

FOREST RESOURCES IN KASHMIR: CRISIS AND IMPACT ON WOMEN

Zahoor Ahmad Shah

Research Scholar Department of History, University Of Kashmir Srinagar (India)

ABSTRACT

Kashmir is predominantly a rural area and larger part of the population depends on traditional sources of energy like fuel wood. The Yar or Kairu (Himalayan blue pine) furnishes the people of higher villages with light, every house stores up a quantity of Pine shavings which are made into excellent tortures, called 'lashi' locally. Due to deforestation the rural women are facing shortage and scarcity of fuel wood. The women have to travel a long distance in local forests to procure fuel wood, which affects their health and consumes much of their time which in turn affects their domestic life. Women play an important part in local cottage industries, arts and crafts etc. In crafts like kangri making and basket making women play an important role from raw material collection to the completion of the craft.

The present paper shows that the women in rural Kashmir depend on forest resources in a number of ways. It also throws light on the obstacles faced by women while accessing the forest resources. Moreover focus has been laid on the forest resource crisis and its impact on women. At the end of paper some suggestions has been made.

Key words: *Crisis; Forests; Kashmir; Resources; Women.*

I. INTRODUCTION

The word Forest is derived from the Latin word "foris" means 'outside' (may be the reference was to a village boundary or fence separating the village and the forest land). Today a forest is any land managed for the diverse purpose of forestry, whether covered with trees, shrubs, climbers etc. or not. Technically forest has been defined as an area set aside for the production of timber and other forest products, or, maintained under woody vegetation for certain indirect benefits which it provides. The hilly state of Jammu and Kashmir comprises of three regions viz Kashmir Valley, Ladakh and Jammu. The state lies in the extreme north of the country and shares International boundaries with Pakistan, Afghanistan and China. The state has a geographical area of 101,387 Sq.kms. It lies between 32°17' and 36° 05' N latitude and East to West, the State lies between 72°31' and 80° 20' longitude. The population of the state is 12.55 million (census 2011) which constitutes 1.04 % of the country's population. Of this the rural population is 72.79 % and urban population is 27.21 %. The population density is 124 per sq.km. The livestock population is 10.99 million (livestock census 2007).

The recorded forest area of the state is 20,230 Sq.kms which is 9.1 % of the geographical area. Reserved Forests constitute 87.21%, protected forests 12.61% and un-classed Forests 0.18%.

Out of the total forest area, 12066 Sq.kms are in Jammu, followed by Kashmir with 8128 sq.kms and Ladakh with only 36 Sq.kms. Kashmir has 40.17%; Jammu region has 59.64%, while Ladakh region has 0.17% area under forest cover.

Kashmir is a land of lakes, rivers and forests. For its beautiful meadows, fresh water lakes and terns, the valley is celebrated all over the world. The valley of Kashmir has a good forest endowment. The rich forest resource base of the valley contributes significantly to the economy of the state. Next to agriculture, forests yield substantial annual Revenue. They have well and truly been described as the “Green Gold” of the state.

Apart from fuel wood and raw materials for crafts, rural women in Kashmir procure many vegetables, fruits and herbs from the forests. But due to deforestation and over-grazing the vegetables previously found in abundance have become rare now. The uncertain political conditions, terrorism, frequent search operations launched by Army in forests have developed a sort of fear psychosis among women which prevents them from going to forests to procure vegetables and other things. Women also play an important role in rearing cattle. They collect fodder for the cattle from forests and have to arrange water for cattle. But due to deforestation and other reasons it has become tough for them to collect fodder and arrange water for cattle as the Water resources are drying up and the women have to cover long distances to get water for cattle and other domestic purposes like drinking, bathing and washing of clothes. The crises have affected the personal life, social life and economic life of women to a great extent.

II. FOREST RESOURCES OF KASHMIR

The forests of valley produce multiple products beneficial to people and State alike. Benefits derived from forest resources are both direct and indirect. Direct monetary benefits include revenues from royalties and proceeds from the sale of major forest products which include timber, medicinal plants and herbs. Indirect monetary benefits include wages resulting from employment to thousands of persons in the forest industry, taxes on business profits and earnings. Non-monetary benefits include role of forests in checking soil erosion and excessive run off from hill slopes, climatic features, and aesthetic values, faunal and floral habitats.

Over 19,236 Sq.kms. is under coniferous soft wood (pine) and 946 Sq.kms. is under non Coniferous soft wood. In the Coniferous category, fir accounts for 3355 Sq.kms. Kail for 1874 Sq.kms. Chir for 1773 Sq.kms. and Deodar for 1,122 Sq.kms.

The big forests in the valley provide timber and fire wood. Grass meadows in the forest provide fodder for the cattle. Medicinal herbs such as balladonna, hyoscyamus, artemisia, labiate, allium, peganum harmala, viola Serpens, macrotomia benthami etc.

The forest resources found in Kashmir may be discussed briefly as,

2.1. Trees, herbs and Shurbs

The trees found in the Forests of Kashmir are, deodar, fir, pine, Spruce, yew, alder, walnut, Willow, poplar, Chestnut, hawthorn, yew, maple, birch, witch Hazel, spindle tree etc.

All the above mentioned trees provide fuel for fire wood, charcoal, fodder for cattle, wood for construction purposes, material for making agricultural implements, for making baskets, kangri (fire pot) etc. The best of all timber is that produced by the deodar. It is much in request for houses, boats and bridges, and it seems to be impervious to water. The old shrines, some of great old age, are made of deodar. Young deodar poles “hamatola” are much sought after by the boat men for polling purposes, and in former days the hop gardens

were supplied with deodar poles. From the roots of deodar a resin is distilled, used by the herdsmen as an ointment for buffaloes. The wooden mortars (*kanz*) in which paddy is husked are usually made of deodar.

The blue pine (*yar* or *kairu*) is much valued as a timber for house building. The white resin of the pine (*kanglan*) is used by the natives as an application to wounds and for medicinal purposes, and from the roots of tree a kind of black pitch is distilled known as *kilam*. Men who work in the rice fields anoint their legs and arms with *kilam* in order to protect themselves against the *kirza*, or water insects, which are troublesome. The *yar* furnishes the people of higher villages with light, and every house stores up a quantity of pine shavings which are made into excellent torches (*lashi*).

The *poh* supplies a good hard wood for the pestles (*mohl*) with which rice is husked and Elm provides an esteemed food for buffaloes.

The wild and indigenous walnut of the forests yields a nut which by boiling is made to yield oil. The walnut wood is much valued and greatly in demand for furniture purposes.

The industries like paper and pulp, joinery, sports goods, furniture, boat industry, wood carving, herbal drugs, match boxes etc. depend on these forest trees for raw materials.

2.2. Herbal plants

The forests of Kashmir are treasure houses of herbal plants which are highly valued.

Some of the important herbal plants important from medicinal point of view are; *Saliva* sp., *Labiata*, *Artemisia*, *peganum Harmala*, *viola Serpens*, *macrotomia Benthami*, *Euphorbia Thomsoniana*, *Corydalis Falconeri*, *Hyoscyamus niger*, *Aconitum heterophyllum*, *Berberis Lycium*, *platanus Orientalis*, *Saussuera Lappa*, *Astragalus* sp., *Gramen*, *Salix* sp, *Euphorbia* sp., *Mentha* sp., Condiments, *Daucus Indica* , etc.

The above cited herbs and herbal plants are found in forests of Kashmir and are highly valued. All of them are used locally in day to day life in rural areas. People attribute great value and medical effects to these herbs. Walter Roper Lawrence writes in his *Magnum Opus*, "The valley of Kashmir", "The Kashmiri people turn nearly every plant and tree to some use, and attribute medicinal properties to every growing thing". *Saussuera Lappa* as a medicine has many properties, tonic, aromatic, and stimulant, and it is used in cough, asthma, fever, and dyspepsia and skin diseases. It is also an excellent remedy for preserving clothes from insects, and is much used in perfumery. The plant is currently under state control and its extraction is strictly prohibited.

2.3. List of chief herbal plants found in Kashmir forests. Table 1

Scientific name	Kashmiri
<i>Aconitum heterophyllum</i>	Patis or Nar-Mada
<i>Hyoscyamus niger</i>	Bagar bang
<i>Macrotomia Benthami</i>	Gao zaban
<i>Viola Serpens</i>	Banafsha
<i>Artemisia</i>	Tetwan
<i>Peganum Harmala</i>	Isband

Berberis Lycium	Kaodach
Saliva sp.	Sholra
Labiata	Brari gasa
Saliva sp.	Janiadam
Aesculus Indica	Hanak dun
Malva rotundifoila	Sutsal
Pyrus Cydonia	Bamtsunt
Rhododendron Campanulatum	Punda Nast
Astragalus sp.	Gagar Kund
Gramen	Gurgas

2.4. Fruits and vegetables

Walter Roper Lawrence writes in his Magnum Opus “The Valley of Kashmir”, “Every hundred feet of elevation brings some newphase of climate and vegetation.” Lawrence further writes, “The Kashmiri people always speak of the wild fruit as bears food (Hapat kheun) but the wild food is not despised and people eat the apples and pears obtained from the forests”.

The fruits and vegetables procured from the forests of Kashmir are; walnuts, Apple, pear, thistles, nettles, the wild chicory, the dandelion, Capsella Bursa-pastoris , Umbellifer, Barbara sp., Rumex, wild onions, ,Rheum, Campanula sp., polygonum sp., Dipsacus inermis, Campanula sp. ,in fact Writes Walter Roper Lawrence, “every plant which is not poisonous goes into the cooking-pot of Kashmiris”. The bark of the yew, *Taxus baccata*, not long ago, when tea was a luxury only enjoyed by the few, was regularly used by the Kashmiris in the place of tea. In the famine the bark was ground into flour and was consumed by the people.

Hydnum coralloldes and *Agaricus Flammans*, known to the people respectively as *kahokhur* and *Silri* or *siriri*, are highly thought of by the natives. *Agaricus Flammans* is only found on the bark of the elm, while *Hydnum coralloldes* affects rotten wood and the burnt hallows of *Pieca Morinda*. Of the ferns the *ded* is dried and eaten in the winter.

The wild apple and pear can be obtained with ease from the forests on the slopes of the hills surrounding the valley, and the Kashmiris have for generations brought down the wild stock from the hills and planted it in orchards.

2.5. The table shown below shows the list of chief indigenous plants which grow wild in Kashmir and yield an edible fruit. Table 2

English name.	Botanical name.	Kashmiri.
Raspberry	<i>Rubus nivenus</i>	Chanch.
Blackberry	<i>Rubus fruticosus</i>	Dhan chanch.
Black currant	<i>Ribes nigrum</i>	Hargil.
Bird cherry	<i>Prundus Padus</i>	Zumb.
Barberry	<i>Berberis Lycium</i>	Kaodach

Hazel	Corylus colurna	Virin.
Guelder	Viburnum foetens	Kulmanch
Strawberry	Fragaria vesca	Ingra.

III. FOREST PASTURES: FODDER AND GRASSES

The pasture areas of Kashmir are extensively used for grazing. Walter Roper Lawrence Writes in his book the valleys of Kashmir, "In most villages cattle-breeding is carried on, the shir gujri, or milk sellers, have cows with a strain of Punjab blood."

As summer approaches all the cattle save the requisite plough bullocks and the cows in milk are driven to the high mountains, where they obtain excellent grazing, returning in the autumn to the stubbles.

Every effort is made to collect fodder for the winter. Rice and maize straw is the cheap fodder, but a large quantity of hay is also laid by. In the rice villages the boundaries of the fields give a grand crop of hay, which is carefully cut, dried, and twisted into ropes. These ropes are suspended from trees and remain dry and uninjured by the winter snow and rains. The best grasses are the *Bren, jab, batakkluit (Clover), and methi*. Besides the grasses the leaves of many trees are carefully collected. The mountain willow and poplar, the Cotoneaster and hawthorn, all yield valuable fodder.

In the summer the swamp grass *nari*, and *khur*, is excellent fodder for milch cattle, and in the winter rice straw and rice husk mixed with starchy rice water are said to increase the yield of milk.

Kashmiris in rural areas rear sheep in abundance. They are the important source of income and employment for the people living in rural areas. During summer season the Shepherds took the sheep to upper ranges for grazing. When autumn has arrived, writes Walter Roper Lawrence, and the sheep have eaten their fill of the sweet mountain grasses, the Chaupan (shepherd), with the dejected air, descends to the valley, where clamorous clients await him, and then Greek meets Greek, and haggling commences about the loss of sheep and the Shepherd's wages, which take the form of grain. Lawrence writes that a tax of two annas per sheep is taken by the state. Lawrence again writes that a tax of thirteen chilki rupees is levied per hundred sheep. This tax (zar-i-chaupan) is collected as the flocks (ramba) pass up to the mountain pastures. Sheep produce excellent wool which is an important raw material for shawl weaving industry. The continuous and intensive grazing has deteriorated the status of these grazing areas to a great extent. A recent survey on Kashmir and Pir Panjal showed that the species which contribute to the protein rich forage flora are on decline and are being replaced by less edible and evenobnoxious weeds in some of the prominent. In the sub line pasture slopes and plains the poisonous grass, *Stipasibrica* is spreading alarmingly. Similarly the presence of *scenarioChrysan* and *Rumex Sp.* in alpine banks is reducing the grazing area. In many of the pasture areas surveyed the spread weeds *Cadranutans*, *Euphorbia willichii*, needs to be viewed with concern, and warrants steps to be undertaken for their speedy eradication and check further spread. There is worst kind of degradation of pastures in Kashmir. This has resulted in poor pasture availability for all kinds of livestock in Kashmir valley.

There is, however, great potential for developing these areas into high yielding, improved pastures. Since the fodder deficiency for livestock feeding is felt in all the regions of the state, it is essential to find out suitable species of grasses, legumes, and fodder for different agro climatic zones of the state.

Rising of fodder trees and shrubs will help in enhancing the forage yield and availability during scanty period of the Year.

IV. FOREST RESOURCE CRISIS AN IMPACT ON WOMEN.

The Forests of Kashmir are facing acute crisis. Some of reasons like deforestation, Political uncertainty, terrorism, illiteracy and ignorance of rural population etc. are discussed and analysed below.

Deforestation is one of the major problems the Forests of Kashmir are facing right now. The uncertain political conditions, negligence of forest agencies, illiteracy and ignorance of local people are some of the important factors facilitating deforestation. Moreover forest fires caused both by natural and man-made factors damage forests on a large scale.

Due to deforestation the forest products like fruits and vegetables have witnessed a vivid decrease. Also deforestation has led to soil erosion which has made a large chunk of forests unproductive and bereft of vegetative cover. Moreover due to deforestation wild animals have witnessed a destruction of natural habitat and food.

Overgrazing and overexploitation of forests and forest resources is one more cause of deforestation. Due to increase in population of both animals and humans beings there is an extra pressure on forests. Overgrazing by livestock has far-reaching effects on Forests, such as loss of prosperity of soil, desertification of the previously fertile forest area.

Scarcity of wood especially fuel wood is also an important effect of deforestation in Kashmir as the major part of the population is rural dependent on trade sources of energy like fuel wood.

Population explosion and large scale construction and industrialization also effects forests as the pressure on forests increase day by day.

Terrorism and military operations are also affecting the Forests of Kashmir to a large extent. Illegal encroachments on forest lands also affect forests as the forest land and area is decreasing day by day.

A frequent search operation by Army in forests to locate militants does a lot of damage to the flora and fauna of the forests in Kashmir. The army at times resort to heavy shelling and firing which death of many forest trees and wild animals. It also cause great damage to vegetation and leaves the great chunks of forests denuded. Moreover it causes loss of habitation for wild animals which in turn gave birth to man animal encounters.

Uncertain political conditions and negligence on the part of the state has done a great damage to forests of valley. The forests of valley remained unguarded for years due to turmoil in the valley which gave a free hand to smugglers to cut forests in a ruthless way. Also corruption by forest officials and other state agencies led to gross destruction of forests in valley of Kashmir.

Illiteracy ignorance of rural population especially of Gujjars and Bakerwals is another problem increasing forest resource crisis.

4.1. Impact on women

Kashmir is a land of lakes, rivers and forests. For its beautiful meadows, fresh water lakes and terns, the valley is celebrated all over the world. Rivers and streams in the valley of Kashmir. Due to deforestation the rainfall is scanty, the Water bodies are drying, which causes lot of trouble for rural women in Kashmir as they have to travel a lot to procure water for drinking, bathing, washing clothes and for their cattle.

Larger part of the population in Kashmir is rural dependent on traditional sources of energy like fuel wood. The Yar or Kairu (Himalayan blue pine) furnishes the people of higher villages with light, every house stores up a quantity of pine shavings which are made into excellent torches, (lashi). Due to deforestation the rural women are facing shortage and scarcity of fuel wood. Also the women have to travel a far in local Forests to procure fuel wood which affects their health and consumes much of their time which affects their domestic life.

Women play an important part in local cottage industries, arts and crafts etc. In crafts like kangri making, basket making women play an important role from raw material collection to completion. The women would accompany their men and (sometimes alone) to the forests for collection of twigs of *parratopsis jacquemontiana* locally known as Posh Kaine which is an important raw material for making of kangri, baskets etc. But the material is very scarce and tough to find in forests today, so the women have to travel a far in forests which affects their health, domestic life and also endangers their life.

Moreover rural women procure many vegetables from forests. It would be wearisome to enumerate the various herbs which the Kashmiris eat as vegetables in the spring and summer; thistles, nettles, the wild chicory, the dandelion- in fact; every plant which is not poisonous goes into the Cooking-potof Kashmiris in rural areas. But due to deforestation the forests have witnessed soil erosion, decrease in forest products, loss of biodiversity, etc. Also due to forest fires and Overgrazing by cattle the fertile forest lands have lost prosperity of soil and have witnessed desertification. The vegetables previously found in abundance have become rear in present time. The women have to toil a lot to get these vegetables to feed their families. Also uncertain political conditions, terrorism, search operations by Army of forests have developed a sort of fear psychosis among which prevents them from going to forests to procure vegetables and other things from forests.

Women play an important role in rearing cattle. They collect fodder for cattle; they milk buffalo, cow, goat and sheep. Due to deforestation, water crisis, the women have to travel a far to get water and fodder for cattle.

Women play an important role in Agricultural and Horticultural sectors of economy. Women would go to forest to collect manure. The manure found in abundance is extremely beneficial for plants like paddy and vegetables domesticated at home in kitchen gardens. But due to current political uncertainty, terrorism, military search operations, increase in man animal conflicts, the women face lots of troubles in procuring such materials from forests. This badly effects the production and local economy in rural areas.

V. CONCLUSIONS AND SUGGESTIONS

Larger part of the population in Kashmir in rural areas is dependent on traditional sources of energy like fuel wood. The main source of fuel wood is the forests. The women in rural areas greatly depend on forests and forest resources as they are playing a pivotal role in domestic life. Their dependence on forests ranges from collection of fuel wood, raw materials for crafts like kangri and basket making, vegetable and fruit collection, fodder for the cattle, charcoal for winters etc. The resources previously found in abundance have become rare now. The scarcity and shortage of forest resources have become a grave concern for women in rural areas. There has been an immense increase in forest crisis due to many factors like deforestation, insurgency, terrorism, political uncertainty etc. Also the mass ignorance of rural population especially of Gujjars and Bakerwals is another issue of forest resource crisis, as this section of the population is damaging forests ruthlessly. Moreover the state negligence is one more factor paving way for forest crisis.

The suggestions made in the paper are mentioned and discussed below;

In frontier areas much of the forest is nominally owned by the state, but the reach of the government and the rule of law are weak and property rights insecure. In order for forest management to succeed at the forest frontier, all parties with an interest in the fate of the forest should be commonly involved in planning, management, and profit share.

Investment in research, education and extension should be raised. Training and education of stakeholder's helps people understand how to prevent and reduce environmental factors associated with deforestation and forestry activities and take appropriate action when possible. Research substantiates shit and helps to understand the problem, its causes and mitigation. This arena is lagging behind for paucity of funds and investments encourages this arena. There is a lack of knowledge and information in the general community about forests and forestry. Forest managers and those developing forest policies need to be comprehensively educated and need to appreciate the complexity of the interacting ecological, economic, social, cultural and political factors involved.

Presently the tremendous pressure for growing livelihood, industrial and development needs on the green cover, the sector need to be addressed on priority. It is, therefore important to focus on sustainable management approach and maintenance of environmental stability.

People in the rural areas must be encouraged for the use of renewable energy sources like solar energy.

More and more area should be brought under forestry. Increasing the area of forest plantation by using vacant or unused lands and wasteland, marginal lands especially as roadsides, on contours, avenues, bordering and land not suitable for agricultural production should have net positive benefit. Planting trees outside forest areas will reduce pressure on forests for timber, fodder and fuel wood demands.

The use of religion, teachings of great saints like the teachings of Sheikh Ul Alam the patron saint of Kashmir Ann posh Van posh (food is subservient to forests) should be made on large scale.

The presence of tribal people like Gujjars and Bakerwals from the Forestry point of view is to be regretted. These must be educated, motivated and even hired to work as forest guards.

Since the fodder deficiency for living stock feeding is felt in all the regions of the state, it is essential to find out suitable species of grasses, legumes and fodder for different agro climatic zones of the state. Rising of fodder trees and shrubs will help in enhancing the forage yield and availability during scanty period.

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