

ROLE OF WATER RESOURCES USERS ASSOCIATIONS CONFLICT MANAGEMENT STRATEGIES ON MANAGING CONFLICTS RELATED TO WATER IN LAIKIPIA COUNTY, KENYA

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Abstract: In Kenya, changes in land use and land ownership have brought about a dramatic transformation in social composition, from a simple pastoral society to a complex multi stakeholder society, ranging from the foot zones down to the Laikipia Plateau and the Samburu Plains Based on this, water conflicts are common in Kenya's Laikipia County since people started settling and carrying out farming activities in the County, leading to the management of the water resources through community based organisations referred to as Water Resources Users Associations (WRUAs) whose intention is to act to manage conflicts over water. This study sought to assess the role of WRUAs in water conflict management among communities in Laikipia. Descriptive survey research was used to look at the variables that was studied, where both quantitative and qualitative approaches was adopted. Data was collected by use of questionnaires, which was administered to the target population of 559 members of the 7 WRUAs in Sub catchment 5BE. A sample size of 141 members out of 317 members from 4 randomly sampled WRUAs and 8 WRUA stakeholders responded. The data analysis was done using descriptive and inferential statistics, according to the research questions and objectives of the study. The findings indicated that WRUAs conflict management strategies contribute to managing conflicts related to water. Poor strategies were found to aid the conflict. The signs of the conflict included rise in complains on water, disagreements between communities and people breaking rules governing water.

Keywords: Conflict Management, Strategies, Water Resources.

1. INTRODUCTION

Water is essential to sustain life in both human systems and ecosystems. In almost every region of the world, supply of water is becoming more difficult because of increasing demands associated with industrialization, increasing urbanization and growing population. According to the World Water Vision report (Cosgrove and Rijsberman, 2000) the world population has tripled in the past century and water use for human purposes has increased six-fold. In addition, climatic conditions, such as global warming, have worsened the situation. Water is very unevenly distributed both temporally and spatially. Frequent and regular rain fall in some regions contrasts sharply with prolonged droughts in others. Some regions are blessed with an abundance of freshwater while others face scarcity (Gleick, 1993). Moreover, the freshwater resources of the world are not partitioned to match the political borders. Thus the distribution and use of limited water resource can create conflicts at local, regional, and even international level. History shows and future may confirm that water has a strategic role in conflicts among different stakeholders (Gleick, 1993). Improved water management, conflict resolution and cooperation could ameliorate such conflicts. Water conflict resolution process has been approached by many

disciplines such as law, economics, engineering, political economy, geography, anthropology, and systems theory. An excellent source of selected disciplinary approaches is presented by (Wolf, 2002). Traditional conflict resolution approaches such as the judicial systems, state legislatures, commissions and similar governmental instruments mostly provide resolutions in which one party gains at the expense of the other. When the river basin traverses across multiple legal, political and international boundaries, the number of potential stakeholders and their specific interests increases, making the conflict resolution process rather complicated (Wolf, 1998).

2. STATEMENT OF THE PROBLEM

Water is one of the natural resources and sustainable use of natural resources is crucial for maintaining the basis for sustainable livelihood and peaceful co-existence among community members. There is no such thing as managing water for a single purpose all water management is multi-objective and is based on navigating competing interests. Both globally and locally, water sector is facing a lot of challenge such as population growth, urbanization, poverty, climate change and natural resource degradation that negatively affect on water resources and ecosystem in general, a key challenge is to achieve equitable universal allocation and distribution of river water resources. Within a nation they are competing interests which include domestic users, agriculturalists, hydropower generators, recreators, and environmentalists and in which in any two are regularly at odds and the chances of finding mutually acceptable solutions drop exponentially as more stakeholders are involved. In 2002, the Kenya's Water Act, 2002 was enacted to provide for the management, conservation, use and control of water resources and for the acquisition and regulation of the rights to use water. In September 2007, Water Resources Management Rules were promulgated, helping to fill some of the gaps in the Act. The Act is notable in general terms for devolving the management (not supply) of Kenya's water resources to the Water Resources Management Authority (WRMA). The Rules define a WRUA as "an association of water users, riparian land owners, or other stakeholders who have formally and voluntarily associated for the purposes of cooperatively sharing, managing and conserving a common water resource". The intention of WRUAs is to act to resolve conflicts over water. Water conflicts are common in the Ewaso Ngiro North Catchment area (ENNCA) where Laikipia County falls in, since people started settling and carrying out farming activities in the upper part of the catchment leading to changes over the years in the demand for and supply of river water. These changes have resulted in a society where various stakeholders claim access to local water resources resulting to conflict. The conflicts are further aggravated by high social inequity, economic marginalization and limited non-land, non-water-dependent sources of livelihood (Gichuki, 2003). This has resulted in the management of the water resources through community based organizations referred to as Water Resources Users Associations (WRUAs) in the Ewaso Ngiro North Catchment Area. This study therefore sought to assess the role of WRUAs in water conflict management among communities in Laikipia county in Kenya.

3. LITERATURE REVIEW

Conflicts are the visible registers of underlying differences as noted by McCall (2001). They can be defined also as disagreements on the course of action to be taken (Mostert, 1998). Globally, while the underlying water related conflicts can be based on several reasons such as power struggles and competing development interests, all water disputes can be attributed to quantity, quality and timing (Aaron *et al.*, 2005). Competing claims for a limited quantity of water can cause tensions when allocations increases when the resource is scarce. However, even where pressure on the resource is limited, its allocation to different uses and users can be highly contested. On the quality scenario, where low quality is the issue whether caused by pollution from pesticides, or excessive levels of salt, nutrients, or suspended solids, makes water inappropriate for drinking, industry, and agriculture hence becoming a source of dispute between those who cause it and those affected by it. The timing, of water flow is important to avoid downstream and upstream conflicts. Upstream users for example, might release water from reservoirs in the winter for hydropower production while, downstream users might need it for irrigation in the summer. In addition, water flow patterns are crucial to maintaining freshwater ecosystems that depend on seasonal flooding.

Rainfall patterns in Kenya are extremely variable not only spatially and temporally but also in rainfall intensities. Rainfall may vary between +35% to - 70% from the mean while rainfall intensities may be as high as 200 mm per hour over short time periods (15 minutes). This makes the natural flow of water in the watercourses highly variable in space and in time. The growing population increases the demand for water for domestic use, food security and hydropower to the point where the needs are outstripping supply. This makes orderly economic and socio economic development, which depend

on reliable water resources more difficult to achieve. Kenya, with a current population of 38 million and a projected population of 43 million by 2015 faces enormous challenges in the management of its complex, but limited water resources (Ministry of Water & Irrigation, 2010). Kenya is classified as a chronically water scarce country with an annual renewable fresh water supply of only 647 cubic metres per capita (Ministry of Water & Irrigation, 2002).

Mediators use about 100 conflict-management techniques (Wall & Lynn, 1993). Some of these are applied to the party-other relationship; others are targeted at the parties themselves; and still others are focused on the parties' relationship with outsiders. For decades, researchers have recognized these techniques and more recently they've noted that mediators employ sets of techniques (strategies) to solve the party-other disputes. For example, mediators use certain coercive tactics (substantive pressing) to move a disputant off a position, and they also employ more gentle ones (substantive suggesting) to nudge the disputant into a new position (McLaughlin, Carnevale & Lim, 1991). Do these tactics and strategies work? According to Kressel and Pruitt (1989) the answer must be somewhat equivocal. They judge the median settlement rate to be about 60% with a range between 20% and 80% (Bercovitch, 1989; Wagner, 1990). While this average is lower than one would like, we should bear in mind Schwebel, Schwebel, and Schwebel's (1985) observation that mediation frequently attacks conflict causes; consequently, it is as much a preventative measure as it is one of resolution. Even when it does not lead to a conflict settlement, mediation frequently improves the interaction between the disputants. Specifically, it improves their communication (Kelly & Gigy, 1989), reduces stress (Zarski, Knight & Zarski, 1985) and on occasion, provides the disputants with problem solving skills that they can rely upon in the future. Looking at another indicator of success, we find the parties' satisfaction with the mediation process to be quite high. Kressel and Pruitt (1989) report it is typically about 75%, even for disputants who fail to reach agreement (Kelly & Gigy, 1989). Disputants tend to be satisfied with mediation because they retain control of the situation; mediation is inexpensive; usually it takes into consideration all aspects of the dispute; it allows for catharsis, with confidentiality; and in general, it is viewed as fair. Because of the mediators' efforts and disputants' satisfaction with the process, compliance with mediated agreements is typically very high, about 77% (Roehl & Cook, 1989). The study will assess the methods and strategies used by WRUAs in water conflict resolution, including mediation, in sub catchment 5BE of Laikipia County.

In general, an arbitrator can employ any of the techniques or strategies used by a mediator (Feuille, 1975). Additionally, he or she has the option of dictating the solution (outcomes) to the conflict. There are roughly four types of arbitration: conventional, final offer (DeNisi & Dworkin, 1981), med-arb, and nonbinding. Under conventional arbitration, the arbitrator can employ any techniques he chooses and make any ruling. For final offer arbitration, however, the arbitrator must choose one negotiator's last offer. The arbitrator, in med-arb, first mediates and then arbitrates. And for nonbinding arbitration, the arbitrator suggests an agreement point, but the parties do not have to accept it (DeNisi & Dworkin, 1981). Does arbitration work? According to Feuille (1975), by definition, except in the nonbinding case, arbitration gives a solution or agreement. Yet conventional arbitration seems to have a "chilling effect". Some parties conclude they can receive higher outcomes from the arbitration than from a negotiated agreement with other. Therefore, they hold to their position or even raise their demands so as to tilt the arbitration in their direction (Feuille, 1975). Final offer arbitration tends to remedy this effect. Because the arbitrator here will select one final offer, both parties are motivated to negotiate reasonably (or to at least make a reasonable final offer) in hopes the arbitrator will choose their final offer. There is strong evidence that final offer arbitration does overcome the "chill". Specifically, it produces more negotiated agreements than does conventional arbitration (Feuille, 1975). It lowers the parties' aspirations and brings them closer to agreement in the negotiation. Likewise, it resolves more issues and tends to bring greater final concessions. As for the effectiveness of med-arb, the data currently provide tentative conclusions: it seems that med-arb is more effective than mediation in generating agreements and is somewhat more effective than conventional arbitration in producing cooperative bargaining (e.g., Pruitt, McGillicuddy, Welton & Fry, 1989). Turning to nonbinding arbitration, we find it difficult to distinguish from mediation; therefore, its effects are assumed to parallel those of mediation. This study will assess the methods and strategies used by WRUAs in water conflict resolution, including arbitration, in sub catchment 5BE of Laikipia County.

Rather than mediating or arbitrating, the third party can provide conciliation (James, 1987; Webb, 1986) or consultation (Fisher, 1990). As for the distinction between the latter two processes, there appear to be more similarities than differences. Both are less formal than mediation (or arbitration) and are more voluntary; likewise, both give less control to the third party and more to the disputants. Also in both, the third party provides an informal communication link between the disputants and has a primary goal of improved relations, rather than settlement of the issues. As for the differences between conciliation and consultation, we can find a subtle one. Fisher (1990) holds that the third party, when consulting, does not, and should not, proffer specific solutions or proposals, because the resolution must come from the disputants or

their constituencies. James' (1987) observation is that conciliators are even more arms-length: they not only let the disputants define and settle the issues; they also refrain from seeking information or making judgments prior to the conciliation. Presently, there is evidence that consultation (Fisher, 1990) and conciliation (Tripp, 1985) do help to manage conflict. Yet because of their nonassertive nature, both seem less effective than mediation. This study will assess the WRUAs approach to water conflict resolution and which approach may be effective for WRUAs to engage in, including conciliation and consultation.

4. RESEARCH METHODOLOGY

This study adopted a descriptive survey research design which involves observing and describing the behavior of a subject without influencing it in any way. The study targeted all the 7 WRUAs in sub catchment 5 BE that traverses Meru and Laikipia Counties, with a total of 559 members covering a total area of 1238 square kilometers. The main reason for targeting the 7 WRUAs is that each has its own method of coping with the water conflicts as they arise. The number of members per WRUA range from 17 to 200 (WRMA sub region office, Nanyuki, 2015) which is informed by the fact that some of the projects, which have many members, register with the WRUA as one umbrella member e.g. Ngusishi while others, for example Timau have most of their members as individuals. Four WRUAs with a total of 317 members were purposively selected from the sub catchment. The study interviewed the WRUA management committee members. The main reason for interviewing the WRUA management committee members was that they were more knowledgeable as they are the ones involved in the running of the WRUAs. This study sample frame involved provincial administration, employees of WRMA and stakeholders working in the Laikipia County were also interviewed. The study applied both probabilistic and non-probabilistic procedures of sampling. Sub catchment 5BE had a total of 7 WRUAs, traversing Meru and Laikipia counties, with a total of 559 members. The data analysis involved quantitative and qualitative methods (numerical and descriptive). Qualitative data was analyzed based on content analysis while quantitative data was analyzed using descriptive and inferential statistics. Data was analyzed with the help of electronic spreadsheet SPSS Program which had analysis tools.

5. FINDINGS

The study investigated the conflict management strategies used by Water Resource Users Association by probing how they get to know the existence of conflict related to water use, how they resolve the conflicts and if there is influence of strategy and approach used by WRUA on water conflict management.

Table 1: Signs of conflict related to water use

Signs of conflict related to water use	Frequency	Percentage
Rise in complains on water use	52	40%
Disagreements between communities	48	37%
People breaking rules governing water usage	10	8%
People showing disrespect	20	15%
Total	130	100%

The findings in Table 1, indicates that majority 40% revealed that the signs of conflict relating to water use included rise in complains on water while 37% indicated that the sign can be disagreements between communities. A few 8% showed that when people breaking rules governing water usage is a sign of conflict while 15% indicated people showing disrespect.

Table 2: Ways WRUA use to resolve water related conflicts

Conflict resolution techniques	Frequency	Percentage
Hold sensitization meetings targeting the affected areas	94	72%
Engage a surveyor to determine the boundaries	10	8%
Initiate projects such as tree nurseries	12	9%
Fencing off the dams	14	11%
Total	130	100%

Majority 72% of the respondents indicated that WRUA can hold sensitization meetings targeting the affected areas as a way to resolve water related conflicts while 9% indicated that they initiate projects such as tree nurseries. A few 8% indicated that they engaged a surveyor to determine the boundaries while 11% indicated that they can resolve conflicts by fencing off the dams.

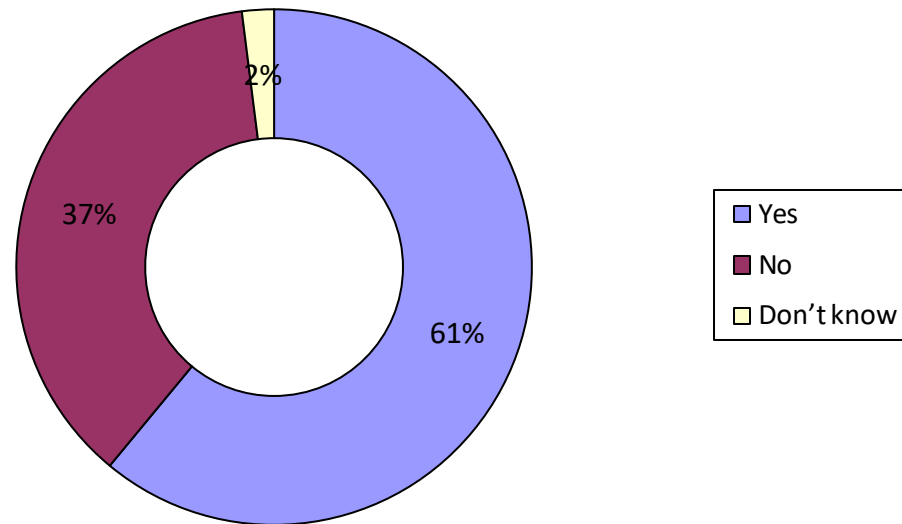


Figure 1: Relevance of the method used in resolving water related conflicts

The Figure 1 shows the response regarding the relevance of the method used in resolving water related conflicts. Majority 61% of the respondents indicated that the method used for resolving water conflict was relevant while 37% disagreed that it was relevance. A few 2% were not sure of the methods being relevant.

Table 3: Methods that can solve the water conflict

Methods to solve water conflict	Frequency	Percentage
Designated watering points	23	18%
Capacity and training on conflict resolution	30	23%
Ensure equitable water access by all users	20	15%
Provide a forum to discussion	41	32%
Develop a water allocation Plan	16	12%
Total	130	100%

The findings in Table 3 indicates that majority 32% of the respondents indicated that providing a forum for discussion that would prevent and resolve water use conflicts. Another 15% indicated ensuring equitable water access by all users would help to solve the conflict resulting from water. 18% indicated that the conflict would be solved by designation of watering points while 23% indicated that it can be solved by capacity and training on conflict resolution. A few 12% indicated that it can be done through developing a water allocation plan.

Table 4: There being influence of strategy and approach used by WRUA on water conflict management

Response	Frequency	Percentage
Strongly agree	39	30%
Agree	75	58%
Neutral	10	8%
Disagree	6	5%
Total	130	100%

Table 4 indicates that majority 58% of the respondents agreed that there was influence of strategy and approach used by WRUA on water conflict management while 5% disagreed to the statement. This means that the strategies and approached used by WRUA either positively or negatively influences conflict management among the community. The conflict management strategies is positively related to the conflict management. This is shown by the positive sign of the coefficient. The coefficient of conflict management strategies is also statistically significant as indicated by a P value of 0.04 which is statistically significant at 5%. The findings on the WRUAs conflict management strategies and managing conflicts related to water revealed that the major signs of conflict relating to water use included rise in complains on water. Some indicated disagreements between communities while a few showed that when people breaking rules governing water usage is a sign of conflict. Majority of the respondents indicated that WRUA can hold sensitization meetings targeting the affected areas as a way to resolve water related conflicts while some indicated that they initiate projects such as tree nurseries. Others indicated that they engaged a surveyor to determine the boundaries while some indicated that they can resolve conflicts by fencing off the dams. Majority of the respondents indicated that the method used for resolving water conflict was relevant. Majority of the respondents indicated that by providing a forum for discussion would prevent and resolve water use conflicts. Another indicated through ensuring equitable water access by all users would help to solve the conflict resulting from water. Some indicated that the conflict would be solved by designation of watering points while a few indicated that it would be solved by capacity and training on conflict resolution. Some indicated that it can be done through developing a water allocation plan. The respondents agreed that there was influence of strategy and approach used by WRUA on water conflict management. This means that the strategies and approached used by WRUA either positively or negatively influences conflict management among the community.

Postel (1999) describes the roots of the problem: Water, unlike other scarce, consumable resources, is used to fuel all facets of society, from biologies to economies to aesthetics and spiritual practice. Moreover, it fluctuates wildly in space and time, its management is usually fragmented, and it is often subject to vague, arcane, and/or contradictory legal principles. There is no such thing as managing water for a single purpose all water management is multi-objective and based on navigating competing interests. Within a nation these interests include domestic users, agriculturalists, hydropower generators, recreators, and environmentalists any two of which are regularly at odds and the chances of finding mutually acceptable solutions drop exponentially as more stakeholders are involved. In summary the findings revealed that WRUAs conflict management strategies contribute to managing conflicts related to water. Poor strategies practiced were found to support the conflict. The indicators of the conflict included rise in complains on water, disagreements between communities and people breaking rules governing water.

6. CONCLUSION

From the findings, it can be concluded that WRUAs conflict management strategies contribute to managing conflicts related to water in Laikipia County. Poor strategies were found to aid the conflict. The signs of the conflict included rise in complains on water, disagreements between communities and people breaking rules governing water.

7. RECOMMENDATION

The WRUAs should ensure they involve the community in coming up with strategies of conflict management. This will contribute to better management of conflicts relating to water in Laikipia County. The community will be able to follow what they have suggested in regards to conflict management.

REFERENCES

- [1] Aaron, T. W., Annika, K., Alexander, C., and Geoffrey, D. D. (2005). *State of the World. Managing water conflict and cooperation*. Pg 81 Agarwalla, T. (9th Ed), (2011). Strategic Human Resource Management, Oxford University Press, India.
- [2] Bercovitch, J. (1989). *International dispute mediation: A comparative empirical analysis*. Pp. 53-67 in K. Kressel & D.G. Pruitt (Eds.), *Mediation research*. San Francisco: JosseyBass.
- [3] Cosgrove, W. J., and F. R. Rijsberman, (2000). *World Water Vision: Making Water Everybody's Business*, Earthscan, London,
- [4] Crouch, A., & Yetton, P. (1987). Manager behavior, leadership style, and subordinate performance: An empirical extension of the Vroom-Yetton conflict rule. *Organizational Behavior and Human Decision Processes*, 39: 384-396.

- [5] Department of Water Development, (2002). *Country Strategy on Integrated Water Resources Management*. Government Printers
- [6] DeNisi, A.S., & Dworkin, J.B. (1981). Final-offer arbitration and the naive negotiator. *Industrial and Labor Relations Review*, 35: 78-87, 49.
- [7] Fisher, R.J. (1990). *The social psychology of intergroup and international conflict resolution*. New York: Springer-Verlag.
- [8] Florestano, P. S. (1994). Past and Present Utilization of Interstate Compacts in the United States.
- [9] Gleick, P. H. (1993). Water and conflict: Fresh water resources and international security, *Int. Security*, 18(1), 79–112.
- [10] Grant, D. L. (2003). Interstate Water Allocation Compacts: When the Virtue of Permanence Becomes the Vice of Inflexibility. *University of Colorado Law Review*. 74: 105–80.
- [11] Gregory, Robin, Tim McDaniels, and Daryl Fields. (2001). Decision Aiding and Not Dispute Resolution: Creating Insights Through Structured Environmental Decisions. *Journal of Policy Analysis and Management* 20 (3): 415–32.
- [12] Government of Kenya, (2005). *Sessional Paper on Sustainable Development of Arid and Semi-Arid Lands of Kenya*. Nairobi.
- [13] Hay group, (2011). *Building the new leader-Leadership 2030: Leadership challenges of the future revealed*. Retrieved From: Hahm, P-C. (1986). Korean jurisprudence, politics and culture. Seoul, Korea: Yonsei University Press.
- [14] Kahn, H. (1965). *On escalation: Metaphors and scenarios*. New York: Praeger.
- [15] Kelly, J., & Gigy, L. (1989). *Divorce mediation: Characteristics of clients and outcomes*. In K. Kressel & D.G. Pruitt (Eds.), *Mediation research*. San Francisco: Jossey-Bass.
- [16] Kenya, (2010). Kenya Water Act. Government Printer; Nairobi Kim, S. (2006), Public service motivation and organizational citizenship behavior in Korea, *International Journal of Manpower*, Vol. 26 No. 8, pp. 722-40. James, A.L. (1987). Conflicts, conciliation and social work. *British Journal of Social Work*, 17: 347-364.
- [17] Kiteme, B.P., and Gikonyo, J. (2002). Preventing and Resolving Water Use Conflicts in the Mount Kenya Highland-Low land System through Water Users Association. *Mountain Research and Development* Vol 22 No 4 Nov 2002: 332–337
- [18] Kothari, C.R. (2004). *Research Methodology*. New Delhi: New Age International Publishers.
- [19] Kressel, K., & Pruitt, D.G. (1989). *Conclusion: A research perspective on the mediation of social conflict*. Pp. 394-435 in *Mediation research: The process and effectiveness of thirdparty intervention*. San Francisco: Jossey-Bass.
- [20] McCall, M.K. (2001). *Conflict analysis & conflict management approaches in: Environmental & natural resource management & Land use planning*. Lecture notes. Social Science Division, ITC.
- [21] McLaughlin, M.E., Carnevale, P. & Lim, R.G. (1991). Professional mediators' judgments of mediation tactics: Multidimensional scaling and cluster analysis. *Journal of Applied psychology*, 76: 465-472.
- [22] Mugenda, O.M., & Mugenda, A. G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts press.
- [23] Postel, S. (1999). *Pillar of Sand: Can the Irrigation Miracle Last?* New York, Norton,.
- [24] Pruitt, D.G., & Rubin, J.Z. (1986). *Social conflict Escalation, stalemate, and settlement*. New York: McGraw-Hill. Revised and updated as Pruitt, D.G., Rubin, J.Z. & Kim, S.H. (1994). *Social conflict: Escalation, stalemate, and settlement*, 2nd ed. New York: McGraw-Hill.
- [25] Pruitt, D.G., McGillicuddy, N., Welton, G., & Fry, W. (1989). *Process of mediation in dispute settlement centers*. Pp. 368-393 in K. Kressel & D.G. Pruitt (Eds.), *Mediation research*. San Francisco, CA: Jossey-Bass.
- [26] Roehl, J., & Cook, R. (1989). Issues in mediation: Rhetoric and reality revisited. *Journal of Social Issues*, 41: 161-178. Rok, B. (2009), People and skills ethical context of the participative leadership model: taking people into account, *Corporate Governance*, Vol. 9, No. 4.

- [27] Thompson, L. (1990). Negotiation behavior and outcomes: Empirical evidence and theoretical issues. *Psychological Bulletin*, 3: 515-532.
- [28] Tjosvold, D., & Chia, L.C. (1989). Conflict between managers and workers: The role of cooperation and competition. *Journal of Social Psychology*, 129: 235-247.
- [29] Tripp, C. (1985). Intra organizational conflict mediation: The effects of communication, complaints, compliance, and confidence. *Mediation Quarterly*, 7: 83-99.
- [30] Wagner, R.V. (1990). Mediated divorces last-At least to the bench. *Negotiation Journal*, 6: 47-52.
- [31] Wall, J.A. Jr. & Blum, M.W. (1991). Negotiations. *Journal of Management*, 17: 273-303.
- [32] Wall, J.A. Jr. & Lynn, A. (1993). Mediation: A current review. *Journal of Conflict Resolution*. 37: 160-194.
- [33] Water Resources Management Authority, (2012). *Performance Report 2*. A Report to the Public from Water Resources Management Authority.
- [34] Water Resources Management Authority (2008). *Ewaso Ngiro North Catchment*. Catchment Management Strategy.
- [35] Water Resources Management Authority and Water Services Trust Fund (2008). WRUA Development Cycle (WDC). Volume 1.
- [36] Wolf, A. T., Jeffrey, N., Jeffrey, D., Brian, S.W., and Jan, K. P. (1999). International River Basins of the World. In: *International Journal of Water Resources Development*. 15(4), 387-427.
- [37] Wolf, A. T. (1998). Conflict and corporation along international waterways, *Water Policy*, 1(2), 251– 265.
- [38] Wolf, A. T. (2002). *Conflict Prevention and Resolution in Water Systems*, Edward Elgar, Cheltenham, U. K.
- [39] Zarski, L.P., Knight, R., & Zarski, J.J. (1985). Child custody disputes: A review of legal and clinical resolution methods. *International Journal of Family Therapy*, 7: 96-106.
- [40] Zimmerman, J. F. (2002). *Interstate Cooperation: Compacts and Administrative Agreements*. Westport, CT: Praeger.