# NEW FRONTIERS OF MILITARY LEADERSHIP: ENVIRONMENTAL FORAYS

**MANOJ KUMAR**

Traditionally, the role of the military has been envisaged to safeguard the country's borders—air, land and sea. It is rarely, if at all, that the common populace gets to see the social face of the military monolith of their country. This takes place when there is a natural calamity and the governments—provincial or federal—are overwhelmed. The military then interacts with its civil counterparts and reaps lavish praise for securing the affected population from the elements. As nature turns benign again, the military retracts till the time such an eventuality recurs. This 'on and off' facet of military-social interactions is being seen with growing regularity as sudden climatic events are visiting us with increasing frequency. Rarely do these instances of demonstrated military professionalism, discipline and leadership get etched in the memory of the country's inhabitants. As nature's fury abates, the people's memory also fades. Thus, an important facet of the military's social leadership never emerges from the shadows.

The senior echelons of the Indian Army take pride, and justly so, in protecting the endangered ecology of many difficult terrains by

Group Captain **Manoj Kumar** is a Senior Fellow at the Centre for Air Power Studies, New Delhi.

the use of their Eco Territorial Army Battalions[1]. Planting of trees and thereafter maintaining them is a noble and traditional way of protecting the environment. However, there are many arguments for and against involving the military's decision-making body in this pursuit as it is not their primary objective. Planting trees also does not have an effect on the pursuit of any military objective. This evident lack of clarity and focus on the matter has put a stop in expanding the scope of the process to the other two Services i.e. the Indian Air Force (IAF) and Indian Navy (IN). Therefore, such forays by the Indian Army have not mirrored their leadership role in the social sector of environment protection, to be emulated by the other two Services. The questions that arise from the observations mentioned above are:

- How does one define leadership in the social domain within the military? What are the various components of this form of leadership that the military can demonstrate? What purpose would such demonstration serve for the military?
- Is there a need for the leadership in the Indian military to be seized of the matters of the environment and should they even consider these issues in their decision-making calculus?
- The pertinent question is whether environmental leadership in the military is any different from similar abilities of other organisations?
- What actions on the part of the Indian military could be considered a demonstration of its leadership in the protection of the environment?

This paper on environmental leadership focusses on the Indian Air Force (IAF) and it would attempt to answer the core issues related to the first three questions posed above. Further, an attempt would be made to answer the last and the most difficult question posed, on how this leadership process can be carried forward by actual implementation that would help the IAF to convert environmental forays into an opportunity to become more resource efficient.

1. For more information on the subject, readers may refer to Col P.K. Gautam (Retd) *Environmental Security: New Challenges and Role of Military* (New Delhi: Shipra Publications, 2010).

## TRADITIONAL VERSUS ENVIRONMENTAL LEADERSHIP

There are many definitions of leadership by experts, with striking similarities. Some traits of leaders like drive, desire to lead, integrity, self-confidence, intelligence, and domain knowledge have been considered important enough to merit almost a ubiquitous mention wherever elements of leadership are discussed. Similarly, a few experts have focussed entirely on the inter-personal-relations or team-building abilities of a leader. They define leadership as an ability to influence the inter-personal relationships towards achievement of pre-defined objectives or goals. The question then arises as to why should a separate entity of environmental leadership be carved out? It is natural to question whether environmental leadership is a broader concept and not contained within the well defined allegory of leadership.

A contemporary environment leader does not necessarily fit the bill of traditional leaders like Mahatma Gandhi, Churchill, Mandela and many other greats of yore. These great leaders had the ability to carry the nation with them (and probably most of the globe), but not many environmental leaders can hope to achieve such heights of followers, considering the fractured state of the debate. In most cases, our knowledge of the environment is littered with contradictions and facts are difficult to master. The cause and effect paradigms do not always seem to converge. It would seem that in such a scenario, it would be highly improbable to locate a person with domain knowledge of the environment along with the ability to 'motivate the inter-personal relationships'. This is where an environmental leader is different from a traditional leader. An environmental leader is more of an epitome of personal drives, who works in the area of unknowns. As in an ecosystem, the boundaries are permeable, with matter and energy changing forms, an environment leader learns to work not only within but also outside the boundaries of the defined systems and paradigms, his/her own or those of society. The boundaries that are imposed by history, geographical features, human institutions and jurisdiction, probably present the biggest challenge to a leader working towards improving the environment. To overcome this challenge, a traditional leader would work

**Working across boundaries rather than redefining them is an essential attribute to be possessed by an environmental leader.**

towards redefining these boundaries in line with the aspirations of his/ her followers and their own beliefs; however, this approach may be redundant in matters of the environment. A classic example in this case is that of management of Ozone Depleting Substances (ODS) under the Montreal Protocol. The ODS banned under the protocol are being phased out and are required to be replaced by chemicals with a lower Ozone Depleting Potential (ODP). While moving to redefine this boundary, it was realised that the envisaged replacements of a few of these chemicals themselves have a very significant global warming potential, as the replacements, that is HFCs for CFCs/HCFCs are capable of causing great harm to the environment due to their greenhouse effect. Thus, redefining boundaries is not always a suitable approach in environmental matters. Working across boundaries rather than redefining them is an essential attribute to be possessed by an environmental leader.

It must have been noted by now that one of the distinguishing facets of an environmental leader would be that it is an acquired mindset and ability. However, its prerequisite would be the possession of a vision as well as the ability to go beyond a value system. A major challenge that is normally faced by leaders is that of *uncertainty*. In environmental issues, this is paramount in its manifestation. Not only the future but even the history of environment change is being constantly debated and is still rather uncertain. When faced with such an opaque scenario, a cynical attitude would normally appear in weaker personalities. A leader has to dispel this thought process, first in himself and then propagate it in the followers and even in the naysayers.

The complexity of our ecosystem, coupled with the fact that the elements remain an enigma for even the greatest brains of our times, poses another challenge to the leaders. With limited know-how at one's disposal, it is an onerous task to be able to convince and lead the masses towards a safer habitat. The belief in the simplicity of actions that transcend science and

are observed in the region of common sense, is of utmost importance. The adage that 'you can't manage what you don't understand' is a thing of the past for an environmental leader. Managing change, much more than what the corporate 'change management' has taught, is an imperative for an environmental leader. The incredulity of the words, 'what you don't understand, you can't be doing,' is lost on such a leader. Working with a convergence of uncertainty, changes, boundaryless systems and an urgent need for actions, can only be observed in an environmental leader.

**Environmental leaders are those who can define environmental problems by rising above their own value system and, in the face of an uncertain, seamless environmental complexity, are able to carry hard decisions to their logical conclusions, with willing actions from their followers.**

After explaining various attributes that go into the making of an environmental leader, a definition may be attempted. **Environmental leaders are those who can define environmental problems by rising above their own value system and, in the face of an uncertain, seamless environmental complexity, are able to carry hard decisions to their logical conclusions, with willing actions from their followers.** It is worth mentioning here that an environmental leader has to possess the ability to be able to rise above his/ her beliefs and think of the global commons. It is a very intrinsic process, fairly ordinary and simple for the human psyche, and as an oxymoron, thereby, not easily achievable. This would be explained in little more detail and with specific examples when the issues of military leadership in environmental matters are discussed.

## ENVIRONMENTAL ISSUES: INVOLVEMENT OF THE MILITARY

Before we discuss the environmental leadership issues that the military may need to imbibe, it would be prudent to consider the drivers for the military to make forays in this, primarily, the social domain. Protection of the environment has long been seen as a subject that merits attention by the social leadership. The Indian military establishment has remained

aloof, almost a bystander, to the 'mitigation and adaptation' debate ranging around them. It has always been felt that regulations and policies on the environment are concerned with the ways of life that touch such social issues as pollution, forestry, land use, and energy conservation, etc. The security implications of environment change and, more importantly, the contribution of the military during their peace-time role towards jeopardising the environment, have not been visualised[2]. The military has many serious issues of national security to ponder upon and an issue of social security such as environment protection obviously does not really count as a priority for them. These impediments to adopting environmental leadership would be considered later in the paper. However, it would be sensible to add here that this is not because of any adverse intentions on their part but due to the gap that exists in understanding the larger consequences of adopting environmentally sound processes in military operations.

**Environmentally sound processes imply those procedures and systems that would be resource-efficient, thereby, cost-effective and overall easier to manage and control**. These applications have a very large canvas. From a mundane activity such as waste disposal in a military installation to operational scenarios demanding optimum utilisation of fossil fuel and armaments, figuratively speaking, the field of vision is, therefore, 360 degrees. Some of these optimum procedures would have been implemented by the military organisations on their own, considering their efficacy. However, defining their environmentally sound implications would impress upon the military hierarchy that their implementation is essential from more angles than one. It is a win-win situation if their implementation actually results in an operationally stronger military organisation. This is the intention in defining these processes and describing how they can be made more resource efficient.

Military leadership would be truly demonstrated if they were to achieve not only the 'low hanging fruits' but also consider activities that demand bold and 'out of the box' actions. If a military commander is to carry out an energy efficiency and conservation study in his/her installation in India, he would

2. For more information on the subject, readers may refer to *Environment Change and National Security* by the author (New Delhi: KW Publishers, 2011).

most likely face the derision of his subordinates and superiors alike. However, if by implementing the recommendations of the same study, it is demonstrated that the formation had been able to cut its reaction time for deployment and also achieve cost cuts, the commander is likely to be lauded for the effort. This is not a trodden road for the Indian military but one which would have to be traversed often, considering the needs of the present times.

As already mentioned, the canvas of the correctly managed, environmentally sound procedures is very large. Therefore, a representative sample of the subjects that may be considered for immediate action, is mentioned below:

- Resources Management: Armament Inventory.
- Dependence on Sensitive Material like ODS.
- Energy Conservation and Efficiency.
- Waste Management.
- Environmental Training in the IAF.

} In a typical IAF formation

**ENVIRONMENTAL LEADERSHIP IN THE MILITARY**

After having defined the requirements for environmental leadership, it is appropriate **to define the necessity to introduce such leadership at the desired levels of the military hierarchy**. Militaries in most of the developing countries are not yet actively taking adequate steps to address environment change. The social tag attached to the subject has proved to be a hindrance for it to be considered by the military hierarchy. Since its correlation with military matters has not been studied, it has not been emphasised upon sufficiently. The developed countries, on the other hand, have been actively focussing on the subject of carbon mitigation for quite some time. It started due to their respective governments' regulations requiring their departments to be compliant of energy and resource efficiency initiatives. Once the processes got optimised in line with the government's regulations, it was soon realised that the operational efficiency was a welcome by-product of such endeavours. With this realisation, a serious investigation of these issues was started by the top echelons of these militaries. Consider the policy issued on the subject by the US Army given below:

**Box 1**[3]

**The Army Strategy for the Environment**

*"Sustain the Mission – Secure the Future"*

The United States Army has long recognized that our mission is only accomplished because America entrusts us with its most precious resources – its sons and daughters. It is our obligation to ensure that our soldiers today – and the soldiers of the future – have the land, water, and air resources they need to train; a healthy environment in which to live; and the support of local communities and the American people.

The new Army Strategy for the Environment: Sustain the Mission – Secure the Future establishes a long-range vision that enables the Army to meet its mission today and into the future. Sustainability is the foundation for this strategy and a paradigm that focuses our thinking to address both present and future needs while strengthening community partnerships that improve our ability to organize, equip, train, and deploy our soldiers as part of the joint force.

Sustainability connects our activities today to those of tomorrow with sound business and environmental practices. We have learned over the past decades that simply complying with environmental regulations will not ensure that we will be able to sustain our mission. We must strive to become systems thinkers if we are to benefit from the interrelationships of the triple bottom line of sustainability: mission, environment, and community. To sustain the future Army, we must implement effective policies and practices that safeguard the environment and our quality of life in a manner that our nation expects of us.

The Army Strategy for the Environment does not pretend to dictate all the answers. It is only the starting point that commits Army leaders at all levels to certain goals and challenges them to develop innovative methods to achieve these goals. Achieving the vision outlined in this strategy will require a deep and personal commitment from every member of the Army team – every leader, every soldier, every civilian, and every family member. For the Army to be successful on its quest toward sustainability, we must all do our part to Sustain the Mission, Secure the Future!

| -sd- | -sd- |
|---|---|
| Peter J. Schoomaker | R.L. Brownlee |
| General, United States Army | Acting Secretary of the Army |
| Chief of Staff | |

3. This policy statement has been reproduced from the site www.sustainability.army.mil/overview/ArmyEnvStrategy.pdf, accessed on December 7, 2010.

It is clear from the policy statement mentioned here that the US Army is actively taking into account mission accomplishment on the same page as environment protection. This throws open a new vista in perspective planning that is done by the Service Headquarters (HQ) in India. The focus on the community-military partnership, the individual soldier, and, most importantly, the need to sustain future missions by following environmentally apt practices, does require a deep understanding of the interactions of the environment with the military's working. The sustainability approach needs to be followed for 'military' reasons as different from purely social ones. This is the crux of environmental leadership in the military. Broadly, the objectives and benefits of demonstrating environmental leadership in the military are given below.

***Strengthen Operational Efficiency***

Following sustainable practices is bound to result in reduced dependence on fossil fuels, scarce resources, and energy. This has a cascading effect upon reducing the military's logistics tail during operations and training and on the cost of missions. With the reduced costs, the military would have more resources in their hands to deploy in priority areas of enhanced training levels and quality of life. Reduced logistics signature is also an operationally desirable feature of any military mission. This does not expose their vulnerabilities and is, thus, a much sought-after attribute by the military planners. To be able to deploy/move fast with the least encumbrances and with less worries related to availability of energy are achievable elements of sustainable mission planning.

***Innovative Process***

To reduce dependence on energy and resources, innovation in thinking and technology is essential. Militaries are normally committed to technological innovations as that gives them an edge over their potential adversaries. However, extending this commitment to innovative resource planning is a requirement of environmental leadership. Ensuring introduction of energy efficient processes, renewable sources of energy, and energy and resource

**A military that adopts sustainability in its ethos would have a strategic advantage as it would be able to adapt to changes much faster than the one that doesn't.**

conservation (as different from pure efficiency measures) methods would reduce costs while protecting human life and the environment. It would call for consulting professionals who have domain know-how, and also the relevant sectors of both government and private enterprises. This would result in commensurate benefits in expanding the scientific and technological base that would ensure buffering the military organisation from fast paced changes in these fields and allow it to remain potent and ahead. As an example, for captive power sources for communication equipment of the military, a change from diesel-based power generation to renewable energy sources may result in savings and operational benefits that are being mentioned here. Such opportunities exist in many facets of military operations; the requirement is to invest in commitment to innovative thinking. This is possible only if the military leadership is convinced of the process and its benefits. Showcasing environmental leadership is of the essence here.

*Enhance Quality of Life*

A safe and healthy environment is a sure recipe for a good quality of life, one that all of us aspire for. Military formations are inextricably connected to the local community that in a way sustains it. Whether deployed in a remote location or operating from a peace location, an Air Force formation undertakes operations that have an impact on the local community. From disposal of used Fuel, Oil and Lubricants (FOL) to lead contamination of ground water from the small arms firing ranges, all such activities would harm the health of not only the soldiers but also their families and the supporting local community. Environmental leadership within the military would enhance the knowledge of such actions, leading to empathy and, thus, support for innovative ideas on recycling and waste disposal. The close and collaborative nature of relations between the local community and military formation becomes a potential game-changer at the time of actual

operations. India learnt this well during the wars (including that of Kargil) that it had to fight. Since the military is already a source of leadership and inspiration for the masses, it is important that they treat this feature of community interaction with the necessary impetus that it deserves.

***Sustainability Ethos***

A military that adopts sustainability in its ethos would have a strategic advantage as it would be able to adapt to changes much faster than the one that doesn't. This advantage would be derived from the conditioning of its personnel in adopting a parsimonious approach towards utilisation of resources. Such a military organisation would also earn the respect of the nation and international acclaim. To inculcate this sustainability ethos, it would be essential for the leadership to introduce the relevance of safeguarding the planet and their nation—in that order—to their personnel.

It is essential to develop the sustainability ethos within the military as more and more conflicts in this world would take place due to dearth of resources. If the military organisations are going to further add to these scarcities, then the country would be caught in a downward spiral even as it tries to meet all the possible requirements of its military that are as it is considered sacrosanct in most countries. The important aspect to watch out for in the process of optimisation is that at no stage should the operational readiness of the military get adversely affected. Building efficiency through environmental audits and ingraining of a sustainability ethos is a possible way out. If the military can do more training at lower costs, it would benefit, as also the country.

***Minimise Total and Life-Cycle Costs (LCCs)***

Although this requirement of low cost inputs is an important part of environmental leadership and sustainability ethos, it is being mentioned separately, primarily to provide additional focus to the issue. Costs that are obvious are the ones that easily attract attention. For example, consider a hypothetical case wherein the cost of FOL at one of the border bases of

the Indian Air Force would be almost the same as in a peace location in another state, barring a little variation in taxes, etc. However, this would not take into account the costs involved—in monetary and environmental terms—for transporting the stores by the IAF aircraft/vehicles to the point of dispersion. This is also known as the fully burdened cost of FOL. The environmental costs would further get exacerbated if one takes into consideration the fact that owing to the remote location of this base, it may not have a proper disposal system for the used FOL, leading to unsafe disposal and thereby causing contamination of the ground water.

In the same context, the life-cycle costs of any military hardware may be much more than the capital cost of its procurement. The costs involved in carrying out preventive maintenance add to the total cost of operations of a military hardware. These costs include ease of maintenance, its frequency, parts change, transportation of these parts to and from the repair agency, their repair/maintenance, additional hardware or float needed to ensure that the numbers available do not deplete below a certain limit (lest it affects national security) and deployment of additional personnel to take care of these processes. Most of these costs are hidden and not accounted for when one calculates resource efficiency. This may induce a false sense of complacency due to inaccurate costing analysis and, thus, present an inaccurate picture.

## MILITARY'S ENVIRONMENTAL STRATEGY

This debate now enters a crucial phase and brings us to the question of **how to define the strategy on environmental leadership that has to be adopted by the military?** Although the question may seem complex, the solution is simple as is the case with most of nature's creations. **The environmental strategy of the military can be defined as the optimisation of processes that are capable of ushering in the future at less comprehensive costs (environmental and life-cycle), combined with higher operational capability.** The words that need to be tagged here are 'processes', 'costs' and 'present-future' juxtaposition.

Processes that would have an impact on environmental costs and the operational capability of the military organisation would differ as per the

operating conditions. Certainly, the training methodology, maintenance procedures, inventory planning and management, and estate management are a few of the subjects that have an impact on operational readiness as well as environmental signatures of the organisation. Their optimisation can be achieved if one considers—and is willing to decrease—the cost of operations. In the US, pushed by federal legislative mandates and by the need to save money on energy costs, the US Navy reduced its overall traditional energy consumption level by 12 percent in 2008 with projects centred around wind energy generation, solar photovoltaic systems, geothermal systems, and ocean thermal energy conversion.[4] Since the legislations demanded and the need of the hour (due to economic downturn) was such that these processes had to be introduced in the developed countries, the Indian military now needs to demonstrate a proactive strategy and be a role model for other similarly placed governmental and non-governmental organisations, in the national and international arenas.

Inventory mapping of the processes is normally the first step towards their optimisation. The US military spent $20 billion in 2008, consuming 4 billion gallons of jet fuel, 220 million gallons of diesel and 73 million gallons of gasoline.[5] Till such figures are compiled and compared on an year-on-year basis, a need would not be felt to engage in the optimisation process. The leadership would be seized of the matter only once the potential for making wholesome changes is seen. An environmental leader creates the opportunity by visualising these avenues. Any reduction in energy inputs, either by conservation or conversion to renewable sources has a cascading effect on reducing the dependence on a particular source—leading to energy security. This, in turn, allows for greater operational flexibility, reduced reaction time—a necessity for any military, and energy security. This becomes more and more important for operations in remote areas. Consider the following news article of a solar powered railway station published in *The Times of India*, New Delhi edition, on January 27, 2010.

4. http://www.environmentalleader.com/2009/04/28/military-adopts-green-technologies/, accessed on January 26, 2011.
5. Ibid.

**Box 2**

**India Gets 1st Green Railway Station**

New Delhi: Railways has inaugurated India's first green station at Manwal on the Jammu-Udhampur rail route.

With the tiny station facing frequent power cuts, it has been provided supply of solar power. "A request was made to J&K SEB for providing reliable electric power supply to this station...it was planned to generate onsite renewable energy through solar panels," said A.S. Negi, spokesperson, Northern Railway.

Sources said that now station lighting and fans are working on solar power. The state electric supply is a standby source, which can be used in case of any failure of the solar system. Electric load of S&T installations and one water cooler is on the state electric supply. Additional solar panels for increasing backup for power supply and standalone lights for complete platform lighting are planned to be provided for further improvement in the system after the trials are successful.

To reduce the existing load at the small station, some surplus fittings have been removed and energy efficient T-5 fittings, 60W fans, new exhaust fans (55 Watt) and CFLs have been installed. ''We have used 28 solar panels (each 12V, 70W) that have been used in two groups of 14 panels each," said Negi.

"Station building load has been segregated in two portions. Each portion is being fed by one group of solar panels. The complete work has been done departmentally by arranging solar panels from Kapurthala rail coach factory and solar charge controllers have been purchased from the market. All wiring, installation, commissioning has been done departmentally, without any outside assistance," he said.

These measures of opting for renewable sources of energy, as explained above, can be easily replicated in the Indian military considering that they too operate in remote locations and face a similar dearth of energy, which most Indians have got used to. It is purely a matter of considering the alternative processes that are available to the leadership and then opting for one that (a) has the least environmental signature; (b) is easily adaptable; and; (c) is operationally suitable. The decision-making matrix of the military for optimising a process may be suitably modified to **focus on all the three mentioned variables**.

The juxtaposition of the present and future is very important in the making of an environmental leader. Presently, the environmental debate is

fractured and the future is uncertain, to say the least. In such a scenario, it is only the bold within the military who will consider decision-making with environmental implications, as a variable. The pragmatic approach would be to wait out the current controversy raging on the science of climate change and whether anthropogenic interventions have caused this state of affairs or not. But pragmatism in this case may be mirroring cynicism. Later may be too late. The timeframes of decisions may be allowed to be long when it is certain that the consequences of environment change may not be felt by us immediately. However, when sudden climatic events are affecting us with increasing and unpredictable regularity, it would be strategically important for a military leader to take these into account while planning operations. Another example of such prudence would be to consider the efforts that militaries all over the world (including India) have to launch whenever a natural calamity strikes. To cater to such eventualities, both in terms of training and material, would be a leadership decision even though such requirements may not be directly imposed upon the military by the civil administration as a routine.

**The need to demonstrate environmental concerns in the military flows from their proclivity to showcase the institution of the military as an outstanding example of excellence in all walks of life.**

Over and above the strategy and benefits of environmental leadership mentioned here, the need to demonstrate environmental concerns in the military flows from their proclivity to showcase the institution of the military as an outstanding example of excellence in all walks of life. The citizen of the nation expects and would emulate this 'lead from the front' ethos of the military in this crucial facet of social entity. When the Indian government has designed the National Action Plan on Climate Change (NAPCC)[6] to prepare the country for meeting its commitments in reducing greenhouse gas emissions, it would be a leadership decision on the part of the Indian military establishment to come forward with their own plan, within the

6. http://pmindia.nic.in/climate_change.htm, accessed on February 2, 2011.

ambit of the NAPCC, for their organisation, thus, helping the country meet this commitment. The state governments in India have formulated and implemented their own action plans on climate change. Although these policies are applicable to military installations in that state also, they are not required to provide a feedback on the implementation generally owing to the unique position that the military occupies in India.[7] This by no means absolves them from the responsibility of acting on the desired actions. It may prove to be a case of moral high ground for them to be proactive and act on these action plans even when they are not specifically called to do so. Only by demonstrating this kind of leadership can the military win the confidence and awe of the nation. Most of these plans have been so astutely designed that they are easily actionable and make economic sense too.

**IMPEDIMENTS TO ENVIRONMENTAL LEADERSHIP IN THE MILITARY**

It may be a little difficult to understand that there may be impediments to the formulation and implementation of environmental policies in the Indian military, since it makes eminent sense, operationally, economically and socially, to do so. Why has this not gained acceptance in a big way, similar to the militaries of the developed nations? To answer this, it is important to understand the contemporary leadership value system and priorities that are followed in most of the military establishments around the globe and India is no exception.

The Indian military, as also the nation, is passing through a transition phase wherein it is modernising and formulating a strategy commensurate to the major active role that the country is set to portray in the global affairs. The pace at which the transformation is taking place in the country's stature requires the military leadership to think $360^0$, even while observing and imbibing the model followed by other similarly placed military institutions. It has to charter a path with its own value system. Considering the geographical location of the country and its history, it is not surprising that uni-focus thinking on attaining military balance or superiority against its adversary

7. Readers may study the Delhi State Action Plan on Climate Change at http://moef.nic.in/downloads/public-information/Press_Delhi_NAP.pdf, accessed on February 3, 2011.

is of utmost importance. This superiority is achieved primarily by means of numerical and technological dominance. The Indian military establishment is wholly involved in building, modernising and training for achieving these two objectives. It is still on the upward slope of the growth graph and is focussed primarily on improving war-fighting abilities.

**The policies on environmental management in different countries or communities are based on local interpretations of politics, economics, science, and culture, etc. This knowledge system is still evolving.**

It has already been discussed earlier that the military establishments of the developed nations (like the US and UK, etc) have now shifted their focus equally to their environmental responsibility. Their objective is not only to ensure an operationally efficient establishment but the path being chartered takes into account the changed realities of modern economics. They are open to deliberation of their actions having an impact on the environment. They now go past their personal value system to observe the opportunity presented by following low energy intensity as well as a resource efficient and socially responsible path. Since 'environmental value' is comparatively a modern construct, the complexities associated with it have been appreciated early on by the countries that had a robust investment in scientific research. This is the underlying reason for the headstart that the developed countries have in the matter.

The policies on environmental management in different countries or communities are based on local interpretations of politics, economics, science, and culture, etc. This knowledge system is still evolving and is at different stages in different countries. These complexities make it difficult for the military leadership in emerging power centres of the world to accept this as an important paradigm. For them, the orthodox martial outlook is the only necessity. For the sake of a better definition, this may be called a 'traditionalist approach' towards the fast evolving discourse of environment management within the military. It should not be construed that this approach is wrong; rather, it may be a necessity considering the state of affairs in many countries. The present day asymmetry and complexities force the militaries to follow

the rationalist approach to security. However, it is the belief of the author that the Indian military establishment, being one of the largest in the world, is rightly poised to show leadership on this front now. The business case made out previously in this paper makes this vital for the Indian military establishment. The need is to rise above a set value system that has been handed down from one bureaucratic/ military hierarchy to another, keeping the benefits of environmental leadership in abeyance.

It is not an easy task to plan for unknown timeframes as is the case in environmental matters. A logical military approach would normally not work when we are dealing with matters where the enemy is not known and even the attack timelines and place are uncertain. Then it is easy to postpone a decision till clarity is built. The only argument against environmental forays, albeit weak, is that building process efficiency and thereby reducing costs does not need another strong driver for change. A military that has understood the concept of a lean and mean approach to operational readiness would embrace it openly. By going ahead on this path, a private enterprise might improve its balance sheet and since its prime responsibility is to its shareholders, it would earn kudos for the leadership demonstrated. A military organisation, on the other hand, does not have a profit motive. Therefore, if they adopt this leadership model, it would be akin to a private concern going beyond the regulatory requirements of following environmental bylaws. Why this happens, comprises a separate study in itself.[8] This would normally happen either due to the top management's commitment or leadership on the subject or in a situation where the "policy-supporters" manage to convince the "non-believer" constituents of the long-term benefits and, thus, manage to tilt the leadership towards the subject. It is the advocacy of the problem and solution—the quantum of change being a large factor, which ordinarily convinces the leadership to accept or reject the proposal for an activity that is not immediately required to be acted upon.

It must be clear by now that overcoming the impediments to showcase environmental leadership in the military is a task which would have to

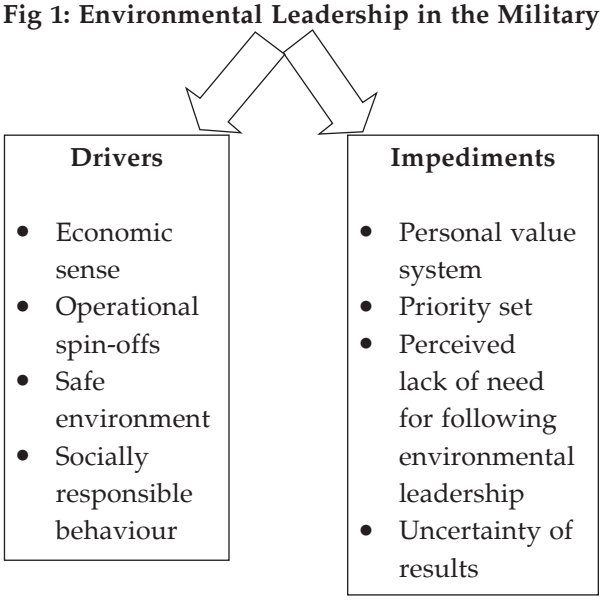
8. Readers may refer to Aseem Prakash "Why do Firms Adopt 'Beyond-Compliance' Environmental Policies?" in Neil Gunningham, ed., *Corporate Environmental Responsibility* (USA and England: Ashgate Publishing Limited, 2009), pp. 297-310.

be driven by extrinsic variables as the uncertainties involved are too large for adoption by a hierarchy that has been largely inured to the traditional model of growth. The role model militaries (read those of the developed countries) are still studying further avenues to incorporate environmental forays. They have started realising the comprehensive benefits that this approach has accrued to them only now. Therefore, it would be worthwhile, as it is not too late, for the Indian military establishment to start thinking of formulating their own strategies of environmental leadership.

**COMPARATIVE ANALYSIS…**

A closer look at the advocacy of environmental leadership in the Indian military would suggest subtle drivers and impediments. While the drivers are both extrinsic and intrinsic, the impediments are purely intrinsic. It is the self-driven organisational belief and value system that has not yet ensured development of this format of leadership. The following diagram would bring this argument in perspective (Fig 1).

**Fig 1: Environmental Leadership in the Military**



The order of stating the drivers or the impediments is not necessarily commensurate with the importance attached to each. This order would vary with different individuals or organisations and is dependent upon the value system that they are used to. So there may be a case where the requirement to leave behind a safe environment may be the biggest motivator to adopt environmentally friendly practices. On the other hand, a traditionalist may view the operational spin-off as the main achievement of following this path. In the same way, the impediments take priority, depending upon the individual's intrinsic thought process.

The need for environmental governance in the military cannot be overstated. Suffice to say that the mindset of the higher military echelons to further the cause of environment would now be counted as a strategic decision that would distinguish a modern military from one that is working towards it. The approach for adopting this paradigm would necessarily be innovative and customised for different military organisations. Various factors of input resources, geographical location, technological limitations and, above all, human will, would determine the approach that is finally undertaken whilst adopting an environmentally sound policy. Military leadership is looked up to in almost all countries. By adding another dimension to it, one that has social values and military ethos combined, the image of the military may see a positive transformation. Improving productivity within any business organisation is a priority of the top management, and the military is in the same mould. This could be the first step to strive for by an environmental leader in the military.