# An Overview of Ecological Task Forces (ETF) and Ecological Institutions of the Indian Army

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# Introduction

The Indian Army is probably the only army in the world which has implemented the concept of ecological units of the Territorial Army since the 1980s. These units, called Ecological Task Forces (ETF), are officered by a mix of regular and Territorial Army officers and based on manpower comprising of young ex-servicemen. ETFs are funded by state governments and the Ministry of Environment and Forests. The ETFs, through tree plantation, have performed admirably in recovering from the damage of manmade ecological disasters – such as 'mining' areas in the Mussoorie hills or sand dune stabilisation in the Thar desert of Rajasthan and other places in the Himalayas and the foothills. Over the last decade, the ETFs have planted approximately two crore plants and have reclaimed twenty-five mines.

The credit for the ETF concept goes to Dr Norman Borlaugh, father of the Green Revolution, who in early 1980s suggested the need for a disciplined force to undertake such tasks. Prime Minister Indira Gandhi, on observing ecological degradation in the Himalayas, displayed a rare ecological insight and operationalised the idea by an executive decision to form ETF of the Territorial Army. New-age soldier scholars, including Brigadier Michael Harbottle of the United Kingdom (UK), were inspired by the ETF. Brigadier Harbottle recorded the unique work of the ETF in his path-breaking work, What is Proper Soldiering?2 – which seems to have set-off the trend of employing the armed forces all over the world. They are just not fighting each other, but are being used in disaster relief, ecological restoration and UN peacekeeping missions, which demand deep understanding of ecological links to intra-state wars and ultimate peace. The link of ecological restoration and peace got better recognition when in 2004 Wangari Maathai, Kenya's Assistant Minister of Environment, Natural Resources and Wildlife was awarded the Nobel Peace Prize for planting trees.

#### **ETF in Brief**

There are currently eight ETFs (Refer to Table). An ETF has the headquarter-cum-administrative element and a company under an officer, three Junior Commissioned Officers (JCOs) and about 99 men. The strength of an ETF, consisting of HQ and one company, may be three officers, five JCOs and 139 other ranks, making a total of 147 all ranks – a two-company ETF would be nearly 250 all ranks. Local assistance from the Forest Department is taken in imparting training. One advantage with the massive rural base of our soldiers is that they have a very good working knowledge of agriculture, forestry and tasks close to Mother Nature. But soon this inherent advantage will reduce due to urbanisation.

The initiative to raise an ETF is taken by the state which needs to solve an ecological problem in a timeframe of say three to five years. Generally, the budget is shared by the state government and the Union Ministry of Environment and Forests (MoEF). The ETFs of the Union Territory of Delhi and Himachal Pradesh are fully financed by the state government, whereas the two new raisings in Assam are financed fully by the MoEF. This joint venture of the MoEF, Ministry of Defence and state government concerned undertakes activities such as afforestation, soil and water conservation, pasture development and other restorative works. As a thumb rule, the capability of an ETF is to plant 1.5 lakh saplings a year in 200 acres of land in the hills and 400 acres in the plains. Empirical data show a very high survival rate of the plants (varying from 70 to 87 per cent).3 The rough cost of an ETF embodied for eight months in a year is Rs 1.83 crore for five years.

The ETF is raised and embodied for the task. On completion of the task in three to five years the unit hands over the eco-regenerated area to the state government, after which it may be disbanded. Till date, all the four ETFs raised in the 1980s and 1990s have been redeployed. Uttarakhand has two ETFs of four companies each.



The following requirements have to be met to form an ETF :-

- (a) A problem of environmental degradation demanding military type discipline and dedication. This should be known to the leaders at both the centre and in the state.
- (b) Political will, including allocation of budget.
- (c) Sizeable ex-servicemen population needs to be residing in the region.
- (d) There needs to be a well-oiled civil-military interface for smooth implementation of the scheme.
- (e) Regular officers should be available to be posted by the Military Secretary's Branch of Army Headquarters, failing which TA offices intake can be beefed up as a long-term strategy.

#### **The Armed Forces**

Though non-mandated, all the three Services reflect an ethos of environmental awareness. This at first blush appears strange. The military, after all, is the main instrument of destroying the environment with its military might and firepower. But as the saying goes, soldiers who have seen war are the best ambassadors of peace. Similarly, military life and routine in both field and peace areas stresses the need for environmental awareness and preservation. The high order of natural capital in the military garrisons is witness to this phenomenon. Each unit and station has an arboriculture plan.

The Indian Army has an ecological cell at the Army HQ. It is routine for a formation such as a division to organise events related to ecology and environment.

Because of the nature of military deployment military personnel are posted and deployed in ecologically sensitive and rugged terrain such as deserts, jungles, mountains and island territories. With frequent postings and transfers in their military career, the personnel get to know the biodiversity of the Nation. They also carry with them traditional ecological knowledge and wherever posted apply the best practices like tree plantation and nurturing. This love for nature is also a function of the need for soldiers to have an eye for the ground. They also train for war in jungles, mountains, riverine and desert terrain. Military life thus is a free on-the-job package on ecology.

Great care is exercised in avoiding damage to land during training and manoeuvres. Compensation is paid to locals for any damage done. Most field firing ranges are acquired. Due to urbanisation and the need for land, there has been a steady decrease in notified areas. The military has adjusted to this new challenge by switching over to simulators. However, there is a limit to simulation and imagination when it comes to training in soldierly skills and large-scale exercises. A standing military needs to train. There is thus at places a clash of interest of the damage done due to exercises versus not carrying out any training. It is unlikely that this will ever get resolved.

One also has to be careful in expecting the military to ignore its core competency of soldiering, combat and war fighting. Long periods of peace may induce a misguided opinion to use the military for tasks other than their primary mission. A military is worth having only if it is prepared for war. Any digression will pose serious challenges to national security. What, in fact, the military leadership needs to know is the ecological roots of

conflict and environmental factors as a cause of war. In the nuclear context, Bernard Brodie noted, "Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose." In similar manner, the military needs to be aware of the causes of war and help the Nation take all measures to avoid war due to ecological degradation.

# **Military and Protection of Ozone Layer**

Climate change and ozone depletion are complex challenges which need to be addressed. Montreal Protocol deals with protection of ozone layer. Kyoto Protocol deals with global warming and climate change

### **Inter-Relationship: Montreal Protocol and Kyoto Protocol**

What is important to keep in mind is that halocarbons contribute to ozone depletion and climate change, while HFCs and PFCs contribute only to climate change and are among possible non-ozone depleting alternatives for ozone depleting substances (ODSs). Gases under Montreal Protocol including its amendments and adjustments are ODSs like HCFCs, CFCs and Halons. Man made chemicals which are also green house gases under UN Framework Convention of Climate Change (UNFCC) and its Kyoto Protocol are PFCs and HFCs. Concentration of important halogen containing gases, including CFCs, are now stabilised or decreasing at the Earth's surface as a result of the Montreal Protocol on 'Substances that Deplete the Ozone Layer and Its Amendments'. Concentration of HCFC, production of which is to be phased out by 2030, and of the Kyoto Protocol gases HFC and PFC, are currently increasing.

The advantage with ODS is that it was easy to identify the point sources – in this case the chemical industry. All ODSs like CFCs and halons are man made and their source is easy to monitor.

In true letter and spirit of Montreal Protocol, which deals with protection of ozone layer by eliminating ODS, India has entrusted the banking of Halon (A critical fire fighting gas used in aircraft, ships and tanks) to the military and The Centre for Fire, Explosives and Environment Safety (CFEES) of Defence Research and Development Organisation (DRDO). A joint service committee has been set-up to reduce and finally eliminate use of ODS's in defence applications. For coordinating the effort, Headquarters (HQ) Technical Group, Electronics and Mechanical Engineers (TG EME), New Delhi have been made the nodal agency by Perspective Planning Directorate. A seminar to come to grips with the problem and evolve an action plan was held at TG EME on 29 April 2009. The Vice Chief of the Army Staff was the Chief Guest - which indicates the concern the military has on environmental matters.

#### **Ecological Traditions of the Indian Army**

The military has been performing green tasks as a way of military life. This is not surprising, as we have soldiers mostly with rural /agricultural background with Indian culture of least materialism. Soldiers in any case are frugal, being in harmony with nature, and known to survive in desert at scales just over 5 litres per man per day. They still use animals or man pack in operational areas and thus indirectly save on fossil fuel and carbon emissions. The cantonments, barracks, picquets and posts are having green cover. There are ecological task forces of the Indian Army, probably the only army in the world having troops for ecology, which have greened arid deserts and barren mountains. Non-ETF establishments are also pursuing water harvesting/reuse, green awareness including non use of poly bags (much before it was legislated by some states). Solar energy and other renewable practices have been spread to remote border regions. Visionary leadership raised an Ecological Cell under Quartermaster General Branch in the early 1990s. In 2009, ODSs phase out is now high on the military's agenda. Military minds such as the Engineers are attempting to design energy efficient equipment and getting geared up to face the day when fossil fuels may get exhausted.

# Conclusion

Starting with simple tasks such as tree plantation and ecological restoration of degraded land, the Indian military has been upfront, with its ecological units. The military has immense potential to rise up to the National mission for a Green India. It is also in the lead in protection of ozone layer. The future of ecological restoration by the military is very vast. As an institution, much more needs to be done to further improve on the past achievements and to enhance ecological consciousness. This is one field where Indian military can be a global role model. What is required – is to consolidate and document the good work being done by the Indian Army.

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