ADDISABABAUNIVERSITY,
SCHOOL OF GRADUATE STUDIES,
COLLEGE OF SOCIAL SCIENCES,
DEPARTMENT OF SOCIOLOGY AND
SOCIAL ANTHROPOLOGY

WATER RIGHTS AND THE PROCESSES OF NEGOTIATIONS AMONG IRRIGATORS IN WEST SHEWA ZONE: THE CASE OF INDRIS SCHEME IN TOKE KUTAYE DISTRICT.

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A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLEMENT OF THE REQUIREMENTS FOR THE DEGREE MASTER OF ARTS IN SOCIAL ANTHROPLOGY.

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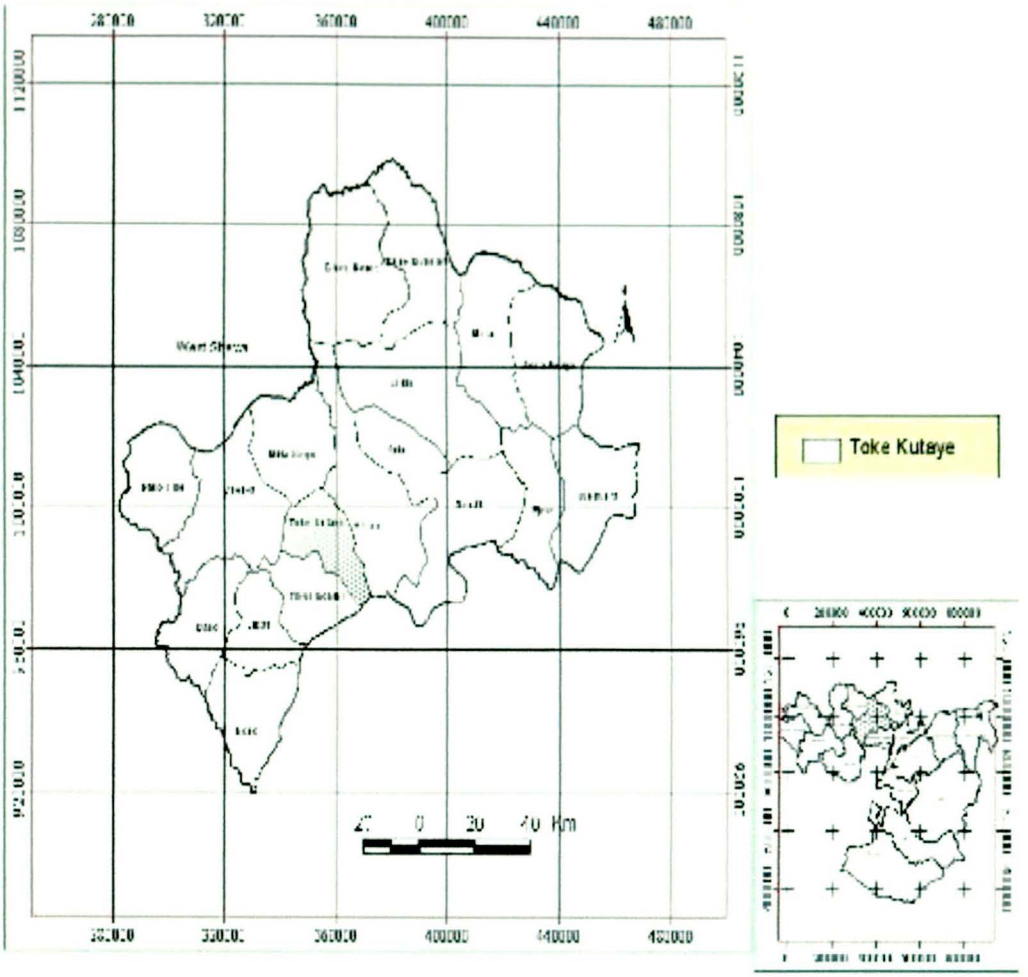
Glossary of Local Terms

Addee	A title offered to married women.
Birr	Ethiopian currency serving as a medium of exchange.
Dabaree	A rotational labor party organized by women in the same Neighborhood.
Debo	A communal labor party arranged to maintain labor deficit.
Derg	The military regime that ruled Ethiopia prior to EPRDF.
Garee	A team of 12-15 households according to the division by the ruling Ethiopian government for administration.
Gooxii	A team of 5-15 Garees in adjacent localities according to the recent classification by the Ethiopian Government.
Idir	An association of mutual support established for burial Services.
Iquib	An association established to promote local saving.
Kebele	The lowest local administrative unit next to district.
Nehase	Ethiopian month for August.
Obboo	A title given to married men preceding their proper name.
Pagume	The thirteenth Ethiopian month only with five days.
Ras	A politically appointed head administering a certain area.
Wereda	District
Zone	The current administrative structure next to a Region.

Acronyms and Abbreviations

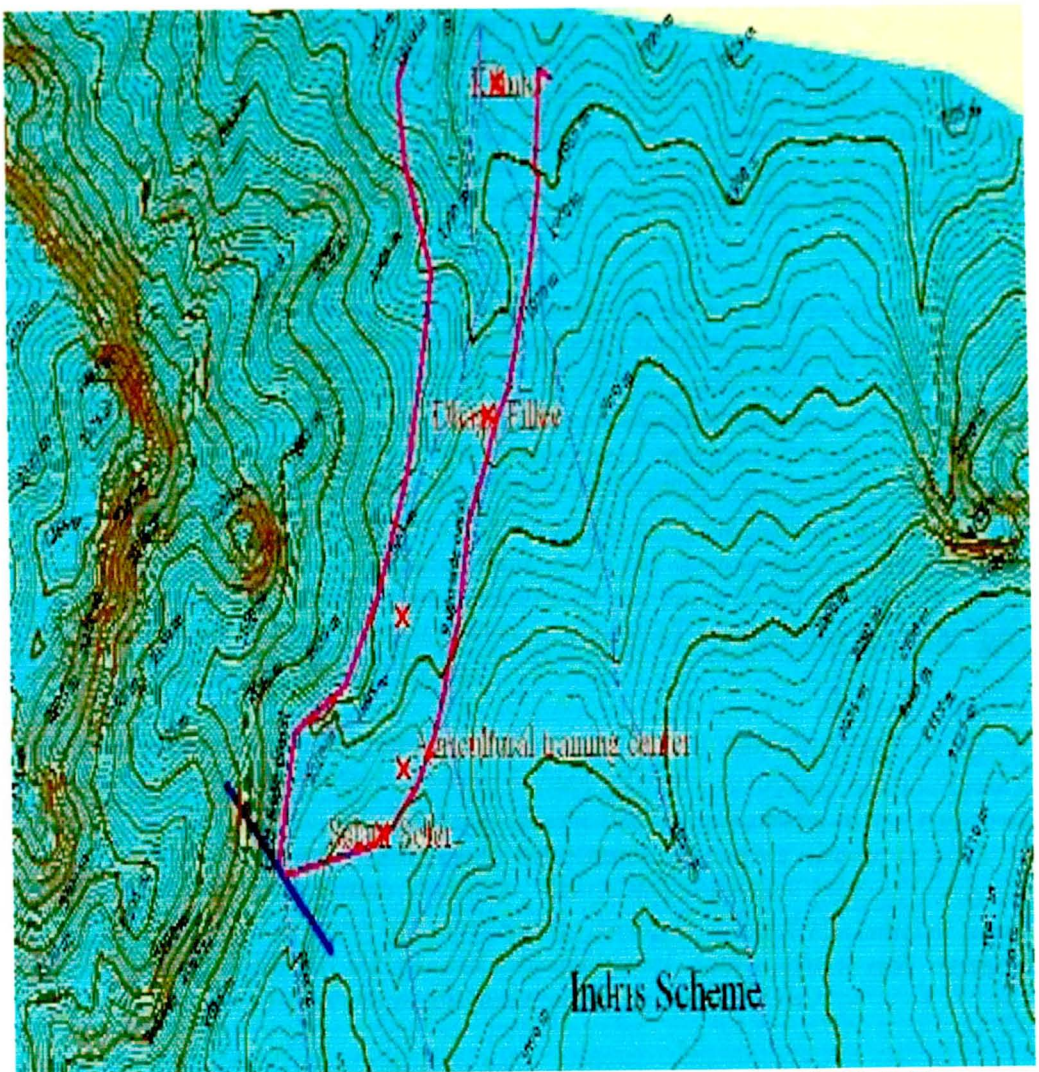
AAU	Addis Ababa University
ADLI	Agricultural Development Lead Industrialization.
CRDA	Christian Relief and Development Association.
DA	Development Agent.
GDP	Growth domestic Product.
EEC	European Economic Commission.
EPRDF	Ethiopian People's Revolutionary Democratic
ERSHA	Ethiopian Rural Self-Help Association.
FAO	Food and Agricultural Organization.
FDRE	Federal Democratic Republic of Ethiopia.
FGD	Focus Group Discussion.
Ha	Hectare.
HHs	Households
ILRI	International Livestock Research Institute.
IWMI	International Water Management Institute
MoWR	Ministry of Water Resource.
NGOs	Non-Governmental Organizations.
PA	Peasant Association.
SSI	Small Scale Irrigation.
WUA	Water Users Association.

Map-1: Location Map of the Study Area.



Source: Oromiya Finance and Economic Development Bureau, Regional Statistical Department (1999 E.C).

Map-1: Relative Locations of the Study Peasant Associations (Specific Research Settings)



Source: Oromiya Irrigation Development Authority (1999 E.C).

Legend

-**X** in read mark indicates the focus settings of the study.
-Continuous Lines with read color represent **left and right** canals of Indris scheme.
-The diverging juncture of the canals with **blue bar** indicates Indris schemes diversion Point.

Abstract

Though water rights are at the core of exploiting water resources for irrigation purposes, trivial concerns were offered to the case of Indris irrigation scheme in Toke Kutaye district in West Shewa. The historical background and development of the scheme has been presented in a contentious manner. The augmenting number of competitors too paved the way for conflicts that recurrently erupt out and inevitably lead to a succession of negotiation processes. With the inception of such missing gulfs, this research aimed to scrutinize water rights and the processes of negotiations among irrigators along Indris modern scheme, in Toke Kutaye district. To maintain this objective, qualitative anthropological methods were predominantly utilized as the main data generating research tools in the field.

The findings of the research depicted that Indris scheme marked three significant phases in its historical development. In these phases, explorations pertaining to water rights and processes of negotiations were found to be at their immature ground. While the elements of the riparian doctrine of water rights preponderated during its initial phase, the components of appropriative doctrine pronounced more at its middle age. A mix of ingredients from both doctrines interwoven with certain extra requirements determined the water right access of users since the conversion of the scheme into a modern style. Multiple water right rules emanating both from the customary and formal water acts have co-existed to direct the actions of users. In this regard, the theoretical orientations of legal pluralism in water right paradigms proved to coincide with the pragmatic contexts of water users from the scheme.

Conflicts in connection to irrigation water use and rights, that have escalated over years, have been attributed to the decline in the volume of water resources, institutional failures to address the causes adequately, week observance on governing water right rules and increasing demand of users. As a result, negotiation processes aiming to settle disputes were repeatedly initiated either by users, committee members (elders) or courts. The procedures pursed to narrow the contrasting interests around the scheme verified the pragmatic applicability of the central arguments of both cyclical and developmental models of negotiation processes discussed thoroughly by Gulliver.

Thus, in the face of growing demands on a declining water resource, the findings of this research revealed out that concerned individuals or relevant institutions need to exert further endeavor on the formulation of water policies that clearly stipulate specific irrigation water entitlements of users in a turmoil environment. Enforcements on the frame of references set on the water manual need to be rigorously checked on practical implementations. Consciousness buildings on irrigation water right claims, promotion of negotiated approaches in disputes and particular accentuation on customary rules of resource use constituted the dimensions seeking meticulous considerations in prospect.

Chapter-One

1.1. Introduction.

Ethiopia being predominantly an agricultural country, half of the GDP, close to 90% of export earnings and about 85% of people's livelihood sources has come from agriculture (CRDA, 1994:20). Irrigated agriculture, complementary to the conventional rain-fed agriculture, has a history of more than one century in some parts of the country (Dessalegn, 1999: 10; Woldeab, 2003:25). Some indigenous schemes are said to have existed since the reign of Menelik II (National Irrigation Policy Discussion Paper, 1990:2).

The impulse to promote irrigation schemes has been triggered by the recurrently occurring droughts and worsened food insecurity situations (FAO, 2005). Tsegaye (1991:2) elicited though irrigation developments were taken to be among optional mechanisms to cope up with the prevailing poverty conditions, productivity through such systems has failed to meet the anticipated targets being constrained by a number of factors.

Studies by Mokonnen (1992) and (FAO,1978) for instance accentuated, mismanagement of irrigation practices could result in the problem of soil salinity, alkalinity, water logging, canal seepage, and expose people to various diseases like malaria. Lemma (1994:5) has also indicated constraints of irrigation developments to be highly associated with poor water management and dispute settlement mechanisms, topography, soils, distant markets and inadequate infrastructure, lack of credit, lack of market information and other socio-cultural factors.

Even though access to water rights and processes of negotiations over irrigation water entailed similar effects deterring the promotion of the practice, this notion has been overlooked greatly. Reflecting this argument, Cotula (2006:3) in the past, in most irrigation systems emphasis was tended to be placed on geophysical and technical issues; while social, legal and institutional factors have often been slightly neglected.

In our case (Ethiopia), earlier accounts and searches have appeared inadequate to indicate how water rights and processes of negotiations could contribute either to the development or under development of managing irrigation systems as a whole

In West Shewa Zone of Oromiya region where this research endeavored to scrutinize water rights and the processes of negotiations, several irrigation schemes operated both in indigenous manner and application of modern irrigation technologies. Indris modern irrigation scheme is among the scaled up ones and located at a distance of 2 Km south of Guder town. Initially, the scheme had been operating in an indigenous manner. It was promoted into modern system completely in 1986 E.C by the financial assistance of European Economic Commission.

Hence, this research has intended to examine water rights and the processes of negotiations experienced by water users in Toke Kutaye district of West Shewa Zone. Specifically, it discussed at length the historical background and development of Indris scheme, irrigation water management systems, basics in water right claims and decisions, co-existence of multiple rules that override water allocation and distribution, the significance of water rights and negotiations in the improvement of irrigators' livelihoods, linkages between water rights and interactive dimensions (like gender, power influence, economic status or ethnic affiliations), sources of conflict and its settlement, and processes of negotiations along with its outcomes. To have a comprehensive analysis on the theme under investigation, views of non-irrigators were also highlighted.

1.2. Problem Statement and Justification.

The development of indigenous irrigation schemes have been initiated either by individuals, households and community as a whole or an interest of an institution. Woldeab (2003:25) denoted that indigenous irrigation systems cover relatively small and scattered areas and employ simple methods. The intake structures are often temporary, having to be replaced from time to time. Prior to its complete conversion into modern style, Indris scheme was not far from this reality. Yet, no search has been

made on the historical development of the scheme. Even the prevailing data regarding its historical background were not only scanty and insufficient to connote the general synopsis of the historical development of the scheme but also presented in a contentious way among the water users themselves.

Even though studies on water rights and negotiations in Ethiopia have found to be inadequate, it is apparent that great deals of searches have covered topics of water management in irrigation practices (Lemma, 2004), conflict settlement (Yacob, 2002), irrigation developments (Dessalegn, 1999), associations and institutions managing irrigation practices (Shemelis, 2006) , environment and irrigation linkages (katharina, 2006; Mekonnen, 1992), and the role of irrigation in livelihood improvement and poverty alleviations (Woldeab, 2000; Nigussie, 2002 and Kerealem,2006). Indris modern scheme was entirely upgraded into modern scheme in 1986 E.C in its style of operation, management, water allocation and distributions. The indigenously governing water right rules were also interwoven with the recurrently modified government water use acts. Formerly, studies that portrayed the aforesaid dimensions around Indris modern irrigation scheme were almost non-existent.

In irrigation systems (be indigenous or modern) the decisions who, how, where and when to use water for irrigation usage have processed through individuals (commonly identified as water fathers) or Water Users Associations. The decision may emanate from a riparian rule; as our country has been part of a system that offered individuals who possess certain hectares of land to have the right to exploit other resources on it including water. Thus, the mandate of water use rights would be given by those who owned the land. However, after the land reform of 1967 E.C has occurred, farmers who had settled earlier closer to the water sources claimed for appropriative rights of water use. Difficulties emerged as these rules fail to address the interests of a growing population that demands water for expanding irrigation. As a result, the water rights of the majority irrigators become far from being considered enormously. It is rather

constrained further by factors like distance from the main diversion point, hours negotiated for water use per week and power interactions.

Along Indris modern irrigation scheme water users have showed antagonistic interests over water rights. While the Agricultural Training Center of Ambo College uses water continuously for 24 hours in the days of a week, farmers are limited only to certain hours and days of the week. These contradictions increase as the volume of water declines with drastically growing population of users in the area. The difficulties turn into more intricate as some water users involve in frequent water thefts. In addition to that the parameters for water right accesses have been changing over time. Hence, it requires eliciting the basics in water right claims, the contradictory interests of irrigators and the processes employed in negotiations for water rights.

Negotiation processes among irrigators have been indispensable to narrow conflicting interests on water rights as well as overall management. Most often, negotiations lead to enhanced water use rules and rights but not necessarily under all instances. When Indris scheme functioned in an indigenous manner, all sorts of conflicts were handled by water fathers. However, after the conversion of the scheme the involvement of stakeholders from the district agricultural desk has increased to smooth conflicts. Typically, the rough interactions between the Agricultural Training Center and the farmers escalated over years. While the farmers took the firm stand that the institute should return water to the river at least during the night, yet the research institute refused to consider this request.

The complicated nature of the above stated predicaments compounded with the debate going on among water users themselves (partitioned as upstream, middle and tail enders) as well as between farmers and Agricultural Training Center fascinated the researcher to have a holistic comprehension of the social dramas perceived over water rights and the processes irrigators go through for negotiations and renegotiations to evade disputes.

1.3. Research Questions.

Therefore, basing on the stated justifications to the problem statement, this research addressed the following guiding research questions:

1. How was the historical background and development of Indris Scheme?
2. What were the water management, allocation and distribution systems of Indris scheme?
3. What were the basics for water right accesses and decisions for allocations?
4. What were the water right rules adopted by irrigators at Indris modern Scheme?
5. What factors instigate conflicts among water users?
6. How negotiation processes have been made over water rights among water users? With what out comes?

1.4. Objectives of the Study.

The research has got dual objectives: general and specific ones.

1.4.1. General Objective.

The general objective of the study is to investigate water rights and the processes of negotiations among irrigators diverting water from Indris scheme located in Toke Kutaye district of West Shewa Zone.

1.4.2. Specific Objectives.

The specific objectives are to:

1. Study the stages in the historical background and development of Indris modern scheme.
2. Explore the nature of water rights and processes of negotiations prior to and post of 1986 E.C.
3. Investigate the rules and by-laws that govern water use rights, distribution and management aspects.
4. Study how decisions and negotiations have been made for water access and rights in light with interactive factors like gender, economic status and power.
5. Analyze the significances of water right negotiations for users (in relation to livelihood improvement).
6. Highlight conflict settlement mechanisms adopted by water users.

1.5. Research Method.

A qualitative research method was employed to collect relevant data. Ervin (200:160) denoted in applied situations anthropologists' assets continue to be their capacities for naturalistic, qualitative research in local communities and organizations using observations and key-informant interviewing. In this regard, both primary and secondary tools of gathering data were utilized.

1.5.1. Primary Methods.

The primary methods of collecting data involved interviews, focus group discussions, observations, case studies and photographs.

1.5.1.1. Interview.

Both unstructured and structured interviews have been held with water users, irrigation experts and development agents at district agricultural desk. Thus, users, water committee members, experienced elders found in (3) three irrigation villages were interviewed in unstructured way. Agricultural agents and experts as well as officials and daily workers at the Agricultural Training Center were contacted through structured interviews. About 6 non-irrigators (2 from each village) were also interviewed. All the interviewed non-irrigators were male.

Mainly, the purpose of interview was to gather detailed data through face-to-face interactions. This method enabled the researcher to generate sufficient qualitative information as it created an opportunity to click additional questions. Therefore, a total of 36 individuals (8 from each village, 7 from the agricultural desk and the rest 5 from the Agricultural Training Center) were approached and interviewed. Amongst the contacted individuals, 8 (eight) of them constitute women informants (2 in Selam Sefer, 2 at Dhaga Fillee, 3 at Kilinto and 1 from the district agricultural desk).

1.5.1.2. Key Informant Interviews.

This is an in-depth interview conducted with persons thought to possess cumulative experiences of working know-how on irrigation practices and water management through several contacts. These were representatives of water committee (2 from each

village), elders (1 from each village) and agricultural workers (1 Agronomist and 1 DA). Thus, a strong rapport was created with 11 key individuals.

The application of key informants assisted the researcher to enrich a range of themes difficult to find out through normal interviews. It also increased the validity of data collected through interviews. Moreover, use of key informants has a merit to explore past trends and histories of the development of the scheme.

1.5.1.3. Observation.

Observations were employed in the efforts to obtain an insiders perspective at their irrigation settings. In essence, comprehension of how decisions were made for water distributions, how negotiations proceed and how rules of guidance and sanctions were interpreted on the sites constituted amongst chief points observed during the field work on top of many other aspects.

To consolidate observations, photographs were taken to re-enforce the holistic comprehension of the title under exploration. Above all, these enabled to visualize certain themes with deeper insight in their naturalistic settings and illustrate ideas further. Tape recording and transcriptions was also used in the interviews held with key informants and focus group discussions.

1.5.1.4. Focus Group Discussions.

Focus group discussions were carried out to authenticate the reliabilities of data generated through interviews and key informants. The discussions have uncovered a range of issues poorly obtained during interviews and observations. Thus, one focus group discussion was held per the three selected research sites having 6, 7 and 8 participants in Selam Sefer, Dhaga Fillee and Kilinto, respectively. In the FGDs held, committee members, elders and other water users actively took part. In the discussions held at Kilinto and Dhega Fillee few women had participated while the rest participants were all men. The remaining one FGD was conducted at district agricultural desk where in 6 persons have participated (3 DAs plus 2 Irrigation

Experts and 1 Agronomist). The agronomist and the irrigation experts were also contacted over a number of days for interviews.

1.5.1.5. Case Studies.

Five (5) case studies (3 on water rights, 1 on views of non-irrigators and 1 on conflict over use of irrigation water) were incorporated as an integral part of the analysis. Case studies enabled the researcher to construct the pragmatic realities of water users besides its use to provide strength for the arguments in the text.

1.5.2. Secondary Method.

Secondary sources including books, journals, research papers and official records were reviewed to substantiate and fortify the data obtained through primary tools.

1.6. Scope of the Study.

This research explored the experiences of irrigation practitioners residing in three villages chosen from three (3) peasant associations of Toke Kutaye district, identified as Selam Sefer, Dhaga Fillee and Kilinto. Principally, the research is limited to uncover water rights for irrigation usage and processes users go through to curb disputes in these three irrigation practicing settings.

1.7. Justifications to the Selection of Research Sites/Villages.

One cannot study in-depth all instances, events or persons (Marshall and Rossman, 1995:50). On the first place, the sites have been potential areas where both Holeta and Bako Agricultural Research Centers conducted pilot demonstrations repetitively. The accessibility of larger concentrations of experienced irrigators in the villages was another justification. Moreover, the selected villages are comparably accessible for transportations. Besides, the villages are well suited for fieldwork to explore deep information as each of them followed a nucleated settlement pattern. Lastly, as a social anthropologist, the social dramas over water use rights and process of negotiations demonstrated by the interactions among upper and lower sites or between the villages and Ambo Agricultural Training Center created a passionate feeling in the researcher's understanding to offer priorities for these villages.

1.8. Significance of the Research.

The findings of the research brought into light creeds of knowledge for academic, research and policy analysis purposes. It depicted the importance of clear and transparent water rights to boost productivity and enhance the livelihoods of irrigators. The result, therefore, indicted the need to ponder on water rights as amongst likely factors causing stagnation on the over all irrigation development in the study area.

Water rights and negotiations processes have enjoined amidst of marginalized agendas in social sciences in general and anthropology in particular. So, the findings of this study stipulate orientations that should be pursued to uphold our perceptions on exploitation of communal natural resources like water both in the study area and at the nation level.

The study also possessed significances for further planning and policy re-considerations. It portrayed the place of power relationships for resource use and rights. Besides, it is instructive of the dynamic rules of water rights to co-exist and guide the behavior of water users pragmatically. The results of the research could be taken as a reference for similar replications in various parts of our country. At national level, the implications of the investigation show the country's competency to reinforce its claim over the rights to divert and utilize water at a basin level like the Blue Nile.

1.9. Organization of the Research.

The primary data interpreted in this research was generated through a field work that covered a period of time ranging between March 06-07-1999 E.C and April 03-08-1999 E.C. Preceding the main field work, preliminary field visits were made twice during the months of December and January. At that state, legality to field entry and creation of rapports with district agricultural workers and few committee members were assured. On the first preliminary field visit, the surroundings of Indris modern scheme was observed. In the second round, the potential research settings were

marked out and visited. Hence, it was based on these preliminary arrangements that the field work which stayed over 30 days has been conducted.

The data gathered then organized in 7(seven) chapters where in the first three chapters focused in one way or another on introductory clues. In essence, chapter one describes the problem, objectives and data collection methods. The next chapter depicted an account of the existing literature. The third part vividly expounded the study area. The discussions related with the historical background and development of Indris scheme and overall aspects of irrigation water management was presented in the fourth chapter. The discussions on water rights constituted the contents of the fifth chapter. Conflict and processes of negotiations make up the sixth chapter paving the way for summary, conclusions and recommendations in the final section.

The researcher underlines that readers should not presume the findings of this study as if absolutely perfect. This is chiefly attributed to the fact that studies pertaining to irrigation water rights or processes of negotiations are of the first in the area. Hence, it could be instigation to more trimmings rather than final ending on the topic as well as the area.

To respect the anonymity of those persons involved in information sharing, real names were not mentioned. Instead, terms and phrases like informant, focus group participant, expert, committee member or administrator were frequently used.

1.10. Limitations of the Research

The separation of Toke Kutaye as a new district constrained access to documents and statistical information. As a part of the research involved chronological analysis of trends in the development of Indris scheme, informants have failed to evoke the order of events. A feeling of suspicion was observed among informants and the team leader of the daily laborers inside the Agricultural Training Center. Dearth of literature on the Ethiopian case concerning irrigation water rights and the processes users gone through for negotiations was another aspect that somehow limited the research.

Chapter-Two

2.1. Review of Water Rights and Negotiations.

A brief review of the literature on water rights and the processes of negotiations demonstrating the experiences of certain developing nations would be made in the first part pursued by certain cases in Ethiopia at the last part.

2.1.1 World Wide: Experiences of Some Developing Countries.

Socio-anthropological issues are embedded in the operation of all irrigation systems, small or large: people organize socially in order to secure water, transport it, divide into usable shares, enforce rules for its distribution, pay for it and dispose of unused portions (Cernea, 1991: 43).

There has been much talk about a right based approach to development in different literatures, particularly with respect to land and water resources. With clearly specified rights to resources, citizens can mobilize to gain access to them on the basis of clear, transparent legal provisions (Scoones and Wolmer, 2003: 8).

Nowadays, both international norms and domestic legislation recognize the right to ownership, possession, use, conservation and control of surface and non-surface, renewable and non-renewable resources (Boelens and Davila, 1998:73).

Vermillion (2000:57) quoting (Arriens et. al 1996; Secker, 1996) asserted that with rising populations and diversified economies, competition for water is rapidly intensified in many developing countries, especially in Asia. Such conflicts over water resources are further aggravated by the social inequality, economic marginalization and poverty (Blank et. al, 2002:113; FAO, 2005:5).

Blank et al (2002:123) confirmed the multiple sources of conflict over water use in the Upper Ewaso Ng'iro North Basin of Kenya, attributing to causal factors linked with water scarcity, inequitable water allocation and distribution, election of representative water users, failure to observe water by-laws. Water conflicts

associated with scarcity are attributed to over abstraction of water in the upper reaches and latent conflicts are attributed to inequalities inherent in social, cultural, economic and political disparities among the stakeholders.

Conversely, it is worth to note that often it is not the actual lack of water alone that may lead to conflicts but rather the way in which water is administered. The highly complex and sensitive nature of its availability, use and allocation requires strong, capable mechanisms and institutions to negotiate and balance competing interests. Because conflicts somehow tend to be intensified by institutional failure to achieve fair and equitable water management (Barrow, 1987: 56).

Sandra (1992:22) elucidated that the policies, laws and practices that shape water use today rarely promote all three tenets of sustainable resource use – efficiency, equity and ecological integrity.

Law is an instrument which can be used to smooth out conflicts of interest generated in the sharing of water resources. It also provides guidelines for ordering future conduct (Barrrow, 1987: 70). Laws and traditions controlling water use in developing countries are often inadequate, unsuitable introductions, ignored or unenforceable. Fair, rigorous and swift enforcement is important in maintaining or improving adherence to water use laws and rules (Ibid).

Many developing countries have non-western legal systems. Some follow Islamic law while others got indigenous water laws; for example in Indonesia indigenous adat (law) is administered through village or 'parish' units (Marga) which lease water rights to individuals (Ibid: 73). Reflecting a comparable argument, Blank et al (2002:278) presented the Kenyan experience indicating that in pre-colonial times, management of water was an integral part of the overall customary laws and behavioral norms of each tribal society. Access to water was guaranteed for each individual by virtue of affiliation with a specific community (e.g. a tribe or clan) and

water use was regulated by the political leaders of each community (chiefs, elders, clan leaders).

Bruns and Meinzen- Dick (2000) denoted water rights are not just an analytical abstraction. The term water right is broad including diverse kinds of and levels of rights. For instance, Boelens and Davila (1998:87) have discussed water rights are social relationships among humans and not only between the user and the water; thus, they are rooted in the other components of the peasant community's normative system. Meinzen-Dick and Nkonya (2005: 2) analogously noted "rights have no meaning with out correlated duties...on aspiring users to refrain from use." This means that property rights are not a relationship between a person and a thing, but are social relationships between people with relation to some objects (the property). Particularly in the case of water, rights also have corresponding duties that apply to the rights-holder-usually to use water and often to maintain it.

Water rights comprise formal rights embedded in official tittles, permits and seasonal irrigation schedules, less formal rights based on customary patterns and rights implicit in social norms and local practices (Bruns and Meinzen- Dick, 2000:28; Cotula 2006: 10).

Thus, water rights are considered as legal entitlements for the abstraction and/ or use of water resources. Water rights may also be constructed as contractual rights or may be based on bodies of norms other than domestic legislations-namely customary law (Ibid).

Bruns and Meinzen-Dick (2000: 203) have offered clues on diverse levels of rights in a specific source, such as ownership rights, rights to participate in decision making process (including decisions concerning allocation of water), rights to use without rights to participate in decision making process, rights which may or may not be transferred, rights to use only for a specific season or purpose, individual rights and community rights.

Boelens and Davila (1998:88) presented that in a given region, it is not unusual for several mechanisms to operate simultaneously and it is also common to find mixtures of peasant and governmental mechanisms:

- Concession of water use rights, granted by the state administration to individuals or groups of applicants;
- Granting of formal or informal titles over socio-territorial waters by their inhabitants;
- Agreements for permanent transfer of water rights from one right-holder to another such as in the case of purchase and sale, rental inheritance, barter or gifting;
- Acquisition of rights and access to water by force; in many regions of the world, power groups have expropriated water by coercive force from peasants and indigenous peoples.

Likewise, Meinzen-Dick and Bakker (2001:133) provided some of the bundles of rights (as rights that may be held by different parties and considered as web of interests) related with water that is applied for irrigation use as follows:

- ✓ Access: the rights to enter a defined physical property i.e. to a flowing stream.
- ✓ Withdrawal: the rights to obtain the benefits from that property by taking out some of the flow.
- ✓ Exclusion: the rights to determine who will (and will not) have access to the resources.
- ✓ Management: the rights to regulate use patterns. Management rights also provide the ability to define access or withdrawal rights.
- ✓ Alienation: the rights to sell, lease or bequest water.

According to Boelens and Davila (1998: 29) there may be multiple bases for water claims. The two most widely recognized doctrines for water rights are based on ownership or possession of land along rivers, streams or over aquifers (riparian rights) and claims based on historic water usage (prior appropriation).

Clearing up these two doctrines of water right claims, Thorne and Peterson (1977:103) put that according to the riparian doctrine rights are based on situations in which a flowing stream passes through a parcel of property and gives the property certain values. The chief features of riparian rights embrace:

- Gives equal rights of use to owners of land which borders on or touches a stream or across which a stream flows.
- A riparian right is attached to land ownership - a user can take up the right to use water at any time even if he/ she had not done so before and to do so affects existing users.
- The right is usufructuary i.e. the owner does not own the water (the resource it self can belong to the state or some other authority) only the right to use it.

One who enjoys riparian rights, therefore, should receive flows from upstream land owners with out material change in amount or quality and should ensure that down stream owners enjoy the same. Barrow (1987: 70) maintained that the riparian doctrine has spread from England to the United States of America and Australia and from France to parts of Africa where also ex- colonial countries were also enforced to adhere to it.

According to the appropriation doctrine, on the contrary, the first settler or user of water from a stream acquires a right to continue the use of that portion of water needed for the irrigation of his/her land. Prior appropriation rights may be summed up as "first in time first in right"; the earlier appropriator has a right superior to later appropriator (Ibid).

Barrow (1987:72) also contended that administrative disposition of water use rights is tending to supersede the water rights doctrines just described. Under administrative disposition, water is controlled fully or partly by the state which then grants permits or licenses to users.

Boelens and Davila (1998:90) presented a distinction that may generally be made between two complementary (not separate) parts: individual and collective rights. Each irrigating family's individual rights involve using the water to which they are entitled and using the infrastructure that makes this usage possible. Collective rights, on the other hand involve participating in collective definition of the rules of play, i.e. the right to take part in creating, reaffirming and modifying the norms governing irrigation management.

Meinzen-Dick and Nkonya (2005:5) added that water rights can be broadly classified as public, common, or private property. Public water rights are rights held by the state and in which the government allocates rights to users (the case of Zimbabwe in 1990s and Mozambique 1991 serve as best examples). Common water rights refer to communal water rights where water can be used by people in ways that are specified by some community. In most African customary water law, water is considered as a community property and private ownership of water is not recognized. Private rights are rights held by an individual or corporations. It is generally only use rights that are recognized for individuals to use water in certain ways.

Efforts to improve water allocations may be ineffective or even have the opposite effects from those intended unless grounded in a good understanding of social institutions that shape rights to water (Meinzen –Dick and Nkonya, 2005: 2).

As far as management issues are concerned, experience shows that water users themselves can organize and manage their supplies through representatives which they elect, appoint or have appointed for them. Some of these community managed irrigation systems are indigenous, others may be recent introductions promoted by governments or aid agencies (Barrow, 1987:126).

Rights to water may be negotiated in many contexts, not just within communities but also between communities and others sharing water resources. Various strategies may be open to communities including direct action to acquire more water and restrict

others' access; litigating in court; participating in planning and other formal administrative procedures; lobbying to advocate their case to the public and politicians; and trying to reach agreements with other water users and with water management agencies are all part of negotiating rules about who gets water (Bruns: 2005: 1).

Negotiated approaches are a subset of the larger set of processes through which disputes are waged. Disputants choose where to pursue their claims, shopping among available forums to deal with water conflicts. Negotiation among disputants can often generate more creative and appropriate solutions than those imposed by a court or agency decisions. Mediations, facilitations and convening forums are among ways in which third parties can contribute more productive negotiation (Ibid).

Generally speaking, Gulliver (1979) wrote negotiations are inevitable to reconcile conflicts among diverse interest groups over resource use. As he puts it,

> *'Negotiation involves interaction between different claimants, not unilateral decisions made in isolation. It includes sitting around a table to craft an agreement, formal trading arrangements as well as less visible struggle over access to water, as local people comply with or contest the ways in which state agencies or other users acquire and distribute water. Thus, negotiations are processes of interactions between disputing parties whereby, without compulsion by a third-party adjudicator, they endeavor to come to an independent, joint decision concerning the terms of agreement on the issues between them. It proceeds through the exchange of information between the parties. Information is verbal and non-verbal including evidence, argument, appeals to rules and ideology, expressions of strength and proposals of terms for agreement. Negotiation is a continuing process, influenced-but not fully determined-by changes in rules and laws. Thus, agreements may mark major milestones, but usually lead to further negotiation about how the agreement is to be worked out in detail, how to monitor compliances and respond to violations, and whether to revise agreements (Gulliver 1979: 79).'*

Boelens and Davila (1998:247) noted that for water distribution, decisions are discussed and made by every one on different occasions. In many Andean systems, for instance, the intake becomes the place for negotiation and agreement at the moment of irrigation.

Water rights are dynamic, flexible and subject to frequent negotiations because of uncertain water supply, damages to intake structures, and social, political and economic changes (Meinzen-Dick and Pradhan, 2006). Shimmering this argument, Blank et al (2002:278) stated that particularly customary systems of water management were by no means static, regulations and technologies altered over time.

Cognizant to this, as described by Bruns and Meinzen-Dick (2000: 202), farmers in Nepal for example, shop for and use what they believe is the best strategy available to them in a specific situation. The strategies they use depend on the social relations between the stakeholders (such as power, kinship, economic, political) as well as the legal resources they have at their disposal.

Multiple, flexible and dynamic legal orders are more responsive to these uncertainties and changes than a single, fixed legal system. With every change in water supply from a water source, introductions of new use or users change in property regime, social or political upheaval, old rights holders and new claimants dispute and negotiate and renegotiate their water rights relationships (Ibid).

Therefore, the review of water rights in developing nations exhibited its complexity in social, economic, political or environmental implications coupled with the negotiation processes accompanying it.

2.1.2. Ethiopia's Experience in Water Rights and Negotiations among Irrigation Promoting Communities.

In the Ethiopian context, studies conducted on water rights or processes of negotiations over irrigation water have appeared scanty. Furthermore, policies, legislations and rules issued in connection to water rights have also been far from satisfaction.

Yacob (2002) contended that in Ethiopia there does not yet exist a single body of rules pertaining to the use rights of and management of water resources; which holds grains of truth for water competitors in the Waiyto valley of Southern Ethiopia where his study offered a greater focus.

Zewde (1994:88) has also signified that there is no extensive legislation covering the use of water in Ethiopia. But, there are decrees that water is a national asset and that it can be controlled only by the central government. Additionally, Studies conducted by (FAO, 2005) reaffirmed that written information on water use is not available.

Ewnetu (1987:1) put that in Ethiopia enacted water rules appeared recently, but prior to this the people were using customarily and even today it is observed in many parts of the country.

According to Ewnetu (1987:12) the Fetha Nagast, which was a combination of religious and religiously flavored secular rules of dim origins lays the following principles:

- The right to the flow of water: People in the low lands have a right to demand that their counter parts in the highlands let the water flow properly.
- The right to draw water or the right to use, and the right to bring water or the right to use water way: The right to use water automatically extinguishes on the expirations of the time fixed, be it for summer, only a month, more than a month, or for more than a year.

The civil code of Ethiopia promulgated in 1960 contained 29 provisions intended to regulate the ownership and use of water. Under the code, water is regarded as a communal resource. The code also included provisions for protection of down stream users. The relevant provisions in the code are reportedly based to a large extent on indigenous practice and were intended as a temporary measure pending more comprehensive legislation (FAO, 1990: 59).

Lemma (2004:50) has also found out that there is no policy in the region as whole that entails about water right and entitlement.

Currently, the Ministry of Water Resources has formulated a water policy embodying the irrigation component both at Federal and Regional level, basing on the Agricultural Development Led Industrialization Policy (ADLI) of the country (MoWR: 1999). Specifically, (FAO, 2005) discussed a summary of relevant proclamations that served as a base for the comprehensive and integrated water resources management policy, prepared by the MoWR and adopted in 2000. The Proclamations are:

- Proclamation No 197/2000, stating that all of the country's water resources are the common property of the Ethiopian people and the state and giving the MoWR the necessary power to allocate and apportion water to all regional states regardless of the source and location of the resource.
- Proclamation No 4/1995, stating that the MoWR has the power and duty to determine the conditions and methods required for the optimum allocation and utilization of the water that flows across or between more than one regional governments among various users.
- Proclamation No 197/1992, dealing with the water resources management regulations describing development areas that require licenses, the allocation of water for various uses and the need to protect water resources from pollution.

While the overall objective of the policy is to develop irrigated agriculture for the production of food and raw materials for agro industries, amongst specific issues the policy emphasized:

1. Ensure the full integration of irrigation with the overall framework of the country's socio-economic development plans, and more particularly with the Agricultural Development (ADLI) Strategy.
2. Promote users based management of irrigation systems taking account of the special needs of rural women in particular.

3. Enhance indigenous irrigation schemes by improving water abstraction, transport systems and water use efficiency.
4. Establish water allocation and priority setting criteria based on harmonization of social equity, economic efficiency and environmental sustainability requirements.
5. Recognize that irrigation is an integral part of the water sector and consequently develop irrigation within the domain and framework of overall water resources management (Ibid).

At Oromiya regional state level, a proclamation (No.30/1999) is enacted in order to reinforce the tasks of the Oromiya Irrigation Development Authority. In the proclamation, the duties and responsibilities to be assumed by the authority with regard to how best to confiscate water by users are some how indicated. Accordingly, under article 6 (powers and duties of the authority) number 1 of the proclamation reads as: initiate and submit policies, strategies, laws and regulations of the authority. This article in the proclamation, therefore, confirms the mounting concern of the government to put laws and directives that guide water use patterns of beneficiaries at various levels.

Offering a general scrutiny, McCornick and Seleshi (2004) have displayed their analysis on *'Water use rights in Ethiopia'* correlating with the policy environment as follows:

> *"The relevant policy and legislative framework must continue to be strengthened and allowed to evolve to accommodate the indigenous arrangements and established water-rights, and meet the new demands. The recent improvements in the national water policy framework has established the necessary foundation, and there is some evidence that communities are playing a more active role in the decision making with regards to allocation and management of water at the local levels, allowing for better integration of indigenous water rights and management systems (McCornick and Seleshi, 2004:8).*

Zewde (1994: 178) discussed that water allocation in an irrigation system should be done with due regard to promote equity and social justice. Disparities in the

availability of water between head reach and tail-end farms and between large and small farms should be forestalled by the adoption of a rotational water distribution system and supply of water on a volumetric basis subject to certain ceilings.

Dessalegn (1999:11-12) throwing a light on the management system of indigenous schemes in parts of north Shewa, north Wollo, east Gojjam, and highlands of Harrage, emphasized that they are managed by elected elders known as 'water fathers' or 'water judges'.

Shimelis (2006) has analyzed over the institutional arrangements, management structures along with causes of conflict and the strategies adopted by the committee members to handle it. He has, for example, discussed his observation explaining that water allocation and rotational schedule prepared and being implemented by the water committee does not clearly define the water rights of individuals, water users and water user teams.

Melese while briefly describing irrigated agriculture among Tsemako denoted that the task of designing a timetable and distributing water to the fields of every village is the responsibility of the Murade (a group of people who are elected and shoulder certain responsibilities on behalf of the community). However, unlike distributing land, the water management involves inter-village negotiations and, therefore, inter-Murade discussions (Melese, 1994:117). Though disputes of one form or another have arisen they are considered minor and resolved by those present on the spot (Ibid, 118).

To wind up Ethiopia's experience regarding irrigation water rights, the discussions carried out in the preceding sections hold grains of truth for the majority of irrigation sites functional in various regions of the country. Studies that elicited irrigation water entitlements and negotiations over it like Indris modern irrigation scheme were missing.

2.2. Theoretical Frameworks.

The central arguments of legal pluralism and processual models of negotiations were utilized as the theoretical tools to analyze water rights and the processes of negotiations at Indris modern scheme, respectively.

2.2.1. Legal Pluralism.

Legal pluralism, as a perspective, emanates from and overtakes much of the concepts of legal anthropology the subject matter of which has been made up of the indigenous customs of specific ethnic groups (Havet, 1978:1006). Legal pluralism begins from the recognition that multiple legal and normative frameworks coexist. The paradigm of legal pluralism has important consequences for the conceptualization of the relationship between norms and behavior. It depicted the perspective of people's experience with water access and control in which individuals draw up on a range of strategies for obtaining irrigation water. Thus, government, religious, and customary laws, development project rules, and unwritten local norms may all address who should receive water, from which sources, for what purposes (Burns and Meinzen-Dick, 2000; Meinzen-Dick and Bakker, 2001).

Therefore, the conceptual frame work of legal pluralism became indispensable in view of contemporary water rights paradigms. It aimed to explore the different conceptualization of water and water rights and the variety of legal statuses attached to water. As an approach, legal pluralism goes beyond a dualistic opposition between 'formal state law' and 'local customary law' to look at the tensions and contradictions within and between interlocking repertoires (Ibid).

2.2.2. Processual Models of Negotiation.

Negotiation involved two distinct though interconnected processes going on simultaneously: a repetitive, cyclical one and a developmental one. The cyclical process comprises the repetitive exchange of information between the competing parties, its assessment, and the resulting adjustments of expectations and preferences while the developmental process involved the movement from the initiation of

dispute/ conflict to its conclusion leading to some out come with its final implementation (Gulliver, 1979: 82).

The cyclical process stressed, negotiators in dialogue receive information of various kinds and in response offers clues. The received information is interpreted and evaluated by involving parties. As the exchange of information exceeds more than a mere communication, there are possibilities of cognition and learning that induce changes, preference sets, and strategies or provocation for more information. The developmental process, on the other hand, incorporated a series of overlapping sequences (search for an arena, formulation of agendas with definitions, preliminary exploration of dimensions, narrowing differences, bargaining, confirmation of the out come and its implementation) (Ibid).

Hence, the elements of the processual models were chosen to be instrumental to analyze the processes of negotiations that water users apply to settle conflicting interests while diverting irrigation water in the study localities.

Chapter-Three

3.1. Background to the Study Area and the People.

This section provides the description of the study area, the people, and the bird's eye-view of irrigation practices in the district.

3.1.1. Description of the Study Area.

Geographical position and location, topography and land use pattern, climatic conditions, natural resources, and social as well as physical infrastructures of the district constituted the major sub headings briefly addressed in this section of the study.

3.1.1.1. Geographical Position and Location.

Toke Kutaye district constituted one of the 21 Weredas in west Shewa Zone. Geographically, the district is located at an astronomical grids of $8^0$47'N-$9^0$21'N and $37^0$32'E-$38^0$3'E (Strategic Planning and Management document of Toke Kutaye district, 1999:7).

Guder, some 12 kilometers west of Ambo town, serves as the chief socio-economic, administrative, political and cultural capital of the district. It is situated at a distance of about 137 kilometers away from Addis Ababa on the Addis Ababa-Nekemte main road.

The district comprises a total of 31 rural peasant associations and 2 urban Kebeles. It is bounded by Ambo Wereda in the east, Caaliya Woreda in the west, Xiqur Incinnii Woreda in the south west and Ameya Woreda in the south east (Ibid: 9).

3.1.1.2. Topography and Land use Pattern.

The district has a total area of 78,886.77 hectares (which is nearly about 788.88 in Sq Kilometers). The general area's landscape position happens to occupy relatively higher elevation altitude that ranges between 1,400 meters-3,040 meters above sea

level. Out of the total land only 1,384.8 hectare has been under irrigated agriculture (Strategic Planning and Management document of Toke Kutaye district, 1999:10).

3.1.1.3. Climatic Conditions.

The climatic situation of the district is categorized into three major divisions: the cool, the warm-temperate and the hot. These climatic divisions cover 20.99 %, 51.31 % and 27.7o %, respectively. The selected peasant associations and specific research sites chosen for this research fit in to the warm climatic division (Strategic Planning and Management document of Toke Kutaye agricultural district, 1999: 14).

The rainfall distribution is bimodal. While the dry season normally lasts from the months of October to February; the main rains are received from May to September. The highest concentration of the rain falls during the months of June to August. At this season, irrigation activities have declined and the rain fed agricultural productions preponderate instead of it. As a result, the water flowing through the ditches blocked back to the main river. The highest and lowest recorded rainfall of the district is 1000mm and 80mm, respectively (Ibid: 15).

3.1.1.4. Natural Resources.

Throughout the district huge water resources flow either perennially or seasonally. The great rivers of the district include Indris, Chole, Boji and Guder River itself. There existed also several streams and minor rivers that joins the major rivers as tributaries. Indris River rises from the high lands of Lake Wanci and it is a perennial river (Katharina, 2006).

Three broad classes of soils have reported to exist in the district. The grumusols (27.3%) are black topical soils which have a clay texture and usually crack deeply on drying. The latosols (47.7%) occupy relatively larger portions of the peasant associations in the Wereda. The brown soils (25.00%) have found only in few parts of the area. In the selected research sites for this study, a mix of both the black and red soils observed to exist (MoE, 2002).

The natural vegetation in the district comprised of woods, bushes and remnants of previously thick forest places. According to the data extracted from the planning and economic development document of the district, currently the natural vegetation cover nearly approaches to be 0.4 % (Strategic Planning and Management document of Toke Kutaye agricultural district, 1999:17).

The availability of mineral deposit sites has also been confirmed. Amongst others, colorful stones used for construction of buildings have been highly transported to the rest parts of the region and the country. In addition, the extractions of sand stones, gypsum and limestone have also been carried out in large amount (Ibid).

3.1.1.5. Social and Physical Infrastructures of the District.

As computed against its years of foundations (legendary sources trace back as far as to the last decade of 19th century), the over all social and physical infrastructures of the district in general and Guder in particular cloud not escape from critiques of watching eyes.

Sectors like education, health, water supply and sanitation, and communication networks and transportation pathways are components that demonstrated encouraging progresses. As an instance, the health coverage of the district reached nearly 32%. There are four (4) Clinics, one constructed by private individual and the other three established by NGOs. There are also about ten (10) health posts constructed in the rural PAs (Strategic Planning and Management document of Toke Kutaye agricultural district, 1999:20).

The educational coverage has shown a remarkable shift. The primary enrollment ratio of the district reached 87.7 %. A discussion held with the head of Wereda education bureau attested the effective operation of one senior secondary school (9-10th grade), 37 primary and junior secondary schools (1-8th grades), 3 lately established Kindergarten centers (Ibid: 21).

The sanitary and water supply component has enjoyed amidst of the marginalized sectors. A search by an NGO working in the district exhibited that about 73.7 % of the people utilize water from unsafe and non-well protected sources. Additionally, the sanitary situation of the town is meager. Only two (2) public latrines, with 6 and 8 class each and constructed by the municipality of the city serve the public (Ibid: 23).

There are few nation-driven NGOs (like ERSHA and Abebech Gobena) working in the district to take part in the development endeavors as well as humanitarian missions being launched by government and other private organs (Ibid:25).

3.1.2. Description of the People.

In this sub section the population, ethnic and religious compositions, as well as subsistence basis of the people in the district would be thematic points to be touched upon.

3.1.2.1. Population.

Figures pertaining to the population number of the district should be looked suspiciously. This is because no consistent census has been conducted since the separation of this district from Ambo. Any how, following the separation, the Economic Planning and Development bureau of Toke Kutaye district has initiated a sort of pilot assessment to estimate the total population. Thus, based on the estimated result, the total population residing in both rural and urban Kebeles of the district is about 122,857 out of which males account for 58,828 (47.88 %) and females constitute 64,029(52.11 %) (Economic Planning and Development document of Toke Kutaye district, 1999: 11).

3.1.2.2. Ethnic and Religious Composition.

Several ethnic minorities with the dominant Oromo ethnic group co-exist in the district. Like the population figure, the statistics for the percentage composition of each ethnic category appears less perceptible. However, official guesses state that the

Oromos as a dominant ethnic group covers almost more than 95 % of the ethnic composition. Among the ethnic minorities the Amhara, Gurages and few Tigrians do dwell in the district (Economic Planning and Development document of Toke Kutaye district, 1999: 13).

Three chief religions have been apparent in the district: namely Christianity, Islamic and Indigenous (i.e. people's adherence to Waqefaana-believe in one supreme God) Christianity, especially the Orthodox sect has showed a substantial dominance in the area (Ibid: 17).

3.1.2.3. Subsistence Basis.

The economic base of the district relied on agriculture and its produces. It accounted for more than 90% of the economy of the district. Crop and livestock mixed farming systems dominate the agricultural activities. Additionally, irrigated agriculture covers almost 18 peasant associations out of the 33 PAs in the district. The chief crops produced in the district include Teff, Wheat, Barely, Maize, Sorghum, Beans, and Oil seeds like Nug. The irrigated agriculture also generates a significant amount of income from the vegetables and fruits planted at least twice per year (Economic Planning and Development document of Toke Kutaye district, 1999: 23).

3.2. Brief Overview of Irrigation Practices in Toke Kutaye District.

Indigenous irrigation systems have said to operate since time immemorial in some places and sites in the district. Prior to the appeal of government or various agencies to initiate and develop them into modern schemes, the indigenous ones predominate in most of the recently irrigated areas. Information explored from the district agricultural bureau disclosed that a sum of over 25 major and minor rivers have been diverted and used for irrigation purposes. The rivers where extensive irrigation sites have been developed in the district include: Chollee, Indris, Shimela, Galandii, Gurraa, Gawwisaa, Dimma, Faaxoo, Allaayyoo, Qarsa, Ceeka, Waraboo, and Abayii

(Strategic Planning and Management document of Toke Kutaye agricultural district, 1999:29).

Varieties of vegetables and fruits irrigated comprise items like Tomatoes, Peper, Cabbage, Onions, Potatoes, Carrot, Papaya, Lemon, Orange, Bananas, and Sugar Cane. Some people have also involved irrigating cereals like Maize, Wheat, and Teff even during the dry seasons (Katharina, 2006).

The irrigation sites in the district, management of the schemes rests largely in the hands of the beneficiaries commonly effectuated through either appointed elders or committee members. For the purposes of further clarification, a summary of irrigated sites in hectares, beneficiary households, and an initiator for its development have depicted in a tabular sketch as follows:

Table 3:1- Indigenous Irrigation Practices in Toke Kutaye District.

Name of the site/ Scheme	Irrigated area in hectares	Beneficiaries			Organ for its initiation and Development
		Male headed HHS	Female headed HHS	Total	
Qobo and Bojii	40	165	8	173	Community
Sumbee and Waraboo	45	130	7	137	Community
Abayii	8	21	2	23	Community
Laga Arbaa	10	35	7	42	Community
Allayaa	30	99	16	115	Community
Qile	69	133	7	140	Community
Total	202	583	47	630	-

Source: Adopted from a Chart Prepared By the District Agricultural Desk, in December: 1999 E.C.

Table 3:2- Modern Irrigation Practices in Toke Kutaye District.

Name of the site/ Scheme	Irrigated area in hectares	Beneficiaries			Responsible Organ for its initiation and Promotion
		Male headed HHS	Female headed HHS	Total	
Indris	381	920	100	1020	European Economic Commission (EEC)
Birbrisa	175	289	58	347	Abebech Gobana
Cheka	30	50	9	59	ERSHA
O'oo	27	34	5	39	ERSHA
Choollee 1st	200	305	55	360	ERSHA
Choollee 2nd	115	100	20	120	Ras Mesfin Silashi
Chancho Arusee	150	165	15	180	Community
Laga Qilee	70	130	20	150	Community
Total	1147	1993	282	2275	

Source: Adopted from a Chart Prepared By the District Agricultural Desk, December: 1999 E.C.

As indicated in the above tables, one can analyze that almost all the schemes irrigated via indigenous or modern techniques fall below or equals to 200 hectares, except the case of Indris. According to Dessalegn's (1999:10) classification of irrigation schemes depending on their size, operation and management; large schemes include irrigated areas over 3000 ha, a medium scheme ranges an irrigated area between 200-3000 ha and small schemes up to 200 ha. Therefore, in line with his view, it becomes reasonable to deduce that the irrigation schemes pragmatically functioning in the district belongs to the small scale category while exceptionally Indris modern irrigation scheme falls into the medium scale.

Chapter-Four

4.1. Historical Background of Indris Scheme: Phases of Irrigation Development.

In this section of the research, the results and discussions related to the descriptive analysis of the historical background and development of Indris scheme would be discussed in detail.

To begin with, it remained controversial among water users as to when exactly irrigation practices had been commenced in the area. Several oral sources commonly prevail to offer details about the historical development of Indris scheme. In this regard, the explanations provided by informants were not only inadequate but also contradictory. Anyhow, the most strongly held legend associated the historical development of Indris scheme with individuals (like Kinfe Desta, Ras Imiru, Sefu and Abdissa) who had been prosperous and also famous in the area.

To hold comprehensive understandings of the historical background and development of Indris scheme, categorization into three distinctive phases are marked out based on the raw data generated in the field. These phases can be mentioned as;

4.1.1. Prior to the development of the scheme into its indigenous operation (covered a period before 1972 E.C).

4.1.2. Development of the scheme into an indigenous manner (that extends from1972-1986 E.C).

4.1.3. Conversion of the scheme into modern style (post 1986 E.C).

4.1.1. Phase-1: Prior to the Development of the Scheme into its Indigenous Operation (covered a period before the 1972 E.C).

Elders and key informants have attested that two men identified by the name Kinfe Dasta and Ras Imiru had initially started irrigation practices during the early 1960s E.C on small plots surrounding their garden as unintended consequences of establishing a Grinding Mill. Obbo Kinfe had activated the construction of a simple dam on Indris River with a mixture of stones and woods that only functioned for a limited number of months. The construction of the dam aimed at utilization of water

power to run the Grinding Mill but not to divert water for irrigation purposes. As the dam gets washed away by over flooding during the rainy seasons, the location of the dam shifts year after year above of the Grinding Mill. This shifting nature in the location of the dam had contributed much for the gradual development and spread of irrigation practices in the village.

As underlined by the interviewed elders, irrigation practices were only hardly carried out before Indris scheme's development into indigenous operations. The relatively few residents of the area also held little views about the merits of fruits or vegetables irrigated in the plots of their gardens. The major sources of peoples' livelihood essentially relied on rain-fed agricultural productions. The water used for the commencement of irrigation had been taken out in two ways. The first was from the main dam itself through narrow ditches while the other option was from the water coming out through the Grinding Mill.

The summary of an interview made with a key informant who has acquired considerable experiences in the practice centrally reflects the features of the phase as stated below:

> *"Obbo Kinfe Desta who was a rich and popular person in the vicinity diverted water from Indris River to run a Grinding Mill. The servants of Obbo Kinfe then began to plant vegetables (like Pepper, Cabbage and Onion) and fruits (such as Grapes and Sugarcane) on small pieces of land by digging dikes that supplies water to the field. These irrigated produces were principally useful for household consumptions alone. Gradually, residents in the neighborhood like Ras Imiru, Obbo Sefu and Abdissa adopted an analogous experience of producing vegetables and fruits. The items were planted and harvested only once per year. As a result of a succession of such activities, the rest inhabitants in the area including (Daawe Dale, Ido Bari and Selam Sefer) showed interest to engage on simple irrigation practices paving a way for further developments."* (Field interview held with a key informant at Selam Sefer, March 1999).

Hence, in the early phase of irrigation development from Indris river, as confirmed by the participants of the focus group discussion held at Selam Sefer, the practice was introduced alongside with the introduction of the Grinding Mill technology and essentially characterized as;

- Production was only to complement household consumptions. That connoted market orientation was quite negligible.
- The practice was carried out on small pieces of land (confined only in their gardens) by few households alone.
- The vegetables and fruits planted were limited in variety.
- Technological application and innovations for irrigation utility were at their lowest stage.
- The involvement and advisory support of external institutions like the agricultural desk had been missing.

However, developments attained in this premature phase of irrigation practice around Indris River served as a keystone for the promotion of the act into its operation in an indigenous method. This phase has suspected to cover a range of years towards the mid of 1960s to early 1970s E.C. Yet, elderly key informants contacted over days have failed to evoke the precise year, season or sequence of events that evidenced instigation of irrigation activities. Efforts were made to review documents to confirm the moments of irrigation commencement in the area, secondary sources pertaining to the historical background and development of Indris scheme are almost non-existent at all levels (Wereda, Zonal or Regional levels).

4.1.2. Phase-2: Operation of the Scheme in an Indigenous Manner (that extends from 1972-1986 E.C).

The development of Indris indigenous scheme had been initiated as result of close collaborations among the community members who were found in 5 PAs (Imela Dawo, Dawe Dale, Ajo Bedo, Dhaga Fillee and Kilinto) currently diverting water from the scheme.

An agronomist working at district agricultural desk for not less than eight years of stay in the area asserted that the *Derg* government was with the policy to encourage small scale indigenous schemes like that of Indris as it was thought to be cost effective, managed easily by the irrigators, involves no dislocation of users and

environmentally provoke no effect. Thus, with such firm conception facilitation was launched to dig the ditches throughout the aforesaid PAs. To step up the construction of the ditches within a short period of time, a mix of techniques were pursued ranging from supplies of compensation for their labor to strict enforcements refusal of which may end up in financial or extra work punishments. For their labor contributions, for instance, a compensation of 3kgs of Wheat was provided to farmers per day as long as they had engaged in the construction of the canals. An informant has also elucidated that the 3kgs of Wheat provided to farmers was part of the 'Food for Work' program. The program was intended to mobilize the farmers to take part in the construction work of the canals/dam and create a sense of ownership in their mentality. The second technique was the cruel rule of enforcing farmers to contribute their labor for construction of the ditches. As the value of irrigation in the livelihood of the people was at its early moment, users had little aspiration to contribute their labor for the construction purpose. Therefore, users who rejected to work had been enforced to execute their part forcefully. Any trial to break the enforcement might put the actor in a prison for while. He/ she will then be anticipated to accomplish his or her portions with out any complain. In this regard, an informant has disclosed his experiences of how he used to enforce fellow farmers who fail to contribute labor for construction of the dam or ditches.

The completion of digging the web of canals and building up the indigenous dam that in fact lasts only during the dry season marked a momentous shift in the historical development of the scheme in numerous respects. To portray the highlight of some;

- Remarkable increase in the number of water users.
- Incorporation of larger hectares of land under irrigation practice (about 180 hectares at its upper limit).
- Orientations of irrigated produces/items both for domestic consumption and market supply.
- Applications of varieties of seeds and seedlings that are scientifically approved.

- Formulation of agreed up on by-laws with the technical assistance of agricultural workers and other officials from the desk. In the first phase of irrigation development, certain tacitly perceived normative rules emanating from the broader customs of the society had guided the actions of water users. Thus, such sorts of implicit normative rules were transformed into more or less written rules being interwoven with certain fragmented elements of the prevailing irrigation guidelines.
- Enhanced irrigation production efficiency leading to a relatively better livelihood diversification.
- Developed the custom of irrigating twice per a year which was not formerly patterned in the first phase.
- Institutions like the Agricultural Training Centre began to divert water as its second best alternatives. Previously, the institute used to divert a substantial amount of water from Chole River.

These chief shifts occurred with the development of Indris indigenous small scheme. It has operated for several years in an indigenous approach extending its command area year after year. An increase in its command area enabled a number of water users to benefit from the system. According to a statement by the district irrigation expert, it was intended to reach about 250 households on 180 hectares of land during its indigenous operation. However, the achievements moved beyond the proposed figures.

Along with the significant shifts that accompanied the scheme's development, water users have also internalized the wide-ranging worth of irrigated farming. The compounded effects of these great changes and the increasing recognition by practitioners, created the motive for the transformation of the scheme into its third phase i.e. from indigenous scheme to modern scheme

4.1.3. Phase-3: Conversion of the Scheme into Modern Style (Post 1986 E.C).

Informants contacted at Kilinto held the opinion that some non-irrigators or those who were not much concerned about irrigation framing became to develop a keen interest towards the practice as a result of lessons observed from neighbors already engaged on it. The typical progresses brought about on the living conditions of the earlier water users in many folds have instigated the rest residents to provide a credit for irrigated production. Even water users who had carried out irrigation production were only tied to small plots that could not exceed 0.02 hectares (2000 m^2) out of which they extracted significant amount of cash twice or three times per a given year.

Nevertheless, the increasing demand from the framers side and the discharging capacity of the indigenous scheme on the other hand happened to be inconsistent to meet the interests of the drastically growing population. The gap grows wider pertaining to the gradual decline in the volume of water. As a result the water users, the district and zonal irrigation bureaus as well as the Agricultural Training Center initiated a proposal to scale up the working capacity of the scheme. To materialize the initiatives and upgrade the scheme, the proposal was submitted to distinct national and international organizations for financial and technical assistances. Amongst diverse organizations requested, it was only the European Economic Commission (EEC) that showed practical interest to donate for the construction of the modern dam that took over 2(two) years. Prior to the involvement of EEC, countless efforts were in place to build up the dam in relatively strong way to function for longer durations than the indigenous manner. This was of course implemented in 1978 E.C. That was also limited only to address a few portion of the problem encountered. The parts of the dam gets damaged easily as the construction ingredients and the technical skills applied were some how meager. EEC, then, released a total of 3.5 million Ethiopian Birr to facilitate both the renovation as well as finalization works of the modern dam.

The focus group discussants at Dhaga Fillee reached a consensus to put their assertion regarding the promotion of the scheme into modern style as summed up here in below,

"It would have been implausible for people like us to undertake the construction of this modern dam with such huge amounts of Birr had it not been for the financial assistance of EEC. As foremost users of the task performed, our efforts were restricted only to contribute our labor. We also appreciate the efforts exerted by the government line departments to facilitate the finalization of Indris modern scheme. The whole conversion of the scheme into modern style kept the effects of intricate themes at their unripe stage. Above all, the workload along with the labor insisted for renovations of the indigenous dam year after year have been entirely averted. At the same time, the accessibility to get irrigation water at any time strengthened our capacity for better production. Time and water use efficiency demonstrated remarkable enhancements as well. (FGD held at Dhaga Fillee, March1999 E.C).

The transformation of the scheme into modern operation has induced further shifts besides those noteworthy moves formerly confirmed. Via the discussions held with the agricultural development agents, the following points were sorted out:

- The command area has grown to cover 7-8Kms. In its indigenous operation, it was managed to reach users within limited radius from the source, perhaps not more than 4-5kms away from the main source. Only sites closer to the main canal got irrigation water sufficiently. Thus, the conversion of the scheme augmented the command area by at least 2-3kms.
- The scale of the scheme grew from small to medium range. It was about 180 hectares (categorized as small scheme) of land covered through indigenous irrigation techniques that stretched to incorporate about 381 hectares (categorized as medium scale) of land in its current state. The numbers of water users have also increased from 250HHs to 1020HHs as a result of opportunities secured in connection to the promotion of Indris scheme.
- The need to apply environmentally sound and scientifically proved varieties escalate based on the calculations to gain satisfactory benefits.
- Both at the Zonal and district level, the areas were selected to be taken as a model among the top irrigation practicing sites in the district/zone. Driven with this view, Bako and Holeta Agricultural Research Centers frequently visited the sites, particularly Kilinto and certain parts of Dhaga Fillee. Such kinds of linkages with the research centers have enabled users to develop

further their operational skills as well as raised their awareness about merits of irrigation to a certain extent.

- The institutional capacities and management systems of irrigation water fall under the administration of Indris irrigation Water Users Association (WUA). The association was formed with the mandate to operate since the aftermath of the transformation of the scheme. Problems interlinked with water scheduling, water misappropriations (in the form of theft, seepages or salinity) received more concern in an integrated approaches since the promotion of the scheme.
- Irrigation production (fruits and vegetables) focused on market orientations. In the first and second phases of the scheme's development, irrigated produces were basically for household consumption and market supply to certain extent. In the third phase, production for market supply outweighed household consumption.
- Water users' dependence on irrigation practice rises up. Water users, particularly those found in the upper stream of the scheme (in villages like Selam Sefer and outskirts of Guder town in that direction) totally adopted irrigated farming than rein-fed agriculture. The majority of them were reluctant to engage in the practice in earlier phases of irrigation development.
- A slight modification to the name of the scheme was also another development with the promotion of the scheme. The indigenous diversion was named after the name of the river itself i.e. Indris. The intent behind the new naming has stemmed from irrigators' exclusive dependence on the water diverted from the river. Water users gathered to think up a name that would represent the common interests of users across streams (upper, middle and lower). A key informant at Selam Sefer pointed out that on a meeting of the general assembly, which is of course the highest decisive body; it was reached a consensus to name the scheme as 'Indris Fayiissa' literally mean Indris our savior. Such endeavors of naming and renaming implies man's role in the making of culture.

Plate 4:1- Indris Modern Scheme: constructed with 3.5 million Birr donated by EEC.

As whole, the conception to practice irrigation only on small scales in a marginalized manner have predominated the activities of the irrigators during the two earlier sequential phases. That sort of fashion and thinking has wholly superseded along with the improvement of the scheme into its third phase. The orientation to perceive irrigated farming likewise the rain–fed agriculture develops with the promotion of the scheme.

In the vivid depiction of the historical background and development of Indris scheme, a major focus was offered to the themes that hold positive dimensions. For comprehensive analysis, it becomes inevitable to have a look at on impeding factors. Through the extensive discussions made with the agricultural development workers

and irrigation experts on factors that somehow constrained the development of Indris scheme, state of affairs described below were extracted;

- The policy environment regarding irrigation schemes lacked strong basis. Above all, dearth of specific and directive guide lines for pragmatic implementations caused a lag on certain tasks while developing the scheme.
- Financial and technical skills were also amongst main constraints. An informant has contended the view that it was due to financial limitation that Indris Scheme stayed over ten years operating more of in an indigenous method. Dearth of support on the technical skills of irrigators to undertake maintenances, prevent wastages of water in seepages, water logging and drainages some how hampered the progresses of the scheme as sought.
- Institutional inadequacies prevailing at the three stages of the scheme's development put the overall management system under critiques. A member of the executive committee elicited that in nearly all circumstances institutional matters were either taken for granted or deliberately overlooked as if it posed only miniature effects. Yet, such ill conceived factors induce far reaching repercussions, usually with unprecedented consequences. For the purposes of illustration, cases linked with ditch cleaning and maintenance or attendances on meetings presumed to own negligible effects in spite of their potentials to facilitate the functional disintegration of the Water Users Association contradicting its development.
- Conflicts of diverse nature (among water users themselves in their vicinity, water users of upper groups against lower reaches, or between water users and other claimant institutes) somehow lingered the developments surrounding Indris scheme.

Thus, in the analysis of the historical background and development of Indris scheme a mix of factors both with restorative and dispiriting dimensions were recognized enabling the scheme to reach its current level.

The table below provides the major events that characterize each phase in the historical background and development of Indris scheme.

Table 4:3- Synopsis of the Historical Background and Development of Indris Scheme with Characteristic Features.

Key events apparent in each phase	Phases of Indris Scheme's Development		
	Phase-1	Phase-2	Phase-3
Nature and type of the scheme	Garden based-Simple practices	Small scale/indigenous	Medium scale/Modern
Duration/ time span	Mid 1960sE.C. to 1972s E.C	Between 1972s-E.C early 1986s	Entirely post 1986 E.C
Initiatives	Introduction of Grinding Mill/technology	Water users' increasing self motivation	EEC's financial assistance
Distance from the source	Not more than a kilometer	4-5 kilometers	7-8 kilometers
Irrigated land in hectare/beneficiary HHs	Undetermined	180 hectares/250HHs	381 hectares/1020HHs
Production trend in a year	Irregularly irrigate vegetables and fruits	Patterned once a year , un occasionally twice per year	Twice or three times per year
Market orientations	Negligible linkages, produces used for HH Consumption	Better linkages, production for both HH consumption and market supply	Focus on market supply with little for HH consumption
Involvement of agricultural offices	Almost non-existent	Encouraging	Strong involvement
Policy Environment	Almost no or less focus on the garden based practice	The irrigation directives, slightly had better look at on the practice	Frequently revised irrigation acts, more concern.

Source: Data gathered during the field work (March and April, 1999E.C.)

4.2. Institutional Arrangements: Management, Allocation and Distribution of Water from Indris Scheme.

A discussion would be made here on the central features of the overall irrigation water management as a pragmatic reflection of the irrigators' real life experiences.

4.2.1. Institutional Set-Up at Separate Stages of the Scheme's Development.

Indris modern scheme has been exposed to distinct institutional levels of structures. Particularly, the interplay between internal factors like (customary rules) and external factors (policy directives) worked as an impetus for the frequent restructuring and organization of its institutional arrangements.

When the practice of irrigation was at its emerging stage, no significant institution was reported to separately deal with the act of irrigated farming. The agronomist pointed out that except the broad guidelines and directives generally imposed on users the existence of well defined institutions connected with management of the irrigation system was beyond imagination. However, water management was basically implemented by individual actors who were primarily involved in the practice. An aged key informant expounded that:

> *"Any community cannot exist without institutions that enabled it to manage problems tied with exploitation of resources particularly water. Accordingly, though happen to be difficult to specify either institutions or approaches through which the initial practitioners underwent to handle every actions of individuals, the overriding customs and normative rules of the society presumed to take a bigger portion as an instrument to induce remedies for irregularly erupting disagreements. Elders' rule, through the practice of 'Jarsummaa' (elders arbitrations) disseminated in the vicinities functioned to normalize cases of harsh encounters emerged over the use of water."* (Interview held with an elderly informant at Selam Sefer, March1999).

Hence, during the first phase of irrigation development around Indris River, there were hardly recognized institutional arrangements that had established linkages with government structures, committee or associations. Instead, individual beneficiaries themselves involved to smoothly run the overall management of irrigation water allocation and distributions. In connection to this notion, it was taken out that renowned irrigation promoting HHs like the family of Obbo knife, Ras Imiru, Obbo Sefu and Obbo Abdissa acted to provide decisions on the management and distributions of water. As a result, these individuals assumed to display their role as

water fathers discharging all necessary responsibilities anticipated on behalf of the rest users.

The water fathers' rule that had instated their influences during the initial phase persisted to preponderate after the progress of the scheme into patterned indigenous style. The highest decision makings with regard to management aspects remained in the hands of experienced water fathers. But, their contact with line government departments and other institutions exhibited remarkable improvements. On top of other themes, the water fathers were made to be organized in the form of water committee with the mandates to re-enforce the entire management of water. This was basically facilitated with the involvement of principals from the agricultural offices. With an increment in the involvement of the *Derg* government's concern to indigenous small scale irrigations, a sort of rules and regulations were delineated to direct the actions of water users. The rules were not out of the normative orientations prevailing in the wider society and based on the common determination of irrigators. A typical move way was merely the availability of water rules in a synchronized manner as related with the previous stage of the scheme's development and the formation of committee that carried out dual missions: management of irrigation water as a whole and networking with the government structures for administrative and other purposes.

Since the conversion of the scheme into modern operation (i.e. post 1986 E.C), numerous changes and improvements were brought into the institutional affairs, particularly in the management, allocation and distribution of water as well as formulation of clearly stated by-laws and enforcement of its pragmatic implementations. For this reason, it becomes indispensable to precisely discuss the water management aspects that centrally portrayed enhancements post of the scheme's promotion as a reflection of its institutional set-up. These aspects revolve and focus on:

- Over all management of irrigation water
- Allocation and distribution decisions, and

- Clearly set up by-laws with its enforcement.

4.2.1.1. Management of Irrigation Water at Indris Modern Scheme.

Indris modern irrigation scheme has been chiefly managed by the Water Users Association (WUA) since the aftermath of its entire promotion into a modern style. The formation of the association was inspired with the enthusiastic involvement of the government of EPRDF through its structures found at Zonal and district agricultural offices with the intent to upgrade the efficiency of water management and decision making capacity of water users. The agricultural workers, who carry out multifarious activities, like the DAs and experts took an essential role in the efforts to amalgamate the interests of the water users with the policy environment and also supervise the applicability of intermittently revised irrigation water acts by the government.

One of my informants, who served as a member of the executive committee, explicated that the Water Users Association (WUA) was formed with the consent of water users in the five (5) PAs, namely Imala Dawo, Ajo Bedo, Dale Dawe, Kilinto and Dhaga Fillee. However, as indicated here in above, this research provides a focus to villages only in three PAs. Therefore, in each of the settings selected for the study, there is representative committee supposed to work on structures of the WUA that organize and guide the actions of water users in their respective villages. In order to grasp a clear insight of the committee responsible for the management of irrigation water, it would be helpful to look at their nature.

At the forefront, the general assembly represents the highest authoritative structure whereby its decisions remain effective and unanimously implemented by any member provided that he/she has accepted the approval of rules and regulation on their by-laws. It was noticed that more than 50% of the members have to take part on the venue to approve decisions pertaining to irrigation water use. The general assembly maintained certain responsibilities and duties to be handled at length. Some of the

responsibilities and duties of the general assembly, as stated on their water use manual, includes:

- ✓ Assess the performances of the WUA to hint constructive comments and decisions if necessary.
- ✓ Examine the pragmatic implementation of the principles, rules and guidelines stated on the manual containing their by-laws.
- ✓ Appoint or fire committee members who deliver services depending on conditions at hand.
- ✓ Carefully listen to the reports and prospective plans of the executive committee either to pose questions or opinions that would further strengthen the proposed plans.
- ✓ Conduct systematic assessments on the newly registered members as well as watch cautiously those deleted from the WUA due to misbehaving.

The WUA has got an executive committee with seven (7) functional members who are in charge with all aspect of irrigation water management. These seven members of the executive committee are supposed to fill the positions of:

- Chairman of the committee
- Deputy Chairman
- Secretary
- Cashier
- Accountant and
- Any two members of the WUA.

The executive committee of the WUA is accountable to the general assembly and remains operational only for the duration of three years span. Nevertheless, informants have depicted the view that members of the executive committee could be removed and substituted by a new member in case they fail to maintain expectations. These executive committee members are selected from different PAs or villages as their role is to manage water across the command area. Certain eligible criteria are set for the recruitment of a given member to the executive committee structures.

Amongst others, the recruited member need to fulfill requirements like experience in the practice, fixed residence in the PA and above 18 years old, own a piece of land suitable for irrigation as well as his/her occupation must be a farmer, and finally the position taker must be acceptable in the eyes of water users.

As a general principle two women must be incorporated in the structures of executive committee. This justified the intent to reduce gender disparities and enhance the decision making capacities of women users on matters pertaining to irrigation. Informants claimed that despite women were included in the positions; they were noticed to be non-responsive to undertake their duties in fear of incompetence compounded with cultural barriers. Apart from that any member of the WUA who maintain the eligible criteria have got the right to be selected regardless of his/her ethnic background, religion, socio-economic status or political orientations.

Even though the executive committee of Indris WUA has been supposed to manage and handle all irrigation related themes, there are roles and duties to which the committee draws its particular concern. These comprise:

- To safeguard and supervise the over all operation along the ditches and streams of the scheme.
- To approve water use schedules and assures its implementations accordingly.
- To prepare programs for canal cleaning and maintenance of damaged parts timely.
- To document the profiles of the members lists as well as the financial records of the WUA.
- To initiate and organize the formation of water user cells either in the form of teams (Garees) or territories (Gooxiis) along with activities they required to implement.
- To create strong working communications with relevant and concerned agricultural departments at various levels.
- To conduct monthly regular meetings and other meetings per their predetermined schedules. The general assembly gathered twice or three times

per a year. But in circumstances the committee seek to conduct urgent meetings, it has the mandate to call up on members at any time.

- To arrange conditions for auditing the financial documents of WUA.

The performances of the executive committee are critically observed and counterchecked by a controlling committee with three persons assuming three respective structures (chairman, deputy chairman and secretary). Their principal task rests on the systematic follow up of how best the executive committee members do discharge their duties and responsibilities. Alike the executive committee members, the controlling committee also works only for three years duration.

Next to the executive committee of Indris WUA and controlling committee, there are two significant committee working at village and water user teams inside the village. These are territorial (Gooxii) level and team (Garee) level committee. The documented data obtained from the district agricultural desk confirmed the role played both by Gooxii and Garee level committee to be considerable particularly with regard to allocation and distribution of water to users. In the selected research villages, there are 6, 15 and 10 Garees in Selam Sefer, Dhaga Fillee and Kilinto, respectively. Each Garee encompasses 12-15 HHs. The three villages have got one principal Gooxii each. A given Gooxii could incorporate as many possible Garees as ranging from 5-15 convenient for administrative purposes. Therefore, there exist three territorial/Gooxii level committee and many team/ Garee level committee that fit to the number of teams mentioned here in above in each area. While the team level committee is selected rotationally from the team members, the Gooxii level committee is recruited from representatives of water user teams.

Thus, the management of irrigation water diverted from Indris modern scheme has been effectuated through the chains of interactions extended from executive committee to team level committee. Generally speaking, the executive committee of the Water Users Association provides a frame of reference to the Gooxii level committee that in turn pass similar guidelines to be realized by Garee level committee

and the remaining water users. Numerous sub-committee do exist and function in diverse structures of each Gooxii and Garee.

4.2.1.2. Allocation and Distribution Decisions of Irrigation Water.

The chief responsibility to provide decisions pertaining irrigation water falls in the domain of committee at Gooxii level. The allocation committee that operates as a sub-committee in the Gooxii level committee fundamentally takes into account the number of water user teams, total hectares of land covered through irrigation under the teams, distances from the main water carrying ditches, the types of vegetables and fruits commonly irrigated and the total hours supposed to be sufficient for the number of water users in each teams.

The water distribution sub-committee as a component of the team level committee in turn assures the timely, equity and sufficiency in the distribution of irrigation water to water user HHs. The Focus group discussants held at Kilinto enriched these views explaining that:

> *"All of us strive and work in teams to create conducive environment to secure water. The executive committee positioned at the peak of the WUA, noticed to exert its full efforts to launch the major programs predetermined in their plans. Thus, the executive committee fed necessary programs and tasks to be pursued and realized by the Gooxii level committee which also in turn replicate similar procedures to be adhered and implemented by Garee level committee. The Garee level committee tended to be overburdened with several duties as it closely works with the water users. Preparations and announcement of water schedules, canal check-ups, supervision of time utility of water users, transgression of elements contained in the by-laws, turn abuses or theft inspections constitute amongst their foremost duties on the spot. Even at times conflicts occurred in their teams, the team level committee is responsible to appear there first. The reports and implemented programs, therefore, move up ward in a chain of hierarchies that extends up to Wereda or Zonal agricultural offices."* (FGD, held at Kilinto, April 1999).

It was not uncommon to come across complains of few water users who seemingly appeared disappointed with the timely or sufficiency of water distributions. An informant contacted at Kilinto put forwarded that most committee members discharge their responsibility only at initial days of their appointment to the positions. As he put

it *"committee members fade away failing to perfectly undertake the required duties and responsibilities contradicting in a manner which they promised to serve water users. There are occasions even the committee members deliberately ignore while water users involve in violation of the rules and regulations of the WUA."*

On the other hand, it was also highlighted that the loyalties of the water users themselves to their obligations have played its part. As a result water users have been recommended to adhere persistently to the following points:

- Frequently check-up and stick on the publicized water schedules or turns.
- Cover the accessible and potential plots through irrigation items that suits to the environment with minimal use of water.
- Ensure materialization of the already enacted by-laws through negotiations.
- Abstain from affecting the water rights of the rest water users.
- Endeavor to avert conditions that aggravate wastages.
- Abandon the likely conditions that either instigate or aggravate conflicts over Water resources.

As a whole, the irrigation water management system of users has displayed to move from less sophisticated institutional approaches, rules, techniques to more intricate and institutionally working association that manage, allocate and distribute irrigation water to users. It has also demonstrated remarkable shifts from the state where in irrigation water was judged by the sole decisions of water fathers to the committee of WUA.

4.2.1.3. Irrigation Water Rules and its Enforcement at Indris Modern Scheme.

The availability of clearly defined WUA's rules signified a great land mark in the management, allocation and distribution of water. When the scheme operated in indigenous manner, as repetitively indicated by informants and FGD, the overwhelming customary rules have taken to play a pivotal role. Of course, the

currently working by-laws originally rooted their sources to the customarily available normative rules.

The development of Indris scheme into modern operation has resulted in transformation of rules that govern the behavior and actions of users. The technical assistances of agricultural development workers and irrigation experts were said to have paramount significance in the endeavors to modify the water use rules. With regard to the enforcement of the rules on the manual, identical views preponderate in the three research settings. Serious complains prevail amongst water users as observed from their responses. Even the committee members working at Gooxii and Garee level observed to change the mood of their interactions when the discussion of rule enforcement steps on the ground as an agenda. In connection to this, an informant has stated regarding the rule enforcement as, *"We did formulate a by-law that appears considerable to read and hear, with negligence on implementations that demands devotions from all water users, committee and agricultural workers."*

Conclusively, it was noted that the formal establishment of the water use rules on the manual itself entailed a great deal in spite of its poor enforcement in practical senses as depicted by informants. The development of water use rules on the manual also bridge water users with the overriding legal environment.

Plate 4:2- FGD participants at Kilinto addressing themes on water allocation/ distribution decisions and enforcement on water use rules.

Chapter- Five

5.1. Water Rights among Irrigators in the Study Area: Basics for Decision and Access.

In the preceding chapter, three phases that indicate the historical back ground and development of Indris scheme were distinguished and essentially discussed. The irrigation water rights of users do correspond those phases.

The interviews held with informants and participants of focus groups implied the elements of the riparian doctrine of water rights to predominantly prevail among irrigators diverting water from Indris scheme. During the initial phases of the scheme's development the users' right had emerged as a result of possessing personal land through which either the river crossed or happened to exist closer to Indris River. Though trends in the practice of irrigation exhibited progress in the area, water right claims were found to occupy an insignificant place. Above all, the initiators of the practice had not diverted water purposively with the notion of realizing their water rights. Rather, it was simply a trial to take part in the production of certain vegetables and fruits, as adopted from neighbors.

In fact, there were views that advocated HHs' water right decisions or an access were not apparent or intricate as the irrigation system was too simple, covered relatively small area and only serve few households. In connection to this, dimensions like water users' socio-economic status, power relations, religion or gender could create no special water access or opportunities. Instead, the predominantly wide spreading principle emphasized, all individuals/HHs that possessed certain plots of land got equal access for irrigation water. Nonetheless, no specific rules were coined out or laid down in relation to water right matters.

Thus, during the first phase of irrigation development possession of a land right took a prior consideration for HHs to establish an access for their irrigation water rights along with a little recognition on the historical precedence of individuals in the area reflecting the appropriative doctrine.

Together with the full conversion of the scheme into indigenous operation, the elements of the appropriative doctrine of water right worked more applicable for water users. An agricultural development agent contended that individuals whose lands were found closer to the diversion point or source claimed to utilize water sufficiently for a longer duration of hours and/or days prior to releasing little volume of water to those located in the middle or lower streams of the scheme. The agent has further gone on to say about the water right claims of users as follows:

> *"It has not been uncommon to observe water users geographically located at the upper stream of Indris scheme pretending to exclusively decide on use right of the rest users down the canal of the scheme. Users inhabiting Ido Bari, Dale Dawe, Selam Sefer acted as if they hold the right to benefit much from the scheme disregarding the access of Ajo and Dhaga Fillee water users in the middle stream and Kilinto at the lower tail. Severe conflicts had erupted several times in connection with water right claims. Though the extent and manifestations decline, the tendency to ponder in a way that water users at the upper tail of the scheme hold extra rights over the water has not entirely removed from their mentality."* (Interview, held with DA at Selam Sefer, March 1999).

The irrigation water right claims based on a historical precedence in association with the settlement period of water users have commonly disseminated even among the upper stream village residents. According to elderly informant, the villagers (Selam Sefer) views fall into dual category in this regard.

While the first category pronounced the idea that the original inhabitants of the land in the area had the full right to claim over access to irrigation water use. Their argument slightly coincides with the riparian water right doctrine. On the other hand, the second category advocated the belief that irrigation water right claims should not necessarily consider land holding nature or settlement period of new comers to the area. This debate that propagated from the orientations of the appropriative doctrine of water right claims disseminated among other villages in the down stream of Indris scheme. The discourse over the problem has persisted during the entire period of the scheme's operation in a indigenous manner. The *Derg* government then involved in the formulation of broad directives and rules which water users need to realize. Its attempt was to curb the disagreements among users over water right claims in ways to

uniformly benefit all users across the upper to lower stream. To have a glimpse over some of the general directives, as recalled by an informant who was a water controller at that moment;

- Irrigation water users from Indris scheme have equal access, decisions and opportunities regardless of their territorial locations.
- Water as a communal and natural resource can be exploited equally by users.
- The water users are needed to take part in labor demanding tasks as prescribed by water controllers or elders.
- Water users need to obey the irrigation water use rules initially derived from the customary and normative dictations of the society as a whole.

Therefore, analyzed from irrigators' responses, water right claims during the indigenous operation of the scheme to a lesser extent defined through the users' labor contributions, fulfillment of government obligations and adherence to the consensus generally reached by water users. These emerging new requirements play their part in building the water right access of users. Water users who have assured their access also got the opportunity to partake in the decision making matters. Hence, in a historical perspective land ownership and individuals' chronological appearance to the area have been centrally taken as crucial dimensions to assure a water right access for water users. However, with increasing crisis associated with water right claims the *Derg* government took a measure to slightly modify the existing water right claim systems through the introduction of water enactments.

The change of Indris indigenous scheme into modern operation has also involved a move in the parameters that have been taken in to account to create access for irrigators' water right claims. Informants in the three research villages have described the details of most crucial factors that should be considered basics for access and decision. As particularly stated by an informant at Dhaga Fillee, the list of central points for water right access include:

i. The applicant should be above 18 years old and establish his/her own independent family.

ii. The applicant as a water user should have a well defined residence in the PA and be registered as a member of the WUA of Indris scheme. Occasionally, few irrigators might have residential units and irrigable plots in more than a PA. In this case, he/she has not the right to claim water in more than a single PA. It is clearly stated that no one can irrigate above 2000 m^2.

iii. The water users need to own not only a land but also make sure that a portion of the land has to be suitable for irrigation farming. In this regard, distance from the main canal and minor ditch, geographical location of the land (below or above) the water carrying canal or health status of the users are among certain factors considered to access the water right of users.

iv. To reinforce their water rights access, users have to meet their obligations which are clearly incorporated on the water use manual. The obligations to be maintained by water users at the fore front encompass.

a. Respect and materialize the by-laws of the WUA: A woman informant residing in Selam Sefer shared her observation stating that "*On the first place as to my opinion rules referring to violations should not be included in the by-law. Their existence on the by-law encourages the possibility to think antagonistically. In reality when a given water user breaks a water use rule, like a water schedule with a deliberate aim to be punished, this water user not only affected the right of others but also made them to suffer from cash and production loss crisis.*"

b. Complete utilization of potentially available irrigation plots. When users fail to cover their plots with vegetables or fruits, they are enforced to enter contractual agreements or share cropping. However, irrigators who have overlooked these conditions are blamed for under utilization of their own water rights.

c. The members of WUA are obliged to conduct canal cleaning and maintenance once or twice a year. Usually the propositions to undertake the initiatives get completed during the months of Nehase and early Pagume. Despite the major task of canal maintenance and cleaning are accomplished early in the month of September, team level committee conduct inspections to maintain damages

that occurred on canals at any time of the year. According to the views of informants water users who failed to share their labor due to reasons could be denied of their water rights completely. As in the former phases, possession of land rights or historical precedence in the area have been serving deterministic, since the promotion of the scheme in to modern techniques labor contributions take a greater part in the decision to create a water right access of users.

d. Timely completion of financial fees: the obligation to timely pay their financial fees constitute among compulsions imposed on water users. The financial payments expected from water users basically comprises of;

- ✓ Taxes collected by administrative structures depending on the total hectare of land an individual utilizes.
- ✓ Payments aiming to compensate services rendered by distinct institutions like credit and saving services.
- ✓ Payments imposed on water users as a punishment in recognition to their disobedient acts against the WUA by-laws.
- ✓ Annual fees collected from water users for maintenance and operations. An elderly informant consulted has recapitulated that in earlier days, particularly since the aftermath of the operation of the scheme deep in an indigenous manner, annual fees collected from users were not more than 10.00 Birr. But the same payment increases to 18.00 Birr along with the promotion of the scheme.

To have a brief account of what has been cited by an informant at Selam Sefer,

> *"These days every water user gets acquaintance with the annual fees of operation and maintenance. No water user has any discontent with annual fees as periodic maintenance assures continuity in water flow. The fee has also been reasonable in that it considers the actual hectares of plots users irrigate. Due to decline in water volume, and drastic increase in the number of users, users are forbidden to irrigate more than 2000 m^2 for which he/she expected to pay 18.00 Birr and it moves down proportionally i.e. for 1000.00 m^2 9.00 Birr, for 500.00 m^2 4.50 Birr and lastly for 250 m^2 and below up to 2.50 Birr. As the majority of water user in the three study*

settings irrigate between 1000-2000m² they accordingly pay 18.00 Birr." (Interview with an informant at Selam Sefer, March 1999).

The water rights of irrigators could be either facilitated or deteriorated as evaluated from the timely fulfillment of the aforementioned payments particularly the annual maintenance and operation fees.

e. Safeguarding the scheme and any other assets of Indris WUA. Water users who knowingly or carelessly sympathize with corruptors might be denied their water rights. To smoothly run the system, inspections of various assets are carried out at the end or twice per year. Auditing of the financial documents is also meticulously conducted by a team of experts from district and zonal level agricultural offices.

f. Attendance and participation on the meetings: three DAs (each of whom work separately in the 3 areas selected for this research) and one (1) SSI (Small Scale Irrigation) expert have elicited that meetings held at various levels could address multipurpose ends. Above all, it facilitates exchange of views and actions to be taken on immediate plans, reinforces the practical implementation of water rules, enables water users to rehearse leadership skills, creates greater level of orientations on how best to claim their water rights, and shrinks the frequency as well as intensity of conflicts or wastages of resources.

The details of points deeply discussed here in above are the most pertinent parameters taken into account to access users for their water rights. Nevertheless, certain impeding factors affected the water right of users in the three phases of the scheme's development, implicitly or explicitly. Few of them includes,

- In the former days, especially at the moment when the scheme functioned in an indigenous manner, water right issues were not as such sensitive. As a result, the inclinations of the agricultural desk as well as water users were far from focusing on themes of water right. It has been with growing conflicts, dialogue and violation of rules that water rights got an increasing concern.

- Diminished endeavor on the enforcement of by-laws of the WUA. The poor application of directives stated on the manual made their implications to carry insignificant effects.
- The dynamic nature of water rights: the basic dimensions considered to access irrigators' water right have not been fixed. Access to land rights fundamentally determined users' water right during the initial phase of the scheme's development. This was accompanied sooner with the questions of settlement closer to the water canals i.e. historical precedence in the area. In recent days, the reconstruction of the scheme also necessitates the reformation of irrigators' water right in several regards. The dynamic natures of water rights become more intricate as its rules stem from multiple origins. For instance, since the promotion of Indris modern scheme, irrigators could get accesses of water rights plausibly via:
    i. Inheritance from parents or relatives who had formally established their irrigation water rights.
    ii. Purchase of the water rights of a given user through contractual agreements.
    iii. Water rights maintained through share-cropping.
    iv. Water rights acquired in association with land re-distributions by the government.
- Finally, with the recognition to manage and exploit water, users open access has been somehow curtailed. For instance, users are limited not to irrigate more than 2000 m^2 of land despite they could have the capacity to irrigate more.

To put this part to an end, three cases were selected to illustrate comprehensive understandings of the discussions on water right, access and decisions. The cases are,

Case: 1

Obbo Kumela Magarsaa, is an elderly male informant aged 48, dwells in Selam Sefer (upper stream village of the scheme). A substantial income of his family (4 daughters plus 3 boys along with his wife) depends entirely on irrigation of vegetables and fruits

three times per year on about 1,500 m^2 of land. He had involved in the practice over 15 years and also served as a water distribution committee. He acquired his irrigation water right through inheritance from his uncle who had got the land during the time the scheme operated in an indigenous manner as beneficial of the land redistribution carried out by the Dreg. Despite the inheritance of water rights was inseparably treated from the rest rights (like land use); some neighbors had confronted me to lose a parcel of my water rights. Among others, I was systematically enforced to receive a little amount of water in my turn which was insufficient to reach my irrigation plots. I have suffered a great due to damages occurred on my production. As I was a new comer to the area, I had impersonal ties with the majority of water users. Even there were occasions I refrained to present the cases to water committee. Water users adjacent to my irrigation plots used to break the ditch and divert water to theirs deliberately.

Gradually, I have improved strongly my access to water rights through keen involvements in maintenance and operation tasks, timely accomplish fees, render services and take part in any occasions that require my labor. Nowadays, I have been appointed as a member of the executive committee, on the supervision of water distributions. Hence, I have established the right to divert water based on the basic guiding principals of water schedules that directs to stick on the specific days and hours. When I recall these issues today it appears quite straightforward, but the struggles I have made to assure my irrigation water rights were really disgusting. It would be worth mentioning to note that even as of to date some water users attempt to maximize their merits at the disposal of shaking others water rights.

Case: 2

Obbo Ajama Tujuba, about 34 is a male key informant living in Kilinto (lower stream of Indris scheme) together with his four children. He claimed to own cumulative experiences of irrigated production since his childhood while assisting his parents. After he got married and established his own family, he was eager to acquire irrigation plots through formal procedures from the government side. But, his venture

remained fruitless to secure any piece of land suitable for irrigation. Then, he decided to enter a contractual agreement with a range of 150.00-200.00 Birr per 200m^2-250m^2 plots depending on the fertility and geographical location of the land, with water users who have the right to use irrigation water yet did not engage on the practice due to their personal reasons.

Hence, he makes use of entering the contractual agreement as a technique to benefit himself and the right owners. The agreement is subject to renewal per a year. Recently, the amount of the Birr to be paid for the contractual agreement is calculated in terms of the cereal crops approximately harvested from the land per a year. In his views, it is rewarding to purchase water rights in the form of contracts and engage in irrigation rather than becoming dependent only on rain-fed farming in Kilinto where in almost the entire villagers gain noteworthy benefits from irrigation practice.

Case: 3

Addee Ayinalem Idossa, is a female informant aged 52 inhabiting in Dhega Fillee (in the middle stream of Indris scheme). She leads her life with her grand sons and daughter. Addee Ayinalem recalled that her husband obtained a considerable land convenient both for rain-fed and irrigation farming during the redistribution of land by Derg. He got the opportunity to divert irrigation water as a portion of the land was closer to the canal carrying water down to Kilinto. He then began to irrigate vegetables on a very small plot encompassing more plots year after year. But, accidentally he died from unknown disease. Except one of my daughters who married in a nearer village, our rest children migrated to towns in pursuit of education and jobs. As, I was loosing the energy to sustain and manage my water rights alone I invited share croppers. While I provide the land and access to water rights, share croppers commonly contribute their labor and varieties of vegetables and fruits to be irrigated. At the end we share the cash. Of course, such techniques were rarely pronounced in Dhaga Fillee. The willingness of the share croppers took its own

weight as they are attempting to create access to irrigation water rights and land at the same time.

The cases presented here in above specifically demonstrated the ways through which water users from Indris scheme had created access to irrigation water rights. Cognizant to the irrigation policy dynamism noticed in the three successive governments, land possession or use rights, historical precedence in the irrigation villages, financial and labor contributions post the promotion of the scheme into modern techniques occupied prominent places among fundamental factors to be considered basics for access and decisions of water user rights from Indris scheme.

5.2. Plural Nature of Water Right Rules at Indris Scheme: in Origin and Co-existence.

Irrigation water right rules observed at Indris scheme have been said to propagate from diverse sources. The consulted informants have confirmed the share of customary rules to be substantial on the foundation of which modifications to integrate with certain aspects of government water acts have been underwent. In concrete terms, the government water acts themselves are derivatives of customary rules. The reconstruction of Indris scheme into modern style as a project itself inevitably brought into existence rules that were less conceived in the mentality of water users. Generally, the results of the extensive group discussions held with a team composed of irrigation experts and DAs concerning the diverse nature of water right rules at Indris scheme in origin and co-existence tended to reveal out what is summarized below:

> *"Irrigation water use in general and water right rules in particular emanated from several sources. In the three phases of Indris scheme's development a mix of rules being backed-up by the ideologies of the ruling government prevailed. To depict in the form of links, during the initial phase of the scheme customary rules with ethical norms out weighed. Likewise, during its second phase even though a combination of customary and government irrigation water directives said to work simultaneously, still the customary rules had been meaningful in numerous regards. A decision once made by an elder carried an immense value. As a whole, there were signs of strong moral devotions to abide water right and use rules customarily adopted. Lastly, in*

the third phase of the scheme's development, integration of customarily available rules and government water acts comprised water right rules. In spite of their dissimilarity in origin, their ultimate aim was to effectuate the water right and use rules of users in accordance with the stages of the scheme's development." (Focus group discussion held at district agricultural desk, March 1999).

Plate 5:3 - District agricultural development agents discussing about the diversity and dynamic nature of water rights around Indris Scheme.

Presently, the water right rules of water users from Indris modern scheme have submerged into the section of the right of members on the manual of WUA. These rules stated in the right of members section predominantly indicated the amalgamation of both customary and government irrigation development directives. These rules were incorporated on the manual with a full consent and approval of the general assembly of water users. The section referring to the right of members' state the overwhelming water rights of water users denoting that water users have possessed the right to:

- Irrigate their plots depending on their predetermined water schedules or turns.
- Equally benefit from the services rendered by institutions or technical advices of experts.
- Vote and also be elected as a committee member of WUA to serve at separate levels.

- Create and hint innovative ideas intended to enhance the working capacity of the WUA of Indris and the higher productivity of irrigation production as well.
- Selectively irrigate vegetables and fruits suited to the environment.
- To enter contractual agreements or sharecropping when confronted a crucial difficulty that could not allow them to irrigate by themselves. Under such circumstances critical assessments are usually carried out by committee members, particularly by those at the Garee (team) level as they are supposed to be closer to ordinary water users.

These rules overshadowing the water right of users are not necessarily fixed. The earlier trend indicated that they have been subject to revisions, complete omissions and improvements. Rules pertaining to payments, punishments, obligations or rights of members are among frequently revised sections of the water use manual.

In the efforts to wind up this part of the discussion, the multiplicity in origin, co-existence and functional integrity of water right rules pragmatically perceptible at Indris modern scheme essentially explained the central elements of the theory of legal pluralism. Water users have reported to shift in the application of the rules (between customary or government water acts) with the intent that certain rules customarily imposed have carried harsh implications while the formally enacted ones considered to be fair or vice versa. The customary and formal water right rules manifested at Indris scheme could be depicted in the next table for further apprehension in a comparative way.

Table 5:4- Comparison of Customary and Formal Water Right Rules at Indris Scheme.

Dimension	Water Right Rules at Indris Scheme	
	Customary	Formal
Nature	Orally available, elders experience and not documented well. Informal in approach.	Written, documented and available in the hands of each water user in hard copies.
Scope	Effective more in the culture of irrigators, may be less applicable in other districts in the zone.	Could be applicable in several irrigation practicing villages in the district
Predominance	Predominated during phase-1 and phase-2 of the scheme.	Available and accepted during its phase-3 of scheme's development.
Enforcement	Strongly recommended by elders and materialized by water users. Sanctions involving ignorance may encounter users who fail to meet the rules.	Strictly applied pursued by serious punishments on disobedient actions.
Role in conflict resolution	Resolves conflict from its root. No avenge	Conflicts could be solved but there is a possibility to recur again
Resource-time utility	Resource and time effective	Relatively costly
Response to external/internal changes	Tendency to be more non-dynamic, resistive.	Subject to changes and frequent revisions along With policies.
Access to Water rights	Considered either land rights or historical precedence of water users.	Requires maintaining all set criteria for registration and usage.

Source: Data gathered during field work (in March and April, 1999 E.C)

5.3. Water Right Claims and Interactive Factors.

Webs of multiple factors have pointed out to hold implicit and explicit links with water right of irrigators' diverting water from Indris modern scheme. Amongst others, economic status, power relations, and gender dimensions affected irrigators' access to

water use for irrigation. Factors like religion and ethnicity could also pose similar effects. In this regard, Dessalegn (1999:32) has attested that there are social, economic and gender differences among irrigation beneficiaries in Ethiopia. In some cases the differences may be cultural or religious. Whatever the causes, differentiations pose a problem to full and equal participation by beneficiaries. Drawing a similar concern, Rathgeber (2003) claimed that different users and categories of users have varied needs, priorities and expectations. For this reason, the social status of the potential user and his or her wealth, influence, and credibility in the community, can become important determinants in water diversion.

5.3.1. Water Rights and Economic Status.

The views of informants ascertained that the economic status of a given water user determines his/her claim to water rights in several regards. As a factor, economic status proportionally functioned more in favor of the relatively affluent users conversely creating negligible opportunities for those categorized as economically weak. Cleaver et.al (2005) asserted that for more that to the wealthy, water rights matter to the poor for an obvious reason: poor people lack the financial resources and political voice to protect their interests outside a rules-based system water rights count for little if, in implementations, they skew advantages to those with power. Hence, the poor are systematically excluded from access. Through in-depth discussions held with key informants, it was comprehended that water users in Kilinto sites appeared relatively better in their economic status. This was partly embedded in the fact that water users in Kilinto also divert additional water from Chole River besides an amount secured from Indris scheme. There are occasions when irrigators collect 10-30 thousands of cash per a year in Kilinto. Correspondingly, water users in Dhaga Fillee extract reasonable benefits though not as equal as those found in Kilinto but by far stronger than water users around Selam Sefer. In fact, variations in economic status are also apparent even among water users within a single irrigation village.

Water users distinguished as economically weak usually create a poor self image including about their access to water rights while the better of filled with the spirit of

winning. Irrigators who have been categorized in the economically better off class predominantly secure their water right access with out pronounced obstacles. Such interactions between water right and economic status cross cut the spring board of the committee member themselves. The responses of interviewed committee members at Selam Sefer confirmed economic status affected the water right of users at least as the economically better of,

- Completed a range of tuitions imposed on them earlier in relation to the economically weak.
- Can purchase access to water rights through contractual agreements or entering share-cropping. In contrast, water users in an economically weak position lose to utilize such opportunities.
- Develop a relatively strong channel of communication with the committee members, extension workers and other institutes.

Hence, economic status as a factor played its part to depreciate the irrigation water rights of the economically weak users in a quite systematic and concealed manner while it capitalized the opportunities already achieved by the economically well water users.

5.3.2. Water Rights and Power Relations.

Irrigation water as a public good meant to be utilized equally by users who have established their rights through any of the possible means. Nevertheless, it is not uncommon to encounter instances where water users or organizations try to be competent as vested through their power reflections emerging, legitimately or illegitimately. For instance, the severe complains and a feeling of discomfort put forwarded to Ambo College of Agricultural Training Center by water uses in the three selected irrigation sites has been a mere reflection of imbalanced power relations. The Agricultural Training Center got the 'legitimate' power to use water for research purposes despite no stated rules pertaining to this notion would be available. The legitimacy to divert water from Indris scheme was partially recognized by the farmers themselves. This was facilitated as the Agricultural Training Center was

thought to meet the common interests of the community. However, the institute moved beyond its mandate of diverting water. Almost all segments of the informants contacted blamed the Agricultural Training Center to apply its legitimate power to abuse the water right of the farmers. The head of the training center, on the other hand accused the farmers for their attempts to intervene in the activities of the college that was primarily designed to fulfill research and training needs of trainees. In his views the training center has never utilized its power to affect the rights of water users. The reactions sustained between the institute and irrigators created a discourse drawing the concern of other stakeholders such as local administrators and both zonal as well as district level agricultural desks.

Power influences do also operate among the team of water users (in terms of upper, middle or lower scheme levels) or separately individual users one another though not easily perceivable. As an illustration a female in formant living in Dhega Fillee put forward her opinion regarding the ways power relations could affect water rights users'. So, depicted her argument as,

> *"let alone the Agricultural Training Center and/or the famous irrigators, the committee members who were elected to serve users honestly regardless of any sets of domain or out looks, frequently seen to make use of their formal power illegitimately particularly in taking a side with turn abusers or thieves marginalizing the water rights of normal users. Unquestionably, the committee members (especially those working at team level) themselves involve in abusing the water right of other users through misuse of their power vested at the structures and positions they occupied."*

Power reactions do also prevail among water users in upper tail and those found down at the lower end. Their power interactions were chiefly rooted in the misperception that those in the upper ends aspire to hold exclusive control over the water source adversely affecting the water right of users down the canal of the scheme. This mentality has induced damages ending up serious confrontations among water users on stream basis.

Whatever the fashions of its manifestations, power relations prevailed among diverse entities where in an institution or individual user either legitimately or illegitimately

tries to impose their power deteriorating the water right of those in comparably underprivileged positions. In consistence with this view, Boelens and Davila (1998:445- 447) confirmed the conception that 'water flows in the direction of power'. Within unequal power structures, different societal bodies define their strategies in order to defend and materialize their own interests in controlling the water or the processes of irrigation development. Thus, ill-treated distribution of irrigation water is not only through consideration of economic status but also mystification of the power via which the user HH or institute define its access.

5.3.3. Water Right and Gender.

It was explained that the involvement of women either in the decision making processes or institutional structures of Indris WUA tended to be quite negligible as compared to the crucial roles displayed by men. In connection to this argument, Dejene (1994) denoted that female households often have very different rights and responsibilities with respect to resource ownership and decision making in agricultural production. The predisposition to ill-treat female headed water users by their male counterparts was reported to work in hidden dimensions. Cleaver et.al (2005) has also added that women are doubly disadvantaged in irrigation systems. Lacking formal rights to land in many countries, they are excluded from irrigation management systems. At the same time, informal inequalities-including the household division of labor, norms on women speaking in public and other factors– militate against women having real voice in decision making. Accordingly, among irrigators diverting water from Indris scheme, such a bizarre distortion of the water right of female headed HHs and/or women users in general were attributed to several interpretations. The cultural barriers or out looks that kept women to only presume marginalized status have persisted in the mentality of the current water users. As a result, women's access to the decision ladder remained restricted. Their participations at meetings also happen to be passive and more of submissive to simply acknowledge decisions forwarded by male water users. Therefore, gender as a socio-cultural construction, contributed much amongst other constraining interactive factors that weaken the water rights of female headed HHs.

The district irrigation expert claimed that couples of years have been counted since the participation of women has grown in water user committee and other interlinked duties. The policy environment of the current Ethiopian government advocates and encourages the involvement of women in the water use as whole. In essence, the manual of Indris WUA depicted that out of the 5-7 executive committee members, it is mandatory that two of them must be women water users. Despite the inclusion of their name in the list of committee, no women were keen to discharge the responsibilities and duties attached with the positions. An interview held with a woman appointed as an executive committee member yet unable to undertake the tasks attested that:

> *"I do extend great appreciation to the community of water users who selected me. It is quite clear that irrigated production by diverting water from Indris River occupied a vital place in the life of my family members. Regardless of that I have countless domestic chores and routines to be daily performed. Hence, what I wanted to express for all water users is that I am not disobedient to discharge the duties and responsibilities offered to me but lacked the time to join the rest executive committee members."* (Interview with a woman, at Dhaga Fillee, March 1999).

Plate 5:4- A woman informant failing to take her position in the executive committee, attributed to domestic and irrigation task burdens.

Alike to economic status, power interactions and gender dimensions, religious out looks and ethnicity have also carried similar effects though not as affective as dimensions discussed above. In terms of religious out looks, for instance, there were occasions when water users in the same cult or sect deliberately cover water right offenses committed against users who do not belong to the category. The tendency to sympathize or disregard one another based on ethnic considerations only rarely noticed compared to other dimensions. Rather, strong interrelationships maintained through social ties and webs of networks (like associations of Iquib/Idir, marriage, extended families, work labor parties in the form of Debaree or Debo) worked either to enhance or deter the access of users in or out of network differently.

5.4. Significances of Water Rights in the Improvements of Irrigators' Livelihood.

The main economic stay of water users incorporated in this research come from a mix of both rain-fed and irrigated farming. It was also pretty obvious that water users' dependence on the produces extracted through the production of irrigation farming demonstrated remarkable shifts from a worthless state to the extent of complete dependency on it.

Informants (in the three research villages) affirmed that both the existence and effective implementation of clear and transparent water right rules played a crucial role to the enhancement of irrigators' livelihood in multifarious dimensions. A well experienced informant enriched his argument emphasizing that perhaps only few members of water users knew about water right rules under normal circumstances. Every user becomes sensitive only when his/her water rights are violated as a result of deliberate or unintended actions. Any how, water users' knowledge about irrigation water right signified their endeavor to procure sizeable proportion of cashes from the production of vegetables and fruits that in turn enable them to derive better livelihood.

In contrast to better knowledge of water right and rules that ultimately ends up promoting users' livelihood, its poor conception has contributed depreciation of users' livelihoods. For the purposes of illustration, the aforesaid informant embraced in his discussion a typical instance that verified the role of water right in irrigators' livelihood. He summarized it as,

> *"The interest either to abuse turns or involve in water theft with deliberate intent, damaged fruits and vegetables planted. The damage occurred mainly as users turn would not come for a weak or fortnight. The user who abused the turn and right of innocent fellow would be blamed and guilty in two respects. On the first place, abuse/theft involved violation of the rules of water use and reacted with punishments as depicted on the manual. Secondly, the turn abuser entered the compulsion to compensate the damage occurred. The compensation does not only refer to the damage observed alone but also include all the prices of irrigated produces at their maturity stage, the prices of fertilizers applied, the labor cost involved to soften the soil, the prices of seeds or seedlings of vegetables/ fruits purchased, if the land was accessed through contractual agreements the amount of cash paid for it. The issue may create tensions, but if it is unmanaged by the water users, the Kebele or the district court took part in the inspection of the case to induce justices. There were moments when turn abusers or those involved in theft coerced to pay 10,000-20,000 Birr. Thus, a simple act of violating users water right finally happened to create unprecedented looses on both sides (particularly the right breaker) adversely affecting their income and the entire HHs livelihood."* (Interview held at Kilinto, March 1999).

The discussants who passionately have taken part in the FGD held at Kilinto on the same point have also asserted that;

> *"Participation in irrigation production by itself is an opportunity to strengthen our earning capacities and the diverse benefits in addition to what we extract from the rain-fed agriculture. On top of this, water users who adhere to the technical advices of extension workers and implement water use rules stated on the manual proved to attain higher merits remarkably year after year. That assisted users to accumulate money and assets. Thus, users who precisely utilized their rights are witnessed to show momentous improvements in the ways of their life as manifested in their house nature, clothing and expenditure patterns in comparison with users overburdened by punishments and coerced compensations."* (FGD, held at Kilinto, April 1999).

To wrap up this part, water rights and livelihood of users have correlated with constructive intimate ties. DAs have shared their common assertion that a greater portion of water users' livelihood has demonstrated encouraging improvements within the last few years as a result of increasing yield from irrigation farming. Therefore, the chain of interactions that revolves around water right and irrigation, irrigation and livelihood improvement finally culminate in having a drop on the practical realization of the agricultural development led industrialization policy currently pursued by the country.

Plate 5:5 - A woman informant at Kilinto: attesting the significances of irrigation in the livelihood of her family.

5.5. Views of Non-Irrigators' on Water Rights.

The numbers of non-irrigators get diminished over time as the practice of irrigation expands encroaching to enclose a relatively broader command area. In principle, on the manual of the water users it has been clearly depicted that no water user is admitted to keep his/her potential irrigable plot bare for a moment unless and otherwise exceptionally recognized barriers confront the users. This rule enforced unenthusiastic water users to submerge into the practice. Water users who failed to irrigate their plots shall be warned or punished based on the approved rules. The punishment could move as far as taking away and transferring the irrigable plots to likely users. The act of keeping bare irrigable pieces of land was justified as anti-

irrigation promotion and an impediment to the overall development of the agricultural sector. Such a philosophy echoes among all users.

Nearly all the contacted non-irrigators displayed that access to irrigation water right have not constrained any of them to engage in the practice. Rather, socio-economic factors (like health status or purchasing capacity of irrigable items with other necessities) and distance from the main ditches were among relevant factors pointed out by non-irrigators. In this regard, water users located at the peripheries were noticed complaining that insufficient amount of water reach their field exposing them to plant varieties that resist longer duration of water shortages. Additionally, there exists a case when the geographical location constrained irrigators to divert water to their field like in parts of Selam Sefer.

In circumstances of personal matters, for example; health problems, insufficient labor power for maintenance works in the HH or lack of financial assets, the water users have been expected to formally write and submit a letter in copies both to Indris WUA committee and the district agricultural desk so that he/she requires arrangements to enter either contractual or sharecropping than keeping the irrigable plot remain bare. Then, with the full recognition and admission of both the committee and the agricultural desk, the water user admitted to effect the agreement.

To merely support the above discussed notion, a case of non-irrigator has been presented as follows:

Case: 4

Obbo, Getachew Iticha aged 47 is a male, non-irrigator informant dwelling in Dhega Fillee. He criticized a lot about the by-law of Indris WUA and the committee members for both of them overlooked the interests of non-irrigators. On the manual, no section appears to deal with non-irrigators. Despite my passionate inspiration to engage in irrigation, water does not reach our vicinity. I have tried several times to plant few vegetables and fruits, with a little amount of water reaching here. However,

losses surpassed than what I gained due to shortage of water. Intentionally, I have attempted to enter contractual or share-cropping with users who could have much access. Yet, they were not willing to give us access because every user here had realized deeply the value of irrigation production or they purposely request you a huge amount of money which you cannot afford. What actually, I feel these days is that the agricultural desk should arrange ways through which people like me would also secure access to irrigation water. As a whole, I sense discomfort for it became impractical to make use of the opportunities like friends in the adjacent neighborhoods."

Thus, scrutinized through interviews and the case study, the interplay of factors such as land-patterns, distance from the ditches, increasing number of water users, economic and personal matters affected much the few existing non-irrigators than access to water right difficulties. Even, there are non-irrigators who are members of Indris WUA and participate fully in all affairs.

Chapter-Six

6.1. Negotiations and Dispute Settlement over Irrigation Water in the Study Area.

It was repeatedly stipulated that irrigation water, both as a natural and public good, caused conflicting perspectives among water users in several regards. Claimants who divert irrigation water from Indris scheme have demonstrated conflicts of diverse nature that gradually develop into chains of disputes calling for a series of negotiations undertaken in procedures. Hence, this section of the thesis depicts the discussions related with conflicts over irrigation water (principally in connection to water rights), major casual factors for conflict, themes centrally negotiated, processes involved as well as out comes of negotiations.

6.1.1. Conflict and its Causes over Irrigation Water.

It was apprehended that failures to maintain commonly enacted expectations have instigated water users to enter arenas of conflicts in the courses of diverting water to their irrigation plots. Interviewed committee members clearly denoted that let alone these days even in former times conflicts had prevailed among water users despite its magnitude and nature varied along with the development of the scheme from an indigenous operation into modern style.

Accordingly, the ways it has been settled exhibit corresponding shifts with each phase. Attested by an informant at Selam Sefer, during the indigenous operation of Indris scheme, conflicts were not as such pronounced. For one thing, the number of water users as compared to the amount of water reaching irrigators', was relatively proportional. In that sense, water users involved in theft, abuse of turns or violations of predetermined water schedules as well as disobedience of the normative rules of conduct pertaining to irrigation water use confirmed to be quite less. Even under circumstances when conflicts emerge between water users or teams (sub categorized as upper and lower); it was likely handled at village level by the elders or in accordance with the narrowly stated rules of conduct. There were almost little rooms

for conflicts to escape beyond the decisions of water fathers inviting for the involvement of external agencies (agricultural bureaus or courts).

Nonetheless, along with the promotion of the scheme from the state of indigenous operation to modern style, diversity both in the nature and intensity of conflicts grew and necessitated the keen involvement and supervisions of organizations other than water users themselves as it could not only constrain conducive working environments but also move to the extent of collapsing other irrigation related affairs.

Currently, the parameters that have been segregated by informants and DAs as primary casuals for conflicts widely spreading among water users linked with a range of issues covering multifarious agendas. Amongst others, a synopsis of the most repetitively reported cases comprising the causes of conflict among water users at Indris modern scheme are provided as follows:

I. Irrigation Water Theft.

As elicited in the instructive discussions held with informants, water theft constitutes the most sensitive dialogue between users. It involved the transgression of agreed up on rules and regulations. As a result users proved of stealing irrigation water illegally would be punished in a fine payment of reaching up to 300.00 Birr while a user who breached the ditch and diverted water to his/ her field would be punished up to 400.00 Birr. But, for water users who frequently involve in the acts of theft, the punishment could move to the extent of denying his or her access to irrigation water depending on the decisions passed by the executive committee, the agricultural desk and the general assembly. Such sorts of decisions were noticed to be preferred by users because a simple act of irrigation water theft induces far reaching repercussions. Above all, in addition to constraining the water right of others it also exposes greatly the planted vegetables and fruits to severe damages that end up in losses for both sides. The irrigation expert working at the district agricultural desk asserted that irrigation water theft occurred in diverse forms: at individual level, village wise in teams or in the form of upper against lower streams. The most widely pronounced form is the one at

individual level dogged by team at village level. In terms of irrigation water theft, users from the upper stream (mainly those in Selam Sefer) were reported to recurrently quarrel with each other. The higher rate of conflict here was basically justified as the area has merged with irrigators found in the out skirts of Guder town who were not legally registered in the WUA but divert water during the midnight. Conflicts associated with water theft declines as one moves down along the ditches in villages of Dhage Fillee and Kilinto. Team based water thefts do prevail not as much as individual based one. Even at its single instances of occurrence, serious causalities circulate among users with higher probabilities of injuries or bloodshed. Hence, the district agricultural desk claimed to strictly look after such cases and provide remedies in collaboration with water users themselves and other stakeholders (Wereda or Kebele administrators and court represent the instances).

II. Turn Abuses.

Next to water theft turn abuses predominantly accelerate conflicts of one form or another among water users from Indris scheme. Turn abuse entailed use of irrigation water out of ones own fixed and scheduled turn. Its impacts interfaced characters with water theft in that both adversely trouble the water right of other users as well as exposed irrigated produces to damages. The agricultural extension workers emphasized that turn abuse and subsequent conflicts in connection to it commonly exist almost in the three villages. In recognition to the predicaments facing the users and the government line departments, the district agricultural desk in close assistance with the committee as well as users negotiated to outline a schedule that every water users should adhere to. While fixing the schedule that visibly indicates the turn, several dimensions comprising distance from the main source, concentration of beneficiaries and type of irrigable items in a given locality were said to have been chiefly analyzed.

The table indicated below exhibits the water turn of users scheduled per the irrigation villages.

Table 6:5 Irrigation Water Turn Schedule at Indris Modern Scheme for Users in the Three Research Settings.

S/N	Dimensions considered to fix the irrigation water Schedule	The Research Villages		
		Selam Sefer	Dhaga Fillee	Kilinto
1.	Location of the irrigation villages along canal of the scheme.	In Upper stream of the Indris Scheme	Middle stream of the scheme	At lower stream of the scheme
2.	Distance from the Source	2Kms	4Kms	7kms
3.	Days scheduled for water turn in a Week	Sunday: throughout the day and night(one day)	Tuesday: from Mid day to Thursday Mid day (two days)	Thursday from mid day to Sunday (two days and half)
4.	Hours to be Utilized	24 hours	48 hours	60 hours
5.	Irrigators' users/concentration	About 90HHs	230HHS	156HHs

Source: Data gathered during field work (March and April, 1999).

It needs to be noted by readers that other villages which are not included in this research like Ajo Bedo do also divert water from the scheme on Tuesday for 36 hours addressing the irrigation water demand of not less than 150 HHs.

Water users who, therefore engage on turn abuses, transgressing the aforementioned schedule have considered as deliberate instigators of conflict and enforced to enter the domain of punishments implemented at least in three steps depending on the former history of the disobedient as well as the harshness of destructions occurred. To accentuate, the steps adopted for punishment as stipulated on their by-law:

i. If the water user is detected abusing the water turns of others for the first time, he/she would be punished 200.00 Birr and enforced to

compensate any damages occurred on the irrigated items of the marginalized user.

ii. If the water user is detected abusing the water turns of others for the second time, he/she would be punished 300.00 Birr and enforced to compensate any damages occurred on the irrigated items of the marginalized user. In addition, he/she will be given the final warning to abstain himself or herself from such deeds.

iii. Finally, in the third encounter, he/she will be detached from his/her irrigation plots as he/ she has failed to maintain the rules of conduct. The land, then, offered to other irrigators in shortages of plots in the vicinity. But, even at this final step of evacuating to irrigate the land, he/she could not escape from compensating the damages occurred.

An informant has illustrated his own case highlighting the harshness of the punishment intended to avert his actions of frequent involvement in turn abuses. The detailed presentation of his case could be read as:

Case: 5

Obbo Dheressa Gelana, aged 37 resides with his three daughters and two boys in Selam Sefer diverting water and engaging on the practice for more than 12 years. He involved both in the practices of irrigated farming and rain-fed agriculture. Despite his involvement in both kinds of production systems, a substantial portion of his family's livelihood relies on the produces extracted from vegetables and fruits collected twice per a year. His potentially irrigable land exceeds more than 0.05 hectare which is beyond the maximum limit admitted for any water user. He claimed that he is mindful about the rules and regulations. He believed that their implementation worked effectively on people who maintain poor relations with the committee. Of course, it is understandable that the fruits he commonly planted (like Sugarcane and Papaya) demands sufficient water, perhaps affecting the amount of water next to his plots. He indicated that two or three times there were minor conflicts created between him and users below his irrigation plots due to timing of

water. These disagreements were very simple and could be managed inside our village. However, the committee perceived him as a guilty man for any water problem. He complained the way the committee members discharge their duties and responsibilities. It was without any prior notification and concrete confirmation that they rushed to punish me about 200.00 Birr. Their deeds pushed me to take avenge in turn for several seasons. I knew that it was crime to do so in many respects. But, as all of the people here disliked me for that I showed improvements in the lives of my family, they use the pretext of turn abuse in all instances just with a calculated intent to punish me. Surprisingly, there were situations when some water users here break the ditches and divert water to my irrigation plot in my absence and then shout as if I bused their turn. These days, both the Kebele administrators and the district agricultural developments have taken part in this complicatedness and I have also decided to avoid any form of controversies with my neighbors as well as committee members.

III. Power Abuse.

Power relations deeply rooted in diverse structures of interactions among users of Indris modern scheme either became a sole causal of conflict or exacerbate what has already conceived. The sources of the power relations appeared to mix using both the legitimate and illegitimate milieus. The questions of power influences basically takes its focus on, as hammered by key informants, Ambo Agricultural Training Center with the whole range of water users, committee members and other users, in a village level between the relatively better and the have not, lastly between those in the upper stream and users down along the canal. The principal forth going controversy was between the Agricultural Training Center and irrigators from the PAs. While the Agricultural Training Centre legitimately could claim irrigation water as a research institute, it went beyond the upper limits of its 'legitimate' power diverting water 24 hours of day through out the week irrigating over 8 hectares of land covered with vegetables and fruits. What seemed to aggravate the situations between the Agricultural Training Center and farmers revolves about the design of the division box that lets water to the irrigation fields of the Agricultural Training Center. While

the Agricultural Training Center owns the mandate to divert only an amount of water admitted for a single irrigating farming HH as decided per their agreements, reversely the division box designed and fixed by the Agricultural Training Center lets an amount of water that could serve 3-4 farming irrigators without the consent of water users. Adding up on that, a substantial portion of the diverted water flows out of the Agricultural Training Center down to few irrigators on the peripheries of Guder town who have lacked legal recognition as full members of WUA.

Plate 6:6- The Agricultural Training Center of Ambo College.

The administration of the Agricultural Training Center has been severely criticized for its unsympathetic concern to avert excess amounts of water back to its main canal. The deeds of daily laborers (working inside the Agricultural Training Centre hired on wage) exacerbated the conflict. Mostly, the daily laborers themselves are members of the contiguous villages such as Ajo, Selam Sefer, or from the peripheries of Guder town. Therefore, daily laborers who have not secured their access to irrigation water rights legally from the scheme deliberately let water to flow in the direction of their respective villages instead of blocking back to its main canal. Of course, such deeds

are conducted in highly concealed manner difficult to notice straightforwardly. Whatever the matter, the debates have extended over a couple of years. These days there prevails a tendency to enhance their common understandings and expectations via chains of negotiations with a keen involvement of the zonal and district agricultural desks as well as the local administration.

In a similar vein, the committee members rendering services at separate layers were also blamed to make use of their powers vested to them through distinct structures on ordinary water users illegitimately. An informant, who really wanted to keep the idea mysterious, interviewed at Selam Sefer revealed out the ways the committee members exercise their powers illegitimately. To precisely summarize the points he raised:

1. Few committee members themselves engage in selling the water turns of users whom they consider feeble and cannot submit his/her case either to Indris WUA-executive committee or to the Kebele/district courts. Provided that the water user attempts to complain, he/she will be warned in a concealed manner so that the predicament remained intact. It is only after such repetitive offenses against the water right of the weak that conflict erupts and the public get aware of it.
2. Additionally, certain committee members have been reported to mistreat water users on different grounds. Belongingness to the same lineage, social ties developed through (marriage, Idirs, extended family, labor party organizations), economic status, and attendance of the same Church were factors on which discriminatory tendencies emerge to work. In practical senses, water users who receive the favor benefit much in terms of the time allotted for them to divert water at team level or any tricky case linked to them would be covered up and some times overlooked. Such selfish and poor judgments emanating from a trial to illegitimately use their powers typically culminate in conflicts with unprecedented consequences.

Power abuses among irrigators within a village may also exist in diverse forms. But, it transforms into a well defined form of conflict when certain water users tries to

irrigate more than $2000m^2$ (0.2 hectare) which is the upper limit for any water user in the district. The mere implication of not allowing any user to irrigate exceeding 0.2 hectare is for reasonable and equitable distribution of water. So, conflicts of minor effects could occur when those users thought as capable have been admitted to irrigate beyond the maximum limit as it reversely constrain the access rights of other users in turn.

The power influence unmitigated for a longer duration of time between the upper stream users and those located down along the canal has been explained to decline in intensity in recent period. Despite the practical efforts to block water only among themselves in the upper villages (e.g. those in Selam Sefer) eroded from its foundation, the predisposition and mentality to ponder as if they do hold more power over the source area has not been entirely eradicated. In prior trends, the actions to block the flowing water and sometimes to shrink the volume of water were frequently viable. In such cases, conflicts erupt between users in upper stream and lower reaches. The district agricultural desk disclosed that it has been working effortlessly in close regulation with users to avert the possibility of its incidence. Thus, the orientations even to think as if their power over the source remained more influential than those in the lower territories become to be less substantive. Rather, the views to consider water as a public and a common resource acquired predominance there by narrowing the room for conflicts to emerge forward.

IV. The Gradual Decline in the Volume of Water Resource itself.

The agronomist at Wereda agricultural desk contended that increasing acts of deforestations took to stir their part in the game of shrinking the amount of water. Coupled with that, the number of diversions on Indris River has reached more than five exacerbating the difficulty on scarcity of water. The situation get worsen as the number of claimants to divert water grow in number year after year broadening the crisis and conflicts associated with water. The question of how best should water exploitation move, as common resource, is a central question demanding an integrated efforts from the diverse and alarmingly growing populations of users.

The focus group participants held both at Dhaga Fillee and Kilinto have also disclosed the aforesaid principal causes of conflict in connection with the water rights of users from Indris scheme. Having conducted extensive discussion on causes of conflict, the team then lastly provided its assertion underlining conflicts (occurring inside vicinity, between upper and lower groups, or between irrigators and the Agricultural Training Center) both with very minor and rigorous consequences have prevailed almost in all villages. It was aggravated in correlation with the growing dependence of irrigators on water from Indris scheme. Thus, activated with the surplus benefits extracted from the practice, water users enter conflicts associated with theft, abuse or illegitimate exercises of once own power reflections achieved through distinct means. The drastically growing population of water users itself posed unforeseen effects on the nature and intensity of conflicts. The participants have also accentuated that all involving stakeholders should ponder on the rules to be framed out in a new fashion to cope up with the dynamic character of water users who change their behavior and actions repetitively depending on the prevailing situations and state of affairs under concern.

As a whole, conflicts mushrooming over irrigation water use and right from Indris scheme originate implicitly or explicitly from failures to strictly observe the enacted rules and regulations. Conflicts were also reported to increase in their nature and frequency since the promotion of the scheme from indigenous to modern operation. Had the rules incorporated on the manual of Indris WUA been flawlessly implemented, the rooms for predicaments would have depreciated. A water user, who is also a committee member, stressed his outlook that reflects the amount of water flowing at this moment itself could be sufficient to address the user HHs irrigation water demand provided that matters with mismanagement and institutional capacities have been removed from its roots. Generally speaking, either transgressions or deliberate ignorance to take critical observance on the rules of conduct anticipated from any water user serve as the principal basis for the conflicts erupting out among users of diverse categories.

6.1.2. Strategies Applied by Water users for Conflict Settlement.

Since the conversion of Indris scheme from its indigenous operation to modern style, separate strategies were heard to be utilized by water users from Indris scheme. The strategies working correspond to the stages at which the conflict has occurred. It is stipulated in texts discussed above that the levels at which conflicts occur embrace:

I. Between individual water users or teams in a given irrigation practicing village (inside Selam Sefere, Dhaga Fillee and Kilinto).
II. Among groups interims of streams along the canal of the scheme (Upper stream groups like users in Selam Sefer against middle stream users like Dhaga Fillee or those in Selam Sefer with users at lower reaches like irrigators in Kilinto).
III. Between farmers as principal water users and the Agricultural Training Center claiming water from the scheme.

The notions of contacted interviewees and committee members portrayed that for conflicts occurring at individual water users' level inside the villages, the customarily rules framed out and transmitted through generations work more effective. Elders either executing tasks in the committee or those in village would be consulted for each emerging case. Basing on their prior experiences and cumulative skills, they commence the assessment of the problem at hand with enthusiastic feelings to induce harmony. One of my informants, interviewed at Selam Sefer, has enriched his argument focusing on the procedures strictly pursued by the elders (former water judges) as reviewed here in below:

> *"At times conflicts occurred between individual water users in one of these villages, even though the case will be thought to be solely handled by the common actions of committee assuming responsibilities at team (Garee level) and territorial (Gooxii level), our renowned elders directly involved to manage the case, sometimes with their own inspirations or with the directives of the committee members. The elders, whose number could range 3-5, call each other and the individual users or representatives of teams in the village to have clear instances of the causes and consequences with all its dimensions. Having conducted a detailed assessment on the cases from both sides, an appointment would be given to users or representatives of*

teams with the intent to further analyze and examine additional remarks that may enable to make fair decisions. On the date of appointment, the decision would be publicized to audiences of the meeting at the presence of both sides in away it consolidate their former behaviors social interactions. If complains may appear, the rules on their by-law will be integrated to interpret some of their wrongly conquered actions. The case may go as far as Kebele or district courts in hierarchical linkages provided that one of the conflicting groups denies materializing the decisions made by elders or committee members." (Interview conducted at Selam Sefer, March 1999).

Plate 6:7 - A Key informant explicating about major causes of conflict and the way elders settle it inside the village at Selam Sefer.

In the course of expounding these procedural techniques which are presumed to be instrumental in order to induce synchronization amongst water users, the merits of settling at lowest level in the best possible ways out weighed in numerous regards than letting the matter to move up to the court level. To precisely take a glimpse on these merits,

- ✓ The settlement of the case in conflict appeared to be managed in a manner cost effective for all involving entities. The conflicting individuals or groups would not expend much money either for any sort of travels or purchase expenses of certain items. It was also heard that the time wasted to follow up the case at Wereda court level could be utilized for other productive purposes.

- ✓ The resolutions of conflicts through the wisdom of elders also entailed a great deal in completely averting the problem from its roots and induce consequential truces. The individuals or teams in disagreement are really enforced to absolutely remove out any kind of scars of the conflict. Avenge would be no longer entertained as compensations decided by the truce makers believed to relieve the damages and strains sustained for a while. Conversely, the district court may only punish whom or the team it gets offensive and guilty yet does not move to the extent of enforcing the parties to interact in their former styles or ways of life.
- ✓ While the procedures and processes applied to operate for resolution of conflicts at vicinity of elders is not strict or appear overlapping one over another, in contrast, the one conducted at courts maneuver more in a formalistic environment. The nature of the setting where the cases put under trial then largely influence the way individual water user or teams in the conflict cloud address their genuine feelings.

The higher frequencies or rates of conflicts over irrigation water use from Indris scheme comprises those occurring at the individual HHs or teams in village level. Among the three irrigation villages under the concern of this research, the rates of conflict showed increment as one moved down from Selam Sefer to Dhaga Fillee and then Kilinto essentially due to water deficiencies and larger concentrations of users. Cases or at least complains reach the district agricultural desk through monthly reports of the executive committee of Indris WUA. The strategies of applying elders' wisdom and skills, committee structures working at three levels (executive, territorial and team), Kebele and district level courts for resolutions of conflicts emphasized to remain effective as of to date itself.

On the other hand, conflicts emerging at stream level come into view less in its frequency as analyzed in relation to those at vicinity level. Despite its fewness in happenings, instances of such cases that occur ones in a blue produces unpredicted harsh causalities to both confronting sides. Water users situated at Selam Sefer and

partially parts of Ajo Bedo belonging in the upper stream of the scheme, typically engage in blocking water flowing through the ditches leading to either Dhaga Fillee or Kilinto. If the water blocked stayed for more than 24 hours, in the next date all water users in the villages of middle or lower streams launches a campaign to release water from where it is blocked. In the course of exerting efforts to get back water, emotional and nervousness water users in the lower villages may rush to collide with whom suspected of committing such deeds. In such circumstances, the district agricultural experts and DAs denoted that the enthusiastic participation of government administrators become mandatory if the case has to remain at its initial period. Besides, the likelihood to loss lives, vegetables and fruits on productions plots suffer from lack of water that keep its roots wet. The cattle also remain out of water for days till the situation overturned into its normal sate. The same holds true for domestic chores that seek water.

Therefore, cases would be examined through all levels of conflict resolution strategies (through elders, committee or courts). But, what differentiated settlement strategies at stream level and individual user level lies in the extent of courts participation to look after the case and the decisions given. Their follow up and concern steadily rises up with stream level conflicts. Numerous institutions including the Zonal agricultural office and government administrative structures also take part to manage the issue at its infancy. The resolution for peace would be carried out for number of months. Lastly, water users found accountable for the case would be enforced to receive punishments in relation to their role in the difficulties occurred. The penalty sometimes moved to the level of entire cancellation of users from usage of water for ever. Previous trends dictate that these categories of crisis prevail once in a year or in two years time. It has sometimes the prospect to develop into disputes that elongated for a longer duration of time seeking further negotiations. The detailed description of the negotiation agendas and procedures pursued would be the fundamental themes focused in the next remaining sections.

The third category of conflicts comprises those occurring between the farming irrigators and the Agricultural Training Center. Despite the conflicts between farmers and the Agricultural Training Center erupt recurrently, the efforts exerted to provide pragmatic solutions have been negligible. Even the proposed remedies in a way to represent the common interests of the complaints were seen impractical by both sides. The committee members contacted contended the view that farmers underlined the chief cause of the trouble was mainly attributed to the fact that the Agricultural Training Center illegitimately exercised its power beyond the mandate offered to it; the Agricultural Training Centre in its turn refused the critics. Attempts have been initiated under several instances (through elders judgments with customary contentions, committee decisions based on the commonly enacted by-laws that also applies for the Agricultural Training Center) with the view to develop smoother interactions between the competing categories. The conflict has matured fully into a dispute that stays for a number of years where in the court and other government line departments have taken to play a significant part of the game. Particularly, due to the concern of experts both from the zonal and district agricultural level, the Agricultural Training Center administrators demonstrated the tendency to review and work to improve over foremost points that glimmer into disagreements. The conflict pronounced between water users and the Agricultural Training Center represents among the typical cases in point rightly mirroring disputes over water rights from Indris modern scheme.

6.2. Processes of Negotiations over Irrigation Water Rights.

Herein, it is intended to address the central negotiation agendas, core procedures pursued in the processes and the outcomes of the executed negotiations.

6.2.1. Major Themes of Negotiations in Irrigation Water at Indris Modern Scheme.

At Indris modern scheme, as the results of consultation with informants verified, negotiations interconnected with irrigation water rights and use have been accomplished in dual senses: negotiations carried out under ordinary circumstances

solution to upgrade the working capacity of the scheme and negotiations instigated with the principal aim to relatively create harmony among users' competing to maintain their respective interests. In the latter applications of negotiations, the district agricultural DAs elucidated that minor or major conflicts occurring at any of the aforementioned levels (at village level, between water users or in teams, stream level or between farmers and institute) over irrigation water enter an extensive phase to be observed for prolonged period of time. While negotiations undertaken at normal state of affairs put its locus on the formulation of water rules and their pragmatic implementations, the other sub-category deals more with themes of conflict and its settlement. To describe the synopsis of the subject-matter of negotiations, via a group discussion held with users, the stated below points were managed to be accentuated as they do shine core elements supportive to this research.

Plate 6:8- Contacts made with water users at Kilinto to discuss about major Thematic agendas negotiated among themselves.

The essential components incorporated in water use and right rules of Indris WUA accessible in a written manner, as repetitively presented in details in the preceding chapters, only get approval at the consent and negotiation of all water users. It was only through negotiation dialogues that any new rule (either from customary or formal source) would be accepted to be part of their general by-laws. It was also attested that the water use rules could either constrain or enhance the water rights of

users in one way or another. In the manual, the rules that seek and attract the entire negotiation of all water users particularly comprise:

A. Water Scheduling Days and Hours

Negotiations pertaining to fixtures on the days and hours that villagers (in Selam Sefer, Dhaga Fillee and Kilinto) permitted to divert water rely on interplay of numerous factors amongst which distance from the scheme and larger concentrations of water users have been predominantly considered. The agronomist has disclosed that it was, therefore, on the bases of their negotiation agreements that users on the upper stream of the scheme should get water for relatively few hours not exceeding a day as the distance between the source and water users happens closer. Besides, there is only few number of water claiming HHs that resides in the upper stream areas of the scheme. In Selam Sefer about 90 HHs have been admitted to divert water for 24 hours only on Sundays. Conversely, as the distance form the source and concentrations of water users increases, accordingly the days and hours negotiated to divert water also augments. Thus, water users at Dhaga Fillee (as middle stream of the scheme) divert water for 48 hours and those at the lower reaches of Kilinto negotiated to divert water for 60 hours.

B. Total Hectares of Land Covered through use of Irrigation Farming.

The ever mounting demand of water users to engage in irrigation coupled with the declining tendency of water volume inevitably enforced the government (through its structures launched at Zonal and district levels) to enact apparently fresh rules to be implemented by water users. Accordingly, the new rule dictates that any water user cannot irrigate more than 2000 m2. Consequently, extensive discussions were made to negotiate over the rule in general and irrigators who own the competence to irrigate beyond the utmost limit in particular.

C. Maintenance Schedules and Labor Contributions.

This has remained an arena where water users negotiate and renegotiate to keep the effective realization of maintenance schedules and mobilization of labor to execute

the tasks. Centrally, the agendas of focus and negotiation topics here encompass when to carry out maintenances, which water user teams should precede, how many users need to work at a time, segregation of tasks that call up on the technical assistances of exterior agencies and decisions on the amounts of budget required to successfully accomplish the maintenance tasks. Despite the committee members are assumed to smoothly perform all affairs related to maintenance and mobilization of labor, the keen participation of ordinary members to negotiate on how best to go about with the determined schedules took its own significance.

D. Irrigable Produces.

Water users of Indris modern scheme have also moved to the extent of negotiating over the categories of items to be planted. For the purposes of illustration, while vegetables (Onions, Cabbages, Carrot, Tomatoes, Potatoes and Red-roots) in general relatively absorb less water (but seek much water only at their seedling stages alone) in contrast fruits on the whole and particularly sugarcane, Papaya and Mango absorb relatively much water till they reach the stage of maturity in a decreasing order. Through dialogues and agreements, it was reached that no user has the right to irrigate other than fruits and vegetables specifically permitted both by committee members and the district agricultural desk. In addition, it is forbidden to plant trees like Eucalyptus that absorb huge amount of water with the likelihood to dehydrate fruits and vegetables irrigated on close by plots.

E. Negotiations over a Range of Fees.

Annual payments for maintenance, taxes, punishments due to transgression of rules and fees executed to as compensations to various services obtained by water users constitute among central themes over which water users negotiate and renegotiate. In essence, the payments to be imposed on members as punishments of failing to adhere to the agreed up on rules represent a typical instance of negotiation undertaken among members in the domain of fees. For instance, a user who either misses or come lately to a gathering would be punished 3.00 and 2.00 Birr respectively for the first time. The punishment increases in 0.50 cents as the user continuous to go against the rule

and may stop lastly withdrawing from the access rights. Before rushing to effectively interpret the rule on the ground, all water users then invited to exchange their views profoundly and make dialogues that pave the way to the concluding agreements. Hence, other negotiations also proceed sharing an analogous feature.

The negotiation processes presented here in above reflected the most prominent aspects that have been commonly experienced by water users. The water manual of Indris WUA demonstrated numerous points and milieus over which negotiations have been made as an integral part of the overriding water rules. Essentially, the discussion addresses instances of negotiations without referring to marked conflicts. These series of negotiations explains and coincides with the arguments of the cyclical model of negotiation (as a constituent of processual model of negotiation) asserted by Gulliver. The model depicted that repetitive and recurring exchange of information between negotiating participants over a given premise contributed a great deal for maintaining the overall agreements that serve as a frame of reference to move forward. Having a glimpse on the subject-matter of negotiations, the researcher has inclined to focus on processes to be gone through while negotiating over conflicts that occur in association to irrigation water diversion.

6.2.2. Procedures in the Processes of Negotiations.

Conflicts in relation to irrigation water rights apparently happening at Indris modern scheme in separate levels (inside teams in villages, upper and lower user groups or farmers and other claimants) have not successfully averted under all cases. Conflicts that protracted over periods of time, therefore, developed into disputes that need to be critically assessed and examined to come up with consensus. The parties entering disputes attempt to produce strong arguments with the intent to gain maximum merits at the culmination of the continuing process. The water fathers/elders, committee at three levels (team, territorial and executive committee of WUA), the Kebele or district courts, district agricultural desk and team of agricultural experts served as arenas of major conciliation facilitators. However, consulted key informants during the field work have avowed that conflicts developing into a chains of opponents'

discussions initially handled by the executive committee in close assistances with the district agricultural desk, then depending on the magnitude and consequences of the complexity of the predicament either the Kebele or the district courts prove their involvement to handle the anger spreading among water users.

As reflected in the discussion of the three focus group participants undertaken at the three research villages interwoven with the observation of the team composed of DAs and irrigation experts, emphasized certain steps to move through prior to arriving at the required target which constitute finishing negotiation confirmation. The marked procedures at least offer greater considerations on the next stated steps;

i. **Recognition of the grounds of the dispute/ general environment:** at this point the negotiators themselves or the mediators (elders, committee, Kebele or district court) scrutinize the basis of the conflict together with its repercussions.

ii. **Execute assessments on the prospective points to be negotiated:** having deeply examined what underneath the conflict, either the negotiators or mediators move to sort out the promising arenas where in negotiation would be set in motion to bring out remarkable agreements to set up smoother interactions among water users.

iii. **Persistent presentation of negotiators' respective cases and points of departure:** the segregation of points over which negotiation produce relatively stable interactions, ultimately invite negotiators to present their cases to each other and the mediators in the attempts to persuade the audiences elaborating that their argument contained more reality than their opponents. There also appeared the presumption that negotiators who aspired to gain much from the debate need to condemn the arguments of their opponents. The presentation of their respective cases usually takes much of the time in the entire processes of negotiation.

iv. **Narrowing the gap perceptible between the interests of negotiators:** the succession of appointments to heed the respective cases of water users in dialogue, enable to easily distinguish the gap in the interests perceptible

between either the teams or individuals in debate. At this instance, the negotiators themselves or mediators engaged in the facilitation of negotiation propose ideas or strategies pertinent to successfully narrow the diverging interests of claimants. Here also it requires the patience not only to gain but also to loss definite merits for the opponent side. Techniques and tactics thought fruitful are happily employed to accumulate more advantages in the final consensus.

v. **Provide the final decisions to confirm and attain consensus:** with the minimization of the perceptible gap among the disputants comes the concrete decisions to be accepted commonly by the former opponent sides. Here, the disputants rush to realize what their respective side bargains. At this point, no way appear open to entertain with complains that revolve about the history of loss and gain. Rather, systematically organized and coherently consistent points that advocate consensus and their ability to negotiate echoes in the comments of the audiences or negotiators themselves paving the ground to finalize the debate in terms of actions that could be implemented. These actions need to be accentuated with special concern as they were interrupted for some period of time due to the emerged dispute over water use.

These steps largely represent the standards at least to be pursued, details of procedures incorporated in each steps vary from village to village or depending on the general setting where the negotiation have been conducted. The implications and essential arguments of both components contained in the processual models of negotiation (cyclical and developmental) holds coincidences with the issues at hand. In each step of negotiation, as participants of the focus group discussions revealed out, there exist recurrent exchange of views and information that enabled the opposing categories to learn more about the expectations and responses to their particular quests embraced in the process. This notion specifically parallels with the elements of cyclical model of negotiation. The cumulative effects of each negotiation steps finally culminate in generation of the consensus sought by water users as their primary target. So, the ultimate achievement (i.e. bargaining over their irrigation

water rights) elicited the central attributes of the developmental model of negotiation. The end results of negotiations over water rights assured through repetitive and cyclical processes of both information sharing and learning depicted in each stage enabled users to transform from a state of competing interests to collaborating entities.

To authentically support the above discussed negotiation steps, the focus group participants held at Dhaga Fillee have elucidated the case of a dispute negotiated between users who were quarreled due to water theft in teams inside Dhaga Fillee village. The summary of their discussion reflects the paramount significances of negotiations to curb disputes to create interactive environment among water users.

> *"In 1998 E.C. there were almost 15 irrigation teams (Garees) that divert water from Indris modern scheme. During the second season of irrigation production that extends from February to June, the volume of water has declined tremendously due to the protracted shortage of rainfall received in the months of April and May. These teams quarreled with one another merging into separate cells basically due to turn abuses and water thefts. The conflict further went swelling more teams. The irrigation village then overwhelmed with unprecedented tensions as few water users began to clash each other. Despite elders' intervention to clear up their disagreement, team members geographically located in the lower peripheries aggravated the situation to be worse. As a result, the committee at territorial (Gooxii) level in assistance with the executive committee and one agricultural development worker initiated a negotiation process to create reconciliation among the teams. Each fundamental steps required to acquire relevant information instrumental for the desired negotiation were given due emphasis. It took more than two months to assess all the difficulties and integrate the teams' antagonistic interests. The committee and elders finally managed to close up the loop holes sustained for three months inside their village with negligible resource losses."* (Views of focus group participants held at Dhaga Fillee, March, 1999 E.C.).

The central decisions that would be transformed into pragmatic implementations are only those stemming from the antagonistically reactive teams or water users struggling to persuade the views of ones own opponent and derive benefits from the ongoing debate. The roles of elders, committee and agricultural experts have restricted only to facilitate and make sure that the dialogue moves in the desired

direction. In spite of their marginalized roles, mediators sometimes steps to intervene with a deliberate aim to influence the firm stands of disputants. However, once the case formally submitted to be examined either at Kebele or district courts, the decisions of negotiators significantly declines. Instead disputants present their respective cases to courts and wait for out comes of what ever nature.

6.3. Outcomes of Negotiations over Irrigation Water Rights.

Though the ultimate purpose of initiating negotiations over irrigation water right has been principally to avert disputes created among water users, however; hardly ever the final out come appears contradicting what was normally anticipated. Elders contend that the role of negotiations have remained indispensable in bringing into light truces that would be effectively applicable for a longer period of time.

As a whole, the results of extensive discussions and interviews made with committee members and key informants at Selam Sefer, Dhaga Fillee and Qilintxo, denoted that a larger portions of disputes occurring over irrigation water use and rights from Indris scheme end up in an encouraging and positively interpreted remarks and agreements. This has been apparently recognized even in conflicts that erupt at individual water user level, team level, and stream level along the canal of the scheme. Users, teams or groups found guilty usually entered an agreement to compensate the losses of the rival. Even though at that moment a range of predicaments happen to be resolved via chains of negotiations, this does not imply that it lasts for ever. Disputes may occur again and then accompanied with negation processes.

On the contrary, negotiations on disputes like the one going on between the Agricultural Training Center and the water users in the villages on the other hand only work effective for a short period of time as the likelihood of the problem to occur again is higher. In that regard, the out come of the negotiations have not been absolutely constructive.

Chapter-Seven

7.1. Summary, Conclusion and Recommendations.

As a closing remark, this section depicted the synopsis of great themes discussed in detail in the preceding successive chapters. It also provides conclusions to the exploration. To trigger further concerns from individuals, researchers or institutions both on the title and the study settings, certain clues are suggested as recommendations for actions.

7.1.1. Summary.

The investigation on the historical background of Indris scheme demonstrated its development in three distinctive stages; pre-conditions in the initial phases (prior to 1972 E.C), operations in an indigenous manner (extending from 1972-1986 E.C), and complete conversion into modern style (post 1986 E.C). Accompanying the development of the scheme, significant shifts have marked each phase. A rise in the number of users, expansion of its command area, augmenting credit and interest on irrigation farming, institutional and administrative development for irrigation water management, formulation of by-laws referring the policy environment and application of negotiated arrangements to handle predicaments constituted essentially the perceptible shifts.

Interplay of factors both from within and outside the irrigation system have interacted to induce these highlighted changes. Above all, the internal motives of water users striving for betterment water resource extractions interwoven with the financial donation of European Economic Commission played pivotal role to attain its current standard.

Intricacy in the chains of structures and institutions involved in the management, allocation and distribution of water for irrigation have moved from a state of simple operations overwhelmed by elders or water fathers rule in the village to the level of sophisticated webs of networks directed by the frameworks of Indris Water Users

Association. The general assembly of users took its ultimate power to provide decisions for the pragmatic allocations and distributions of water via committee functioning at three levels: Executive, Gooxii (territorial) and Garee (team). That also entailed decentralization of the decision powers to the users' level.

The basics for water right access and decision have also enjoyed a broader spectrum of considering land rights, historical precedence, financial as well as labor requirements to be maintained by users. At a time the irrigation practice commenced in the area, land rights or possessions had been considered as a factor to enable users' access to irrigation water. This signified and coincides with the elements of the riparian water right doctrine. In the second phase of the scheme's operation in an indigenous manner, historical precedence and settlement in the villages had predominantly served as a parameter to decide and secure users access to irrigation diversion on top- of land rights. With the conversion of the scheme into modern style, the decisions to admit or deny users for irrigation water rights rest on and determined through their labor contributions and fulfillment of obligations imposed by the general assembly. Water users were also noted to employ a mix of techniques for creating access to water rights in the form of sharecropping, purchase or contractual arrangements through negotiated approaches.

The water right rules are multiple in origin and integrative in function. The predominately governing water use rules were/are the combination of customary normative dictations and formal-legal irrigation water management guidelines. These water right rules are inheritable, dynamic in the sense that they would be subject to revisions either for omissions or additions pertaining to the turmoil environment.

Several interactive dimensions have been investigated to hold linkages with water rights either to promote or curtail users' accesses and participations for decisions. Economic status, power, gender, ethnicity and religion comprised amongst the pertinent factors that have in one way or another contributed either to facilitate or deter users' access to irrigation water.

The pragmatic interpretation of irrigation water right occupied a prominent place in the struggle to enhance irrigators' livelihood or income expropriated from the practice. Failures to observe the water use rules in general and ones own water right in particular deteriorated users' livelihoods. As an instance, users with longer experiences of implementing the water user rules have been reported to progressively improve their livelihoods year after year.

There existed few non-irrigators who lacked the opportunity to divert water from Indris scheme due to varied reasons. None of the contacted non- irrigators claimed that constraints interlinked with water rights have never deterred them both from the access or decisions. Rather distance from the scheme/ source, decline in the amount of water for the lower stream users (Kilinto) and geographical barriers for the upper stream users (Selam Sefer) became major hampering factors on top of other personal matters.

Conflicts of competing interests among diverse categories of users are another dimension to be looked in co-relation with the water right of users. The results and discussions of primary data generated during the field work proved increase both in the intensity and severity of conflicts over irrigation water corresponding the three phases of the scheme's development. Conflicts occur among users in a village, along the streams of the scheme or between farmers and the Agricultural Training Center of Ambo College. The principal cause for conflicts to erupt out has been embedded in the transgression of negotiated water use rules like theft, turn abuse, failing to timely pay financial fees or deliberate ignorance of labor contributions for canal operations and maintenance. Power abuse became to be considered as the second chief factor for conflicts.

These conflicts have been handled at distinct levels within the village through elders and committee decisions, at Kebele courts or at district court. In case these conflicts emerge into disputes that stayed over a prolonged duration of time, a succession of

negotiation processes and procedures would be employed to manage the case. The processes involved range from identification of the central predicaments to the final remarks of disputants that assured their consents not to replicate a similar disagreement once again. The protracted conflict between the Agricultural Training Center and the farmers, or users in the upper and lower streams basically exhibited typical instances of the case in point.

Though the ultimate aim to execute negotiation processes have been triggered with the motives to induce a real truce, sometimes the outcomes may not end in the way desired to attain encouraging targets. Instead, it leads to additional rearrangements for having chains of negotiations. Anyhow, at the end of negotiation processes, the competing parties or users may gain certain parts of their quests submitted for negotiations though commonly unfeasible to acquire the entire range of their initial pursuits.

7.1.2. Conclusion.

Debates over access to water rights for irrigation usage and negotiations have been central among water users and institutions claiming water from Indris scheme. These debates over water right claims have been mainly attributed to rising competitions over irrigation water, drastic population growth and shrink in the volume of water due to augmented diversions points on Indris River as well as failures to strictly observe rules of conduct for resource use. Disputes associated with use rights, like farmers against Ambo Agricultural Training Center, or among the farmers themselves have predominantly prevailed in the research sites.

Though the elements of both the riparian and appropriative doctrines of water rights were reflected among the irrigators in the study sites, their know-how regarding water right entitlements appeared to be found at its infancy. Themes that center on irrigation water rights tended to be overlooked under normal circumstances. Such topics become sensitive and an area of controversy only when the rules are frequently violated affecting the use rights of members. As a whole, water right themes for

irrigation diversion gradually began to receive substantial concerns corresponding to the phases of the development of Indris scheme.

The theoretical frameworks employed as a conceptual tool to examine the water rights and processes of negotiations over irrigation water among irrigators diverting water from Indris scheme proved to be in consistence with the experiences of other developing nations reviewed in the literature. Hence, both the arguments of legal pluralism advocated principally by Burns and Meinzen-Dick (2000) in water rights paradigms and the processual models of negotiations discussed by Gulliever (1979) were pragmatically apparent in the daily actions and practices of water users in Toke Kutaye district of West Shewa Zone.

In essence, the applicability of legal pluralism was verified via the multifarious sources of water rights and their integral functionality. This fitted with the conclusions of former studies carried out in various developing countries. In that regard, a study by Cleaver, et al (2005) demonstrated the conception that claims to resources in general and water in particular are made and enforced through both 'formal' (local government, Water Users Associations, tenure arrangements) and 'informal' (customary practices, social relationships, norms of use and access) frame of references.

Correspondingly, at Indris scheme, a combination of rules for water rights stemming out of the broader normative rules as well as guidelines formally enacted for irrigation water management were essentially available. In the efforts to reinforce water rights besides rules framed out indigenously, significant reforms embodying the legal environment have been accomplished with the help of Toke Kutaye district agricultural desk. While the indigenous rules exhibit the pragmatic contexts of irrigators in their respective vicinities, the formal-legal approach tends to emphasize the components of irrigation directives adopted by the government to be implemented for inducing change. The arguments extracted from these dual approaches have

evidenced to effectuate the water use right claims and the processes of negotiations among irrigators in the study areas.

In the research, it was realized that customary rules were particularly effective in curbing conflicts while the formal guidelines become strong to reinforce punishments at moments either the rules are poorly interpreted or deliberately transgressed. As a result, combinations of these rules enable to have wider frameworks for the actions and behaviors admitting users to divert water. Therefore, the paradigm of legal pluralism contains much relevance with the existing realities of water users in the three selected research settings for this study (Selam Sefer, Dhaga Fillee and Kilinto).

In a similar vein, the arguments of processual models (both cyclical and developmental) of negotiations expounded by Gulliever (1979) tested to bear reliability with the manner conflicts over irrigation water have been settled or the processes gone through to negotiate and renegotiate for securing access to water. Though these models are thought to work at the same instance, the cyclical model applies more to grip minor conflicts erupting out among users or teams in a village. Conversely, the developmental model of negotiation has been utilized to justify the protracted disputes continued over a number of days or a couple of months. The arguments of this same model appeared instrumental to reconcile the antagonistic interests of the Agricultural Training Center and farmers as well as frequently occurring disputes among water users at Selam Sefer (as upper stream beneficiaries) and Kilinto (as lower stream beneficiaries).

7.1.3. Recommendations.

The views contended herein below demand the concerted efforts of interested stakeholders, users themselves, researchers or institutes to contribute their resources (in the form of time, know-how/ technical skills, donations or material supplies) to narrow missing gaps and thereby endeavor for better transformation. Hence, the recommendations embrace:

i. The policy pertaining to irrigation water management in general and water right entitlements in particular have been offered little concerns. This investigation indicated the need to coin out specific water right guidelines by the relevant organs in an informative way and equally workable for all users.

ii. The involvement of chief stakeholders like the district agricultural desk need to provide its special focus on enhancing the awareness level of users about the overall nature of water rights. Formerly, it was confirmed that inadequate attention was paid to programs that create awareness among users about water rights. As it promotes the empowerment of users in that regard, there is an acute need to incorporate water right themes in the plans for actions to be implemented.

iii. There prevailed the tendency to increasingly undermine the role of customary rules and instead forcefully impose legally recognized rules by various government organizations. Yet, the study has found out that the customary rules were by no means less in effective than the formally laid directives in numerous respects (for instance, saving resources). Hence, accentuations have to be given on advocating the merits of customary rules that shines the wisdom and cumulative experiences/skills of practitioners.

iv. The causes of conflict were essentially embedded in failures either to adhere or weak pragmatic implementation of the negotiated rules of water use. In this regard, the findings of the study have indicated the existence of a serious affair that must be addressed thoroughly. Therefore, water users, technical experts, the institutes claiming water from the scheme or other stakeholders need to work hand-in-glove manner to reinforce the practical interpretation of rules obtained through the consents of all users.

v. In the face of growing population and declining water volume, competitions over irrigation diversion would inevitably augment. Initiatives to supplement

water from other perennial and potential rivers (like Heddee) have been proposed by users, the district agricultural desk and the Agricultural Training Center. As the materialization of this proposition would only be realistic with the financial assistances of interested organizations (like EEC), the study suggests conducting further assessments or searches on the likelihood to assure irrigation water sources in addition to Indris Scheme.

vi. Negotiated approaches over water rights and other themes in the irrigation system, as a best option, have facilitated desirable achievements in inducing common understandings between disputants. Despite its remarkable role to settle conflicts of interests, negotiated approaches have been declining over time tending to carry little credits among users. The study recommends offering particular considerations on collective actions that uphold the enhancement of negotiated approaches over resource use (water). The institutions like WUA mediating the access of users need also undergo periodic restructurings in a way to accommodate ever growing demands of the claimant.

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APPENDIX-A: Questions Prepared for Major Stakeholders in the Study.

Addis Ababa University, School of Gradate Studies, College of Social Sciences, Department of Sociology and Social Anthropology

To introduce you, my name is Tesfaye Zeleke and currently I am conducting my MA research on "Water Rights and the Processes of Negotiations" among irrigators like you diverting water from Indris scheme. The responses you provide me from now onwards become invaluable and taken as a essential component of my study. I would like to assure you that the questions raised here or the findings of the study have no ties with political, religious or other purposes. Therefore, you are kindly requested to provide your genuine replies to the questions I pose to you regarding your experiences in water rights and processes undergone for negotiations with the aim to settle disputes or competing interests over water use.

A. Sample of Unstructured Interview Questions for Water Users in the three Research Settings.

1. Do you have any hint about when did irrigation practices begin in this locality? Where it first began and who was the initiator of the idea?
2. Do you engage in irrigation practice? If yes from where do you abstract water for irrigation?
3. Were there any governing rules of water use? Who had coined the rules and on the basis of what considerations? Explain also the sources of the rules (the government, customary laws, religious or other institutional rules)
4. Were the rules fixed or changeable? Were there possibilities for the rules or bylaws to be transferred to other users and under what circumstances?
5. Did all individuals have the access and right to use water for irrigation? What were the major criteria for water rights of individuals?

6. Who was responsible to decide and control the allocation of water, its scheduling, and overall management? Or are there institutions that have undertaken this responsibility?
7. Were there conflicts over water rights and how was its settlement? Can you discuss the main sources of conflict?
8. Were there any initiatives for negotiations and who ran the process? And what were the out comes of negotiations?
9. How was the involvement of the government or other institutions in water right issues and over all irrigation supervisions?
10. When was the scheme upgraded and who was the initiator? Were there factors that necessitated the intervention?
11. What was the role and contribution of the water users, government, and other institutions in the process to scale up the scheme?
12. Are there changes brought due to intervention on water rights, water allocations, water scheduling, water management and negotiation processes? If yes, discuss the improvements you recognized?
13. Are there changes regarding the rules/bylaws that govern water rights after 1986 E.C? If yes, describe the changes that occurred?
14. Do you think that multiple water rules could coexist? If no, why?
15. In your opinion, which rules (government water acts, customary laws or a combination of them) do you think are more effective? Why?
16. Do all negotiations among water users lead to fulfillment of conflicting interests? What follows when they fail to address common problems? What is the role of the government in that regard?
17. In your views, what factors can be mentioned as constraining to promote water rights and what actions need to be taken in the future?
18. Do you feel that proper water rights and series of negotiations can contribute to the improvement of irrigation productivity? If yes, justify your points?
19. In your opinion, do those who misappropriate water use can affect the right of other war users? If yes, discuss how it can affect.

20. Do you see any relations between water rights and factors like gender, religion ethnicity, economic status or power influences? And who benefits much in those circumstances and why?
21. How is water users interactions so far (for example, between up and down streams, between farmers and Agricultural training center of Ambo college) in areas of water rights and negotiations?
22. In the face of growing population and increasing competitions over water use, what actions do you suggest inducing effective water rights among all users?

B. A Sample of Check lists for the Case Studies.

1. Place the case studied---------- Date----------Time-------
2. Position in the household----------
3. Your relationship or involvement with the water allocation committee--------
4. How long have you lived here?
5. When did you begin to use water from the Scheme?
6. Do you have any view regarding water allocation, water right and negotiations before 1986 E.C the year of intervention? If yes, explain how its nature.
7. Have you ever been part of decision makers in water allocation? If yes, were you comfortable with all the procedures of providing water distribution systems to users?
8. Have you heard or come across any criteria used for water rights? List them and discuss in detail.
9. Do you have experiences of complaining against water rights decisions? If yes, explain its cause and consequences on you and you production efforts.
10. Have you been part of a negotiating process either for your self or as a negotiator between claimants on water rights? Describe your experiences in this regard.
11. Do you have experiences in formulating or contributing water right rules?
12. Have you ever been blamed or blame others due to violation of the rules agreed for water use rights? If yes, how was the case managed?

13. Have you seen noticed changes that may occur after 1986 E.C. in water rights and allocations, negotiation processes, conflict settlements and overall water management? If yes describe from your point of view.
14. Did so far water right and negotiations affect your irrigation production and livelihood? If so, in what ways it affected you?
15. Discuss any unique experiences you encountered formerly in relation to irrigation in general and water rights and negotiations in particular.

C. A Sample of Check lists for Focus Group Discussions (FGDs) Points of Discussions

1. Place the FGD held---------- Date----------Time----------
2. Discuss the historical development of Indris Scheme prior to and post of 1986 E.C.
3. What is meant by water right in irrigation to you? And what factors are considered greatly to get access to water right for an individual/ institution?
4. Are there practices of negotiations over water rights and dispute settlements? If yes, discuss who initiates it and how it proceeds?
5. From your previous experiences, what are the out comes of and consequences of such negotiations in light with its contribution to improvement of your livelihood?
6. How do you relate the water use rules with water rights issues?
7. In cases when conflicts, how have you settled it? Discuss.
8. Are there ways in which water rights and negotiations can affect (positively or negatively) irrigation production and income earned from it?
9. In your opinion, what factors or issues restrict the implementation of negotiated water rights? And what measures need to be in action?
10. Are there changes in water allocation, water management decisions, water scheduling, avoidance of misappropriations, negotiation patterns after 1986 E.C?

11. How do you see the interactions between diverse segments of irrigators before and after 1986 E.C? E.g. between upstream and lower stream users or farmers and The Agricultural Training Center.
12. Population number is ever growing; competition over water is increasing while the volume of water is shrinking. So, discuss the role to be played by irrigators, government, and the Agricultural College in light with issues of water rights and negotiations.

D. A Sample of Unstructured Interview Checklists held with Non-Irrigators.

1. Residential Village----------
2. Place the interview held---------- Date----------Time----
3. How long have you lived here?
4. How do you consider irrigation practices in this area?
5. Have you never engaged on irrigation? Or you used to practice it until upon you withdrawn from it?
6. Could you briefly discuss what major factors constrained you to engage on the practice?
7. Do you have any clues regarding water rights? And how an individual may claim for it and the bases for claiming water rights?
8. Do you consider water rights among factors hampering you not to engage in the practice?
9. Have you seen or heard when the agricultural experts or development workers discuss about water allocations and its management? What do you feel about their programs in that regard?
10. Did you involve in any of those processes to resolve conflicts through negotiations?
11. Do you have any intentions to engage in irrigation practice in the future or keep up on refusing it?
12. In your eyes, what would be the role of the government, accessed users or other agencies in encouraging non-irrigators to benefit from the practice in the future?

E. A Sample of Checklists for Structured Interviews Conducted with Principals working in the Agricultural Training Center.

1. Code/ name----------
2. Age ---------- Sex----------
3. Educational level ----------
4. Place the interview held---------- Date----------Time----------
5. Position of interviewee in the institute----------
6. Years of service or work experience at departmental level ----------
   ----------or as a daily laborer----------
7. Do you know when the college did begin to divert water from Indris River to utilize it for irrigation purposes?
8. Did you have any view regarding the back ground development of the scheme?
9. Does your Training Center use water from other sources for irrigation purposes other than Indris scheme? If yes, describe it.
10. Were there consents between your Agricultural Training Centre and other irrigators to divert water? Or you simply started to use it? Initially, for how many hours per day and how many days in a week? What about the trend today on this aspect?
11. Can you explain the importance of negotiations in water right claims?
12. Were there any points of disagreement or conflicts of interest between your college and the rest farmers? What are the sources of conflicts?
13. In cases conflicts of interests may crop up, how did you settle it? Who imitates and assumed the responsibility to manage it? What is the response of the administration of the Agricultural Training Center? Provide any experiences you may have in this regard
14. Are there set rules/by laws that govern water rights commonly between your institute and other users? From where did the rules come (government water use acts, customary rules, religious rules or from your institute)?
15. What factors are considered at length for individuals' or your Agricultural Training Centre water right claims?

16. How do you evaluate the water use system of your College in relation to other irrigators in the Community?
17. Misappropriation of water use is one aspect where water rights have been curtailed. Could you mention areas where water has been inefficiently exploited both in your context and among farmers? What contributed to that? And were there measures taken to improve in part?
18. What would be the future planning and programs, particularly in relation to water allocations and management or negotiations over water rights with the farmers?

F. A Sample of Structured Interview Checklists held with District Agricultural Experts and Development Agents.

1. Code/ name----------
2. Age ---------- Sex----------
3. Educational level ----------
4. Place the interview held---------- Date----------Time----------
5. Position of interviewee in the office----------years of service or work experience----------
6. Do you have any hint about when did irrigation practices begin around Indris locality?
7. Who had a decision on water use for irrigation, its allocation and water management?
8. What factors were considered as base for water allocation decisions and water right claims?
9. Were there rules/by laws that govern water rights and allocations? From where did the rules come (government water use acts, customary rules, religious rules or from other organizations)?
10. Are rules fixed once stated or subject for revisions depending on certain conditions like times of drought? Would it be possible to transfer these rules to other users based on agreements?

11. Were there any points of disagreement or conflicts of interest between irrigators for e.g. between farmers and the College? What are the sources of conflicts?
12. In cases conflicts of interests becomes severe, how did you settle it? Who imitates and assumed the responsibility to manage it? What is the response of the agricultural office to such problems? Provide any experiences you may have in this regard.
13. Were there negotiations made among various water users? Examples can be between College and other irrigators or between upstream and down stream? Who initiates the process of negotiations and why?
14. When was the Indris scheme upgraded and who was the initiator? Were there factors that necessitated the intervention?
15. What was the role and contribution of the water users, government, and other institutions in the process to scale up the scheme?
16. Are there changes brought due to intervention on water rights, water allocations, water scheduling, water management and negotiation processes? If yes, discuss the improvements you recognized?
17. Do conflicts over water use and right claims increased or decreased both in frequency and intensity after the scheme was upgraded? Justify your reasons?
18. How do you consider the water right claims and use patterns of farmers as compared to Agricultural Training Center?
19. Can you indicate relations between water rights on the one hand and economic status, power influence, religion, ethnicity or gender on the other hand? if you have any thing, please discuss it in detail.
20. Do you think that appropriate water rights and a series of effective negotiations can contribute to the improvement of irrigation production and income generated from it? If so, discuss your arguments.
21. Do you see any aspect where water rights and negotiations have effect (negative or positive) on the livelihood of the irrigators or their income from irrigation productivity? Explain it.

22. What do you think the role to be and has been played by the government especially the district agricultural office in enhancing the realization of water rights and rules as well as negotiations? And on the overall water allocations or management?
23. Misappropriation of water use in the form of theft, water logging or seepage is one aspect where water rights have been curtailed. Could you mention areas where water has been inefficiently exploited both in the context of the Agricultural College and among farmers? What contributed to that? And were there measures taken to improve that in your part?
24. As an irrigation expert or development agent, did you have programs that thought to create awareness among irrigators over water rights and negotiations so far? If no why and what has to be done in the future?
25. Put forward your general comments if you have any regarding water rights, water allocations, water scheduling, misappropriations, conflict settlement and negotiations among irrigators from Indris scheme by comparing situations prior to and post of 1986E.C.

Thank you for sharing both information and your time.

Declaration

I, the undersigned, declare that this thesis is my original work and that all sources of materials used for the thesis have been duly acknowledged.

Candidate

Name Tesfaye Zeleke

Signature

Date of Submission 22/08/2007

Place AAU