

## Multiple Enactments of Abijata Shalla Lakes National Park, Ethiopia



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# Summary

This study employs a non-framing approach in examining the complex environmental dispute in Abijata Shalla Lakes National Park (ASLNP). It describes, connects and analyses multiple actors, practices, discourses and processes that interweave and enact different realities of natural resources in ASLNP. It incorporates Actor Network Theory (ANT) with its outright focus on relationality, as a methodology in tracing and connecting actors, explicating processes involved in how networks are formed and sustained. It approaches natural resources in ASLNP as enacted into being in different versions instead of merely observed from multiple perspectives. In so doing, the study acclaims that the problem in ASLNP is shifting and fluid beyond what appears to be a pre-defined base of the problem. Ontological politics is introduced to examine the conflicting and collating relations between multiple versions of the park. Through politics of scale, the study examines the social process and material forces that influence cause of events beyond its geographic confines.

Multi-sited ethnography employed in the study provided the needed spatial flexibility as well as methodological assemblage that included participant observation, semi-structured and open ended interviews and Focus Groups Discussions. This allowed maneuvering between different data collection methods to provide detailed accounts on practices and motives behind these. This way the study examined how different associations came to be and were interwoven in reconstructing realities. Accordingly, the study engaged with the enactment of the resources in three different versions identified as 'Natural resources for livelihood', 'Natural resources for industry' and 'Natural resources for conservation'. The reconstruction of the park in this way is also an outcome of this research and how it intervened in bringing forth these versions among others.

'Natural resources for livelihood' embodies diverse set of actors that include the farmers, salty mud dealers, shifting pastoralists, the livestock, the lakes and the acacia trees all under the shared discourse on the use of resources for basic livelihood ends. The second version identified as 'Natural resources for Industry', encompasses the Abijata Shalla Soda Ash Share Company, lakes Abijata and Shalla where the industrial merit of the lakes is prevailing definition. Accordingly in this version, water abstraction for industrial purposes is the main practice aligned with its definition of natural resources. The third version 'Natural resources for conservation' agglomerates actors such as the park management on site, the three lakes, (Abijata, Shalla and Chitu), the birdlife and biodiversity, Ethiopian Wildlife and Conservation Authority (EWCA) and conservation organizations; Ethiopian Wildlife and Natural History Society (EWNHS) and Institute of Biodiversity conservation (IBC). In the conservation network, the principal discourse is on the degraded state of the natural resources due to human and industrial impacts and their conservation significance. The study elaborates on the mechanisms and processes through which each these different actor-networks are held together. Accordingly, different modes of ordering of the resources are presented that feature collating and conflicting relations within and across different

versions. The study presented two of such collations, one between the farmers, the conservation organization (EWNHS) and the park management. This exemplifies how discursive, material and practical alliances are forged between these different actors in forming and sustaining a network. Another coalition is between the farmers and shifting pastoralists who are discursively linked in the livelihood version and sustain practical and material links through livestock, grazing pasture, fees and marriage alliances.

The study also shows how fragile any ordering attempt is, where failure to achieve successful translation could lead to network fractures at any time. In relation to diverging networks, the study examined two important conflicts. One of these is between the farmers and the park management. This conflict, stemming from incongruent definitions of natural resources shows how such definitions have performative capacities that translate in the spatial arrangement of the park. The way space is variously appropriated in the park, such as farm and grazing land, settlement areas, park head quarters, outposts and viewpoints, is reflective of such differing definitions and enacted practices. This conflict also elucidated the shifting nature of the problem beyond apparently given and static features. As actors and their roles change, where definitions and stories differ, so too does the problem. Thus, resource degradation constantly shifts to mean rainfall scarcity and drought in the livelihood version while referring to decline in lakes and its impacts on Trona production in the industrial version. It also means ecological disturbance and its implications on biodiversity in the conservation network. This has brought in a number of other issues and actors beyond those directly involved. This was where theoretical framings from politics of scale came in useful. Through a relational treatment of the concept of scale, the scene of the study's examination transcended the geographic boundaries of the park. This revealed that what turns out to be the problem on the ground is influenced by broader global, national and regional actors and discourses.

Finally the study examined tourism as a new version, which as an emerging enactment, shapes and is shaped by its relation with the other versions discussed. Accordingly, the tourism network is closely affiliated to the conservation network. It is being proposed as an important intervention mechanism towards resolving the conflicts between the livelihood and conservation network. The study asserts that tourism's role in the resolution of the conflict is limited and unstable. Benefit opportunities from tourism do have some role to enroll communities in conservation network. However, this ordering is highly unstable and could be disrupted due other community members not benefiting. On the other hand, the tourism network could also the strain existing standoff between the conservation and industrial network. Thus, a broader understanding of the complexities of tourism, its fragility and limited role in addressing the conflict, is needed as it emerges as a new version of the park.

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# 1. Introduction

In the management and development of parks and protected areas, there are often competing and divergent claims on the resource base among the multiple actors involved (Steins, 2011). Some of the prominent stakeholder issues include; the enhancement of biodiversity conservation while ensuring community benefits, as well as the need to secure economically viable and environmentally responsible development activities in and around protected areas. Closely related to differing claims and priorities actors have towards resources is the way these different actors correspondingly define a situation, assign roles and relate to other actors. The presence of multiple actors with varied interests also implies that each of these performs differently towards the resources. Therefore, the competing conceptions of nature manifested in the discourses and associated with the material practices results in conflict over these natural resources (Steins, 2011). Further complicating such environmental disputes is the ongoing and complex entwinements among actors, practices and discourses giving rise to different enactment of the resources.

The resulting conflicts often characterize the devastated state of many parks and protected areas with contested governance issues; including illegal settlement and exploitation of resources, human-wildlife conflicts as well as conflicts among conservation organizations and other stake holders. Attempts to resolve these disputes have focused on the divergent perspectives of different actors while leaving the object under scene fixed and coherent. Such approaches present environmental problems as stemming from different world views and interpretations directed towards a pre-defined solid base of the problem (Steins, 2011). On a similar vein, such lines of thinking tend to take a certain frame of reference or perspective as an angle from which the impacts of conservation, resource dependant livelihood or commercial activities around protected areas as seen against others.

Steins (2011), feels that such a single handed treatment of the problem is problematic in adequately grappling with the complexity of such environmental disputes. The presence of multiple actors, with varying claims, practices, as well as interpretations of the situation, seeks for an analysis of the problem itself, not just the viewing subject as multiple and fluid (Carolan, 2004). It is through destabilizing seemingly given and fixed foundations that the breadth of the underlying heterogeneity and complexity of connections can be better grasped.

## 1.1 Problem Background

Abijata Shalla Lakes National Park (ASLNP) shares many of the common conservation issues facing protected areas in Ethiopia: contested land use and resource ownership rights, human settlement in and around protected areas, as well as lack of congruity between conservation priorities and pressing livelihood demands. However, the problems in ASLNP are particularly complex due to the presence of an expansive set of actors, each with their own diverse set of claims, interpretations and performances on the park's natural resources. The area was initially established as a proposed national park in 1970 to protect the migrant and resident birdlife, their feeding and breeding islands as well as the unique scenery rendered by its three lakes Abijata, Shalla and Chitu (Flower, 2011). However, from the onset, the park's management and conservation endeavors have been haunted by complex and seemingly irresolvable problems stemming from the multiplicity of the actors, directly/indirectly involved, and their diverse claims and practices on its resources.

Human settlement in the area started prior its establishment as a national park, with some 2840 people residing inside the boundaries as of 1971 (Flower, 2011). In the past forty years, the population has substantially increased with approximately 55,0000 people living inside the park in 2010 (Flower,2011). Relying primarily on traditional rain fed agriculture for their livelihood, the settlers also depend on the park's natural resources as secondary sources of income, including cutting fuel wood for charcoal, mining salty soil for animal fodder and sand extraction (Flower, 2011). The massive human population and the accompanying livestock, estimated at 190,000 animals, have adversely affected the ecosystem. Significant environmental degradation has occurred that is associated with human activities in the park including: deforestation from human settlement expansion, conversion of natural vegetation to agricultural land, fuel wood cutting, overgrazing, and extraction of sand and salty soil from the shores of lake Abijata (Estifanos, 2008; Flower 2011).

Aside from the environmental pressures from human activities within the park, the property also faces external threats associated with activities on its lakes and their tributary sources. One of these threats is to Lake Abijata, which is a terminal shallow lake that derives its water from rain fall and tributary rivers. Due to industrial and irrigation activities taking place on the lake and its main sources, the water level of Lake Abijata is undergoing considerable depletion (Flower, 2011).

Lake Ziway is the main water source for Lake Abijata through the Bulbulla River and its volume significantly determines the amount of water flowing in to Lake Abijata. To this end, the water extraction for irrigation and industrial activities from Lake Ziway and its sources, the Meki and Katar rivers, has culminated in dropping the level of Lake Ziway (Flower, 2011). This has, in turn, resulted in considerable reduction of water flowing in to Lake Abijata through the Bulbulla River.

Another factor in the declining level of Lake Abijata is the presence of the Abijata Shalla Soda Ash Share Company, located on the Northern shore of Lake Abijata, inside the park. The share company started

operation in 1990 and is 38% owned by the Ethiopian Government. It produces Trona ( $\text{Na}_2\text{CO}_3 \cdot 2\text{H}_2\text{O}$ ) through abstraction and evaporation of water from Lake Abijata (Flower, 2011). Trona is used by over 60 Ethiopian companies, especially in the production of glass, bottles, and textiles (Flower, 2011). The Soda Ash Company's production of Trona had been scrutinized as one of the causes for the increasing decline of Lake Abijata and the resulting loss of pelican habitat (Flower, 2011). If Lake Ziway continues its current rate of decline, studies predict Lake Abijata will completely dry up within the next 20-50 years (Jasen et al., 2007 cited in Flower 2011)

The park is currently administered by the Ethiopian Wildlife Conservation Authority (EWCA) which assumed management in 2008. Situated within the environmentally sensitive Central Rift valley (CRV) of Ethiopia, the park encompasses a unique ecosystem and biodiversity composition that justifies its national and international significance. Conserving the wetland as an important birding site for resident and migrant birds, developing and promoting tourism, enhancing research and education activities while promoting community benefits are the priority themes of EWCA (Tefera & Alamaw, 2002). However, long standing and complicated environmental problems continue to pervade.

One of the main problems of dealing with ASLNP's complex environmental issues is the tendency to form pre-defined and single sided perspectives. Such an approach tends to present the issue as concrete and fixed in the middle to which different perspectives are forwarded. Taking for granted pre-given categories such as human and non-human, macro and micro detracts from the possibility of delving further into unexpectedly important connections that arise when the problem itself is seen a bit more fluid.

Engaging with the complexity of environmental disputes, such as those found at ASLNP, requires a move away from single handed scenes of the problem. Adequately examining the complexity therefore entails, viewing the object under scene itself as fluid and shifting instead of fixed and coherent. This study aims to do just this while investigating the problems of ASLNP, where focus is on connections and how they come to bring forth different realities of the park. To this end, the study engages with the complexity of the conflict in ASLNP by describing, connecting and analyzing different versions of the park. Defining actors on the basis of their effects in connections, it also draws its focus on how different objects, individuals, organizations, practices and discourses interrelate in ways that enact different versions of the national park.

A staging ground into the analysis of the problems is the recognition that ASLNP is simply a series of interwoven connections temporarily held together in the form of an ordered structure of a park. However, this seemingly ordered structure is more messy and fragile than what it appears to be. The heterogeneous connections that make up the park are made to last through a series of ongoing performances, discourses and relations between actors where there is always a possibility for disorder.

A case in point is what took place to ASLNP in 1991, when a political overthrow of the previous Derg regime occurred. This resulted in the breakdown of the park's structured system, unveiling the messiness of the heterogeneity underneath. This was an evident fracture of a network as the park was substantially looted with massive landless people moving into the park leading to intensive farming, fuel wood cutting, grazing, and fishing (Flower, 2011). With this exemplary scenario setting the scene, the study aims to investigate ASLNP's yet prevalent environmental problems by tracing and connecting actors. It also seeks to examine the processes through which networks are constituted and made to last, albeit temporarily. In consideration of the multiple actors and their various enactments of natural resources, the role tourism can play as part of conflict resolution had not been adequately analyzed.

## Tourism as a potential future version of the Park?

ASLNP is favorably situated along the main highway leaving Addis Ababa and running south through the rift valley. This is a main tourist route through Southern Ethiopia. This presents a peculiar situational advantage compared to other national parks in Ethiopia as it can be readily accessed by visitors heading to or from Southern Ethiopia tourist ventures. Additionally, it is in close proximity to a number of renowned (eco) lodges and resorts nestled around nearby Lake Langanoo which is frequented by both local and foreign visitors. The park is also a particularly important birding destination hosting an array of resident and migrant birds. Its three lakes Abijata, Shalla and Chitu, in addition to rendering the park an internationally significant birding area also offer enchanting scenery coupled with its unique landscape typical of the central rift valley. The park hosts an array of important avifauna of about 450 species including prominent birds like pelicans and flamingoes (Flower, 2011). There are also over 76 species of mammals such as the greater kudu, Grant's gazelle, spotted hyena, bat eared fox in the park (Flower, 2011). The unique culture of the surrounding Arsi community could also be a potential attraction for developing tourism. Despite the mentioned tourism development potentials, to date the park remains devoid of any tourist facilities. However, currently tourism is being extensively promoted as an ideal development in the park where three different lodges are under construction. This study examines the emergence of tourism as a future version of the park and its relationship with other enactments. The study also examines if and to what extent tourism can contribute to the resolution of conflict in ASLNP.

## 1.2 Research Objective and Research Questions

In light of the multiplicity of actors and complexity of problems characterizing ASLNP, this research contributes to a better understanding of park conflicts by examining how it is multiply enacted in different versions. Tourism and its role as a potential version in the park is also examined. The different actors, their connections, and how they enact different versions of the park, takes the central stage in this study. Therefore, the study examines how different realities of the park come into being through the complex entwining of different actors, their multiple discourses and practices. Furthermore, the study examines how these different versions connect, conflict, overlap and depend on one another.

The research has these main objectives;

- To analyze the enactments of different versions of Abijata Shalla Lakes National park and examine the resulting complex relationship between these versions;
- To assess the existing and potential role tourism has in resolving conflicts over the park's natural resources.

To address the stated objectives, the research attempts to answer the following research questions;

1. How do different discourses and resource utilization practices result in enactment of multiple versions of ASLNP?
2. How and to what extent do the multiple enactments of Abijata Shalla Lakes National park lead to conflict?
3. How and to what extent can tourism development contribute towards conservation of natural resources and aid in resolution of conflict?

### 1.3 Significance of the study

Abijata Shalla's current and exacerbating state of deterioration and issues of conflict over natural resources remains an unresolved matter of wide spread public and academic debate. However, there exists a gap in analyzing the park itself as fluid and complex that assumes various versions, depending on how it is enacted by different actors. With its emphasis on tracing different actors, forging connections, examining and describing multiple enactments, this study will provide new insights in the complexity of natural resource conflicts in ASLNP. This insight proves worthwhile when taking a holistic management approach towards contributing to resolving the natural resource dispute in ASLNP. To this end, it can serve as input for congregated conservation and development initiatives encompassing actors such as EWCA, park management on site, industrial organizations such as the Soda Ash Share Company, as well as different groups of local community. Its focus on the relational dimension of scale, coupled with multi-sited ethnography as its methodology, also provides a non-territory bound and broader scene into the problem and the actors involved. Furthermore, it sheds light on tourism as upcoming development initiative in the park, its relations to existing complexities and role in contributions of the conflict.

The study also provides useful scientific insights in engaging with the entanglement of actors and complexity of environmental problems, through a combined use of theoretical and conceptual tools from the ANT, ontological politics and politics of scale. It contributes to scientific queries focused on complexity and multiplicity in natural resource conflicts, by focusing on relations, declining pre-given categories and single sided perspectives while examining the enactment of realities in different versions. To this end, the important stance taken in this research is refuting the static reality of the park. In this

way, it has introduced useful insights in opening up 'black boxes' on what constitutes a problem in natural resources conflict in ASLNP. Through incorporating the broad types of actors without prior distinctions, the study has offered a process of tracing unlikely actors and connections. In acknowledging the role of this research in bringing forth particular realities, it highlights the possibilities of enacting alternative realities. More importantly, this study serves as a useful backdrop for further studies focusing on conflict resolution over natural resources in ASLNP.

## 2. Theoretical and Conceptual Framework

This study employs Actor Network Theory (ANT) as an approach to primarily trace and connect the various actors and describe the multiple enactments of natural resources in Abijata Shalla Lakes National Park. ANT serves as a useful approach and methodology in investigating the web of relations among different actors and how different versions of reality are enacted and relate to each other (Law 1992; Latour 1996). To contribute to a better understanding of the contestation over natural resources among the different actors, insights from ANT have much to offer in making visible how different actors connect, form networks and enact different versions of reality (Steins, 2001).

The study engages with complexity surrounding environmental disputes and approaches the problem as fluid and multiple. In so doing it makes use of the concept of ontological politics (Carolan, 2004) in investigating the how the problem shifts and continues to multiply rather than remaining fixed and singular. Ontological politics (Mol, 1999), to this end proves useful in dealing with reality as fluid and shifting beyond its apparently static features. Through ontological politics, research also acknowledges its interventionist role in partaking in the construction of the realities it seeks to study.

Politics of scale (Rangan and Kull, 2009; Brown and Purcell, 2005) is introduced in this study to engage with the relational dimension of scale. It helps span the scene of the analysis beyond the geographic confines of the park, as it examines broader forces at work and their influences over conflicts in natural resources in ASLNP.

### 2.1 ANT and Its Concepts

ANT is an approach and a methodology that is premised on the notion that nothing has reality or form outside the enactment of those relations (Law, 1992). In treating every matter as an effect of relationality, ANT erodes foundational distinctions such as human and non human, big and small, micro and macro (Law, 1992). Furthermore, in viewing the world as composed of constantly constructed relations, ANT proves a useful tool of examining how certain structures, practices and systems come about or do not (Van der Duim et al, 2012). ANT's devotion to relational practices thus enhances the possibility of tracing actors and examining process through which such relations are formed and made to last. It is this feature of ANT that renders it sensible to the messy practices of relationality and materiality of the world (Law, 2009). Therefore, ANT provides a mechanism of understanding how realities of the social are generated by tracing the webs of heterogeneous material and social performative practices that produce them (Law, 2009). These diverse webs of actors are held together in a relationship through the process of translation resulting in a precarious state of ordering (Law, 1992). Thus by employing ANT, this study aims to investigate how different versions of the park come into being, are performed and could relate to one another. This study treats the natural resources in Abijata Shalla Lakes National

Park as 'object multiple', where different actors produce and perform different versions of its meaning and use.

### 2.1.1 Relationality and Actor Networks

ANT refutes all pre-given and considered static foundations and distinctions, as it focuses on heterogeneous connections by following actors and their links in the networks. It defines actors on basis of their ability to produce, link, associate and order within the network. Law (1992) notes that an actor is always a network of elements defined based on its capacity to produce effects in the network. In employing ANT as a toolkit towards grappling with the messy practices of relational effects, two important principles are particularly relevant. First the 'principle of agnosticism', focuses on the need to avoid using pre-given categories while undertaking research (Steins, 2001). This implies that distinctions such as micro and macro, regional or national, global and local are not left as pre-given entities. Rather they become the subject of further inquiry seen as outcomes of relational effects. Second, the 'principle of symmetry' implies that the researcher in ANT should approach every phenomenon that he/she seeks to explain in the same way (Steins, 2001). Thus, in ANT, researchers treat not only humans but also non humans as having agency to act in the actor network. Steins (2001) further adds that agency comes to have effect through the interaction between people and objects and through relational effects. Steins elaborates further on the outright recognition given to non humans and emphasis on relationality in ANT (citing Latour 1994 and Law 1994) that both things and humans do not act by themselves, rather the whole association of entities and humans performs in the actor-network. The distinction between big and small is also immaterial in ANT as the relational logics can apply at any scale (Law, 2009). Law asserts that the notion of scale is also a relational effect. Therefore, what comes to have greater analytical significance in ANT is the relational effect produced in the webs of actor networks (Law, 2009). To this end actor-networks are seen as heterogeneous constructs that are constantly in action for the network to continue to exist (Van der Duim et al, 2012). These ordered heterogeneous actor-networks are referred to as nested 'collectifs' (Steins, 2001). Through the investigating lens of ANT, the world is seen as hybrid and constructed out of a series of ongoing 'relations gone solid' (Van der Duim et al, 2012). It is this feature of ANT that renders it suitable to examine, describe and analyze otherwise unseen actors and connections. Fleeing away from pre-given categories and following on to where the relations lead, offers the possibility of examining and grappling with the messiness of the constantly ongoing processes of construction and relational practices behind the scenes of static and pure relations.



### 2.1.2 Multiple Enactments

ANT sees the world as heterogeneous where everything plays its part relationally resulting in a precarious reality (Law, 2009). Law gives an example taking the case of a strawberry market on how different elements such as the buyers, sellers, notice boards, spatial arrangements, economic theories etc. assemble together and enact the reality of a market. This assemblage of different parts, Law (2009) argues, shows how the reality of the market is enacted into being through the collective gathering of the different elements. Thus, enactment or performance implies that reality is not constructed out of a stable prime mover (Law, 2009), but needs to be seen as an effect that is performed into being through its heterogeneous elements. Enactment, therefore, indicates the need to examine the web of heterogeneous material and practices that result in a momentary state of stability.

Multiplicity is another important concept in ANT that implies reality takes various forms and versions and is performed differently in different places. This was noted by (Saldanha, 2003) that if subjects are split, heterogeneous and multiple, so are objects. Thus, the multiplicity of reality implies that it is not about multiple perspectives directed towards the same reality, but about a de-centered and multiple object, which is variously done and enacted. Further elaborating on the concept of multiplicity, Mol (2002) gives the example on lower limb atherosclerosis turning up with different versions across different places such as surgery, radiography, ultrasound department etc., illustrating that the disease is variously performed and results in multiple performative realities or actor-networks. This further denotes that there is no single and constant network but complex set relations to further examine. The quest in ANT studies is therefore to examine the complex ways in which these different connections conflict, collide or depend on one another giving rise to different 'modes of ordering' (Law, 1999).

### 2.1.3 Translation and Modes of Ordering

It had been stated that ANT sees the world as complex, hybrid and fluid; that it is in the process of ongoing construction and negotiation (Van der Duim, 2007). Actors and the networks they are part of, are all seen as outcomes of ongoing relational practices and associations that yields in the formation and momentary stabilization of actor networks. ANT burrows further beyond the apparently given and stable status quo as it engages with the messiness of heterogeneity and relational practices lying beneath ordered structures. In so doing, the focus of ANT inquiries increasingly shifts to the steps behind, and the "how's" of structure formation, the processes and practices associated with these. Michel Callon (1996: 25-26) coined the term 'translation' to refer to the process that enables actors to speak, act and represent others by defining roles and delineating scenarios. Van der Duim (2005: 94) further elaborates on the concept of translation as;

"the methods by which actors form associations with other actors and actor-networks are established and stabilized.... builds actor-networks from entities; attaches characteristics to them and establishes more or less stable relationships between them."

Translation thus refers to the process through which actors attempt to identify themselves with particular features, roles and scenarios in conformity with the requirements of a network of which they are a part of. Michel Callon (1996) provides an illustrative example on how the science of rearing scallops came about as a result of the process of translation. He notes of how different elements such as fishermen (who agreed to stop fishing around larvae areas), scientists (turning themselves to spokespersons) and the scallops, as intermediary objects, were all linked together and configured in a way that renders possible the formation of scallop farming technology (Law, 2009).

Tactics of translation, Steins (2001) notes, is about unraveling the processes and steps through which the bits and pieces of heterogeneous elements making actor-networks, are held together, albeit, temporarily. Translation is never stable and the heterogeneous connections and momentary stabilizations are always susceptible to failure (Van der Duim et al, 2012). This implies the translation process is only a momentary achievement where potential disorder is just around the corner. ANT studies, therefore, examine how things are held together in a precarious network of connections. Examining the ways and processes through which temporarily durable networks are constituted, leads to the discovery of multiple modes of complex entwinements within and between actor-networks. Van der Duim (2005) explains 'modes of ordering' (MoO) as coherent sets of strategic notions through which actors define, as well as perform, in relation to a situation. Van der Duim (2005) notes, these modes of ordering come to be known through stories, narratives or accounts that also have more or less consistent performative effects. These effects could possibly lead to internally congruent practices as in the case of a successful ordering process. However, ordering process is not always successful where external interaction with other modes of ordering could lead to factions. Such factions could also exist within a given mode of ordering. Law (1994) illustrates the concept of modes of ordering with the example on how organizations are held together through different organizational management forms such as enterprising, charismatic, vocational and administrative forms. He adds that these different modes of ordering are conflicting, overlapping and at times partially connected to one another. What this demonstrates, according to Law, is the possibilities for the co-existence of different modes of ordering that sustain a functional organization while conflicting or overlapping with one another. This process of ordering is never complete and is prone to potential disorder that is precariously kept at bay (Law, 2009).

It is in the aim of ANT studies to make visible the many small steps leading on to the formation of seemingly ordered structures. Thus, through tracing the ongoing process of translation and ordering, it becomes possible to examine how things become ordered in a seemingly natural way or why associations do not hold (Van der Duim et al, 2012). While examining how actor networks come to be ordered through an ongoing process of translation, power is seen as an outcome of relationality, than as something possessed or exerted by certain actors. With this understanding, focus of inquiry, is not on

power as vested in entities, but on social processes involved in the translation of power through mobilization of resources (Van der Duim, 2005)

## 2.2 Ontological Politics

In engaging with complex environmental problems, the need to consider the object under scene as multiple and de-centered is stressed with the concept of multiplicity in ANT. This indicates a move away from 'perspectivalism' where only the viewing subject is considered as multiple leaving the object at the center as stable and fixed (Carolan, 2004). The concept of ontological multiplicity implies that not only are there multiple subjects and interpretations but also different versions of the object in question that is enacted or performed differently (Carolan, 2004). Multiplicity of reality, thus, emphasizes the need to consider the different set of practices that yield in the performances of different versions of the object under scene. In examining the different ways through which reality could be variously performed, ontological politics sheds light on how different versions of reality connect to one another, at times conflicting, overlapping or possibly co existing together (Mol, 1999).

The word ontological politics suggests a link between the real, the conditions of possibility we live with and the political (Mol, 1999). Beyes & Steyaert (2011), citing Mol (1999) and Law (2004) state that the conditions of possibility we live with are not pre determined but shaped through practices. What makes these processes political is that they are open to debate and are contested. Thus, if reality is social, and thus multiple, then it is also ultimately political, as implicated by ontological politics (Carolan, 2004).

One of the elements in ontological politics is interrogating the nature of the 'facts' that define and represent reality that is variously enacted among different actors. Carolan (2004: 498) quotes "'facts' do not speak for themselves, independently outside the realm of the social." In this regard, Mol (1999) further claims that conditions of possibility are structured as 'facts' rather than as outcomes of decision. One of quests in ANT studies is to deconstruct taken for granted 'matters of fact' and turn them to 'matters of concern' (Latour, 2005). Through further inquiries into what appears as a solid problem, real options shift elsewhere further multiplying as actors move in and out (Carolan, 2004).

The problem takes various performative realities as it continually shifts depending on how it is enacted or performed by different actors. This in turn shapes how these actors engage, speak of and respond to the problem. Thus Carolan (2004: 513) states "The strategy of ontological politics is never forgetting about these performances that go into reality." Carolan (2004) further states that reality is enacted differently across different ontological orders. Carolan uses concepts of 'epistemological distance' and 'complexity' in framing the ways environmental problems differ in how they are construed as a problem and the implications they cause. Epistemological distance, Carolan (2004) notes refers to the extent to which certain environmental problems, for example litter, can be directly perceived or experienced. Complexity, on the other hand, is about how divisive and contested the problem is in relation to the immediate social, political, ecologic impacts it causes (Carolan, 2004).

Carolan further explains that environmental issues such as litter can be considered epistemologically near as we can directly perceive and immediately experience the effects. Furthermore, in terms of impacts caused, litter can be considered less problematic and thus less complex (Carolan, 2004). Accordingly, Carolan (2004) locates environmental problems different ontological orders based on epistemological distance and complexity. Environmental concerns like litter which are relatively apparent, directly perceived and less complex are placed under the realm of first order ontology. In another example Carolan (2004) explains dioxin and global warming as environmental problems that cannot be directly seen and perceived as in the case of litter. Dioxin and global warming represent epistemologically distant environmental problems that need to go through a process of translation through the use of machines, models, and computer printouts to be directly perceived (Carolan, 2004). In terms of impacts, dioxin and global warming are considered to have more pronounced implications. Therefore, these environmental problems are located at second and third orders of ontology respectively based on epistemological distance and complexity. Dioxin requires a number of instruments that translate it to be directly perceived and also causes more serious impacts compared to litter. Global warming is placed on the third order of ontology as it is even further removed from our direct perception and its impacts are only indirectly perceived through further translation such as models, machines etc. (Carolan, 2004). In terms of complexity, Global warming is considered more divisive than both litter and dioxin as it entails more pronounced and broader implications thus placing it on the third ontological order.

The increasing ontological orders of multiplicity shown with increasing epistemological distance and complexity is a conceptual map depicting environmental problems that shift beyond what appears as the given problem. What these illustrations of increasing complexity and epistemological distance do is bring focus on how process of translation shifts environmental problems that results in continuing multiplicity of such problems across different ontological orders. Translation, therefore, represents the shift in reality which also represents a shift in the object (Carolan, 2004). This infers that what is defined as the problem will continually take different versions for different actors, and depends on how they define, relate to and enact the problem. Though closer inquires into how actors attribute different factors in relation to the problem, the problem goes further in multiplying rather than remaining stable and fixed.

Examining the continuing fluidity and multiplicity reveals tension and conflicts between different versions of reality that is variously enacted. Further investigation into the different performative practices also results in further complex interferences between these (Mol, 1999) Therefore, multiplicity also entails that there will be other realities that will be connected in multiple different ways. This is what Mol (1999) terms as the 'phenomenon of interference,' referring to the range of other realities that are also at stake.

As had been implied with concepts of complexity and epistemological distance, engaging with complex environmental disputes demands engaging with the abounding multiplicity beyond what manifests to be

the problem at a glance. The crisis is far more than what it appears to be thus through examining the process of translation reveals further multiplicities, their continual maneuvering and how these different enactments shape reality.

Ontological politics also encompasses a new conception of politics, that while realities may clash, it is also possible that various performances of an object may collaborate and even depend on one another (Mol, 1999). Multiplicity therefore does not necessarily mean fragmentation. Mol (1999:85) further notes that “Alternative realities don’t simply co-exist side by side but are also found inside one another.” Acknowledging multiplicity of realities, destabilizing seemingly fixed foundations and seeking out for yet further enactments, could also lead to surprising connections with possibilities for interdependence.

It is the aim of this research to analyze the multiple realities of Abijata Shalla Lakes National Park and how these are enacted, performed, as well as related to one another. By employing ontological politics, the research seeks to go further beneath the seemingly solid ‘problem’ of the park, examining the various practices and objects that shape the enactment of its multiple versions. It delves further, examining how different associations and connection shape the way the park is enacted into multiple versions. It examines the ensuing conflicts as well as the unimagined possibilities for congruence and collaboration within and between different actor networks.

### 2.3 Politics of scale

Having established that we approach the world as an outcome of ongoing processes of networking that yield in momentary structure formation, an important inquiry would be to ask where and how these structural effects are being produced. In line with this study’s approach that declines pre-given and taken for granted categories, it also engages with scale as an object of inquiry. This calls for a renewed treatment of the concept of scale. Brown & Purcell (2005: 607) note this requires “explicit understanding of the way that human–environment dynamics in development take on particular scalar configurations, and how those configurations are produced, undone, and reproduced through political struggle.”

The emerging conceptions of scale, in relation to the spatiality of the social, imply that scale is more than merely a pre-given product of geographic relations (Marston, 2000). Accordingly, a focus on the relational dimension of scale has emerged that treats it as socially constructed rather than a pre-given and naturalized category. The dichotomies made, such as local and national, global and regional etc., Marston (2000) argues, should be seen as outcomes of tensions between structural forces and human agents. Further elaborating on the social processes going into the construction of scales, Erik Swyngedouw (1997:169) defines scaled places as “the embodiment of social relations of empowerment and disempowerment and the arena through and in which they operate”.

Scale is thus seen beyond a nested spatial ‘container’ but an outcome of social relationships, material processes and power (Lefebvre, 1991). Scale is the means through which ecological (and related social and economic) change is made political (Rangan & Kull, 2009). Brown & Purcell (2005) further argue on

the need to treat scale and scalar configurations not as independent variables but as strategies used by political groups to pursue a particular agenda. By dealing with scale and scalar arrangements in relative terms enables the possibility of delving further into the political agenda of those behind the construction of these. The aim of examining scale as a socially produced and a relational concept should be to understand how particular scales become constituted and transformed in response to social-spatial dynamics (Brown & Purcell, 2005). Politics of scale as a theoretical framework stresses that there is nothing inherently given a priori about scale and that it is an outcome of the political struggle of particular actors (Brown and Purcell, 2005). It examines the processes that shape and constitute social practices at different levels of analysis (Martson, 2000)

Having established scales as socially constructed and an outcome of ongoing political struggle, politics of scale also deals with scale as being both fluid and fixed. There an ongoing political struggle behind scalar arrangements, characterized by a constant process of making, undoing and remaking which renders scale as fluid (Brown and Purcell, 2005). While fluid, however, there is also a momentary state of fixity where scales associate themselves with particular characteristics or social processes. Brown and Purcell (2005) note that while scales are processual, they also become momentarily routinized into enduring hegemonic orders for a certain amount of time. This argument on the fluidity and fixity of scale implies that albeit temporarily, certain scalar arrangements become steady and hegemonic imposing political power for certain period of time. However, this hegemonic structure formation (fixity) of scales is only temporary and in a constant state of being made and remade. Brown and Purcell (2005) citing of Brenner (2001) use the term 'structuration' to refer to the ongoing process of fixing, un-fixing, and re-fixing scalar structures. Thus characterizing scales is the constant power struggle by groups who seek to circumvent the prevailing scalar arrangement to their advantage. While examining scale as a unit of analysis and its social construction, it is also necessary to engage with the relational aspect in which scales are found embedded in other scales (Brown and Purcell, 2005).

Therefore, politics of scale offers a useful theoretical instrument in dealing with scale as an object of inquiry by dealing how it comes to be socially produced through an ongoing process of political struggle. In engaging with scale as a relational and socially constructed concept, politics of scale also examines the political agenda behind the constant state of making and remaking of scales and momentary scalar arrangements. In the context of the conflict in ASLNP, politics of scale will be employed in examining the socio-spatial processes that give rise to various scalar configurations.

## 3. Methodology

### 3.1 Study Area

ASLNP is located in the Ziway Shalla basin of the Central Rift Valley (CRV) system of Ethiopia some 200 Kms south from Addis Abeba with an altitude of 1540-2075 m.a.s.l. (Estifanos, 2008). It has a total surface area of 887 km<sup>2</sup> out of which 482 km<sup>2</sup> is covered with lakes Abijata and Shalla (Estifanos, 2008). The two CRV lakes, are separated by three kilometers of hilly land, and together form Abijata Shalla Lakes National Park (ASLNP). The park falls in a semi-arid climatic zone with substantially varying temperature and rainfall that range from 25<sup>0</sup>c and 620 mm near the lakes to 15<sup>0</sup>c and 1200mm at higher altitudes respectively (Flower, 2011). The rainfall in CRV has three main seasons with extremes of inter annual rainfall variability (Flower, 2011). The main rainfall season is July to September, accounting for 50-70 % of the mean total; where the dry period is between October and February with occasional rainfall of 10-20 % (Flower, 2011). The short rainy season is from March to May accounting for the rest 20-30% of mean annual total rainfall (Flower, 2011 citing of (Legesse et al. 2002)). Acacia wood land is the dominant vegetation type where diverse group of mammals such as greater kudu, bat eared fox, Grants Gazelle, jackal, warthog and spotted hyena are found (Flower, 2011). The park's wetland ecosystem also supports an array of migrant and resident birds six of which are identified as endemic or near endemic to the country. The park has been proposed as a potential Ramsar wetland site and a UNESCO world heritage by Birdlife International.

The park has three Main Woredas (districts) namely Arsi Negelle, Adami Tullu Gudo Kombolcha and Shalla. In this study, a total of four Kebeles (peasant Associations) are selected from the three districts. Shalla Billa and Daka Horekelo are the PAs selected from Arsi Nelle. Desta Abijata and Lebu Subka are the PAs selected from Adami Tullu Gudo Kombolcha and Shalla districts respectively.

### 3.2 Study Design and Methods of Data Collection

#### 3.2.1 Multi-sited Ethnography in This Research

This study employs qualitative research design and draws on both primary and secondary sources of data in investigating multiple enactments of Abijata Shalla Lakes National Park. The study largely engages with multi-sited ethnography as a main method of investigating multiple enactments of ASLNP. It also incorporates secondary sources such as literature review, analysis of documents and tourist suggestion books in retrieving background information and gathering relevant literature. Given the aim of the study in engaging with ASLNP as fluid and heterogeneous by tracing actors, seeking out their connections and describing multiple practices, multi-sited ethnography provides a useful methodological input for the primary sources of data gathered. Falzon (2009: 1-2) states the essence of multi-sited research "is to follow people, connections, associations and relationships across space". Falzon further asserts multi-

sited ethnography helps overcome the methodological shortcomings of ethnography in being confined to a single site as it involves (geographical) spatial de-centeredness. This makes it particularly suited to examine heterogeneity and complexity pursued in this research. As the study deals with space as socially constructed and seeks to examine the social processes behind these, multi-sited ethnography's spatial flexibility proves useful. Furthermore multi-sited ethnography enhances thorough description as it enables the provision of detailed accounts of practices and interpretations on the enactment of different versions of Abijata Shalla Lakes National Park. To this end the research involves in-depth (open-ended) as well as semi-structured interviews, participant observation/note making, and Focus Group Discussions (FGDs) as part of the multi-sited ethnography employed.

As there are no guidelines on where to start or end the tracing process, I decided to follow the actors on basis of their relevance to the problem and their differing enactments. The actors I first identified and started this research with were: the Ethiopian Wildlife conservation authority (EWCA), Ethiopian Wildlife and Natural History Society (EWNHS), Institute of Biodiversity conservation (IBC), and the Ministry of Mines and Energy. These actors were chosen as starting points of inquiry prior to tracing and approaching the actors directly involved with the natural resources of Abijata Shalla Lakes National Park. I chose these actors as starting points as I find their engagements and connections interesting to examine in relation to conservation/ industrial development practices in the park. Through the use of semi-structured interviews with these actors, a broad scene into other associated actors, their continually multiplying claims, interpretations and practices towards the problems were obtained.

During the first month of the study, I conducted four semi-structured interviews with conservation organizations; EWCA, IBC, EWNHS and Ministry of Mines and Energy. From these interviews I was able to find a web of connections pointing to other actors. From the interviews conducted with EWCA, I was able to learn more of their activities, interests, rules and regulations towards the use of the resources as well as connection with other actors affiliated. The semi-structured interviews with IBC, EWNHS and Ministry of Mines and Energy reflected their interests, activities, priorities regarding the resources and problems of ASLNP and their relationships with other actors. From the first phase of semi-structured interviews conducted, some of the identified congruent connections pointed to possibly emerging actor networks. Other divergent interests and definitions of the situation from these interviews pointed to the different types of incomplete relations that were left hanging for the next stage of the investigation.

With the first stage of preliminary interviews setting the scene, I moved to field work in the second stage involving both in-depth and semi-structured interviews, FGDs, and participant observation/note making with community groups, park management, regional government offices, tourists and tourism professionals. The second phase interviews and FGDs with community groups were conducted in the local language (Oromiffa) with the help of a translator. The semi-structured interviews focused on the interests of different actors towards the resources, their conceptualizations of the problems and relationships with other actors. The in-depth interviews concentrated on better understanding how



interests, priorities and interpretations of the problem among different actors leads to various forms of connections, solidarity in some cases and divergence in others. Participant observation/note making gave an exposure to practices affecting the natural resources that are not adequately disclosed in interviews.

During the participant observations of local community groups, the focus was on their resource practices, their observation/denial of the park rules and regulations as well as their relationships with other park actors. The goal was to better understand how their particular version of the park comes in to being through practices and objects, and how it relates to other versions. Following the participant observation (involving harvesting maize with farmers, attending social and formal events), follow-up in-depth interviews with the community sought the attributed causes and motivations for the observed practices. The FGDs were helpful to steer broader discussion on topics identified from the in-depth interviews.

### 3.2.2 Reconstructing Realities of the Park

Preliminary findings from the first phase of the study focused on tracing actors, their practices and interpretations on utilization of resources, featured formation of three possible important realities of the park. With these emerging enactments, participant observation, interviews and FGDS employed in the second phase provided clearer focus and consolidated formation of the identified actor-networks. Thus, the reconstruction of park realities resulted in the enactment of three different versions, namely: 'Natural resources for livelihood', 'Natural resources for Industry' and 'Natural resources for Conservation.'

#### Reconstructing Livelihood Reality

Three important practices were identified in relation to the first version of the park depicted as 'Natural resources for Livelihood'. The practices emerged simultaneously with the construction of the first reality based on preliminary findings from interviews, FGDs and literature reviews. These practices are: traditional farming, shifting pastoralism and the salty mud dealing. Although not necessarily mutually exclusive of one another, these are different resource uses conducted by different community groups. Furthermore, the practices create conflict as they are illegal and prohibited by the park management. Thus, the decision was made to focus on these particular practices among others such as numerous small holder irrigation activities based on the lakes' sources. In the month-long field work (end of September till end of October), I moved through the three different districts in which the park is situated: Arsi Negelle, Shalla and Adami Tullu Gudo Kobmolcha. The reason for encompassing all three districts surrounding the park was to provide a broad coverage of the problems while tracing the various resources and human practices. From each of these districts a total of four Peasant Associations were selected for this study.

The selection of Peasant Associations/PAs in each of these districts was based on: 1) their location in relation to the resources and dominant livelihood practices (lakes, salty mud, and the grazing pastures), 2) strife conflict zones reported by park management, 3) the span of the park's management and control posts 4) accessibility by car.

Community groups / Administrative Districts	Selected PAs	Number of Interviews	Type and Number of Interviewees	Number of FGDs	Type of Participants	Number of participants in each FGDs
Arsi Negelle	Shalla Billa Daka Hora Kello	4	1-Aba-Gedda /traditional leader 2 -Farmers	3	1 FGD with Youth farmers in Shalla Billa	8 participants
			1- Salty mud dealer		1 FGD with Residents farmers in Chele	8 participants
Adami-Tulu Gudo Kombolcha	Desta Abijata b	4	3-Farmers	1	1 FGD with Village elders	5 participants
			1-Shifting Pastoralist/Godantu			
Shalla	Lebu Subka b	2	1 -Widow Salty Mud dealer	1	1FGD with Salty Mud dealers	6 participants
			1 -Farmer			
Total -1		10	10	5		27

Conservation Organizations	EWCA	1	National Parks and Wildlife sanctuaries Directorate (1)			
	EWNHS	1	Ornithologist (1)			
	IBC	1	Head of Microbial Department (1)			
Go's	Arsi Negelle Woreda gov't office	1	Head of woreda(1)	1	1 FGD with Gallena Kello PA leaders	3
Tourists/tourism offices	Tourists	5	American(1) French(2)German(2)			
	Arsi Negelle Culture and Tourism bureau	1	Head-tourism bureau(1)			
	Tourism Experts	2	Tourism-researcher (2)			
Industry Unit	Abijata Shalla Soda Ash share comp			1	1 FGD with Abijata Shalla Soda Ash mgmt and staff	3
Total 2		12	12	2		6
Total 1 &2		22	22	7		33

Table1: Interviews and FGDs with different community, Conservation and Industry and tourism related groups

From different community groups, a total of 37 respondents were purposively sampled for interviews and FGDs, based on their resource practices, their role and positions, and their land ownership status in the community. The community field work began with Shalla Billa PA of Arsi Negelle district, a reportedly core area of conflict with the park due to active illegal tree cutting. It was also the largest most accessible PA by car from the park headquarters. From all selected PAs of the three districts; a total of 6 farmers were approached for interviews and participant observation/note making. The farmers were randomly traced, based on the location of their farms and homes in the identified PAs and their resources practices. Additionally 4 FGDs were carried out with different groups of farmers. All FGDs were conducted in the respective participants' PAs. One included a group of young farmers attending a village meeting concerning lack of land and jobs for youth. The other FDG was conducted with a group of farmers gathered at the end of the day's harvesting. The third FGD was conducted with the elected leaders of Shalla Billa PA. The last FGD was conducted with village elders in Desta Abijata PA.

In connection to the second livelihood resource practice, I followed 2 shifting pastoralists for which I conducted participant observation and in-depth interviews. The Godantu were traced while grazing their cattle in the community designated, large grazing field/Mansa/ inside the park.

The third practice, related to salty mud dealing, entailed following salty mud dealers/ Boje collectors. The 2 Boje collectors were approached for interviews and participant observation/note making while collecting the salty mud/ Boje from the shores of Lake Abijata. One FGD was carried out with a group of women in a village that were reported to be leading livelihoods on salty mud/ Boje/ dealing. An interview and FGD was also conducted with Aba Gedda (traditional chief) of the community and PA leaders related to their roles in the community, their understanding of the problem and its causes, and their relations with the park management.

## Reconstructing the Industry Reality

There are several industrial activities based on the resources of the park, mainly on the lakes and their tributary sources. These include the horticultural farms and winery companies which are located on Lake Ziway. The water abstraction activities from these industries influence the water volume of Lake Abijata which is a terminal Lake without underground sources. However, in this study, the Abijata Shalla Soda Ash Share Company was examined in relation to industrial priorities and practices on the park resources. The choice of focusing on the Soda Ash Share Company was based on the long-lasting conflict concerning the commercial production of soda ash, against the park management's conservation priorities. Thus in reconstructing the industrial version of the park, the focus is on objectives, priorities, ascribed problems of the Soda Ash Share Company and its relationships with other versions. A FGD involving three participants that included management and experts of the Soda Ash Share Company was conducted. The objective was to examine how this version of the park comes into being and how it relates with other versions.

## Reconstructing Conservation Reality

In reconstructing the park's conservation reality, the main focus is on the practices, interests and discourses of the park management onsite (working under the jurisdiction of EWCA) as it is the main actor entrusted with the task of sustainably managing the park resources. This prominently included in-depth interviews and observation with park management. The park warden and scouts were approached for interviews and observation concerning their interests and objectives, their practices, the problems they attributed to park management and their relationships with other actors. Additionally the discourses, advocacy and community support practices of conservation organizations (EWNHS and IBC) are examined in this version of the park. Conservation, being one of the prime objectives of the park's establishments, was closely examined to better understand how different actors, goals, discourses and practices interweave to form this network; how it interrelates with other versions identified in collaborating and collating ways.

Furthermore, 5 tourists were interviewed and observed. The focus of the interviews and observation/note making was on the activities they participated in, their interest and expectations, as well as their impressions of the national park. Interviews were also conducted with the Arsi Negelle district Culture and Tourism bureau and tourism researchers from Wondo Genet College of Forestry and Natural Resources, regarding the role of tourism, the challenges and prospects for its development under the given circumstances at the park.

An interview conducted with the government office of Arsi Negelle district regarding their definitions of the problem, their priorities regarding the park and its resources, as well as their role in responding to resource conflicts.

### 3.2.3 Scope and Limitations

Multi-sited ethnography, employed as the main method in this research provided the needed spatial flexibility to follow different actors across four different PAs and generate through descriptions on their practices in the limited time span of the field study that lasted a month. During this period, I moved between the park headquarters, (in Arsi Negelle district) and the four PAs of the study area Shalla Billa , Daka Horekello, Desta Abijata and Lebu Subka. While carrying out the multi-sited ethnography, farm areas, grazing pasture, settlement sites and practices were traced, including different objects and people involved. This entailed following the farmers, scouts, salty mud dealers and the shifting pastoralists, the lakes and the livestock to where the relations pointed. Thus, multi-sited ethnography enabled tracing, examining and describing multiple actors, practices, and connections to give light to the complex set of relations that arise between these. The field techniques incorporated in multi-sited ethnography, such as mobile participant observation and note making, in-depth and semi-structured interviews and FGDs, provided the study possibilities for pondering further into details on accounts of practices and

relationships otherwise impractical through independent application of these in the limited period of the field study.

One of the setbacks encountered during the data gathering was the inaccessibility of some sites. Therefore, PAs included under this study area were those that were accessible by car and on foot as there is no boat service from the park to any of the PAs. Another practical limitation is building rapport with different groups in the community and management officials. The topic being a matter of ongoing contestations caused suspicions and unease among the interviewed community groups. There were instances of non response and with holding back of answers to some questions. Given the strained relationship between the park management and the residents, it proved erroneous to take the scouts as guides or translators during the field study. Building trust and creating a common understanding on the objectives of the study with the community demanded taking part in their formal/ informal social events such as coffee gatherings, community meetings and using members of the community as guides and translators.

On a similar note, the topic's political sensitivity posed some setbacks due to lack of trust and insecurities while approaching the officials at PA and district offices. Some meetings with PA officials were called off and some questions were put off as outside of the domain. Attempts to incorporate the SherEthiopia horticulture farms in the enactment of the industrial version of the park had to be abandoned due lack of cooperation for interviews and observations. There were also relatively fewer number of Godantu followed, as most have already moved out of the park during the study period following the end of the rainy season.

The decision on when and where to cut the network depended on what following actors entailed on the ground. In cases where further interviews and observation did not lead to any more new information, the tracing was stopped. Similarly, inaccessible sites were left out of the scope of the tracing while inclusion in the network also depended on willingness of participants for interviews and observation.

### 3.2.4 Data Analysis and Interpretation

The field data collected in terms of observation notes, transcripts from interviews and FGD reports were systematically analysed in line with their relevance to the research questions and research purpose. The analysis involved two important activities which Boeije (2012:76) ascribes as "segmenting the data into parts and reassembling the parts again into a coherent whole." In the segmenting phase, important phrases and ideas were sorted, raw data broken into sensible and manageable units as I examined their associations and searched for patterns. As the study avoids taking predefined categories, the emerging information during the analysis dictated the formation of associations. Following leads and tracing for new connections was simultaneously underway based on the appearing data in the analysis.

In the segmenting phase of the analysis, I developed 'codes' which are labels that summarize relevant and meaningful parts into groups and categories (Boeije, 2012). Similar and relevant ideas that inductively emerged from the data were coded in corresponding categories. As the analysis progressed, the second phase which is the reassembly of data was conducted where evolving and existing relationships among categories was thoroughly examined in consolidating links and explicating ongoing processes of network formations between these.

As the process of data collection went underway, every emerging new data was evaluated in light of the existing categories, (re)formulating codes as well as examining the relationship between different categories. Boeije (2012:83) terms this process 'constant comparison' where "new data collection provides the researcher with cases that are suitable for comparison."

The analysis of the collected data was also done through the research's theoretical lens which Boeije (2012) terms as 'theoretical sensitivity'. Thus, segmenting and reassembly of the data, formulation of codes, and the interpretation of the association between different categories were my particular way of engaging with the data in light theoretical lenses I had set out with. Theoretical sensitivity in this study therefore implies that the analysis involves my way of restructuring the data collected in line with theoretical frame works employed in this study.

Multi-sited ethnography employed in this study allowed for assembling and manoeuvrings of different sources of data in approaching the research questions. Different sources of data collection used in this study include; semi-structured and open ended interviews, FGDs and participant observation. This is an important part of 'Methods triangulation' where assemblage of different sources of data "can reveal varied dimension of a phenomenon leading up to a layered and thick description of a subject under study" (Boeije, 2012: 126). This in turn aligns with ANT inspired gauge of the study on tracing and connecting actors and providing thick descriptions about the processes behind their associations.

## 4. The Enactment of three different versions of the Park

This section discusses how the configuration of different actors, interests, practices and discourses results in the enactment of Abijata Shalla Lakes National Park in the three different versions identified in the study. Following a brief introduction to these versions depicted as ‘Natural resources for living’, and ‘Natural resources for industry’ and ‘Natural resources for conservation’, a thorough description of each version is provided. The enactment of the park in these three versions was itself partly an outcome of an ordering process done by this research. The park could possibly be enacted in several different ways given the many additional resource practices present. These include several small holder irrigation and industrial activities based on the source of Lake Abijata such as a winery, horticulture farms, and fruit and vegetable farms around Ziway. There are also a range of conservation-based GOs/NGOs such as the Horn of Africa Regional Environmental Center/Network (HoA-REC/N), Addis Abeba University (AAU), Arsi Negelle Nature Concern for the Environment and Development Association (ANCEDA), working in relation to ASLNP. It is practically impossible to provide a total picture of the complexity of the multiple enactments of the park at any one time. Thus, the decision to look at these enactments is an outcome of my particular way of re-constructing realities of the park due practical and analytical reasons. Therefore, this study is not entirely neutral in its approach, that by engaging with the enactments of realities pursued, it also leaves out other possible versions of the park. To this end, the study acknowledges the effects of its interventionist approach and recognizes these particular versions examined only as outcomes of the ordering process done for its purposes.

The farmers, the shifting pastoralists (Godantu), the salty mud dealers and the resources they depend on constitute the first reality of the park presented as ‘Natural resources for livelihood’. The farmers’ livelihood practices are primarily related to clearing trees for agriculture and settlement expansion and extensive livestock grazing. These are ongoing, yet practices banned by the park’s management. The shifting pastoralists and their livestock that travel to and stay in the park from the surrounding highlands have significant effect to the extensive seasonal livestock grazing that takes place. Their seasonal presence and associated practices, though proclaimed illegal by the park management, continues to be widely practiced. The salty mud (Boje) dealers engage in selling salty mud collected from shores of Lake Abijata, a practice that is controversially proclaimed illegal in relation to the conservation practices of the park.

All actors in the version ‘Natural resources for livelihood’ share the common objective in which the resources are directly or indirectly used to sustain livelihood. The farmers are predominantly dependant on traditional agriculture and related practices such as clearing land for settlement expansion, collecting fire wood or selling fuel wood to sustain and/or supplement their livelihood. On a similar vein, the shifting pastoralists depend on the resources of the park to tend their livestock on which they depend for practicing traditional agriculture/livestock rearing in their places of origin. The salty mud dealers, as



well, depend on the income obtained from selling the salty mud (locally termed Boje or Bole), which is collected from the shores of Lake Abijata and sold as an animal fodder to support their families.

On another dimension, the Abijata Shalla Soda Ash Share Company and lakes Abijata and Shalla form the second reality of the park presented as 'Natural resources for industry'. The Soda Ash Company thrives on water abstraction from Lake Abijata in the commercial production of Trona (soda ash), an industrial input substance.

In the third reality of the park depicted as 'Natural resources for conservation', the Abijata Shalla Lakes National Park management (EWCA and the park management on site), the natural resources including the acacia trees, lakes, birds, wildlife, livestock and conservation organizations such as Institute of Biodiversity Conservation (IBC) and Ethiopian Wildlife and Natural History society (EWNHS) were identified.

## 4.1 Natural Resources for Livelihood

The following section presents a description of various practices, interests, interpretations on resources; different actors, and the complex relationships among these, that yield the enactment of the first park reality: 'Natural resources for livelihood'. It discusses the different modes of ordering of the resources present, through differing and shared practices and discourses, where the common objective is the use of resources to sustain/supplement livelihood. During the field work, participant observation, in-depth interviews and FGDs were conducted with different community groups. The main themes concerned their practices, interest and priorities on resources, relationship with other actors, as well as how and why they define the problem in certain ways. The forthcoming section is a thorough description of the field findings concerning how the livelihood version of the park is enacted through the interweaving of different practices, priorities and interpretations of farmers, shifting pastoralists and salty mud sellers and the natural resources they depend on.

### 4.1.1 Subsistence Agriculture

Subsistence agriculture involving traditional farming and livestock keeping constitutes the main source of livelihood for the Abijata Shalla Lakes National Park resident communities. This was evident from the observations and interviews carried out in all selected peasant associations in the three districts of the park. When asked about when they started subsistence agriculture as their source of livelihood, the farmers noted that traditional farming, alongside livestock husbandry, is as old as their first settlement in the area. Given their economic circumstances, the natural resources available and the unpredictable climatic conditions, livestock keeping continues to supplement traditional farming as a dominant source of livelihood.

The respondents claimed that the two practices are inseparable, as livestock are kept mainly to supplement the traditional farming they undertake. An interviewed farmer from Lebu Subka PA affirms

“We have farm land and thus we keep livestock, because that’s how we plough the land as we don’t have the capacity to farm with machines. The land and livestock are our main assets.” The livestock and land were followed as objects due their roles in the links formed with farmers and other actors as well as within the farmers’ livelihood practices. The farmers practice a traditional rain fed farming system using a paired oxen drawn plough to prepare the soil for sowing. They also depend on the power of oxen and donkeys in threshing the grain after harvest. Donkeys and mules are used for transporting the products from the farm to the barns as well as to nearby town for sale in markets. The farmers also obtain dairy products such as milk and butter from their livestock which they use for household ends. Livestock are also kept as a form of security for times of crisis and drought. In times of bad crop yields, the farmers sell and exchange the cattle for grain and cash. A farmer interviewed in Desta Abijata noted; “In times of bad crop yields, farmers with expansive lands have the advantage of turning their former farm land to cattle grazing pastures. This way they are able to fatten their cattle for sale with which they can sustain their families’ lives.”

Aside from these values of the livestock in sustaining and supporting livelihood practices of the farmers, they are also important assets in the social and cultural value system of the society. Keeping livestock in large numbers serves as a sign of prestige and marks higher social status in the community. Cattle such as oxen or cows are presented as dowry, as part of the wedding tradition. The same farmer, added to this stating, “It is in the tradition of our community to make offerings of cattle from both sides of the married couple as part of the wedding customs. Therefore every family needs to possess cattle with which they can also show their social importance.” The farmers’ livelihood practices and existence of the livestock on which they heavily depend for subsistence are entirely reliant on the area's natural resources. Another farmer I interviewed in Chitu noted “The nature is everything for us... why? Because with the trees we make homes for our families, barn for the crops and livestock, and also obtain firewood from the forest.”

Maize is the main cash crop produced in the study area while other crops including sorghum and legumes such as haricot beans are secondary products from farming. Fields produce only once a year with yields exclusively depending on the highly variable and unpredictable rain fall. The famers note that the climate has substantially changed over the years, where lack of sufficient rainfall has recurrently exposed them to crop failure. A farmer aged 78 years in Desta Abijata PA has been living in the park his whole life. He explains “Back in earlier days this place used to be so full of forests and we had a lot of rain, it was a period of abundance. We did not have farms as expansive as we now do. We used to have one or two hectares of land but those were highly productive and we used to have very good yields from our farms.”

The lack of adequate and regular rainfall according to the farmers is the result of change in climate of the area induced by the loss of trees cleared for farming and settlement expansion. They acknowledge that the climate of the area has changed drastically over the years and relate this to the increase in

population. The interviewed farmers also recognize the importance of trees in enabling them to get rainfall for better yields from their farms. A resident in Shalla Billa notes “We know trees are worth keeping and thus we do not allow cutting trees down in our villages for charcoal making like before..., we have seen the use ourselves.” In addition to subsistence agriculture, that is the main source of livelihood in the area, the interviewed farmers noted that they also seek benefits from other sources. One of these is by temporarily hosting pastoralists who come to the park in search of the expansive grazing pastures.

Responding to questions about their settlement within a national park, all interviewed farmers claimed to be aware of the presence of a national park. However, they describe themselves as residents living in the peasant associations. A resident of Shalla Billa responds to this issue: “I only know I am living here in this Kebele( PA), the rest of the matter about our location concerns the PA in which we are found.” In their descriptions, they depict territories such as farms, households, grazing fields as well as riverside sites, as their own. In this way farmers define themselves as entitled residents of the area who deserve to make a living out of the available resources. Their recognition of the national park was largely in relation to specific activities that are prohibited due to park’s rules and regulations.

There are differing views of the community towards activities that are prohibited by the park. The interviewed farmers also have varying explanations for activities they engage in, in relation to the park’s rules and regulations. Concerning rules against tree cutting, there seems to be a general understanding among the interviewed farmers that the trees have an important role to play in receiving regular rainfall. The farmers highlighted the year’s better yields as an outcome of improved rainfall received. An interviewed farmer notes “This year we have very good yields from the farm compared to years before, perhaps because the rain was good, it was very timely”.

In response to what farmers thought was the cause for the improved rainfall received, the interviewed farmers alluded that the presence of the park, and therefore the decline in tree feeling, are important factors. On a similar vein, participants from a FGD asserted their support of the park’s regulations of controlling extensive tree cutting in stabilizing the climate and enhancing regular rainfall; “We are aware of the park and we have lived together with the park for years. They were preventing us from cutting down the trees and today we see why and we are not cutting down these trees for charcoal anymore.” We also do not harm the animals. The problem is that they (park management) do not have any options for our problem. We plough on this land so we may sustain our daily lives.”

A resident in Desta Abijata particularly explains how the lack of trees affects farmers’ livelihood practices; in his quote “We are paying for the consequences of loss of the trees we ourselves destroyed, nowadays we are having to make barns out of sugar cane sticks and have to find weeds from the lakes to make these. Because we don’t have enough trees anymore.”

The interviewed farmers made distinctions between their practices on the resources which they deemed basic and those that were supplementary to their livelihood. In their descriptions, they depicted practices such as cutting down trees for housing, practicing farming and grazing livestock as indispensable activities while living in the area. They considered these practices related to their livelihood as basic, 'non illegal' and thus off limits from the rules and regulations of the park. On the other hand, activities such as tree cutting for charcoal making and the sand extraction (almost entirely not practiced currently) were practices they recognized and described as prohibited. "We are not cutting down trees for charcoal like before and we have also stopped selling sand, we only use these for building homes. We also have our own separate spaces for farming and grazing pastures." Observations made in all PAs shows that resident farmers appropriate space on their own terms as designated grazing fields, settlement and farming sites in different parts of the park. Individual households and farms are often marked with separating fences. The homes and fences, barns, carts for transportation as well other domestic utensils, which are used by the farmer communities, are all built from forest products.

The farmer communities interviewed trace their origin in the area back to ancestral lineages where they claim to have inherited the land from their forefathers. Land is an important asset that marks family inheritance for the community. Farmers I interviewed, that own land, claim to have acquired it through inheritance. Land acquisition through family inheritance however, is no longer feasible due to land shortage and the growing population pressure as reported by the farmers. This was a particularly pronounced concern for the landless unemployed youth of the community. In the FGD with these groups in Shalla Billa PA, the youth reported their resentment in their statements saying; "We are only farming on our family's land that is barely enough for themselves (their families) let alone being shared with the children. We do not own any land of our own and we are also without jobs. We gathered today to discuss this with the rest of the community in the peasant association." The need to clear land for new farm lands and houses was discussed in the FGD as the only option that exists for land-less youth that are unable to obtain it through inheritance. With the increasing human population and increased demand for new settlement and farming areas, land shortage was one of the prominent issues reported during the interviews. An old farmer I interviewed who owns 2 hectares of land notes "we are facing land shortage here, what we have now is merely enough to sustain our lives not to improve it. Some of the youth may even have to go to the South in search for jobs. But that will not be an option for us who have always been here. For what is better or worse we face, we have stayed here relying on the land we have."

One of the problems that noted in farmers' description of their farming land use practices is the peculiarly dry and salty nature of the soil. According to the farmers, because of this soil characteristic, they are recurrently exposed to drought in the absence of regular and sufficient rain fall. Furthermore the soil salinity increases as one draws closer towards the lakes region of the park. Sites around the lakes are less fertile and less preferred for farming purposes. As an interviewed farmer in Desta Abijata notes

“Our area, especially around Lake Abijata has a very dry and salty soil, if the rain fails for a week or two, we often face major losses in crop yields.” A scene of the park, in reference to the lakes also shows a settlement pattern as explained by the farmers. Due to high salt concentration all three lakes can only be used for non drinking purposes. Accordingly extensive number of people and livestock are observed bathing, washing cloth and watering livestock. The expansive meadow immediately near Lake Abijata is an open field, an area designated as a grazing pasture. Houses and farms are located further away from the lakes where the soil is found to be more fertile. The famers noted that due to the declined fertility of the land, there is the need to acquire more expansive farm areas to obtain sufficient level of yields.

#### 4.1.2 Shifting Pastoralism

Shifting pastoralists, locally termed Godantu carry out transhumance by periodically moving their livestock into the park in search of grazing pasture. The pastoralists are mostly highlanders practicing livestock husbandry or sedentary agriculture in their places of origin. Their practice takes the form a seasonal movement (during the rainy season) in search for livestock grazing pastures in the wide park meadows. During the field study (September-October) most of the pastoralists were either leaving the park or in the last phases of their stay, following onset of the dry season. They normally stay in the park during the rainy season (July to September). The shifting pastoralists along with the significant number of livestock (on average 15-30 cattle per pastoralist) were observed in designated grazing sites throughout the study area. Interviewed pastoralists asserted that there could be as many as 70-90 livestock per individual. The livestock were particularly dominant in one of the community designated grazing fields, locally termed ‘Mansa’ (in Desta Abijata PA), where the park's wildlife such as grants gazelle are mostly found. When questioned about their presence in the area, all interviewed pastoralists claimed to be relatives hosted by resident farmers. Through further inquiries during the interviews, it became clearer that the links they establish with the settlers of the area is an important pretext for their entry to and remaining in the park.

The pastoralists seek to establish different forms of affiliations with the farmers that yield reciprocal ties between the two. One of these ties is through marriage alliances formed between the pastoralists and the resident farmers. I traced and interviewed a pastoralist while looking after his cattle in the grazing farm of his relative, a resident farmer in the park. He explained pastoralists’ ties with the farmers of the parks as; “There has to be some kind of ties between us and them (resident farmers), it is not for free, it’s either through blood lineages, money or cattle. I am here because my sister is married to this family. I am also proposing to marry one of their daughters myself and strengthen the relationship.”

Another way by which relationships are maintained between the two parties is through cattle offerings. During their period of stay, the pastoralists make temporary offerings of their livestock which are better quality breeds for the use of the farmers. In this way, the resident farmers are compensated with dairy products from the livestock in return for hosting the pastoralists. Therefore, the cattle of the pastoralists

and the grazing pasture supplied by the resident farmers forge mutually beneficial relationship between the two. In addition, marriage alliances established between the two helps to create lasting relationship which is also sustained through offerings of cattle as per the tradition.

The pastoralists particularly favor the exceptionally vast meadows in the park as preferred grazing pasture for their cattle. An interviewee further attests “Where I come from, West Arsi zone (at least 20 kms far from the park) there is hardly any grazing field available for my cattle. But here plenty of field is available.” The pastoralists do not have direct relationships with the park’s management or clear awareness of its rules and regulations. However, they are directly affiliated with the resident farmers who they consider to be owners of the land. They describe their presence and all activities they undertake as legitimate, with the awareness and permission of their hosting relatives. They further justify their legitimacy, claiming that they make due payments per grazing pasture utilized for the corresponding peasant associations. This explains that the presence of the pastoralists for grazing, though illegal per the park’s rules and regulations, is subtly recognized and approved by the peasant associations.

Regarding the prohibited activities, the interviewed pastoralists noted their awareness of restricted practices largely related to harming wildlife. Other than this they consider their presence and activities of livestock grazing as regular and not conflicting with the other resource users’ interests including the park management. They also mentioned that they are exclusively restricted to herding their cattle during their stay in the park. It is the hosting farmer that provides them with temporary place to stay as well as farmstead for their livestock.

#### 4.1.3 Salty Mud/ Boje/ Selling

In this version, the shores of Lake Abijata are particularly framed as important sources of salty mud, locally termed Boje (Bole), a brownish, dry, salty substance that is formed from mud found near shores of the retreating lakes. Salty mud dealers are a group within the park's resident community, particularly elderly women and children that collect and sell Boje from the shores of Lake Abijata. Their livelihood is reliant on collecting Boje which serves as animal fodder and is largely sold to other suppliers. Boje selling women and children numbered 60-80 spread out on the shores of Lake Abijata to fill sacks with Boje. They scrub off the mud using objects like wooden sticks or flattened plastic bottles. On average, one person collects 20 to 50 sacks of Boje per day which is sold for a maximum of 6 Ethiopian Birr /ETB( 0.25 Euros) per sack. The sacks of Boje are then loaded on to donkeys or to lorries that come close to the shores of the lake to buy the sacks. The Northern shore of lake Abijata is also a resting spot for birds of the lake particularly flamingos and pelicans.

When asked about Boje selling as a source of livelihood, the interviewees labeled it a last resort option that they cannot live without. Observation and interviews conducted ascertained that most Boje sellers are elderly women and children who cannot engage in farming which is the prominent source of

livelihood in the park. An elderly woman interviewed, that lives by selling Boje explains “I started Boje selling since 1984 during the period of drought. It is the only thing available that I can make a living with and raise the children.” The Boje sellers are aware of the regulations of the park on Boje selling and some are regularly confronted with the restrictions from the park’s scouts. However, the Boje sellers’ claim all other options available are restricted leaving them with no other option for survival. Another Boje seller interviewed attests, “We know what they say, that we are not supposed to come near the lakes, they say we’re not allowed in the park. But nothing is above our children’s life. They say we cannot use the woods or make use of the sand. What else is there for us to live on? It is not an option we prefer, it is the only one we have.”

Though Boje dealing is an activity officially banned through the park’s regulations, it continues to be practiced either covertly or at the mercy and consideration of the park officials and scouts. A son of one of the Boje dealers who is also a part time scout of the park adds to this that, “It is restricted in other parts of the park, but we show consideration to them as we understand their problems, provided that they do not allow trees to be cut, or permit sand extraction in their villages.” A young man I interviewed claimed to be Boje dealer who links the merchants with lorries to the Boje collectors claims that their practice does not damage on the area. In his words he notes “Boje collecting does not have any harm, if we brush off the mud today; it replaces itself the next day. But because it is prohibited, we are now in constant fear of getting caught by the park when we let lorries in. We have to do it disguised at night.”

The Boje collectors strongly object to the park rules totally banning their activities in the absence of other alternatives. The dealer notes “It would be better if they would tell us where it’s allowed to let lorries in and where not, then just preventing it all together.” The move of the park to put stricter restrictions against Boje selling is met with resentment and opposition. In a FGD in Shalla, I talked to 5 widows in a household under a single breadwinner who is now deceased. Each of the widows with their children (total family size is over 30 people) now depends on Boje selling as the only source of livelihood. They noted “We have filed against these restrictions of the park to higher authorities and are waiting for solutions. In the mean time, we continue to do it, sometimes being chased away by the scouts and sometimes in disguise.”

## 4.2 Natural Resources for Industry

In the version of the National Park for industrial activity, Lakes Abijata and Shalla are framed as possessing Soda ash, a commercially valuable industrial substance that has significant national economic significance. The Abijata Shalla Soda Ash Share Company is co-owned by the Ministry of Mines and Energy and National Mining Corporation. A FGD and interviews were conducted with the management of the Soda Ash Share Company on site. These were centered on their practices, the problems they ascribe related to their practices on the resources and their relationships with other actors. Lakes Abijata and

Shalla were followed as objects on the basis of roles they assume in the industrial version of the park and how that relates to other actors.

## Abijata Shalla Soda Ash Share Company

Abijata Shalla Soda Ash Share Company is a joint venture between the state run Ministry of Mines and Energy (with a 38 % share) and the National Mining Corporation, a private investment company under MIDROC Ethiopia 62% share). The company started operations in 1990 near the shores of Lake Abijata inside the park's boundaries. Since its establishment, the Share Company has thrived on the existence of Lake Abijata, in the commercial production of Soda Ash/Trona ( $\text{Na}_3\text{H}(\text{CO}_3)_2 \cdot 2\text{H}_2\text{O}$ ). Lake Abijata, and to a lesser extent Lake Shalla, are rift valley lakes known for high content of soda ash ( $\text{NaCo}_3$ ) (Flower, 2011). The company facilities are based inside the park which includes the concentration ponds, transporting pumps, processing plant and administrative units. The production of soda ash is carried out through solar evaporation and crystallization of water from abstracted from Lake Abijata which is stored on artificial concentration ponds (Flower, 2011).

The company, designed to produce 20,000 tons of Trona per year (t/y) is currently producing about 7500 t/y partly due to the recession of Lake Abijata (Flower, 2011). As the country's sole producer of Trona, and with high industrial demand for the substance, the share company seeks to increase its productive capacity. In a FGD with the Soda Ash Company management and staff, it was stated that the company seeks to engage in large scale production of Trona for export.

A key concern is the declining level of Lake Abijata. The lake cannot sustain the increased water demand needed for the expanded soda ash production. The company maintains that in order to meet the rising market demand for Trona, there is an ongoing project to obtain a license for extracting water also from Lake Shalla. The plan, according to the share company, is to divert water through a pipeline from Lake Shalla to Lake Abijata that can be used for the increased production of Trona. A company chemist I interviewed justifies that "Lake Shalla (with 266.6 meters of depth) is much deeper and less prone to dry up. This makes it more plausible to engage in water abstraction activities from Lake Shalla. This also lessens the increased water abstraction from Lake Abijata whose level has dropped to 7-8 meters currently."

In relation to the Lake Abijata volume decline, there are allegations that the effects of the Soda Ash Company in threatening the long term existence of Lake Abijata. According to the Soda Ash Company, the production of soda ash from Lake Abijata is not the main cause for the lake's decline. Substantiating this with studies, a respondent from company's management claims that "Abijata is a terminal lake without springs and its volume is highly affected by the volume of the rivers that feed into it. We do not have any impacts on these rivers as we are based on extracting water directly from Lake Abijata."



Studies done on the comparative effects of the Soda Ash Company in the declining level of Lake Abijata, also corroborate the company's claim that it has less significant impact in accounting for Abijata's decline compared to water abstraction due to upstream irrigation and industrial activities. Flower (2010) notes that the Soda Ash Company abstracts approximately 2Mm<sup>3</sup>/ year of water directly from Lake Abijata. This figure is relatively less significant compared to the reduction in volume of river Bulbula (on average 200Mm<sup>3</sup>/y to 50Mm<sup>3</sup>/y), which is the main feeder of lake Abijata, due to upstream irrigation and industrial activities. To this the respondent from the management adds "Lake Abijata is a terminal lake, prone to drying out with or without the impacts of the Soda Ash Company. The determining factor is the water abstraction activities carried out on its feeding rivers."

There are a series of accusations against the Soda Ash Company in relation to its operation practices and impacts on the lakes' resources. The Soda Ash Company denounces these accusations as biased and does not see its presence or its activities as affecting the national park. It also claims to benefit the surrounding community mainly through employment creation. Currently the soda ash share company employs more than 200 workers most from the surrounding community. The company further asserts that there is a nationwide economic significance in the production of Trona from the lakes. The interviewed respondent from the management adds "Abijata is a terminal lake, prone to dry up through evaporation due climatic factors of the area on top of the external abstraction activities. What we are now doing is creating a bigger market value for the evaporation to serve domestic demand and potentially earn foreign exchange for the country." The contentious case concerning the lakes' resource on which both the park and the soda ash company claim is still unresolved.

## 4.3 Natural Resources for Conservation

### 4.3.1 Conservation priorities

This section describes how the third reality of the park, 'Natural resources for conservation' is enacted through the configuration of various interests, practices, interpretations and actors with a shared goal of conserving the natural resources. In the conservation reality of the park, the on site management of Abijata Shalla Lakes National Park, the Ethiopian Wildlife Conservation Authority (EWCA), and other conservation organizations, including Institute of Biodiversity Conservation (IBC) and Ethiopian Wildlife and Natural History Society (EWNHS) are present. Interviews with these actors focused on their objectives, interests and activities in relation the resources and the associated problems.

This version of the park sees the natural resources as objects of national and global ecological and/or economical significance, which are facing continued degradation due to human and industrial effects and therefore in need of protection. The prime interest of the park's management on the resources is connected to the basic reason for its establishment as a proposed national park in 1970, with the objective of conserving the peculiar diversity and number of aquatic birds, resources they depend on and

the scenic beauty of the area (Tefera and Alamaw, 2002). The definition of national parks in Ethiopia, Proclamation 1972/1980 of the Negarit gazette, prohibits all forms of residence, hunting, cultivation, grazing and other forms of exploitation of natural resources except for the development and management of the park (Tefera and Alamaw, 2002). According to the park's chief warden, the park's management onsite has the most immediate legal autonomy of managing, developing and conserving the resources of the park. Working under the jurisdiction of EWCA, the management engages in monitoring the conditions of the resources, controlling prohibited activities and educating the community on the importance of conserving resources. There are four priority interest areas of the park's management on the resources, these are; conservation of biodiversity, maintenance of ecological processes, generating economic benefit through tourism development, and enhancing research and education engagements for the scientific community (Tefera and Alamaw,2002). Conservation priorities are prominently attached to the presence of the three crater lakes Abijata, Shalla and Chitu that comprise particular wetland biodiversity composition and scenic features representative of the central rift valley system. Lake Abjata is recognized as an important feeding and resting site for massive number of bird species including waders and ducks. Lake Shalla, the deepest Crater Lake (266.6 ms) maintains importance as a breeding site for bird species such as cormorants, storks and pelicans (EWCA, 2013). To this end, the park management upholds the need of conserving and promoting this peculiar biome and its surrounding as an important feeding and breeding site for wetland birds.

In recognition of the significance of the lakes as important feeding and breeding sites for resident and migrant birds, EWNHS, an indigenous conservation NGO has designated the park's wetland regions as one of the Important Birding Areas (IBA) in the country. According to an ornithologist interviewed from EWNHS, Lake Abijata "ranks among the top three wetland sites identified in terms of birdlife significance out of 23 wetland areas surveyed by EWNHS." Working as the Ethiopian focal point of Birdlife International, EWNHS fosters the conservation and sustainable utilization of Ethiopia's natural resources mainly through the protection, identification and promotion of important birding areas. Using criterion developed by Birdlife International, EWNHS has also completed extensive studies and designated the park as a potential Ramsar site. Ramsar convention, an inter-governmental treaty to which Ethiopia is not yet a signatory, embodies commitments of member countries on sustainable use of all wetlands in their territories. The interviewee notes that should Ethiopia become a signatory, and the park a Ramsar site as already proposed, the wetlands shall become sites of international conservation significance and protection.

Conservation goals towards the park's resources are also related to the economic and ecological significance of its biodiversity species composition. Aside from the significant ecological value of the lakes in supporting the birdlife, the alkaline nature of the crater lakes also renders it an important source of biologically and economically desirable substances. The Institute of Biodiversity Conservation (IBC) is a federal level conservation affiliated body that engages in research and education works, identification,

gene banking and exploitation of economically important, endemic and endangered species. As one part of its engagements in sustainable utilization of the biodiversity of the park, IBC sees great potential in the development of Spirolina, microbial bacteria found on the surface of Lake Chitu. A respondent from the Microbial and genetic resources unit of IBC claims “Spirolina is a very useful edible material that is highly nutritious and, consumed in various forms; it is of such tremendous international market demand that it is labeled as the future food of the world.” The relative abundance of Spirolina in Lake Chitu and its significant commercial viability renders the lake and its surrounding of heightened conservation importance. To this end, the same respondent explains conservation efforts are underway by IBC proposing Lake Chitu and its surrounding as an intact protected area devoid of human intervention.

#### 4.3.2 Conservation practices and problems

In line with its stated conservation ideals, the park’s management, in principle, prohibits all consumptive use of natural resources. Practically, however, daily patrol practices by the scout are mainly focused on controlling new settlement and farm land expansion (e.g. construction of new houses, cutting of trees), charcoal making/selling, sand extraction, and to a lesser extent salty mud extraction/selling. Currently out of the 887km<sup>2</sup> total area of the park, the management maintains strict and successful control over the 1 km<sup>2</sup> fenced area near the main headquarters of the park. The remaining part of the park is occupied with scattered and expansive human settlement, farms, pastures and livestock. The scene of the rest of the park, with the expansive human settlement and ongoing livelihood practices, renders it indistinguishable from other PAs outside the park. As in other adjoining peasant associations, social establishments such as schools, shops, mosques and cemeteries characterize the settlement areas. During the field observations, there were also many new homes that were being built and more of them being renovated with new corrugated iron roofs.

The chief warden of the park explains management problems of the park as stemming from its contested status as a national park with clearly delineated boundaries. In his words he asserts, “This Park has already been granted legal recognition as a national park, with its own boundaries and land use principles that are nationally and globally recognized. All human practices we see as problems emerge from violation of its status as a national park.” According to the chief warden, activities that are permitted in the park are in relation to its priorities of conserving and maintaining the ecosystem, promoting tourism development and research and education. The park’s first priority theme relates to the definition of a national park as a protected area devoid of human settlement and intervention. To this end, the presence and the continued expansion of human settlement along with the associated practices is seen as that contradicting its status as a national park. Practices related to human settlement, such as agricultural and settlement expansion, livestock grazing and tree cutting for fuel wood, the chief warden asserts, have detrimental effects on wildlife resources, their habitat and the ecosystem base of the area. This in turn, relates to the need of conserving wildlife habitat and maintaining the landscape scenery and ecosystem set up of the area. The second priority area of the

national park in relation to tourism development also presupposes a national environment that is conserved and observed, at best, free of human intrusion.

Therefore the park primarily sees the presence of expansive human settlement within the vicinity of the park as a fundamental management problem in relation to its conservation ideals and practices. The resources including the acacia trees; the wildlife base, particularly the internationally famed birdlife; the landscape features; and the three lakes, the park management claims, are under considerable threat due to a number of human induced impacts. The park's management denounces the expansion of settlement in the park as illegal and considers the settlers as intruders of the park's boundaries. The chief warden maintains "There is virtually no part of the park except the lakes where people are not living..... People that live here are in constant touch with the natural resources. Their daily routine is based on practices that harm the environment. This is only a park in paper."

The park's management carries out routine controlling and monitoring as well as providing periodic education to the community about practices allowed and not within the park. The education, aimed at creating and improving community awareness towards resource conservation is conducted through the aid of community elders and opinion leaders (Aba Gedda). The controlling and monitoring of illegal practices is carried out by the park scouts who conduct daily patrols in designated locations. They mainly watch out for newly built houses, cutting/burning of tress for fuel wood and charcoal making. In cases of such incidents, the scouts either give warning to the person caught in the act or report it to the district bureau depending on the extent and frequency of the offence. So far the park had been successful in bringing to an end the illegal sand extraction and to a lesser extent outright tree felling for charcoal making that were extensively practiced.

There are illegal practices that confound the park's management on a daily basis. These are mainly related to distributed settlement pattern and the extensive number of people living in the park. As a scout of the park claims "makes it practically impossible to entirely control prohibited activities given the park's limited capacity." He further explains "We just returned now from a 12 kms patrol on foot, but right as our feet sets off the area, anything is possible with the forests and we can do nothing about it." The task of effectively preventing and managing illegal practices is also complicated due to lack of strictly enforced penalty measures from the district offices, as well as the unclear land tenure system in the park. As an interviewed scout notes, "The Woreda( district) offices are largely unresponsive to take due measures when we report illegal practices such as tree cutting to them.....it also makes it difficult to monitor settlement expansion since the community here does not have legal land ownership titles and thus occupy vast unregistered land." The seasonal presence of the Godantu (shifting pastoralists) and expansion of new farms leads to further clearing of trees. Another issue, according to the scout, is in relation to development activities and expansion of social services within the park. He notes "While we are constantly trying to curb further expansion of farm land and settlement, on the other hand some

NGOs work towards sustaining their (local community's) livelihood and encouraging their stay, which is contradicting our goals and practices."

These social institutions, the park claims, are factors that exacerbate conditions for permanence and further expansion of settlements in the park. The chief warden claims "we do not permit the expansion of social provisions within the park but these are still being carried out. Executives at regional offices should help effect the national recognition given to the park, not to deny these. But indirectly through propagating the expansion of social provisions, they are threatening the park's autonomy and fueling animosity of the park with the settlers. The community has now gone as far as denying acknowledgement to the park's very existence."

Another problem that park sees as a contradictory to its conservation realms is the presence of the Abijata Shalla Soda Ash share company and its impacts on the lakes. The continuous decline of Lake Abijata, and its impacts on the abounding biodiversity, particularly birdlife, is the priority concern of EWCA. A respondent from EWCA attests "our priority is saving Lake Abijata and saving the ecosystem it sustains, the bird biodiversity including lesser and greater flamingos, in light of the long dated and complex pressure it faces." The chief warden of the park adds to this; "The Soda Ash Company should not have been established on the territories of a national park. Abijata is already a lake under threat, and the water extraction from Lake Abijata is an added pressure." The park sees that the increased water abstraction of the lakes and the subsequent increased salinity renders it an inhospitable habitat for the microbes and the microbe consuming birds.

In addition to effects of different community groups and the Soda Ash factory on the resources of the park, the management of the park presents as its major challenges the problems beyond the confines of its boundaries, in particular, the upstream irrigation and industrial activities of Lake Ziway. The upstream irrigation and industrial activities taking place on Lake Ziway, EWCA asserts, is at the expense of Lake Abijata. The park management sees an integrated stakeholder approach as a viable solution to curing problems on the lakes and the park at large.

On a similar vein, EWNHS's prime stake towards ASLNP is in the conservation of the ecosystem and the biodiversity composition, particularly the resident and migratory wetland birds. The interviewed ornithologist from EWNHS further explains the chained effects of industrial and agricultural activities of the upstream lakes as well as human induced impacts on the bird's species and their habitat. In his statement "Abijata is naturally a hyper-alkaline lake with high concentration of salt. This concentration is diluted by tributary streams flowing in to the lake. However, with the decline and loss of its tributaries it has turned out too saline to be inhabited by fish. The hyper-alkalinity of the lakes, together with previous over-fishing activities has led to the extinction of fish eating birds such as Cormorants and King fishers. Now there are only algae consuming Flamingos in large numbers." One of Abijata's peculiar features is the abundance of birdlife, hosting over 20,000 birds at any given time. This number is boosted by

seasonally flocking migrant birds from the Northern hemisphere including Waders which typically feed on the mud banks of the lake's shores. Explaining the threats facing the birdlife, the ornithologist from EWNHS notes that "there is a considerable threat of losing the great number of migrant and resident birds due to the decline of the lakes and human activities around it."

In connection to maintaining an intact biodiversity, the concerns of IBC are related to ongoing and planned development and investment activities within the park and its surroundings. In light of sustaining the economically and ecologically important biodiversity base contained in the lakes, IBC asserts there is an exceptional need to focus more on conservation oriented approaches regarding development activities particularly related to the lakes resources. A respondent from IBC adds that "the planned tourism investment activities on Lake Shalla should strictly be founded on conservation principles, otherwise profit making tourism development initiatives could seriously jeopardize the ecosystem base and biodiversity composition of the lake."

## 5. Analysis of the Multiple Enactments of Abijata Shalla Lakes National Park

This section presents an analysis of the conflict and co-existence patterns characterizing the relationship between different modes of ordering the park's natural resources. Based on the various interests, practices, problems and actors, traced and discussed in the previous chapter, this section reflects on how the interweaving of these results in complex set of relationships, negotiated roles, and blurred boundaries between and within different versions of the park. It also shows the constantly shifting nature of what is construed as 'the problem' with actors moving in and out and roles and statuses changing. How some conflicts and contestations are embedded in broader national and global discourses and practices is also addressed in this section, elevating the scene beyond the geographic confines of the park. At last, the role tourism can have as a potential new version is discussed along with conditions to examine as tourism emerges as a new intervention under existing circumstance of the park.

### 5.1 Modes of ordering Resources for Livelihood

A scene into the enactment of the first reality of the park depicted as 'Natural resources for livelihood' shows a loose network of actors, with differing claims, interpretations and practices related to the resources and the problem on hand. The different modes of ordering in this version feature the various community groups (residents and temporary) resources involved (lakes, land, wildlife, acacia trees) and the claims, ranging from resource access to ownership rights.

Actors	Farmers, Acacia trees, land, lakes, livestock, birds and wildlife	Shifting Pastoralists (Godantu), Land, livestock, lakes, wildlife	Boje (Salty mud)sellers and dealers, Boje, Lakes, Birdlife
Residence status/ type of participants	Active and strained; aware of restrictions and regulations	Temporary livestock grazers/ Mostly men	Permanent settlers/ Women (often elderly), children
Practices	Cutting trees for farming, settlement, fuel wood and charcoal making, livestock grazing, washing cloth and watering livestock on lakes	Livestock grazing, watering livestock on lakes	Scrubbing off salty mud from the shores, lorries coming in to the park to buy the Boje from the dealers

Discourses	Farming and related livelihood practices on 'own' land is legitimate and harmless to the environment	Grazing livestock on designated pasture is harmless to the environment; Have legitimate temporary access to the area through hosting farmers	Boje is material left useless by other users; practice is not connected to others;
			Boje selling is unhealthy, a practice of the most destitute as an only option for survival
Relationships with park	Active and strained; aware of restrictions and regulations	Inactive and limited awareness and interactions	Active and strained; aware of restrictions and regulations

Table 2: Modes of ordering of livelihood reality of the Park

In the 'Natural resources for livelihood' version of the park, there are different Modes of ordering of the resources among the farmers, shifting pastoralists, salty mud dealers and the various natural resources involved. All actors under this network align to the common discourse on natural resources as sources of living and that basic livelihood practices are harmless to the environment. However, livelihood network itself is a heterogeneous construct embodying diverse actors, discourses, practices and complex relations.

In relation to how natural resources are defined and acted on, there are different explanations given about the livelihood practices. For the famers, traditional agriculture, despite being an unreliable and tedious practice is preferred as their best available source of income. The farmers describe the land as dry, salty and having poor fertility. Obtaining sufficient yields from their farm depends on the availability of regular and adequate rainfall as well as the size of their landholding. For the pastoralists, their main draw to the park is the availability of expansive and quality grazing pasture. They consider the grazing lands are secured through links with the resident famers. The pastoralists further assert that the meadows in the park offer freedom of abundant and low-cost grazing pasture.

For the salty mud sellers, their practice is seen as hardly sufficient to sustain a livelihood. Boje selling is depicted by other users, such as the farmers, as a vulnerable activity as it involves low pay and unhealthy working conditions. The practice is dangerous due to health implications caused by the steam from the alkaline mud. The lack of any other form of livelihood is emphasized as the only reason for these people's engagement in Boje selling. Events such as loss of sole breadwinner and the seasonal drought are cited as driving factors for their involvement in the activity.



Furthermore in the livelihood reality, there are differences on which resources are enacted upon. The farmers directly/indirectly engage with the land, the acacia trees, and the lakes in relation to their livelihood practices. The pastoralists' activities are mainly connected to the land they use as grazing pasture. The Boje dealer's enactment on the resources is mainly with the lake shores where they collect the salty mud.

Actors in each of these different MoOs emphasized why they found the resources important and defined them in relation to their own livelihood practices. The farmers depicted their presence and activities as confined to their own areas, designated as: settlement, grazing and farming sites. They define resources found in these sites as essential parts of their basic livelihood practices, such as: trees for building homes and for fuel wood, fences and barns; land for settlement, farming and grazing; and lakes, mainly for laundering and watering their livestock. They do not see these practices as affecting the park or other resource users. It was evident in the farmers' discourses that land and livestock are not merely elements of their livelihood practices, but also integral parts of their cultural and traditional value system. They describe land as an indicator of inheritance and belonging. Livestock denote wealth, security and social status, as well as vital objects for creating communal ties such as weddings and traditional conflict resolution.

The pastoralists describe their practices as exclusively restricted to grazing their livestock in the land they define as ideal pastures. They base their definition of the land as grazing pasture from the similar use of the land employed by the hosting resident farmers. The pastoralists therefore do not see their activities as illegal or as affecting others.

The Boje sellers see the salty mud as otherwise useless material and as something constantly available on the lake shores. They claim to be the only ones who can make use of the Boje by selling it to other dealers. They do not see the connection of their practices to either the park or other groups of the community.

There are also differences to which actors are aware of the presence of restrictions on their activities and the extent to which they relate to these restrictions. The resident farmers and the Boje dealers are aware that there are park management restrictions to their livelihood practices. They also have ongoing and implicit/explicit forms of resistances when confronted with these rules. Some of these forms of resistance include, defiance to restricted practices, such as building new homes, collecting fuel wood, collecting salty mud. These people also make appeals against the banned activities and other park management measures. The non-resident Shifting pastoralists, on the other hand, consider their presence and activities as legitimate. These pastoralists justify their legitimacy in the park through their affiliations to the resident farmers and the payments they make for the grazing pastures. They are less aware of the park's regulations and consider themselves accountable to the farmers that host them rather than to the park's management.

From a scene of different actors, differing definitions, practices and relations in the livelihood network, there are different modes of ordering of the natural resources. This in turn relate in complex ways to other modes of ordering of resources in other actor-networks.

## 5.2 Modes of Ordering of Conservation and Industry Realities

As indicated by the table below and the discussion that follows, the entwining of the various actors with different objectives, practices and discourses with multiple interpretation of the problems results in the enactment of the two additional versions of the national park. These are depicted as ‘Natural resources of conservation’ and ‘Natural resources for industry’.

Actors	Park Management, Acacia Trees, land, lakes and biodiversity, birdlife, Wildlife	Other Conservation Organizations		Abijata Shalla Soda Ash Share company, lakes Abijata and Shalla, the Lakes’ Alkaline Substance
		EWNHS, birdlife and their lakes habitat	EBI, Lake Chitu, Lakes’ Biodiversity	
Priorities	Conservation of the resources; Mitigating human/ industrial impacts on resources, promoting non consumptive use of resources	Conservation of the wetland ecosystem, Promoting international importance of wetlands and birds	Conservation and sustainable commercial use of the biodiversity	Sustainable exploitation of water from lake Abijata and Shalla for the production of Trona
Practices	Setting rules and regulations on practices ; Patrolling for illegal practices such as tree cutting, charcoal making and settlement expansions; community education and awareness creations works	Scientific research and practical studies on biodiversity ; Advocacy works on biodiversity protection; community education and development initiatives	Scientific research, gene banking of genetically and economically valuable species; identifying and promoting commercially valuable species	Abstraction of water from lake Abijata, storage and evaporation of water from lake in the production of Trona, ongoing activities of subverting water from lake Shalla for wide scale production of Trona

Discourses	A national park should be freed from human settlement and practices; Resources should be conserved; lake Abijata prone to dry up due to combined effects of human and industrial activities	Birdlife and their habitat under threat due human and industrial impacts; Conservation of resources impractical without community involvement	Biodiversity hotspots should be freed from human intervention; conservation priorities should come ahead development interventions in the park;	Lake Abijata prone to natural evaporation and external water abstraction activities; Comparatively insignificant impact of the soda ash production on declining lakes volume; Nationwide economic significance in the production of Trona;
			Lake Chitu is of significant commercial importance in containing spirulina;	
Coalitions with	Government of Ethiopia through EWCA	Focal point of Birdlife International	Focal point of Convention of Biological Diversity( CBD)	Government of Ethiopia through Ministry of Mines and Energy

Table 3: Modes of Ordering of Conservation and Industry Realities of the park

The table above depicts different modes of ordering resources present between the conservation and industry versions as well as within each of these versions. In the conservation actor-network, both the park management and conservation organizations hold similar ideals: resources have important ecological and economic significance that needs to be conserved and promoted. The park management defines the territory and resources within its boundaries as having ecological, economical and scientific value, the conservation of which the park has the legal mandate of enforcing.

Under this dominant discourse, the resources such as the trees, the land, the lakes and the biodiversity contained, are described in terms of great ecological and commercial importance. These resources are seen as ecologically interconnected, where problems facing one, could have implications on other resources. The lakes wetland region is seen as containing important biodiversity, which is in turn, important for birds feeding on it. Similarly, the acacia trees are essential in stabilizing the area's climate, preventing soil run off and serving as habitat for the wildlife, and maintaining the park's scenic beauty. The park's management views the distribution pattern of the resources in relation to their associated ecological functions. To this end, different parts of the park are designated as important grazing sites for wildlife, resting and feeding site for birds, biodiversity hotspots, and as scenic viewpoints.

While aligned with the same conservation discourses as the park's management, EWNHS has a slightly different mode of ordering resources which is more specifically inclined towards the protection and maintenance of the wetland ecosystem that supports the birdlife. Abijata and Shalla lakes are translated as important breeding, feeding and resting sites, particularly for the flamingos, pelicans and the numerous migrant birds. The identification of the wetlands as important birding areas and potential Ramsar sites is EWNH's way of designating the lakes a conservation value of nationwide and global significance. Scientific research outputs and expertise recommendations by EWNHS frame the lakes and the surrounding regions as peculiarly important in hosting migrant birds that heighten its international significance.

On a similar note, IBC's ordering of resources is particularly focused on the lakes' biodiversity. In particular, Lake Chitu contains commercially and genetically important species. IBC has scientifically substantiated that Lake Chitu is of important ecological and commercial importance in containing important bacteria, valuable in the production of Spirolina. In this way, Lake Chitu and the surrounding wetlands are translated into a genetically resourceful site by containing Spirolina.

Despite the commonly shared discourse on resource conservation, the different actors have different methods of executing their responsibilities. The actors engage in conservation work through different capacities/ mandates, roles and strategies. The park management, working under the government through EWCA, engages by formulating laws and policies, and enforcing rules and regulations. The scouts patrol to control prohibited activities, confiscating of charcoal and wood, dismantling new homes and reporting incidents to the district and PA offices. Conservation organizations, EWNHS and IBC engage in supportive roles, advocating conservation through scientific findings, technical, material and financial supports.

In the Industrial version, a surfacing discourse is the commercial viability of the lakes. To the Soda Ash share company, the lakes are translated as nationally important alkaline bearing water sources containing chemicals essential for the production of Trona. The Soda Ash Share Company's main practice is withdrawing water from Lake Abijata, storing it in temporary concentration ponds and using the evaporation process to produce Trona. They describe the activities as non-threatening to the park or its resources given the limited withdrawal of water and operation mechanisms that are not dangerous to the wildlife. Through the use of scientific studies and physical evidence of concentration ponds habituated by flamingos, the soda ash company justifies that its practices are harmless to the area's bird life. Thus, the lakes, the soda ash Share Company and its practices are ordered in accordance with how the lakes are defined as industrial inputs in the industrial reality of the park.

## 5.3 Coalitions and Conflicts

There are different ways through which the described park enactments of resources relate to one another. The modes of ordering that emerge from the various actors, discourses and practices interplay in complex ways. Some alignments exist within the same network of actors with a shared definition of the situation and problems. Such coalitions also exist between different versions of the national park. On a similar note, there are certain shared practices within the in same enactment and also between different versions of the park. This demonstrates that the boundaries delineating different versions of the park are far from clear cut and fixed. Rather they are blurred and fluid, constantly overflowed through various forms of collating and conflicting discourses, practices and materials. These complex relationships between and within the different enactments are characterized by series of ongoing conflicts and coalitions held together in a monetary state of order.

### 5.3.1 Conservation and Livelihood coalitions

Among the different coalitions present, one important alliance is found between the farmers, the park management and EWNHS in relation to wide scale tree cutting being viewed as a harmful practice. These different actors align with the discourse that wide-spread tree cutting does have detrimental effects on the area. As per the distinctions the famers have made within their livelihood practices, wide spread tree cutting for charcoal making is an activity the famers largely consider as harmful. They attribute excessive tree cutting as being the cause for the loss of rain and the consequent drought which negatively affects their livelihood. The park and the conservation organizations also denounce large-scale tree cutting as being the prime factor for increased desertification which disrupts the ecological processes and endangers the biodiversity composition

Although these groups are in agreement about the detrimental effect of tree cutting for charcoal making, it still takes place covertly among the famer communities. A coalition was formed between the farmers, park management and EWNHS that translates conservation ideals into the famers' livelihood practices. This translation of conservation discourse takes the form of enrolling farmers through educational, financial, and material support. A community site support Group (SSG) founded by the park and EWNHS provides community benefits such as better breeds of livestock and financial incentives for members, thereby sustaining the coalition practically and materially. In return, the groups of farmers in the community SSG, perform conservation practices by agreeing to stop tree cutting for charcoal making and obeying area enclosure to protect the ecosystem in their areas. According to a leader of the SSG, a total of 20 hectares of land has been set aside for conservation while 4 hectares of land has already been enclosed. The SSG strives to demonstrate the ideals of a beneficial and pro-conservation community based on providing education, financial and material benefits to members.

### 5.3.2 Resident Farmers and Shifting Pastoralists' Coalitions

Another coalition present is within the livelihood version, where the Shifting Pastoralists/Godantu and the farmers form a strong coalition over grazing practices. Both of these actors assert that livestock grazing is a non-harmful livelihood practice. The pastoralists rely on their relationships with the resident farmers as a pretext for their using the park for livestock grazing. This relationship is sustained through livestock offerings and marriage alliances that forge mutually beneficial ties between the two groups. While the pastoralists are afforded grazing rights, the hosting farmers obtain dairy products from the pastoralists' cattle. The marriage alliance provides creates a more durable alliances which also provides hosting farmers the opportunity to graze the pastoralists' lands in other seasons. Aside from these the pastoralists also pay fees to the peasant associations according to the size of grazing pasture used. Thus, this coalition also enrolls the PA administration in acknowledging the pastoralists' presence and by accepting their payments. The payments made to the PA renders the pastoralists exempt from being targeted as unrecognized insurgents to the park. In this coalition, the livestock and land are important as objects while the marriage alliances and payments in cash are mechanisms that make possible pastoralists' livestock grazing in the park. Thus, land is framed as a legitimate grazing pasture for the pastoralists, made possible through the interweaving of various objects and practices, including livestock, marriage alliances, and cash payments to the PAs.

### 5.3.3 Park Management Vs Farmers conflict

One of the conflicts stemming from the interplay of the different modes of ordering of the resources is between the park management and the farmers. As Van der Duim (2005:113) notes "modes of ordering not only consist of a set of ideas, but also inculcate a certain set of practices. Modes of ordering entail particular practices, that is, internally and externally consistent, congruous ways of performing..." Thus conflicting practices on the resources emanate from the differing definitions of the situation which in turn determine how resources are variously enacted.

Discursively, the two have contested definitions on natural resources, access and use rights in the park including clearing land for agriculture, settlement expansion and grazing. Farmers basically define natural resources in terms of their importance for supporting livelihood. Accordingly they ascribe their presence in the park is legitimate; their agricultural practices confined to their own designated areas are basic for livelihood and not harmful to the park or the environment. They make claim of ancestral land inheritances and lack of other alternatives in framing their land use rights and livelihood practices as legitimate. The way space is translated in the park is also reflective of the various types of entwinements between different modes of ordering and the power relations ensuing from these. Van der Duim (2005:130) adds "modes of ordering define not only human-human but also human-spatial interactions".

Accordingly in practice, the farmers appropriate certain spaces in the park in accordance with their livelihood discourse and their definitions of the situation. To this end, the land is designated as

settlement and farming area marked with fenced villages and individual households. The heavily settled parts of the park feature extensive farm lands, houses, settlers and livestock that largely depict the absence of any effectively enforced restrictions on the settlers' practices. Such spatial arrangements exemplify the temporary dominance of the livelihood discourses and practices in these parts of the park. The park's management on another hand does not approve with the farmer's way of designating space or with their description of their presence and activities as harmless to the environment. The park defines the settlement pattern and the way space is appropriated for livelihood practices as an encroachment of its national park features and contradicting its conservation priorities. For the park's management, this mode of spatial arrangement causes wildlife habitat degradation and fragmentation. Furthermore the park does not see these activities as confined to particular parts, but sees these as dispersed across the park making it difficult to effect conservation practices throughout the park. In attempts of better enforcing its conservation practices, there are designated control posts in other parts of the park including the 1 km<sup>2</sup> enclosed area near its head quarters. Around these posts the park maintains the upper hand in preventing settlement, farming and related livelihood practices. These sites remain devoid of human settlement where wildlife such as ostrich, grants gazelle and better coverage of acacia trees is observed. These areas depict spatial dominion of conservation discourses and practices by the parks management. The appropriation of space in accordance with the prevailing discourses and practices reveals how such strongly converging networks result in dominance of particular modes of ordering in the form of effectively translated spatial configurations (Van der Duim, 2005). Murdoch (1998) cited in Van der Duim (2005) describes these as 'spaces of prescription' demonstrating prevalence of temporarily hegemonic and ordered spatial arrangements.

However, ordering is only a momentary achievement, where there are ongoing struggles and resistances, resulting in patterns of coexistence and conflicts which is also spatially translated. The spatial arrangement in the park and the way resources are enacted is multifold disclosing such collating and conflicting modes of ordering. This is evident in vast parts of the park featuring loosely knitted networks, or what Van der Duim (2005) citing of Murdoch (1998) notes as 'space of negotiation'. Such negotiated spatial configurations characterize areas such as the lakes and the surrounding, which the resident community uses for watering livestock, laundering and bathing. These are simultaneously the same sites promoted as birding hot spots by the parks management. The grazing sites are also examples of negotiated spaces where both the pastoralists and the resident farmers appropriate for grazing. It is the same site; the wildlife of the park particularly grants gazelle also graze on. Thus multiple modes of ordering resources are spatially manifest in the form of spaces of negotiation where different definitions of the situation and consequently different practices co exist.

In defining the situation, the park's management describes the presence and practices of humans within the park as a fundamental management problem. As the chief warden notes "The exceptional case with Abijata Shalla Park is that significant number of people are already inside the park and making a living

out of the resources against the rules of the park.” According to the park’s management, under the current circumstances protecting and maintaining the resource base comes ahead of providing benefit opportunities for the community. The park’s chief warden claims “It is only when there are resources in the first place that there can be claims and conflicts on those resources. With the resources being uncontrollably degraded, there will not be claims of any sort in the future. That is why saving the resource base comes forehand.”

In line with these discourses, the park’s management has different mechanisms to monitor the activities of farmers that it deems improper. Monitoring illegal practices, confiscating illegal materials caught such as charcoal and fuel wood, dismantling newly built homes, chasing away livestock and reporting transgressors caught in the act to the district administrators are some of the measures taken by the park’s management. With these two realities counter posing, there are ongoing cases of resistances by the community where they continue to defy the restrictions of the park through continued settlement expansion and livelihood practices such as farming and grazing. Such ongoing forms of outright resistances and confrontations are spatially in the vast parts of the park that we have labeled as ‘spaces of Negotiation’.

As a way of negotiating the long-dated conflict between the park and resident farmers and enrolling the community with conservation discourses, a re-demarcation of the park’s boundaries was introduced. In 2012, a large coalition constituted from different national and regional GOs and NGOs, peasant association leaders, community groups and Aba Gedda (community opinion leaders) effected re-demarcation of the park’s boundary (98 % completed and awaiting official approval from the Ministers council). According to EWCA and the park’s management, the re-demarcation was made after a thorough deliberation with all relevant stake holders, including community representatives, and in consideration of the practical settlement and land use patterns of the community as well as the location of resources in the park. The new boundary was devised with the aim of reducing the park to an effectively managed protected area while leaving out highly settled areas. The short term park objective is to enhance resource conservation through stricter controls of prohibited activities within the redefined territory of the park. Over the long run, and through the intervention of duly concerned government bodies, the park plans to relocate the households still left within the boundaries.

However, the newly created coalition has begun to show signs of fracture and frailty due to the resistance from farmers who felt they voices were not adequately represented. To residents of the PAs, now officially declared to be residing inside the park’s new territory, the resolutions from the re-demarcation still leave their concerns unaddressed.

The concern of being relocated from the park following the re-demarcation was a major issue with the interviewed farmers. There appears to be lack of accredited information about the next moves to be taken by the park or on the fate of the residents within the park’s redefined boundaries. However,



rumors of eviction are prevalent throughout the study area. In an interviewed resident's words; "We hear rumors that the park managers plan to move us to Southern regions because of the land shortage here. But regardless of the shortage and our problems here, we want to stay here. Anywhere else outside our land will not be any good to us and our children. We will not be able to cope with the weather of other areas."

The resistance takes different forms ranging from an outright confrontation that took place during the course of the re-demarcation, to intensively building new homes or renovating older homes to prevent being displaced. There are also other less volatile forms of resistance including a community appeal to higher authorities to reconsider the re-demarcation. A FGD was conducted with the village elders of Desta Abijata who were leaders in a recent clash with the park's management during the re-demarcation. One of the chief spokesmen of the village recounted the event as "We are the community that has lived here for years; our grandparents died here, this is where we belong. The re-demarcation has still left hundreds of homes and farms inside the park's new boundaries. Their plan is to prevent us from further farming or perhaps relocate those of us within, to some other place. This led to riot and confrontations with the community as we (residents) inside do not want to go to any other place. We have made appeals to higher authorities and are still awaiting a solution." The expected effects of the re-demarcation seems to be a concern not only for the households left within but also to those outside the park's new territories. One of the farmers interviewed whose house and farm lies outside the park's current boundary. However he claims "So far the new boundary has not affected us aside from the rumors we hear about, but if it comes to the ground, it will be a big problem to us, because all our cattle can only graze there (fields inside the park)."

This conflict scenario depicts the complexity and fluidity of the problem; where actors, practices and discourses of actor networks interweave, conflicts are likely resulting in fractures of a network. Thus, the problem under scene rather than staying fixed and solid constantly shifts, leading to yet other emerging actors, discourses and practices, with reshuffling of roles and positions. To this end, the park management attributes the land tenure administration system in the park system as part of the problem related to settlement expansion. The district government offices and respective PA administrations are responsible for the land tenure system of settlement in the park.

A similar lease rate (rent) is levied on the land held per household within the park as is the case with households outside the park. However, for the rent-paying households within the the park, no legal land entitlement (certificate of ownership) is granted as they are situated on a land legally recognized as a national park. While the land is officially recognized as a national park, the human settlement and land use pattern is handled by the district government offices. As a result, there is lack of formal and strictly enforced land administration system giving rise to an open access and 'no man's land' scenario in the expansive and unoccupied parts of the park. To the park management, the absence of an effective land

administration system is a major factor exacerbating situations such as forest clearing for new settlement and agricultural expansion, and encroachment by cattle grazers.

To the farmers, absence of legal land ownership title is assumed a different version of a problem to mean lack of assured legality and sense of security. Without formal and legal land tenure rights, the community members claim they are being deprived their guaranteed settlement rights. Threats of eviction further accentuate the desperate counter measures the farmers make towards ensuring their sustained existence in the area. As was witnessed during the observation process, the farmers have embarked on building new homes or renewing their old houses with corrugated iron in attempts of ensuring their permanence in the park.

The undetermined community status within the park's new boundary has other far-reaching implications. During the interviews and observations, it was evident that basic social provisions such as electricity, roads and drinking water supplies are either entirely missing or very inadequate in the study area. The community presents these as their most pressing challenges of living in the area. They reported that GO's/NGOs seeking to provide social provisions to the community were prevented by the park management with claims that it is not allowed to establish or expand social provisions in a national park's territory. In a FGD conducted in Chele, Shalla Billa PA farmers claimed "The community is leading everyday life here for many years, we are in need of electricity and we've seen and heard rumors that the park prevented this. If this is true, we continue to have confrontations with them." While this adds to the animosity of the people towards the park management, it in turn also has its effects of accentuating the impoverished life they lead. Lack of electricity, roads and water supplies prompts the people to opt for other means of acquiring or supplementing livelihood that are still against the park's rules and regulations. These include extensive dependence on fuel wood, charcoal and salty mud selling as additional sources of income as well as renting the land to highlanders for livestock grazing. The lack of alternative sources of livelihood other than the available resources and absence of any benefit or support from the park, the community claim leaves them entirely reliant on the resources for their very survival.

For the community, their undetermined legal status and lack of official land ownership rights takes a form of a problem in relation to accessing social provisions within the park. To the park's management, the problem shifts to something else. It turns up as 'expansion of social provisions' the park deems contradictory to its goals as a national park. The manager sees the problem as stemming from the incongruence between development and conservation priorities. According to the park management, national priorities of community development, enhancing food reliance and food sufficiency, backed by the support of different NGOs, accentuates the conflict. The chief warden adds that there are problems stemming "from the support that is given to the settlers incongruent with the park's authority and in ways that do not comply to the priorities of the national park." According to the chief warden, support and assistances given to settler communities should be primarily consistent with conservation ideals. These should be aimed at improving their awareness and participation in conservation and curtailing the

community's reliance on the park resources. This was another evident case of counterpoise between different realities, of conservation discourse on containing /reducing settlement expansion on one hand and development ideals of alleviating livelihood problems on another. This was demonstrated by the collision of the park management resisting the district government office's attempt of expanding social provisions to the park residents. As witnessed from observations, attempts of delivering electrical services to the PA's within the park had been temporarily interrupted due to controversies between the park and adjoining district offices. Wireless electricity poles are left standing as the decision of extending electricity lines awaits resolution. This scenario also exemplified that what started off as a plain conflict on different definitions of natural resources between farmers and park management, keeps shifting and multiplying as it engulfs other actors and other issues such as the national development objectives, GOs and NGOs at national and regional levels.

#### **5.3.4 Park Management VS Industry conflict**

Park management and the Soda Ash Company have a number of contentious claims and practices as well as interpretations of the problems concerning Abijata and Shalla lakes. The park management frames Lake Abijata as a terminal lake that is undergoing significant decline from the combined effects of direct and indirect water abstraction activities. The operation of the Soda ash Company and its water abstraction from Lake Abijata is presented as one of the many factors threatening the long term existence of the lake and the biodiversity it supports. To the park management, the protection of the biodiversity, particularly the birdlife, presupposes maintaining adequate water volume in the lakes, reducing its salinity. The Soda Ash Company considers the lake as undergoing significant depletion as a result of external water abstraction activities. The presence and activities of the soda ash is depicted as harmless. The premier objective of the company is in securing sufficient level of water from the lakes to meet the growing domestic and international demand for soda ash.

The park management refutes the soda ash operation that involves abstraction, temporary storage and evaporation of the lake water. A current conflict between the two is the soda ash company's new project to draw additional water from Lake Ziway. The attempts of the soda ash company were temporarily halted by the intervention of the park management, who used its granted prerogative of enforcing conservation priorities. The park management maintains the need to recheck the already existing impacts of the soda ash company on Lake Abijata. While the contention surrounding the launching of a new project of awaits resolution, the company continues its operation using water from Lake Abijata.

#### **5.4 Politics of Scale in conflicts over resources in ASLNP**

A closer examination of various modes of ordering, characterizing multiple relationships between and within different actor-networks, reveals structural and material forces at work beyond the geographic confines of the park. It is the interplay of broader political and economic factors that have visible impacts

on the ground effects. These different forces, at times conflicting and collaborating with one another, embody relations of power that are held together in momentary states of order.

The park management's conservation practices and discourses are derived from EWCA's national-level mandates and priorities for protected area management and development. These are in line with international conservation discourses, echoed through conventions and declarations, and endorsed by the government, including approaches to biodiversity conservation and protected area management. Similarly, the conservation paradigms pursued by EWNHS on conserving wetland ecosystem is aligned with broader global discourses of Birdlife International which are imparted through technical and material support and collaborations. These are geared towards enabling Ethiopia to become a signatory of the Ramsar convention, thereby elevating the lakes' conservation significance to an international arena. With such advocacies and calls for international alliances mounting, the Ethiopian government is striving to meet the Ramsar requirements. Abijata Shalla Lakes National Park has already been identified as a potential Ramsar site in accordance with criterion developed by Birdlife International.

Concurrently, the 'livelihood actor-network' and its premier discourse on the use of resources for making a living, also shows an intersection of regional and national policy directives of enhancing community economic development. In line with the government's national level goals of improving community livelihood, food sufficiency, and self reliance; there are ongoing development initiatives of social facilities such as electricity, water and schools for park residents. District government offices and NGOs engaged in providing such facilities are in line with national level development objectives of delivering basic livelihood and social services to the residents of the park.

Such approaches, although disputed by the park's management as contradicting its conservation ideals, are coordinated through the district offices and PA administrations. This demonstrates a divergence between conservation and development discourses. The result is a temporary scenario where district GOs and NGOs provide social and economic support with/without the consent of the park's management. This is a demonstration of political struggle that results in the empowerment of the dominant scalar arrangement. However, the hegemony of social and economic development discourse is by no means permanent. Rather, it is only a fragile state of order, characterized by constant struggles and resistances. This denotes that scalar structure formation is only a momentary achievement infused with ongoing power struggles, leading to fixing, un-fixing and re-fixing of scalar arrangements. A practical example is when the park refuted this hegemonic structure and prevented the district offices' attempt of extending electricity supply to the park villages. The project is temporarily halted as the dispute continues and awaits the intervention of yet more powerful actors such as the regional and national government offices. The enrollment of such powerful actors would again shift the power struggle to either side, resulting in a temporary scalar arrangement. Yet again, actors not in favor of the dominant structure will continue to wage resistance against the dominating arrangement.

Another case elaborating power struggle in scalar arrangements is in relation to the recent re-demarcation of the park's boundaries. A broad group of actors including community representatives such as opinion leaders (Aba Gedda) as well as national and regional level political delegates, GOs/NGOs participated in effecting the redefinition of the parks boundaries. Based on a resolution passed from the deliberation of the participating actors, the new park boundary was formed that left out some of the villages while incorporating others. This resolution, although a largely aggregate concession of the many actors that participated, was also challenged by some resident groups. To these groups, the re-demarcation was to their disadvantage and posed a threat of eviction. However, the re-demarcation was endorsed, giving the park managers legal empowerment to exercise strict control within the redefined boundaries. This is another reflective case of structure formation that embodies the hegemony of dominant discourse on the conservation of the park. However, this is only a temporary arrangement as there is an ongoing struggle and resistance by the community seeking to circumvent this dominant arrangement to their advantage. This is illustrated by the confrontation that took place between the park management and the residents while the re-demarcation was being implemented. Furthermore, despite the endorsement of the re-demarcation, the residents of villages left within the park have filed appeals to higher authorities to reexamine the re-demarcation.

The contested water extraction by Soda Ash Share Company and the park management's conservation-oriented zeal towards the lakes is another case of politics of scale in action. The Soda Ash Share Company, partly owned by the government of Ethiopia through the Ministry of Mines and Energy, has economic oriented priorities in line with the country's Green Economy goals of boosting domestic investment, import substitution and industrialization. As the sole supplier of Trona for more than 60 domestic industries, and with the goal of extensive production for export, the share company sees the exploitation of the lakes of nationwide economic significance. On the other hand, the park, also managed by the government through EWCA, is mandated to conserve the lakes' resources for sustainable nationwide development, advocating non-consumptive use of the resources. It is the incongruence of the two priorities that has surfaced as an ongoing struggle. The recent planned project by the Soda Ash share company to divert water from Lake Shalla had been temporarily suspended due to unresolved conflicts over the lake's water extraction activities. While these underlying contentions are ongoing, engulfing actors and priorities of nationwide significance, the park management maintains the momentary upper hand by deterring industrial water abstraction activities from Lake Shalla, in line with its conservation mandates. At the same time, the Soda Ash Share company maintains operations inside the park based on Lake Abijata. The Soda Ash share company (38% government owned) and the higher body managing the park, EWCA, are both administered under the federal government. This reveals the incompatible investment and conservation discourses and priorities manifested as conflicts between the two onsite management bodies. It also shows the undetermined and constantly re-negotiated role of the government (in the form of EWCA and Ministry of Mines and Energy) in bringing resolution to the conflict.

While the above conflicts showcase how certain conservation/economic development related debates over natural resources are embedded in broader global, national and regional debates, some other conflicts are particularly local in their context. A case in point would be the salty mud sellers and their claims on salty mud collected from the shores of Lake Abijata. The rights over collection of salty mud remains a matter predominantly concerning the few groups within the community leading life based on the sale of salty mud. Thereby the concern is relatively less debated nor controlled by actors beyond the park's management.

## 5.5 Role of Tourism as a potential version of the Park

The preceding sections have discussed how natural resources in ASLNP are enacted in versions depicted as 'Natural resources for livelihood', 'Natural resources for industry' and 'Natural resources for conservation'. It was also shown that the park is held together through a series of collating and conflicting relations within and across different versions. As such complexities pervade, where roles are shifting and boundaries are being renegotiated, a new enactment of natural resources in the form of tourism is now emerging. Tourism is being proposed as the solution to addressing the conflicts between different enactments. Considering the existing complexities, examining the role of tourism in the resolution of the conflict requires understanding how and why it is now emerging as a new enactment and how it relates to other versions of the park.

The approach taken by this study requires a move away from the conceptualizations of tourism as a singular and organized form of intervention to the park and its problems. There are a multitude of different actors, interests and practices that are being brought together and enacting a new tourism reality of the park. Accordingly, tourism as an emerging version reflects the entwinement of these diverse actors, notions and practices about how natural resources are defined and should be performed.

In this regard, management of the park onsite, EWCA, the Ministry of Culture and Tourism, private investors, conservation organization and tourism professionals are collectively forging discursive, material and practical alliances in forming what is emerging as the 'Tourism network.' These different groups commonly share the discourse that natural resources in ASLNP are degraded due to human and industrial activities, worthy of conservation and have potentials for developing tourism and earning revenue. The assortment of actors in the 'Tourism network' largely relates to groups and interests from the 'Conservation network' that are assuming new roles and enlisting other new actors such as private investors, tourism professionals, tourists and the resident community.

Although tourism is a land use practice promoted since the park's establishment, its emergence as a new version, pooling in such diverse groups is a recent trend shaping and being shaped through its relations with other realities. It is also notable that this surging of tourism as a new version is taking place at a time where the long dated contestation over use of natural resources have soured and uncertainties are looming.

The park management on site, EWCA and Ministry of Culture and Tourism, collectively uphold the ideals that natural resources in ASLNP mark a peculiar, fragile and representative ecosystem. They acclaim that the natural resources have national and international level significance for the development of tourism, particularly as a birding destination. The natural resources, particularly the wetlands, birds and the landscape features, are defined as having international significance for promoting tourism. This discourse is shared with the 'Conservation network' and is also practically and materially enforced as all these groups are under the administration of the government led Ministry of Culture and Tourism. EWCA and the onsite park managers, ascribe the human settlement and livelihood practices as factors threatening natural resources which are considered the base for tourism development. In line with conservation discourse and practices, tourism is framed by the park management as a mechanism of preventing further resource degradation and enhancing better conservation status. It is translated as a conservation tool and a promising source of revenue while maintaining and promoting the resources of the park.

Similarly, conservation organizations such as EWNHS and tourism professionals advocate tourism as an important intervention in resolving the contestation over natural resources. Tourism professionals are now propagating ideals of 'Ecotourism', as intervention mechanism with elements of nature based tourism and community benefits. Natural resources, depicted as sensitive and unique are also enrolled as attractions in the tourism network. To these groups tourism is promoted as a key to bridging the conflict between the 'Livelihood' and 'Conservation' versions of the park. Through creation of benefit opportunities from tourism development, tourism is seen as a mechanism of translating conservation ideals to the community and enrolling them in the conservation network.

Concomitantly, different private investors are being enrolled in this ordering process where there are currently three different (eco) lodges under construction (one almost completed and two underway) in different locations in the park. According to the park's chief warden the aim is to "Use tourism as an instrument that promotes conservation ideals while creating employment and other benefit opportunities to the surrounding community." Accordingly in the emerging 'Tourism network', the resident communities are also being enlisted as participants in conservation endeavors through ascribed benefit opportunities from tourism. While the tourism network is on the rise, agglomerating actors and having close affiliations with the 'Conservation network', it also features discursive and practical divergences with the two other enactments discussed.

In its relation to the 'Livelihood network', the tourism enactment is variously defined and acted upon among the resident community of the park. Over interviews with the park's resident community on their perceptions and engagement with planned tourism, their responses largely reflected their strained relations with the park's management. Currently, the resident community does not get any form of benefit from the existing tourism revenue of the park. A farmer, living right outside the fenced 1km<sup>2</sup> park head quarters notes; "About tourists, I can only speak what I know. We see them coming with the park

staff, they drive across the villages and they go back. They have no contact with us. There is nothing they do for us or our PAs.” While this response reflected the lack of benefits from tourism, the current relationship of the farmers with the park and its implications for tourism was better reflected on this response from a FGD in Desta Abijata. “We cannot see the benefits the park can get us in the form of tourism under our current conditions with them. We are not even in good terms with them in the first place.” To these groups it is largely inconceivable to seek benefit opportunities from the park under the given circumstances.

As conflicts over access and resource use rights are ongoing, some groups in the community see tourism as an additional form of land use that would further restrict their livelihood practices. A demonstrative case was the resident community’s agitation over a private enclosure around Lake Chitu that was originally intended to be a production site for Malaysian Spirolina Mushroom Company. The Spirolina production is now abandoned following opposition of park management on the planned operation. The same company shifted its investment to tourism, which the park management considered as conservation oriented development approach. The facilities of the former company are currently being developed to into a tourist lodge. The residents interviewed were particularly resentful that the area had been enclosed with fences, restricting their use of the lakes and the nearby roads. Their resentment was particularly pronounced as they do not see these developments being beneficial. Instead these are seen as controlling and restricting their daily livelihood practices. Yet to other community groups interviewed, particularly the unemployed youth without land, tourism is envisaged as a solution for their livelihood problems. As one respondent from an FGD with the youth claims “It would be very helpful if the park would provide us with benefits from tourism. It would give us another alternative other than the land that we depend on for living.”

While these responses reflect the definitions and corresponding practices of the community towards enactment of the natural resources for tourism, tourists as one of the actors being enrolled have their own definitions of the situation. The visitors I followed were foreign tourists traveling on organized tours with tour companies based in Addis Ababa. Their visit to park was part of the package tour to southern Ethiopia tourist attractions. Most of the interviewed tourists described their interest visiting the park as including the landscape scenery, the three lakes, the birds and the wildlife. Their visit to the park is facilitated by the scouts who are in charge of accompanying and guiding them through important attractions and routes. I observed these groups at tourist attraction sites such as the view points, the lakes regions, the hot springs near Lake Shalla and the fenced ostrich farm near the headquarters of the park. While these sites are translated as chief tourist attractions, the visit to the park necessarily presents a broader scene cluttered with human settlement, farms and livestock which reflects livelihood versions’ definition of natural resources and its spatial translation. Interviews and observation conducted on visitors focused on their experiences such as prior interests and expectations, actual encounters in the park and their responses and reactions to the situation. The results reflected that the presence of



large numbers of settlers/settlement, farming and grazing sites contravenes the widely surfacing conceptualization of a national park in the tourism enactment. A German tourist I interviewed who was in the park in an organized tour group expressed disappointment with experiences in the park. She noted “When I thought about visiting a park in Africa, I expected a Safari type of tour experience, was expecting to see some wild animals. The landscape is still how you would imagine ‘Africa’ but there are not a lot of wild animals here.” Such responses of tourists revealed the mismatch between prior imagery of an ‘African Wilderness experience’ and actual experiences in the park. Still other tourists evaluate the current state of the park and their encounters in light of their previous experiences in the park. I talked to an Italian tourist who has repeatedly visited the park over the past twenty years of his stay in Ethiopia. He described concern on the continued degradation of the resources recounting of his experiences in visiting the park in the past. In his words he notes “...the most memorable attraction was the ‘pink shores’, the big flocks of flamingos nestled on the banks of the lakes. And now it’s gone. The acacia trees were like a carpet that covered the area but now the forest is gone that the lakes are visible from afar. Over the years trees have disappeared nonstop and even now they (the resident community) are selling charcoals. If this is a national park, they (park management) should stop the people from cutting down more trees.”

On a similar case, I talked to the owner of a tour company who was also there accompanying his tour group. His main concern was the degraded state of the park and the lack of facilities. “This park has quite a potential especially for birdwatchers and we have many tourists that want to come to see this place. But we are often disappointed when leaving; there is not much to see besides villages and cows.” Such responses reflected two differing definitions of natural resources in the ‘Livelihood’ and ‘Tourism’ networks. The corresponding appropriation of space in the park shapes tensions between the two realities.

While most tourists interviewed expressed dismay with settlement, farmlands and livestock observed, contravening their expectations of a national park, to others the existing state of the park itself appeared as a strange source of appeal. I interviewed American tourists whose experiences in the park reflected just this. As one respondent notes, “This place has a wonderful landscape, everything has its own beauty here, even the cattle and the settlers in the park are what make this place different.” Thus, these objects making up the scene of the park are defined and experienced differently by different tourists.

Some tourists respond to the scenery in their own different ways; taking pictures of the settlement sites, livestock and farm lands which are translated as unusual objects of tourist gaze. Another visitor’s reply vividly expresses this, “The interesting thing about this place is that you don’t get the feeling it has been reserved for tourists. I personally think it’s an appealing factor that you have an area that is still natural but also have people living here, so the whole setting is not really ‘prepared’ for tourists.”

The above descriptions show that the relationship between the 'Livelihood' and 'Tourism' networks is complex that features conflicting definitions of a situation as well as possibilities for overlap between these realities. While the 'Tourism network' has largely collating relations with the 'Conservation network', its relation with the 'Livelihood network' reflects diverting definitions and practices. To this end tourism's role in the resolution of the conflict between the 'Livelihood' and 'Conservation' realities is limited and highly uncertain. On one hand there are convergences in the ideals and practices between some resident groups, the park management, conservation organizations and tourism professionals where tourism is seen as a solution to the conflict. In this way, tourism development that engages the resident community through different benefit opportunities can enroll them in conservation works. This would mean translating conservation ideals in the form of practical and material alliances through instrumentality of tourism. In such ordering of 'Tourism network', there is also a possibility of enrolling visitors who still find appeal in the park and its features.

However this 'would be tourism network', where tourism could play role in bridging the standoff between 'Conservation' and 'Livelihood' versions, is also incomplete and prone to fractures. Its ability to constantly and successfully enroll diverse actors determines its sustained existence. As any ordering is a precarious achievement, 'Tourism network' and its potentials in the conflict resolution is prone to disruption. This could emerge from large groups of the resident community whose livelihood needs tourism is not able to meet. Given the significant number of residents whose livelihood is entirely dependent on the resources, tourism cannot feasibly address the livelihood demands of all residents. Such groups who do not see the benefits of tourism for their livelihood would continue to wage resistances and struggles on the 'Tourism network'. Furthermore, to continue to exist, the tourism network also requires visitors to be continually and successfully enrolled. It needs to have enough number of visitors that would that continue be interested in the experiences the park has to offer with its existing features. Thus, while tourism does have the potential in being a part of the solution in resolving the conflict between the conservation and livelihood realities; its role is limited, fragile and relies on the constant enrollment of the diverse actors that constitute/ are related to the 'Tourism network'.

On another hand, the emerging 'Tourism network' and the 'Industry version' of the park feature differing priorities, conceptualization and practices on natural resources. The 'Tourism version' basically draws on the conservation of Lakes Abijata, Shalla and Chitu and the biodiversity system supported as tourism attractions. Evidently the lodge under construction on shores of Lake Shalla seeks to cater to birdwatchers with ideal scenic spots for bird watching. Conversely, the Soda ash share company aligns with its discourse on the industrial merit of Lake Shalla in proposing it for upcoming water abstraction activities for production of Trona. This is also happening at a time where the alleged impact of the share company on the dropping level of Lake Abijata is still unresolved. These differing definitions of the

situation and subsequent practices, could potentially lead to conflicts between the 'Industry' and 'Tourism' versions on how the lakes should be utilized.

The 'Tourism network' embodies similar interests and priorities to the 'Conservation network' in terms of what practices need to be promoted on the lakes. In light of the existing contention between the conservation and the industry versions, tourism as a new version also adds to the importance on the need to conserve the natural resources. This implies tourism pulls the string towards the 'Conservation network' as it also relies on the conservation of the resources for its thriving.

## 6. Discussion and Conclusion

This thesis examined the complex environmental disputes in ASLNP through describing, connecting and analyzing the multiple enactments of the park and the interrelationships among these. The study also analyzed the role of tourism as a potential version; how it fits in with the existing complexities and if it could contribute to the resolution of conflicts over natural resources in the park. In this last chapter, the discussion section reflects on the scientific and practical contributions of the study. In so doing it synthesizes the conceptual and theoretical insights employed from ANT, ontological politics and politics of scale in their application in this study. Finally the conclusion section, wraps up the study, recounting the research questions and how these were addressed through the study.

### 6.1 Discussion

#### 6.1.1 Natural Resources as Multiple Enactments

The approach taken in this study called for a re-conceptualization of what ‘natural resources’ are and how they are to be handled. One of the common strategies in social sciences in engaging with messy objects is to assert there are multiple interpretations of different groups towards the object under scene (Law & Singleton, 2005). Such lines of thinking or ‘perspectival approaches’ explain how such multiple interpretations shape the relationships between different groups (Law & Singleton, 2005). In the context of this study, such approaches would frame ‘natural resources’ differently from the perspectives of farmers, Boje dealers, park management, tourists and others. The projection of this approach is that explaining away these different interpretations would lead to retrieving the real conceptualization of natural resources behind the different perspectives. This study argued with Law and Singleton (2005) and questioned if framing approaches can sufficiently grapple with the messiness of objects like natural resources. It mounted a question, “is there is after all a singular and solid conceptualization of natural resources that can be achieved through science examining different perspectives?” Towards better understanding the complexities of natural resources, the study took on an ontology based approach to rethink conceptualizations on what counts as natural resources.

First, instead of explaining the multiple perspectives of different groups, the study redirected its inquiry to the very base, the ‘is’ of what natural resources are. It carried the discussion further and asserted that there are not merely multiple interpretations, but instead multiple objects; multiple versions of natural resources. To this end it set off with its analysis of the complexity of the conflict in ASLNP by loosening the seemingly pre-given and firm ground of the problem. Detaching the problem from a fixed frame of reference leaves it variously defined, performed and therefore, having multiple versions. This entailed following, describing and analyzing the continual maneuvering of the problem beyond its apparently static and predefined foundations.

Second, it employed ANT inspired insight, the idea of 'multiple enactments' which provided a distinctive conceptualization on natural resources. The concept of multiple enactments indicated that reality is enacted into being, rather than merely observed (Mol, 1999) and is done so by different actors through different practices and discourses. This is not merely about the presence of different interpretations of different actors towards the natural resources of the park. Instead the study indicated that natural resources themselves are multiple depending on whom, how and what methods are used in defining and performing these. Therefore, this thesis discussed how farmers, livestock, salty mud dealers, shifting pastoralists, the Soda Ash Share company, the park management among others enact different versions of the natural resources in the park through different practices and discourses. This further implied that natural resources assume different performative realities depending on how certain actors define, respond to, and engage with these. The study examined three of such differing enactments of the park identified as 'Livelihood', 'Industry' and 'Conservation' versions, out of several other practices in and around the park. Within each of these realities of the park there were diverse set of actors, practices and discourses that interrelated in different ways. Thus, performances had generative effects in bringing forth certain realities among others which also translates in the writing of this study. The enactment of natural resources in the identified versions was also partly done in the process of getting to know those realities( Law and Singleton, 2005). Thus, conducting this study is also performative in reconstructing a reality in such a way that enacts these particular versions among many other practices on ASLNP and its resources.

While investigating how natural resources are enacted into different versions, focus was drawn on different type of connections among a broad variety of actors, their practices and discourses. The notion of 'materiality' necessitated indiscriminate search for actors (without prior distinctions as big and small, human and non human, distant and near) depending on their roles in the connections unfolding. In ASLNP, this enabled tracing and encompassing wide varieties of less visible, remote yet important actors such as shifting pastoralists, livestock, the lakes, Boje dealers, and their interrelationships. It showed that livelihood version comes into being through complex relationships among these diverse groups which collectively define resources as means of livelihood. Moreover, it disclosed how their definitions and stories have performative effects as demonstrated with the way land is differently performed on and enacted into different versions such as grazing pasture, settlement and farming sites.

Another ANT inspired notion of 'translation' revealed different mechanisms through which relations among different entities come to form networks and how these are sustained. In the context of ASLNP this enabled disclosing different forms of material, practical and discursive translation mechanisms that are employed to enroll actors to a particular network. This was evident in the relationship between the pastoralists and the farmers where livestock, marriage alliances, fees and grazing pasture forged an important alliance within the livelihood version. Other instances showcased ties across different enactments as was seen between the farmers, the park and conservation organizations. The financial

and material incentives, the awareness creation given for farmers are evident examples of translation mechanisms. The outcome of these translation mechanisms was the successful enrollment of farmers in the conservation network where protected area enclosures were established as farmers performed conservation by complying with restrictions against tree clearing in those areas.

Explicating these processes was helpful to show how natural resources are successfully translated and temporarily ordered to form particular version. Yet as was shown in the study, “there is no single master plan of translation” (Van der Duim et al, 2012: 16) but instead there are series of conflicting and collating relationships within and between different enactments. This brings us to the concept of ‘Modes of Ordering’, which was helpful to reveal the complex relationships that arise from complex interweaving of multitude actors, claims, practices and discourses. The ‘Livelihood network’ itself was a heterogeneous construct that included different orderings by the farmers, pastoralists, Boje sellers, livestock, the lakes, the grazing land and the birds. The ‘Conservation version’ similarly disclosed different priorities, practices, discourses and collations among the park and other conservation organizations. There are different modes of ordering natural resources that demonstrated conflicting as well as collaborating ties with other actors/actor-networks.

Third, the conceptualization of natural resources as having multiple versions sheds new light in the existing conflict at ASLNP with important implications in natural resources management endeavors. Such treatment of objects as having multiple versions had been applied in other areas such as, atherosclerosis by (Mol, 2002), Alcoholic liver disease (Law and Singleton, 2005), work on and Gorilla tourism, (Van der Duim et al., 2014). Similarly this study has engaged with the enacted character of natural resources to better understand and grapple with its complexities. It has treated natural resources as actants, both shaping and being shaped by the relations they are part of. Examining the enactment of natural resources for ‘Livelihood,’ ‘Industry’ and ‘Conservation’ has exposed the processes that go into making these arrangements. By bringing to light the complexities on the enacted character of natural resources, this study also signals the possibilities for yet other ways of enacting these. It has also given a broader context of the issues and contingencies at stake including land administration system, the role of the government, economic and industrial development policies, practices and their relationships with conservation endeavors and priorities.

Fourthly, the view of tourism as a potential new enactment has practical implication in having broader understanding of how tourism fits in the existing complexities of the park and potentially aid in the resolution of conflicts. This has signaled that tourism itself is not a coherent whole that can be introduced through certain actor/s. The study has demonstrated the ongoing contentions between the ‘Livelihood’ and ‘Conservation’ networks has brought about redefined roles and enrolling of new actors in forging tourism as a new enactment. Thus the ‘Tourism network’ was understood as having closely collating priorities, discourses and practices with the ‘Conservation network’.

On another hand, 'Livelihood' and 'Industry' versions have largely conflicting practices and discourses with the 'Tourism network'.

To this end, the 'Tourism network' can have contributions to make in resolving conflicts between the 'Livelihood' and 'Conservation' networks. The study has shown that benefit opportunities from tourism are examples of translation mechanisms for enrolling farmers in conservation endeavors. Yet how far does such ordering endure and to what extent is it successful? As any ordering is uncertain as there are always possibilities for fractures in a network, the 'Tourism network' would also be fragile and undetermined. Its role in conflict resolution between farmers and park management is also limited, requiring constant performances and successful enrollment of farmers, tourists, tour companies, the park management, conservation organizations, the wildlife and birds. Scientifically the approach taken in this study offers a renewed and singular treatment of tourism that avoids either ends of approaches that dub it as a panacea for all problems or heavily disparage it all together. This broadens conceptual insights to examine underlying complexities of tourism and its relations with other enactments.

### 6.1.2 The Problem as Shifting

The study had set off refuting the pre-defined and singular status of natural resources. Instead the study asserted that what appears to be the fact, the state of order, the existing scenario, should be re-questioned, as facts do not speak outside the realm of the social (Carolan, 2004). In so doing it was shown that what appears to be the problem goes on multiplying rather than remaining single and fixed, as other emerging complexities are unveiled. In the study, the seemingly apparent 'resource degradation problem' constantly shifts and multiplies depending on who talks about it, how it is talked about, and what methods, labels, stories, parameters are used to define it and why.

Resource degradation in the 'Conservation network' implies first hand loss of trees, loss of birds and wildlife, loss of wildlife habitat, loss of landscape scenery, and disturbances of ecological equilibrium. Yet even within the conservation network, the problem on natural resource degradation not is not as singular and as straightforward as it appears. Different actors in this network use different methods in defining and presenting resource degradation as a problem. For the park management for instance, resource degradation has to do with the presence of settlers and their activities in a supposedly protected area. Conservation organizations such as EWNHS and IBC apply the decline in biodiversity and ecological disruption when discussing resource degradation as a problem. Yet, this is not merely about different actors referring to different issues when describing the problem. It is also about how they perform towards the problem that yields in different performative realities. Furthermore, in the conservation network in ASLNP, different actors engage with the problem in different roles and capacities. Power is seen for its effects in the connections among actors/actor-networks rather than as a vested possession of certain actors only. It is thus relational and non static, constantly shifting with the ongoing relationships. The connections among EWCA, park management and conservation organization

EWNHS, result in the successful orderings of the conservation version. In this same network other actors such as the birds, wildlife and the landscape features are represented and enrolled through translation. This includes the designation of the lakes and the wetland birds as potential Ramsar sites. It involves national deliberations on the 'Dying Lake', and re-demarcation measures to enforce restrictions on human practices.

Following on with the notion of shifting reality, the study showed how same the problem, 'resource degradation' assumes a different meaning and embodies different practices in the livelihood network. Here it is about the loss of trees that induce lack of rain and entail subsequent drought. Here it refers to land scarcity that necessitates land clearing and livelihood practices that are endangered due to loss of resources. Accordingly, this involves designating different parts as fertile/ unfertile lands for farming, grazing pastures and settlement sites. It relates to community meetings about landless youth and involves appeals against re-demarcations and prohibitions on Boje selling.

'Resource degradation' shifts to ecological disturbances and unmanaged external threats on the lakes' sources in the park's 'Industrial version'. In this version, resource degradation is construed as a problem in light of its impacts on the declining lakes volume, which in turn, affects the production of Soda Ash. This results in responses such as attempts to secure more water from Lake Shalla following Lake Abijata's continued decline.

This indicated that the problem constantly shifts with different actors moving in and out as well as different mechanisms employed in defining and engaging with the problem. Through this shift, the problem of resource degradation possesses multiple versions, as it is about biodiversity conservation, rain scarcity, land tenure and administration systems, self-reliance and food security aids of GOs/NGOs, industrial and investment policies and practices, incongruent conservation and development priorities of the government. The shifting nature of the problem brings us to the previous notion of multiplicity where reality is enacted differently resulting in performative realities that are continually shifting.

### 6.1.3 Problem beyond the boundaries of the park

Still along the lines of 'a relationality geared approach of the study', politics of scale presented a useful theoretical framework to mount the breadth of the examination beyond the park's spatial boundaries. Paulson et al. (2005:18) asserts relational treatment of scale in environmental studies "opened the possibility of bringing into the analysis social relations and places that are not necessarily proximal to the ecological phenomena of interest." With the continued maneuvering of the problem, it disclosed how certain debates are further entrenched in broader national and global discourses and practices. In this study this shows how conservation priorities of the park derive their sources from international discourses, conventions and practices to which the country is a signatory. International conventions and organizations on conservation (e.g eligibility criterion for Ramsar convention, convention of Biodiversity conservation) to which the country is/ seeks affiliation exert remote yet important influences on the practices and discourses happening at the park level.



The study also showed how certain scalar arrangements assume momentary hegemonic orders. Scalar arrangements are imbued with a series of ongoing power struggles with other groups that feel disadvantaged under the prevailing scalar arrangements. This was applied in the study in examining the conflicts between the conservation and livelihood versions over the re-demarcation of the park. The conservation network pooling in a range of national and regional activists and organizations was able to effect the re-demarcation. Despite this hegemonic arrangement however, the disenchanting community groups continue to wage resistances that characterizes the ongoing struggle behind scalar arrangements.

#### 6.1.4 Ontological Politics in the doing of this Study

At last it need to be realized that conducting this study is also matter of ontological politics (Mol, 2002) charged with role of intervening in co-enactment of the realities pursued in this study among others. Thus, the research acknowledges that it does not merely describe but also engages with reconstruction of realities of the park. As Law (2009: 142) notes texts in this study too “come from somewhere and tell particular stories about particular relations.”

The research/er has brought in a number of important elements that have bearing on the way the park is enacted in different versions identified. During the initial phases of the study, decision was made grounded on preliminary observation and interviews about which actors to trace that gradually pointed to the different types of relationships. The different realities that emerged were outcomes of how this study translated and ordered the connections among them. There were pragmatic and analytic factors that counted when deciding inclusion of some actors in the networks, tracing these, as well as on cutting off a network. For instance it proved impractical (due lack of willingness by from the managers) to include the upstream industrial rose farms in the industrial version. As a result, it was left out of the network. There also several other livelihood practices on the resources that were left out of the livelihood version due to practical limitations. On a similar note, it was the researchers’ decision to include two of the conservation organizations as being more relevant for its purposes out of several conservation GOs/NGOs affiliated to ASLNP. The study was also bound with budgetary and time constraints that implied restricted study area and therefore a restricted scope of observations and respondents. The decision was made to terminate further tracing when no additional unique information was forth coming.

This is a particular case of ontological politics in this research; of enacting certain realities while ‘othering’ some. As Van der Duim et al (2013: 14) notes “As researchers, we are in the business of making particular kinds of realities or worlds more real, other versions are made less so and thus being othered.” To this end, it needs to be realized that the way realities are constructed in the study is not the ‘actual’ representation of the realities of the park. Rather, it’s a particular re-construction that is open to being disputed, eroded, re-built, with other possible actors enrolled or new versions being enacted and

some being left out. Therefore performative practices that go into reconstructing reality should be acknowledged in viewing the park as an enactment of the realities presented in this study.

## 6.2 Conclusion

Aspiring to shed new light to better understanding the complexities of the conflict at Abijata Shalla Lakes National park and hence contributing towards new solutions, this study took a non-framing approach in examining the main research questions;

1. How do different discourses and resource utilization practices result in enactment of multiple versions of ASLNP?
2. How and to what extent do the multiple enactments of Abijata Shalla Lakes National park lead to conflicts?
3. How and to what extent can tourism development contribute towards conservation of natural resources and aid in resolution of conflict?

Towards addressing these, the study introduced ANT, backed with multi-sited ethnography as an essential methodology in tracing, connecting, describing and analyzing complex entwinements among actors, practices and discourses that give rise to the enactment of the park in different versions. As ANT destabilizes the solid ground of the problem, ontological politics reveals how multiple realities of the park unfold through shifting and variously interwoven connections whilst acknowledging research/er's interventions in the making of these. Spatial boundaries of the park are transcended in the relationality geared approach as it interrogates how some debates are embedded in broader political debates through politics of scale. This section ties together the main parts of the study and synthesizes important points discussed while reflecting upon these in relation to the research questions.

Abijata Shalla Lakes National Park was translated in this study as an enactment of at least three variously configured versions identified as; 'Natural resources of livelihood', 'Natural resource of conservation' and 'Natural resources for industry'. Through its vested interest in opening up black boxes, the study employed ANT as a tracing approach in following, examining and describing unlikely actors, their practices, discourses and connections. Integrating multi-sited ethnography the study assembled different techniques such as participant observation, FGDs, semi-structured and in-depth interviews that were maneuvered differently as tracing for actors and connections went underway. ANT's concept on materiality enabled the study to redirect focus on less recognized actors such as the livestock, the lakes and land which are nevertheless important elements in creating and sustaining links among actors/actor-networks. In analyzing relationships and connections, the study revealed different tactics of translation that explains the range of discursive, material and practical mechanisms that go into enrolling or re-enrolling actors to a network. Although not permanent and with clear cut boundaries, the study

showed how the different versions of the park are structured into temporarily ordered actor networks. What the study did in explicating tactics of translation, is to bring to focus the ongoing processes, materials and mechanisms through which heterogeneous entities are held together to form temporary orders. The 'Livelihood version' was depicted as an agglomerate of non-homogenous elements such as the livestock, the Godantu, the farmers, the land, the Boje dealers, the lakes, and the birds. The 'Industrial version' was brought into being through a configuration of human and non-human entities that include the Soda Ash Share Company, and lakes Abijata and Shalla. The 'Conservation reality' of the park was similarly shown as a heterogeneous construct that embodies diverse set of actors such as the lakes, the land, acacia trees, EWCA, the park management and other conservation organizations, EWNHS and IBC.

In examining the relationships among different enactments, the study showed how two important conflicts on natural resources are shaped in and through enactment of natural resources in different versions. The first conflict is between the farmers and the park management which reflects the discursive and practical divergence between the 'livelihood' and 'conservation networks'. Discursively, farmers align to the ideals that natural resources are sources of livelihood, and define their livelihood practices on these resources as legitimate. This definition of the situation also has performative role in the way farmers appropriate space as farming and grazing site, settlements areas etc. On another hand, the park management defines the natural resources as degraded, of national and international significance and in need of conservation. This practically translates in the way the park management designates spaces marked with outposts and headquarters devoid of human activities. These two conflicting definitions and the corresponding practices reflect the practical contestations that take place in the park. The conflict takes different forms including; community embarking on building new houses, scouts demolishing newly built houses and chasing away and confiscating cattle. There are also incidents of direct confrontation between resident farmers and the park staff as in the case of the re-demarcation of the park's boundary. These cases exemplify that differing enactments of natural resources shape the conflict. Another conflict examined is between the Soda Ash Company and the Park management. This conflict also relates to the way natural resources are conceptualized in the conservation and industrial versions to which the park management and the Soda Ash Share Company are correspondingly networked. Lakes Abijata and Shalla in the industrial version are defined in terms of their industrial significance in the production of Trona. The park management on the other hand defines these as having ecological importance in need of protection. Thus the conflict between these two over continuing utilization of Lake Abijata and new water abstraction from Lake Shalla emanates from differing enactments of the resources.

In relation to the role of tourism as a future enactment, the study showed how conflicts and collations among the 'Livelihood' and 'Conservation' networks is leading to new roles and new actors as well as new translation mechanisms. Accordingly, the 'Tourism network' is introducing itself, agglomerating

different actors whose shared discourse is the conservation of the natural resources for tourism. The 'Tourism network' discursively and practically aligns to the conservation network. On another hand, it is diverted from the 'livelihood' and 'industrial versions'. In terms of its role in the resolution of the conflict, tourism does have some limited role to play as a translation mechanism between the 'Livelihood' and 'Conservation networks'. It was shown that benefit opportunities from tourism could potentially enroll farmers to the 'Conservation network'. However, this ordering through tourism would be incomplete and unstable. Other actors such as community members not advantaged by tourism could wage resistances and leading to the crumbling of such an order. On another hand, in resolving the conflict between industrial and conservation network, the role of tourism is minimal. As tourism purports more enforced conservation practices, it is prone to accentuate the tensions between the 'Conservation' and 'Industry' versions.

What can be understood from the complex relations between different enactments is that the park is not only an outcome of successfully configured network of actors but also held through ongoing conflicts and resistances. What this study does is not uncovering an ordered structure of the park that lies beneath nor is it an attempt to aid in the construction of such an order. If anything it has only highlighted black boxed complexities, uncertainties, and loosely hanging connections and its fragility. In the processes it has brought to the foreground multiple realities that sustain the park through ongoing processes of conflicts, coalitions as well as interdependences. This study had introduced a fresh way of looking at the problem in ASLNP that provides an incomplete yet deeper understanding of the conflict and the role of tourism in it.

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# Appendices

## Appendix 1: List of Abbreviations and Acronyms

AAU:	Addis Abeba University
ANCEDA:	Arsi Negelle Nature Concern for the Environment and Development Association
ANT:	Actor Network Theory
ASLNP:	Abijata Shalla Lakes National Park
CRV :	Central Rift Valley
ETB:	Ethiopian Birr
EWCA:	Ethiopian Wildlife and Conservation Authority
EWNHS:	Ethiopia Wildlife and Natural History Society
FDDs:	Focus Group Discussions
GOs:	Government Organization
HoREC/N:	Horn of Africa Regional Environment Center/ Network
IBAs:	Important Bird Areas
IBC:	Institute of Biodiversity Conservation
kms:	Kilometers
m.a.s.l :	Meters Above sea Level
ms:	Meters
NGOs:	Non Governmental Organizations
PAs:	Peasant Associations
SSG:	Site Support Group
t/y:	Trona per year



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