount chief commented in an interview:

"As traditional ruler, you don't allow your stool to be bashed in the public, you should keep quite otherwise you leave the stool[28]".

Fourth, the use of the media proved to be effective at provoking reactions from conflict actors. Following cases R1 and R2, it was observed that, press conferences for example, provoked counter press conferences, counter actions such increased threats or public actions such as organisation of public hearing. Fifth, avoidance actions that created indispensability of actors to the interest of competing actors provoked reactions to seek interaction. Again, case R1 exemplifies this when opponent paramount chief avoided participating in two public meetings (durbar of chiefs and public hearing). Notwithstanding the relatively popular support of traditional leaders for the project, as the traditional authority owning the larger portion of the forest reserve, his consent was critical to the successful implementation of the project; at least he was needed to endorse lease documents. Thus, aside the symbolic damage of his avoidance to the entire forest-mining discourse in public eye, he was substantively needed in project administration. It is this substantive indispensability of his traditional legitimacy in this context that made his use of avoidance effective at provoking actions by proponents to get him into the process. Lastly, when threats were actually deployed, it provoked competing actors to respond. Examples are the actions of opponents at R2 such as petitioning government when activists were arrested and publishing complain about the summons and mistreatment of community activists by a traditional leader in the media.

5.6.2 Management effectiveness

In terms of the overall outcome of the conflicts, i.e. management or termination, one can argue that proponents' empowerment efforts at all the Reserve areas were more effective than opponents. In all cases, the forest-mining projects were ultimately implemented or at least received official endorsement for implementation. Notwithstanding, opponents' empowerment efforts were not fruitless. In all cases, the projects were substantially delayed, media and public discussions heightened and several compromises achieved. For example, at Reserve 1, a joint standing community consultative committee with opposition representation was formed and social benefits from the project secured for opponents' communities. At R2 and R3, the conflict resulted in admission of community representatives in the corporate technical committees working on farms and land compensation schemes.

The question of why proponents succeeded to 'push' the projects through and why opponents' could not 'block' the projects is relevant for enlightenment. From analysis of the respective narratives on actors' empowerment, several factors can be identified. To account for the effectiveness of proponents, four main empowerment factors were responsible. First, in all cases, it was observed that proponents were able to effectively mobilise local political and traditional leaders into their network through economic

[28] This comment was made following allegations that proponents were instigating some leaders to destool the opponent paramount chief. He later admitted in our interview that politicians are capable of working to instigate the destoolment of a chief.

inducements, framing mining as a contributor to the social and economic well-being of their people; in some cases, providing direct rewards to these leaders. In this sense, the comment by a paramount chief that 'fighting the company is like fighting the people' summarises the point. In respect of mobilising traditional leaders, the proponents were still effective at overpowering or at least balancing resistance from other traditional leaders, as exemplified in cases R1 and R3. In the case of R1, additional efforts to balance the power structures were made by 'sponsoring' the elevation of a lower chief to paramount status. At R3, the proponents overpowered the potential threat of opposing chief by their effective deployment of superior traditional authorities who persuaded the meeting that 'the position of the chief was not a serious problem', concluding by asserting that 'since there seems to be consensus from *Nananom*[29], the project should be allowed to go on'. Interestingly, his speech received mass applause and effectively neutralised the opposition, enabling the project to receive official community endorsement. Two factors were resourceful in this scenario. First, the institutional legitimacy of the paramount chief was relatively superior to the opposition chief, making him 'more' representative of the people and therefore his words more important. Second, the orientation of the audience using customary narrative to effectively subordinate the opposition chief to the decision of *Nananom* was an important signal to the officials that his position, though antagonistic, does not really change the support for the project.

Second, related to the mobilisation of local political leaders, most of which were also government appointees, an effective command linkage was established at the local arena where the implementation of decisions of central government must by supported. Thus, in all cases, the proponents virtually had the 'blessing' of public institutions due to mobilisation of political leaders in their network, reflecting in their ability to block planned demonstrations, prevent entry to communities by opponents from outside and so on. Third, by the very nature of the institutional arrangement for community representation in official decision-making, traditionally, chiefs and recently political leaders have often assumed the position as representatives. Thus, by succeeding to mobilise these actors into their network in all the cases, the official processes such as the Public Hearing meetings, which was a platform for ascertaining community grievances and concerns were virtually monopolised. Given this reality, even though such activities may be 'public', it is not in actual sense open to the public.

Turning to explore why opponents' empowerment were not effective at blocking the forest-mining projects will elucidate these points further. First, the possession of institutional legitimacy and their status in the respective hierarchies (traditional and political) was a crucial power resource and as shown before in case R1 and R3, where opponents were 'ripped' of this and their conflict capabilities were constrained. In case R2 for example, the opponents were civil activists which were not part of the local policy community and did not have 'rights' or better still, the legitimacy as 'admitted' stakeholders to participate in the control and management of natural resources. Not surprisingly, even though some opponents were present at the public hearing, they could not openly challenge the supportive statements of chiefs and local government officials. Again, though through their coalition with national NGOs, their

[29] This is a traditional term used to describe an assemblage of chiefs and elders in a particular jurisdictional area. It usually describes the embodiment of the traditional leaders and its usage has representative connotation.

actions were effective at heightening the issue, at least in the media, the coalitional protest was not sufficient to induce local resistance to and over power local support for the project. In case R3, though the leading opponent was a chief, his position in the chieftaincy hierarchy as a non-paramount chief and the fact that the prospective forest area to be mined was outside his stool land were critical limiting factors since effectively his endorsement was not needed in any official transaction in the project.

Second, in all cases, the opponents' attempt to mobilise the intervention of critical institutional agents like top-level national government officials and donors was not successful. This is not surprising as such mobilisations at the national level had already failed, given their respective positions on the matter. Third, opponents generally did not contest the endorsement of official community positions as 'unrepresentative' and in the case of R1 and R2 where they did, they were not effective. In case of R1, the opponents, following internal political and social pressure, compromised by joining a consultative committee to address concerns. In case of R2, notwithstanding the prominence of their contest using framing of mining as anti-social and anti-development, NGOs, media and constitutional rights of freedom of expression, they were not effective at provoking official enquiry or re-assessment of extent of community support. Thus, even though the opponents succeeded in keeping the momentum of the conflict in public domain, they lacked the 'representative' legitimacy to translate this into a process that could challenge the official endorsements and reinvent the wheel.

The other aspect of management effectiveness was on the termination of the conflicts. In all cases, proponents succeeded, aside getting their projects through, to cause opponents to withdraw or accommodate, reversing the conflict into latent phase. In R1, it might be said that the conflict was managed as at least opponents joined proponents in collective action to address concerns. At R2 though opponents were observed to be accommodating, the conflict may erupt if proponents are not able to sustain the use of threats of consequences for any opposition. At R3, proponents counteraction seem to have resulted in enduring withdrawal by opponents especially when they did not counteract proponents' actions at public hearing and did not raise any conflicting views at a second public meeting. In all cases, latter developments regarding fulfilment of promises of rewards, community benefits etc will determine the future status of these termination conditions.

5.7 SUMMARY AND CONCLUSION- CASE STUDY

Confronting the presentation and elaborations made so far with the research questions, the following conclusive observations can be made, taking the lessons from all the Reserve area conflicts together. First, the conflicts exhibited imperfect reciprocal pattern, deviating from the theoretical perfect reciprocal pattern. This suggests that not all conflict actions in actors' empowerment efforts had episodic effectiveness. The study showed that aside actual employment of the law through court suit, other power strategies needed certain critical resources to have episodic effect. It has been observed that such critical resources include the use of the media, execution of threats including types that seek to challenge the power bases of actors (de-legitimise), mobilisation of supra-local (external) structures of political influence and civil society (NGO) networking. Second, the use of power strategies did not follow any predictable

pattern, though the deployment of strategies progressively involved increased mobilisation of power resources. Third, the patterns of strategy configurations showed that both direct and inverse reciprocity patterns prominently characterised actor empowerment, though cooperative reciprocity dominated in all cases. Specifically, none of the hypothetical expectations on reciprocity was fully confirmed, suggesting a mixture of both reciprocal and rational behaviour patterns in the conflict. Fourth, all categories of power resources were mobilised by both proponents and opponents in all cases and the mobilisation of their dimensions generally increased in their use in specific strategies, as hypothetically expected. However, while both proponents and opponents generally balanced their use of institutional, social and orientational resources, the gap between them in terms of use of socio-economic resources was relatively large and skewed towards proponents. This is not surprising given that in all cases, the proponent network consisted of corporate actors with huge financial resources compared to other actors in the opponents' networks. This influenced the pattern of power resource mobilisation because actors with access to wealth were enabled to mobilise critical institutional resources such as local traditional and political authorities.

The studied cases have also shown that the management effectiveness of actor-empowerment, particularly in achieving interests, at the local level depended on three critical power resources, wealth, traditional and political network and access to institutional processes. Fundamentally, access to economic resources to mobilise and organise important social and institutional resources such as building local elites into one's network is perhaps the most crucial factor to management effectiveness. Second, institutional structures or agents with political and traditional legitimacies such as chiefs and DCEs proved to be very important resources needed in one's actor-empowerment network to be effective. Particularly, paramount chiefs demonstrated to be almost indispensable agents to actor-empowerment effectiveness. Thirdly, within the confines of the established and institutionalised processes of stakeholder consultation and decision-making at the local arena such as Public Hearing meetings, an actor's 'admitted' membership (i.e. political representation) proved to be a crucial infra resource for actor-empowerment to have management effectiveness.

6. ACTOR-EMPOWERMENT IN TWO-ACTOR SCENARIO AT LOCAL LEVEL: A CASE OF LOGGING DAMAGE COMPENSATION CONFLICT

> To a large extent, deforestation is caused by disagreement between stakeholders on how to manage the forest and for what, and how to share the benefits and costs of forest management. As a rule, national level governments have neglected the needs and concerns of local communities and forest dependent people in favour of interests that are powerful or that benefit the national interests directly (FAO, 2003)

This chapter presents the empirical results on some studied conflicts related to the payment of compensation for crop damages due to logging at the local community level. It begins with a clarification of the conflict context by underscoring tree ownership and tenure rights and the legal framework of compensation payment vis-à-vis forest management in off-reserve farmlands in Ghana. This is followed by a section on the empirical approaches including the selection of the study areas, respondents and informants, data collection and analysis. In terms of the presentation of chronological sequences of the episodes studied, this chapter differs slightly in structure because the number of the individual 2-actor episodes in this case is relatively very large. Hence a dataset on the individual episodes has been presented as annex 4, leaving the descriptions and presentations out of the results in the chapter. The presentation of the empirical results thus begins, first, by outlining the chronological patterns of the studied conflicts, then focus on patterns of power resources and strategies and finally on an assessment of actor-empowerment effectiveness. The overall results with regard to research questions 1-4 are summarised in a conclusion section.

6.1 CONFLICT CONTEXT

Natural resource management and use at the local arena in Ghana provides several two-actor (interpersonal) contexts for the study of actor-empowerment in conflict. Characteristically, two-actor forest-related conflict scenarios at the local level have involved those between community members and FSD on access to forest land for farming or NTFP collection, between farmers and timber concessionaires (contractors) on crop damage compensation payment as a result of logging on farmlands, between concessionaires or landowners on concession/forestland boundaries and between 'illegal' chainsaw operators and FSD.

To appreciate such conflicts, one needs to appreciate the tree ownership, tenure and management rights, the geo-social setting of off-reserve forest communities and the economic and political positions of forestry and community actors. First, with regard to resource and spatial setting, forest reserves are compartmentalised with boundaries, making concession allocations somewhat orderly. In off-reserve areas, timber resources are interspersed in communal lands, farmlands and community settlements, making off-reserve concession boundaries unclear. The management of forest resources, both on and off-reserve is undertaken by the state forestry agency, the

Forest Service Division of the Forestry Commission (FSD). However, no intensive management operations are undertaken in off-reserve areas as, until recently, the policy was progressive liquidation of off-reserve forests and conversion to agricultural lands (Inkoom, 1999). Although the exact estimation of closed forest canopy in areas outside forest reserves is sketchy ((Inkoom, 1999), the forest resources in the complex mosaic of farmland and secondary forest in the off-reserve areas are considerable. Treue (2001) has shown that off-reserve timber extraction has always accounted for a substantial share of the total recorded timber extraction in Ghana. This substantial stock of trees in off-reserves has been observed to be due mainly to the cultivation of the dominant cash crop, cocoa, which requires considerable shade tree cover (Inkoom, 1999). Aside patches of communal secondary forests (like sacred groves); most of the off-reserve forest resources are located in farmlands dedicated to food crop cultivation cash crop plantations.

Second, the issue of land and tree tenure rights[30] and timber logging rights, especially in the off-reserve areas of Ghana's high forest zone is complex. As rightly observed by Inkoom (1999:73), "across the tropical high forest zone the general 'customary' law position is that things naturally embedded in, growing on, attached to, flowing through, found on etc the land are held in trust for the community and administered by the traditional authority. However, in practice, Klutse (1973) has noted that there is a distinction between interest in the land itself and interests in things on or attached to the land. With specific emphasise on trees, depending on whether it is planted or naturally occurring and whether it occurs in family, communal or rented land, several usufruct rights exist. For example, Agyeman (1994) has observed that when a tree occurs naturally on family lands, tenants can harvest it or parts of it but not allowed to sell them. They can however dispose of planted commercial trees after consultation with the landlord, who normally requests a percentage of the revenue.

Since the passage of the Concessions Act in 1962, all trees, irrespective of where they occur, are vested in the President in trust for the people. Consequently, the right to control and manage tree resources, including allocation of logging rights, is vested in the state. Farmers have no role in controlling felling on their farms and have no rights to fell timber trees on their farms, though continue to exercise judgement over which trees to maintain on their farms, during clearing for cultivation for example (Amanor 1999). Currently, the state exercises jurisdiction over timber rights allocation and as explained in earlier chapters, the revenue accruing to timber sales, irrespective of source of timber, is shared among the District Assembly, landowners (Chiefs), Administrator of stool lands (public agency) and Forestry Commission. Farmers do not have any share of forest revenue because, by customary conventions, the ownership of the land is rather vested in stools (traditional authorities) and for that matter the natural trees growing from the land. However, farmers' right of consultation before timber operations as has been recently admitted by law:

"No timber rights shall be granted in respect of lands with farms without the authorisation in writing of the individual, group or owner concerned" (Timber Resource Management Act 1997, s4.2d).

[30] Tree tenure has been defined by Fortmann (1985) as a bundle of rights over trees and tree products, each of which may be held by different people at different times. These rights include the right to own, inherit, dispose, use and exclude others from using trees and tree products

In addition to tree ownership, management, and benefit sharing rights, the general socio-economic and geographical positions of local actors (e.g. farmers) and outsiders (e.g. timber concessionaires) also provide an important context. Most timber firms are located in the cities and towns which are normally far away from the specific areas where timber logging operations are carried out. Besides public administrative agencies are mostly located in cities and in district capitals and it is not common to find police stations, forestry offices, courts and other public agencies in rural areas in Ghana. Typically, farmers live in villages, and commute daily to their farms and back to their settlement. Farming in Ghana is generally labour-intensive. Poverty is predominant in rural areas accounting for more than 70% of the poor, and in terms of economic activity, poverty is by far highest among crop farmers with about 59% of them living below the poverty line in Ghana (Ghana Statistical Service, 2000). This income poverty situation has affected levels of education, access to health care and general standard of living. In terms of political setup, most communities are governed by both traditional (chiefs) and local government representatives as explained in chapter 5. None of these local governing structures have formal roles in forest management meanwhile the state agency (FSD) and its officialdom is virtually not present at the community level due to huge logistical constraint (see Asante, 2005).This has created gaps in terms of monitoring of forest operations at the community level. Aside this, local people in general do not have any official role to play in forest management, in spite of the fact that farmers have historically managed natural tree resources on their farms (see Amanor, 1999, 2005). Besides formal roles, farmers are poorly organised, with virtually no political representation in resource management and local decision-making in general. This situation has led to a scenario of 'each one for himself God for us all' and when popular representation is needed, community members including farmers are usually represented by local elites and leadership structures (Marfo, 2001). Thus, the prevailing institutional, social, economic and political situation at the community level define the structural constraints encountered by conflict actors, especially with regard to natural resource use where local actors often have to encounter external public or private actors. It is within this broad context that conflicts between local individuals and external actors for example should be situated.

Compensation payment as a result of crop damages of timber operations in farm areas has been one of the most pervasive conflict issues in forest management in Ghana. Long ago, Asare (1970:10) observed that:

"The cocoa farmer has developed a more implacable hatred towards the timber contractor than the beasts that thrive on his cocoa fruits and seedlings, now they make sure that during the clearing of the forest every good quality timber tree is destroyed before the contractor menacingly invades his cocoa farm with a caterpillar"

The legal framework covering the issue of compensation for crop damage is quite pluralistic, often complicating the issue. According to the Economic Crop Protection Decree of 1979 (AFRCD[31] 47), it is illegal to fell timber on a cocoa farm, but in practice, this is not upheld. Inkoom (1999) noted that concession leases issued after this decree further confuse the issue by stipulating that compensation should be paid for crop damage. The practical approach has been the development of official

[31] Armed Forces Revolutionary Council Decree

valuation rates which are determined by Land Valuation Board, but observations are that these are not regularly reviewed and updated[32].

Many studies have observed that in many cases compensations are either not paid or amounts paid are woefully inadequate (IIED, 1993; Treue, 2001; Amanor 2002). Inkoom (1999:105) observes that "while compensation is paid by some companies, this is by no means the rule and in many places, farmers are destroying trees because of inadequate compensation". That until 1995, not only could timber operators legally fell trees on farmland without the permission from farmers but compensation rates for the considerable damage done to crops were derisory. In addition most timber contractors could (and did) avoid paying any compensation at all (Amanor, 2002: 314). In connection with this and other forest management issues, timber merchants have traditionally wielded enormous economic and political power and it has been quite difficult to implement forest management practices which in many instances have been contrary to their economic objectives (Inkoom, 1999; Kotey et al., 1998).

This situation has led to destructive coping strategies by farmers. For instance Amanor (2002: 316) has observed that many farmers destroy timber trees on their land, ostensibly to make way for cultivation, but in reality to deny timber companies any excuse for encroaching on their farms and destroy their crops. He explained that in justifying the destruction of timber by citing the greater good of oil palm cultivation, farmers are employing a discourse which highlights the contradictions inherent in national and regional development policy and practice, while at the same time wreaking vengeance on the timber sector and its operators and managers. By converting to oil palm cultivation, farmers are able to thwart timber contractors while also gaining a powerful patron/ally with strong contacts to the state. The oil palm cultivation is controlled by powerful economic interests such as Unilever (Amanor 2002: 317). This oil palm cultivation on farm lands is a strategy available to farmers but as Amanor has also observed, the majority of farmers do not have the necessary capital to invest in oil palm plantations. In short, farmers have a wide diversity of strategies to cope but have potentials to be destructive. The issue is problematic and provides a practical context for any management intervention.

6.2 EMPIRICAL APPROACH

6.2.1 Selection of case study areas

As indicated before, the crop damage compensation payment conflict was an interesting case for studying actor-empowerment because they occurred in a purely local setting and context and presented a typical two-actor interpersonal scenario. Aside these, it had policy relevance, in that, it represents one of the most ubiquitous conflict issues in off-reserve areas with observed destructive consequences for sustainable forest management.

[32] The latest version of this available to District forestry officials at *Bibiani* that was shown to the Researcher was prepared in 1997.

A case study of crop damage compensation payment conflict was conducted using what might be called core-periphery case selection technique. This approach was to offer opportunity for a detail case study at one community where, aside following narratives of actors' conflict actions, their characteristics which might influence their conflict actions could also be studied. This was followed up by studies in other communities where only data on conflict narratives were collected. The core study was made at *Wioso*, a farming community in the Nkawie Forest District and supplementary study at five other communities in four Forest Districts identified from the background study as having reasonably high incidences of farmer-contractor conflicts in the forested farming areas off-reserves. The selection of *Wioso* for the core case study was purposive based on the professional advice from the District Forest office on the relative prominence of farmer-contractor conflicts in the District.

A brief description of *Wioso* community

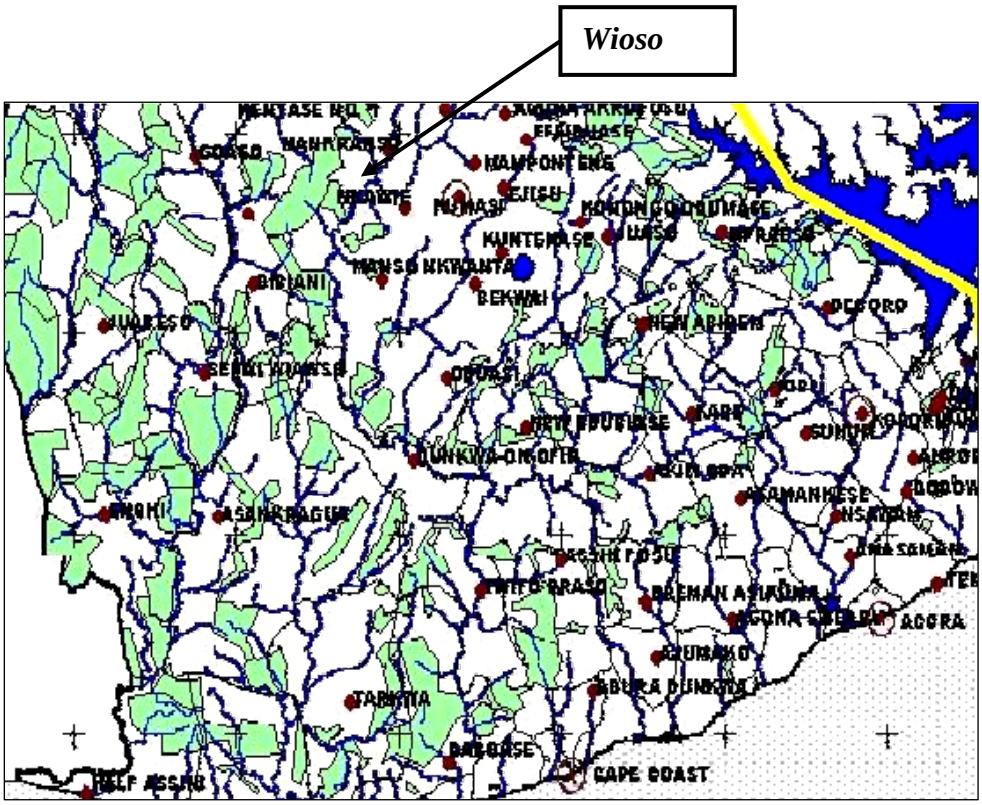


Figure 6.1 a map of the high forest zone of Ghana indicating the location of the core study area, *Wioso.*

Wioso is located in the Ahafo-Ano South District and about 14.4km from the District capital, *Mankranso* in the Ashanti Region and under the Nkawie Forest District. The community lies in the valley of the Tinte Bepo and Tano Offin Forest Reserves. All farming lands belong to the *Ahia* stool lands, which is occupied by a divisional chief under the Kumasi Traditional Council, headed by the Asantehene. The community is populated with about 5,155 people, according to 2005 population estimates by the Regional Statistical Service. Table 6.1 summarises the population and housing data of the community.

Table 6.1 data on demographic characteristics of *Wioso* community

Demographic characteristic	**data**
Population	3,207
Age structure	76.2% below 18 23.8% above 18
Total houses	195
Total households	534
Average household size	6
Distance to nearest post office	4km
Distance to nearest telephone facility	19km
Health facilities	Traditional health centre and clinic
Distance to nearest hospital	15km
Educational facilities	Primary and junior secondary (elementary)
Distance to nearest secondary school	15km
Law enforcement facilities	No court but police post

(Source: 2000 population and housing census, Ghana Statistical Service)

History

The ancestors of the community migrated from *Maabang.* Many people migrated from other areas mainly *Kokofu, Poamo, Asunua, Anomanye* and *Akropong* to settle in the community making the community highly diverse in terms of ancestral lineage. The principal god (*obosom* in *Akan* language) in the community is the *Tano* who is historically famous for having powers to grant children to barren women and for protection against evil attacks. The presence of the *Tano* god accounts for the long immigration history of the community. It is said that, many people who came to the god for protection and birth did not go back to their hometown as the god insisted that they live in the community for her continuous protection of the children. The god has a traditional name as '*okyereampim'* literally meaning the 'one who is able to capture thousands'. Owing to the strategic location of the community, as located in a forested area and sandwiched between two forest reserves, chainsaw logging has also brought some people from other places to settle in the community. Tuesdays are holidays in the community as custom holds that it is the day of the gods and they believe that evil can befall anybody who goes to the farm or the forest.

Local governance system

The community is governed by both traditional and local government systems. Traditionally, the community is headed by a caretaker chief '*Odikoro*' and his elders who serve the *Ahia* divisional chief in Kumasi. Owing to the status of the traditional leader as an '*Odikoro*', the chief does not wield substantial power and control since large tracks of community lands are 'owned' by families and that an '*Odikoro*' is the least powerful traditional leader. In many cases, issues concerning lands are usually referred to the divisional chief in Kumasi. Politically, the community is represented by two Assemblymen, each representing an electoral area, and the unit committee members who form the local government structure and represent the community in the District Assembly. Essentially, members of the unit committees and the traditional elders of the community form the leadership bloc as rulers of the land.

The community has a police post with about four personnel. It has basic education facilities but no secondary or tertiary schools. Until about four years ago, the community did not have tarred roads. It is still not connected to the national electricity grid. The population is predominantly farmers (about 87% of adults). Crops grown are

mainly cash crops such as cocoa and food crops such as cassava, plantain and cocoyam.

It was alleged that many residents in the community work as 'tree hunters' who spot locations of merchantable trees on farmlands, communal lands and fallow lands for timbermen. Packed chain and axe-sawn lumber were observed in about 20 houses during house surveys to count farmers. In a transect walk on 3 farmland paths, logs were also found in some farm and fallow lands. All these supported the claim by some farmers and forestry officials about the prominence of timber harvesting (both legal and illegal) in the *Wioso* community.

6.2.2 Data collection and analysis

Selection of Respondents

The general sampling approach was to conduct a detail study on all (100%) the farmers who had been involved in compensation conflicts for the past 5 years in one community, and follow up with other cases, based on informant lead, in other communities. It was assumed that narratives may be distorted if events were too old since respondents may not effectively recall all actions taken. Table 6.2 gives a summary of the selection of farmers as respondents for compensation conflict interviews.

Table 6.2 summary of selection of farmers for compensation conflict interviews

Community	No. of respondent farmers	Sampling type
Wioso (Nkawie)	35	100% purposive
Foase (Nkawie)	28	Incomplete purposive
Adumasa (Juaso)	4	Incomplete purposive
Bronikrom (New Edubiase)	2	Incomplete purposive
Lineso (Bibiani)	12	Incomplete purposive
Total	**81**	

Selection of respondents at core study area
At *Wioso*, the core study community, a 100% survey of farmers was made to ascertain those who have experienced crop damage impairment and those who have not, using farmer durbar on taboo day complemented with house-to-house survey. Based on this survey, 35 farmers could be said to have been or were involved in conflict with timber contractors as they expressly indicated experienced impairment as a result of logging on their farms. These farmers were selected for the detail study focussing on the narrative of the conflict including their actions and reactions from contractors. Aside a narrative of their conflict episodes, data on the gender, educational level, social and economic status and migration status of each farmer was also collected. The social setting of this community was studied, as mentioned in before, in order to provide a context for detail analysis of the observed patterns of actor-empowerment strategies and to offer possible explanations to the empirical observations.

Selection of respondents in other areas
The reconnaissance study showed that crop-damage related conflicts are prevalent in almost all off-reserve farming areas in Ghana. In order to be able to compare the observed patterns in the core case study area with other forested farming areas, 46

more farmers selected from various communities in four District forest areas were interviewed. The selection of this respondent size was informed by the literature recommendation that for a comprehensive and representative analysis in such an explorative social research, 30-50 respondents is ideal (Bernard, 1995). In addition, familiar patters of actor empowerment strategies were observed in the actor narratives after about thirty interviews had been conducted, which made continuation of the exercise a repetitive and obsolete as a representative picture had already been captured.

These 'aggrieved' farmers interviewed from five farming communities in *Juaso, Bibiani, New Edubiase* and *Nkawie* forest areas were identified with the assistance of Technical Forestry Officers, community leaders and some farmers. These farmers were interviewed only to ascertain their empowerment strategies in order to give a broader picture of the patterns of empowerment strategies used by farmers and contractors. Only conflict narratives were captured from the farmers without particular attention to any background information on the farmers or their communities. The data collected from these interviews was to complement the analysis of patterns of actor empowerment strategies and resources.

Farmer characteristics

Aside narrative on farmer conflicts with contractors regarding payment of compensation for crop damages by timber logging on their farms, other data on some farmer characteristics were additionally collected. This was mainly to ascertain farmer socio-economic status and knowledge level with regard to relevant forestry laws. Hermens (1999) has observed access to means of production as crucial since actors possessing economic resources are usually able to assess other power resources. Thus, farmers' socioeconomic status was taken as an indicator to measure their economic resourcefulness in explaining their empowerment.

The variables traditionally used to assess social standing are education, occupation and income; additional measures include employment status, possessions and presence of reading materials at the home (Powers, 1981). The estimation of farmer income levels in rural Ghanaian settings is problematic for two main reasons. First, apart from farmers' earnings from cash crops such as cocoa which can easily be estimated by multiplying market price by quantity harvested and sold, earnings from food crops are difficult to estimate. Food crops are generally produced for subsistence consumption and farmers do not keep any records of their production, making quotation of quantity uncertain. Second, there are no standards for pricing food crops and actual prices of crops depends on bargaining skills of farmer and buyer, the urgency of the need for cash and other circumstances. Due to the practical difficulty of estimating farmer incomes, we relied on farmers' own estimation of their total annual income levels.

In order to have an indication to assess farmers' income levels, the official poverty index as an indicator of farmer income levels was used. According to the 2000 Ghana Poverty Standards Survey, the lower poverty line was GHC 600,000 (USD 80) per year and this is the critical minimum money required for people to meet their basic human needs like food, accommodation and clothing (Ghana Statistical Service, 2000). The poverty index indicator was seen as appropriate for the study since access to conventional conflict management avenues such as court action, police case,

mediation or arbitration by responsible state agencies requires possession of economic resources that can be spent over and above that required for securing critical basic needs. Using the 2000 lower poverty line of 600,000 (USD 80), the UN poverty line of USD 1/day (equivalent of USD 365/year), the following income poverty status categorisations were used to classify farmers.

1. below USD 80 = very poor
2. Between USD 80 to USD 365/year = poor
3. above USD 365 = not poor

The following other characteristics in addition to gender were studied:

- Educational status: low and high depending on ability to read and write
- Migration status: depending on whether farmer is a native (hail from community) or not, bearing in mind such status is an important social capital that can determine one's accessibility to some people and privileges in rural Ghanaian setting.
- Relation with contractor: whether contractor is a relative, citizen of community or outsider, again noting that rural setting has strong social connections that influence norms for social behaviour.
- Level of knowledge of relevant forestry laws: whether farmer knows rights regarding consultation and compensation payments (satisfactory) or not (poor).

Generally, these statuses were assumed to increase farmer conflict capabilities. For example, farmers who hailed from a community may be assumed to have easier access to traditional and family members who can be used in their empowerment rather than 'strangers'. Similarly, those with high educational status may be assumed to be able to articulate their opinions than less educated ones. Thus, these characteristics were expected to give specific leverage to farmers to effectively engage contractors either by sustaining conflict (insisting on rights) or using more resource-demanding strategies.

Data collection techniques and analysis

The main data collection technique employed in this case was farmer narrative, aside interviews with informants (Forestry Officials, Chiefs and Loggers). A limitation in this case study was that in many instances it was practically difficult to trace timber contractors or their 'Bush Managers[33]' for their side of the interviews to help construct their action-response sequences. In such cases, the study depended only on farmer accounts and that of the official forestry officers (if case ever came to their attention!). To overcome this and improve the reliability on farmer accounts, two techniques were employed. First, a large number of farmers (81) were selected and their accounts were expected to give a true reflection of the empirical patterns of farmer-contractor empowerment strategies in the various conflict episodes, notwithstanding the potential for individual biases. Second, in order to get a 'representative' and independent view, especially about the general picture painted by farmers, the composite portrait technique was employed (see Van Mannen. 1995). Basically, this was to chronicle (sequence) a series of events from the various

[33] Many Timber concessionaires have agents who normally reside at the locality of logging operations and these are usually called 'Bush managers' and are those who practically interact with local people.

ethnographic accounts of the contractors (and bush managers) and forestry officials who were interviewed in order to gain a 'whole' picture of a typical scenario of farmer-contractor conflict. Even though the credibility of such composite stories has been questioned, there is a growing authoritative endorsement of its usefulness in communicating ethnographic findings (Hill, 2001).

"Under these circumstances, ethnographies are not evaluated on their objectivity but on their interest (does it matter?), coherence (does it hang together?) and fidelity (does it seem true?)" (Hill, 2001"368)

The application of this technique in this case is defensible especially as it was 'only' used to crosscheck or verify general episodic scenarios as narrated by farmers and not really as 'facts' to represent any particular contractor's view. As the composite portrait generally reflected farmer accounts, the farmer narratives were used for data analysis.

Following the systematic data reduction procedure using coding and validity and reliability checks, as explained in the chapter 3, a dataset containing the chronological actions, actor strategies and resources for all the 81 studied conflicts was constructed using Microsoft Excel. Analysis for patterns were made using this dataset while the 'original' field notes were kept for detail content analysis of specific accounts to improve the explanation of the observed patterns. Descriptive statistics and graphical representations were employed to enhance the display of patterns. Moreover, in the case of assessing relations of farmer characteristics with specific variables such as power strategies, graphical representations and non-parametric statistical tests were employed to ascertain statistical significance, using an SPSS dataset. This is because no assumption about the distribution of the impaired farmers in the population was made; besides, the analysis was based on counts (frequencies) and not on parametric variables and sample size (see Bryman and Cramer 1999). The justification for the specific statistical test employed is footnoted in the appropriate text in the relevant empirical sections. In cases of statistical test, only data from the core study area, *Wioso*, was used since the 100% sampling of impaired farmers makes a representative sample for statistical analysis and inferences to be drawn. Hence, statistical results are only used for illustrative purposes and not to make any generalised claims on farmer empowerment. We now turn to the presentation of the empirical results, starting with the chronological characteristics of the farmer-contractor conflict episodes.

6.3 CONSTRUCTED NARRATIVE OF THE CONFLICT EPISODES

Looking at the 81 studied farmer-contractor episodes in addition to informant accounts, the bases for the conflicts are summarised before the chronological patterns of the various episodes are elaborated.

6.3.1 Issues and positions: farmers and contractors

To put actors in the proponent-opponent perspective, farmers were considered proponents since the demand for compensation usually come from their end; contractors then as opponents. From farmer narratives and informants' accounts, it was observed that the compensation conflict has several dimensions.

The main basis of compensation payment conflicts have been claims by farmers for financial compensation owing to destruction of crops or properties as a result of timber operations in off-reserve farmlands. It was observed that many farmers were either ignorant of the official figures for crop damage compensation or refused to use them since they saw it as too low; the negotiation over what should be adequate was mostly problematic. The demand by farmers was usually perceived to be too high compared to the official figures and the offers by contractors perceived by farmers as too low relative to the market value of destroyed crops. In the studied conflicts, it was clear that farmers used their own estimation without making reference to official compensation rates. Although it was established that farmers' knowledge about the officials rates for crop compensation was generally low, the fact that many of them counter argued against such suggested rates by contractors seems to suggest that farmers were using their own valuation or estimation of the losses. Commonly, farmers who were confronted with such official valuation rates rejected them giving their contextual situations such as prevailing market prices of produce and cost of hired labour (*baaday* as normally called in popular local parlance). Such differing context considerations may result in different estimations of crop damage. For example, in situations where a farmer uses family labour, he may not factor that into his calculation of 'reasonable' compensation but a farmer who used hired labour may emphasise high labour cost in estimation giving rise to different compensation demands. Excerpts from two accounts may highlight the point:

"…after Nana *(chief)* went to inspect the extent of damage himself, the contractor promised to pay GHC 50, 000[34]. I didn't agree because one bag of ginger costs GHC 125,000, moreover I had to hire labour which amount to extra cost, so it will be cheating if I accepted this…" (Farmer at Nkawie, 2003)

"…I met them *(contractor's team)* and was annoyed with one of them who said they will only pay for the cocoa and not food crops. I told them I have not even paid for the *baaday* boy who cleared the land for the cultivation of the food crop and that what they are offering me cannot even pay for that, let alone the crops…" (Farmer at Adumasa, 2003).

So, it was clear that standard technical rates recommended to be applied across board could not take such specific context factors into consideration. The question is normally then whose estimation 'actually' reflects the value of the damage and therefore constitute adequate compensation? It is the misunderstanding that often resulted from such subjective evaluations that may postpone or leave the bargaining open which may motivate contractors to use promises to get their operations going on and never to come back again

Second, the conflicts have also arisen due to contentions over rights of extraction against rights for compensation, the adequacy of offered compensation, the identity of 'culprit' and over delay in payments. Some timber contractors use their official logging rights in the form of official permits to argue that they have paid every related cost of harvesting the trees to government. Against this argument, the right to be compensated has been used by farmers and when these two arguments clash, there was usually a conflict.

Third, since more than one timber contractor may be working in a particular off-reserve area and given the widespread of illegal timber operations in almost all parts

[34] The Cedi (GHC) is the Ghanaian monetary currency (1USD = 9000 Cedis, by average 2005 exchange rate)

of the high forest zone of Ghana, the identification of who caused specific damage was also observed as a cause. While farmers may point fingers to particular contractors, contractors may deny knowledge of the referred operations. In this case, the point of contention had been evidence to prove who destroyed the crops, before compensation is discussed. Lastly, the long delays in payment of compensation have been observed as an important basis of many compensation related conflicts. In some cases, contractors promised payment and after operations no compensations were paid only for farmers to recognise that they had vacated the community.

6.3.2 Conflict episodes

Annex 4 contains the dataset of all the farmer-contractor conflicts studied. It can be inferred that the various conflict episodes differed in the length or number of their action-reaction sequences before the conflict 'ended'. Unlike the national and reserve areas conflict cases where the chronological sequences of proponents and opponents were elaborated, this is not the case here due to the large number of individual cases of proponent-opponent interactions. Rather, the length of the sequences and the strategies and resources employed at specific chronological steps by all the studied episodes are used. By comparing the chronological sequences of the 81 studied farmer-contractor conflict episodes and their percentage frequencies of occurrence using a time-series graph, figure 6.2 shows the chronological characteristics of the farmer-contractor conflict episodes. From figure 6.2, it can be inferred that on the average, most conflict episodes 'terminated' at chronological step 5. This means that most farmer-contractor interactions involved only two reciprocal episodes, usually terminating not because the conflicts were settled but because contractors were no longer available for interaction. Not surprisingly, it was observed that most conflict episodes were short-lived with less than 10% of them travelling beyond chronological sequence step 8. Generally, the longer conflict proceeded, the fewer the proportion of farmers who continued their conflict interactions.

By hypothesising that the educational, income poverty, migration and gender status may influence the chronological length of farmer conflict interactions, a statistical test[35] (at 0.01 significance level) showed that these characteristics did not significantly affect the chronological length of their conflict interaction with contractors. This test was carried out by grouping farmers into low and high groups using the average length of a chronological sequence step of 5 since about 50% of farmers reached this level (see figure 6.2).

[35] For tests involving two unrelated samples of categorical (gender, migration status) and non-categorical (poverty, educational and knowledge levels) variables, chi-square and Mann-Whitney *U* non-parametric tests have been respectively recommended (Bryman and Cramer 1999:136).

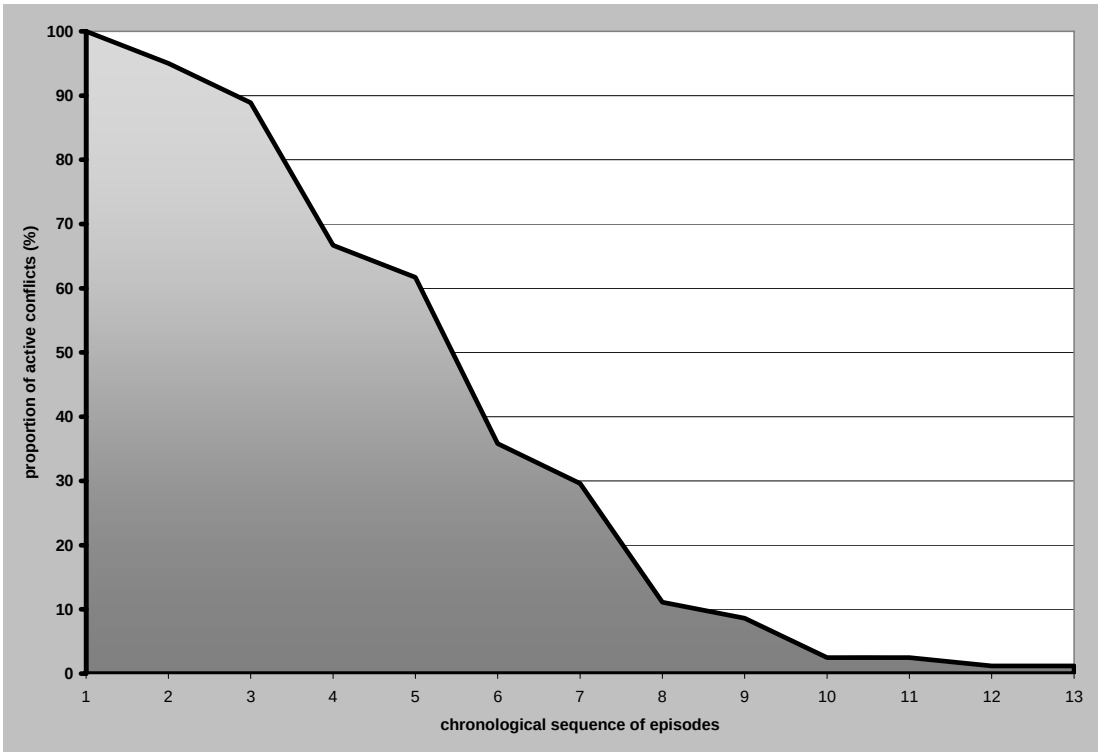


Figure 6.2 proportion of the number of conflicts actions (active conflict) that travelled through the various chronological sequence steps in the 81 farmer-contractor episodes. In all 409 specific actions at different chronological steps were involved.

Termination of conflict episodes

Looking at how the various episodes ended the dataset shows that the conflict episodes terminated at one of three points, settlement of compensation, accommodation and withdrawal. Figure 6.3 summarises the relative proportions of the various ending points of all the 81 conflict studied episodes. It shows that, about 50% of the episodes ended through withdrawal of farmers, 35% terminated with farmer accommodation and 15% through settlement of compensation by contractors. Although about 15% of the conflicts ended with settlement of compensation by contractors at steps 2, 4, 6 and 8, the dataset shows that there was a progressive decline in the proportion of conflicts ending through settlement with 50% at step 2, about 33% at step 4 and about 15% at steps 6 and 8 respectively.

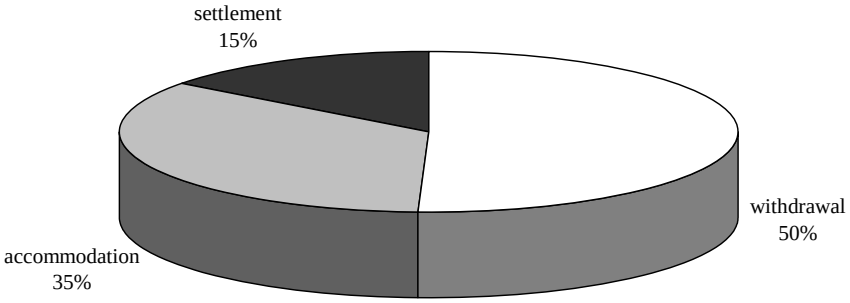


Figure 6.3 proportions of conflict episodes ending with withdrawal, accommodation and compensation settlement (N=81)

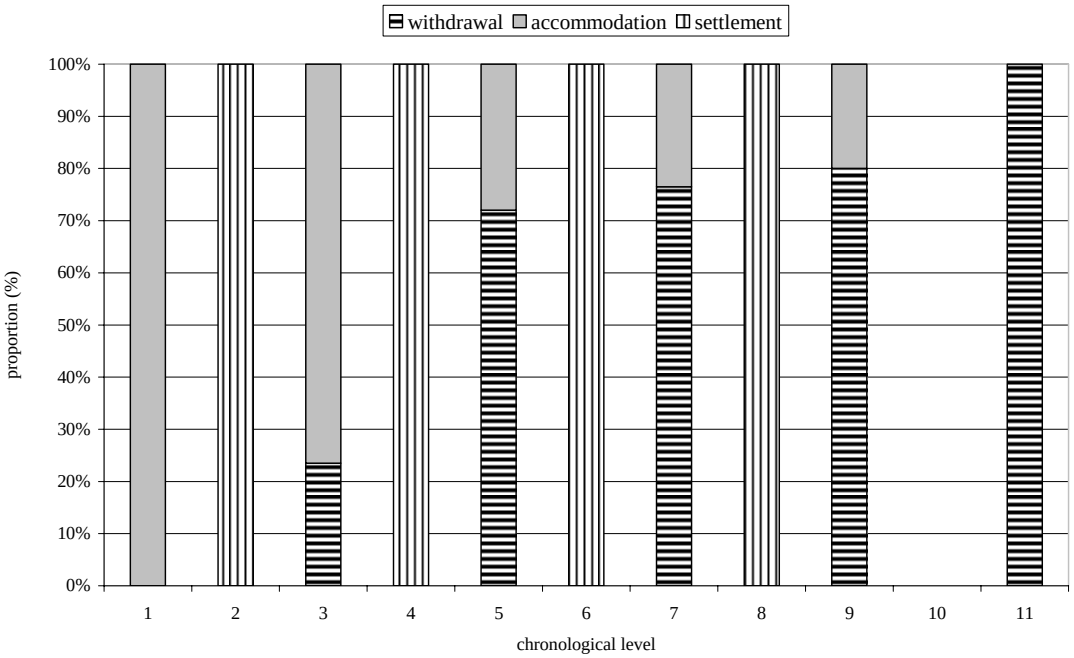


Figure 6.4 the number of conflict end points as a percentage proportion of conflict end points at specific chronological sequence steps in the 81 episodes.

A chronological pattern of the various end points in the studied episodes is shown in figure 6.4. It can be inferred from the figure that there was a progressive decline in the termination of conflicts through accommodation, starting with chronological level 1. All the conflicts that terminated at level 1 ended through accommodation by farmers. From step 3 to 9, the percentage declined from over 70% to 30%. A reciprocal pattern

is seen with conflict episodes progressively ending from step 3 to 9 through farmer withdrawal from the conflict.

Beyond this level, all the conflict episodes ended with withdrawal. All the conflicts that ended at steps 2, 4, 6 and 8 did so only through settlement, hence observed proportions as 100%, even though the absolute frequencies declined progressively as mentioned before.

By hypothesising that farmer characteristic such as gender, economic status, educational status, relation with contractor and knowledge in relevant forestry law may influence the extent to which they withdrew or accommodated, statistical tests showed that there is no significant difference between the categories in these variables with regard to their end points in the conflict episodes. Thus, we can conclude that the end point of a specific farmer-contractor conflict episode cannot be predicted on the basis of farmers' gender, literacy status, and economic status, relation with contractor or level of knowledge in relevant forestry laws. Generally, the pattern shows increasing 'hopeless' perception as more farmers were withdrawing as the conflict travels through time. This inquiry was interesting because withdrawal and accommodation connoted different termination status with those accommodating more likely to renew conflict in the future, for example when they encounter contractors again.

Several factors might influence the chronological patterns observed from the farmer-contractor conflict episodes. First, the spatial location of timber companies in relation to forested areas and the nature of operations naturally provide limitation for prolong conflict interactions. Most timber companies are located in the cities and towns which may be far from the specific forest area where logging operations usually take place. The distribution of commercial timber trees in off-reserve areas is spatially scattered due to deforestation as a result of conventional shifting cultivation practices, fires and logging. By the nature of the distribution of commercial timber trees in off-reserve areas, timber operations on farm or fallow lands are not intensive in terms of time as contractors have quite few trees to log on a particular farming land. As a result, contractors spend relatively shorter time at specific localities and it is within this short operations period that the contractor or his agents (usually called Bush Managers and workers) may be physically present at the community. Therefore, any compensation claims for crop damage caused by logging operations are likely to be made within this short period. If settlement of compensation is not made within this period, the likelihood of the conflict interaction ceasing or at least being dormant is high since the contractor or his agents may not be at the community. Observation shows that this is usually the case and account for the relatively short chronological sequence of actor-interactions in the farmer-contractor conflict episodes.

Second, owing to logging and infrastructural development, most of the off-reserve forest resources are located in rural areas. These areas normally do not have state institutional structures such as police stations, law court and forest offices. In most of the communities studied for example, these public structures were not present. Access to forestry officials was normally accidental as the forestry office may be located in the District capital and the schedule of forestry official's visit to the community is not known to the farmer or community. Given the general poverty situation in rural Ghana, the implication of this situation is that it may be practically difficult for

farmers to prolong conflict beyond the operational period of the contractor in the community. Prolonging the conflict means investing quality time, energy and money. However, these are the resources which the poverty situation in rural Ghana has made it scarce to the ordinary farmer. Many farmers spend the working hours of the day in their farms, traditional farming using local implements like cutlasses is very energy-sucking and many farmers only undertake subsistence farming to feed their families. These conditions practically make it difficult for farmers to pursue conflict interactions with contractors beyond their locality. In many of the cases studied, the conflict interactions beyond the locality of the farmer occurred through the involvement of public agents like the forestry officers and the police.

Thus, within the active part of the conflict episodes, farmers who do not receive compensation and cannot or are not prepared to pursue the conflict further have only two options, to accommodate hoping that promises may yield some results or withdraw completely. As expected, it is more likely that more farmers may be quite hopeful at the beginning and then withdraw if the situation becomes hopeless as they no longer can encounter contractors. This hypothesis is very much affirmed by the chronological pattern observed as accommodation progressively declined with time with increasing cases of withdrawal with time.

6.4 PATTERNS OF POWER RESOURCES

6.4.1 Power resource categories

Employment of power resources by conflict parties

Several sub-categories of power resources were used in the farmer-contractor conflict episodes. These are summarised in table 6.3.

Table 6.3 summary of the observed power resource categories employed in the compensation episodes

Main categories	**Sub-categories**
Orientational	strategic framing (pleads, petitions, logic) promise, threats and cultural framing (beliefs, trust)
Institutional	Law (e.g. the police), political legitimacy (DCEs, Assemblymen), and administrative legitimacy (FSD officials).
Social	social network (e.g. family members), corporate network (e.g. native bush managers), traditional network (community chiefs) and geographical-social circumstances such as the relative locations of contractors from communities
Socio-economic	wealth (e.g. transportation costs, compensation fees)

By counting the frequency of use of the various categories of power resources, the dataset shows that orientational resources were used in 64% of the cases against 8% for institutional, 21% for social and 7% of socio-economic resources. In Figure 6.5, the relative proportion of use of these power resources by farmers and contractors is shown. Generally, it can be seen that farmers used more institutional and orientational

resources than contractors while the opposite is the case regarding the use of social and socio-economic resources.

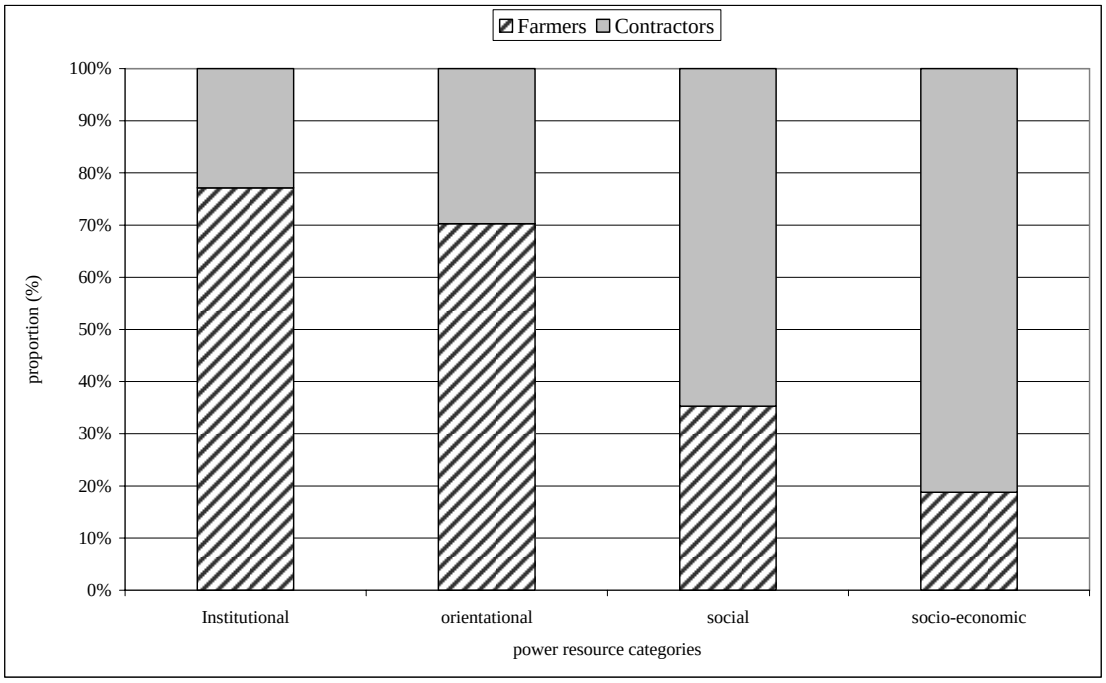


Figure 6.5 the proportion of power resource categories used by farmers and contractors in all the studied 81 conflicts (respective number of resources observed, N = 35, 296, 102 and 32)

A binomial test[36] to compare the frequencies of the categorical observations of the use of the various power resource groups assuming 50:50 proportions at significant level of 0.05 was carried out. The results show that given a 50:50 chance of the use of the various power resource categories, farmers are likely to use orientational resources at any given time during their conflict interactions with contractors. For institutional and socio-economic resources, farmers are more likely not to deploy them at any time in their conflict interactions. For social resources, the chances of using them or not were the same.

This observation can be explained using the broader context of the prevailing situation in many rural settlements in Ghana. Obviously, the predominant use of orientational resources can be expected as it is the most accessible resource to the farmer. At least everybody can be assumed to have the potential to communicate grievances and attempt to convince or coerce, through verbal communication, opponents in conflict to change their impairing behaviour. Secondly, at least the 50% probability of using social resource such as family members, social and traditional networks can be explained by the cohesiveness of social structure and interaction in rural Ghanaian settings. In many households, people live with close relations and there is the tendency that in course of conflict, one of these people may be called upon to assist. Moreover, typical rural settings have traditional leaders and though, chieftaincy is part of customary institutional structures, chiefs, are seen as ‘fathers’ and ‘guardians’ of

[36] this test has been recommended for a comparison of the frequency of cases actually found in the two categories of a dichotomous variable, such as gender, with those which are expected on some theoretical basis (Bryman and Cramer, 1999:119)

the people and have thus effectively become part of the broad social network of rural people. This reality potentially enhances the chances of rural people to use such traditional network actors as part of their social capital in conflict episodes. In all the communities studied, this close social contact of the chief with the people was observed, though this does not necessarily mean that chiefs always acted in support of aggrieved subjects.

The low tendency for farmers to use institutional and socio-economic resources can be understood given the social, economic, political and geographical circumstances of many rural settings in Ghana. First, many rural people are constrained with access to state institutional structures such as law courts, police stations, administrative offices of relevant public institutions. For instance, none of the communities studied had a forestry office or even a resident technical forestry officer. Again, only one of them had a police post with only four policemen and none of them had even a circuit court. All these institutional structures as potential power resources were located in District capital towns. Thus, to use any of such institutional structures needed time, energy and money. Incidentally, these socio-economic resources are lacking in many rural settings. With the high poverty incidence in rural settings coupled with the generally low levels of education therefore, it should be understood why many farmers could not use socio-economic and institutional resources, which mutually affect the effective use of the other. In *Wioso* for example, 63% of farmers were poor, only 11% had a minimum of secondary-level education and only one-third had good knowledge on relevant forestry laws.

Chronological sequence of power resources over conflict episodes

Figure 6.6 shows the chronological pattern of use of the various categories of power resources in the farmer-contractor episodes. Orientational and social resources were mainly deployed in the beginning to middle of the conflict episodes as can be seen from chronseq1 to 9 in figure 6.6. However, farmers relatively seem to use more of institutional resources than contractors while contractors used more socio-economic resources than farmers. Beyond the use of institutional and socio-economic resources at the latter part of conflict episodes by respective actors, farmers mainly used orientational resources as contractors used social resources (see from chronological levels 10 to 12).

Comparing the power strategies (see figure 6.8) which resulted from the use of these power resources on the chronological scale can give insight as to whether escalation or competitive strategies were use in deploying these power resources. First, it seems that farmers generally used escalation or more competitive strategies as the conflict episode progressed when the observed pattern of power resources were employed. Farmers started predominantly by using bargaining (chronseq1) which was followed by a lesser use of bargaining with the frequency of use of mediation and manipulative bargaining increasing. Consequently, persuasive bargaining progressively declined whiles more competitive strategies like mediation, litigation and coalition-building was increasing till force was deployed at the last level. Thus, it could be concluded that the employment of the observed power resources by farmers in course of the conflict episodes were made with increasingly more competitive tendencies.

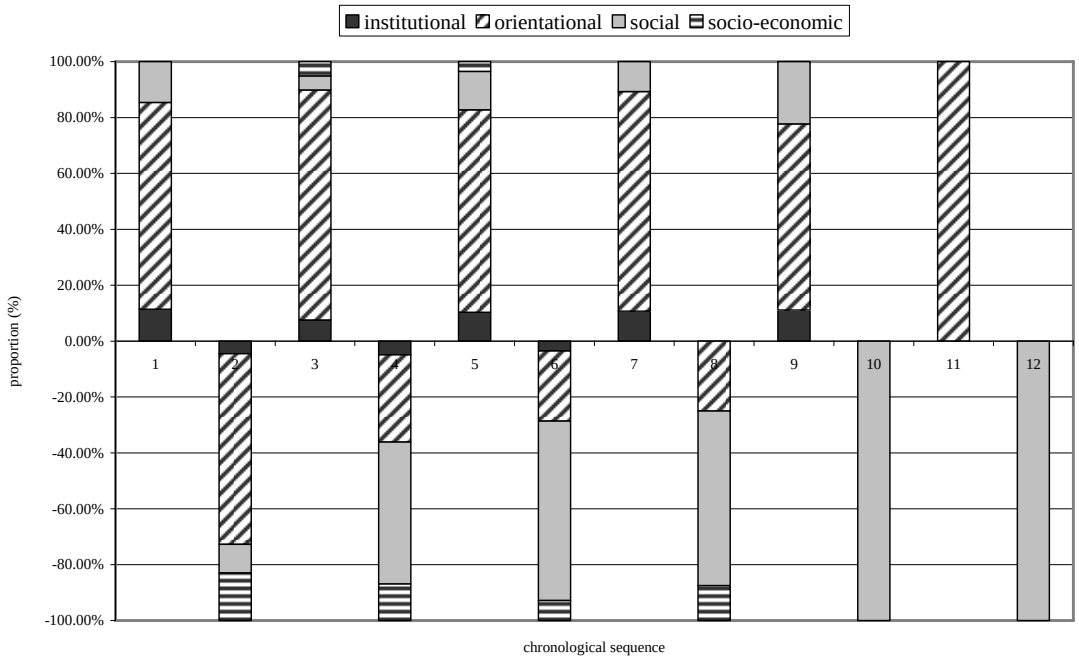


Figure 6.6 the number as a percentage proportion of the various power resources categories used by farmers (upper chart) and contractors (lower chart) at specific chronological sequence steps in all the 81 studied conflicts. Respective total number of resources at various chronological steps = 96, 88, 79, 61, 58, 28, 28, 8, 9, 2, 2 and 1)

For contractors, a similar conclusion can be drawn due to the progressive decline of persuasive bargaining as a dominant strategy (from level 2 to 8) parallel with the progressive increase in the use of avoidance, which meant increase in competitive or escalation tendencies. The difference between the two seems to lie in the fact that whiles farmers increasingly employed resources to maintain contact and interaction with opponents, the contractors progressively pursued avoidance of opportunities for interaction by increasingly capitalising particularly on the geo-social circumstances of distance.

Choice of power resources

By hypothesising that farmer relations with contactor, income poverty status, educational status, level of knowledge in forestry laws may influence the use of specific power resource categories, a statistical test, gave a non-significance result. Thus, it can be inferred that farmer relation with contractor, income poverty status, educational and migration statuses and level of knowledge in relevant laws did not significantly affect the use of specific power resource category. The non-significant test result is an important observation as it enables us to probe into the merit of the relevance of some conventional characteristics as empowerment resource. Under the general socio-economic, geographical and institutional circumstances surrounding the compensation conflict in off-reserve areas, differences in farmer characteristics such as gender, poverty and educational levels may not effectively contribute to differences in conflict capabilities. This is principally because, in many cases, both male and female farmers, poor and non-poor, highly educated and lowly educated, immigrant or native etc are all faced with the same constraints which are generally greater than the capabilities these statuses may offer them. For instance, in case of avoidance by

contractor, they are all faced with geographical distance constraint, lack of detail information about the contractor such as location of firm, generally less motivated administrative officials to pursue case beyond their office etc. Besides, even those who have the means to pursue case further may weigh the comparative cost-benefit ratios and may decide, on the basis of rational choice, to discard the case. Under such practical situations, it may not be resourceful whether a farmer is a native of the community or not.

Generally, the trend of farmers' increased use of additional strategies, aside persuasive bargaining, such as mediation and litigation suggests increasing attempts to mobilise social and institutional resources. Generally, their description of follow up actions with contractors or their agents suggested the use of more aggressive and desperate language in their persuasion.

6.4.2 Categorisation according to Rogers (1974)

Putting all the observations on resource mobilisation together, three circumstances can be described as infra resources for farmer resource mobilisation. First of all, the structural constrain regarding availability and accessibility of important institutional resources such as the police, forestry office, legal aid office etc was observed to have impaired farmer mobilisation of these resources. In all the studied communities, only *Wioso* for example had a police post with only 4 policemen. Second, the condition that many of the contractors who operate in off-reserve farmlands do not reside in the communities was 'problematic' as it constrained impaired farmers face-to-face interactions. Lastly, as per the aforementioned conditions, economic capability to enable impaired farmers to 'cross over' the locality of the communities was observed as crucial condition to most farmers resource mobilisation abilities. These will be elaborated under the section on actor-empowerment effectiveness.

6.5 PATTERNS OF ACTOR POWER STRATEGIES

6.5.1 Reciprocity

In order to test the theoretical hypotheses on strategy reciprocity, the action-response strategy configurations observed in the specific episodes of farmer-contractor conflicts are summarised in Annex 3. In all, 23 configurations were observed with 14, 4 and 5 respectively belonging to the equal, cooperative-competitive and competitive-cooperative groups. Even though as high as about 75% of the configurations with persuasion (the dominant strategy) was equally reciprocated (i.e. persuasion-persuasion pairs), since in about 25% of the cases, persuasion was inversely reciprocated a general conclusion on direct reciprocity with regard to persuasive bargaining cannot be made. Figure 6.8 displays the relative cooperative-competitive scales of the 23 observed configurations. First, it is observed that though direct reciprocity dominated actors' strategy patterns (over 50%); our expectation of direct reciprocity is not fully confirmed in the farmer-contractor conflict episodes. Generally, the large proportion (47%) of inverse reciprocity configurations further weakens any tendency to confirm our expectation on direct reciprocity. Second, our

hypothetical expectation that in case of inverse reciprocity, cooperative-competitive configurations were to be observed is not totally confirmed as about 36% of all cases of inverse reciprocity involved competitive-cooperative configurations.

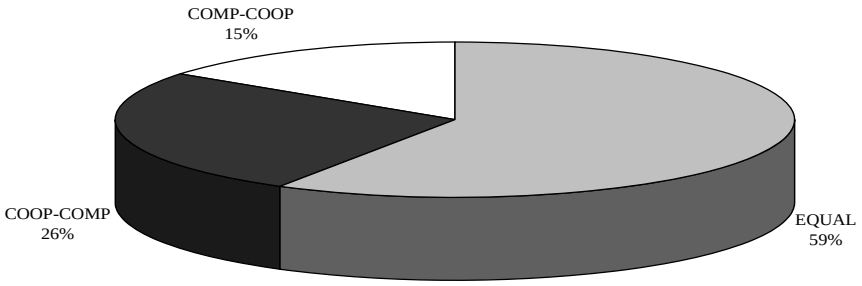


Figure 6.7 the percentage proportion of relative cooperative-competitive scale category of the 205 observed power strategy configurations in the farmer-contractor conflicts.

6.5.2 Strategy sequences

The dataset (Annex 4) shows that avoidance, persuasive bargaining, manipulative bargaining, mediation, litigation, coalition-building and force were the main power strategies used in the farmer-contractor conflicts. Displaying the various power strategies used by farmers and contractors in a chronological sequence (figure 6.8), it can be seen that while farmers seem to use all the power strategies in course of the conflict, contractors used mainly persuasive bargaining and avoidance with increasing occurrence of the use of avoidance.

From figure 6.9, significant patterns with respect to the use of power strategies by farmers and contractors can be observed. First, at the beginning of conflict, both farmers and contractors predominantly employed direct persuasive bargaining (over 70% in both cases). However, there was progressive decline in the use of bargaining till it was no longer used by both actors from chronological sequence step 9. Parallel to this, the use of mediation and avoidance respectively dominated farmer and contractor strategies. This progressively increased from about 15% at chronological step 1 to 100% at step 9 (in the case of farmers) and from about 18% at step 2 to 100% at step12 (in the case of contractors). This is not surprising since mediation has been observed to be a preferred indigenous mode of dispute settlement in most local areas in Ghana (Fred-Mensah, 1999: 957). The recourse to mediation is suggested to be influenced by residential proximity and kinship ties which require people to deal with one another in the future and hence the need for a less adversarial approach (Fred-Mensah, 1999). The use of litigation by farmers generally increased with force as the only farmer strategy at level 11.

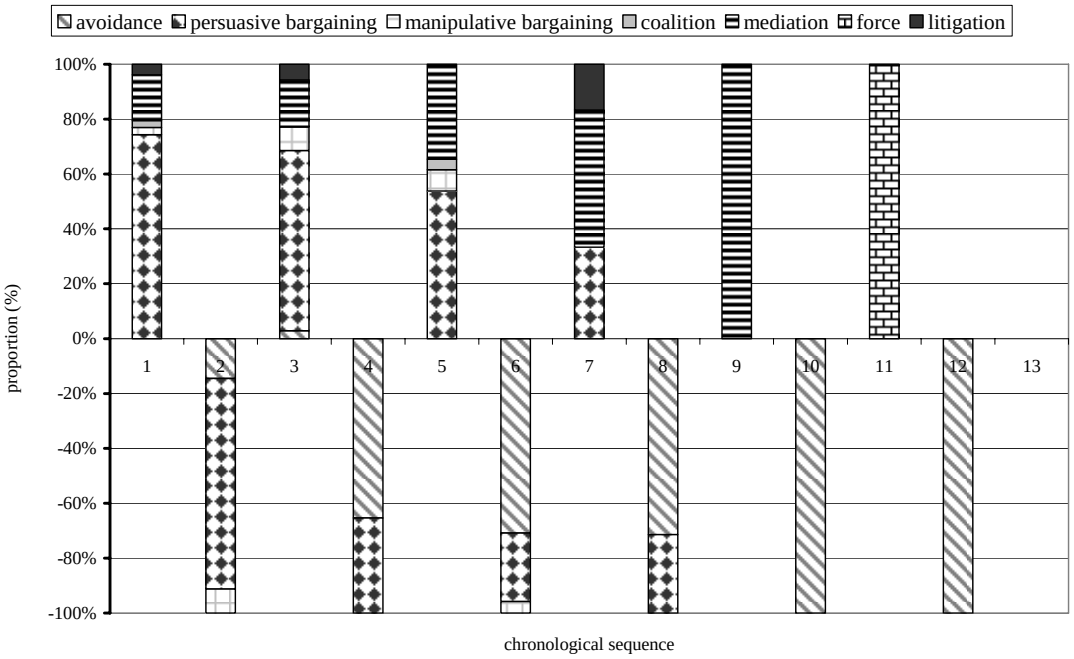


Figure 6.8 number of specific strategies used as a percentage proportion of all strategies used by actors at specific chronological sequence steps in all the episodes. Upper chart for farmers and lower chart for contractors (respective number of strategies at various chronological steps= 78, 69, 35, 52, 26, 24, 6, 7, 1, 2, 1 and 1)

In order to ascertain whether farmer characteristics has any relationship with the power strategies used, they were tested with their first power strategy, regrouping strategies into persuasive bargaining and others due to the predominance of the former. Following the pattern in figure 6.8, the hypothesis was to see if farmer characteristics such as economic and educational status, level of knowledge in relevant forestry laws etc influenced the use of specific strategies at the beginning of the conflict. A chi-square test[37] of their observed and expected values using SPSS cross tabulation gave non-significant results for all characteristics. Thus, the gender, economic status, educational status, level of knowledge in forestry laws and contractor-relation of farmers could not help explain the observed patterns.

6.6 EFFECTIVENESS OF FARMER EMPOWERMENT

6.6.1 Episodic effectiveness

[37] If a comparison of the frequency of cases in a variable in two or more unrelated samples or categories of another variable is needed, chi-square test has been recommended (Bryman and Cramer, 1999: 123)

Generally, contractors' avoidance and employment of persuasion using promises were effective at causing farmers' to withdraw or accommodate the impairments. This account for the relatively short episodic life of the farmer-contractor conflicts since farmers, even if they wished to pursue the conflict further, were constrained mainly due to the 'absence' of contractors. Chiefs, forestry officials and police interventions were even constrained by this in some instances. For example in 23 (68%) out of 34 instances, farmers' use of mediation and litigation could not provoke contractor response. Thus, the most important condition necessary for episodic actions to have been observed was physical contact between farmers and contractors and this was generally missing, due to the prominence of contractors' avoidance strategies, in the studied conflicts. Notwithstanding, where this condition was satisfied, either through the presence of contractors themselves or their Bush managers, direct persuasion or seeking for the intervention of chiefs, high-ranking forestry officials (mediation) and the police (litigation) by farmers were sometimes effective at getting contractors' to respond, though did not necessarily result in settlement. For example, in 32% of the cases where farmers used mediation and litigation, they were successful at getting contractors to respond.

6.6.2 Management effectiveness

Given that only 15% of the conflict episodes were terminated with the settlement of compensation, from a management effectiveness point of view, such conflicts can be considered as those that were 'successfully' managed. Focussing on the dimension of empowerment with regard to the management of conflict, the settlement of compensation thus becomes the central criteria for assessment in the compensation conflict context**.** This section therefore aims at explaining these successful cases which actors might have influenced the 'management successes. Since the majority of the episodes terminated around chronological sequence step 5, it was assumed that it would be useful to follow at least three chronologically ordered strategies of farmers. This might be more revealing in the search for possible farmer strategies that could influence management effectiveness. Figures 6.9 a, b and c compares the various power strategies deployed by farmers and their effectiveness towards ensuring compensation payments in their first three chronologically sequenced actions. First, they show that strategies that resulted in full settlement were litigation and mediation. In addition to these two strategies, the application of persuasive bargaining in some instances resulted in partial settlement. However in a larger number of cases the application of these strategies could not secure settlement.

Figure 6.10 shows the relative frequencies of the use of litigation, mediation and bargaining under scenarios that resulted in some form of settlement (full or partial) and non-settlement. Proportionally, one can say that litigation was the most effective strategy, followed by mediation and then bargaining since the settlement: non settlement ratios when they were employed were 0.6, 0.1 and 0.08 respectively. In order to explain why same strategies were effective at securing settlement in some cases and not in other cases, hypotheses that farmer characteristics were influencing factors were tested.

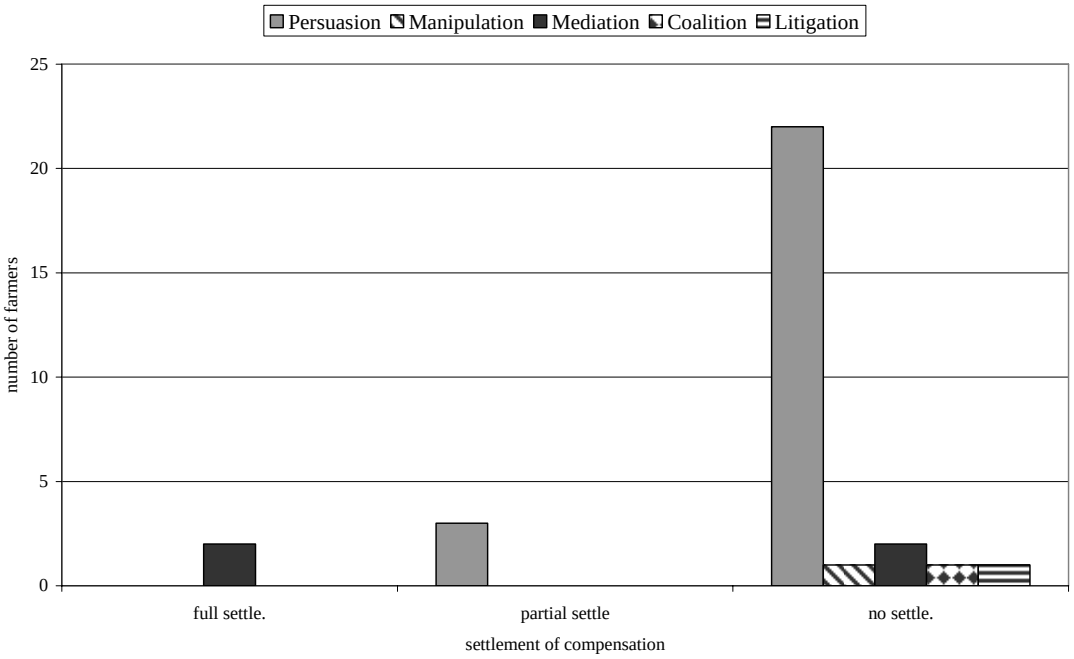


Figure 6.9a the frequency of farmer power strategies used at their first conflict action and their effectiveness at achieving settlement (N = 32)

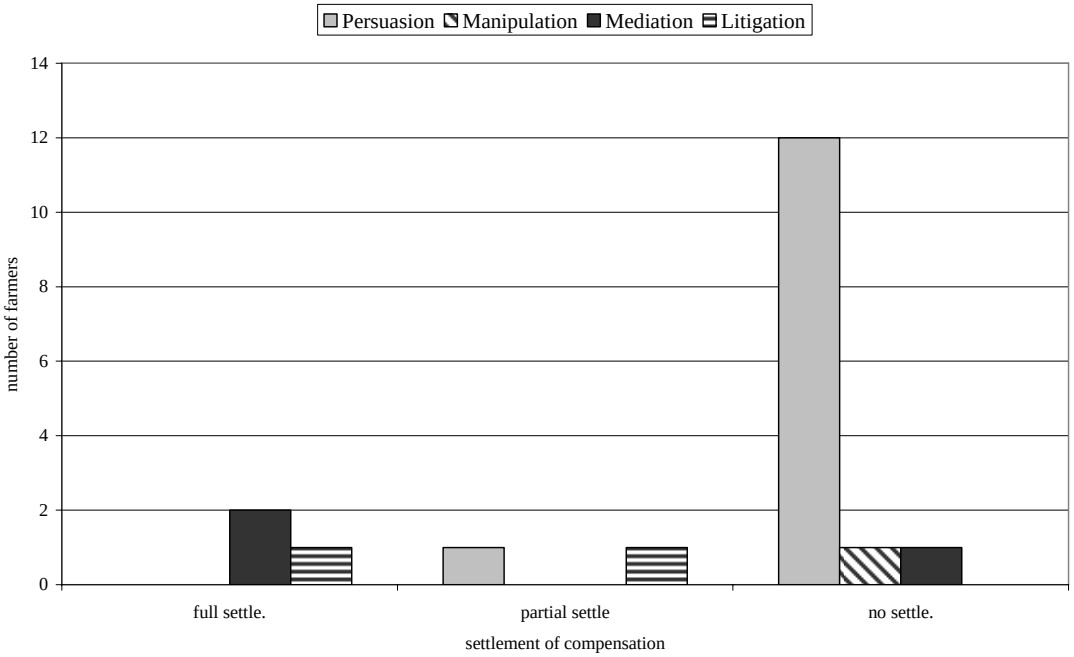


Figure 6.9b the frequency of farmer power strategies used at their second conflict action and their effectiveness at achieving settlement. Counts represent absolute frequencies (N =19)

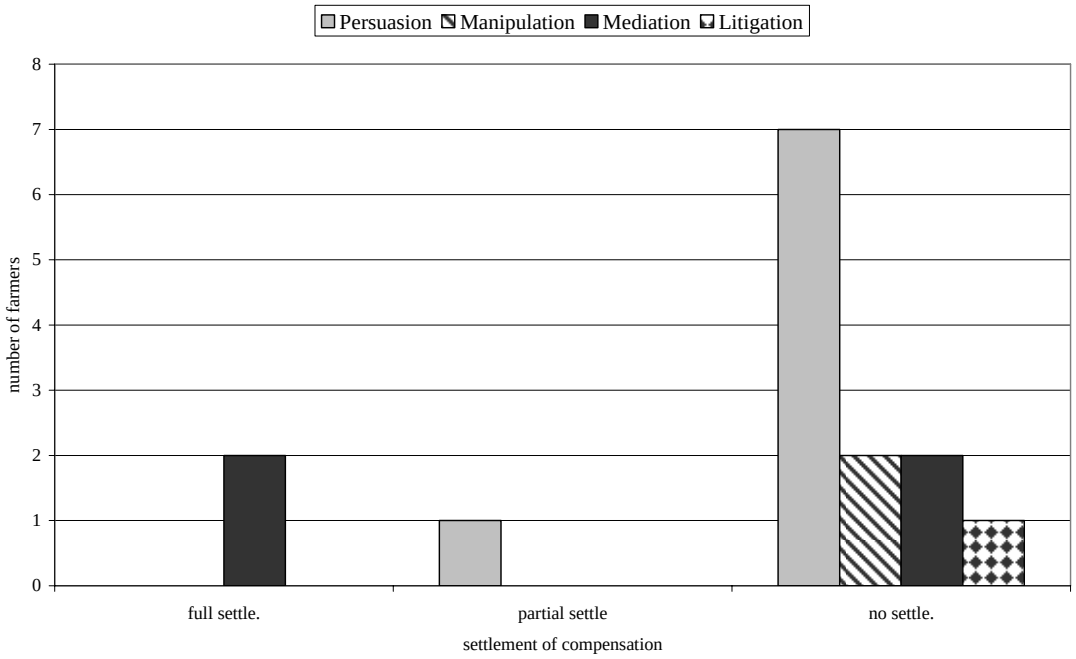


Figure 6.9c the frequency of farmer power strategies used at third second conflict action and their effectiveness at achieving settlement. Counts represent absolute frequencies (N =15)

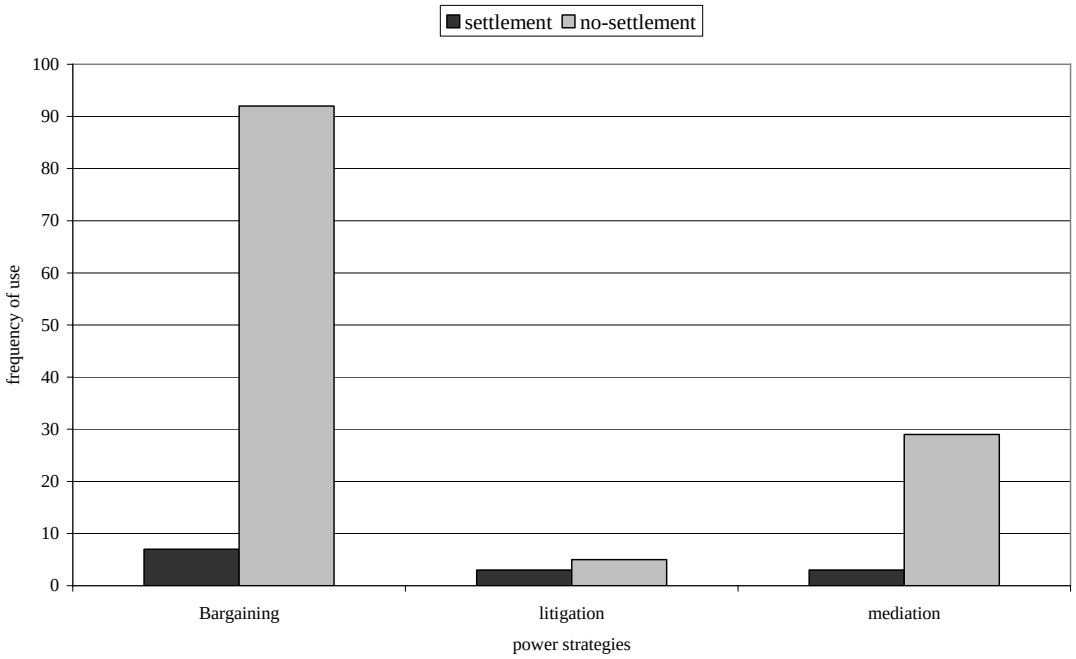


Figure 6.10 the relative frequency of use of bargaining, litigation and mediation by farmers in conflicts that resulted in settlement and those in non-settlement.

By hypothesising that farmer relation with contractor may result in some compensation payment, a chi-square test to assess the relationship gave a non-significant result. Although output of a cross tabulation of the two variables (figure 6.11) shows that none of the farmers who were relatives to the contractors received any settlement, we cannot conclusively say that farmer relations have significant

influence on compensation payments. Statistical test with other farmer characteristics gave non-significant results.

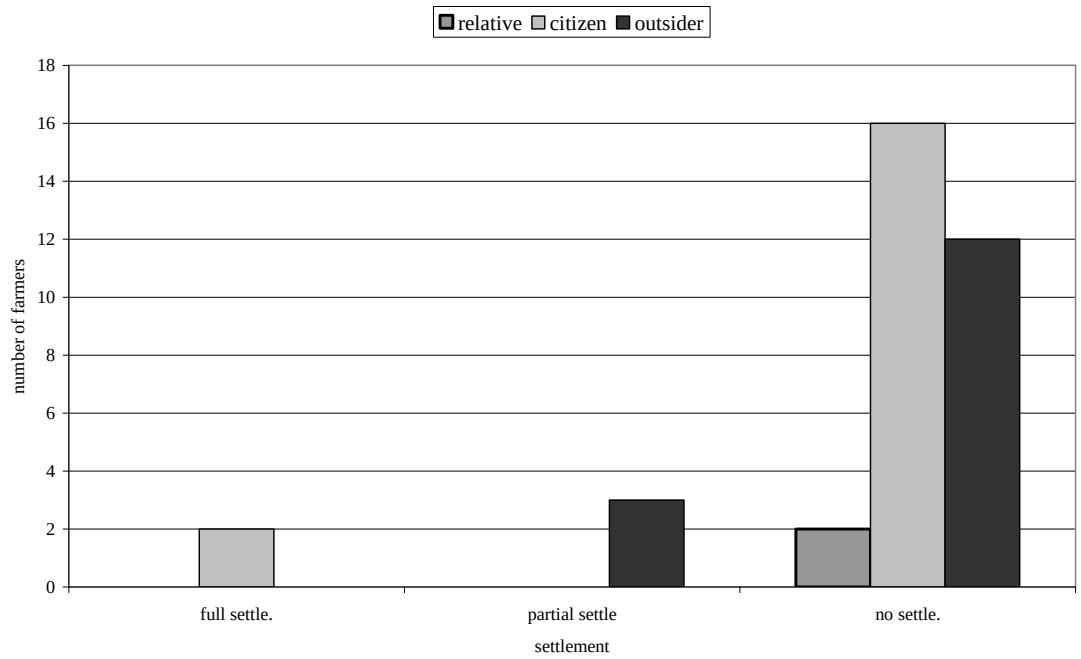


Figure 6.11 results of farmers' relation with contractors and their respective compensation settlement payment status at *Wioso*

From the above it can be concluded that the influence of farmer characteristics could not offer explanation on the effectiveness or otherwise of the deployed strategies.

The timing of the use of the strategies that resulted in some form of compensation payment did not seem to be an important factor due to the fact that the application of such strategies at the same chronological levels in some cases did not result in any form of settlement (see figures 6.9a, b and c).

In table 6.4, a comparison of the power resources used by farmers in relation to the specific strategies do not also give a strong indication to explain why some farmer empowerment process achieved settlement and why others did not. From table 6.4, some clues to explain why some litigation, bargaining and mediation resulted in settlement could be identified. It shows that the use of law or pursuit of it was not necessarily effective comparing the frequency of the use of law in the settlement and non-settlement scenarios. Although, when a social network was mobilized to pursue the law, it was effective in achieving settlement, we cannot be conclusive due to the low frequency of this observation.

Similar uncertainties exist for the use of other resources such as the use of cultural framing and administrative structures by farmers in their bargaining due to their low frequencies. Although strategic framing was employed in the entire farmer bargaining that resulted in settlement, the relatively large number of its use in other episodes which did not result in settlement makes it difficult to explain the observation. Similar conclusions can be drawn for mediation.

Table 6.4 a comparison of power resources used for litigation, bargaining and mediation in episodes that resulted both in settlement and non settlement (resources in *italics* are those which were sometimes effective, hence occurring in both columns)

Farmer power strategy	**Resources used to achieve settlement(frequency)**	**Resources used which did not result in settlement(frequency)**
litigation	Law(3), social network (1)	*Law(7)*
bargaining	Framing(7), cultural framing(1), administrative structures(1)	*Framing(78),*
mediation	Administrative structures(2), traditional network(1), framing(2)	Political structures(6) *Administrative structures(4)* *Framing(6)* Social network(11) *Traditional network(9)* Geo-social circumstance(2)

Consequently, in searching for explanation for the observed cases of settlement, a more qualitative effort through a comparative content analysis of the narratives of the specific settlement and non-settlement episodes is needed.

For litigation, the cases that resulted in settlement show that in the pursuit of law, farmer provided evidence such as contractor's car registration number and threatening statements of his agents to the police (case W019). The social circumstances of the farmer as a partially blind person and the use of the friendly relationship between his landlord and the contractor (case W07) were compelling for the police to ensure settlement. Last, when the police arrested the contractor's agent for prosecution (as in case F07), settlement was made. In the other instances of the use of litigation and the law which did not result in settlement, the narratives show that the police attempted to facilitate bargaining, acting more as mediator (as in case F08), the police could not have contacts with the contractor (as in case F10), the contractor was informed of farmer's police complaint (case F14) and farmer agreed with police to social settlement of the case (as in case 020).

Comparing the two scenarios with regard to the use of litigation by farmers, it seems convincing to conclude that the effectiveness of the use of litigation as a power strategy and hence law as a power resource was highly contextual depending on farmer's ability to establish evidence, his willingness to go beyond police reporting, accessibility of the contractor to the police, social circumstances of the farmer and the seriousness and willingness with which the police was determined to enforce the law. Of course in a broader context, this will also depend on the capability and resourcefulness of the police as a law enforcement agency.

With respect to bargaining, the differences in the narratives of the settlement and non-settlement scenarios was quite fluid and the success of bargaining also seemed to be quite contextual. However, few generalizations could be observed. First, in the instance where prior notice was given to the farmer before logging (as in cases L10, W022), bargaining resulted in some settlement. Moreover, where specific demands were made and justified in the framing (such as in W022, W025, L10), some settlement was made. Another peculiar scenario was in case F06 where prior use of political and administrative structures such as District Assembly and Forestry office to engage the contractor before direct bargaining resulted in compensation payment. In other instances, such as in cases B01 and B02, settlement was made when farmers decided not to challenge or bargain down the offer made by the contractors.

Settlement was also made in the only instance where the forestry office (administrative structure) was used by the farmer for the bargaining. In this case, it was complemented by emotionally charged gestures (such as weeping by farmer in case F013). Thus it seems that strategic framing, cultural framing and the use of forestry administrative structures were more resourceful in farmer bargaining. However, the effectiveness of strategic framing may depend more on farmer's ability to mobilize evidence of offence, use quantitative assessment of crop/property damage and logical argumentations charged with emotional appeal. Considering the narratives of the non-settlement scenarios, it was found out that in most instances, farmers used simple logic such as 'once operations have led to destruction, demanded compensation must be paid'. In many of such cases, farmers could not state the quantity of crops damaged or give specific quantitative values of the extent of destruction.

For mediation, out of the 6 cases where structures of administrative legitimacy (forestry service officials) were used by farmers, only 2 resulted in settlement. Again, out of the 10 cases where farmers used their community chiefs (traditional network) as mediators, only 1 resulted in settlement. For the use of other resources such as political structures (District Assemblies, Unit Committees, Assemblymen) and social network (relatives, contractor's family), no settlement was observed. A content analysis of the narratives of cases where chiefs and forestry officers were used as mediators offers some explanations for the observed effectiveness in ensuring settlement or not. In the case of W028, the chief readily assisted the farmer but in the case of W029, the chief was unwilling to follow-up the matter while in the case of W17, the contractor did not make himself available to the chief. In the cases of W030 and W027, the contractors did not perceive the chief as a legitimate party to mediate in such matters.

With respect to the use of forestry officials, in all the cases that resulted in settlement (cases F01 and F09), the farmers had already engaged the contractors either with direct confrontation or with a chief and had not been 'successful'. In the instances where the involvement of forestry officials did not result in settlement (cases F02, F15, F06), it was observed that the mobilization was opportunistic, involved lower officials or the forestry office could not summon the contractor to their office. In case F02, the farmer attempted to use the forestry official when he was accompanying the research team to the community. In other instances such as in case F15, the official was a technical officer and in the case of F06 the contractor refused to respond to the invitation of the forestry office upon several attempts.

In all, the effectiveness of mediation was constrained by some structural problems including institutional ambiguities between jurisdiction and capacity of potential mediators which were 'easily' accessible to farmers. Owing to the information such as contractor details and other technical details such as applicable legal rates which were needed for effective mediation, aside the leverage forestry officials (especially higher ranked ones) had on contractors, forestry officials seemed more effective than chiefs and Assemblymen in mediating for compensation settlement. However, the mobilization of such administrative agencies required money and time since farmers would have to travel to the District office to meet the 'Officer'. There are also possible situations where local leaders could not be effective because their 'neutrality' is tainted as a result of previous transactions with contractors. For example, given the

status of chiefs as 'landowners', it customarily required that any 'stranger' who goes to any community to work must go and 'greet' the leaders especially the chief. During this 'greeting', some donations are normally given for the elders to buy 'drink'. At the same time, some form of soft-negotiations or requests is normally made which place some 'social' obligations on the contractor. In such situations, it is practically difficult for the chief and the leaders to be 'neutral' and to help farmers negotiate and enforce compensation payment. There is also increasing recognition that the interests of farmers and community members and that of chiefs can be very different (see also Amanor, 2005).

Given these reality, the claim by some observers like Bercovitch (1989: 286) that mediation is 'cheap, flexible, adaptable and effective' can be misleading when placed in situations like the farmer-contractor conflict context and other such local conflict constellations, especially when mediation is not well institutionalized. Under such conditions, one can argue that where an efficient law-enforcement facility like police post exist, litigating by making direct police complain may be cheaper and effective than attempting to seek for mediation, especially when it is common, as observed in the study, for the police themselves to facilitate some negotiations instead of prosecuting such 'minor' cases.

The non-significant test provokes the question as to whether farmers indeed had a choice or not with regard to the mobilisation and use of power resources. It seems that in many instances farmers did not have adequate access to resources especially with regards to institutional resources. The limiting access may be due to geo-social constraints such as the relatively long distances or to what can be called mobilisation constraints such as the inability of farmers to establish evidence or a *prima facie* case. In some instances, institutional resources such as the police may not, *de facto*, be resourceful at all to farmers when the police itself is for example incapable of tracking accused contractors. Again, other resources such as traditional network and administrative structures may not be very resourceful to farmers and their effectiveness seems to be highly contextual and cannot be easily predicted.

6.7 SUMMARY AND CONCLUSION – CASE STUDY

Reference to the research questions on patterns and effectiveness of actor-empowerment, the following main conclusions can be drawn. First, we observed that the conflicts did not exhibit perfect reciprocal pattern suggesting that some actions did not have episodic utility. It has been demonstrated that this was mainly due to the successful use of avoidance by contractors which constrained further conflict interactions. We observed that actors' interactions can be hampered when one party lacks cross-scale capability to mobilise resources to engage an avoiding party outside the original conflict area. This is supported by the fact that some of the few farmers who were able to cross community boundaries to mobilise institutional resources like the police and forestry officials, could get contractors to respond. Second, with regards to patterns of strategies, farmers predominantly used cooperative strategies (persuasive bargaining and mediation) at the beginning of their conflict interactions, intensifying their conflict actions by progressively using more competitive strategies like litigation and force. Contractors, mainly used cooperative strategies (persuasion) at the beginning of their conflict where farmer cooperation with regard to their

operations are critical; beyond this there is a progressive increase in the use of avoidance as a competitive strategy. Thus, under conditions where conflict actors are compelled to interact seems to be useful for cooperation and mutual interaction. With regard to strategy reciprocity, we observed both direct and inverse reciprocity patterns confirming that actor behaviour incorporated both rational and reciprocity tendencies. Third, though the progressive use of more competitive strategies by farmers suggested increasing use of power resources, resource mobilisation did not generally intensified within successive use of specific strategies as expected. This has been explained by farmers' limited conflict capability not only to overcome structural constraints but also their ability to mobilise basic instrumental resources such as mobilising evidence. Finally, farmer strategies were not effective as reflected by the low incidence of compensation settlement (15%), with declining probabilities as conflicts proceed with time, suggesting that the timeliness of conflict action can influence management effectiveness. It has been noted that several context-dependent factors, dictated by actor's own capability as well as structural and other systemic factors beyond actor's control influenced the management effectiveness of his empowerment.

7. A COMPARATIVE OVERVIEW OF ACTOR-EMPOWERMENT AT DIFFERENT CONFLICT SCALE LEVELS

> Cross-scale interactions are always negotiated outcomes of power relations, reaffirming the hierarchies of institutions and actors (Adger et al., 2005)

This chapter, building on the empirical results presented in chapters 4, 5 and 6 is aimed at giving a comparative overview of the empirical observations in the three studied conflict cases with respect to their scale and cross-scale dimensions. In order to avoid confusion about the local level or scale, the term 'community-level' will be used to represent the single community or village level spatial scale or domain within which the compensation conflicts occurred, and 'local-level' to represent the reserve area domain (sub-regional *meso* scale) in which the forest-mining occurred. In essence, the chapter is aimed at providing answers to research question 5. Following the research questions and the general structure of presentation of the results in chapters 4 -6, the chapter is structured along the following questions:

- To what extent did actor-empowerment at the national and local levels exhibit any cross-scale linkages? Cross-scale linkage means the direct interactions of actors at different scale levels through networks to mobilise information and other resources related to their empowerment efforts in their respective conflicts.
- To what extent are the patterns of conflict episodes comparable in the three case studies?
- To what extent are the patterns of actor mobilisation of power resources comparable in the three case studies?
- To what extent are the patterns of power strategies comparable in the three case studies?
- To what extent is the effectiveness of actor-empowerment efforts comparable in the three case studies?

7.1 CROSS-SCALE LINKAGES IN CONFLICT CASES

The focus of this section is to compare the national and reserve areas conflicts on forest-mining since they were selected with an advantage that they can help with cross-scale linkages in actor-empowerment.

7.1.1 Actor networks and issues

The character of the proponents and opponents networks in the two case studies showed some patterns of similarities and differences. In both cases, there was a strong linkage among actors in the proponents' network than opponents. With the exception of case R2, where local and national opponents acted in many instances to resist proponents, the opponents in other cases did not show such cooperation. Both observations are not surprising. First, the leading proponents who were private companies at the reserve areas were members of the national corporate body which

championed the pro forest-mining advocacy at the national level. Thus, it was not surprising that there was a strong presence of the national proponents in the individual reserve area conflicts to support local oppositions to the respective projects. This is because the actual interest of the proponents was not just for the government to have a pro forest-mining policy but to have actual opportunity to do mining in the targeted reserves. In effect, the national and local interests became so conflated that it is not unexpected that the networks of the local and national proponents consisted of similar actors. On the contrary, the respective local opponents were not prominently part of the national opponent network; hence, it is not surprisingly that the composition of the networks of the local and national opponents did not have the same actors. Again, this is expected because the interests of respective local opponents differed from that of national opponents. While the ultimate aim of the advocacy of national opponents was to block a pro forest-mining policy, the interests of the various local opponents were not directly policy-oriented. Their interests were based on their specific socio-cultural, economic and environment circumstances in relation to the potential impact and benefit of mining in 'their' forests. In essence, the varying interests of national and local opponents did not serve as an incentive and a force to pull the two together to oppose proponents at both levels. The situation of the local and national opponents' cooperation at R2 resulted from cross-scale mobilisation, an observation which will be elaborated later.

Related to these, the composition of proponents' networks at both levels was more homogenous than opponents. While the network of the proponents at both levels consisted mainly of private commercial investors and political, administrative and traditional authorities, the network of the opponents differed across and within scales. For instance, in R1 the opposition actors consisted mainly of chiefs, in R2 it consisted of civil activists and in R3 chiefs and civil activists (farmers).

Another point for reflection, from a comparison of the discourses at the two levels, is the conflict positions of the proponents and opponents. Similar to the pattern of their networks, the 'message' of the proponents remained somewhat homogenous at both national and local conflicts. They consistently used the 'economic benefit and national/community development' frame in addition to *legitimation* symbols using the existence of mining guidelines to allay the fears of adverse impacts. On the contrary, while the national opponents dwelt much on the 'illegality', 'biodiversity conservation' and the 'anti-development' frames, the local opponents focussed on peculiar discourses that were related to their specific situations. For instance, while the opponents at R1 focussed on environmental services and cultural roles of the forest, R2 focussed mainly on social impacts and R3 on economic aspects of compensation and benefit distribution. These positions are unexpected. At R1, the forest in question played cultural and ecological functions for the local people, which were different in the case of R2 and R3. At R2, the experiences of the local people with previous mining activities made social and environmental impact considerations paramount to civil society activists. At R3, though substantial portion of forest reserve was to be affected, the large portions of farmlands and small settlement in the project's catchments area made equitable compensation and distribution of benefits core issues. Against this background, it is not surprising that specific local 'problems' defined the composition of opponent's network and the content of conflict discourse.

7.1.2 Resource mobilisation

The actors in the studied conflict cases exhibited a wide range of cross-scale linkages in their empowerment efforts. The mobilisation of external resources was due to either structural constraint within their spatial scale or to some dynamics in the conflict. First, looking at the national conflict, there was some cross-scale dimensions of actor-empowerment efforts. An example is the mobilisation of local and international civil support by opponents, which was dictated by the dynamics of the conflict. The need to mobilise extensive pressure on government was as a result of the tendency that government was being pressured by proponents to allow forest-mining. Moreover, when the question of representation was raised against the NGO coalition's advocacy, it 'crossed' to the local domain to mobilise some community-based groups as part of the coalition. This was needed to establish their legitimacy as also representing community voice. As was indicated, they started listing these community-based groups in their advocacy documents such as when they wrote to some donors requesting them to stop government. They indicated that, some communities have vowed to resist any forest-mining in their communities at the local level, symbolising their connection with local realities. At the local level, there was a case of a coalition of local civil activist with national NGOs networking to resist corporate and local elite pressure against local anti mining campaign. Several cases of attempts by the local actors to mobilise political influence from the national domain in the face opposition from local politicians and leaders were also observed. Some particular structural constraints, especially with regard to access to important institutional resources such as the media and high-level courts, dictated that in some cases of local conflict, actors resort to resources in the national domain. For example, in all the local cases where actors wanted to bring their position to public attention, they were compelled to utilise the media, sometimes holding their press conferences, like in the case of R1, in cities outside the locality. Moreover, when the opposition chief in R1 decided to litigate against the elevation of a sub-chief to paramount status, they used high-level judicial bodies such as the Regional House of Chiefs and the Supreme Court, which were located outside the conflict locality. Even in the community-level case, it was observed that some farmers mobilised themselves to petition their District Chief Executive after efforts to deal with contractors at the community level failed to secure settlement of their compensation.

It can be concluded that there was cross-scale linkage, especially with regards to the mobilisation of resources in the local and national conflicts. Moreover, the mobilisation did not seem to follow any direction because it has been illustrated that the national actors mobilised some local actors to support their cause and the vice versa; all depending on where strategic resources are located and when the capability to mobilise exist. Finally, the actors who interests depended on outcomes of conflicts at both levels exhibited more cross-scale linkage.

7.2 PATTERNS OF EPISODES

Table 7.1 gives an overview of the patterns of the conflict episodes in all the case studies.

Table 7.1 comparison of reciprocal and serial patterns of the episodes in the 3 case studies

Levels of case study	**Average reciprocal: serial ratio**	**Proportion of actions with reciprocal responses**
National level	70:30	70%
Local level	80:20	80%
Community level	40:60	40%

The general patterns of the various conflict episodes in all the three spatial levels showed imperfect reciprocity. This observation can be assessed on two levels. First, from action effectiveness point of view, it is not surprising since not all the actions in the various conflicts were reciprocated. However, it is surprising that the ratios did not increase from national to community levels, with the assumption that the 'closer' visibility of opposing actors within the various levels would have improved from national to local areas. Rather, the observation is that the national and local areas conflicts showed higher levels of reciprocal responses than the community level conflict. It has been shown already that this observation was due to the relative effectiveness of respective actors' empowerment. As shown in chapter 6, the scenarios with the compensation conflict as a case of the community-level conflict had unique circumstances leading to difficulty in assessing exact episodic patterns. On the average, it has been shown that only 2 out of the average of 5 exchange encounters were reciprocated, giving it a reciprocal rate of 40%. This is misleading as in many cases, contractors 'escaped' from the interaction field leaving farmers wanting and following up trying to get contractors to respond. Taking the observed maximum chronological sequence step of 13 as potential reach of farmers, the proportion of reciprocal patterns could be as low as 15%. As has been elaborated before, this deviation can be explained primarily by the spatial distance between the location of farmers (community actors) and contractors (external actors) who 'only' interacted at the community domain during logging operations. From the foregoing, two scenarios are presented that potentially affect patterns of episodes. The first is a situation where competing actors are visible within their spatial domains and have opportunities to interact. This was the case of the local and national conflicts as well as the first few instances of farmer-contractor encounters during logging operations. The second is a situation where actors do not have the opportunity to interact within their spatial domain, such as was the case in the community conflict after logging operations.

These two scenarios reveal two important lessons. First, they show the importance of accessibility of or geo-social distance between conflict actors to the overall structure of conflict episode pattern. It seems that when actors have easy access to each other (visibility), their conflict interactions may exhibit high dynamism given that their actions have high episodic effectiveness. Second, the comparative results seem to suggest that the relation between conflict scale and reciprocal pattern of conflicts depends on the possibilities of actors to access each other for interaction. This will depend on 'scale-imposed' circumstances and institutional arrangements that constrain both actors to interact such as those that happened at the beginning of most compensation conflicts or the capabilities of an actor to compel the other to respond irrespective of location. Supporting the latter case, the limitations of the conflict capabilities of farmers for example, especially to act beyond the community domain has been illustrated. Moreover, the observation at some local areas where national NGOs could compel local corporate actors who ignored local activists' demands to respond to their press conference is another example. Thus, it seems the level of

conflict may not necessarily influence episodic patterns. Rather, both accessibility and the cross-scale capabilities of respective actors seem to be the important conditions.

7.3 PATTERNS OF POWER RESOURCES

Figure 7.1 gives a comparative overview of the categories of power resources used by actors in the various scale-level case studies. The specific sub-categories used in the various case studies are summarised in table 7.2.

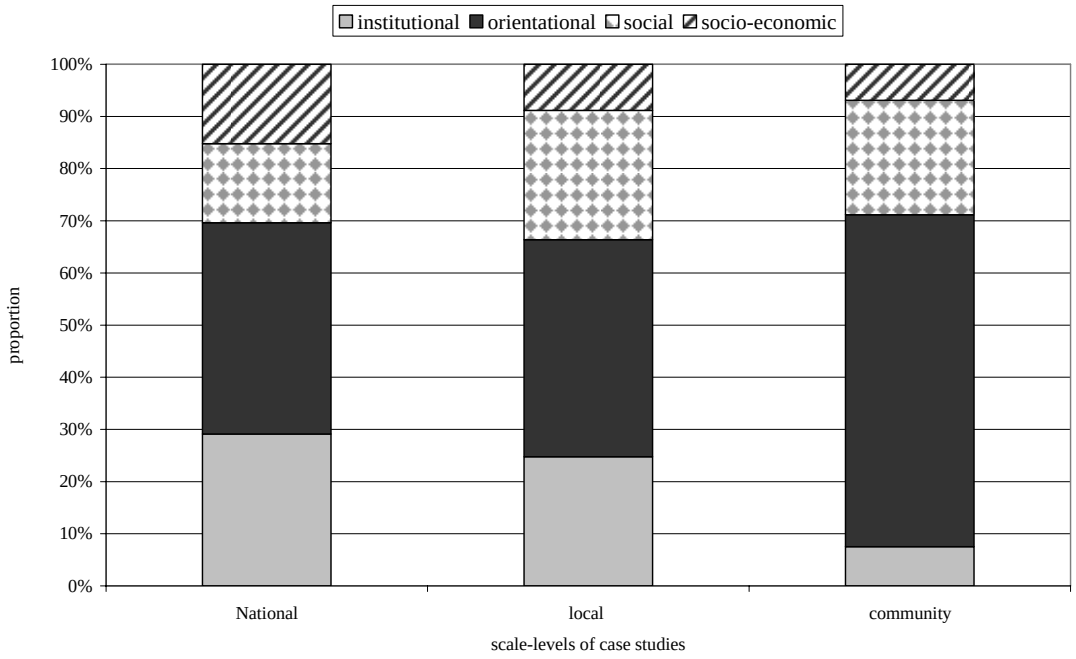


Figure 7.1 relative proportions of the various categories of power resources in all the 3 scale-level case studies. Total number of observed resources (N) at national, local and community levels = 79, 113 and 564 respectively.

Figure 7.1 shows that orientational and institutional resources dominated actor-empowerment efforts in the national and local case studies, accounting for at least 60% in the respective cases. However, in the community-level case, orientational and social resources dominated accounting for at least 80% of all resources used. In all cases, orientational resources dominated actor resource deployment accounting for about 40% in the national and local and over 60% in the community level conflicts. This is not surprising as the respective narratives have shown that all the studied conflicts involved several verbal persuasive efforts using *strategic framing*, *information* and *threats*. However the relatively larger proportion of orientational resources in community case study can be due to the prominence of the use of *promise* and *cultural framing* (trust and belief in promises) by contractors and farmers respectively.

Table 7.2 summary of specific power resources mobilised by actors in all the case studies

Main resource categories	Sub-categories observed in case studies		
	National	local	community
Institutional	• Political legitimacy • Administrative legitimacy • Law and media • Donor	• Same as national plus • Traditional legitimacy • Media and donors	• Political legitimacy • Administrative legitimacy • law
Orientational	• strategic frame • threats • information • promise	• strategic frame • information • threats	• same as local + • cultural frame • promise
Social	• political network • corporate network • civil society network (NGOs)	• same as national + • social network • traditional network • geo-social circumstances	• social network • traditional network • geo-social circumstances
Socio-economic	• expertise • wealth	• expertise • wealth	• wealth

With regards to institutional resources, it can be inferred that it was more prominently used as one goes from the national to local level and then to community level conflicts. This can be explained by the nature of the conflicts and actors' accessibility and capability to mobilise institutional resources. First, it is not surprising that the national and local actors prominently used institutional resource because the forest-mining conflict was basically policy and legal issues which required authoritative decisions at both levels. Besides, the issues involved both state and traditional actors with vested political, administrative and traditional rights, hence the prominent use of structures of legitimacies. Compared to the compensation conflict which was more of a civil and interpersonal issue, it is not surprising that both the types and frequency of institutional resources used were relatively lower. Second, and perhaps more importantly is the accessibility and capability of actors to mobilise institutional resources at the different conflict levels. The various scale levels provided constraints to institutional resource mobilisation. For example, as explained in chapter 6, the very location of rural communities in relation to the distribution of critical institutional resources such as political, administrative and legal structures and the media constrained their mobilisation. As illustrated earlier, in many cases accessibility to these institutional resources by community-based actors required cross-scale capabilities in their empowerment. However, the prevailing socio-economic situation and institutional arrangements for forest management at the community-level do not easily permit such cross-scale mobilisation. For the local level conflicts, it is not surprising that institutional resource mobilisation was prominent since actors had easier access to these resources due to presence of state structures at the District levels.

Although social resources were not relatively prominent in the case studies, they were more prominent in the local and community conflicts compared to the national case. Characteristically, the national conflict mainly involved the use of political, corporate

and civil society networks. These were used by actors mainly to gain access to critical institutional resources or strengthen their representation and resource mobilisation capabilities. At the local level, social resources became crucial in all the conflicts especially because community consent was needed for the successful implementation of the pro mining policy. Not surprisingly, in all the reserve area cases, it was observed that local community representative structures became important social resources for actor mobilisation. Therefore, depending on particular local situation, it was observed that, in addition to political and traditional networks, other social resources such as NGOs and corporate network were used. Comparatively, the community-level actors mainly used social and traditional networks in addition to capitalising on their geo-social circumstances. This is also not surprising as community-based actors were generally not organised into social groups compared to the coalition of NGOs or the private mining corporate bodies at the national level. They depended on existing social relations/networks such as family members or contacts with local chiefs and elders. Particular to the community-level case study which involved 'outside' actors, the social and geographical distance between the actors became an important social resource for the outsiders. Although it was expected that visibility or accessibility of actors will be much higher at the community level, this was not the case due to the continuous exploitation of this geo-social distance conditions, accounting for the prominence of social resource in the observed pattern. Compared to the other cases, especially the national case, the prominent use of the media which brought the issues to the public domain potentially overcame the possible visibility problem that might have led to such exploitation.

The pattern observed from figure 7.1 also suggests that, though the use of socio-economic resource was not frequent compared to others, it relatively declined from national to community-level conflicts. This is also not surprising for two main reasons. First, while the national and local level actors used both expertise and wealth, only wealth was used in the community-level case. It was observed that the controversies surrounding the forest-mining discourses needed some technical information from experts for actors' persuasive messages to gain credibility. This was crucial because of the legal, socio-economic and environmental impact implications that were loaded in the anti-mining campaigns. Compared to the compensation conflict, demand for expert knowledge on valuation was not central to actors' persuasive efforts. They only challenged the basis of each other's valuation of what constitutes adequate compensation. Second, the number of lobbying or protest activities that were organised at the national level required more economic resources than those at the local and community levels. This was because the national-level conflict involved a wider audience to be persuaded for a pro-mining policy to go through or be blocked. It was observed that the audience included government, lawmakers, bureaucracy, donors and the public. This culminated in the organisation of lobbying meetings, field visits for lawmakers and media personnel, and press conferences, all requiring economic resources. Compared to the local level, the scope of audience was narrower involving mainly local authorities as representatives of the people. Therefore, it is not surprising that the main activities organised were sponsorship of supporters to public hearing meetings and organisation field visits for local political and traditional leaders.

Regarding the community-level case, it is not surprising that economic resource was the lowest deployed resource. As explained in chapter 6, farmers in general did not

have economic capabilities to organise themselves and others to pursue compensation payment. Besides, since only 15% of the cases resulted in some form of settlement by contractors, it is not unexpected that economic resource deployment by contractors was low. Moreover, comparing the net cost/benefit ratios of the various interests in the studied cases, the observed pattern is not strange. The mining conflict involved high economic stakes with high expected turnover, which warranted the economic investment in the pro-mining lobbying. Contrary to the compensation conflict, aside the low official compensation rates, there is not even any guarantee as per current institutional arrangement and other conditions mentioned that investing some economic resources to pursue one's case will result in settlement. It was realised that even when there is a guarantee, the cost/benefit components of, for example, pursuing a contractor in the city may not worth the time and money investments.

7.4 PATTERNS OF POWER STRATEGIES

In order to have a comparative view of the expectations on reciprocity of actor behaviour in the studied cases, figure 7.2 presents the observed patterns in the respective scale levels.

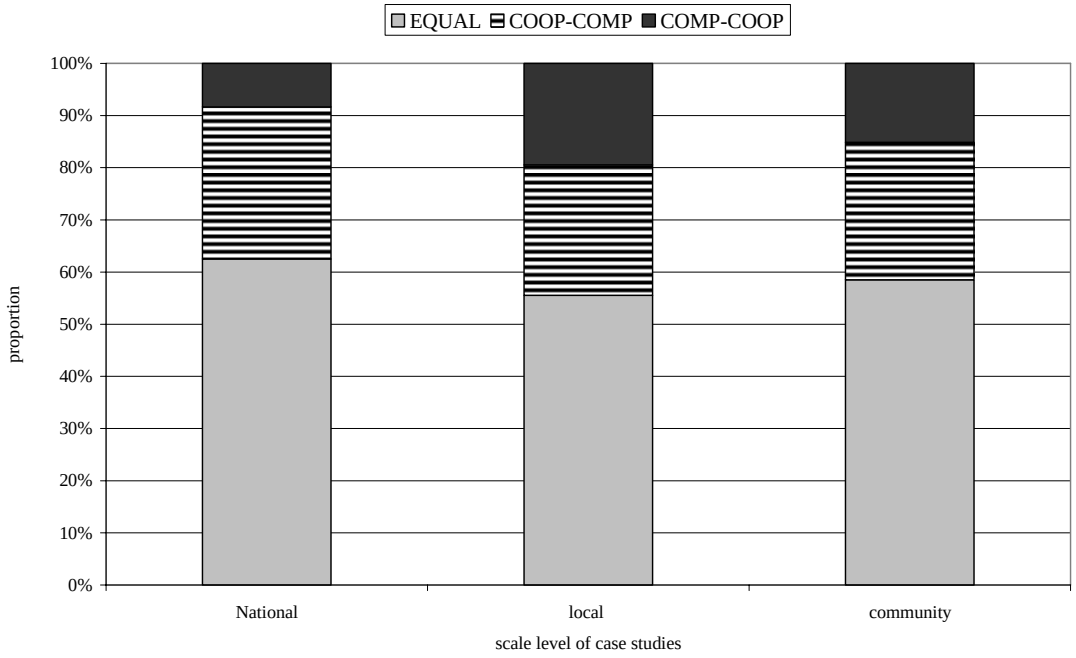


Figure 7.2 the proportion of strategy configurations on the relative cooperative-competitive scale in the various scale levels of the case studies. Total number of configurations at national, local and community levels = 24, 36 and 205 respectively. Complete data in annex 3

It can be observed from figure 7.2 that the configurations of actor strategies on their relative cooperative and competitive scales followed similar pattern across all the conflict scale levels. Direct reciprocity dominated strategy configurations (over 50% in all cases), followed by cooperative-competitive patterns (between 25-30% in all cases) and then competitive-cooperative patterns (at most 20% in all cases).

This observation, in relation to the hypothetical expectations suggests the following. First, it suggests that there was a high tendency for the actors to respond to the

strategy or behaviour of opposing actors since direct reciprocity accounted for about 60% of all strategy configurations. Looking at the composite configurations within the direct reciprocity group (EQUAL), persuasion-persuasion reciprocity dominated their strategy responses, accounting for over 50% of all observed configurations at all the levels. The two strategies that were mainly used to inversely reciprocate persuasion were manipulation and avoidance; while the former was not confined to any particular level, the latter was confined only to community and local level conflicts. The observation with regard to avoidance is particularly not surprising because, as described earlier, the local community setting provided conditions for the use of avoidance by external actors as exemplified particularly in the compensation conflict. However, looking at the reciprocal responses to individual strategies, it was observed that persuasion was directly reciprocated 68%, 67% and 74% at national, local and community levels respectively), giving an average of 70% persuasion-persuasion configuration in all cases. This suggests that, persuasion, generally had a high tendency to provoke direct reciprocity, especially when conditions for direct interactions that constrain avoidance were present. This is especially important as avoidance alone out of the five strategies that were used to respond to persuasion accounted for almost half (about 47%) of all the deviation.

Notwithstanding, given that about 40% of strategy configurations in all case studies resulted in inverse reciprocity, a conclusion on the expectation of direct reciprocity in conflict behaviour is weakened.

Second, it is observed that the proportions of cooperative-competitive configurations were higher than competitive-cooperative ones at all levels of conflict cases. Notwithstanding, the hypothetical expectation that cooperative-competitive configurations will dominate competitive-cooperative ones in case of inverse reciprocity cannot be firmly supported. This is because 40% of the cases of inverse reciprocity did not confirm this expectation. In all, the spatial scales at which conflict occur did not show to have any influence on the pattern of responsive strategies actors may use.

Regarding the use of specific strategies, table 7.3 summarises the results for the three scale level conflicts. Persuasive and manipulative bargaining were the observed actor strategies that pervaded context and scale boundaries. Putting all actor strategies together, they generally formed a prominent component of their power mix or strategy conglomeration.

Table 7.3 a summary of observed power strategies used at different conflict scale levels (+ means observed; - means not observed)

	Community-level	Local level	National-level
Avoidance	+	+	-
Persuasion	+	+	+
Manipulation	+	+	+
Coalition-building	+	+	+
Force	+	+	-
Mediation	+	-	-
litigation	+	+	-

It can be inferred from table 7.3 that, more power strategies were used as one move from national to community level conflicts. The attributive scale factor that could explain this is the ‘tangibility’ of competing actors. At the community level

competing actors could be explicitly defined due to the relative confinement of the community domain. Obviously, in the two-actor scenario compensation conflict case studied, the 'enemy' was conspicuously vivid, tangible and could be specifically identified. This suggests that strategy deployment could be easily targeted within actors' interactional field than in higher scale settings where locating the 'enemy' may involve much more transaction cost. This is exemplified by the situation in the farmer-contractor conflicts where contractors avoided and 'escaped' from the community domain, stretching the conflict scale from a micro to a somewhat *meso* level. In such circumstances, as illustrated before, it was found out that farmers were incapable of deploying their power strategies, and the few who attempted, had to spend extra time, energy and money to get hold of the target. The 'ease' with which competing actors could be identified in the local level seems to also enable easy conversion of threats to deployment of force when conditions were ripe for it.

In spite of the above observations, any rigid conclusion suggesting determinacy of scale on power strategy can be misleading, though, the effect of scale as enabling or constraining the 'ease' with which some strategies can be deployed cannot be overlooked. For example, if mediation was an institutionalised conflict management mechanism in policy planning in Ghana, it can be imagined that the opponents would have resorted to it. Moreover, if they had the capability, they could have converted their court threat to actual litigation.

Second, in all cases, actors generally used a conglomeration of strategies, more in sequential order than in simultaneous aggregation. Thus, the pattern of power mix seems to be structured in course of the conflict, with a tendency for the actors to change their particular strategies rather than employing several at the same time. However, except for the community-level conflict case, there were no observed patterns of change of actor strategies in the local and national level conflicts. For example, actors mainly used persuasive and manipulative bargaining at the national level and this did not follow any sequential pattern. Likewise, no such sequential patterns were observed for the strategies used at the local (reserve areas) conflicts. Unlike these, the community-level conflict showed a progressive decline in the use of more cooperative strategies to more competitive ones by both actors in course of the conflict.

A careful look at patterns of deployed strategies and that of resource mobilisation in all the conflict cases lead to an interesting suspicion regarding actor-empowerment and conflict behaviour. To start with, both patterns as described in the various case study chapters seem to support the general claim that conflicts generally intensify or heat up in course of time. However, as observed in the study, such intensification seems to have followed two behavioural patterns. First, there was increasing competitiveness through shifts from more cooperative to competitive strategies. This was done without necessarily increasing quality dimensions of resources such as the pattern observed in the farmer-contractor conflict at the community level. Second, it was observed that there was intensification by increasing quality dimensions of resources within the employed strategies. This was done without necessarily changing strategies to more competitive ones such as the pattern observed in the local and national conflict cases. These patterns are founded on the descriptions of patterns of resource mobilisation and strategy sequences in the respective case study chapters. Comparing the systemic circumstances and respective actors' conflict capabilities as

described before vis-à-vis these observed patterns, a hypothetical model of intensification of actor empowerment in course of conflict can be formulated:

1. There seems to be a tendency that actors will use particular strategies and improve its effectiveness by improving the quality dimensions of their resource mobilisation. This tendency may be followed if actors do not face constraints to the mobilisation and use of these strategy quality dimensions. Such strategies may however oscillate between persuasion and manipulation.

2. There seems to be a tendency that actors are likely to shift from original strategy to more competitive ones if opportunities or capabilities for mobilising resources to improve quality dimensions of original strategy are constrained.

7.5 EFFECTIVENESS OF ACTOR-EMPOWERMENT

This section takes a comparative view of the effectiveness of actor-empowerment, looking at the results on the effectiveness of actor-empowerment presented in the various case studies. A comparative overview indicates that the particular systemic factors that prevailed at the various scale levels had some influence on actor-empowerment effectiveness. This was particularly so with regards to the mobilisation of power resources that were observed to contribute to episodic and management effectiveness.

First, the use of media was observed to have episodic effectiveness both at national and local levels. It has been shown how the media stimulated debates and 'forced' conflict issues, and consequently, conflict actors to interact. Even when actors were not directly interacting, it was observed that using the media by one party to bring issues to the public domain was generally effective at provoking opposing actors to respond. However, its mobilisation was limited at the local and especially community levels because of the general absence of the media in rural settings. Comparing the national and local settings, there was a vast difference in terms of media presence, which made their accessibility easier in the national-level conflict. It was observed that the use of the media by local actors, except for private companies, was mainly supported by national NGOs and many of the local level press conferences were held in the cities. Moreover, in terms of reporting, the national-level conflict received much more attention. In this respect, the localization of the media in the national domain, to some extent, influenced the effectiveness of national and some local actors. Not surprisingly, in spite of the commonness of compensation conflicts, no media report on it was ever observed in the study period, nor any actor purported to mobilise it.

Moreover, the effectiveness of actor empowerment in the study was largely influenced by the disproportional distribution of some critical state institutions at the various spatial levels. For instance, all the high-level political and administrative structures, such as the seat of government (executives and Ministries), parliament and the headquarters of relevant public institutions were located in the national level. It is not surprising that the mobilisation of these institutional resources were limited in the local and community-level conflicts. This is because the transaction cost of accessing these agencies are relatively high. The mobilisation of these state structures by local

and community actors was further constrained because most of them are not present at these levels, especially at the community-level. In the core study area, *Wioso*, for example, the police post had only four policemen in such an area with high levels of economic and social activities. This situation, coupled with the high levels of poverty in rural settings is problematic as far as access to the mobilisation of these resources is concerned. This assertion is made against the background that structures with political and administrative legitimacies have been noted in all the cases as useful resources for actors to achieve both episodic and management effectiveness.

In general, consequent to the high presence of the state in the national domain, access to organised social, corporate and political networks were also observed to be limited. Generally, local and community level actors, especially civil society actors, could not use critical organised actors in the national domain, owing to lack of organised linkages and high transaction cost. For example, while mining companies could used their national corporate body in their lobbying and persuasive efforts, opposing chiefs and local activists did not have any such 'formal' linkage to organised NGOs for example. The exceptional cases were situations where some NGOs also needed to build alliance with specific local actors to gain representative legitimacy in their advocacy. This was in a form of coalition-building for the anti-mining advocacy but not a 'permanent' organisational effort.

From the foregoing, one can conclude that, the distribution of state and Para state institutional structures within the various spatial scales in which natural resource conflicts occur in addition to the relative locations of actors within these levels influenced the effectiveness of actor-empowerment.

8. DISCUSSION

> It is the work of an educated mind to be able to entertain a thought without accepting it (Aristotle, 384-322 BC)

In chapters 4-7, the empirical results from the case studies have been presented in the light of the research questions outlined in chapter 1 following the theoretical and methodological perspectives presented in chapters 2 and 3. This chapter is dedicated to discussing the general results in the light of the theoretical arguments and approaches advanced for the study of the role of actor-empowerment in conflict. First, the notion of conflict as experience of impairment and as a two-actor game will be discussed. The study adopted several analytical categorisation schemes for studying actor empowerment, particularly power resources. These will be evaluated in the light of their empirical applications in this study. Moreover, the hypothetical expectations with respect to reciprocity and resource mobilisation patterns in strategy sequences resulting from the impairment-response patterns observed will be discussed. Finally, the notion of empowerment as used in this study will be discussed against the backdrop of how they justify the conceptual connotations they assume in the introductory and theoretical chapters. Generally, the chapter is structured following these outlines with the view to providing clear bases for the conclusions of the study.

8.1 CONCEPTUALISING CONFLICT

8.1.1 Reflections on the impairment delineation

In chapter 2, following Glasl‘s model (1997), conflict was conceptualised as the experience of impairment by an actor as a result of the behaviour of another actor. This led to the two-actor game model, which was applied to studying the empirical cases, grouping the actors into proponents and opponents even in the multi-actor cases.

Generally, the study supports the delineation of conflict using the impairment notion propagated by Glasl’s model. Without the use of the impairment delineation, the conceptual distinctions between conflict, politics of interest and disagreements in general could not be captured in the study. For example, looking at the disagreements between farmers and contractors on the issue of ‘adequate compensation’, two scenarios can were observed. First, there were many instances that even though farmers were unhappy about crop destruction or disagreed with compensation offered by contractors but did not take any action to with the situation. In this case, even though there were some elements of disagreement, these could not be conceptualised as conflict because no steps were taken to manage the impairment. In the second scenario, farmers took steps to deal with their disagreements with contractors. In this case, farmers could be said to have been sufficiently impaired, thus, converting disagreements to conflicts. Moreover, it was observed that in some cases farmers had their ‘own’ plans or trees on their farms. In some cases, felling such trees without

their notification was impairing. However, the cases that were studied as conflicts were those that such impairment provoked reactions from the farmer. In the mining case at local levels for example, though many chiefs and local people expressed disagreements with the pro and con positions regarding forest-mining, only those who took steps to 'resist' other positions were considered to be in a conflict situation. Otherwise, almost everybody who was interacted with would have been studied or categorised as an actor in the studied conflicts.

However, a deeper reflection, especially on the agential aspect of impairment, suggests that the notion of impairment needs further clarification than has been given to it. The important observation from the study on this point is the situation where the impairing actor is 'invisible'. For example, it was observed in the compensation conflict case study that, in some instances farmers were impaired when they found out that 'somebody' has felled a tree to destroy crops in their farms. Going by Glasl's two-actor game model, has a conflict occurred or not? Looking at the issue of impairment, it can be argued that a conflict has occurred to the extent that the aggrieved farmer took steps to deal with the impairment. On the other hand, from the two-actor model perspective, one may argue that a conflict has not occurred because conflicts occur between two actors. In this instance, it is somehow uncertain whether Glasl's model is applicable since the impairing actor is 'invisible' and does not seem to have agency. The lessons from such cases in the study suggest that the judgement as to whether conflict has occurred or not should be based on the response of the impairing actor and not on the physical presence or visibility of the impairing actor. This should be the case, so long as the cause of the impairment can be attributed to some human agency. In the cited example, two informative scenarios were observed. First, some farmers, even though were impaired by the impact of behaviour of the 'invisible' actor, they did not respond because there was no one to take responsibility. Second, some impaired farmers even though did not identify the 'culprit', they responded through actions like suspecting particular people, reporting to forestry officials or simply adopting some coping practice like felling remaining timber trees for their own use. In the first scenario, even though there was experience of impairment, there was no response to cause any actor to take responsibility. Here, one can argue that since the two-actor dimension of Glasl's model is not satisfied, in the sense that no human agency was attached to the cause, there was no conflict. However, in the second scenario, the aggrieved farmers caused the 'invisible' actor to have agency through others such as officials with administrative responsibility. In this case, one can argue that a conflict has occurred, because the two-actor dimension of Glasl's model is satisfied.

From the foregoing, the 'impairment' notion of Glasl's model seems to have empirical application even in natural resource conflict context. Based on the lessons from the study, one conceptual clarification is needed. That is, in such contexts, the underlying impairing behaviour may not be directly linked to conflict actors as may usually be the case in interpersonal conflict. Other studies (Kangwana, 1995; O'Connell-Rodwell et al. 2000; Suryanata and Umemoto, 2005) have shown that in many instances, other actors are caused by impaired actors to 'assume' agency for the impairing actor. For example, Marseille (2004) has shown that farming communities have engaged managers of the Mole national park in Ghana as a result of crop destruction by game animals. It can be imagined that the application of the impairment delineation of Glasl's model in natural resource conflict must incorporate the possibility that actor

A's agency might be 'imposed' on others, on the basis of certain norms or principles by B. Otherwise, issues over forest conservation for future generation cannot possibly be imagined as conflict.

8.1.2 Reflections on conflict as a two-actor game model

It was argued that using the impairment delineation (Glasl's model), conflicts should be studies as a two-actor game. On the basis of such theoretical considerations, actors can be designated into two groups. This approach was used in the study. The application of the model in the compensation conflict was easier since it involved only two individual actors, farmers and contractors. However, in the forest-mining cases which involved several actors, the application of the model involved two steps. First, using the notion of impairment, the specific conflict actors were 'isolated' as mentioned before. Second, on the basis of their interests or positions in the conflict, pro and con, they were designated into two-actor groups, the 'proponents' and the 'opponents'. Thus, in both the 'pure' two actor conflict and the multi-actor conflicts, by using the impairment delineation on the basis of their substantive positions pro and con, all the conflicts could be constructed as a two-actor game. As argued in chapter 1, actor-designation was a crucial aspect of the application of the model.

In the application of the model in the multi-actor conflicts, the designation of actors into the proponent-opponent groups was challenging. For instance, in the studied cases, the designation of 'government' as an actor in the national conflict was problematic since it displayed both normative role as a neutral observer and as having interest or position, making it a conflict actor. The application of the model faced difficulty as one is forced to put such actors into one actor-group or eliminate them. This is because the boundary between these roles is fluid, with government behaving like a referee and a player, especially at the beginning of the conflict when it had not declared its position. However, the model was useful to unravel such dilemmas when the conflict was systematically followed in time, which allows the researcher to know when such actors become 'converted' into a particular group. This is important as some public agencies which were 'active' conflict actors at the beginning, later withdrew to 'neutral' observers. Thus, the proponents and opponents groups did not stay stable, which requires a greater reflection on the studied conflict actions and discourses to determine actor positions in the course of the conflict. This requires investigative inquiry and diligent corroboration of information such as content analysis of top government officials' speeches and the extent of departure of their actions from the normal 'rule' of legitimate exercise of their political and administrative authorities. In the mining conflict, there were instances where the government acted as a 'neutral' guardian taking actions which at least symbolically connoted as acting in 'public interest'. Example is when government responded with ministerial fact-finding missions. There were also other instances when it explicitly acted as a proponent; another reason why the chronological construction allowed by the model is useful. Example was when the government held press conferences to defend prospects for a pro mining policy.

The point being developed here is that since, historically, it is known that social and political actors do not necessarily act in the interest of their groups or on their legitimate mandates, the application of the model cannot benefit research using a

typical survey approach. At best it would require case studies or investigative approaches that give particular attention to chronological narrative accounts and observations in order to identify the appropriate actor-group. For instance, chiefs in Ghana are expected to act solely in the interest of their people or communities but the studied local level conflicts showed that they were not often on the side of 'their' people. Therefore, the designation of an actor in the two-actor model seems to be purely an empirical question to be verified in course of the conflict as the study has shown that actor positions or designations do not stay stable in course of a conflict. Thus, even though the study confirms the observation by conflict scholars that all conflicts have the tendency to reduce to two party conflicts via coalitions and blocs, the membership of the groups are not constant in the course of the conflict.

Reflecting on the case studies, it can be realised that the two-actor game model of conflict was useful for studying conflicts in both the two and multi-actor settings. Therefore, even though most natural resource conflicts can be expected to involve multiple actors, the model can be useful in studying specific two-actor fields as well as the entire multi-actor situation. For instance, for some theoretical or practical reason, one may be interested in the conflict between only two actors in a multi-actor setting, say a private corporate actor and an environmental NGO. In that case, the model could be useful as these actors could easily be designated into a defined two actor groups. For example, in the forest-mining conflict, if it had been decided to follow the conflict interaction between government and an environmental NGO, their respective conflict actions in response to each other could have been selected. Thus, multiple 2-actor fields such as Government-NGO, Government-Miners, Chief-Company, Chief-Chief, Media-Government etc could have been isolated and studied, independent of each other. In such cases, some actors' status as the main conflict actors would change and they may be part of another actor's social network or coalition. Thus, while in a Government-NGO scenario, a mining corporate body would have appeared as a social resource to Government, in a Miner-NGO conflict, it would have been a main actor. Moreover, as shown in the empirical cases, the model could also be applied when the interest was on the entire range of actors. In this respect, as has been exemplified in the national and reserve area conflicts, actor-designation becomes crucial to the application of the two-actor model. This demands a clear theoretical foundation, as exemplified in this study, in defining who are opponents and proponents.

Aside the possibilities of applying the model in both two-actor and multi-actor contexts, its usefulness in reconstructing conflicts chronologically allow for multiple applications of the studied data. For example, due to its systematic organization of observable facts in course of time, its usefulness transcended 'mere' qualitative descriptions of the conflicts to actual quantitative representation of the chronological patterns of actor strategies and resources, for instance. Thus, it can offer a powerful field study approach for a wide range of researchers who are interested in pure stories, in pure mathematical modelling or both.

8.2 POWER RESOURCES

8.2.1 Reflections on categorisations

In chapter 2, it was proposed that all power resources can be categorised as orientational, institutional, social and socio-economic. In general, the study proved that the abstraction level of the categorisation was adequate to accommodate most of the observed power resources. . Even though observed conditions such as 'geo-social circumstances' and 'place' were observed to be resourceful, their categorisation as social resources was found to be problematic during peer coding discussions. Moreover, ordering the specific resources into the various sub-categories which were used for the coding was sometimes problematic. In the face of the empirical data, it was realised that the conceptual delineation of some of the sub-categories was not analytically very sharp. This difficulty was encountered during coding and peer coding. As was pointed out in chapter 3 regarding comparison of the coding of the researcher and the peer, there were some differences that were 'resolved' only after discussion. Even with that, there were still some conceptual differences which both coders could not agree on. For example, from the perspective that the police are the law enforcement agency of the state, it was categorised under institutional resources as 'law'. However, the argument had also been that the police form part of the institutions of the state with administrative authority over law enforcement, hence could be categorised under institutional resources as 'administrative legitimacy'. Thus, while the coding of some power resources into the main category-levels was clearer, coding them into the sub-category groups was more difficult. Another example from the coding discussion is the use of threat of court action. From an orientational perspective, it should be coded as 'threat' since it is intended to influence the target to choose an alternative action rather than 'suffering' legal sanctions. However, one could also argue that the material strength of the pronouncement of court action is an invocation of the application of the law. This is because any threat of court action is in principle built on a certain legal premise. Consequently, such actions could be regarded as the application of the law and hence the use of institutional resource. The question is whether a law has been used as an institutional power resource when it is invoked in discourse (such as threatening court suit or citing specific laws) or when actual steps are taken to enforce it (such as actually filing a court suit)? The study used a consideration of the latter in the coding. However, it became clear that since the 'mere' invocation or threat of the use of the law can have episodic effect of causing a target to change behaviour, it can have equal efficacy as actual enforcement. Moreover, it became evident in the study that the quotation of a law for example can be coded as an institutional (law as legitimised code of conduct) or an orientational (law as an information) resource.

Thus, two conceptual dimensions arise from the discussions so far. It seems that power resources may have what could be called 'functional' and 'structural' dimensions and the considerations given to such dimensions may determine their groupings into the various categories of power resources. For example, it seems that from a functional point of view, both the police and the threat of court suit could be categorised as the law and a threat respectively. This is because, in a more abstract sense, the functional utility of these resources is respectively the use of the law in the manipulation of the target to fear some consequences. However, from a structural

perspective, both can be categorised respectively as administrative legitimacy (institutional) and the law (institutional).

In terms of conceptual delineation of the sub-categories, the institutional, social and socio-economic categories were clearer as few problems with coding were encountered. For example, as has been explained before, chiefs in Ghana are important social and institutional agents. Therefore, the use of chiefs for mediation or to support a local project for example, presented an empirical challenge as to whether they were being 'used' as an agent with traditional legitimacy (institutional) or as part of one's traditional network (social). Similar observations can be made for the use of all people who possess some institutional legitimacy symbols such a Parliamentarian, President or a Chief Executive. It was resolved in the study that, when such people act as a result of being personally impaired or assumes such a position because of their institutional position, then they can be categorised as using the appropriate institutional resource. On the other hand, if they are 'enrolled' by others because of their status, then they actor as social or political network agents.

These observations confirm the claim by Kurtz (2001) that the resources of power are inextricably intertwined and can be separated only for analytical purposes. In this respect, the attempt to sub-categorise power resources under the main traditional categories was more useful to improve the analytical strength of the study of power. However, as has been pointed out from the study, the task is conceptually and empirically challenging. Therefore, it seems not too surprising that most studies on power have focussed largely on the main traditional categories. From the foregoing, the lessons from the study suggest that the sub-categorisations of power resources need some conceptual refinement in order to improve their analytical and empirical application. This is needed to avoid such subjective assumptions and considerations in the analytical application of the notion of power resources as mentioned.

Reflecting on the conceptual arguments in chapter 2, a fundamental question emerges in the search for ways to resolve the problem associated with the categorisations of power resources. The question is whether on the basis of the lessons from the study, there is compelling need to approach the analysis of power resources in actor-empowerment using the main categories or sub-categories or both. From the results presented in the empirical chapters, it can be concluded that employing both main categories and sub-categories can be more useful. First, the study has illustrated that a higher level of categorisation such as the four main categories is useful for studying patterns of resource deployment by conflict actors. In this regard, the study could show which conflict actors in the various case studies used, for example, more economic resources or social resources. It also helped to follow the chronological patterns of the types of resources actors used in course of the conflict, particularly with regard to ease of graphical representations.

However, it should be pointed out that, in terms of offering explanations, especially on observed patterns of actor-empowerment effectiveness, an overview of the sub-categorisations were more useful. For example, it was observed that both proponents and opponents in the national mining conflict used institutional and social resources. However, the sub-categorisations made it possible to see that the proponents used mainly political and administrative state institutions while the opponents mainly used the others such as donors and the media. It was also observed that, though both

farmers and contractors prominently used orientational resources, they differed in the types of *knowledge* they used, for example. While the farmers mainly used *informal knowledge* in their persuasive efforts, the contractors more often used formal knowledge such as official compensation rates. From the examples given, it is clear that it would have been difficult to explain the effectiveness of actor empowerment without a detail overview of the sub-categories of resources used by the actors. Thus, the results of the study have confirmed that it is analytically more elegant to use both levels of categorisation in the search for patterns and explanations for actor-empowerment and their effectiveness.

From the foregoing, to resolve the issue of coding resources into specific sub-categories would therefore require that the notion of power resource in actor-empowerment elaborated in chapter 2 is revisited. As was argued, power resources are conceptualised as the means (bases) to gain capacity to deploy influence strategies. In this sense, an actor-empowerment perspective seems to suggest a goal-oriented ambition for the use of specific resources. Therefore, it is more reasonable to focus on the functional aspects of resources as the objective criterion to categorise discursive resources such as the threat of law suit.

In terms of completeness, it has been shown from the study that, 'place' for example featured prominently as a power resource owing to its cultural and symbolic functions in discourse. Examples were the association of mining communities with development against social vices and the cultural labelling of the forest as the abode of the gods. This suggests that the list of sub-categories is not complete and new ones should be added. The objective is to improve the categorisation of power resources to have a comprehensive analytical scheme for application in research. This will require a continuous research effort at employing and improving the analytical categorisations beyond the traditional three or four level categories.

8.2.2 Reflections on the usefulness of Roger's categories

In chapter 2, the categorisation of power resources into instrumental and infra resources by Rogers (1974) was introduced. It was proposed to be analytically useful for the explanation of the effectiveness or otherwise of specific power resources. Reflecting on the various presentations on the effectiveness of actor-empowerment in the empirical chapters, it can be concluded that Roger's distinction is useful in the analysis of power. Its usefulness is not for 'rigid' analytical categorisation, such that particular resources can be neatly grouped as instrumental or infra resources. However, as explained in chapter 2, its application in the study helped to identify the conditions and circumstances that enabled or constrained the effectiveness of actor-empowerment efforts. For instance, it was pointed out that some institutional circumstances such as an actor's membership status in a policy community can be an opportunity or constrain to his participation in important consultation processes. Thus, it was indicated that irrespective of NGOs reasons (instrumental resources) for halting the anti-mining policy for example, their inability to gain status as an admitted pressure group in the forest-mining policy consultation process constrained their empowerment efforts. Other conditions that can be said to be infra resources were pointed out in the various empirical chapters. For example, it was noted that chiefly status, accessibility and credibility of critical public agents, legitimacy to represent an

aggrieved group and even the geographical distance between conflict actors have all been noted. The empirical sections on actor effectiveness captured and elaborated on these and other such structural conditions that influenced actor-empowerment in the study. Two important lessons emerge from the study. First, it became clear that, for a condition or resource, to assume a status as an infra resource it is contingent on the special circumstances of the specific empirical context. For example, though geographical distance was observed to have constrained farmer empowerment efforts, it could not do so in the reserve or national level conflicts, though similar geo-social conditions existed. Following this, the second lesson is that the categorisation of infra and instrumental resources should only be used as heuristic analytical tool to explore for the specific context and setting factors that can offer explanations for constraints to resource mobilisation. In this sense, it can be used to formulate questions about what social, political, cultural, institutional etc factors that enable or constrain a particular observation of an empowerment effort.

8.3 IMPAIRMENT-RESPONSE-PATTERNS

8.3.1 Reflections on expectations on strategy configuration

In chapter 2, following the main arguments on strategic behaviour, three hypothetical expectations on actor responsive behaviour to impairment were formulated. Based on the rational choice and reciprocity schools of thought, the hypothetical expectations were essentially formulated as follows:

- It was expected that actors will directly reciprocate cooperative and competitive strategies, leading to EQUAL configurations.
- It was expected that actors will not necessarily reciprocate the strategies of opponents and that responding actors will tend to exploit opponents by using competitive strategies to respond to cooperative ones rather than the opposite. This was expected to lead to COMP-COOP configurations.

None of these hypotheses was confirmed by the study. The results as elaborated in the empirical chapters of the study have illustrated that actors exhibited both direct and inverse reciprocity. All the patterns of strategy configurations generally suggested the predominance of direct reciprocity though there were substantial proportions of inverse reciprocities. As was elaborated in chapter 7, even when the action-response patterns of the actual strategy categories are compared, they could not strongly confirm any of the expectations. However, the results seem to strongly suggest that the use of persuasion may have a higher tendency to be reciprocated. As was pointed out, in at least 70% of the cases where persuasion was used, they were directly reciprocated with persuasion. This observation seems to be significant comparing the extent to which manipulation (about 10%) and avoidance (about 7%) were directly reciprocated.

A reflection on the studied conflicts reveals some insights into actor behaviour vis-à-vis rationality and reciprocity. First, it seems quite natural to expect that actors will reciprocate cooperative or competitive behaviours. However, the study observed several unexpected cases where actors' strategic interests were not sacrificed for cooperative reciprocity. Recall the examples of the use of avoidance by contractors

and the use of manipulation by opponents in response to farmers and proponents' persuasive response respectively. For example, contrary to the reciprocity expectation, it was observed that, some proponents used persuasion to respond to the use of force by some community opponents. This was strategic as any such forceful reaction would have damaged their reputation, especially in the face of intense anti-mining campaign at the national level. Moreover, the use of avoidance was inversely reciprocated in many instances (over 90%). Again, taking farmer-contractor cases for example, it is reasonable to observe that farmers continued to use persuasion and mediation to pursue 'running' contractors. This was because it was in their strategic interest to secure compensation payments. From the foregoing, the role of rationality in actor responsive behaviour seems to be well demonstrated in the study.

8.3.2 Reflections on reciprocity and expectations from game theory

From all the observations on strategy configurations discussed above, the study does not strongly confirm any generalization that specific strategies have affinity for a responsive strategy of their like, as suggested by some game theorists. For example, the conclusion by Cosier and Ruble (1981) that disputants tend to reciprocate the styles employed by the other seems far too generalized and deterministic. Rather, such a conclusion should admit that the tendency to respond with similar strategies may very well be dependent on whether it is likely to give desired results (rational motives) and that it should not be isolated from an evaluation of the effectiveness of responsive strategy. This makes context considerations relevant. Others, such as Messick and Brewer (1983) and Komorita et al. (1991:496), have given an affirmative response concluding that 'subjects definitely reciprocate the competitive choices of others and react to defection with defection'. Similarly, such a complete competitive reciprocity prediction is not fully supported by this study. For instance the use of manipulation by proponents was not directly counteracted with manipulation in the forest-mining conflicts. Also, there were instances where contractors used persuasive bargaining to respond to litigation by farmers. The conclusion from these studies that are supported by this study is with regard to the fact that 'subjects do not always reciprocate the cooperative choices of others, and frequently exploit such behaviour' (Kimorita et al., 1991:496). Moreover, Van de Vliert (1997:58) has claimed that 'a conflict party cannot successfully 'avoid', 'compromise' or 'solve the problem' if the other party does not avoid. This suggests that an actor cannot, for instance curtail interaction, unless he is 'allowed' by the competing actor in a two-game situation. The claim from such a conclusion that reciprocity is needed for one to successfully deploy avoidance is not wholly supported by this study. For example, it has been shown in the compensation conflict how the relative spatial location and distance between farmers and contractors provided structural conditions that allowed some contractors to unilaterally use avoidance. The implication is that, such a prediction by Van de Vliert for example, presumes that the contextual actors are spatially constrained to interact such as in game experiments. While this is possible in game experimental situations, in the reality of natural resource conflict context, the study has suggested that it is not always so.

These observations do not discount the notion of reciprocity, as the study has also shown instances where contractors respond with threatening language when farmers in their anger confronted them with threats, giving rise to manipulation-manipulation

configuration. As shown before, direct reciprocity dominated actor strategy configurations in all the case studies.

The implication of the perspectives gained so far for conflict intervention does not support models that allow predictions of what strategies may provoke cooperation from competing actors if one is influenced to initiate cooperation. It was expected that, for example, if actors were found to be reciprocating cooperative strategies, then conflict intervention could focus on persuading actors to use cooperative strategies to provoke similar responses from their adversaries. Contrary to this expectation, such predictions cannot be confidently made. With the realization that actors exhibit both reciprocal and rational choices in their conflict and social exchanges, a key consideration has been how to improve cooperation in the light of the realization that cooperative reciprocity cannot be guaranteed in all cases (see Ostrom 1998; Lubell and Scholz, 2001)? At the centre of attempts to unravel the complexity, it has been pointed out that face-to-face communication is critical. Commenting on why cooperation was not always reciprocated in prisoner's dilemma game, Komorita et al. (1991) admitted that the lack of communication in such games provides ambiguous motives and intentions. Other studies have observed the effect of communication on cooperative reciprocity. Ostrom (1998:7) commenting on communication and collective action observed that 'no other variable has as strong and consistent an effect on results as face-to-face communication'. Other similar positive effect of communication on cooperation has been observed in natural resource conflict contexts (see Suryanata and Umemoto, 2005). In spite of this claim, the results from farmer-contractor face-to-face communication encounters in their first conflict episodes did not seem to give much support here. As was observed, after such interactions, many contractors responded using avoidance, breaking their own promises. Again, when the proponents invited opponents for direct talks in the forest-mining conflict, the result, at least the subsequent reactions from opponents, does not also support the 'magic' that face-to-face communication can perform. Ostrom (1998) admitted that communication alone is not a sufficient mechanism to ensure successful collective action under all conditions. She pressed for attempts to understand the reinforcing roles trust, reciprocity and reputation for being trustworthy play to explain the effectiveness of repeated communication in cooperation.

In this line, trust, as a *cultural frame*, was identified in the study as playing an important role in actor behaviour. This was exemplified in the farmer-contractor face-to-face communication encounters. It was shown that in their first episode, both farmers and contractors mainly used persuasive bargaining in their face-to-face communication encounters. This was expected to provoke further cooperation in their subsequent encounters. Generally, promises by contractors seemed to be believed by farmers (initial trust) as evidenced by their cooperation to allow contractors to log and convey the logs. This was done with the 'hope' that contractors will reciprocate their cooperation, especially when many contractors were represented by native middle men as their Bush Managers. What was observed, following the patterns of farmer-contractor strategies and of resource mobilization showed an increasing trend of the use of relatively more competing strategies such as mediation, litigation, coalition-building intensifying to force at latter stages. This suggests that the farmers' trust in the contractors to fulfil their promises was dwindling, thus breaking the conditional commitments that underpinned their cooperation at the beginning of the conflict. A typical expression of mistrust by farmers was contained in their various narratives.

For example, a farmer at *Adumasa* narrated his story that expressed how mistrust tainted initial cooperation in their face-to-face encounter:

"…I refused the amount suggested by them (contractors) and they said we can talk about it later after they have off-loaded the logs…later when I contacted the bush manager he was asking me to go and come, go and come until I forgot about it…knowing that they were deceiving me, I took the gun and vowed that if I find anybody in my farm cutting tree, there will be war" (excerpt from narrative, 2004)

With several of such sentiments expressed, it is clear that reputation of mistrust and non reciprocity were likely to influence how farmers would deal with contractors in the future. More reinforcing is the expression by some farmers who recounted their experiences with contractors who had built a reputation of trust.

"There is a new company, which is good. They destroy our crops but the bush manager will always come to you, negotiate and pay the compensation' (farmer at Adumasa, 2003)

Moreover, even though there was face-to-face communication by top government officials on assurances that environmental regulations will be faithfully enforced, why did the opponents consistently reject the assurances? The opponents did not simply trust the government and the proponents. This is because, as was elaborated in the narratives, they believed the proponents did not have a reputation of trustworthiness. This was vividly expressed in many of their various public and interview statements. For example, they expressed in one of their press releases:

"…In the heat of the controversy surrounding surface mining in forest reserves, a public agency (*name withheld*) suddenly showed up with "Environmental Guidelines for Mining in Productive Forest Reserves in Ghana"… Essentially this publication seeks to justify the undemocratic procedures used by successive governments for the management of the national forest estates. The document listed 12 organisations as key contributors, all of which are either from the mining industry or from government agencies. There was no representation from the communities directly affected by mining or forestry, or from civil society organisations. This clearly demonstrates that the decision to mine in the forest reserves is created and influenced by the mining industry in close collaboration with sections of official bureaucracy. Even … (*mentioning another public agency*) which had earlier expressed concerns about surface mining in the forest reserves now appears to be satisfied that with such guidelines it is feasible to conduct surface mining in forest reserves" (Opponents' press statement, March 2004).

Later on this level of mistrust intensified when donors also refused to bring their influence to bear on government to stop a forest-mining policy as expressed in their latter public statements:

'…we feel you are aware and fully behind the government and the companies, which explains the long silence and apparent neglect of our letter…' (Opponents second letter to donor, 2004).

All these expressions reinforce the claim that the relationship among trust, reputation of trustworthiness and conditional commitments are key links to explaining actors' rational and moral behaviour towards cooperative reciprocity.

However, it can also be concluded from the study that, notwithstanding actors' experience of mistrust and non-reciprocity, building trust and undertaking collective action towards the management of the conflict can 'reverse' mistrust and provoke cooperation. For instance, when the proponents and opposition chiefs in R1 decided to build trust by forming community consultative committee with both parties represented, it led to withdrawal of opponents' conflict actions. This is positive for conflict management as it supports the proposition that past experiences with non

reciprocity does not diminish the ability of current reciprocity to enhance cooperation in collective action heuristic (Lubell and Scholz, 2001). However, as argued above, face-to-face communication alone may not be sufficient unless real actions of trust-building and fulfilment of conditional commitments leading to reputation of trustworthiness are undertaken.

8.3.3Reflections on strategy sequences and power resource mapping

In chapter 2, it was theoretically deduced that the use of the specific power strategies will require the mobilisation of some of the main power resource categories. These were summarised in table 2.4 and was noted that the matching was only hypothetical. Following the results presented under the respective sections on strategy sequence in chapters 4-6 in particular, it can be concluded that the matching was quite simplistic. This is because certain resource categories were observed in certain strategy deployments that were not included in the matching in table 2.4. This notwithstanding, the strategy-resource matching was confirmed to be useful as the listed resource categories were included in resources used for the specific strategies.

A careful look at the results suggest that, in many of the instances where additional or 'unexpected' resources were used, they were used to create, to use Roger's language, infra resources. For example, the use of coalition-building did not capture the deployment of socio-economic resources, assuming the use of orientational resources would be sufficient to persuade or manipulate target social or institutional agents. However, it was observed that in some cases, certain unorganised targets may need to be organised by using economic resources to support such efforts. For instance, the critical condition for some mining communities to be enrolled as coalition members was for them to have critical political agency and representation. So while the leading NGO 'only' had to persuade other national green NGOs to join the coalition, in the case of the communities, it had to support the organisation of the people into a community-based advocacy group. Similarly, the use of persuasion in some instances may require economic resources to organise platforms for communication and strategic meetings in addition to orientational resources. Another example from the study is the case where potential mediators are located outside the locality of the actor, such as was the case with farmers who, in many instances, needed to use district forestry officials. In such cases, the actor needs to mobilise economic resources to arrange for transportation to the location of the district or regional forestry office. Thus, in addition to the expected mobilisation of social and institutional resources, an actor under such circumstance may need to also mobilise economic resources.

These observations reinforce the analytical relevance of Roger's notion of infra and instrumental resources. This is important because without such a perspective, the theoretical basis for any claims of strategy-resource matching such as Scott's argument become weak.

> While each strategy depends on the use of resources, the type of resource and the ways in which they are used differ' (Scott, 2001:2)

If Scott's notion of resource is confined 'purely' to the instrumental category, then the study seems to support such a theoretical possibility of such a matching.

8.4. EMPOWERMENT

In chapter 1, it was argued that using an approach that focuses on studying conflict as a self-regulatory process in which the conflict actors themselves direct the course of events can be more enlightening. Three main conceptual perspectives were related to the term. First, it was used in the sense that the conflict process is self-regulated through the sequential actions and responses of impairing actors and hence conflict regulation must be regarded as a non-interventionist process. Second, it was used as a framework for understanding power-play by conceptualising an actor-empowerment framework which perceives power as the mobilisation of resources by actors to undertake strategies with the view to managing experienced impairment. Third, related to the second notion was the perspective that the effectiveness of actor-empowerment could direct the conflict either by provoking responses or terminate it. This third perspective led to the notions of episodic and management effectiveness. The subsequent sub-sections will be devoted to reflecting on the three main conceptual aspects in the light of the study.

8.4.1 Empowerment and conflict regulation

Looking at the all the studied conflicts regarding the actions of the actors and the termination of the conflicts, it can be confirmed that the conflict process is a self-regulatory one. The study can show many instances where certain actions which actually resulted from actors' empowerment may be easily labelled as interventions from third parties. For example, the action by some politicians who exerted pressure on the leading opponents to change their positions at R1 was not an intervention, in a sense that it was a neutral and 'independent' decision by the politicians. The narratives indicated that the politicians were actually mobilised by some proponents as part of their 'own' empowerment effort in the conflict. To the extent that the politicians 'agreed' to act in support of the proponents, they could essentially be regarded as impaired and that they were already being 'used' as social resources by the proponents. Similarly, if donors had taken anti-mining position and pressured government to rescind her decision, it might have been because of the pressure from the NGO coalition. All the actions encountered in the study could be justified as outcomes of the actions of particular conflict actors. In many instances, 'neutral' actors 'joined' the various actor groups as pro or con in the conflict. Thus, the study seems to provoke rethinking about the notion of intervention of third parties in conflict as if it is a neutral, apolitical and independent notion. The lessons from the study is that, in many cases, what might be seen from outside as intervention may actually be outcomes of some conflict actors' empowerment efforts. This insight affirms the observations by Rioux (2003) that intervention in conflict is a political decision and therefore with interest underpinnings, pro and con. This may well explain why many of the so-called conflict interventions are unable to manage conflicts.

In terms of regulation of the conflicts regarding their termination, it has been observed from the study that, actors themselves control the outcomes. This is consequential to the argument made earlier that the conflict process essentially involved 'only' impaired actors in one way or the other. For instance, in the compensation case study, the individual episodes ended either through settlement by contractors or

withdrawal/accommodation based on farmers' own decisions. Where there seemed to be intervention, for example by forestry officials, the chronological narratives pointed to the effort made by the actors to enrol the agency of these officials.

8.4.2 Empowerment and episodic/management effectiveness

From the actor-empowerment perspectives employed in this study, a distinction was made between episodic and management effectiveness. The results from study justify such analytical distinctions in one important way. It was useful as it helped to identify the functionality of particular resources with regards to their limitation in managing conflict. For example, it was observed that resources like the media and threat generally, were effective at provoking response from opposing actors. However, they were not generally so effective at managing conflicts in terms of managing the impairment or causing opponents to withdraw or accommodate. On the contrary, it was observed that the use of high-status political and traditional networks generally enhanced management effectiveness of actors who employed them.

This analytical distinction was generally useful as it highlighted complexities that would have otherwise been overlooked. It might have caused one to simply focussed only on the end points or the 'ultimate' outcomes of the conflict without understanding how the 'winners' or the 'powerful' were 'forced' to adjust their behaviour in the course of the conflict. Thus, the categorisation met the expectations proposed in chapter 1 and 2 that, the role of power in conflicts can be more enlightened if one follows action effectiveness, not only from impact on the management or termination of a conflict but also on action-response dimensions.

8.4.3 Actor-empowerment and power

Finally, it is interesting to reflect on the appropriateness of the concept of empowerment for the study of power. This is because as an unconventional approach to studying power, a reflection is needed in order to evaluate the application of the actor-empowerment framework in empirical investigation vis-à-vis the notion of power.

In chapters 1 and 2, the study took a point of departure with regards to the study of power by conceptualising actor-empowerment as the mobilisation of resources to undertake strategies to manage experienced impairments. Even though the empowerment framework for studying power incorporates many aspects of existing conceptualizations and empirical approaches to studying power, it presents some conceptual contradictions. This is particularly because it separates the aspects of effectiveness of actor actions from the notion of the exercise of power. This is problematic in the light of conventional notions of power which assumes action effectiveness as an inherent characteristic of any notion of power. Recalling the position of Wrong (1979) is informing:

'…the effectiveness of power would seem to be so obvious a criterion for its presence as to preclude any need for further discussion' (1979: 6).

However, the study provides some insights that warrant a conceptual separation of power from the dimension of action effectiveness. Taking avoidance strategies by contractors in the compensation conflict for example, it has been shown that they were generally effective, especially in causing many farmers to withdraw their conflict actions. However, the effectiveness could not be necessarily attributed to any inherent ability of avoidance to result in withdrawal by farmers. Rather, as has been elaborated, certain systemic factors such as geo-social distance and low cross-scale mobilisation capabilities of farmers in general enabled the use of avoidance to be effective. Other examples from the study could be the inability of some civil activists to participate in some official processes because they lacked representative legitimacy as a result of the existing structural/institutional arrangements. In these situations, the action effectiveness of some actors was not because of any inherent power of their strategies or actions. Therefore, to conflate power and effectiveness as inherently an integrative notion as often assumed in power literature can be misleading.

The application of actor empowerment and effectiveness in this study seems to offer a more reconciliatory approach to this tension. It was argued in chapter 2 that the question of effectiveness cannot be overlooked in any serious analysis of any notion of influence including power. However, to make it a terminating point or an inherent observation that must preclude the concept of power denies the term of dynamic investigative utility. This is primarily because, whether an action will achieve its intended influence or not cannot be predicted unless the action is actually taken and the outcome of intended influence measured. Following this logic, it suggests that one can study power in empirical cases only after outcomes of specific actions have been observed and not when the actions are being taken. This suggests that actions that could not achieve intended influence on targets should not to be studied in an analysis of power. Such a perspective can weaken the explanation for why actors do not achieve their intended purpose. Thus, rather than making effectiveness a defining fulcrum for the conceptualization of power, it should be realized as a separate but complementary analytical notion; separate because it allows one to follow how actors attempt to achieve influence through resource mobilization and complementary because it elucidates why some empowerment efforts could be effective and why others could not.

Besides resolving the power and action-effectiveness controversy, the empowerment framework provides an epistemological delineation that reconciles, to a large extent, the power scholarship. Fundamentally, power scholarly has been divided by two traditions, traditional perspectives that study the episodic exercise of power (*pouvoir*) that one agent has over another and the perspective that is focused on dispositional capacity (*puissance*) of agents to act (Scott, 2001). Whiles the former would have emphasized the actual strategies or actions by contextual actors that led to compliance, domination or resistance in the studied conflicts, the latter would focus on the resources that the actors possessed that enabled or could enable them to exercise influence. As illustrated in the study, the actor-empowerment framework gives equal attention to both, looking at the exercise of power as a *process* involving *resource mobilization* (including dispositional ones) and actual attempts to take strategic *action*. By focusing on the two dimensions at a go, the exercise of power as a

process (*em-power-men*t[38]) could be understood. This is similar to Giddens' (1984) conception of the dialectic relation between 'agency' and 'structure' (*structuration*) and not a definite 'tangible' end that one can grasp in its finality. While one can understand the means by focusing on the dimension of power resources, the 'intended' effect can be grasped through the dimension of power strategy.

[38] Perhaps if a term like '*powerment*' could be allowed to exist, it would have clarified the notion of 'actor-empowerment' in this context better.

9. CONCLUSIONS

> We may need to recognise that access to any arena of policy formation is not uncontested. It is in fact an arena of power, guarded by what are often very powerful gatekeepers whose interests may lie primarily in preserving or extending the symbolic capital and status they have already accumulated in that field. For them, the introduction of new, or qualitatively different, discursive frameworks may well be interpreted as a threat; if that is the case, they are likely to be resisted (Spiegel et al. 1999:183)

The study started by indicating that our understanding of natural resource conflict management and policy intervention will be enhanced by understanding the dynamics of power play in conflict. The concept of actor-empowerment was developed to investigate such power play, using reconstructed two and multi- actor conflict cases at community, local and national levels. The empirical results have been presented and discussed. In concluding, though many useful insights have been gained, it is not claimed that the study has unravelled all patterns of complexity of power-play, especially when it cannot be claimed that all actor interactions could be identified in the reconstruction of the conflicts. One could think of a telephone conversation between a politician, a top public official or a traditional authority and an actor for example that could not be captured, though could have exerted substantial influence and changed the course of things! Nevertheless, the study has at least highlighted the reality of the complexities to provide sufficient caution to scholars and practitioners involved with designing policy and conflict management interventions. In this regard, the study has, by and large, achieved its aim of enlightenment. From this enlightenment, the chapter is structured into two main sections. First, section 9.1 highlights the implications for conflict management, particularly on interventions. Second, section 9.2 underscores the implications for future conflict research, particularly recapping the usefulness of the theoretical and methodological approach employed in this study.

9.1 POSSIBLE IMPLICATIONS FOR CONFLICT MANAGEMENT

As pointed out in chapter 1 the intention of the study was not to provide a blue print for conflict management, a discussion on the implications of the outcomes of the study will rather be used to confront the fundamentals of intervention approaches, reflecting on how such tendencies may benefit from the insights gained for constructive conflict regulation[39].

In the context of sustainable resource management, this may mean addressing substantive concerns such as access to forest resources and equitable sharing of benefits as well as relationship and procedural concerns. The studied conflicts show that actors exhibit conflict regulation capabilities through mobilization of resource and strategy deployments. However, within the context of the constructive limits

[39] Specific to the implications of the study for forest conflict management in Ghana, two Policy Briefs targeting forestry stakeholders in Ghana have been prepared. See Tropenbos-Ghana Programme (forthcoming). Interventions for the management of forest-related conflicts in Ghana

within which conflict is perceived to be potentially beneficial to society, some lessons from the study point to the fact that some interventions are needed. For example, when farmer frustrations lead to intentional destruction of young regeneration and social tension they may have obvious ecological and social consequences which are not desirable. Moreover, if social and environmental concerns of mining activities cannot be addressed by local people, they may lead to social tensions and may aggravate the rural poverty situation. All these can create mistrust and uncooperative attitude which are social capital needed for society to optimize its potentials to overcome her problems. Particularly in the context of developing economies, where some people's livelihoods are so connected to natural resources and in many cases, their participation and cooperation needed for the sustainability of the resource, self-regulation may have negative consequences. This is because, as has been demonstrated, as a result of constraints posed by opposing actors or systemic factors regarding some actors' empowerment effort, they may be 'forced' to withdraw or accommodate. However, withdrawal or accommodation does not mean that actors would not cope with their situation. For instance, the fact that a farmer withdraws from a conflict with a contractor as a result of the frustration of avoidance will not prevent him from burning or uprooting a commercial seedling in his farm the following day. Thus, so long as sustainable resource management and sustainable development in general are value-laden concepts, the need for intervention in specific conflicts related to resource use policy and management can be demanded upon some 'rational' value judgments. In this respect, intervention in itself is a political decision, especially when those with legitimate resources to intervene themselves have vested interest in the conflict.

However, the call for intervention should not be interpreted to mean that all natural resource conflicts should be intervened in a sense that simply makes intervention a cooked-tool for regulating conflicts. Rather, the lessons from the study seem to suggest that intervention should be seen as any action that limits constraints to the empowerment efforts of actors. In other words, intervention is a means of providing infra-resource, both at systemic and actor levels, that allows resource mobilization and strategy deployment to achieve and effective and constructive influence. First, the study generally exemplified self-regulation as a natural tendency since actor-empowerment is inherently a matter of human agency. It has been shown that farmers, in spite of their low resource capabilities, attempted to convince contractors to pay 'adequate' compensation, including even those who had little knowledge about formal rules. Again, the impairment by one NGO led to a huge coalitional campaign against forest-mining. Second, notwithstanding the self-regulation tendency, it was still observed that there were structural as well as individual actor constraints that impeded this natural tendency, and these are the points where intervention must occur. These points will be taken up and addressed in subsequent sections, drawing on the lessons from the empirical chapters.

9.1.1 Intervention as creating influence boundaries

The study has shown that in both self-regulated and third party involvement approaches, a fundamental infra resource is the existence of what can be called *influence boundaries*; a virtual institutional boundary within which actors are constrained to interact for mutual influence to occur, regardless of whether the outcome is win-win or not.

The need for such a concept of *influence boundary* is demonstrated in all the conflict cases. For example, in many of the farmer-contractor conflicts, the interactions of the actors were conditioned by the presence or accessibility of the contractor or his agent in the community (relational geographical distance) and when timber operations such as logging, loading and transporting were ongoing. This business interest created a social relation between the contractors and the farmers/community. The combination of these realities constituted a geo-social time boundary within which actors were likely to be able to employ direct interactional influence strategies. Within this time boundary, the length of the chronological sequence was low when actors were able to reach settlement or influence the other to withdraw or accommodate. Otherwise, the chronological length may increase leading to long conflict episodes. Episodes with lower chronological length were encountered when either actors or one of them lived outside the geo-social time influence boundary. At the reserve and national levels, the constraint was in the form of a virtual enclosure with which only institutionally recognised members had the opportunity to engage in constructive influence. This made representation and membership in the institutionalised policy (decision) community critical conditions (infra-resources) for actor-empowerment. Thus, as elaborated in the mining conflicts, in spite of civil activists protest, both at national and some local levels, they could not penetrate the decision community to have equal 'space' to engage with others in constructive influence. This is virtually a scenario that resembles the geo-social constraint posed by the relative locations of farmers and contractors. These observations have implication for conflict management intervention strategies. It implies that in order to facilitate actor interactions, they must be kept within an influence boundary by 'interlocking' their interests and political representation to create space for their physical and political interaction.

The notion of *influence boundary* has its conceptual rooting in social exchange theory postulated by Emerson (1964). The theory stipulates that if two persons are unequally dependent on one another for valued outcomes, the less dependent person has a power advantage over the other, and the relation is said to be power imbalanced. Power imbalance is predicted to lead to imbalance in exchange, with the more dependent person giving more than he or she receives (Molm, 1990). Basically, it suggests that when actors are kept within their *influence boundary*, conflict interactions are likely to proceed until the conflict is managed or at least a political space will be provided for interaction so far as actor interests are effectively inter-locked. On the other hand, if actors are 'allowed' to interact beyond their influence boundary without inter-locking their interests, it will serve as an opportunity (infra resource) for some actors and a constraint for others. Figure 9.1 represent the notion of influence boundary.

When discussing infra resources, it was elaborated that, such an influence boundary may be an institutional mechanism to constrain and interlock actor interests so that they are 'compelled' to interact. Otherwise, participation and for that matter conflict management may not work as those who have the resources to 'escape' either by avoidance or by blocking others entrance into relevant decision-making platforms may choose to do so. In natural resource conflict, as demonstrated in this study, one area for policy intervention could be the institutionalization of such boundaries. Thus, one can argue to support, for instance, an open policy community at the national level that admits emerging interest groups such as green NGOs and civil society groups. In a decentralized political and administrative setting such as the case in Ghana, the

institutionalization of such an open policy community could be extended to local decision-making processes to allow for example, local civil society activists to participate in official decision-making.

Generally, while the specific form that such institutionalization may take will depend on the context, the point being made is that, unless a governance mechanism, at any level, exists to interlock the interests and political participation of natural resource conflict actors, mutual influence and empowered participation may not be achieved. It should not be taken for granted that the existence of public consultation processes such as the one which was used in the forest-mining conflicts at the reserve areas is a sufficient substitute[40]. This does not mean that such processes cannot be used to serve the purpose of mutual influence; its usefulness for this purpose will depend on how it is organised to provide deliberative space for all participants to learn and to deploy their influence strategies and resources in order to produce collective outcomes.

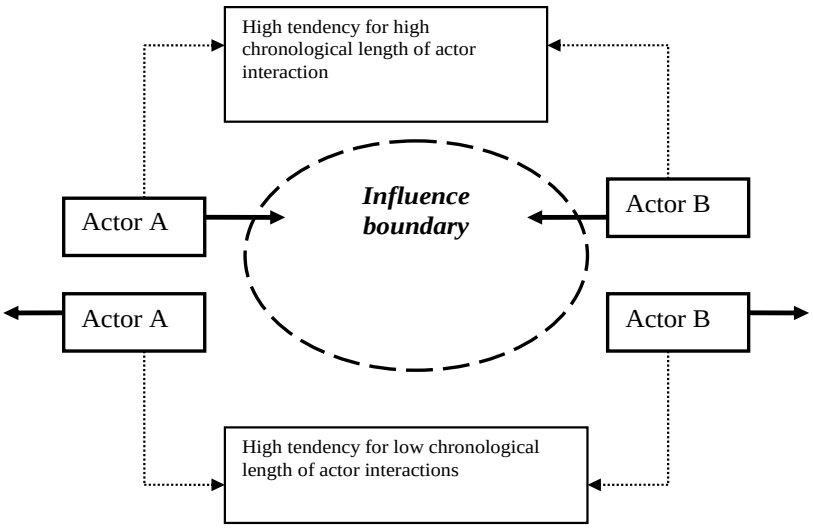


Figure 9.1 a diagrammatic presentation of influence boundary and the tendency of the chronological length of actors within such virtual boundaries.

This is not to suggest that the institutionalization of such influence boundaries will be conflict-free or does not in itself involve power play. It is meant to say that, whoever is interested in why natural resource conflicts should be managed constructively should also see it as fundamental to conflict management. This leads to another implication of intervention, and that is, seeing intervention as a change in governance culture.

9.1.2 Intervention as a change in governance culture

Within a broader scope of natural resource policy-making and management, the creation of open policy community and decision-making process or using collaborative platforms for decision-making on substantive conflict issues may depend on the prevailing governance culture that defines how things are done. In the context of forest policy and implementation in Ghana for example, it was realised that

[40] Public organised consultation and participatory processes have received criticisms as they are usually used as instruments to perpetuate the interests of the public agency organising it (Daniels and Walker, 2001)

policy-making is still within the purview of politicians and bureaucrats, with some consultations with established stakeholders, especially admitted pressure groups. Usually, technocrats draft policy content and 'invite' others to comment as exemplified by the formulation of the 1994 Forest and Wildlife Policy (Marfo, 2002). The formulation of the guidelines for mining in forest reserves which involved mainly members of the forestry and mining sector policy communities is a specific example from the study. Such hierarchical governance culture does not simply open space for those outside the policy community to substantively shape policy content.

When one comes down to the level of implementation, the same picture depicting close decision-making community is seen at the local and community level. Even though there may be a claim for decentralisation, resource governance may still revolve around the core policy-community members. As shown in the forest-mining conflicts at local levels, in all cases, the content of community interest or position were almost always determined by chiefs and local politicians, even in the face of clear popular discontent. Why this could happen was because the established governance culture imposes community representation on traditional and local government structures. This notwithstanding, the study has also shown that the potential for using such local political and traditional institutions within the decentralized system of governance for conflict management exist. This potential is exemplified by the large number of instances when these leadership structures were mobilised by conflict actors. This potential notwithstanding, it was observed that the lack of institutional legitimacy of chiefs to mediate or arbitrate in forest conflicts between community members and 'outsiders'. However, the use of traditional social and institutional structures such as chiefs for conflict management roles such as mediation should be approached with care. Traditionally the roles of such third parties in conflicts were limited to authoritative and coercive strategies (Kom 1988)[41]. It should be noted that chiefs are not necessarily neutral and just, and measures to mitigate injustice and partiality should be put in place for their roles to be constructive. In any case, this will mean extending forest resource governance to embrace such parties and roles, thereby legitimising their functions. Currently, aside forestry officials, other potential mediators at the local level such as chiefs, Assemblymen and Unit Committee members do not have any direct role endorsed by law or any administrative functions in forest resource management.

Thus, to intervene by creating influence boundary to interlock conflict actors to interact will depend first of all on creating a new governance culture that accepts plurality and diverse political representation or at least that allows the represented to demand accountability from representatives.

Finally, intervention should not be interpreted as external definition of appropriate structures or new institutional arrangement. Rather, intervention should provide space or possibility for multiple demands by actors to be negotiated. For example, Marfo (2001) has shown that communities may want different structures to represent them in negotiation with external actors. While some may want chiefs to represent them as signatories because of their traditional authority, others may want a community development committee to represent them and negotiate for their interest. This may be

[41] Recent studies in rural governance and natural resource management (Ribot, 1999; Marfo 2004) give useful precautionary lessons to be observed if customary arbitration should be adopted

due to trust in existing leadership structures, competence, historical events, level of political consciousness and beliefs in tradition. Intervention must allow space for such demands to emerge and be negotiated.

9.1.3 Intervention as building conflict capability

In a more instrumental sense, conflict management should be seen as intervention to give serious attention to building actor capacity for mobilization and use of instrumental[42] power resources. This is informed by observations in this study that the effectiveness of actor conflict capabilities depends on their ability to mobilize and deploy critical resources such as strategic framing, threats, social and civil networks, media, administrative legitimacy and so on. Realizing the disproportional distribution of orientational, institutional, social and socio-economic resources among conflict actors, conflict management should seek to build actor capacity to effectively mobilise and deploy 'useful' instrumental resources. The term 'useful' is intentionally used to emphasise that all power resources have *potential usefulness* and what can be called *episodic usefulness/utility*, and that it is the latter that contributes to actor empowerment in conflict. The study has demonstrated that, it is at the point of instrumentally using specific resources that issues like knowledge credibility, information on potential allies, communication skills of actors, capacity to facilitate multi-actor dialogue, usefulness of media, establishing *prima facie* case and so on become crucial empowerment tools.

The actor-empowerment perspective posits that conflict management should seek to 'empower' (now the term is used in the same sense as Bush and Folger, 1996) all actors for 'independent' activism. This is crucial because natural resource management is essentially conflict management (Castro and Nielsen, 2001) and that it should be perceived that actors are always active in one conflict field or the other. Therefore, one can agree with proponents of transformative processes that, building the conflict capability of actors in itself should be regarded as an end in conflict management. This means that there is the need for a paradigm shift for natural resource management to be seen as an actor-empowerment process that seeks to build the capacity of users and managers to effectively engage each other to define goals and policy directions. This notion is increasingly captured in emerging NRM approaches such as co-management (see Castro and Nielsen, 2001; Borrini-Feyerabend et al., 2000).

In this wise, building actor capacity to mobilize power resources in natural resource management means undertaking strategies to make indirect investments. There is a view held by some power scholars that when power resources are mobilized and exercised, some part of them are consumed in the process and that the use of power resources always involves opportunity costs (see Korpi, 1985). Capacity building can then be visualized as investments in power resources, noted by Korpi for example as present sacrifices through the conversion of resources in ways which can increase future benefits. Some areas of power resource investment can be highlighted from this study. First, the investment into the organization of actors to give them capacity for

[42] The term is not used here in a rigid sense that there is a category of resources which are labelled as such. However, depending on the context and assessment of specific actor situations, one may identify which resources are within actors reach and can be activated for influence.

collective action is important to start with. The literature[43] on power resource has several examples that attest to this investment as an important one that increases the effectiveness of most power resources. The specific lessons from the study has been the critical agency that were achieved by green NGOs when they acted as a coalition and when farmers in a particular study community acted together to 'chase away' contractors. It has been observed in both cases how activism, in terms of organisation of advocacy or deployment of force, was largely enhanced compared to the scenarios where for example NGOs and farmers were acting alone. The important lesson being drawn here is that when actors are organised, cost of resource mobilization can reduce and effectiveness of resources augmented by increasing their liquidity (Korpi, 1985). Reflecting on stakeholder situation in the forestry sector of Ghana for example, it is realized that actors such as farmers and forest-fringe communities are prominent ones in many conflicts, yet they lack organization[44]. Actors who are not organised cannot effectively participate and would always have to be represented by others who may not advocate for their interest at all. Taking compensation conflicts for example, assuming that an intervention using collaborative learning were going to be used to negotiate appropriate levels of compensation, who will represent farmers in the forest zone in Ghana? In today's situation, one can imagine that some farmers may be selected for the process, but who are they? Whom do they represent and what organised legitimacy do they possess? Such questions make it important for natural resource management to pay attention to stakeholder organization as power resource investment[45].

The second investment can be framed as conversion and consciousness, borrowing Korpi's terminology, where attempts to affect ideologies, motives and beliefs are made. The term can be stretched to include attempts to increase actors' knowledge and information base which can feed into effective persuasion. Persuasion is particularly mentioned here, especially for community and local level actors for a reason. This is because, the actors in the studied local conflicts showed a tendency to shift their strategies to more competitive ones. The first dimension precludes that since mobilizing different power resources are associated with differing costs, investing in low-cost normative resources such as beliefs and ideologies is an economical way of investment. The general assumption here, at least from power resource perspective, is that power is anterior to social norms and hence such investments can change the basis and orientation of action from the rational weighing of the relative utilities of alternative courses of action (Korpi, 1985:39). In this regard, natural resource management could invest in the conversion of generally-held opinions and prevailing norms on, for example, 'what is the function of our forest'

[43] The growth of ,juristic persons' and corporate actors throughout the past centuries and the growth of civil movements in national and global politics today attest to this. (see Korpi, 1985, van den Hombergh, 2004).

[44] It is interesting to note that even though cocoa is a leading export commodity and that the agricultural sector contributes significantly to the Ghanaian economy, there is no organised front for farmers at national and district levels. Even farmer groups at community-levels are not well organised (personal observation)

[45] Whiles it can be agreed that one cannot absolutely avoid symbolic representation of certain stakeholders in all natural resource processes; I think that for natural resource conflict, stakeholder or actor representation must be based on well organised actor structures. Elsewhere, a critical view on community interest representation in forest policy and management negotiation is given (Marfo, 2004b)

and 'why is stakeholder collaboration needed for sustainable resource management'[46]. In effect, such investments should create internalized values, which in effect, will influence the causal elements in conflict. For example, educating timber concessionaires or policy-makers about the strategic roles of farmers in the sustainability of timber resources or policy-makers can be an important conflict capability resource.

The second dimension is about investing in critical instrumental resources such as information, capacity to mobilize strategic framing, mobilize dimensions of manipulation and institutional and administrative legitimacy. For example, the study has shown that in terms of actor capacity building for principled negotiation in farmer-contractor conflicts, both farmers and contractors' had low capabilities in effective mobilisation and deployment of strategic problem framing (provision of evidence and quotation of relevant regulations etc) and cross-scale mobilisation of institutional resources. Thus, investing in critical information that allows actors to effectively engage each other in participatory processes in conflict management can be crucial. If ignorance is anything to be taken serious, then equipping actors with relevant information is critical to constructive conflict management. The study has shown how information was prominently used by the conflict actors and the role its 'perceived credibility' played in enhancing or constraining actors' empowerment efforts[47]. Particular to information, it was observed in this study, and also by others (see Berkes, 1995, 1999; Peuhkuri, 2002; Louis, 2004) that both expert (scientific/technical) and lay (indigenous) knowledge suffered credibility crises and intervention may focus on collaborative learning by providing platforms for conflict actors to jointly generate knowledge. For example, instead of depending on official valuation estimates of crop compensation, an action research, first building the respective capacities of farmers, contractors, forestry officials, local leaders, researchers etc in collaborative learning, may be used to jointly generate standards based on both scientific and farmer valuation criteria. In the same vain, collaborative learning could have been used to define national standards for critical ecosystems. In this sense an observation by Martinez-Alier (2001), writing in the context of the clash of knowledge in resource policy conflict, is well supported:

"For policy, what is needed is not cost-benefit analysis but rather non-compensatory multi-criteria approach able to accommodate a plurality of incommensurable values" (: 167)

It is important to note here that, building power resource capacity cannot be limited to conflict actors alone. From the perspective that natural resource management is essentially conflict management, the study further suggest that serious attention should be paid to institutional/professional capacity-building in the facilitation of conflict management mechanisms. Within a broader sense, natural resource institutions should also be able to mobilize critical infra and instrumental resources, as it is imaginable that state institutions for example may be involved in conflict with say private interests. In the forest-mining case, there were instances where the district forestry office was against mining. In terms of capacity to facilitate conflict

[46] This normative transformation seems to have taken place in Europe where the purpose of forestlands is more for recreation and environmental functioning rather than for economic interests.

[47] Participation alone cannot lead to feasible solutions without appropriate information and research provided by experts and local people (Walker and Daniels, 1997)

management, the Researcher's observation (and also others[48]) from the field has been that forestry officials in general lacked capacity for mediating conflicts, and in some cases their actions/inactions fuelled conflicts to more destructive ends. For instance, farmers may resort to 'illegally' selling other trees on their farm to chainsaw operators or destroy seedlings of economic trees in some instances where forestry officials failed to mediate their conflicts with contractors on previous compensation issues[49]. If policy also means the structured allocation of important resources, then many public administrative agencies with management responsibilities over natural resources, at least in Ghana, do not have dedicated professionals or units trained for conflict management. For instance, notwithstanding a great deal of evidence that forest management in Ghana is highly characterized by conflicts, both from historical and contemporary views, there is no Unit within the Forestry Commission, for example, dedicated to forest conflict management, in a sense that reflects the perspectives in this study.

Finally, it is important to end this section with the need to see intervention also as building capacity for enforcement of conflict management outcomes. In a very broad sense, the existence of impartial judiciary and policy instruments that sanction or rewards compliance with negotiated outcomes of conflict management processes can be a very useful investment. Thus, the promotion of good governance, rule of law and democratization of countries rich with natural resources, like Ghana, to a larger extent is providing empowering environment for conflict management, particular in enforcement of outcomes of stakeholder processes. As shown in the compensation conflicts for example, even when farmers and contractors engaged in bargaining to reach agreement on compensation, they were never put in forms that were legally tenable; they only sustained their agreement by verbal repetitions. This gave room for the use of promises by contractors to work effectively and further constrained other efforts to secure payments. The legitimization of such conflict management outcomes seem to be more critical at the inter-actor and local level conflicts where no rigid institutional arrangements exist that formalizes actor interactions.

9.2 POSSIBLE IMPLICATIONS FOR FUTURE CONFLICT RESEARCH

In chapter 1, it was introduced that the study of conflicts, especially the role of power, is challenging. This is because conflicts are complex social processes involving multiple actors and power-play and transcending spatial boundaries. It was pointed out that the conventional approaches of studying conflicts using descriptions of episodes and a dichotomous categorisation of actors into the 'powerful' and the 'marginal', are not sufficient to deal with these complexities. Subsequently, it was proposed that conflicts should be studied by reconstructing their episodes chronologically by employing the two-actor game model and the actor-empowerment framework. Having discussed these concepts in the light of their empirical application in this study, it is useful to highlight their possible implications for future conflict research.

[48] Rastogi (1997) has also shown that many forestry officials lacked the capacity to manage conflict in the Joint forest management

[49] A recent study on coping strategies of farmers in compensation conflicts in the Goaso District of Ghana also observed similar farmer responses (see Nambini et al. 2005)

9.2.1 Usefulness of chronological sequencing

It is proposed that conflict studies should be approached with a methodology that allows the chronological sequencing of conflict actions. As has been shown in this study, such an approach allows for reconstructing conflicts to gain a historical perspective of the episodes. This offers several advantages. Perhaps the most important of all is that, it allows the researcher to look for chronological patterns of desired variables, such as coping strategies, power strategies, causes, evolution of actor-networks and intervention mechanisms. This can give a historical perspective on particular aspects of interest, allowing for studies into the dynamics of change and what might have influenced the observed pattern. Secondly, it can allow concepts whose exploration depends on precedent actions such as the episodic effectiveness notion used in this study to be explored more effectively. For instance, if it had not been for the chronological arrangements of the studied episodes, it would have been practically difficult to identify which conflict actions could provoke immediate response from competing actors. In conflict and conflict management studies, it may be, more often than not, crucial that the researcher/practitioner gain such a sequential overview of events/episodes in order to properly understand causes and explanations of observations. Related to this, such an approach provides better opportunities to understand context factors that influenced specific observations as timing of events can be matched with broader systemic factors prevailing at specific periods and places. Consequently, a better explanation can be offered from such event-time sequence perspective offered by a chronological sequencing approach. Moreover, by using chronological sequencing of episodes helps to track actors with shifting positions, thus enhancing the overall construction of the conflict and actor-designation. Finally, a chronological sequencing approach seems to be methodologically more elegant as it allows an easier transition from pure qualitative descriptions to more quantitative trend assessment due to the advantage of sequencing of episodes. Thus, it seems to offer more opportunities for employing modelling techniques in the study of conflicts.

Notwithstanding these advantages over general descriptive/narrative approaches, it has been learnt from the study that a chronological sequencing approach in the form used in the study demands more time and resources, both for data collection and analysis.

9.2.2 Usefulness of the two-actor approach/impairment delineation

The two-actor game model approach is recommended as a useful one for natural resource conflict studies. Taking a point of departure that conflict should be conceptualised as the experience of impairment, the two-actor approach is applicable to studying conflicts both in two and multi-actor scenarios as exemplified in this study. As has been explained, for some reasons, there may be the need to study conflict interactions between only two actors or all the actors in a multi-actor conflict setting. In such situations, the possibility of actor designation into pro and con groups allow conflicts to be studied, particularly following the chronological sequencing of their interactions. As was discussed, the two-actor approach has its foundation on the notions of conflict as impairment and actor designations. Therefore, a study purporting to employ the approach needs to use the impairment delineation (Glasl's

model) and also clarify the theoretical assumptions that justify and facilitate the two actor groupings.

9.2.3 Further research needs/outlook

Following from the discussions of the empirical results, some issues emerged that deserve to be highlighted for future research considerations.

First, the study generally showed that actor-empowerment was highly context-dependent. Therefore, there is the need to continue to build our understanding of the effect of different context constellations on actor-empowerment, in order to attempt to build a more 'universal' understanding of context-patterns. In this case more case studies and their synthesis using different natural resource conflict contexts, scales, settings and escalation levels are needed.

Second, There was a suggestive clue from the study which related resource mobilization and strategy shifts to spatial scale of conflicts as a consequence of the structural and systemic constrains and opportunities they impose on actors. The patterns of resource mobilization in relation to patterns of power strategy shifts needs further exploration using conflict cases with high escalation levels at different spatial scales. There is the need to explore this further in different socio-political systems; for now it should remain highly hypothetical. The following hypotheses, informed by the study, can guide any such future exploration:

1. Actors have the tendency to use particular strategies and improve their effectiveness by improving the quality dimensions of their resource mobilisation in the course of conflicts. This tendency may be followed if actors do not face constraints to the mobilisation and use of these quality dimensions. Such strategies may however oscillate between persuasion and manipulation.
2. Actors have the tendency to shift from original strategy to more competitive ones if opportunities or capabilities for mobilising resources to improve quality dimensions of original strategy are constrained.
3. Thus, it is suspected that, there is no 'natural' tendency for conflicts to escalate into more aggressive forms, hence no correlation between the length of conflict interactions and the use of more competitive strategies.

Third, it may be useful to separate specific geographical and social characteristics or symbols attached to specific natural resource settings or locations and categorise them as geo-social resources in addition to institutional, social, orientational and socio-economic categories. Two sub-categories have been identified in this study, the geo-social distance between resource-base level actors and outsiders and the politics of 'place'. Besides providing a clearer delineation than subsuming them under social resources, there seems to be a significant dimension of resource conflicts utilising these geo-social circumstances

The study has demonstrated that our understanding of power and actor-empowerment, particularly on effectiveness aspects, is enhanced by employing categorisation of power resources beyond the main levels. There is the need to improve the conceptual definitions and delineations, particularly by building on the structural and functional

aspects of resources that complicate their categorisation and empirical application. This may require more case studies at different spatial scales, socio-political settings and issue contexts.

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Summary

Increasingly, conflicts over natural resource use and management have attracted the attention of both scholars and professionals. While the recognition that conflict has both constructive and destructive capabilities have dawn on us, the negative outcomes have been prominent in many cases, calling for innovations in conflict management.
In chapter 1, the problem confronting our understanding of how to deal with resource related conflicts, especially by 'regulating' them within constructive limits is brought to perspective. The role of 'power' as a defining element in any mechanism to manage conflict is acknowledged, arguing that the search for innovation in conflict interventions will be greatly enhanced by understanding power-play in conflict. However, it was noted that our understanding about the role of power in natural resource conflict (NRC) seems to be impaired, first because the subject has been scarcely studied and second, because conventional approaches to studying conflict have dwelt too much on descriptions rather than systematic analysis of power. This has led to over-simplification of complexity, often classifying actors as 'powerful' and 'powerless', even in the face of increasing argumentation and proof against such a simplistic view in reality.

Recognising that power is notoriously a contested phenomenon that presents practical difficulty with its conceptualisation and operationalisation, it was argued that the subject needs to be studied using a pragmatic approach. Such an approach was to reconstruct conflict actions by contextual actors, focussing on patterns of their action-response strategies and the resources they mobilise to take such actions. This was conceptualised as actor-empowerment. Therefore, the scientific objective was to understand the dynamics of actor-empowerment in NRC and the role it can play in conflict management intervention. It was clarified that, the study does not aim at providing blue prints but to gain insights to enlighten interventions and to test the conceptual framework used in the study power in NRC. It was illustrated that forest-related conflicts in Ghana provide appropriate context for the empirical investigation into the role of actor-empowerment, not only because the evolution of forest policy has been characterised by conflicts, but also because they have involved power-play among local, national and supra-national actors with both positive and negative outcomes.

Chapter 2 delineated the conceptual framework leading to a two-actor game model for studying power in conflict. Essentially, it conceptualised conflict as impairment by actor behaviour generating interactions which can be reconstructed over time as a series of unit episodes of action-response encounters. Power was conceptualised within the actor-empowerment notion, as the intentional mobilisation of resources (power resource) to gain the capacity to take actions (power strategies) to influence others in order to manage the experienced or perceived impairments. Such strategies were shown to involve elementary ones like persuasion through institutionalised forms like litigation to more aggressive forms like force, each of them being cooperative or competitive and deployed via institutional, social, economic and/or orientational resources. The search for patterns made use of expectations on strategy reciprocity models and on strategy-resource mapping in respect of actor strategies and resource mobilisation in their successive conflict interactions.

Chapter 3 placed the general methodological approach into scientific perspective, making a case for using case-studies for such a study and why triangulation of methods using actor-narratives, media and documentary analysis and participant observation were appropriate data collection techniques. Besides, it illustrates how thematic coding was carried out, particularly addressing validity and reliability aspects through independent peer coding. The empirical results of the three case studies at national, forest Reserve and community levels are presented in chapters 4 to 6 respectively. Chapter 7 was dedicated to provide a comparative overview of the results from the three case studies. The first case looks at policy-related conflict at national level regarding proposals for mining in forest reserves, mainly between environmental NGOs and private mining interests. The second case looks at the same forest-mining conflict, but at the forest area (local) level; the actors involving local government and traditional leaders, civil activists and prospective mining investors. The third case looked at farmer-contractor conflicts over payment of compensation for crops damaged by logging on farmlands at community level.

Chapter 8 discusses the theoretical concepts and approaches developed for the study in the light of their empirical applications. Particularly, the reflection focussed on the conceptualisation of conflict using the impairment delineation and the two-actor game model, the categorisation of power resources, the notion of empowerment and reciprocity. Chapter 9 wrap up the study by highlighting the main conclusions, particularly highlighting on the implications of the lessons from the study for conflict intervention and future conflict research. Essentially, it has been elaborated in the thesis that the two-actor game model and the notion of actor-empowerment are useful concepts for the study of power in conflict. It has been shown that actors exhibit both rationality and reciprocity in their impairment responses. Generally, actor-empowerment and its effectiveness have been observed to be highly context-bound with some degrees of indeterminacy, uncertainty and unpredictiveness. Thus, conflict intervention cannot certainly benefit from predictive models of actor behaviour, not even on the popularly acclaimed notion of cooperative reciprocity. Rather, it has been argued that interventions can benefit from an understanding of the context factors that enable or constrain actor-empowerment and its effectiveness thereby pointing out some possible areas of intervention. The study has exemplified such context factors inviting intervention as a manipulative phenomenon to influence systemic and actor capabilities to achieve some conflict capability goals. Thus, intervention cannot be a neutral decision or programme, but 'political' to the extent that it is premised on goals defined by specific actors or parties. In that sense, the study pointed out that intervention should not necessarily mean intervening in specific conflicts, but can also be targeted at levels or processes beyond specific conflicts or actors. It was demonstrated that, intervention can be targeted at institutional arrangements that interlock the interest of actors in such a way that they must engage each other in mutual influence, creating interdependence that constrains avoidance and compels bargaining. Lastly, the study suggested that, interventions can also be targeted at building specific conflict capabilities, particularly to enhance episodic and management effectiveness, taking particular note of context and systemic factors that influence the efficacy of specific strategies or resource. Finally, some areas for further research, particularly on improving on the conceptual delineation of power resources and on testing some hypotheses on strategy-resource patterns were given.

Samenvatting (summary in Dutch)

Steeds vaker trekken conflicten over het gebruik en beheer van natuurlijke hulpbronnen de aandacht, zowel van onderzoekers als van professionals. Al wordt het inmiddels onderkend dat conflicten ook wel eens positieve gevolgen kunnen hebben, het feit dat zij toch meestal destructief van karakter zijn, vraagt om herziening en vernieuwing in de aanpak van conflicten.

In hoofdstuk 1 wordt geschetst wat het probleem is van conflictbeheer op het gebied van natuurlijke hulpbronnen, vooral waar dit het opleggen van beperkende maatregelen betreft. De bepalende rol die macht speelt in elk mechanisme voor conflictbeheer wordt erkend, waarbij wordt beargumenteerd dat een beter begrip van machtsgebruik in conflicten de zoektocht naar interventies van dienst zou zijn. Onze kennis hiervan is nu nog ontoereikend, aangezien het een nog weinig bestudeerd aspect is van conflicten over natuurlijke hulpbronnen. Studies zijn veelal beschrijvend geweest, zonder een systematische analyse van macht te maken, en dit heeft geleid tot overgesimplificeerde classificaties van 'machthebbenden' en 'machtelozen', terwijl de realiteit veel complexer is.

In het besef dat macht een moeilijk te operationaliseren concept is, werd gekozen voor een pragmatische benadering. Die bestond uit het reconstrueren van *conflict actions* door betrokken actoren, met nadruk op patronen in hun *action-response* strategieën en op de middelen die ze mobiliseren om actie te kunnen ondernemen. Dit werd aangeduid als *actor-empowerment*. De wetenschappelijke doelstelling van deze thesis is om de dynamiek van *actor-empowerment* te begrijpen, en de rol die dit speelt in conflictbeheer. De studie probeert niet om blauwdrukken te geven maar om behulpzame inzichten te verkrijgen en het conceptuele kader te testen van macht in conflicten rond natuurlijke hulpbronnen. Conflicten over bosgebruik in Ghana bleken een goede context voor dit empirisch onderzoek naar de rol van *actor-empowerment*; niet alleen omdat conflicten een grote rol speelden in de evolutie van het bosbeleid, maar ook vanwege de bestaande machtsverhoudingen tussen lokale, nationale en supranationale actoren, die positieve zowel als negatieve gevolgen hebben.

Hoofdstuk 2 zet het conceptuele kader uiteen, uitmondend in het *two-actor game model* voor studies naar machtsverhoudingen in conflicten. Een conflict wordt gezien als een tekortkoming in het gedrag van actoren, wat interacties oproept die gereconstrueerd kunnen worden in de tijd als een serie *episodes of action-response encounters*. Macht in het kader van *actor-empowerment* moet gezien worden als de opzettelijke mobilisering van middelen om anderen te beïnvloeden, om zo echte of vermeende tekortkomingen te beheren. Daartoe blijken ook geinstitutionaliseerde strategieën te behoren, zoals *litigation* (procesvoering), zowel als agressievere manieren, waaronder geweld. Beide kunnen zowel cooperatief als competitief zijn en aangewend worden met institutionele, sociale, economische en/of orientational middelen. In het onderzoek werd gebruik gemaakt van verwachtingen op basis van *strategy reciprocity models* en van *strategy-resource mapping* met betrekking tot strategieën van actoren en hun aanwenden van middelen om conflicten te overkomen.

In hoofdstuk 3 worden de gebruikte methoden in wetenschappelijk perspectief geplaatst en het gebruik van *case-studies* verdedigd, alsmede dat van triangulering van *actor-narratives* met analyse van media verhalen, documenten en *participant observation*. Ook wordt geïllustreerd hoe thematische codering werd uitgevoerd door middel van onafhankelijke *peer coding*, met specifieke aandacht voor toepasselijkheid en betrouwbaarheid.

De onderzoeksresultaten van de drie *case-studies* worden gepresenteerd in de hoofdstukken 4 tot en met 6. De eerste studie betrof een conflict tussen milieu organisaties en mijnbouwbedrijven over de aanvraag voor een mijnbouwconcessie in een bosreservaat (nationaal niveau). De tweede studie keek naar datzelfde conflict vanuit het perspectief van het bosreservaat (lokaal niveau), met de lokale overheid, traditionele leiders, burger-activisten

en toekomstige investeerders als actoren. De derde studie betrof conflicten tussen boeren en houtkappers over compensatie voor beschadigde gewassen ten gevolge van boomkap (dorpsgemeenschap niveau). De resultaten van deze studies worden vervolgens in hoofdstuk 7 met elkaar vergeleken.

Hoofdstuk 8 bespreekt de theorie en benadering die voor deze studie werden ontwikkeld, met verwijzing naar hun praktische toepassing. Met name wordt gekeken naar de conceptualisatie van het begrip conflict, gebruik makend van *impairment delineation*, het *two-actor game model*, de categorisatie van machtsmiddelen, en de begrippen *empowerment* en wederkerigheid (*reciprocity*).

In hoofdstuk 9 wordt de studie afgesloten met het onderstrepen van de belangrijkste conclusies. Specifieke aandacht wordt besteed aan de gevolgen die de inzichten van deze studie kunnen hebben voor conflictinterventies en voor toekomstig onderzoek aan conflicten. In essentie wordt uiteengezet dat het *two-actor game model* en het begrip *actor-empowerment* bruikbare concepten zijn in studies naar machtsverhoudingen in conflictsituaties. Het is aangetoond dat *actoren* zowel rationaliteit als wederkerigheid laten zien in hun *impairment responses* en dat de doeltreffendheid van *actor-empowerment* zeer afhankelijk is van omstandigheden, gepaard gaand met een zekere mate van besluiteloosheid, onzekerheid en onvoorspelbaarheid.

Modellen voor actor gedrag kunnen geen voorspellingen doen die met zekerheid toepasselijk zijn voor conflictinterventie, zelfs niet met betrekking tot de alom geprezen *cooperative reciprocity*. Daarentegen zou confictinterventie wel geholpen zijn met een beter begrip van de contextuele factoren die *actor-empowerment* mogelijk maken of juist in de weg staan. Deze studie wijst enkele zulke factoren aan. Interventies kunnen nooit neutrale beslissingen of programmas zijn, maar zijn altijd politiek vanwege het feit dat bepaalde actoren of partijen hun doelstelling formuleren. Deze studie geeft ook aan dat interventies niet per se op specifieke conflicten gericht hoeven zijn, maar ook op niveaus of processen buiten specifieke conflicten of actoren om. Interventies kunnen zich bijvoorbeeld richten op geinstitutionaliseerde regelingen om de belangen van verschillende actoren te doen samenvallen; zij kunnen elkaar niet langer vermijden als onderlinge afhankelijkheid hen dwingt om samen te werken en te onderhandelen om tot wederzijds bevredigend resultaat te komen.

Interventies zouden zich ook meer kunnen richten op het creëren van vaardigheid in het omgaan met conflicten, met name om *efficiency* in conflictbeheer te verbeteren, met specifieke aandacht voor omstandigheden en systematische factoren die de doeltreffendheid van bepaalde strategieën of middelen kunnen beïnvloeden.

Ten slotte worden mogelijkheden voor verder onderzoek aangegeven, met name om het ‘machtsmiddelen’ concept te verbeteren en om enkele hypotheses te testen met betrekking tot *strategy-response* patronen.

Annexes

Annex 1 A scheme for coding power strategies and power resources

Variable	Data set code
Power strategies	**100**
avoidance	101
persuasion	102
manipulation	103
force	104
Coalition-building	105
bargaining	106
mediation	107
arbitration	108
litigation	109
Power resources	
Institutional resources	**200**
Political state legitimacy	201
Administrative state legitimacy	202
Traditional legitimacy	203
Law	204
Donor	205
Media	206
Orientation resources	**300**
Strategic framing	301
Formal knowledge	*302*
Informal knowledge	*303*
Agency information	*304*
Threats	305
Cultural framing	306
promise	*307*
Social resources	**400**
Social network	401
Political network	402
Traditional network	403
NGO/civil society	404
Geo-social circumstances	405
Corporate network	406
Socio-economic resources	**500**
Expertise	501
Wealth	502

Annex 2a Dataset of actors' power strategies and resources in the national forest-mining conflict

National level

Episode	Chronseq.	Actor	Power str. Researcher	Peer	Power Res. Researcher			Peer		institutional	Orientational	social	socio-economic
			PS_1	PS_2	PR_1	PR_2	PR_3	1	2				
1	1	Pro	102	102	301			301		0	1	0	1
2	2	Opp	102	102	**301**	204		204		1	1	0	0
	3	Pro	**103**	**102**	201			201		1	0	0	0
3	4	Pro	102	102	**202**	502		***301***	502	1	0	0	1
	5	Opp	102	102	**501**	**502**		***301***		0	0	0	1
4	6	Opp	102	102	**206**	301	*502*	301	**302**	0	1	0	1
5	7	Pro	102	102	202			202	***301***	1	0	0	0
	8	Opp	102	102	301			301		0	1	0	0
6	9	Opp	102	102	301	**303**		301		0	1	0	0
	10	Pro	103	103	**301**	305		***204***	305	0	1	0	0
	11	Pro	102	102	301	402	**406**	402	301	0	1	1	0
7	12	Pro	102	102	301	**502**	**406**	***201***	301	0	1	1	1
	13	Opp	105	105	**301**	404		406		0	1	1	0
8	14	Opp	102	102	301	**303**	204	301	**302**	1	1	0	0
9	15	Pro	102	102	301	**406**	**502**	301	***201***	0	1	1	1
	16	Opp	102	102	301			301		0	1	0	0
	17	Opp	**102**	**103**	**206**	301	**404**	301	***406***	1	1	1	0
10	18	Opp	102	102	**206**	301	**404**	301		1	1	1	0
11	19	Pro	102	102	201			201		1	0	0	0
12	20	Opp	103	103	204	305	***201***	204	305	1	1	0	0
13	21	Pro	102	102	201			201		1	0	0	0
	22	Opp	102	102	301			301		0	1	0	0
14	23	Opp	102	102	301	**206**		301	**406**	1	1	1	0
	24	Pro	103	103	305	502		305	502	0	1	0	1
15	25	Pro	102	102	301	406		301	406	0	1	1	0
16	26	Opp	103	103	301	**206**	**303**	301		1	1	0	0
17	27	Pro	102	102	206	**301**	**302**	206	**406**	1	1	1	0
18	28	Opp	102	102	301	**205**		**406**		1	1	1	0
	29	Pro	102	102	**502**	**406**		**301**		0	1	1	1
19	30	Pro	102	102	301			301		0	1	0	0
	31	Opp	102	102	**301**	**303**	206	**306**	206	1	1	0	0
20	32	Opp	102	102	301	206		301	206	1	1	0	0
21	33	Pro	102	102	**307**	**406**	**502**	**301**		1	1	0	1
	34	Opp	102	102	301	**205**	**305**	301		1	1	0	0

	35	Opp	102	102	206	301		206	301	1	1	0	0
22	36	Opp	102	102	301	**206**		301		1	1	0	0
23	37	Pro	102	102	206	**406**	502	206		1	0	1	1
24	38	Opp	**102/103**	**103**	301	**206**	502	301	305	1	1	0	1
25	39	Pro	102	102	201	301	*502*	301	201	1	1	0	1
	40	Opp	"end"							23	32	12	12

Annex 2b Dataset of power strategies and resources in the forest-mining conflicts at various Reserve areas

Reserve 1

episode	chronseq	interactants	power strategy	PR_1	PR_2	PR_3	PR_4	PR_5	Institutional	orientational	social	socio-economic
1	1	pro-opp	102	302	502				0	1	0	1
2	2	opp-pro	102	203	301				1	1	0	0
3	3	pro-opp	101	301	401	403	405		0	1	1	0
4	4	pro-opp	103	203	301	402	403		1	1	1	0
	5	opp-pro	102	203	204	301			1	1	0	0
5	6	opp-pro	102	201	203	205	301	403	1	1	1	0
6	7	pro-opp	102	203	403	502			1	0	1	1
7	8	opp-pro	103	203	301	405			1	1	1	0
	9	opp-pro	102	301	401				0	1	1	0
8	10	opp-pro	102	203	206	301	403		1	1	1	0
9	11	pro-opp	102	203	301	405			1	1	1	0
10	12	opp-pro	102	203	301	405			1	1	1	0
11	13	pro-opp	102	201	203	403	502		1	0	1	1
12	14	opp-pro	101	203	301				1	1	0	0
13	15	pro-opp	102	402	301				0	1	1	0
14	16	opp-pro	102	203					1	0	0	0
15	17	pro-opp	102	301					0	1	0	0
16	18	opp-pro	102	203	301	403			1	1	1	0
17	19	pro-opp	102	301	406				0	1	1	0
18	20	opp-pro	102	203	301				1	1	0	0
19	21	pro-opp	102	206	301				1	1	0	0
20	22	opp-pro										

Reserve 2

episode	chronseq	interactants	power strategy	PR_1	PR_2	PR_3	PR_4	PR_5	Institutional	orientational	social	socio-economic
1	1	pro-opp	102	301	502				0	1	1	0
2	2	opp-pro	105	301	401				0	1	1	0

	3	opp-pro	102	301	401				0	1	1	0
3	4	pro-opp	104	305					0	1	0	0
4	5	opp-pro	102	301					0	1	0	0
5	6	pro-opp	103	201	305	403	502		1	1	1	1
	7	pro-opp	103	301					0	1	0	0
6	8	opp-pro	104	401	404	301			0	1	1	0
	9	pro-opp	102	201	203	301	403		1	1	1	0
7	10	pro-opp	103	203	201	305			1	1	0	0
8	11	opp-pro	102	206	301				1	1	0	0
9	12	pro-opp	102	206	301				1	1	0	0
10	13	opp-pro	102	206	301	404			1	1	1	0
11	14	pro-opp	102	206	301				1	1	0	0
	15	pro-opp	103	301	402	403	305		0	1	1	0
12	16	opp-pro	102	401	404	301			0	1	1	0
13	17	pro-opp	103	201	202	301	402		1	1	1	0
14	18	opp-pro	102	206	301	404			1	1	1	0
15	19	pro-opp	103	305					1	1	0	0
	20	pro-opp	accommodate									

Reserve 3

episode	chronseq	interactants	power strategy	PR_1	PR_2	PR_3	PR_4	PR_5	Institutional	orientational	social	socio-economic
1	1	pro-opp	102	202	502				0	1	0	1
2	2	opp-pro	102	301	403				0	1	1	0
3	3	pro-opp	102	301	501	502			0	1	0	1
4	4	opp-pro	104	305	401				0	1	1	0
	5	pro-opp	102	403	502				0	0	1	1
	6	pro-opp	102	402	403	501	502	301	0	1	1	1
	7	pro-opp	102	207	301	501	203	201	1	1	0	1
5	8	pro-opp	102	301					0	1	0	0
6	9	opp-pro	102	301	501	203			1	1	0	1
	10	pro-opp	102	203	301				1	1	0	0
7	11	pro-opp	102	301					0	1	0	0
	12	opp-pro	accommodate									

Annex 3 Summary of actor strategy configurations in all studied cases

Cooperative-competitive scale of strategy configurations	Strategy configuration	Observed frequency at various reserve areas					Overall total within strategy scale groups (% of grand total)
		National	**R 1**	**R 2**	**R 3**	**Comp.**	
COOP-COOP	Persuasion-persuasion	15	11	3	4	97	130
	Mediation-persuasion	-	-	-	-	4	
	Persuasion-mediation	-	-	-	-	2	
	Case totals	**15**	**18**			**103**	
COMP-COMP	Manipulation-manipulation	-	-	-	-	2	19
	Avoidance-avoidance	-	-	-	-	2	
	Avoidance-coalition	-	-	-	-	2	
	Coalition-avoidance	-	-	-	-	2	
	Manipulation-coalition	-	-	1	-	-	
	Avoidance-litigation	-	-	-	-	1	
	Avoidance-force	-	-	-	-	1	
	Force-avoidance	-	-	-	-	1	
	Manipulation-litigation	-	-	-	-	1	
	Litigation-manipulation	-	-	-	-	1	
	Manipulation-avoidance	-	1	-	-	3	
	Litigation-avoidance	-	-		-	1	
	Sub-total	0	2			17	
EQUAL	**Sub-totals**	**15**	**20**			**120**	**155 (59%)**
COOP-COMP	Persuasion-avoidance	-	3	-	-	23	**70 (26%)**
	Persuasion-coalition	1	-	1	-	-	
	Persuasion-manipulation	6	-	4	-	8	
	Persuasion-force	-	-	-	1	-	
	Mediation-avoidance	-	-	-	-	22	
	Persuasion-litigation	-	-	-	-	1	
	Sub-total	**7**	**9**			**54**	
COMP-COOP	Avoidance-persuasion	-	1	-	-	9	**40 (15%)**
	Manipulation-persuasion	2	-	4	-	4	

	Coalition-Persuasion	-	-	1	-	-
	Manipulation-mediation	-	-	-	-	2
	Avoidance-mediation	-	-	-	-	14
	Force-persuasion	-	-	-	1	-
	Litigation-persuasion	-	-	-	-	2
	Sub-total	2	7			31
Grand Total						**265 (100%)**

Indicative event	chronseq	interactants	power str_Researcher		Peer coding		Power res_Researcher			Power res_Peer		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
w01												
Farmer demanded specific 300,000	1	farmer-contractor	102	106	106		301			303	304	**301**
timberman promised to pay	2	contractor-farmer	102	106	nil	102	307			307		**307**
farmer waited for promise	3	farmer-contractor					306			306		**306**
timber never came back	4	contractor-farmer	101		101		405			405		**405**
farmer has forgotten about it	5	farmer-contractor	END				306			306		**306**
w02												
Farmer demanded compensation	1	farmer-contractor	102	106	102		301			304		**301**
contractor promised to pay later	2	contractor-farmer	102	106	nil	102	307			307		**307**
farmer waited for promise	3	farmer-contractor					306			306		**306**
contractor never came back	4	contractor-farmer	101		101		405			405		**405**
farmer reported to the chief	5	farmer-contractor	107		107		203			403		**403**
contractor never paid the money	6	contractor-farmer	101		101		405			405		**405**
farmer has forgotten about it	7	farmer-contractor	END				306			306		**306**
w03												
farmer complained to bush manager	1	farmer-contractor	102	106	102		301			304		**301**
He promised to arrange for comp	2	contractor-farmer	102	106	nil	102	307			307		**307**
farmer followed up on demand	3	farmer-contractor	102	106	nil	102	401			301	401	**301**
contractor continue promises	4	contractor-farmer	102	106	102		307			307		**307**
farmer gives up	5	farmer-contractor	END				306			306		**306**
w04												
farmer demanded compensation	1	farmer-contractor	102	106	102		301			304		**301**
agent promised payment later	2	contractor-farmer	102	106	nil	102	307	304		307		**307**
farmer followed up on demand	3	farmer-contractor	102	106	nil	102	301			301		**301**
contractor still promised payment	4	contractor-farmer	102	106	102		307			307		**307**
farmer insulted contractor	5	farmer-contractor	102	106	103		301			301		**301**
contractor refused to pay	6	contractor-farmer	101		nil	101	502	405		301		**301**
farmer has forgotten about it	7	farmer-contractor	END				306			306		**306**
w05												
farmer confronted timberman for 500,000	1	farmer-contractor	102	106	106		304	301		303	304	**301**
he promised for negotiation later	2	contractor-farmer	102	106	nil	102	307	405		307		**307**
farmer waited for promise	3	farmer-contractor					306			306		**306**
Agent never came back	4	contractor-farmer	101		101		405			405		**405**
farmer has forgotten about it	5	farmer-contractor	END				306			306		**306**
w06												
farmer confronted timberman	1	farmer-contractor	102	106	102		301			304		**301**

timberman quarrel with farmer	2	contractor-farmer		103	106		103		301	405		301			**301**
farmer stopped pursuing case	3	farmer-contractor	END						306			306			**306**
w07															
farmer requested landlord's intervention	1	farmer-contractor		107			107		401			401			**401**
contractor did not contact farmer	2	contractor-farmer		101			101		405			405			**405**
Farmer's family sent case to police	3	farmer-contractor		109			109		204	401		204	**401**		**204**
contractor paid compensation	**4**	**contractor-farmer**	**SETTLE**						**502**			**502**			**502**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		**Agreed**
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**PRs**
w08												
farmer did not take any action	1	farmer-contractor					306			nil		**306**
w009												
farmer complained to contractor	1	farmer-contractor	102	106	102		301			304		**301**
contractor promised to pay something later	2	contractor-farmer	102	106	nil	102	307			307		**307**
farmer waited for payment	3	farmer-contractor					306			306		**306**
contractor never turned up	4	contractor-farmer	101		101		405			nil		**405**
farmer gave up	5	farmer-contractor	END				306			nil		**306**
w010												
farmer mobilised others to confront contractor	1	farmer-contractor	102	105	105		401	304		406		**401**
contractor promised to pay some comp	2	contractor-farmer	102	106	102		307			307		**307**
farmers followed up	3	farmer-contractor	102	106	nil	102	502			301		
contractor still promised payment	4	contractor-farmer	102	106	102		307			307		**307**
farmer has given up	5	farmer-contractor	END				306			306		**306**
w011												
farmer contacted suspected timberman	1	farmer-contractor	102	106	102		301			304		**301**
timberman refused responsibility	2	contractor-farmer	103		nil	101	301			nil		**301**
farmer continued to pressure timberman	3	farmer-contractor	102	106	103		301			301		**301**
timberman accepted to pay him later	4	contractor-farmer	102	106	102		301	307		307		**307**
farmer waited for payment	5	farmer-contractor					306			306		**306**
timberman never came back	6	contractor-farmer	101		101		405			405		**405**
farmer gave up	7	farmer-contractor	END				306			306		**306**
w012												
farmer sought for brother's intervention	1	farmer-contractor	107		107		401			401		**401**
contractor gave 100,000 as compensation	2	contractor-farmer	106	102	106		502			502		**502**
farmer refused and demanded more;	3	farmer-contractor	103	106	103		301	305		301	**305**	**301**

otherwise threatened court action														
contractor not responding to demand	4	contractor-farmer		101			101			405			305	204	**405**
farmer still waiting for settlement	5	farmer-contractor	END							306			306		**306**
w013															
farmer did not take any action	1	farmer-contractor								306			nil		**306**
w014															
farmer complained for compensation	1	farmer-contractor		102	106		102			301			304		**301**
contractor promised to pay something	2	contractor-farmer		102	106	nil		102		307			307		**307**
farmer followed up on promise	3	farmer-contractor		102	106	nil		102		301			301		**301**
contractor kept on promising	4	contractor-farmer		102	106		102			307			307		**307**
farmer kept of following up	5	farmer-contractor		102	106	nil		102		301			301		**301**
contractor left the community	6	contractor-farmer		101			101			405			405		**405**
farmer has forgotten about it	7	farmer-contractor	END							306			306		**306**
w015															
farmer complained for compensation	1	farmer-contractor		102	106		102			301			304		**301**
contractor offered 50,000 as compensation	2	contractor-farmer		106	102		106			502			502		**502**
farmer rejected the offer	3	farmer-contractor		106	102	nil		106		301			301		**301**
contractor refused to deal with farmer	4	contractor-farmer		101			101			405			405		**405**
farmer advised to stop pursuing the case	5	farmer-contractor	END							306			306		**306**
Indicative event	**chronseq**	**interactants**	**power str_Researcher**			**Peer coding**			**Power res_Researcher**			**Power res_Peer**			
Compensation conflict			**PS1**		**PS2**	**Power str_P1**		**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
w016														
farmer tolerated as culprit was not found	1	farmer-contractor							nil					**405**
w017														
farmer complained to chief and police	1	farmer-contractor		107	109		107	109	203	204		403	**204**	**403**
contractor did not contact farmer	2	contractor-farmer		101			101		405			405		**405**
farmer forgot about case	3	farmer-contractor	END						306			306		**306**
w018														
farmer confronted contractor for comp	1	farmer-contractor		102	106		102		301			304		**301**
contractor promised payment	2	contractor-farmer		102	106	nil		102	307			307		**307**
farmer waited for promised	3	farmer-contractor							306			306		**306**
contractor went away without payment	4	contractor-farmer		101			101		405			405		**405**
farmer has given up	5	farmer-contractor	END						306			306		**306**
w019														
farmer confronted contractor for comp	1	farmer-contractor		102	106		102		301			304		**301**
contractor threatened assault	2	contractor-farmer		103			103		305			305		**305**
farmer reported to the police	3	farmer-contractor		109			109		204			204		**204**
contractor paid farmer 10,000	**4**	**contractor-**	**SETTLE**						**502**			**502**		**502**

		farmer												
w020														
farmer confronted timberman	1	farmer-contractor		102	106		102		301			304		**301**
timberman promised to see manager	2	contractor-farmer		102	106	nil		102	307	405		307		**307**
farmers followed up	3	farmer-contractor		102	106	nil		102	301			301		**301**
timber kept on promising to see manager	4	contractor-farmer		102	106		102		307			307		**307**
farmer continued to follow up	5	farmer-contractor		102	106		102		301			301		**301**
timberman still promising	6	contractor-farmer		102	106	nil		102	307			307		**307**
farmer reported to the police; agreed to social settlement	7	farmer-contractor		109			109		204			204	401	**204**
contractor still promised to pay	8	contractor-farmer		102	106		102		301			307		**307**
farmer has stopped pursuing the case	9	farmer-contractor	END						306			306		**306**
w021														
farmer confronted contractor for comp	1	farmer-contractor		102	106		102		301			304		**301**
contractor promised payment	2	contractor-farmer		102	106	nil		102	307			307		**307**
farmer followed up on promise	3	farmer-contractor		102	106		102		301			301		**301**
contractor kept on promising	4	contractor-farmer		102	106	nil		102	307			307		**307**
farmer confronted contractor's agent	5	farmer-contractor		102	106	nil		102	301			**401**		**301**
agent refused to pay any compensation	6	contractor-farmer		101			101		405			405		**405**
farmer looking forward to some payment	7	farmer-contractor	END						306			306		**306**
w022														
farmer demanded compensation	1	farmer-contractor		102	106		102		301			304		**301**
contractor paid for trees	**2**	**contractor-farmer**	**SETTLE**			**SETTLE**			**502**			**502**		**502**
farmer demanded compensation	3	farmer-contractor		102	106		102		301			304		**301**
contractor promised payment later	4	contractor-farmer		102	106	nil		102	307			307		**307**
farmer waited for promised	5	farmer-contractor							306			306		**306**
contractor never came back	6	contractor-farmer		101			101		405			405		**405**
farmer waiting for opportunity to see him	7	farmer-contractor	END						306			306		**401**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
w023												
farmer complained to contractor's agent	1	farmer-contractor	102	106	102		301			401	**406**	**301**
he promised payment later	2	contractor-farmer	102	106	nil	106	307			307		**307**
farmer waited for promised	3	farmer-contractor					306			306		**306**
contractor never came back	4	contractor-farmer	101		101		405			405		**405**
farmer withdraws	5	farmer-contractor	END				306			306		**306**

w024													
farmer demanded compensation	1	farmer-contractor		102	106		102		301		304		**301**
contractor promised payment	2	contractor-farmer		102	106	nil		102	307		307		**307**
farmer followed up on promise	3	farmer-contractor		102	106	nil		102	301		301		**301**
contractor still promised to pay	4	contractor-farmer		102	106		102		307		307		**307**
farmer threatened to invoke curse if no payment is made	5	farmer-contractor		103			103		305		305	306	**305**
contractor still not paying	6	contractor-farmer		101			101		405		nil		**405**
farmer waiting for payment	7	farmer-contractor	END						306		306		**306**
w025													
farmer demanded 200,000	1	farmer-contractor		102	106		106		301		304	303	**301**
contractor paid 150,000	**2**	**contractor-farmer**	**SETTLE**		**106**		**102**		**301**	**502**	**502**		**502**
farmer followed up on balance	3	farmer-contractor		102	106	nil		102	301		301		**301**
contractor not responding to demands	4	contractor-farmer		101			101		405		405		**405**
farmer has given up	5	farmer-contractor	END						306		306		**306**
w026													
farmer complained to contractor	1	farmer-contractor		102	106		102		301		304		**301**
contractor promised to pay compensation	2	contractor-farmer		102	106	nil		102	307		307		**307**
farmer followed up with son in Kumasi	3	farmer-contractor		102		nil		102	301	401	301	**401**	**301**
contractor did not contact farmer	4	contractor-farmer		101			101		405		405		**405**
farmer continued to follow up	5	farmer-contractor		102	106	nil		102	401		301	**401**	**301**
contractor did not contact farmer	6	contractor-farmer		101			101		405		405		**405**
farmer has given up	7	farmer-contractor	END						306		306		**306**
w027													
farmer complained to Bush manager and threatened to report to police	1	farmer-contractor		106	103		102	103	406	**204**	304	305	**305**
He promised to see contractor for comp	2	contractor-farmer		102	106		102		301	405	307		**307**
farmer agreed to this	3	farmer-contractor							306		306		**306**
contractor conveyed logs without payment	4	contractor-farmer		101			101		405		405		**405**
farmer complained to chief	5	farmer-contractor		107			107		203		403		**403**
contractor did not contact farmer	6	contractor-farmer		101			101		405		405		**405**
farmer confronted bush manager	7	farmer-contractor		102	106	nil		102	301	406	304		**301**
He promised to take action	8	contractor-farmer		102	106		102		307		307		**307**
farmer waited for promised	9	farmer-contractor							306		306		**306**
contractor did not contact farmer	10	contractor-farmer		101			101		405		405		**405**
farmer has withdrawn	11	farmer-contractor	END						306		306		**306**
w028													
farmer complained to chief	1	farmer-contractor		107			107		203		403		**403**

Indicative event	chronseq	interactants	power str_Researcher		Peer coding		Power res_Researcher			Power res_Peer		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
contractor paid compensation through chief	**2**	**contractor-farmer**	**SETTLE**				**502**			**203**		**502**
w029												
complained to chief	1	farmer-contractor	107		107		203			403		**403**
contractor never contacted him	2	contractor-farmer	101		101		405			405		**405**
he followed up on the chief	3	farmer-contractor	107		nil	102	203			301		**403**
contractor did not pay anything	4	contractor-farmer	101		101		405			405		**405**
farmer gave up and has forgotten about it	5	farmer-contractor	END				306			306		**306**
W030												
farmer demanded compensation	1	farmer-contractor	102	106	102		301			304		**301**
contractor promised to pay later	2	contractor-farmer	102	106	102		307			307		**307**
farmer waited for promised	3	farmer-contractor					306			306		**306**
contractor never came back	4	contractor-farmer	101		101		405			405		**405**
farmer reported to the chief	5	farmer-contractor	107		107		203			403		**403**
contractor never paid the money	6	contractor-farmer	101		101		405			405		**405**
farmer has forgotten about the issue	7	farmer-contractor	END				306			306		**306**
w031												
farmer demanded 200,000	1	farmer-contractor	102	106			301	304				**301**
contractor promised to pay 150,000 later	2	contractor-farmer	102	106			307					**307**
farmer agreed and waited for payment	3	farmer-contractor					306					**306**
contractor never came back	4	contractor-farmer	101				405					**405**
farmer followed up on payment	5	farmer-contractor	102				301					**301**
contractor still promised to pay	6	contractor-farmer	102				307					**307**
farmer reported to contractor's wife	7	farmer-contractor	107				401					**401**
cotractor never paid the money	8	contractor-farmer	101				405					**405**
farmer has forgotten about the issue	9	farmer-contractor	END				306					**306**
w032												
farmer complained to timberman	1	farmer-contractor		106			301					**301**
timberman checked extent of destruction	2	contractor-farmer	102	106			303					**303**
farmer demanded compensation	3	farmer-contractor	102	106			301					**301**
timberman promised to arrange for comp	4	contractor-farmer	102	106			307	405				**307**
farmer followed up on demand	5	farmer-contractor	102				301					**301**
timberman did not respond	6	contractor-farmer	101				405					**405**
farmer has forgotten about the issue	7	farmer-contractor	END				306					**306**
w033												
farmer complained to timberman	1	farmer-contractor	102	106			301					**301**

timberman promised to pay compensation	2	contractor-farmer		102	106			307					**307**
farmer waited for promised compensation	3	farmer-contractor						306					**306**
timber never came	4	contractor-farmer		101				405					**405**
farmer followed up	5	farmer-contractor		102				301					**301**
timberman refused to pay	6	contractor-farmer		102				405					**405**
farmer has forgotten about the issue	7	farmer-contractor	END					306					**306**
w034													
farmer demanded compensation	1	farmer-contractor		102	106			301					**301**
timberman promised to pay compensation	2	contractor-farmer		102	106			307					**307**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
farmer waited for compensation	3	farmer-contractor					306					**306**
timberman never came	4	contractor-farmer	101				405					**405**
farmer has forgotten about the issue	5	farmer-contractor	END				306					**306**
w035												
farmer complained to contractor	1	farmer-contractor		102	106		301					**301**
contractor promised to pay 50,000	2	contractor-farmer		102	106		307					**307**
farmer waited for the money	3	farmer-contractor					306					**306**
contractor never came back	4	contractor-farmer		101			405					**405**
farmer followed up	5	farmer-contractor		102	106		301					**301**
contractor still did not pay	6	contractor-farmer		101			405					**405**
farmer has forgotten about the issue	7	farmer-contractor	END				306					**306**
F01												
Farmer complains to chief	1	Farmer-Contractor		107			203	**301**				**403**
Contractor argues on compensation	2	Contractor-Farmer		102	106		301					**301**
Farmer looks forward to payment	3	Farmer-Contractor					306					**306**
Contractor plays hide and seek	4	Contractor-Farmer		101			405					**405**
Farmer sought forestry intervention	5	Farmer-Contractor		107			202	**301**				**202**
contractor paid some compensation	**6**	**Contractor-Farmer**	**SETTLE**				**502**					**502**
F02												
farmer reports to bush manager	1	Farmer-		102	106		301					**301**

		Contractor									
contractor grows angry	2	Contractor-Farmer		103	106		305				**305**
farmer responds with confrontation	3	Farmer-Contractor		103	106		305				**305**
contractor promised to compensate	4	Contractor-Farmer		102	106		304	301			**301**
farmer believed them	5	Farmer-Contractor					306				**306**
Contractor plays hide and seek	6	Contractor-Farmer		101			405				**405**
farmer reports to forestry	7	Farmer-Contractor		107			301	202		**301**	**202**
contractor still not paying	8	Contractor-Farmer		101			405				**405**
farmer still waiting to be paid	9	Farmer-Contractor	END				306				**306**
F03											
farmer pleads for compensation	1	Farmer-Contractor		102	106		301				**301**
contractor promised to compensate	2	Contractor-Farmer		102	106		307				**307**
farmer ok with whatever happens	3	Farmer-Contractor	END				306				**306**
F04											
farmer complains to bush manager	1	Farmer-Contractor		102	106		301				**301**
contractor promised to compensate	2	Contractor-Farmer		102	106		307				**307**
farmer hopes to be paid	3	Farmer-Contractor					306				**306**
contractor continues to promise	4	Contractor-Farmer		102	106		307				**307**
farmer raises issues opportunistically	5	Farmer-Contractor	END				405				**405**
F05											
farmer reports to chief and others	1	Farmer-Contractor		107			301	**403**	**401**		**301**
contractor promised to compensate	2	Contractor-Farmer		102	106		307				**307**

Farmer looks forward to payment	3	Farmer-Contractor	END				306							**306**
F06														
farmer complains to unit committee	1	Farmer-Contractor		107			201	**301**						**201**
Indicative event	**chronseq**	**interactants**	**power str_Researcher**			**Peer coding**		**Power res_Researcher**			**Power res_Peer**			
Compensation conflict			**PS1**		**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**	
Contractor plays hide and seek	2	Contractor-Farmer		101				405	**401**					**405**
Farmer sought forestry intervention	3	Farmer-Contractor		107				202	**301**					**202**
contractor continues avoidance	4	Contractor-Farmer		101				405	**401**					**405**
farmer put pressure for forestry help	5	Farmer-Contractor		107				202	**301**					**202**
contractor still adamant	6	Contractor-Farmer		101				405	**401**					**405**
farmer finally negotiated compensation	7	Farmer-Contractor		106				306	**301**					**306**
contractor settles farmer	**8**	**Contractor-Farmer**	**SETTLE**					**502**						**502**
F07														
farmer reports to police	1	Farmer-Contractor		109				204						**204**
contractor paid negotiaed compensation	**2**	**Contractor-Farmer**	**SETTLE**					**502**						**502**
F08														
farmer reported to police	1	Farmer-Contractor		109				204						**204**
contractor promised to compensate	2	Contractor-Farmer		102	108			307						**307**
Farmer looks forward to payment	3	Farmer-Contractor	END					306						**306**
F09														
farmer angrily confronted contractor	1	Farmer-Contractor		103	106			301	**305**					**301**
contractor responded with confrontation	2	Contractor-		103	106			301	**502**	**305**				**301**

		Farmer								
farmer complained to forestry	3	Farmer-Contractor		107		202	**301**			**202**
contractor gave some compensation	**4**	**Contractor-Farmer**	**SETTLE**			**502**	**301**			**502**
F10										
farmer reported to police	1	Farmer-Contractor		109		204	**301**			**204**
contractor did not contact farmer	2	Contractor-Farmer		101		405				**405**
farmer still waiting to be paid	3	Farmer-Contractor	END			306				**306**
F11										
farmer confronts contractor	1	Farmer-Contractor		102	106	301				**301**
contractor confronts farmer	2	Contractor-Farmer		102	106	301				**301**
farmer to use neighbours	3	Farmer-Contractor		107		401				**401**
F12										
farmer complains to contractor	1	Farmer-Contractor		102	106	301				**301**
contractor agreed to pay farmer	2	Contractor-Farmer		102	106	307				**307**
Farmer looks forward to payment	3	Farmer-Contractor	END			306				**306**
F13										
farmer pleads for compensation	1	Farmer-Contractor		102	106	301	**202**			**301**
contractor compensates her	**2**	**Contractor-Farmer**	**SETTLE**			**502**	**202**	**301**		**502**
F14										
farmer reports to police	1	Farmer-Contractor		109		204	**301**			**204**
contractor confronts farmer	2	Contractor-Farmer		103	106	305				**305**
farmer refuses cooperation	3	Farmer-Contractor		101		301	**306**			**301**
contractor also avoided farmer	4	Contractor-Farmer		101		405				**405**

farmer to seek for fresh bargaining	5	Farmer-Contractor		102	106			301					**301**
F15													
farmer complains to forestry	1	Farmer-Contractor		107				202	**301**				**202**
contractor did not respond	2	Contractor-Farmer		101				405					**405**
farmer waiting for response	3	Farmer-Contractor	END					306					**306**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
F16												
farmer complains to contractor	1	Farmer-Contractor		102	106			301				**301**
contractor avoids issue	2	Contractor-Farmer		101				405	**502**			**405**
farmer withdraws	3	Farmer-Contractor	END					306				**306**
F17												
farmer complains to contractor	1	Farmer-Contractor		102	106			301				**301**
contractor promised to compensate	2	Contractor-Farmer		102	106			307				**307**
farmer continue to persuade contractor	3	Farmer-Contractor		102	106			301				**301**
contractor promised to compensate	4	Contractor-Farmer		102	106			307				**307**
farmer waits for compensation	5	Farmer-Contractor	END					306				**306**
F18												
farmer complains to contractor	1	Farmer-Contractor		102	106			301				**301**
contractor promised to compensate	2	Contractor-Farmer		102	106			307				**307**
farmer waits for compensation	3	Farmer-Contractor	END					306				**306**
F19												

farmer pleads for compensation	1	Farmer-Contractor		102	106	301	**301**
contractor promised to compensate	2	Contractor-Farmer		102		307	**307**
farmer still waiting to be paid	3	Farmer-Contractor	END			306	**306**
F20							
farmer complains to contractor	1	Farmer-Contractor		102	106	301	**301**
contractor promised to compensate	2	Contractor-Farmer		102	106	307	**307**
farmer waits for compensation	3	Farmer-Contractor				306	**306**
contractor refused to pay	4	Contractor-Farmer		101		405	**405**
farmer withdraws	5	Farmer-Contractor	END			306	**306**
F21							
farmer complains to bush manager	1	Farmer-Contractor		102	106	301	**301**
bush manager promised to pay	2	Contractor-Farmer		104	106	307	**307**
farmer waits for compensation	3	Farmer-Contractor	END			306	**306**
F22							
farmer complains to bush manager	1	Farmer-Contractor		102	106	301	**301**
bush manager promised to pay	2	Contractor-Farmer		102	106	307	**307**
farmer looked forward to payment	3	Farmer-Contractor				306	**306**
bush manager never paid	4	Contractor-Farmer		101		405	**405**
farmer withdraws	5	Farmer-Contractor	END			306	**306**
F23							
farmer taking no action	1	Farmer-Contractor				306	**306**
F24							
farmer argues for compensation	1	Farmer-		102	106	301	**301**

contractor promised to compensate	2	Contractor Contractor-Farmer		102	106			307				**307**
farmer waits for compensation	3	Farmer-Contractor	END					306				**306**
F25												
farmer complains and demands comp	1	Farmer-Contractor		102	106			301				**301**
contractor promised to compensate	2	Contractor-Farmer		102	106			307				**307**
farmer waits for compensation	3	Farmer-Contractor	END					306				**306**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
F26												
farmer reports to chief	1	Farmer-Contractor		107			203					**403**
contractor pleads ignorance of case	2	Contractor-Farmer		102	106		301					**301**
farmer then requires compensation	3	Farmer-Contractor		102	106		301					**301**
contractor promised to compensate	4	Contractor-Farmer		102	106		307					**307**
farmer waits for investigation and comp	5	Farmer-Contractor	END				306					**306**
F27												
farmer complains to contractor	1	Farmer-Contractor		102	106		301					**301**
contractor promised to compensate	2	Contractor-Farmer		102	106		307					**307**
farmer still waiting for compensation	3	Farmer-Contractor	END				306					**306**
F28												
farmer complains to contractor	1	Farmer-Contractor		102	106		301					**301**
contractor promised to compensate	2	Contractor-Farmer		102	106		307					**307**

farmer still looking for compensation A01	3	Farmer-Contractor	END			306				**306**
farmer complains to contractor	1	Farmer-Contractor		102	106	301				**301**
contractor bargained for compensation	2	Contractor-Farmer		102	106	301				**301**
farmer pushes for better compensation	3	Farmer-Contractor		102	106	301				**301**
contractor promised to compensate	4	Contractor-Farmer		102	106	307				**307**
farmer intensify pressure for pay	5	Farmer-Contractor		102	106	301				**301**
contractor promised to compensate	6	Contractor-Farmer		102		304				**304**
farmer withdraws temporally	7	Farmer-Contractor		101		306	**405**			**306**
contractor avoids issue	8	Contractor-Farmer		101		405				**405**
farmer join others to complain to DA	9	Farmer-Contractor		105	107	201	**401**	**405**		**201**
contractor still adamant	10	Contractor-Farmer		101		405				**405**
farmers use threat/force on contractors	11	Farmer-Contractor		104		305				**305**
contractors leaves community	12	Contractor-Farmer		101		405				**405**
farmer forgot about case A02	13	Farmer-Contractor	END							
farmer complains to contractor	1	Farmer-Contractor		102	106	301				**301**
contractor avoids issue	2	Contractor-Farmer		101		502	**202**			**502**
farmer continue to persuade contractor	3	Farmer-Contractor		102	106	301				**301**
contractor still adamant	4	Contractor-Farmer		101		502	**202**	**405**		**502**
farmer join others to complain to DA	5	Farmer-Contractor		105	107	401	**405**	**201**		**401**

contractor still adamant	6	Contractor-Farmer		101			502	202				**502**
famer takes look and see attitute	7	Farmer-Contractor	END				306					**306**
A03												
farmer complains to DA	1	Farmer-Contractor		107			201	301				**201**
no action and contractor avoiding	2	Contractor-Farmer		101			502	202	**405**			**502**
farmer complains again	3	Farmer-Contractor		107			201	301				**201**
no action and contractor avoiding	4	Contractor-Farmer		101			502	202	**405**			**502**
farmer continue to pressurise DA	5	Farmer-Contractor		107			301					**301**
contractor accepted to pay compensation	6	Contractor-Farmer		102	106		304					**304**
farmer still waiting for compensation	7	Farmer-Contractor	END				306					**306**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**	**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
A04												
farmer complains to DA	1	Farmer-Contractor		107			201	**401**	**405**			**201**
contractor avoids issue	2	Contractor-Farmer		101			202	**502**				**202**
farmer goes to DCE again	3	Farmer-Contractor		107			301	**201**				**301**
contractor still adamant	4	Contractor-Farmer		101			202	**502**				**202**
farmers to petition President	5	Farmer-Contractor		107			201	**301**	304			**201**
B01												
farmer complained to contractor's agents	1	farmer-contractor		102	106		301					**301**
contractor dictated compensation and paid	**2**	**contractor-farmer**	**SETTLE**				**301**	**502**				**301**

B02													
farmer demanded 200,000 as compensation	1	farmer-contractor		102	106			301					**301**
contractor paid 75,000	**2**	**contractor-farmer**	**SETTLE**					**502**					**502**
L01													
farmer demanded 500,000 as compensation	1	farmer-contractor		102	106			301	304				**301**
contractor promised to pay 400,000	2	contractor-farmer		102	106			307	502				**307**
farmer waited for settlement	3	farmer-contractor						306					**306**
contractor did not pay	4	contractor-farmer		101				405					**405**
farmer complained to Assemblyman	5	farmer-contractor		107				201					**201**
contractor still did not pay	6	contractor-farmer		101				405					**405**
farmer has forgotten about it	7	farmer-contractor	END					306					**306**
L02													
farmer demanded compensation	1	farmer-contractor		102	106			301					**301**
contractor promised to pay 400,000	2	contractor-farmer		102	106			307					**307**
farmer threaten to confisicate logs	3	farmer-contractor		103	106			305					**305**
Agents promised to arrange payment later	4	contractor-farmer		102	106			307					**307**
farmer followed up in contractor's camp	5	farmer-contractor		102				502					**502**
agents threatened farmer with assault	6	contractor-farmer		103				305					**305**
farmer complains to Assemblyman	7	farmer-contractor		107				201					**201**
contractor has still not paid anything	8	contractor-farmer		101				405					**405**
farmer advised to leave case to God	9	farmer-contractor	END					306					**306**
L03													
farmer demanded for some compensation	1	farmer-contractor		102	106			301					**301**
Agents promised to arrange payment later	2	contractor-farmer		102	106			307					**307**
farmer followed up	3	farmer-contractor		102	106			301				**502**	**301**
farmer was asked to contact contractor in Kumasi	4	contractor-farmer		102	106			304					**301**
farmer refused and forgot about it	5	farmer-contractor	END					306					**306**
L04													
farmer demanded 2 million as compensation	1	farmer-contractor		102	106			301	304				**301**
contractor promised to pay	2	contractor-farmer		102	106			307					**307**
farmer waited for settlement	3	farmer-contractor						306					**306**
contractors never contacted farmer	4	contractor-farmer		101				405					**405**
farmer complained to Assemblyman	5	farmer-contractor		107				201					**201**

Indicative event	**chronseq**	**interactants**	**power str_Researcher**		**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**	**PS2**	**Power**	**Power**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed**

						str_P1	**str_P2**				**PRs**	
contractors still did not respond	6	contractor-farmer		101				405				**405**
farmer stopped pursuing	7	farmer-contractor	END					306				**306**
L05												
farmer complained about destruction	1	farmer-contractor		102	106			301				**301**
loggers promised to pay her something	2	contractor-farmer		102	106			307				**307**
farmer waited for payment	3	farmer-contractor						306				**306**
loggers didn't turn up	4	contractor-farmer		101				405				**405**
on husband's advice, farmer forgot about it	5	farmer-contractor	END					306				**306**
L06												
farmer complained about destruction	1	farmer-contractor		102	106			301				**301**
agents directed her to contractor in another town	2	contractor-farmer		102	106			304				**301**
farmer pursued contractor	3	farmer-contractor		102	106			502			**301**	**502**
contractor did not respond to farmer's call	4	contractor-farmer		101				405				**405**
farmer pursued contractor again	5	farmer-contractor		102	106			502				**502**
contractors left their camp	6	contractor-farmer		101				405				**405**
farmer feels cannot do anything	7	farmer-contractor	END					306				**306**
L07												
farmer complained to loggers	1	farmer-contractor		102	106			301				**301**
loggers promised to pay her something	2	contractor-farmer		102	106			307				**307**
farmer pursued loggers again	3	farmer-contractor		102	106			301				**301**
loggers paid 100,000	4	contractor-farmer		102	106			502				**502**
farmer demanded more	5	farmer-contractor		102	106			301				**301**
loggers promised to pay more later	6	contractor-farmer		102	106			307				**307**
farmer waited for payment	7	farmer-contractor						306				**306**
loggers left the community	8	contractor-farmer		101				405				**405**
farmer has accommodated the situation	9	farmer-contractor	END					306				**306**
L08												
farmer demanded 100,000	1	farmer-contractor		102	106			301				**301**
Agents promised contractor will pay 80,000	2	contractor-farmer		102	106			307				**307**
farmer went to contractor to get money	3	farmer-contractor		102	106			301	**502**			**301**
contractor left his camp	4	contractor-farmer		101				405				**405**
farmer accommodating with situation	5	farmer-contractor	END					306				**306**
L09												
farmer complained about destruction	1	farmer-contractor		102	106			301				**301**
contractor paid her 150,000 as compensation	**2**	**contractor-farmer**	**SETTLE**					**502**				**502**
L10												
farmer complained and demanded 1mil	1	farmer-contractor		102	106			301				**301**

contractor agreed to pay 300,000	2	contractor-farmer		102	106			307					**307**
farmer waited for payment	3	farmer-contractor						306					**306**
contractor settled payment	**4**	**contractor-farmer**	**SETTLE**					**502**					**502**
L11													
farmer complained to suspected logger	1	farmer-contractor		102	106			301					**301**
logger demanded for number of trees	2	contractor-farmer		102	106			304					**301**
farmer provided information	3	farmer-contractor		102				303					**303**
Indicative event	**chronseq**	**interactants**	**power str_Researcher**			**Peer coding**		**Power res_Researcher**			**Power res_Peer**		
Compensation conflict			**PS1**		**PS2**	**Power str_P1**	**Power str_P2**	**PR1**	**PR2**	**PR3**	**PR_P1**	**PR_P2**	**Agreed PRs**
contractor refused to pay	4	contractor-farmer		101				301					**301**
farmer forgot about it	5	farmer-contractor	END					306					**306**
L12													
farmer complained	1	farmer-contractor		102	106			301					**301**
Agents promised contractor will pay 80,000	2	contractor-farmer		102	106			307					**307**
farmer followed up in contractor's camp	3	farmer-contractor		102				502					**502**
contractors left their camp	4	contractor-farmer		101				405					**405**
farmer feels cannot do much	5	farmer-contractor	END					306					**306**

Acknowledgement

> There is no duty more indispensable than that of returning a kindness; all men distrust one forgetful of a benefit (Cicero 106-43 BC)

Thank God that I could go through the PhD journey and to have the opportunity to say many thanks to those who helped me in diverse ways in the course of such a long 4-year academic trip. The journey started with a strong encouragement by a scientist I met during an IUFRO meeting in Pretoria, South Africa, who encouraged me to pursue the academic ladder to a PhD level. I regret that I lost his name but I am grateful to him. When I was about to complete my MSc programme, Dr. Freerk Wiersum was the first lecturer I indicated my intentions to continue with a PhD. He welcomed my idea and facilitated my contacts with Prof. Dr. Heiner Schanz, who later became my thesis supervisor. I am indebted to both for their motivation even when there was no guarantee that I would obtain a PhD position. The journey actually started when I was finally awarded a sandwich PhD fellowship by Wageningen University; I am grateful for that. Tropenbos-Ghana Programme and the Netherlands Research School for Resource and Development (CERES) gave additional financial and logistic support, which to a large extent made the field research in Ghana possible and I am highly grateful. Just about to go for my first academic visit, I encountered immigration problems with my residence permit and this became a battle for almost one year. During this time, Prof. Schanz, Dr. Wiersum and Barbara Kolijn, all of the FNP group and Hans Vellema of Tropenbos-International gave me their unflinching support and I am grateful. During the delays, I met Rita, my wife, who gave me a lot of encouragement. Thanks to God Almighty that the immigration conflict was managed. In course of the programme, I visited Netherlands and Germany on several occasions. I am very grateful to Barbara Kolijn (Wageningen) and Barbara Matthias (Freiburg University) for helping me with administrative arrangements.

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At the end of the journey, reflecting on all the ups and downs, I want to now express my sincerest gratitude to Prof. Dr. Schanz and Prof. Dr. Arts, my promoters, who have worked with me all this while, through thin and thick, to complete this work. By dedicating this work to my wife and children, I express my deepest appreciation to them for paying a high price to make this work successful. Last but not the least, I want to say thank you to Maame Akua Agyeiwaa (my mother) for giving me the first milk that developed my mind and my belated father, Samuel Kwasi Marfo, for the quality investment he made in my early elementary education before he died. I end all by saying *'Aseda nka wodin, Yehowa'*.

About the Author

Born on 27th July 1973 in Kumasi, Ghana, Emmanuel Marfo graduated with BSc (Hons.) in Natural Resource Management at the University of Science and Technology in Kumasi in 1997. He did his national service as a Teaching Assistant at the Institute of Renewable Natural Resources at the same University. In 1998, he was elected President of the International Forestry Students Association (IFSA) at the Association's 28th International Symposium in Ghana. He worked for one year at the then IFSA international secretariat in Gottingen, Germany. His affiliation with IFSA exposed him to international forestry institutions and initiatives. He initiated IFSA network with the International Tropical Timber Organisation (ITTO) and strengthened relations with IUFRO, WWF and IUCN. He also represented forestry students worldwide in many international forestry events such as the third session of the United Nations Intergovernmental Forum on Forests (IFF-3). With this international exposure, he decided to focus his postgraduate studies and career on the social and political dimensions of natural resource management. With the support of the Netherlands Fellowship Programme, he enrolled at Wageningen University (The Netherlands) in 1999 to undertake an MSc Tropical Forestry programme and specialized in forest policy. He graduated with Distinction and received the University's prestigious Prof. van Der Plas award for the best Master of Science student in 2001. His MSc thesis focused on community representation in negotiation, using the Social Responsibility Agreement negotiation in Ghana as a case study. Following his MSc programme, he was engaged as a consultant on the Tropenbos-Ghana Programme where he carried out several works, notably, documenting the research programme development process, developing stakeholder database for the programme and conducted a study to compile a bibliography for the Programme's research themes. He obtained a sandwich PhD position at the Forest and Nature Conservation Policy Group of Wageningen University in 2002. He was employed as a Research Scientist (Forest Policy and Law) at the Forestry Research Institute of Ghana in 2003 and has been working there till date.

In 2004, he was awarded a grant by the International Foundation of Science (IFS) to undertake a study into legal pluralism and forest access in Ghana. Besides research, he has served as a member of the Board of Directors for the Ghana Association for the Conservation of Nature since 2002.

Completed Training and Supervision Plan

Description	Department/Institute	Month/year	Credits
I. Orientation			
- Literature search	Wageningen University	2003, 2004	4
- Presentation of research proposal	Forest and Nature Conservation Policy group, Wageningen University	March 2003	1
- CERES orientation programme	Utrecht University	April 2003	4
- Advanced research seminar	Forest and Nature Conservation Policy group, Wageningen University	2003 – 2006	3
II. Research methods and techniques			
- TBI-Ghana Workshop "Natural resource management in Ghana: Challenges to professionalism"	Akyawkrom, Kumasi Ghana	2004	1
- TBI-Ghana Workshop "Equity in forest benefit sharing in Ghana"	Akyawkrom, Kumasi Ghana	2005	1
- CERES summer school	Nijmegen University	2004	2
- CERES-Wageningen Seminar Series	Wageningen University	2005-2006	1
III. Paper presentations			
- "Natural resource conflict management as an actor-empowerment process: towards a conceptual framework"	17th Conference of the International Association of Conflict Management, Pittsburg USA	June 2004	1
- Restoration and sustainable management of forests in Ghana	International conference on forest restoration, Elmina, Ghana	July 2005	1
- Managing biodiversity conflicts in local and national settings: the role of actor-empowerment. Lessons from forest-mining conflicts in Ghana	1st DIVERSITAS open conference on biodiversity conservation for life Oaxaca, Mexico	Nov. 2005	1
- Forests and violent conflicts: a global perspective	FNP Seminar Forest and Violent Conflicts	February 2006	1
- Participation in exhibition on environment, conflict and cooperation	Ministry of Housing, Spatial Planning and the Environment, The Hague	March 2006	1
Total			22