

Impact of Armed Conflict on Environment in the State of Jammu and Kashmir: An overview

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“There are no ultimate winners in war - neither people, nations nor the planetary ecosystem. War is indiscriminate and can bring harm or destruction to life anywhere”(Australian Conservation Foundation,1996).Destruction of the natural environment has itself become a tactic of war. To protect the natural environment as one of our fundamental security needs, recognising that all species have a right to exist, that humans should only take what the natural environment can sustainably contribute to our life support system, and that nations should not assume that warfare and training for warfare justify environmental destruction (Australian Conservation Foundation,1996)

Armed conflict has multiple, long- and short-term impacts on development, and on environmental and human well-being(Saundry,2008).Conflict undercuts or destroys environmental, physical, human and social capital. It results in the loss of lives, livelihoods and opportunity, as well as of human dignity and fundamental human rights. Livelihoods are directly affected through decreased access to land, and inadequate access to natural resources, as a result of exclusion, displacement and the loss of biodiversity and trigger new tensions and conflict over critical resources, such as water or food(Saundry,2008).Each injury to the environment accumulates and interacts with all the other injuries, the welfare of future generations is endangered(Edie,2002).Generally, one of the most robust findings in the quantitative conflict literature is that impoverished and institutionally weak countries, usually measure by low GDP per capita, have an exceptionally high risk of armed conflict and civil war (Urdal,2008).

Environment represents the hope and future of every society. Destroying the environment means destroying the society itself. There are a number of wars in which attempts have been made to annihilate the enemy by assaulting the environment (Maliviya,2001).

Military activities place a number of stresses on the physical environment, but their contribution to over-all environmental deterioration has not received its share of attention (Edie,2002).The upcoming World Summit on Sustainable Development ("Rio+10", Johannesburg, August 2002) opens up an important opportunity to bring the military dimension into the ongoing dialogues on development, the environment and human security(Edie,2002).Aware that the consequences of military action on the environment are sometimes more disastrous than the war operations themselves and that the means employed should never be disproportionate to the desired military objective. Noting public outrage at images broadcast by the media at the end of conflicts highlighting damage to the ecosystem that hinders the resumption of human and economic activities and makes political stability harder to achieve.Regretting that assessment of the impact of armed conflict on the environment is not yet considered a fundamental notion to be taken into account in the implementation of defence policies in both countries(India and Pakistan) (Silvestri,2008).In this article it tried to highlight the issue of Armed conflict on Environment in the Jammu and Kashmir and also the plight of wildlife in the region.

Jammu and Kashmir:

“A study by the scientific journal 'Conservation Biology' has raised alarm bells with its findings that 80 percent of the world's major armed conflicts from 1950-2000 have occurred or are occurring in the most biologically diverse and threatened places on the earth. The study points out 34 bio-diverse hotspots in the world and one among them is the Himalayan region with its multiple conflicts - Afghanistan, Kashmir, Tibet and North-East India”(Kashmir Times,2009). Armed conflict remains a critical concern in many parts of the world and it is an also very serious problem in parts of Jammu and Kashmir today. The conflict has wrecked havoc on the forests and water resources of Jammu and Kashmir. Though there may be other reasons for the threat to the environmental degradation of the Himalayan region including Kashmir, the two decade long conflict has only doubled up the speed of destruction. The highly militarised space

has not only usurped agricultural lands and residential areas, it has also taken a heavy toll of the forests (Kashmir Times,2009).

Kashmir is located in the heart of south-central Asia amongst the most populace countries of the world. It shares a border with China, Afghanistan, India and Pakistan. Kashmir once known as "paradise on earth," and home for many species of rare and endangered wildlife and wildlife reserves. Some species so rare they existed only in Kashmir (Crook,1998, Pervaiz,2009) but it has been affected by many years of war (Shambaugh,et al,2001,Pervaiz,2009). The conflict between the military and the militants in Kashmir is indirectly contributing to the increase in the number of man-animal conflicts (Pervaiz, 2009).



Map of Jammu and Kashmir - Source: (Crook, 1998).

Kashmir has many problems with its environments stability (Crook,1998) and has had grave social, economic and environmental impacts (Saundry,2008). The India-Pakistan armed conflict has greatly disturbed the flora and fauna of the region since the mid-eighties when the icy heights were first militarized. Besides, the huge pressure of the soldiers on both sides is fast reducing this

glacier, which is a major source of water of the Indus river to just a trickle at many place (Kashmir Times,2009).While the human toll as a consequence of the militancy in Jammu and Kashmir is well known, little is known about the wildlife plight and environmental situation in the valley. Army and paramilitary forces have set up camps in forests to target militants hiding in the area. Often, wildlife is target of the combat(Shambaugh,et al,2001). Wild life species are now quickly falling victim to the desolation which has encompassed much of this piece of land.

The effects of military action in Jammu and Kashmir in terms of toxicity or other hazards pose a problem during the conflict.It is very true that environmental protection is not foremost in peoples' minds when human lives are at stake, it is essential to give thought to the environmental repercussions of military intervention both Indian and Pakistani military forces, which in certain cases can be even more catastrophic than those of the war operations themselves in terms of the devastation of ecosystems and infrastructure, contamination of soil and disruption of agricultural cycles, and the resulting famine, drought, displacement of populations and political destabilization (Silvestri,2008).

It is of particular concern in Jammu and Kashmir, which has experienced three wars since 1947 and still continues conflicts between India and Pakistan on the line of control. This conflict is driven by a variety of motives with a wide range of contributing factors, among them ideology, access to resources, ethnicity, religion, greed, distribution of power between India and Pakistan., This conflict is driven by some combination of these factors in these weak states, and also lack of leadership. Moreover, these conflicts are usually fueled by patronage systems and the hegemonic desire of political elites or military strongmen to control and exploit valuable natural resources(Shambaugh,et al,2001).

During this continue armed conflict, an armed and lawless society can have both direct and indirect impacts on the environment. These impacts occur for subsistence, strategic, or commercial reasons, and often have political, social, and economic root causes. The main impacts of armed conflict on the environment occur through habitat destruction and loss of wildlife, over-exploitation and degradation of natural resources, and pollution(Shambaugh,et al,2001).

Due to human movement in the forests and the fencing of the LoC, the natural habitat of the wild animals has got disturbed; this is one of the reasons that they stray into human settlements (Pervaiz,2009).The relationship between environmental devastation and armed conflict has only come to the awareness of public opinion over the last few decades but region of Jammu and Kashmir lacks this(Silvestri,2008).At this time there is no effective legislation in force to prevent environmental and ecological damage which is being inflicted upon the natural resources of these beautiful Himalayan region by the presence of military forces and constant fighting(Crook,1998).

Wildlife Plight:

The wildlife population throughout the valley is rapidly declining because of extensive areas of deforestation resulting in the loss of natural habitat for wildlife. For the past seven years widespread use of high velocity rifles by security forces in villages and forests surrounding the Himalayan Valley in their pursuit to apprehend the Kashmiri Freedom Fighters, have further added to the total loss of specie lives lost in an already precarious situation(Crook,1998).

Rare species like the Snow Leopard frequently hunted by military officials and poachers for its precious skin and teeth has now almost become extinct. Similarly, the world famous Kashmiri Otter are now rarely seen in the valley (Crook,1998).The massive deployment of Indian and Pakistani armies on the borders of Kashmir in 1947, resulted in large scale poaching as the troops living in the border areas indulged in killing rare species like the Ibex, Blue Sheep, Urian, the big horned sheep, Antelope and Snow Leopard. At first, the soldiers were killing the animals for food needs but when the poorly paid soldiers realized how valuable the animal furs and skins were, in the international markets, they started to slaughter the Kashmiri animals with much greater zeal. The consequence has been that some of the rare species like the Snow Leopard, Flying Squirrel and Long Tailed Himalayan Marmot have been pushed to being on the verge of extinction. Barking Deer, Cheetal, Nilgai, Musk Deer, Himalayan Black Bear, Shapu, Ibex, Blue Sheep, Marmot and Lynz may soon become extinct if their unrestricted slaughter is not checked(Crook,1998).

Over 300 species of birds which included Pheasants, Quills, Partridges, Vultures, Kites, Eagles and a large number of colorful birds, all of which use to reside in the lush forests of Kashmir have virtually disappeared. Today those forests stand naked and void of any visible sign of bird life. Along with loss of forest, Kashmir has also lost a number of wildlife sanctuaries. A rich variety of birds, Ducks, Geese, Cranes, Crows, Terns and water-fowls however still nest in the wetlands, lakes and streams in Kashmir (Crook, 1998). According to Pervaiz, 2009 “in the winter of 2006 a frenzied mob burnt a bear to death in a hamlet of Kashmir's Tral township. Over the last few years there have been many such incidents where people have tried to capture the animals or kill them”. Endangered or vulnerable species can also be directly affected by landmines. In some cases, landmines have even been used by poachers, as a field of mines can kill or wound an entire herd of animals. Conflict may also have negative impacts on biodiversity in neighbouring countries (Saundry, 2008).

Habitat Destruction:

Habitat destruction and the accompanying loss of wildlife are among the most common and far-reaching impacts of conflict on the environment in Jammu and Kashmir. Habitats are sometimes directly affected during armed conflict. Vegetation may be cut, burned, or defoliated to improve mobility or visibility for troops. With habitat destruction, certain plant and animal species may become locally threatened, or even extinct. Naturally when large numbers of displaced people (refugees) are migrated from Line of Control and temporarily resettled in Azad Kashmir, they often clear away vegetation, to farm and to obtain firewood—practices that swiftly lead to deforestation and erosion (Shambaugh, et al, 2001). The displacement of people is a major social and economic cost of serious conflict, in the short term as well as in post-conflict periods (Saundry, 2008). Displacements of people also have direct impacts on receiving communities and countries. The burden placed on local infrastructure such as schools, hospitals and sanitation facilities may be considerable and difficult to bear (Saundry, 2008). Some of the environmental problems associated with landmines in Kashmir include: habitat degradation, reduced access to water points and other vital resources, species loss, alteration of the natural food chain, and additional pressure on biodiversity. When landmines are found they undermine the tourist trade and affect the ability of managers and others to do their work (Saundry, 2008).

Over-exploitation of natural resources:

Steadily decreasing forest cover in Kashmir, a result of legal and illegal logging operations and human encroachments into the forest, is a direct cause for increasing encounters between humans and animals (Pervaiz,2009).The combined effect of deforestation and mismanagement of water resources has resulted in soil erosion which is responsible for frequent flash floods now seen in the state of Jammu and Kashmir (Crook,1998).Environmental stress is a cause and effect of political tension and military conflict between India and Pakistan in the region and they fought to assert or resist control over natural resources of Jammu and Kashmir. If this conflict continue these resources become scarcer (Edie,2002).

People around the world are displaced where the military take over land (and bodies of water) that the local residents need to live on or feed from, for use as bases, target ranges, weapons stores, training grounds etc.Because of this of political instability local people often cannot grow basic crops especially on the line of control. For their survival, they are increasingly forced to depend on wild foods such as bushmeat and wild food plants. At the same time, displaced people usually collect firewood, food plants, and other natural resources in the areas they have moved. Such exploitation on a large scale may be unsustainable even in the short term. The situation may be made worse if these people lack local knowledge of optimal resource management practices. When displaced people return to their homelands, moreover, they are often forced to rely heavily on natural resources until they can re-establish their normal livelihoods, including agriculture. In addition both in Indian Kashmir and Azad Kashmir, humanitarian organizations themselves often use excessive amounts of local wood for construction (Shambaugh,et al,2001).

Armed conflict can have very different effects on timber production. The opening of new roads in remote forest areas permits the expansion of illegal trade in bushmeat; while logging methods often reduce biodiversity and have a major impact on the livelihoods of poor, resource-dependent communities(Saundry,2008).

Pollution:

According to Edie,2002 “The world's military forces are responsible for the release of more than two thirds of CFC- 113 into the ozone layer”. Another serious environmental impact of armed conflict is pollution. Pollution can take many forms, and can result directly from actions by

military or other armed groups, as well as indirectly from the human and economic crises created by conflict.

During continue conflict in Jammu and Kashmir, burning oil, leaked oil products and chemicals into the rivers, spreading extremely dangerous substances into the environment. Biodiversity sites were hit. This pollution can be serious and posed a threat to human health (Edie, 2002). Hundreds of thousands of anti-personnel landmines litter the fields and mountain passes. Military activities often involve the use of fuels, explosives, solvents and other toxic substances. When improperly handled or stored, they can seep into the environment and affect nearby communities. Military exercises often damage farmland and other property, as heavy military vehicles travel over small roads and bridges (Edie, 2002).

In refugees camps in Azad Kashmir displaced people often find themselves living in conditions so overcrowded that they become a significant source of potential pollution. In their need to subsist, the displaced may pollute surface water; in their flight, they may bring infectious diseases. The latter concern threatens not just the health of human populations but also that of the indigenous wildlife (Shambaugh, et al, 2001).

Pollution of rivers and lakes also occurs when human bodies are deposited in them and decompose, as occurred during . Pollution may sometimes be exacerbated by humanitarian agencies operating in the field during a refugee crisis. Because the primary objective of humanitarian operations is to improve the welfare of refugee or displaced populations, environmental considerations may fall by the wayside. One common consequence is that the facilities and infrastructure in some refugee camps may not meet long-term requirements for protecting the environment. Poorly placed or badly designed latrines or medical facilities may contaminate water or soil. In some cases, the environmental impacts of these practices do not become apparent until well after the camps are dismantled (Shambaugh, et al, 2001).

Impacts of conflict on urban areas:

Conflict can have a distorting affect on settlement and production systems, making a bad situation even worse. Increased urbanization can be a factor. A combination of these war-related factors in Kashmir resulted in rapid and unplanned urbanization. Infrastructure deterioration is particularly significant, due to a loss of investment as well as a reduced ability to maintain these

structures. This has implications for health, communications, education and overall well-being(Saundry,2008).

Vicious circle of conflict, environmental degradation, and poverty:

Depletion of biodiversity and the natural resource base because of armed conflict can weaken the chances of lasting peace and sustainable livelihoods for a region's longterm residents. Although conflicts may start for other reasons, there is a risk that resource depletion and environmental degradation can drag a region into a vicious circle: poverty, further political instability, more armed conflict, greater environmental degradation, and even greater poverty. In many cases, natural resource scarcity and environmental degradation may be more accurately understood as symptoms of larger societal problems, rather than as direct causes of conflict itself (Shambaugh,et al,2001).

Further political, social, and economic aspects:

Current armed conflicts between two nations has fragmented societies, disrupt traditional natural resource management systems, divert resources away from development and conservation, and lower the priority of conservation in general. The conservation sector has relatively little experience in dealing with social, economic, and political issues in armed conflict situations and earthquake disaster has also paralyzed society. If conservation is to remain effective during and following times of conflict, however, conservation organizations must understand the broader context in which they are working, assess how this context hampers their effectiveness, and apply this knowledge to the design, implementation, and management of their activities(Shambaugh,et al,2001).

Armed conflict impacts are so swerve and on a larger scale, national economies can collapse for a wide range of reasons, including disruption of trade, loss of outside investment, and loss of tourism revenue. This economic vacuum may swiftly be filled by new illicit trade networks, as various actors exploit natural resources to boost the economy and, often, to finance conflict. In sum, armed conflict often reduces access to resources for many, increases access (often illegal) for a few, and creates a new array of winners and losers(Shambaugh,et al,2001).

Spread of HIV/AIDS:

In this regions people are more at risk of HIV infection, through the presence of armed forces and from social dislocation and insecurity. The breakdown of social structure and legal protection results in more transitory sexual relationships, involving more partners. Rape is often used as a weapon of war. Women and children may be forced to turn to prostitution when normal livelihood activities become impossible during conflict. HIV education and preventive means during sex are often lacking for both the general population and the armed forces. HIV infection rates in military and peacekeeping forces tend to be up to five times higher than in the general population and much higher during conflict. The increased spread of HIV due to conflict can have serious consequences for the environment (Shambaugh,et al,2001).

Recommendations:

During wars and human crises, the high degree of dependency on natural resources of most communities in Jammu and Kashmir makes it essential that the environment remain a high priority(Shambaugh,et al,2001).

Glaring evidences of destruction and vandalism of the environment in Kashmir need to be taken up more seriously. The cost of each conflict, especially in regions of immense bio-diversity, is too immense to be ignored. The depleting water resources and the forest cover, which are crucial to life are a collective inheritance of humankind and so there is dire immediacy to resolve disputes that are taking a heavy toll of this wealth (Kashmir Times,2009).

- While international fora on the environment and development have touched upon the military dimension, it has not been fully addressed(Edie,2002) .Reconstruction efforts of the United Nations agencies and non-governmental aid organisations are not yet adequate to cope with the effects of armed conflict on the environment and there is great need to highlight and address this issue.
- Both India and Pakistan s` governments should make a serious commitment for their armies to comply - in peacetime and in wartime - with international standards designed to safeguard natural resources.

- Parliaments of both countries should provide the impetus in this context of legal uncertainty and encourage the adoption of more highly developed standards regarding responsibility, including criminal responsibility, for the environmental consequences of conflicts.
- Promote constant awareness of the need to oblige military planners to assess the impact of armed conflict on the environment(Silvestri,2008).
- Take every opportunity to this end offered by parliamentary procedures during debates on defence budgets and the deployment of troops in international operations.
- Take legislative initiatives in order to clarify the conditions for applying legislation, in peacetime and in wartime, to military actions(Silvestri,2008)..
- Submit proposals to the international organisations of which they are members to the effect that advance assessment of the environmental consequences of military action should become the norm for military staff and academies(Silvestri,2008)..
- It is of course more difficult to assess the environmental impact during a conflict in Jammu and Kashmir, because all operations have an element of uncertainty and the needs of the moment may call for the use of different weapons or tactics that may cause unforeseeable damage. The rules of warfare cannot rule out all damage to the environment but should aim, realistically, to limit it to a level deemed tolerable under the circumstances. Clearly it is more difficult to follow a precise methodology during the acute phases of a conflict, but it is necessary to stand firm during military action as regards the ultimate objective of the proportionality of the means to the ends(Silvestri,2008).
- Environmental awareness and training of armed forces is very important, an exercise involving an environmental impact assessment.
- Legal instruments would provide a good basis if they were properly applied. (Silvestri,2008).
- In addition to understanding the impacts of armed conflict on the environment, it is critical to appreciate the broader political, social, and economic context within which conservation is taking place, and how this influences the distribution and use of natural resources and affects the ability of conservation organizations to work effectively in an area(Shambaugh,et al,2001).

- Recognizing the nature of these armed conflicts is an important first step in understanding their impacts, both on local populations and on the environment that supports them, and in developing mitigation strategies. In order to develop such strategies, it is important to first understand the impacts of these conflicts and the consequences they hold both for conservation and for the broader political, social, and economic context (Shambaugh, et al, 2001).
- "Green Beret" corps of military forces assigned to the UN for rapid response to ecological disasters, including war (Edie, 2002).
- The environment itself should not be used as a weapon. Destruction of large areas of natural habitat or the poisoning of waterways, for instance, should be prohibited. The use of environmental modification techniques, that is, any techniques for changing, through the deliberate manipulation of natural processes, the dynamics, composition or structure of the Earth, including the biota, lithosphere, hydrosphere and atmosphere, or of outer space, should be banned (Australian Conservation Foundation, 1996).
- Weapons that destroy the environment or make it uninhabitable should be banned. Whilst it is recognised that most weapons have some damaging effect on the environment, a clear threshold should be defined at international law, so that weapons whose impact is likely to cause destruction beyond this threshold could be outlawed. Such a ban should include research, testing, possession and use of nuclear, chemical and biological weapons (Australian Conservation Foundation, 1996).
- Attacks on infrastructure or installations that result in pollution, the release of poisonous substances or radioactivity be prohibited. Such infrastructure should be clearly marked and identified in accordance with international law.
- National parks and areas of special ecological significance should be declared demilitarised zones and protected by international law.
- An international agency should be established to ensure protection of the environment in times of armed conflict. This should preferably be a part of the United Nations Organisation. It should have the powers to prosecute nations, organisations and individuals for crimes against the environment committed during armed conflict. It should also have the ability to monitor activities of combatants, to ensure compliance

with international law, and to secure compensation where there has been a breach(Australian Conservation Foundation,1996).

- All military personnel should be educated in international and national 'best environmental practice' and environmental legal requirements. Military manuals should contain clear instructions in this regard. Offences should be punishable by both military and civilian courts.
- Military activities should not take place on land held or claimed by indigenous people without prior consultation and fully informed agreement; and where their land is presently under military control and until it is restored and returned, respect for their culture and rights should be shown.
- A national taskforce should be set up to establish clean production standards and life cycle analyses for all military equipment, whether manufactured in the region or imported. It should seek ways to avoid the production of toxic wastes, the dumping of wastes and the unacceptable disturbance of the environment wherever required raw materials are extracted, equipment is used, or worn-out or obsolete equipment is discarded. The taskforce should include representatives of environmental agencies and organizations (Australian Conservation Foundation,1996).
- Wildlife authorities should issue advisories to the citizens to try and minimise chances of conflict with the wild animals and have supplemented it with a number of guidelines for them to follow (Pervaiz,2009).

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