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2018-19, 2019-20, 2020-21

Work Efficiency Maximization by Lady Police Personnel

- A Case study of South Mumbai

Dr. Smita Salunke
Project Director
P-3281

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Environmental Cost of Urbanisation and Development- Special Emphasis on Mumbai City

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QR Code



Introduction

Environmental costs are those human and financial costs connected with the actual or potential deterioration of natural assets due to economic activities. Environmental cost, in other words is the price that individuals have to pay irrespective of the level of development that any country may be experiencing, due to unsustainable modification of the natural landscape, mismanagement of resources, contaminating the air, water and land; unplanned development, etc. Uncovering and recognizing environmental costs associated with a product, process, system, or facility is important for good management decisions. Attaining such goals as reducing environmental expenses, increasing revenue,

and improving environmental performance requires paying attention to current, future, and potential environmental costs.

Sustainable management and sustainable development are the key words in protecting the environment. Human beings have used, overused and misused environmental resources in every possible manner in order to make life comfortable, financially as well as materialistically.

We are way into the 21st century, achieving milestone after milestone in the field of science and technology. These achievements have further contributed in achieving a medical revolution, agricultural revolution, digitalization, industrial development, space technology, advancement in the field of warfare; and an array of other related fields.



Post-independence our country has seen a lot of development in terms of urbanization and infrastructure apart from the other areas. Several cities of India have witnessed industrial growth, rapid urbanization, infrastructural growth, expansion of transport network, etc. All this is, no doubt a prerequisite, to achieving economic growth and prosperity. But all this has its own flip side too.

Aim of the study

This paper emphasizes on how urbanization and development can lead to a big environmental cost due to its effect on environmental components mainly climate, land and water resources. A case study of unplanned urbanization in India and metropolitan cities have been carried out leading to conclude on the existing causes of damage to the environment due to urbanization and preventive measures to keep a check on them. Although it is impossible to restrict urbanization it has to be ensured that urbanization proceeds in the right path causing minimum possible impact on environment.

Impact of urbanization

Urbanization refers to a general increase in population and the amount of industrialization of a given region. It also implies to an increase in the number and extent of cities. It symbolizes the movement of people from rural to urban areas. Due to uncontrolled urbanization in India, environmental degradation has been occurring very rapidly and causing many problems like space

crunch, over-crowding, worsening water quality, excessive air pollution, noise and the problems of solid waste disposal. These environmental problems get further translated into environmental costs which have to be borne by the residents in the form of illnesses, lost workdays, spending on purification of the tap water, purification of air, etc.

Industries

Mumbai is a glaring example of an unplanned kind of evolution that is still underway.

Human activities release a wide range of emissions into the environment including carbon dioxide, carbon monoxide, ozone, sulfur oxides, nitrogen oxides, lead and many other pollutants which contaminate the ambient air.

Industrial growth, if not right in the city, is definitely a part of the Greater Mumbai region with several industries including chemical fertilizers, petrochemicals, plastic, pharmaceuticals, etc being an important aspect of Mumbai's economic growth sector. These industries have a major role to play in the level of pollutants found in the city, especially SO₂, CO₂, CO and other toxic gases such as ammonia, benzene etc. Several complaints received by the Maharashtra Pollution Control Board from citizen groups living in the vicinity are a proof of the problems faced by the locals.

Urban Heat Island

Materials like concrete, asphalt, bricks, asbestos sheets, etc absorb more heat than the barren soil as well as soil covered with



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vegetation. Therefore cities remain warmer in the nights than the surrounding countryside. The prevalence of **urban heat island** indirectly leads to over-consumption of energy resources and the consequent emission of CFCs which again leads to ozone depletion. Thus we can see that we end up in a vicious cycle of unplanned growth of cities and unsustainable practices adopted by the citizens while aggravating the conditions that lead to global warming and climate change.

Transport Network

The transport network is quite extensive across the geographical stretch of Mumbai with local trains being considered the lifeline of Mumbai. The public transport network is particularly meant to ease the movement of people as well as goods. But with the crumbling infrastructure that we are seeing in the city, in the form of collapsing bridges, foot over bridges, etc.; it is a wakeup call for the local administration to intervene and strengthen the existing infrastructure as well as to reinforce the efficiency of the public transport whether it is BEST buses, local trains, monorail, etc. The existing rail transport of the city has not just Nitric Oxides contaminating the city air but an even more harmful pollutant, viz. the Respirable Suspended Particulate Matter (RSPM). The present digging of ground surface for laying the ambitious Underground Metro Project as well as the Coastal Road Project is another major source of air quality decline in the city. Undoubtedly the expansion and

diversification of the transport network is necessary but definitely not at the cost of losing the aesthetic beauty of the place or for that matter loss of livelihood of the local fishing communities or also at the cost of the health of the local residents. Cases of allergic flare ups, and respiratory ailments are becoming a common occurrence for Mumbaikars.

According to urban planners and architects across Mumbai, building the 29.2-km Coastal Road will involve reclaiming and concretising large swathes of the sea bed near the coastline, in a city that is already losing its mangroves, wetlands and other flood-preventing buffer zones to encroachments and construction. New reclamations are likely to further endanger the coastline.

Das a veteran architect in Mumbai says that "Infrastructure has to respond to the ecology, environment and geography of a place. On all these counts, the Mumbai coastal road feels like a disappointment."

Number of private vehicles is increasing very rapidly which is again a major concern for the city's ambient air quality. From 3.2 lakh registered vehicles in Mumbai in 1980-81, it took two decades for the vehicular population to cross the 10 lakh mark –spanning the 1980s and 1990s. While it took just a single decade to cross the 20 lakh mark in 2011-12. The city had nearly 32 lakh vehicles as of November 2018.

Infrastructure



The constant renovation, construction and demolishing work of buildings and other infrastructure work in the city has messed up with the city's air quality to a great extent. The RSPM as well as SPM is increasing rapidly. This will not only lead to respiratory problems for the young as well as the old but it will also be instrumental in increasing the rate of global warming.

Solid and Effluent Waste

The reckless dumping of garbage in the creeks along the mangroves is playing havoc with the aquatic ecosystem. The fish catch along the Mumbai coast is already declining. Furthermore, the untreated effluent wastewater released from the industries has multiplied the problem of water pollution gravely. The marine ecosystem is at stake.

Flooding

A very striking feature of Mumbai during the monsoons is the flooding or water logging that happens in different parts of the city. The widespread concretization of the city has led to levelling down of the city. Therefore, there is dearth of a natural slope over which surface run off could easily flow. This causes problems of water logging in different low lying parts of the city, thus causing a serious consequences for residents of the ground floor in such areas. Those living in shanties or slums in the low lying areas are worst affected.

Conclusion

The above discussion about the various aspects of unplanned urbanization reveals that there are several factors at play that create

financial losses and also degrade the natural ecosystems. Increasing and uncontrolled population is causing severe space crunch, industrial air pollution, effluent waste water is entering the existing water bodies and causing serious contamination of the fresh water sources of the city. The rampant construction activity, be it the buildings or the digging of ground for Metro or the process of reclamation for the construction of the Coastal Road are all causing noise as well as dust. The chief component here is pm 2.5 and pm 5.0 which are serious health hazards apart from being contributors to global warming. The sharp increase in the number of private and commercial vehicles has led to problems of noise and air pollution but also over-utilization of fuel resources, traffic jams, and long hours of commuting for the locals which is also an extremely frustrating aspect for the commuters. The loss of livelihood for the fishing communities is also an outcome of the government decisions of having the Coastal Road work completed. Locals have voiced concerns about the damage to existing infrastructure due to the work going on for the completion of the Underground Metro. But government authorities claim that the best technologies are being used which will not let any damage happen. The urban heat island issue is predominantly experienced during summers as well as winters, when the city area remains warmer than the surrounding suburbs. The solid waste generated in the city is about 550 gms per person. The population is almost touching 20 million. This has caused

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a severe strain on managing the logistics by the local administration in the process of solid waste management. The rainy season comes with its own relief as well as problems. The problems faced are mostly the water logged low lying areas as well as the railway tracks. The entire network of local trains gets badly affected. People get stranded. Sometime there is loss of life and property during heavy rainy spells. Schools and colleges are forced to shut down. Office goers are also affected. Apart from all this, the air pollution in the city causes a lot of respiratory problems for the locals. Allergies have become a common issue for a lot of people. This was opined by some of the doctors at Bombay Hospital. Several of hours spent in commuting daily has its own toll on the locals.

Thus, it appears that most of the major environmental problems for the next century will result from the continuation of the serious issues that currently do not receive enough political attention and a revamped policy making for the sake of protection of environment. This is necessary also so that environmental costs can be reduced by the state as well as the individuals. It is necessary to understand that protection of the environment is important for a healthy survival of the human species.

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Smita Salunke

Director

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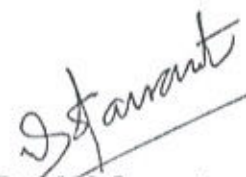
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Date:- 29th September 2017

Place:- Margao - Goa


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F.133C/12 43

Date : 7/11/2017

To,
The Members of Board of Studies in Geography,

Sub: Minutes of the Meeting of the Board of Studies in Geography held on 11th
October 2017

Sir/Madam

I am forwarding herewith, the Minutes of the Meeting of the Board of Studies in Geography held on 11th October 2017 at Parvatibai Chowgule College of Arts and Science (Autonomous), Margao, Goa. If no exception is taken by any Member of Board of Studies to the correctness of the Minutes of the Meeting within five days of the dispatch of the Minutes, they shall be deemed to be correct.

Thanking you

Yours sincerely

Dr. Anagha Bicholcar
Chairperson
Board of Studies in Geography

Enclosure: Minutes of the Meeting





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V. Good P/F *Dr. Smita Salunke*
26/4/17

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. SMITA NAIK SALUNKE**, from Akbar Peerbhoy College, Mumbai, Maharashtra, has attended the Board of Studies meeting in the subject of Geography Tuesday, 25th April 2017, in our College.

N. Sawant

Dr. Nandkumar N. Sawant
Principal

Date: April, 25, 2017
Place: Margao





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DEPARTMENT OF GEOGRAPHY

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This is to certify that Dr. Smita Praveen Salunke of Akbar Peerbhoy College of Commerce & Economics has presented the paper Severe Cyclonic storms over the Arabian Sea - A rising economic burden in National Level Online Seminar on "Population, Society, Development and Environmental Sustainability" organized by Department of Geography and Internal Quality Assurance Cell (IQAC) in collaboration with the Bombay Geographical Association held on Tuesday, 19th April, 2022.

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SEVERE CYCLONIC STORMS OVER THE ARABIAN SEA - A RISING ECONOMIC BURDEN**Dr. Smita Salunke***Assistant Professor, Akbar Peerbhoy College of Commerce & Economics, Grant Road, Mumbai, Maharashtra.***Introduction**

Climate change is the outcome of natural as well as man-made reasons. What we currently see is a set of erratic climatic episodes which are predominantly correlated to excessive amounts of CO₂ and other GHGs released by mankind. Mankind definitely seems to have not been kind enough in matters of environmental protection and observation.

Although scientists are uncertain whether climate change will lead to an increase in the number of storms, there is more confidence that warmer ocean temperatures and higher sea levels are expected to intensify their intensity and impacts. Stronger hurricanes will be far more costly in terms of damages and deaths without action to make coastal (and inland) areas more resilient.

The economic cost of climate change can be seen in the ever-growing losses caused by cyclones and hurricanes. As a result of global warming, cyclones are proving to be the worst accounting for major loss of lives as well as economic damage.

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Climatic records show that the tropical cyclone in the Indian Ocean generally tend to form between April and October. Most of the North Indian coastline is near sea level and prone to flooding, these cyclones can easily kill people with storm surge and flooding.

On an average around 2 to 4 tropical cyclones impact India every year, while most of these tropical cyclones impact the east coast of India, the West Coast of India, in general, is less prone to cyclones with one cyclone out of 2 to 4 hitting the west coast.

A very severe cyclone is defined as one with wind speeds touching 220 kmph.

Study Area:

For the purpose of this study the Indian Ocean, more particularly the Arabian Sea is taken into consideration. The recent years have seen an increased frequency in the incidence of severe cyclonic storms in the Indian Ocean.

Data Collection:

Data is collected from secondary sources such as online websites, IMD journals, etc. for the purpose of this study.

Methodology:

The data is collected for the number of cyclones that hit the west coast of India over a period of five decades. The decade wise data is condensed to see if the number of severe cyclones impacting the Arabian have actually increased. The destruction in terms of economic cost is ascertained for every decade, the data for which is gathered from official

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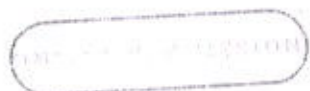
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ROLE OF WOMEN AND THEIR CONTRIBUTION TO THE DEFENCE FORCES OF INDIA- A GENDER PERSPECTIVE

DR. SMITA SALUNKE

ABSTRACT

Since times immemorial women have proved their mettle and performed extremely well - in peace locations as well as in hostile zones, depending on what the situation demanded. It is just that only a handful of them got an opportunity to step out of their comfort zones and prove how resilient they could be.

In the Indian scenario, several factors have been the precursors to women getting into the job arena - the need to empower themselves financially as well as to prove their mettle and to leave behind the rigid social mind-set and to add to the family's income.

..... It took many years for it to become socially acceptable and welcoming for women to join the police force and more particularly the armed forces. Initially when women were inducted into the defence forces, it began with women playing the care-givers role and later on moved on to medical and other administrative roles. But government policies have always been conservative and cautious in assigning combat roles to women.

One of the most important requirements for combat duty is physical fitness, of which aerobic conditioning, strength and endurance form the major part. Perhaps more than any other issue, this has been used most frequently to argue for the exclusion of women from combat.

Keywords: Women, defence forces, capability, work satisfaction, training, mindset

1.1 BACKGROUND

Since times immemorial women have proved their mettle and performed extremely well - in peace locations as well as in hostile zones, depending on what the situation demanded. It is just that only a handful of them got an opportunity to step out of their comfort zones and prove how resilient they could be.

Although the masculine figure, whether within the family or at work place has been considered as the sole image of breadwinner, decision-maker and one that possesses strength, aggression, and leadership qualities; the approach towards women has changed on a far more positive note in the present times.

In the Indian scenario, several factors have been the precursors to women getting into the job arena - the need to empower themselves financially as well as to prove their mettle and to leave behind the rigid social mind-set and to add to the family's income.

1.2 Women and Defence Forces – A Global Scenario

It is seen that several countries have inducted women into the defence forces of their country at different points of times during the past two centuries. Today, women are in the frontline, they are in the cockpit and on the deck. Armed Forces are no-longer a male-exclusive club. At least 16 countries allow women to serve in combat roles. They have equal rights to military stars, stripes and medals as their male counterparts.

Nevertheless, defence forces are normally considered a male bastion and many nations still do not allow women to serve in combat roles or in submarines.

1.3 Women and Defence Forces - Indian Perspective

It took many years for it to become socially acceptable and welcoming for women to join the police force and more particularly the armed forces. Initially when women were inducted into the defence forces, it began with women playing the care-givers role and later on moved on to medical and other administrative roles. But government policies have always been conservative and cautious in assigning combat roles to women.

The role of women in the Indian Army began in 1888 when the 'Indian Military Nursing Service' was formed during the British Raj but it was only in 1992 that the organisation opened doors and started inducting women in non-medical roles. In 2015, India also opened new combat air force roles for women as fighter pilots. However, despite all these developments, women in the Indian armed forces that constitute 3% of the Indian army are still not allowed to be a part of the active combat.



Although the British Indian Army was limited to women towards what were mainly non-combatant roles, it was not the case with the Azad Hind Fauj founded by Subash Chandra Bose. There was a women's regiment named the Rani of Jhansi Regiment which saw active combat when it fought along the Imperial Japanese Army in Burma. One member of the corps, Noor Inayat Khan served with distinction as a spy, acquiring a legendary status for her service during World War II.

On February 17, 2020 the apex court of India upheld the right of serving Short Service Commission (SSC) women officers to be granted Permanent Commissions (PC) just like their male colleagues. This judgment was based on a case filed by 17 SSC officers who were denied a Permanent Commission despite serving for 14 years.

We already have some lady officers in the Indian Army, Navy and Air Force who have carved a niche for themselves in their respective fields and serve as a shining example to young girls. For instance, Namrita Chandi, the first woman heli-pilot to fly over the world's highest battlefield, Mohana Singh, Avani Chaturvedi and Bhawana Kanth became the first Indian women to fly a MiG-21 Bison.

From an aerobatic Sarang helicopter pilot to those who are proficient at high altitude CASEVAC (casualty evacuations) in single-engine helicopters in the Siachen Glacier and aeronautical engineers, the pathbreakers are everywhere. Shaliza Dhami became the first woman officer to get permanent commission (PC) in the flying branch, where women have so far only been short service commission officers.

REVIEW OF LITERATURE

In the Indian context, though there is sufficient background and discourse on women and militarism, very little has so far been specifically written on the aspect of women serving in the Indian Armed Forces. The few research articles that are available on the subject again rely heavily on western sources and are academic in nature.

- A senior BSF officer's views in his article published in the Daily Pioneer, stated "In Armed Forces, women have come a long way and have matched pace with time. It is the responsibility of both the government and the society at large to work upon a roadmap that entails societal changes, acceptance and inclusiveness of women in all spheres of life to recognize the women power and let them achieve their full potential.
- According to American Marine Corps General Robert Barrow, "It is not about women's rights, equal opportunity, and career assignments for enhancement purposes for selection to higher work. It is about combat effectiveness, combat readiness, and National Security".
- Karen Davis and Brian McKee stated "that the real hurdle for women in participating fully in the military today has little to do with their physical and mental abilities but rather revolves around social and cultural issues characterizing the 'warrior framework'."
- According to Retd wing commodore Anupama Joshi, who was a member of the first batch of IAF officers says, 'for a parent to lose a son or a daughter is the same. She has chosen to go there, why shouldn't she get a chance to fight for her country?' (livemint.com, 14th august 2020)

AIM OF THE STUDY

A miniscule percentage of women are a part of the defence and other para-military forces. The aim of this research is to understand reasons for the same and also shed light on the perceptions about pros and cons of women joining the defence forces of the country, from the point of view of both the genders.

1.7 METHODOLOGY

This study derives its data from secondary as well as primary sources. Secondary data is collected through online websites, research work done by persons within and outside India on related topic, official records, online governmental (official) journals, newspaper articles, etc.

Primary sources include personal interviews and the questionnaire method. It may be noted that two sets of questionnaires were drafted - one for the lady officers and one for the gentleman officers.

This study takes into consideration all qualitative and quantitative data obtained from serving and retired men as well as women officers. A qualitative descriptive analysis is done as the issues are subjective in nature; and conclusions drawn.

OBSERVATIONS

Profile of the male respondents



In all, responses were obtained from 35 male officers. 33 were army officers and two belonged to the Navy. Of which 2 were retired Brigadiers, 16 of the rank of Colonel, 3 Lieutenant Colonel, two Captains (Indian Navy), five of the rank of Major and another five were Group Captains.

With respect to their years of service:

- 8 were retired officers,
- 13 of them had ten years left of service; and
- 14 had less than five years before they could retire.

Profile of the female respondents

Lady Officers could be contacted after a lot of effort and only 15 of them responded to the questionnaire mailed to them. Despite the small number of sample size, we can consider the responses given by these ladies as largely representative of the general opinion, too. The sample consists of serving as well as retired lady officers.

- The age of the women respondents ranged between 27 to 55 years.
- Rank of women respondents were Captain (4), Group Captain (one retired and two serving), Major (2), Flight Lieutenant (2), Wing Commander (4 of which 2 retired and 2 serving).
- Number of years spent in service – Those who have spent 15 and more than 15 years are 12 and three of them have spent less than 15 years. Number of years left in service range between 3 years to 10 years. And three had already retired from the services.
- 6 joined the defence forces through Permanent Commission (PC), while 9 of those interviewed joined through Short Service Commission (SSC).

Comparative Analysis of the Responses

The 54% male respondents who were a part of the survey were more than 50 years of age and had served on an average 26 years in the forces. Of the lady officers surveyed, 80% of them had served for more than or equal to 15 years in the forces. Therefore, it can be said that majority of them have served in the forces long enough to give thoughtful responses.

Table: 1.1: Happiness quotient with respect to their jobs

	Male respondents	Female respondents
Very happy	57%	87%
Happy	34%	-
Unhappy	9%	13%

Here it is reflected that a larger percentage of women are very happy with their work as compared to their male counterparts. 87% of the women said they were very happy with their performance at work. While the rest claimed otherwise

Table: 1.2: Appropriateness of the Training Program

	Highly relevant	Needs improvisation
Male respondents	64%	36%
Female respondents	87%	13%

Fewer women and more men (one-third of the respondents) believe that the training program needs improvisation so that it can become more relevant to the changing times.

Table: 1.3: Need for some extra or special training for women

	Yes	No	Not sure
Male respondents	25%	56%	19%
Female respondents	26%	80%	4%

A strong majority of the women (80%) did not feel they needed any special or extra training over and above what the set pattern was.

Table: 1.4: Combat Roles for Women

	Yes	No	Not sure
Male respondents	36%	40%	24%



Female respondents	95%	-	5%
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Men and women differ drastically in their opinion about women being assigned combat roles. 95% of women said they are fit for combat roles while only one-third of the male respondents believe the same.

Table: 1.5: Physical and mental capability of women for combat roles at par with men?

	Yes	No	Not sure
Male respondents	33	52	20
Female respondents	80	20	-

It is interesting to compare and reflect upon the responses obtained for this particular factor. While only one-third of men agree, 80 percent of women believe they are physically and mentally at par with men to deal with combat situations.

Table: 1.6: Existence of Gender Discrimination in the Forces

	Yes	No	Not sure
Male respondents	20	55	25
Female respondents	45	55	-

Interestingly, an equal number of men and women denied existence of gender bias within the forces. But when it came to accepting it, more women opined that gender discrimination exists in the Forces.

Table: 1.7: Major deterrent/s for women serving in the defence forces

Respondents	Terms of service	General Approach towards women	Patriarchal Mind-set	Government Policies	All of the factors
Male	24	20	32	-	24
Female	-	-	-	88	12

Of all the factors, patriarchal mind set was considered the biggest deterrent for women serving in the forces. This implies that men accept that there are certain deterrents for lady officers, of which patriarchal system and mind set plays a major role. Other factors that the male respondents felt serve a hindrance for women are terms of service, general socio-political approach towards women in the forces or those keen about serving in the forces. One fourth of the men felt all the above-mentioned factors were relevant and a constraint for women.

On the other hand, a whopping 88% of the female respondents said that unfavourable government policies are the dominating factor that do not allow them to plan their career effectively and also goes against their goals of serving the nation more fruitfully.

Table: 1.8: Correlation between traditional conservative approach towards women and women's self-confidence

	Yes	No	Not sure
Male respondents	20	80	-
Female respondents	40	60	-

Most men as well as women did not feel that the traditional and conservative approach towards women has in anyway affected their self-confidence. And this is one positive finding.

CONCLUSION

Just as some men are passionate about joining forces, so are women, too. With the right kind of training and socio-political support there is nothing that women cannot do.

From the remarks that the lady respondents have made here point to two major issues unfavourable government policies and patriarchal mind-set that are to blame for the inability of the ladies to serve the nation with equal zest and determination as male officers.

One of the retired lady officers have even stated that there needs to be a change in the social mind set with regards to respecting women and their capabilities.

In this study, men as well as women have voiced that some men do not like taking orders from women and also feel that women should not be assigned combat roles.

One of the most important requirements for combat duty is physical fitness, of which aerobic conditioning, strength and endurance form the major part. Perhaps more than any other issue, this has been used most frequently to argue for the exclusion of women from combat.



From what one of the retired lady IAF officers has voiced, it is apparent that when men in the forces see that the lady officers working alongside them are good enough at their job whether it is at flying a helicopter on the world's highest and most difficult battlefield or whether it is undergoing the same challenging training as men do, they are bound to respect the lady officers.

But very often the problem arises when men belonging to the typical and staunch male dominated societies of the country (read rural agrarian communities) have to bow down to the commands of the senior lady officers, the dissent becomes visible which can further manifest into chauvinistic behaviour on the part of such men.

A very important issue pointed out by maximum number of the lady respondents, both serving and retired, have blamed biased and ineffective policies of the government as the chief deterrent to choosing the defence forces as a full time career and serving the nation for her entire lifetime.

Taking into consideration all the above factors it can be fairly concluded that the role and contribution of women in defence forces can be easily at par with men, provided some bit of socio-political transformation is brought in. It won't be a distant reality to find women joining the Army, Navy and Air Force in larger numbers and protecting the country from internal or external threats in an equally efficient manner as men.

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13. If the work is an 'Artistic work', the location of the original work, including name, address and nationality of the person in possession of the work. (In the case of an architectural work, the year of completion of the work should also be shown).	:	N.A.
14. If the work is an 'Artistic work' which is used or capable of being used in relation to any goods or services, the application should include a certification from the Registrar of Trade Marks in terms of the provision to Sub-Section (i) of Section 45 of the Copyright Act, 1957.	:	N.A.
15. If the work is an 'Artistic work', whether it is registered under the Designs Act 2000 if yes give details.	:	N.A.
16. If the work is an 'Artistic work', capable of being registered as a design under the Designs Act 2000, whether it has been applied to an article though an industrial process and ,if yes ,the number of times it is reproduced.	:	N.A.
17. Details of any	:	

