

## **THE HEART THAT BEATS FOR YOU, LUB, DUP...LUB, DUP...**

**By  
Mrs. Deepti Mehta**

**The blood pumped by my four chambered heart into the arteries, feeding every single cell of my body, not only has all the essential blood cells floating in the plasma but it also has another vital component.** That component is the staunch "Pro Indian Army feeling." In fact, I feel if I donate blood to a soldier of the enemy country, he'll for sure become an Indian Patriot.

Due to a very heavy concentration of this 'component' in my life supporting fluid (blood), it boils whenever I hear any half baked news against the Indian Army, projected and circulated to create sensation, not realising what a colossal damage such misrepresented information is doing to the image of our Army. Unfortunately, people like to hear and love to believe in such juicy and spicy stories (even if deep down in their minds they know that Army is a much cleaner, suave and sophisticated organisation). So, without taking pains to know the complete and true version of the incident, they become judgemental about the entire organisation of many million men and women. Why so much apathy and insensitivity towards the organisation which ensures a safe haven to all the citizens? How can one forget the role played by this very Army to salvage people in the devastating deluge in Uttrakhand and Himachal Pradesh? (This is just one of the recent incidents, otherwise the list is endless).

Being a thorough bred CK (Cantonment Kid) and now a proud AW (Army Wife), I've seen and known my father, my husband, their brother officers, their men and families from close quarters. The manners, the etiquettes, the growth, the camaraderie, the bonding, the civility, the charm, the selflessness and many more such pluses offered by our Indian Army are matchless and not found as "one package has it all" anywhere else. In a crowd of hundred men, you can easily single out an Army soldier. What makes him so special to stand out? It's his grooming and the personality that cuts a smart figure. It's the thinking that has been drilled into him that he has to be a helpful and worthy soul.

So much so I was smitten by this life that when it came to getting married, I kept my foot down to marry an "Army Officer" only. By God's grace, I got married to an athletic built Gorkha Officer. After marriage I progressed and grew further. I will not deny that there were few awkward moments too in the initial stage like when I was dined in and officially accepted as a part of 11GR family, I was asked to sing a song after which the commanding officer complimented me. Pat came a reply from my side before I could realise, "Thank you uncle". There was another such incident when The Colonel of the Regiment visited the unit. Everybody was sweating to make it an error free and immaculate affair. It was then, to everyone's shock, 'the junior most lady of the battalion' (that's me) walked up confidently to 'the senior most officer of the regiment' and started chatting without any hitch. We discussed various issues/subjects like I would have done with any 'other uncle' before marriage. Another incident which too needs mentioning is The First Dinner Party that we hosted and called over the entire unit (to be precise, all officers and ladies invited themselves over to our place on the occasion of our first marriage anniversary) was a 'super flop show' as far as my culinary skills were concerned. I still pity all the officers and ladies who were my first victims (of course after my beloved

husband). There were many such slip ups in the initial days of this 'fauzi kid turned fauzi Biwi'. Now when I sit down and recall those days, I can't help smiling. However the best part was that there was NO NIT PICKING because of those blunders. Everybody encouraged me and were a part of my growing up. Even my awful cooking was appreciated. Other than the embarrassing memories, there are many more memories of struggle, triumph, intellect and all those put together helped me better myself and learn a lot. Now I am in a stage when my husband is commanding, I am a mother figure for all the unit ladies. Motherly feeling is therefore natural for them. I am protective about my ladies, care for them, love them and guide them whenever need arises. They too reciprocate whole heartedly and genuinely. Not only this, we have few of our families (JCO'S and OR) staying in Lucknow where I was staying in SF and we remained in regular touch with each other telephonically. We often planned get-togethers too and remained connected and could resolve many problems of each other. Where else will one find this kind of bonhomie and familial connections?

Another undeniable fact is that there certainly have been some ugly experiences too but I feel they are negligible and hence need no mentioning. I can categorically say that for every regrettable and diabolical experience, there have been fifty more experiences (data not accurately accurate) which have reinstated my faith in the Army life and people belonging to this organisation.

Army runs in my blood and thus I feel outraged when the image of this envious and disciplined organisation is maligned by media due to inaccessibility of actual facts and figures. Due to scant data available with them, they weave a story around whatever little and insufficient information they have. The final outcome is indeed entertaining but far from reality. There's a crying need to alter and revolutionize people's psyche before they decimate the glory and achievements of our Army due to frivolous, incorrect or cooked up incidents/stories. Some steps that I feel can be taken are:-

That there should be compulsory military training and a compulsion to serve in the Army (conscription) for a particular period by all the citizens of the country. This will surely enhance patriotic feeling, discipline and reduce insensitivity towards this magnificent organisation.

Secondly, the unsung, unmentioned but amazing and astounding stories of valour and victories of our Army can be included in the school curriculum. Let the students of today feel proud of their Army. I heard a soldier's wife ( in a TV program, "We the People"), who lost her husband in Kargil War, that most of the children who were born after the war have absolutely no idea about it, leave aside remembering the sacrifices made by the brave soldiers, how true she was. They learn about American Revolution, American Civil War etc but do not have the slightest clue about their own country and the wars fought by its soldiers.

Thirdly, Army should have its own media channel to project its image and showcase the unparalleled task it is doing, the sacrifices and patriotism of our soldiers and also the truthfulness in the projected intentions (which sometimes become a perplexing maze to the outside world). We can also issue the rebuttals immediately. I do not know whether it is pragmatic or not and the difficulties that can come in the actual implementation and execution of the suggestions given above but if the difficulties are not insurmountable, isn't it worth a try?

I salute our gallant soldiers who guard our borders in the most challenging circumstances and are engaged in a round the clock work environment without any cribs. Kudos to the families who miss this soldier on important occasions and festivals but do not let their morale go down. A big pat on the backs of all the mothers who play dual roles (when their husbands are deployed in the field areas) and fight back their tears in front of the kids and put up a brave front when things do not go right. We (entire clan of the Indian Army) all contribute to our motherland in our individual capacities. We sacrifice our own pleasures and happiness willingly, for the sake of our beloved country.

I want to request the outside world to take time out of their self centered life, give a cool thought and feel...JUST FEEL...for our soldiers from their heart. Treat a soldier with dignity and give him his due share of concern. You complain and make a fuss when it's too hot or too cold, 'he' doesn't think of the climate when his call of duty takes him either to the scorching heat of Desert or to the harsh and hostile terrain of Siachen Glacier where no other sign of life exists. You get irritated when a gazette holiday falls on a Sunday or if you are asked to work overtime, he has no Sundays, no gazette holidays and no fixed working hours (it is a 24x7 job),.....but he doesn't utter a single word. He's physically and mentally trained and is wedded to this kind of working culture. It's easy to criticize and easier even to spread negativity but imagine ONLY ONE DAY in your life without your INDIAN ARMY. A big salute to them from core of my heart for the role they are playing.

# **TECHNOLOGY AND INDIAN ARMY**

**By  
Capt Arun Kumar**

Technology is the need of hour. Our Army, as an organisation has also realized it, although a little late but quite in time. World has need the digital world, where the concepts like 'paperless work culture', 'business on wires', 'virtual presence' and many more have made a firm grip on daily routine works. In this changing scenario Indian Army has also started its efforts to go technical.

The introduction to technical aspects is mostly misunderstood with its sole relation with computers while it is not. It is there with the use of mobiles, use of modern vehs, use of modern wpn and eqpt. Undoubtedly computers have got a major role in this new phase. If we analyse today's life and daily routine of a soldier, he is involved with so many technologies whether knowingly or unknowingly starting from changing the settings of his mobile to operating a wpn simulator, its all a web of modern era technologies.

There were times when a correction or amendment in a draft meant another typing effort by clerk. A meeting with cdrs for a discussion needed a lot of planning and administration arrangements. A letter from a far flung location took weeks to reach the offices at base. The above examples explain the extra usages of resources, but with the help of ideas from digital world things have changed and are still changing.

Our organisation has shown full faith in the new concepts but at the same time the loop holes need to be catered for. The provision of computers, server and LAN equipment, everything shows that the transformation is on its way. But with the infrastructure, here comes a big resp on the shoulders of last man in the chain that how efficiently he will be using it. Because here if it is not being used properly means proper misuse. Technology has got an inherent property and that is speed. Everyone having his hands on it must be aware that it can be a double edged sword at times. Its human tendency to ignore the negative side and always think and expect positive, but one has to be educated enough to realize the impact of a little carelessness.

Interesting things, which make one happy or pleases one's mind enter his mind easily and its true for everyone starting from kindergarten student to a CEO of an MNC. If you tell someone how to transfer songs on Bluetooth or download photos from mobile to computer it will always be an easy job and next time he would not want you to be there. But when it comes to installing a firewall or blocking sharing or providing restricted access, these things generally require repeated lessons. With the entry of gadgets in people's life, the increased affordability, the higher education level and the indispensability of these tools of life in today's world, the role of technology becomes even more important. With new generation of soldiers it has become easier to enable them to operate with these inventions of modern life, however an eye on the execution is must.

Strength of Army is always a relative term, as whom are you comparing with. And when we look around, we find that Armies are moving from battle fields to the labs. If Osama Bin Laden can be killed in Pakistan with assistance by satellites and orders on wireless links from USA then the scene of a war in new age can very well be imagined as robots fighting on ground as per commands from an air conditioned room.

To realize this, we have a long way to go. Use of facilities like radars, computerized robots, UAVs, modern accurate missiles and anti missile sheds have given a completely new face to the world armies. But as an infantryman when we talk about these things our role today is limited to awareness only. We must direct our endeavors to have an Army which will not only give results in field but also on digital screens.

Outside world at times start comparing the technical modernisation of Army with corporate world standards. But there is a thick line between these two, as there it's about a company and the latter about a country. One definitely wants to go ahead and hug the technology but to make it a trustworthy friend one will need some time and some good effort.

This is the need of which is getting fulfilled albeit at a slower pace. But what is more important is the healthy adaptation not the time taken to attain it. We have to keep our eyes and ears open to see and hear outside world but at the same time, keep a tap on own activities and direct it all in the right direction. The day is not far when we will also have a totally tech oriented Army

## **PARENTHOOD: SIMPLY COMPLEX**

**By  
Mrs Deepti Mehta**

“Mom, Dad! Don’t complain about the loud music in my room or it’s ‘hurricane hit’ state. My room is a nagging free zone, so grownups ....Stay Out Of It”

These ‘golden words’ were hand written, beautified in bold colours and stuck firmly on my room door when I was an adolescent. No marks for guessing , they were meant for my ‘Hitler parents’ to convey to them loud and clear that I didn’t like their checking me time and again and also to tell them that I was grown up enough to know what’s right or wrong for me.

Believe it or not, that hand written note of mine survived an entire generation and on her last visit to her maternal grandparents place, my 11 year old daughter excavated ‘it’ from an old trunk. You guessed it right, now ‘it’s’ adorning her ‘room door.’ “Mom, Dad! Don’t complain.....”

It stares at me piercingly and I am forced to pause and ponder. Is this what you call poetic justice?

My parents whom I understand much better (now that I too am a mother of two lovely children) and whom I love dearly with all my heart, were they right in being vigilant at all times on all my activities? Was it right on their part to say a firm ‘No’ to my (UN) just and petulant demands when many of my friends got easy approvals from their respective parents? I feel ‘yes’ because eventually they have given the best possible values to me and my brother. Even if we disapproved of their ways then, now I whole heartedly accept and understand, ‘now that I too am a parent’. The million dollar question however is why don’t we parents understand the point of view of our beloved children? Why do we forget that as children we too had all the pre requisites of being “impossible” and not just “difficult” to our parents? Then why do we fail to comprehend our kids when required or is this a pre requisite for parenthood? When you get married, you enjoy the euphoria of a blissful married life and that teaches you what love are but when you become parents, I feel that’s when you experience the ecstasy of true love.....the love for your children. We always have our darlings on our minds. We plan and re-plan their schedules, diet, school work, home work, apparels, group of friends, play time, sleep time, wake up time or practically everything concerning them . While performing our roles earnestly, we don’t realize our metamorphosis from caring parents to dictator parents, and then comes a day when our children bestow the title of ‘medellers’ upon us as they wear that ‘I know it all’ look. This is followed by a clash between the child in us and the adult in our child. How to diffuse this “war like” situation? Is there truly a need to diffuse the situation or should we let it pass? Such thoughts often kindle my mental software but so far I’ve not been able to find a satisfactory solution. This age old talk about generation gap. Should efforts be made to bridge the gap? If yes, then who’s to initiate? In all honesty I feel we as parents should initiate. How? By being their friends, but does that work? Does that mean they should be allowed to have their ways? Do they have the sense to tell right from wrong? Certainly not and that’s where our role comes into play. It’s our duty to give that sense to our beloved children, even if it’s at the cost of

being unpleasant to them. They may not know now but will surely thank us later when time comes.

What I disliked my parents doing to me when a kid, why do I do the same to my kids? Somewhere deep down my heart, a voice is telling me “this is because you too love your children so dearly and selflessly that you desire nothing but the best for them and you don’t want to leave any stone unturned for them to be successful and happy”. Thank you God for relieving me of the guilt that at times I am ‘unyielding and harsh’ towards my adorable kids..... The only reason is I love them more than my life and thank The Almighty for gifting us such wonderful kids..... Before I forget, I thank my parents from the core of my heart for being ‘unyielding and harsh’ with me (when I didn’t know, but thought I knew, what was right or wrong for me) and passing on the baton of parenthood to me.

“Mom, Dad! I don’t have words to express my gratitude to you both for what I am. Always stay connected with me for I’ll need you till my last breath”.

These ‘golden words’ right from my heart are firmly written and stuck on the door of my heart.

# **A FARMER WIFE**

## **BY**

### **PRABHA THAPA**

Long long ago, as a kid in school, I loved singing “Old Mac Donald had a farm” and “Farmer in the Den”. I never even remotely guessed that I was singing about my own future, half a century down the years.

We my husband and I, had just settled down comfortably to our “much-looked forward to” retired life. Circumstances, events people and fate stepped in to turn everything, especially the comfortable part, all topsy turvy ! Most of your readers may n t be aware that our Regiment owns a stretch of land next to our Fauji cantonment in Clement Town, Dehradun, at Indrapuri village. Out of the blue, hubby dear volunteered to take over this land on Lease! May be there was a dormant farmer inside him, lying in wait for just this kind of opportunity.

So there I was, a reluctant farmer’ wife, seeing my dream of sitting in my lawn and reading Jane Austin’s collected works, go up in the dust of ploughed, furrowed fields. Green wheat fields and yellow mustard fields were now the reality. But to reach this state, lot of hard work and money had to be put in. Land had been left fallow for a long time except for some plantations of eucalyptus and poplar trees. It was a pleasure seeing the wasteland gradually transform into cultivable land.

What worth is a farmer if he does not have a few cattle in his backyard! So come up a Dairy Farm!! Except for telling a cow from a buffalo and the much written essay on “COW” from our childhood school days neither of us had any idea of raring these bovines leave aside running a dairy farm. We spent two days scouring all the bookstores in Paltan Bazar, Dehradun, searching for books on these animals. Finally we found on e prescribed for students animal husbandry and veterinary science, a book which helped us grasp the basics but not really very useful when it came to the practical essentials. We made the feeding troughs for the animals as per the specifications given in the book. Our manger, Retired Sub Maj (Hony Capt) of 2/11 GR, was stubbornly against it but we managed to have our way. But later, it turned out that the animals never acknowledged them as feeding troughs, instead would get inside them and had to be shooed, coaxed or driven out before they broke their legs or come to any harm. The manger had his way – the troughs were raised higher. He always eyed the BOOK with suspicion and contempt and considered it as his arch enemy. The BOOK now gathers dust on the top shelf of our cupboard.

Reading too much of James Harriet books made me romanticize about green meadows and cows grazing peacefully. Reality was totally opposite. No chance of green meadows the farm area was full of stones, being a river bed once upon a time. Anyway, where was the harm in letting the animals roam around free and peacefully? Son one fine sunny day, we let the cows out. Chaos prevailed- utter Chaos! The cows knew only those cows that were tied next to them – the rest were strangers. So they started chasing each other, butting one another while we run around to catch them and take back to the shed. Luckily, our cows don’t have horns otherwise it would have been so gory. The “Murrah” buffaloes have small curved horns. When we let them out, some of them managed to get their curved horns entangled and



it was quite a job getting them disentangled. So that was the end to the “peaceful grazing” Now we tie them separately even outside. Come summer, they love to be showered by hosepipe. Eyes closed in cool bliss they enjoy all those water drops falling on their heads and trickling down their nose.

When the cows first arrived at our farm, I had a gala time christening each and every one of them. Our first cow was Kamadhenu, called Kammo affectionately, followed by daisy. The Bull was Torro, naturally. But the farmhands, all from Saharanpur, thought otherwise. My loved one, Kammo was Buddhi, the old one, the first to arrive. As they told me the names with which they used to identify our cows, I saw the futility of my labour! I never even attempted to name our beautiful buffaloes, because they all look alike!!

As we got totally involved in our farm, our social life went for a toss. Social contacts with friends dwindled. Interaction with buffalo and cow dealers increased. Phone calls from friends became less and less. Mobile was busy with calls to and from data. Mobile was busy with calls to and from Rota, the Bhoossawala from Punjab, Rawat he assistant Vet Mann the buffalo man, Farmaan, the cow man etc. Most of our friends, especially from 11 GR are tickled pink at the idea of us becoming farmers. They express a desire to fallow in our one word. I insist they desist from doing so. They too much have read too many of James Harriet books. They don't know how much hard toil and headache goes in this venture, not to talk of the face cream and sun lotions one has buy to lighten and whiten one's brown over tanned complexion. They do not know how many times I have ungracefully fallen into the farm nala because of uneven, slippery paths. Luckily, the height of wheat or whatever was growing in the fields saved me from being observed by the villagers or the passersby. They haven't seen my face swollen beyond recognition after being stung by wild bees on rampage. And the heartaches when the cows that go dry are exchanged and taken away to be hired out to villagers in some far fling village. Or the sadness when the little calves die to multiple reasons. Or the fate of the hard toiled crop hanging on a thin string of uncertain weather conditions and the farmers committing suicides in India.

But there is joy, too. The heart sings just gazing at the yellow of the mustard fields or the lush green of the paddy fields. Watching the new calf being born is on experience by itself. The farm keeps us gainfully occupied and busy. It keeps us in touch with mother earth and in love with nature. Being a farmer's wife has enriched my life in many ways and I do not mean the kilos I have added enjoying the pure unadulterated milk!!!

## **WILL GANGA GO DRY IN FEW DECADES**

**By**

**Lt Gen Sushil Kumar PVSM (Retd)**

**Alarm Bells.** A study in Himalayan glaciers by World Wide Fund (WWF), presented to a ministerial round table of 20 largest energy consuming countries in the world during second week of Mar 2005 stated that Himalayan glaciers including Gangotri Glacier are fasted receding glacier in the World. Gangotri Glacier, which was earlier receding at the rate of 10 meters a year between 1935-1956, has been now receding at the rate of 23 meters every year. Jennifer Morgan, the Director of WWF, felt that this could lead to decline in water flow, with consequent massive economic and environmental problems in Northern India in the next 20 years. Urgent measures were, therefore, required to avert this disaster by reducing carbon dioxide emissions, greater use of renewable energy and energy saving measures.

**Gangotri Conservation project (GCP).** The above situation was foreseen by the founders of Himalayan environmental Trust (HET), who are legends in the field of mountaineering, viz, Sir Edmond Hilary, Reinhold Messner, Sir Chris Bonnington, Richard Blum, Sushil Gupta, MD Hyatt Regency and others. They created GCP 18 years ago with the support of Government India, Government of Uttar Pradesh (now government of Uttarakhand) and the American Himalayan foundation, with the aim of initiating measures which could contribute towards restoring ecological balance in the Gangotri area. American Himalayan foundation provided USD 50,000.00 and similar amount was provided by the Government of India and Government of Uttar Pradesh. Programme included plantation of trees in deforested areas, use of renewable energy, introducing energy saving measures and reduce carbon dioxide emission by vehicles and generators. GCP was launched in 1994 after a seminar and international trek to Tapovan led by legendary Reinhold Messner.

A survey by the GCP team revealed that the entire area was highly polluted. While worldwide global warming was the primary cause for recession of glaciers in Gangotri region, the large scale deforestation, influx of pilgrims/visitors/trekkers/mountaineers dew to improve road communications resulting in easy access to Gangotri shrine, use of firewood obtained clandestinely from adjacent forest, use of kerosene oil and generators, lake of sanitary facilities, none-existence of garbage disposal mechanism and above all lake of awareness about the need for conservation of natural resources had aggravated the situation.

GCP's Governing Body comprised representatives of Governments of India Ministry of Environment and forest, Government of UP (Now Government of Uttarkhand), eminent environmentalists and mountaineers, which meet periodically to formulate its programmes and monitor their implementation. At Capt Kohli's request I took over the responsibility an Honorary Director to implement programmes finalized by the steering Committee. However, after 10 years (2004), when I got cancer, I had to give up my active responsibilities of GCP and become its Vice Chairman. Col K S Mall. VSM (Retd) of 11 Gorkha Rifles become the first Chief Warden.

**Plans of Government of Uttar Pradesh.** Government of UP had created Greater Gangotri Development Authority for developing the area and prevent pollution but it had neither funds nor staff. Consequently, it had become none-functional. It is interesting to note that, in response to a PIL, Justice Dhavan of Allahabad High Court visited Gangotri and subsequently issued specific directions laying down measures to be adopted for cleaning the area and keeping it pollution free so that it had no effect on the warning of the Glaciers.

**Gcp Programmes.** GCP on its part kept the directions of High Court in mind as also the result of its own survey and set about methodically to initiate necessary steps to prevent further pollution of the area. In their effort, involvement of local population, Gangotri Mandir Committee and District Administration was sought at all stages. A concerted campaign was launched to bring about environmental awareness amongst the locals and visitors to the area through large scale distribution of leaflets highlighting Himalayan Code of Conduct, hoardings, sponsored lectures at Nehru Institute of Mountaineering Uttarkashi and periodical meetings of prominent citizens and officials at the District level at Uttarkashi.

Nurseries were set up and, with the help of school children, Army and local populace, nearly one lac saplings were planted on the defrosted mountain slope in Bhatwari Tehsil. After maintaining them for three years, they were handed over to respective forest panchayats. However, the results were not satisfactory as these panchayat had neither the resources nor the will to preserve the new plantation. An incinerator was installed at Gangotri to be operated under supervision of GCP. Since Gangotri had no municipality at that time, GCP organized collection of accumulated garbage from Gangotri and Gangotri-Gaumukh trek for incineration. The task is now being carried out by Gangotri Municipality. A large number of garbage bins were deployed at Gangotri and along Gangotri Gaumukh trek. Several garbage collection expeditions were launched to various mountain base camps and large quantity of litter left behind by the mountain expeditions was back laded to the incinerator site. For this task, cooperation of local youths, mountaineering clubs and Army was taken. A check point has since been established by the Forest Department at Gangotri – Gaumukh trek to prevent carriage of polythene bags by visitors and to ensure that they bring back the material they are carrying up.

A chain of temporary lodges (dhabas) used to spring up along Gangotri- Gaumukh trek during the season to cater for the requirements of visitors. These were constructed by freshly cut branches of the rare Bhojpatra (*Betula Utelis*) trees. Its branches were also used as fire wood for cooking and warming, purpose. Kerosene stoves were also used for cooking. This practice, over the years, had denuded the area of this rare sacred tree. GCP provided 15 sets of quick erect tubular frame lodges equipped with LPG stoves with gas connection and garbage bins. This prevented cutting of Bhojpatra and use of kerosene/firewood. No lodge is now allowed beyond Bhojbas. The scheme is being operated by District Forest Officer successfully.

Gangotri has a large number of ashrams and food stalls to cater for the requirements of ever increasing number of visitors. They were using Kerosene, generators and firewood cut from the adjacent forest. LPG connections were in short supply. A special quota of 374 connections was obtained from the IOC with the help of Ministry of Environment and

Forest, Government of India. These were allotted to consumers in Gangotri through the District Administration. This one single measure saved use of enormous quantity of firewood obtained from the forest.

Gangotri had a 20 KW mini micro hydel on Kedar Ganga. It consists of 4x5 KW turbines, of which only 2 were functional. GCP acted as a catalyst organization in persuading Government of UP to bid for a 200 KW hydel plant under the aegis of UNDP/GEF scheme. This has nearly been completed and will obviate the need for air polluting generators in the area, once it is operational.

Bhojbas (abode of Bhojpatra – *Betula Utilis*) is 5 Km short of Gaumukh. Bhojpatra grew here in abundance. Its bark was used by our stages to write scriptures. Over the years, the trees were used for making shelters and also as fuel for cooking and warming purpose to cater for the increasing number of visitors. Consequently, the area got completely denuded of trees and exposed Gaumukh to pollution. After considerable efforts, GCP set up a nursery of Bhojpatra at Chirbas and has planted nearly 2200 Bhojpatra saplings in Bhojbas. However, its survival rate is low and growth slow due to high altitude, hostile climatic conditions and area being free of snow only for 6 months. The saplings require long period of care and maintenance. Nevertheless, it is hoped that in the next few years, Bhojbas will once again become green, which is bound to have favorable effect on the Glacier ecology. It may be mentioned that, in addition to GCP, there are other organizations which have been engaged in Bhojpatra plantation in the area for long.

There were no community toilets at Gangotri or along the Gangotri – Gaumukh trek. Visitors had to defecate in the open. GCP put up some temporary pre fabricated toilets at Gangotri and Bhojbas but these were not adequate. A community toilet complex by Sulabh international has since come up at Gangotri but similar facility is not available for visitors between Gangotri and Gaumukh. GCP proposed construction of 16 toilets costing Rs. 11 lac at three places between Gangotri and Gaumukh and the scheme was approved by the ministry of environment and forest, Government of India and even token advance was released. However, the same was not agreed to by the Forest Department of Government of Uttarakhand, this being a reserve forest. Consequently, all the 55000 visitors to the area continue to defecate in the open! The availability of toilets may not reduce the global warming effect significantly, but, it will certainly contribute towards making the area pollution free and thus create favorable conditions for reversing the recession of Gangotri Glacier.

### **Action Required**

We have to drastically reduce the emission of carbon dioxide in the area. While use of generators has ceased with the operation of hydel project, we have to curtail the number of vehicles going upto Gangotri Shrine. GCP had suggested that all vehicles must stop at Bhairon Ghati and movement of visitors and stores from there onwards should be by battery or CNG operated vehicles.

We have to drastically reduce the number of visitors going to Gaumukh and beyond as there is no infrastructure to cater for such a large number of visitors. Five years ago the number involved was 15000, which has now shot up to 55000 as per the assessment of Uttarakhand Government. Kanwaria's (Devotees of Lord Shiva, collecting water of Bhagirathi) yearly visit to Gaumukh is a recent phenomenon. Their number is huge (28000) and, after taking bath in Bhagirathi near Gaumukh, they shed their old clothings and other items, which have to be retrieved and brought back to Gangotri for disposal. Earlier, they used to collect water from Haridwar. It is most heartening to learn that Uttarakhand Government has recently announced to limit the number of visitors to Gaumukh through issue of permits. However, necessary infrastructure for these visitors in the form of toilets and shelters with necessary facilities must be created as existing infrastructure is woefully inadequate.

Pedestrian movement over the Gangotri Glacier should be avoided. Present approach to Tapovan (a beautiful alpine meadow) and to mountain peaks e.g. Chaukhamba, Shivling etc. is over the Glacier. As per the mythology, Tapovan is the legendary place where King Bhagirath had carried out meditation and prayed to the Sacred GANGA to come to the Earth. GCP had suggested that a temporary foot bridge be constructed over the Bhagirathi at Bhojbas and all movements to Tapovan and beyond be diverted through this bridge and along the Eastern bank, which is thickly forested, does not meet the same fate as Bhojbas. At our request, Border Roads had carried out an assessment of the task (and, in fact, they lost an officer due to cardiac arrest in the area) but no action has been taken by the State Government.

Some people have vandalized Tapovan by erecting tin shelters in violation of Reserve Forest Rules. This must stop immediately and no construction of any kind should be allowed beyond Bhojbas.

The Gangotri area be declared as National Park and adequate staff provided to protect the area. This has to be implemented strictly.

The Incinerator operation at Gangotri has ceased as the Incinerator had outlived its life. Uttarakhand Government must make suitable arrangements for disposal of garbage.

Bhojpatra plantation at Bhojbas was mainly funded by Rotary International (about Rs. 12 lac). Funds are required for expansion of plantation and their future maintenance. As stated earlier, growth of plants is slow and requires long period of maintenance before they become self-sustaining.

# **EMPOWERING THE INDIAN SOLDIER**

by  
Maj Jai Shankar Singh (2/11 GR)

## **Introduction**

Indian Army has proved its mettle time and again in various operations since its independence. The glorious history of the Indian Army is the epitome of guts, glory and unparalleled example of supreme sacrifice by its Officers, Junior Commissioned Officers and its soldiers. The brave Indian soldier is expected to accomplish its missions despite threat to life, despair, fatigue, injury, inhospitable terrain and weather conditions. However, in the era of revolutionary military affairs and the changing nature of conflict, it is imperative to empower our soldiers through the medium of modernization. The army chief's modernization vision is to "adapt to high-end technology, improve night-fighting capability... information technology, information warfare and Network Centric Warfare." This brings us to the fact that modernization of the Indian army soldier is of paramount importance to achieve the technological threshold imperative for facing the challenges posed by the changing nature of conflict and the need for integration with network-centric warfare.

Indian army, in last few decades, has shown the world that it is capable of operating in high altitude, desert, snow, jungle and even across the sea, whereas other components of war have limitation of terrain, weather or even the type of adversary. They can be inducted through land, air and sea to fight the conventional adversary, non-state actors, international criminal syndicates and even natural and man-made disasters. Though the world may not be facing the prospects of major convention always in the future, the same cannot be said about the Indian subcontinent. The chances of limited war under the nuclear overhang cannot be ruled out since India has territorial disputes with China and Pakistan in the mountainous sector. Proxy war in Jammu and Kashmir (J&K) and insurgency in the Northeast (NE) compels India to be prepared to face a two and half front war in the future. And if that be so, Indian army has to be geared up to fight the limited war in the mountains and in the hinterland. The list of adversaries does not stop here; the Indian soldiers are also fighting the battle of perception and the war of opinion, and even to do that, he needs technology to have situational awareness.

What it takes to empower a soldier? A soldier must have the capability to acquire, identify, decide, disseminate and destroy the adversary in an environment where the boundaries of conflict are not completely defined, the enemy is partially visible and, above all, he is fighting a war in full public view. This he can effectively do if he is empowered by technology not merely as a shooting machine but as a smart sensor, capable of taking decisions, delivery of lethal firepower, able to protect from enemy actions and own negative actions due to error of judgment. The deduction, therefore, is that it is a compulsion to modernize the soldiers in wake of the adversary is becoming technologically empowered, and has the advantage of being even faceless.

## Concept of Modernisation in View of Changing Nature of Conflict

Most of the Indian soldiers and junior commissioned officers are trained in the practical and common sense tradition, a legacy of the colonial era. The mindset is such that troops are happier with light weight improved assault rifles and light weight protective gear. They are yet not accustomed to handle multitasking computerized systems that will assist them to identify, communicate, engage the targets with the aerial weapon platform and shoot with the help of electronic sensors and laser designators. Modern wars are becoming lethal and more intense; therefore, there is no other way than empowering soldiers with technology. In the light of the above facts, "the key to improve performance of the dismounted soldier is providing the 'right balance' between increased mission effectiveness and reduced weight burden."

When we talk of modernization, it is a change of mindset, capability to absorb technology and structural changes in the organization to operate in volatile and toxic environment. To accomplish the task of modernization, following points needs to be kept in mind and given due consideration:

- Empower the soldiers and develop him as a system in a phased manner to be able to absorb the pace of modernization.
- Develop capability of operating in all terrain, all weather and against state and non-state actors in conventional and sub-conventional conflicts.
- Build capability of interoperability with other arms and multinational forces.
- Develop capability to transform from the conventional to the sub conventional and from the military to the non-military role.
- Enhance the survivability, endurance, mobility and fighting ability in the conventional, sub-conventional and chemical, biological, radiological, and nuclear (CBRN) environments.

### Empowering the Soldier through Modernisation

It is vital to understand that the modernization process is a deliberate exercise; what is modern today may be obsolete a couple of years later. But the bigger challenge is that it needs a huge budgetary allocation and training of personnel to develop and absorb the technology. Considering the above facts, modernization, therefore, should be done in following stages:

**First Stage** The first stage should be a change of mindset to accept and absorb the technology and its usage in the changing nature of conflict.

**Second Stage** The second stage is empowering the soldiers to enhance their combat effectiveness by enhancing survivability, battlefield mobility, enhancing his endurance, situational awareness and capability to see where the enemy is and what is he doing.

**Third Stage** The third stage should be to develop the soldiers and sub-units as part of the system to respond with speed and violence in a short and swift war. The system so developed should support planning, situational awareness, target handling, connectivity as well as video and map displays of own and enemy forces.

**Final Stage** The final stage should be to integrate the system into a network-centric combined arms system wherein secured and uninterrupted communication (voice and

electronic data transmission) is central to integration of the soldiers with the net-centric warfare system.

It needs to be clarified that the process of modernization is not sequential but can be developed concurrently, however what is crucial is that this process has to be gone through to achieve the holistic development of the soldier as a system. Once modernization is put in place, there is a need to keep pace with the change. Hence, the aspects which need to be gone into empowering soldiers are as follows:

**Light Weight Body Armour.** A ballistic shield is a vital equipment and its effectiveness is in its weight and protection. It should be ultra light weight so that it does not compromise the agility and endurance of a soldier. Light weight body armour like a tunic made of reinforced fiber plastic to provide protection to cover vital body parts is preferred choice. This should provide protection from splinters and direct firing small arms weapons. The bottom line is in its fitting and weight.

**Mobility.** Mobility is a force multiplier which enhances endurance and increases survivability. Mobility to an individual may not be possible but cross-country robotic scooters and all terrain vehicles capable of lifting logistic loads and personnel are imperative.

**Endurance.** The efficient functioning of a soldier in the battlefield is a test of his endurance. His endurance is largely dependent on good health, quality of life, good clothes, food, water and ammunition. His clothes and personal equipment must cater for all weather and all terrain. Breathable, water and wind-proof battle fatigue for all seasons and all terrain is essential.

**Identification of Friend and Foe** Capability to acquire and identify the enemy. Sensors for monitoring of own troops and identification of friend and foe could be embedded on the helmet/ body armour. Weapon mounted night vision devices/ helmet mounted eye piece and all weather surveillance devices are a necessity. Radio display units to identify and engage the enemy are essential. Nano global positioning system (GPS) for locating each soldier is an added facility whenever troops are operating in small teams.

**Communication** Helmet mounted, short range, hands-free radio set with a throat mike to keep the voice low.

**Power visa-a-vis Load Ratio** The survival of a soldier is in his ability to retain agility and physical endurance. The real challenge is about optimizing the power, weight and space on the soldier and also achieving a measure of control. It needs to be understood that while we consider empowering every soldier with the above mentioned capabilities, what is more important is to identify who should be equipped with what.

## **Conclusion**

Empowering the Indian soldier technologically is an obligation for the security of the country. This empowerment cannot be done in a short span. It would need sustained efforts and a perspective plan without any disruption. The model which must be adopted should be cyclic rather than like a pyramid or ladder.



# **TECHNO-WARRIORS: CAN WE TRANSFORM OURSELVES?**

by  
Capt Ankur Kumar Pal (7/11 GR)

## **Introduction**

Only a century has passed since mankind conquered the sky, and we are still amazed that we have actually accomplished the feat. Fifteen yrs from now encased in weight climate-controlled body armour, humming with electricity and bristling with sensors, a fighting man-machine is constantly updated with battlefield info via a glowing monocular display. Meet the 'infantry soldier' of the future. This is the vision of mil technology escalation in the coming years. But is it really so easy to make these 'remarkable changes' within such a short duration or will it be a 'tough nut' to crack and make us come to the desired level.

## **Concept of Future Soldiers**

The concept of the 'future soldier' has a common focus on five distinct areas where technology can be applied to improve the capability of soldiers. The most imp, referred to as 'C4I' is Command, Control, Communications, Computers and Intelligence. In practice 'C4I' means a portable ruggedized computer unit that gives soldiers access to a bewildering array of com and tac info. The other four key components are lethality (wpns and sights), mobility (navigation, size and weight of the eqpt), survivability (clothing, stealth, body armour) and sustainability (logistics and battery power).

With the evolution of the concept of 'Network Centric Warfare', emphasis is to transform a soldier into a wpn platform, capable of guiding and controlling the wide array of wpn sys.

## **Techno-Warrior: Programme in Progress**

In UK, the Future Infantry Soldier Technology (FIST) project has just completed its second series of full equipment trials. The FIST concept involves a commander, equipped with a GPS, monocular helmet display screen, a handheld laser range-finding surveillance tool and other surveillance tools to allow the soldier to map his team's position. Alongside the commander will be the grenadier, gunner and rifleman/marksman, each carrying his own specialised set of electronic tools and weapons, as well as body armour, data-enabled short-range radio and GPS system.

Similarly, Germany is pushing the Infanteriest der Zukunft (IdZ) i.e 'Infantryman of the Future' programme which is nearing completion. Each soldier in the eventual IdZ will be equipped with a lightweight bullet proof vest, nuclear, biological and chemical (NBC) protection, night vision equipment, digital navigation, tactical speech and data communication and a new range of weapons. The equipment they will carry will include a close-combat weapon, grenade launcher and assault rifle, as well as thermal and night vision sights. Another innovation on which the IdZ is carrying out Trials is Combat ID. This interrogates a soldier up to 1.5km away using a coded laser beam that can determine whether

he is friend or foe. The combat ID system would be integrated with the thermal weapon sight which digitally processes all the information and passes it wirelessly to the C4I hub carried by the soldier.

## **India's Prospective and Advances**

Modernisation of our Army and infusion of technology is our prime focus and thus we have identified information warfare, surveillance, night fighting, long-range fire power as our priority areas. The biggest project that India was banking on was F-INSAS (Futuristic Infantry Soldier as a System), a multibillion programme.

In Jan 2015, it was reported that F-INSAS program has terminated and will now be broken into two components: one arming the soldier with the best of eqpts/weapons and the second is Battlefield Management Systems (BMS).

Though the name of the F-INSAS project may change or renamed but the concept and idea will remain the same i.e to turn India's infantrymen into fully-networked, digitised, self contained 21st century warriors. The concept identifies the need to provide infantry soldier with enhanced capabilities in terms of lethality, survivability, sustainability, mobility, communications, and situational awareness.

In general terms, F-INSAS was divided into five sub-systems:

- Modular weapons
- Body armour and individual equipment
- Weapon sights and hand-held target acquisition devices
- Communication equipment
- Portable computers ("wrist displays" for soldiers and "planning boards" for commanders")

The objective of the F-INSAS project was a development of a new standard-issue armament to replace the ageing INSAS (Indian Small Arm System) rifle with new modular, multi-calibre of weapons. The primary weapon was planned to be a rifle capable of firing 5.56mm and 7.62mm ammunition with a new 6.88mm under-development. The planned equipments included a new helmet with mounted thermal sensors and night vision, as well as cameras and chemical and biological sensors for NBC warfare. The helmet will have an integrated visor with a heads-up display (HUD) capable of outputting images with the equivalent space of two 17-inch computer screens. Other proposed accessories include a full battle-suit with a bullet-proof and a waterproof jacket, health sensors and even solar charging devices.

## **Future Problem Areas**

It may sound good to hear about the upcoming proposed changes and upgradation in the military eqpts and wpns. But as a ground soldier, let us just ponder over the reality on grnd today and discuss the efforts reqd to train ourselves to become capable enough to understand and use the advance wpn sys.

- The future soldier programmes are liable to overload the average soldier with too much of information, making it more difficult for him to perform his job effectively.

- One of the prosaic worry is the massive increase in power that the systems will require. The worry is that without a reliable, rechargeable power source the soldier could be left blind and handicapped if his equipment fails during a mission. Hence, there has to be duplicity or alternate backup to be planned for these contingencies.
- Closely connected with the challenge of increased power demand is the serious problem of weight. On an average, every soldier carries approximately 30kg of load on his back while marching. One solution is to reduce weight elsewhere for the soldier using new, lightweight materials for clothing and body armour.
- With the concept of 'Make in India', are we really capable of coming up with the proposed tech gadgets and eqpts by 2020. If we look at the history of DRDO, which has failed numerous times in keeping their promises upright, this task of having modernised eqpts and wpns seems to be herculean.
- Let us for an instance believe these eqpt and wpn sys comes out to be on ground within the timeframe. Are our soldiers trained enough to operate those, or will it require us to plan for additional trg courses to make them able to understand and operate the eqpts effectively during operations.

Hence, just by visualizing the concept of 'Modernised Soldier and Wpn System', the task of transforming into 'future soldier' is not completed. A lot has to be planned and done on the ground, by the ground soldier, for the ground soldier.

### **Recommendations to Facilitate the Acceptance**

In the information age, advancements in the field of Information Technology, which plays an important role in weapon control and management systems, is crucial for the Indian Army. Officers, JCOs and OR need appropriate training at different level to come to a stage where they can understand and operate well. The following ways can be deliberated upon to fill the void :-

- Officers.** We can follow the naval policy of recruitment and fill the shortage of Offrs with engineering degrees who would be more tech-savvy. B.Tech degree should be made compulsory, rather than a choice, for the cadets in NDA in place of B.Sc degree.
- JCOs/ORs.** Compulsory assessment in Information Technology should be made criteria to grant the next rk / promotion. With the need of the hour and the advancements in the field of IT, min intake level of an OR should be 12th Pass. Those with Graduation and PG degree should be given edn allowances and be trained technically to amplify their intellectual capabilities.

### **Conclusion**

The success of future soldier systems will depend on whether the technology makes the forces' job easier. While it looks promising so far, it would appear there is a little way to go before networked soldier, and the perfect synergy between man and machines on the battlefield, truly becomes a reality.

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# Jawan to General

by  
Col RC Patial, SM (Retd)

'**Jawan to General**' written by Lt Gen Sushil Kumar, PVSM (Retd) makes an interesting reading, especially for young soldiers who have a dream and an ambition to rise. This is a true narration of the rise of a 'Soldier to a General' without godfathers, with his sincere hard work and loyalty to the organisation. I have been fortunate to be the General's ADC during the golden era of his career, I presume, as DGAR of Assam Rifles where he was popularly christened as '**Assam Rifle ke Bhagwan**'. It is still a common saying amongst the older lot of Assam Rifles personnel that if some DG has done something for the force, he is Gen Sushil Sahab and that era is still considered as the Golden Era of Assam Rifles. He had shared his desire of writing his memoirs with me. I had suggested to the General to include some **memoirs** by some of the brother officers or bureaucrats also but that really does not fit into a typical autobiography.

What I write about the 'Jawan to General' is not a classical book review but a mix of my memoirs of the General related to the autobiography; his story "Meri Kahani Meri Zubani" or as an author if it was a biography.

Difference between Autobiography-Biography- Memoirs: **The 'auto' in autobiography means 'self'**. Hence, an autobiography is a self-biography that is written by the subject himself. The subject may or may not have used the help of a ghost writer to write the autobiography. **A biography is written by another person**. A biographer is responsible for presenting the subject's life story, while highlighting various aspects of his life and his intimate experiences. A biography may even include an analysis of the subject's personality. Biographies tend to maintain a more objective tone than autobiographies, so the reader is more likely to get a story from several angles, rather than be just directed by the subject's view. **A memoir can also be biographical or autobiographical**. My memoirs about the General and his core qualities:-

- Loyalty To The Organization
- Appreciated and encouraged suggestions / solutions to resolve a problem and disliked those who argued, 'How a task cannot be done.' Impatient and pushed every one towards achieving the goals.
- Powers fully exercised and did not display 'play safe' attitude. Provided timely decisions.
- Task not left unfinished.(A big black steel box at the end of the day full of files would be carried to the house and the box carried back next day all cleared in spite of an evening engagement almost daily!)
- Dealt directly with even a junior if he had the 'Know How' of a case. (It was a common practice in the MHA that when Gen Sushil visited Delhi to expedite the cases, the civilian clerks would be sitting with AR case files and would say "Today, Gen Sahab is here and we are busy with his cases").
- Respecting veterans, especially war veterans, decorated heroes was immense. I remember the General giving helicopter lift to our heroes MB Rai and Ganju Lama in

spite of all opposition from the pilots. He would get annoyed and say "the Force has paid for the helicopter or the aircraft so leave it to my discretion who I want on board".

- For the Assam Rifles, he was the first to initiate the welfare projects, which have fully fructified and the AR is presently reaping the benefits of Gen Sushil's vision. Welfare measures initiated are Assam Rifles Group Insurance Scheme, introduced ACC type commission in spite of all opposition, set up the Assam Rifles Public Schools, transit facility at Delhi and Guwahati. It was also Gen Sushil's vision to update the history of Assam Rifles and 11 Gorkha Rifles (Path of Glory).

In 'Jawan to General', the autobiography story has been told chronologically with particular focus on the rising career of his life without any personal glory or bias. It is enlightening as the General has written from his own memories with his heart and mind 'Mann ki Baat'. I for one liked the truthful narration flowing from the General's heart of the early struggle which many may have hidden. 'Jawan to General' is the story of a 17 year boy joining ASC (GT Coy) and the soldier rising to become a General. Overall, the book is an interesting, educative, well laid out and correlates to a large extent to the 11 GR histories as he himself is history being the first commissioned officer of the regiment in 1948.

A "must read" by young army officers so that they can motivate themselves and their commands. 'Jawan to General' is recommended to be kept suitably displayed in unit Motivation Halls.