



Leadership in biodiversity conservation: Case studies of Western Himalayan region of India

Kapil Joshi ✉ and Vinay Sharma

Received:12.12.2014

Revised:18.03.2015

Accepted: 15.04.2015

Abstract

The paper argues that conservation and enrichment of forests, while maintaining the rational level of interaction of the forest users and checking on the commercial attraction of the non-users, requires partnerships, inclusive policy implementation and strategic innovation through effective human resource management which requires leadership on the part of the key functionaries (which in this case are Conservators of Forests belonging to Indian Forest Services in case of India). The paper also argues that looking at the magnanimity of the task and constraints of authority at the same time this leadership apart from other required characteristics must be comprised of courage, consistency and intensity given the fact that at the end of the day every conservator is a Government Servant and a normal human being.

Keywords: Biodiversity, Conservation, Leadership, Forest, Conservator

Introduction

The conservation and enrichment of forest resources, seeks attention towards conservation of the span and maintenance of the density of the forests which requires:

- Meaningful conservation of Environmental Resources
- Facilitation of the natural conservation of the Botanical and Zoological habitat
- Maintaining reasonable and rational level of the interaction of the forest users with the forest resources.

But the question is that who should do this? And *how* should one do this? This paper answers the preceding questions focusing on the role of leadership and on the sensitivity of the leaders that should entail towards this important responsibility locating them in the complex context. The questions become more pertinent when the required strength of human resource involved is analyzed. The paper is based on the first hand experience of one of the

Author's Address

Department of Management Studies, I.I.T Roorkee.
Uttarakhand
E-mail: kapilkjoshi@rediffmail.com

authors, who is an Indian Forest Services officer. Adequate literature support along with 6 pertinent cases would explain and strengthen the arguments.

Background

India is amongst the top 12 mega biodiversity nations of the world [http://en.wikipedia.org/wiki/Megadiverse_countries] with a total of 692027 sq km of forest cover which is only 12.05% of the total geographical area [<http://data.gov.in/dataset/total-forest-cover-india>]. People living in and around the rural areas are less resourceful and are primarily dependent upon the various natural resources available to them. These people are using water, fuel wood, fodder, timber, minor forest produce such as wax, honey, medicinal plants, river bed material etc. for their livelihood. This group using natural resources is called as forest users or forest dependent group. Others view Indian natural resources as a source of huge economic gains for themselves. This group may involve builders, tree fellers, wild animal product traders, hunters, encroachers as well as land property dealers. The per capita forest cover in India is only .06 hectare which is much below the world's average of 0.6 hectare [<http://www.nationmaster>].

[com/graph/env_for_are_sq_km_percap-area-sq-km-per-capita](http://en.wikipedia.org/wiki/Deforestation_by_region)]. Under the various biotic and abiotic pressures India is losing its biodiversity. [http://en.wikipedia.org/wiki/Deforestation_by_region]. India has lost over 4700 million hectare of forest land since independence for various non forestry purposes [http://articles.economictimes.indiatimes.com/2012-04-05/news/31294305_1_forest-survey-sq-km-timber-plantations]. Hence, there is an urgent need to protect the natural resources, for conservation and enrichment of biodiversity, sustainable development and for initiating a reasonable, rational and healthy level of interactions with the forest users bonafied as well as illegal. Indian Forest Service was initially created as an all India service in 1967. The prime objective of creating this service, as an all India service was to keep an officer far away from the local pressures and politics in order to provide a much more transparent and focused administration of natural resources .That was the time when developmental activities in India were starting and a new India was emerging from the ashes of the colonial rule of British empire. Whether it be a case of construction of big dams for power and irrigation or development of large chunks of lands for food and agriculture, large areas of virgin forest were indiscriminately destroyed in India.

It was only in the year 1980 when forest conservation act 1980 came into existence which empowered the central government to put a complete ban on any deforestation activity without the prior approval of government of India [http://forest.and.nic.in/fca1980.pdf]. It was a complete shift from commercial and developmental aspect of forestry to conservation and sustainable natural resource management. With this, the role of a forest officer became demanding, managerial and sensitive as it became more of being a conservationist, hence a barrier to the development activities[http://articles.economictimes.indiatimes.com/2012-12-21/news/35953333_1_forest-dwellers-forest-rights-act-vedanta-case]. Therefore a forest officer became a custodian of the act and vast responsibilities of protection and enrichment of biodiversity got vested in him. A forest officer was also supposed to be actively participating in the developmental activities of his area. The role of a forest officer became more crucial when he had to think and do something for a

vast population residing in and around the forest areas. Such population commonly known as forest users was poor, least resourceful and was primarily dependent over the forest and other natural resources. Such a varied situation provides an ample scope for a forest officer to emerge not only as a natural resource manager but also as a sensitive, focused, transparent and a situational leader. A leader who primarily takes care of the forest dependent, economically weaker sections of the society and secondarily ensures stringent actions over illegal activities as there exist many irresistible commercial attractions towards the biodiversity resources. “Three contemporary leadership challenges face local governments today. The first encourages department heads to more actively work the intersection between political and administrative arenas. The second promotes collaborative work, synchronizing city and county boundaries with problems that have no jurisdictional homes. The third argues that citizen engagement is no longer optional; it is imperative and that connecting engagement initiatives to traditional political values and governing processes is an important mark of successful community building”(Nalbandian et al., 2013). “Effective leadership is about dealing with people (compassion) as much as it is about dealing with change (future orientation)” (Brodbeck, et al., 2002). The scope of leadership and the style of leadership is of utmost importance for a forest officer because at times he has to work with poles apart and diverse set of objectives. It may be conservation vs development, participation vs regulation or policy implementation vs situational discretion, ethics vs practicality. In order to be an ethical high performance leader, a person must be both an effective leader and a leader of ethics (Spangenberg et al., 2005).An effective and appropriate leadership style of a public servant for biodiversity conservation and natural resource management can

1. Turn foes into friends
 2. Convert deficits into profits
 3. Create harmony by connecting people
- “Effective Empowerment is not dependent on the amount of delegation but rather it is dependent how delegation is performed. The managers should adapt the way that they empower their teams

based on the conditions and forms of delegation prevailing in local cultures” (Chevrier *et al.*, 2013).

4. Ensure participation for Innovations. “There are many rationales for group, rather than individual, decision making”. (Supovitz *et al.*, 2013).
5. Raise human development indicators through strategies.
6. Inspire, collaborate and promote entrepreneurship with sustainability “A “tough on the issue, soft on the person” leadership approach” (Brodbeck, et al., 2002).

Bono, *et al.* (2003), in one of the papers revealed that “In general, followers of transformational leaders viewed their work as more important and as more self-congruent. The effects of self-concordant work goals on job attitudes and performance were generally positive; however, the pattern of relationships differed in the field study and the experimental study”. As a key functionary in the government department and in order to ensure inclusive policy implementation with effective human resource management following leadership styles [http://forest.and.nic.in/fca1980.pdf] are explained with real life experiences. Visionary leadership style: To implement radical changes where direction was needed for future environmental and economic gain for various stake holders. Affiliative leadership style: To motivate during stressful time where friendly and empathetic attitude was needed. Democratic leadership style: To get valuable inputs from others and to build a team for a common cause. Coaching leadership style: To help competent, motivated and dedicated employee in order to achieve predefined goals. Hackman, et al. (2005), suggested that “Team coaching is an act of leadership, but it is not the only one or necessarily the most consequential one. Team leaders engage in many different kinds of behaviors intended to foster team effectiveness, including structuring the team and establishing its purposes, arranging for the resources a team needs for its work and removing organizational roadblocks that impede the work, helping individual members strengthen their personal contributions to the team, and working with the team as a whole to help members use their collective resources well in pursuing team purposes”. Commanding leadership style: To handle the grave crises in order to ensure a tight

control over a threatening situation. “Leaders foster stewardship in their followers through various relational, motivational, and contextually supportive leadership behaviors” (Hernandez, 2008).

Real Life Examples: Experiencing the Facts

Case 1: Economic Upliftment of Poor Rural Women through Capacity Enhancement (Glass Bead Production) “While radical change seems at times necessary for organizational adaptation, both continuity and change are typically simultaneously present in an organization and may even be necessary for its continuous adaptation over the long term” (Huy, 2002). Schaubroeck, (2012) says that “The influences of ethical leadership occur not only directly, among immediate followers within a unit, but also indirectly, across hierarchical levels, through the cascading of ethical culture and senior leaders' influences on subordinate leader behavior”. Rural household in hilly areas are largely dependent on nearby forest for fuel wood and fodder. Mostly women are the gatherers. In the normal course of action late in the morning they get inside the forest after finishing the basic house hold works and come back by early afternoon with head loads of fodder and fuel wood for their daily consumptions. It takes them 7 to 8 hrs for this rigorous work. As the dry wood availability is decreasing day by day in the forest they hardly give second thought to cut the green branches and trees for their requirements. These households are economically weak and hardly have any cash with them hence are unable to buy gas and pay heavy electricity bills. This particular situation was realized and a vision was foreseen for self employment and opportunities for the women in Thapaliya Mehra village of district Nainital in the State of Uttarkhand in the year 2012. Under this a glass bead entrepreneur was called in the village and a tetra party arrangement was done in the following manner:

Entrepreneur will provide raw material, training and machines to the women. Local bank will provide loan for the machinery with the guarantee of the entrepreneur and the village panchayat (Local elected Governing Body at the Village Level). Every woman will work 4-5 hrs for bead production. Entrepreneur will purchase the finished goods at a prevalent market rates. Forest officers worked as facilitators and motivators in the whole

project as they enjoy excellent goodwill with the villagers. The project rolled on in the name of 'Shakti' and initially 21 women participated in training cum production program. Every woman started with 0.5 to 1 kgs of finished goods production to a level of 3-4 kgs per day with in a period of one month of training, giving them a minimum of 4000 to 5000 Rs per month of earning. At present more than 23 villages have adopted this program and hundreds of women are getting benefited. The visionary leadership style here helped in protecting the local biodiversity because most of the women engaged in this work stopped going to forest and switched over to some other modes of fuel for their daily requirements.

Training of glass beads production



Local newspaper appreciating the project



Case 2: Resolving Fresh Water Availability Problem in Lake City of Nainital (Renovation of Water Springs)

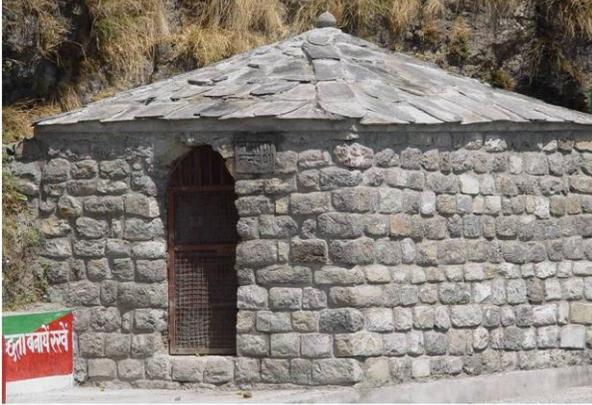
Karakas, (2010) reveals that “For some leaders, spirituality is intrinsically related to building high quality connections with other people. For others, spirituality is inherently individual, and it reflects a

search for meaning and a deeper understanding of self. Yet, for others, spirituality is linked with creativity, self-expression and inspiration at work”. Lake city of Nainital is one of the most beautiful cities of Uttarakhand with a population of about 1,00,000 . Being a tourist destination, there are about 350 hotels and a floating population of over 25000-30000 people throughout the year. As per the Water works department data, the daily requirement of water is about 25 to 30 million liters, out of which only 60 to 65 % is regularly supplied. This way there is a net shortage of 8 to 10 million liters of drinking water per day.

Contrary to that there exist over a dozen natural water springs in and around Nainital city. These water springs were open and unmanaged and about 60 -70% of their water was going waste. Locals were the main users of this water. Especially women were seen standing in long lines to wait and collect the water for their daily use. This situation was first understood and a long chain of discussion was done with the knowledgeable staff and local persons. During these discussions some very important and practical solutions came into picture. Out of them one solution was related to restoration of these natural water springs through traditional practices.

In this method the whole spring was covered with locally made material with a small entrance and a big storage tank was constructed near it to store extra flow of water. No cement, concrete, tiles bricks or paint was used in the restoration of the natural spring. No mechanical tools were used as the water source was underground and there was a possibility that any mechanical work could break the capillary action resulting in drying of the water source. Such traditional scheme did wonders! Local people started getting fresh, hygienic drinking water with no long waiting durations. Every morning over 50,000 liters of fresh water was stored in various tanks situated near water springs. In all 17 water springs were restored in and around the city. Highly motivated local people went a step ahead by forming Water committees to meet regular operations and maintenance expenses of the water springs. This work initiated and motivated by forest department carried very high appreciation in the city and just by helping and listening and following the knowledgeable persons a unique

example of water augmentation and conservation could be successfully created.



Renovated water source



Comments of the local newspaper

Case 3: Evacuating Forest Land from Illegal Possession

Caldwell et al., (2008) define “Ethical stewardship as the honoring of duties owed to employees, stakeholders, and society in the pursuit of long-term wealth creation. Their model of relationship between leadership behaviors, perceptions of trustworthiness, and the nature of ethical stewardship reinforces the importance of ethical governance in dealing with employees and in creating organizational systems that are congruent with espoused organizational values. With the expansion of cities at many places a situation has reached where the forest boundaries are touching the city boundaries. Such forest lands have become highly prone to encroachment and illegal possession. One such case happened in the city of Haldwani district Nainital, where about 1hectare of prime forest land got illegally occupied by some local land sharks. These local miscreants could somehow convince the district magistrate Nainital and got orders in favour of their ownership over the land. Situation was highly sensitive as the cost of

the land was as high as 40 million Rupees and the other party was having a valid authority letter favoring their claim over the land. Within 24 hours of getting authority letter from the district magistrate all the miscreants with a man power of over 50 armed persons jumped over the land and started clearing the whole forest land. Forest staff which was in less number was highly helpless before the administrative and armed men power of the miscreants. It was the last day of May 2009 when the whole forest land was literally taken away from the possession of the forest department. It was really a great crisis for one of the co-author of this paper as none of his subordinates was able to do anything in order to protect the forest land. The only remedy given as per the law was to go to the court and file a writ petition which was a lengthy process and the case might have gone for years. There exists a provision in Indian forest act 1927 article 69 that forest persons have powers to take any necessary actions in order to stop any ongoing encroachment over the forest land but once encroachment has established the only remedy lies with the court. The encroachment was on its way and within 36 hours of district magistrate’s order, one of the author of this paper ordered his circle { 5 divisions 15 sub divisions and 42 ranges } staff to reach Haldwani {site of encroachment} immediately. Next day at about 4 am in the morning, there was a force of over 350 forest personnel; many of them were having their official guns and a fleet of over 21 vehicles were present at the site. At 4.15 am they all started the operation clean sweep and after a forceful confrontation of 1 to 1.5 hours they took back the possession of their forest land from the miscreants and till date all the miscreants could not dare to look back over this piece of land again. Followers' self-concepts are powerful determinants of their behavior and their reactions to the leader” (Howell *et al.*, 2005). Tser-Yieth *et al.*, (2009), in one of their studies “Based on the LISREL model, their study demonstrated that idealized leadership both directly and indirectly affected the voluntary performance of employees, mediated through follower trust, commitment, and satisfaction in their leader”.

Case 4: Turning Deficits into Profits (Pine Needle Briquetting)

Case 5: Checking Pilferages through Technological Advancements (Weigh Bridge Installation for Selling River Bed Material)

Rivers of Uttarakhand are very rich in production of mines and minerals. Sand and boulder is the major commodity found in these rivers. Every year with the onset of monsoon, huge quantity of broken hills come to the planes with the torrent velocity of the river. This material is sold by government departments under mines and minerals act. The quantum of this sale is a little above 1, 00,000 Cubic meters or over 20 to 21,00,000 quintals.

Prior to 2006 all the river bed material in the state of Uttarakhand was sold through cubic meter system. In this system the average capacity of the trucks was decided and the royalty was taken accordingly. This was giving a huge pilferage as the average out formula was a very weak and incorrect system of measurement. For example a truck giving a royalty of 6 or 7 Cubic meters was actually carrying over 10 or 11 Cubic meters of material. In spite of great opposition by the crusher owners and the stockiest of river bed material we could successfully implement the system of sale of river bed material by weight. In this work forest department involved the local weigh bridge businessmen and formed a weigh bridge association under societies registration act. An excellent PPP model was applied where for the measurement of every truck the weigh bridge owner was authorized to take 20 Rs from the truck owner as a service charges, out of this he has to pay only 1 Rs to the department as a token .This way a net 19 Rs was given to the owner of the weigh bridge. Approximately 5000 to 6000 trucks were to be weighed per day. This amounts about 1, 00,000 to 1, 25,000 Rs income to the weigh bridge association. The whole cost of the weigh bridge installation was borne by the weigh bridge owner. The agreement was made for 5 years. These weigh bridge owners really worked for the department and were a great cushion against various agitations made by the stockiest and stone crusher owners. In the state of Uttarakhand one famous river named as Gola, situated in Nainital district, alone fetched an additional royalty of Rupees 20 million in a single year after implementing weight system of sales of river bed material in the year 2006-2007. Today all the rivers of Uttarakhand are working on this system which is giving a huge amount of additional

royalty annually. While implementing this innovation in Gola River in the year 2006, forest staff and officers faced all types of challenges. It was right from offerings to threatening. In one extreme case, a person was shot dead by the miscreants and the whole burden of his death was imposed upon over the forest department by those stakeholders who were unwilling for the new system to become successful. In the year 2006, as a Regional Manager Forest Corporation, one of the author of this paper was totally associated with this complete change over and could successfully implement it in his region through coaching as well as commanding styles of working in which first of all the confidence of one of the strongest stakeholders i.e. weigh bridge association was won and then to implement the new, more profitable method of sales the team was motivated and oriented.

Gola mining field



Conclusion

An ideal Government set up is totally hierarchical in nature which is driven by various standard operating procedures (SOP) for the work. Government consists of departments which have their excellent, well framed rules regulations and procedures to be followed by the government servants as well as by the citizens in which any violation attracts penalties or actions. Advocates of the above theory out rightly reject any scope of dynamic and the other forms of leaderships discussed in the preceding sections in administration or in government setup. A government officer simply follow basic working principles in his day to day official working. For him management and leadership are entirely two different entities. In majority of the cases officials distinguishes management and leadership in the

following manner [<http://www.Kotterinternational.com/our-principles/change-leadership>].

Management makes systems of people and technology work well day after day, year after year. It includes: Planning and budgeting, Organizing and staffing Controlling and problem solving.

Leadership creates the systems that managers manage and changes them in fundamental ways to take advantage of opportunities. It includes:

Creating vision and strategy, Motivating actions and aligning people. Above discussion clearly opens a debate that whether the forest officers are managing a department or are leading an organization. In today's working, no departmental set up is running on its ideal grounds and that is the prime reason that even after 67 yrs of independence we still need lot many modification, additions and subtraction not only in our working patterns but also in our long existing acts, rules and regulations. Such a fluid state of affairs demand more scope to leadership traits of a public servant in an organization as compared to his managerial attributes for day to day affairs [<http://www.nwlink.com/~donclark/leader/leadchr.html>]

Leadership traits involve: Honesty, Competency, Inspiring spirits, Intelligent, Fair mindedness, Broad mindedness, Courageous, Enthusiastic attitude, Straight forwardness, Imaginative, innovative and visionary temperament. Above traits either alone or in combination of two or more formulates either of the visionary, coaching, affiliative, democratic or commanding styles of leadership. Situational Leadership [http://www.ilj.org/publications/docs/Facilitation_Skills_Developing_Facilitative_Leadership.pdf] is another trait of leadership where a leader changes his or her leadership styles depending upon the followers or employees competencies and commitment to their tasks. The leadership style should vary from person to person and one may even lead the same person one way sometimes and another way at other times. It may be directing, selling, supporting or delegating type depending upon the situation. Caldwell *et al.*, (2002), propose that "The Four Umpires Model, which examines how four leadership types view reality and perception, provides a useful example of an effective steward leader".

Studious Comparison:

When a public servant while performing his duties in the department of forest and environment apply any one or more of the above mentioned traits in his day to day public and official dealings, he turns into a leader, dedicated towards biodiversity conservation. Brummans *et al.* (2013), "Underscores the importance of understanding how a spiritual organization is communicatively constituted by voicing a revered figure into everyday situations, illustrating the profound connections between voice, invocation, and vocation". Summarily Glass bead production was an example of visionary style of leadership in which a vision was created for biodiversity conservation through economic upliftment of the forest user group specially women. These women were homemakers and were of the opinion that the use of forest resources is their fundamental right. Economically, they were in an extremely poor condition, they were also not aware of their productivity as they were spending more than 7 to 8 hrs daily inside forest for collection of fuel wood. Once told about the glass bead project every woman moved towards the project and the "solo vision" turned into a "shared vision". A radical change was needed as women were supposed to change their life pattern. They stopped going to forest and come for training and production of glass beads. As this change was economically beneficial, less tedious, respectable and less time consuming, they happily adopted and implemented it. Through their earning now they are in a position to buy cooking gas, pay electricity bill and educate their dependents. All these changes are contributing towards conservation of the biodiversity of the area as day by day they are becoming lesser and lesser dependent over the nearby forest areas. Renovation of water springs through traditional practices was impossible without being an intent listener. Modern civilization gives least importance to the traditional practices because people do not have time or patience. Resource persons telling about traditional practices are also not available now. A consensus was built for the renovation of water springs through traditional practices only after getting valuable inputs from the senior citizens, environmentalist, committed and knowledgeable employees of the area. Main influencers of the neighboring area (ex ward member, respectable old lady, some religious person or social worker)

became the main collaborator of the work and a highly dedicated team got organized to execute the work. This democratic style of leadership worked not only for the renovation work but also influenced people to make “participatory water committees” for meeting out regular operating and maintenances changes of the water source on a contributory basis. Evacuating forest land from illegal possession gives a perfect mix of affiliative as well a commanding style of leadership. There was a time when miscreants totally took over the forest land and deputed more than a dozen armed guards. It was really a stressful time for the subordinates. Their moral was very low and they were finding no way out to resolve the conflict as the miscreants were having a valid authority letter for the land issued by the concerned district Magistrate under these circumstances. Because of affiliative style of leadership subordinate staff stood up as a big, energetic, motivated and dedicated team against the land sharks. Situation was threatening and an absolute control was to be established. In order to handle them, Commanding trait of leadership was practiced by giving clear directions, not only to the staff, but also to the miscreants. With this command, a team of cover 350 motivated and boosted forest personals plunged over the hired men of miscreants with full thrust and courage and got the land evacuated from them within 3 hours of commando operation. This way a large chunk of biodiversity with its harboring forest was saved which otherwise would have turned into a concrete jungle of shops, malls and residences till date. It is rightly said that “Opposite leadership behaviors are simultaneously integrated when an important task has to be performed in a turbulent environment with flexible resources” (Pina & Cunha, 2003). Pine needle briquetting was totally a technical activity which converted a waste material in to a useful economic commodity of important use i.e. energy generation. This activity involved different and varied sections of the society. It involved integration of villagers, forest staff, entrepreneur and the government which could be done through coaching style of leadership. The government issued an order that pine needles from the forest could be collected by the villagers and handed over to the entrepreneurs engaged in bio residue briquetting. The order was lying in the files and not much progress was made in this area till the

year 2011-2012. The only reason for the slow progress was lack of facilitation. In this case facilitator trait of leadership was shown in Nainital district where villagers were facilitated with equipment like rakes for collection of the pine needles; forest staff was facilitated with the proper operation of road side collection points while the entrepreneurs were facilitated with the knowledge of advanced bailing technology for economic transportation. Moreover the entrepreneurs, who were initiating this venture with a high capital investment and risk factor regarding response of the villagers, were given a great support from executive as well as administration. This facilitation resulted into a record collection of over 15,000 quintals of pine needles from the forest of Nainital in the year 2012-13, which was highest in the state of Uttarakhand. This big amount of pine needles otherwise would have been a cause of devastating fire in the forest causing great losses to the local biodiversity. Weigh bridge installation work could be possible only when traits of visionary and coaching style of leadership were given a balanced combination. Vision was nothing but a radical change from the metric system to weight system. It was a new vision for checking illicit trade in sales of river bed material. Forest staff and other stake holders were inspired, in order to get their contribution towards a shared dream of checking of illicit trade and increasing the government revenue. Everyone was properly explained about the advantages and compulsions the changes required in the existing system and few stake holders (especially weigh bridge association) happily started moving with the new vision. That was the time when situational leadership came to force and a shift was made towards coaching or selling style of leadership. The result of these traits surfaced in the very first year of its implementation i.e. in the year 2006-2007, when additional revenue of over Rupees 20 million was generated from a single river of Uttarakhand i.e. from river Gola, in district Nainital. As on date this system is being implemented in all the rivers of Uttarakhand and as per the recent order’s of Ministry of Environment and Forests, major part of the revenue generated from the extraction of River Bed Material from the rivers of Uttarakhand will to be ploughed back for the conservation of biodiversity of the neighboring forest. Finally as rightly said by Beng-Chong *et al.*,

(2004), “transformational leadership is positively related to extroversion and negatively related to agreeableness and neuroticism”, a forest officer has to show lot many successful transformations in performing his duties as a conservator of nature which inadvertently leads him more towards leadership traits as compared to the managerial skills.

References

- Beng-Chong, L., and Ployhart, R. E. 2004. Transformational Leadership: Relations to the Five-Factor Model and Team Performance in Typical and Maximum Contexts. *Journal Of Applied Psychology*, 89(4), 610-621. doi:10.1037/0021-9010.89.4.610
- Bono, J. E., and Judge, T. A. 2003. Self-concordance at work: toward understanding the motivational effects of transformational leaders. *Academy Of Management Journal*, 46(5), 554-571. doi:10.2307/30040649
- Brodbeck, F. C., Frese, M. and Javidan, M. (2002). Leadership made in Germany: Low on compassion, high on performance. *Academy Of Management Executive*, 16(1), 16-29. doi:10.5465/AME.2002.6640111
- Brummans, B. H. J., Hwang, J. M. and Cheong, P. H. 2013. Mindful authoring through invocation: Leaders' constitution of a spiritual organization. *Management Communication Quarterly*, 27(3), 346-372. Retrieved from www.scopus.com
- Caldwell, C., Bischoff, S. J. and Karri, R. 2002. The Four Umpires: A Paradigm for Ethical Leadership. *Journal Of Business Ethics*, 36(1/2), 153-163.
- Caldwell, C., Hayes, L., Bernal, P. and Karri, R. 2008. Ethical Stewardship – Implications for Leadership and Trust. *Journal Of Business Ethics*, 78(1/2), 153-164. doi:10.1007/s10551-006-9320-1
- Chevrier, S. and Viegas-Pires, M. 2013. Delegating effectively across cultures. *Journal of World Business*, 48(3), 431-439. Retrieved from www.scopus.com
- Hackman, J., and Wageman, R. 2005. A THEORY OF TEAM COACHING. *Academy Of Management Review*, 30(2), 269-287. doi:10.5465/AMR.2005.16387885
- Hernandez, M. 2008. Promoting Stewardship Behavior in Organizations: A Leadership Model. *Journal Of Business Ethics*, 80(1), 121-128. doi:10.1007/s10551-007-9440-2
- Howell, J. M., & Shamir, B. 2005. The role of followers in the charismatic leadership process: relationships and their consequences. *Academy Of Management Review*, 30(1), 96-112. doi:10.5465/AMR.2005.15281435
- Huy, Q. 2002. Emotional Balancing of Organizational Continuity and Radical Change: The Contribution of Middle Managers. *Administrative Science Quarterly*, 47(1), 31-69.
- Karakas, F. 2010. Exploring Value Compasses of Leaders in Organizations: Introducing Nine Spiritual Anchors. *Journal Of Business Ethics*, 9373-92. doi:10.1007/s10551-010-0627-6
- Nalbandian, J., O'Neill, R., Michael Wilkes, J., & Kaufman, A. 2013. Contemporary challenges in local government: Evolving roles and responsibilities, structures, and processes. *Public Administration Review*, 73(4), 567-574. Retrieved from www.scopus.com
- Pina e Cunha, M., Kamoche, K., & Campos e Cunha, R. 2003. Organizational Improvisation and Leadership. *International Studies Of Management & Organization*, 33(1), 34-57.
- Schaubroeck, J. M., Hannah, S. T., Avolio, B. J., Kozlowski, S. W., Lord, R. G., Treviño, K., and Peng, A. C. 2012. Embedding ethical leadership within and across organization levels. *Academy Of Management Journal*, 55(5), 1053-1078. doi:10.5465/amj.2011.0064
- Spangenberg, H. H. and Theron, C. C. 2005. Promoting ethical follower behaviour through leadership of ethics: The development of the ethical leadership inventory (ELI). *South African Journal Of Business Management*, 36(2), 1-18
- Supovitz, J. A. and Tognatta, N. 2013. The impact of distributed leadership on collaborative team decision making. *Leadership and Policy in Schools*, 12(2), 101-121. Retrieved from www.scopus.com
- Tser-Yieth, C., Shih-Nan, H. and York, L. 2009. Employee Trust, Commitment and Satisfaction as Moderators of the Effects of Idealized and Consideration Leadership on Voluntary Performance: A Structural Equation Investigation. *International Journal Of Management*, 26(1), 127-141.
- http://en.wikipedia.org/wiki/Megadiverse_countries
- <http://data.gov.in/dataset/total-forest-cover-india>
- http://www.nationmaster.com/graph/env_for_are_sq_km_per_capita-area-sq-km-per-capita
- http://en.wikipedia.org/wiki/Deforestation_by_region
- http://articles.economictimes.indiatimes.com/2012-04-05/news/31294305_1_forest-survey-sq-km-timber-plantations
- <http://forest.and.nic.in/fca1980.pdf>
- http://articles.economictimes.indiatimes.com/2012-12-21/news/35953333_1_forest-dwellers-forest-rights-act-vedanta-case

Leadership in biodiversity conservation

<http://www.kotterinternational.com/our-principles/change-leadership>

http://www.12manage.com/methods_blancharde_situational_leadership.html

<http://www.nwlink.com/~donclark/leader/leadchr.html>

http://www.ilj.org/publications/docs/Facilitation_Skills_Developing_Facilitative_Leadership.pdf

<http://www.au.af.mil/au/awc/awcgate/sba/traits.htm>

All websites were available on 19.11.14.

http://www.12manage.com/methods_goleman_leadership_styles.html