

## ROLE OF COMMUNITY IN SUSTAINABLE MANAGEMENT OF MAZRI FORESTS IN DISTRICT KECH OF MAKRAN (BALOCHISTAN)

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### Abstract

A study was carried out in 2008 to overview the sustainable management of Mazri in District Kech of Makran region in Balochistan province. Topography of the district is mountainous in its characters and lies between two important mountain ranges i.e. Makran coast range and Central Makran range. The objective of the study was to assess the present status and practices, market mechanism, dependence and perception of household engaged in Mazri products manufacturers and trade, and to propose the management strategy for better use of the resource through community participation in Mazri area of Kech district.

The study reveals that majority of the people have their own small size of lands which are economically not feasible under mechanized agriculture system and circumstances and force to Mazri leaves collection. Further 50% of the population owned uncultivated area which can be used for cultivation of Mazri to increase their income. Majority of population collects Mazri from their own, private and shamilat lands and not from land under control of Forest Department. There is no proper market mechanism, 86% of raw material is supplied in the market by the contractors. A Mazri plant can produce leaves for fifty years at an average yield of 10 kg per annum, but due to over exploitation, Mazri forests are decreasing at an alarming rate. About 66% of population generates annual income up to Rs.5000 from Mazri products.

### Introduction

Dwarf palm (*Nannorrhops ritchieana* (Griff.) Aitch. locally called Mazri and Pish is a hardy plant belonging to the family Palmae. It is a gregarious, tufted, and low growing palm (Mughal, 1992) and generally grows in low arid mountains up to 1524m. Champion *et al.* (1960) reported its availability over extensive areas in the dry northern and north western hills of West Pakistan. It requires moderate type of climate, though it can tolerate drought as well. Its leaves provide raw material for a number of home made products and the plant can produce leaves up to 50 years.

Mazri palm is found in the valleys of lower hills from 610 to 914 m, chiefly on sandy soil in depressions (Champion *et al.* 1965). In Khyber Pakhtoonkhwa, it is distributed in the areas of Orakzai Agency, North and South Waziristan, Kurran, Kohat, Hangu, D.I. Khan, etc. and in Balochistan, Loralai, Sharag, Abdul Khail and adjacent tribal belt of Suleman Range. In Punjab, it is distributed in Potohar areas. In Kohat division, it is distributed on an area of 24, 500 ha (Iqbal, 1991). Ayaz (1994) reported that Mazri leaves are used as raw material to support an important cottage industry. The products of Mazri commonly include ropes, baskets, mats, hand fans, shoes, date palm products packing and baan (cordage used in weaving across the frame of bed cots).

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Indiscriminate cutting for fuel and roofing purpose by local people resulted in depletion of the resource. The growth of this hardy shrub has greatly dwindled continuously for the last two decades. The existing Mazri forests are degrading with passage of time and production declining to meet the requirement of local people.

To take measures for controlling the deterioration of Mazri resource, bearing high socio-economic value, it is pertinent to determine the status of the resource and causal factors of deterioration and role of community. Therefore, the study was undertaken with the following objectives:

- i) Determine the status and current practices of Mazri in Kech district
- ii) Study the marketing mechanisms
- iii) To find out dependency and perception of household engaged in Mazri products manufacture and trade.

### **Material and Methods**

The study area was encompassing in district Kech (Balochistan) for survey of respondents engaged in collection of Mazri leaves and manufacturing of related household commercial products. To cover marketing side, the most established and flourishing markets of Hoshap and Turbat tehsils in Kech district were visited. The purposive sampling technique for selection of villages and respective respondent was adopted.

Keeping in view the size of target population 78 respondents in the study area were selected randomly. Thus in each village the available respondents related to Mazri harvesting or manufacturing were interviewed. A pre-designed questionnaire was used as survey tool for data collection from target population. The information regarding market was collected by unscheduled enquiries and question answer conversation with persons engaged in marketing of Mazri products in the district. Secondary data has been cited from various related literature including journals, books and forest working plans and other office records. The answers in questionnaires were coded and fed to EXCEL program of computer. The data were further analyzed and tabulated with the help of MINITAB statistical program.

### **Results and Discussion**

#### **Age**

The analysis of sample respondents data shows that majority (38.46%) falls in age group between 56-60 years. Almost equal number of respondents (33.33%) has age up to 55 years. The analysis revealed that most of the respondents were of old age and experienced.

### **Household Size**

The farming communities in rural areas generally have larger household size. The non-mechanized agriculture production process is commonly practiced because of availability of labor.

The analysis of the sample data indicates that majority (71.79%) falls in household size of 1-7 members. The second largest group of respondents (25.64%) belongs to size 8-15 members per household. Only few have family size above 15 members in the household. Due to limited working members, the households are not in a position to diversify their production processes and are bound to undertake traditional practices of production processes in the area.

### **Household Education Level**

The formal education plays important role in disseminating information and adopting innovative ideas and production processes to increase household income through different sources.

The analysis of sample respondent data indicates that majority (61.54%) households had at least one member educated beyond secondary school level. The second largest group of respondents (32.05%) had at least one member who was educated up to secondary school level. One can safely conclude that local population has the urge of educating their children but they cannot afford to send their children outside the area for higher education because of poverty and lack of education facilities in the locality.

### **Earning Members**

The number of earning members has direct impact on the economic status of the household. The analysis shows that majority of the sample population (52.56%) had 2 earning members. The 2<sup>nd</sup> largest group of the respondents (33.33%) had more than 2 earning members. The analysis revealed that few families had one earning member. The analysis pointed out that about one fourth of the sample population had earning members more than two. The results show that to survive in the rural area two or more than two earning members must be present in a household to have income for meeting basic necessities. That is why the household members struggle for secondary income generating production process such as collection of Mazri leaves, fuel wood etc.

### **Landholding Size**

In rural areas landholding is generally considered as a symbol of social status. The analysis shows that the majority of the population (71.79%) had landholding size up to 10 kanals. The second largest group of respondents (25.65%) had landholding of 11-20 kanals. This indicates that majority of the people have there

own small sizes of land which are economically not feasible under mechanized agriculture. One can safely conclude that the smaller landholding size of the sample population force them to look for other income sources such as Mazri leave collection while remaining near the home.

### **Cultivated Area**

Analysis of sample data indicated that majority (47.44%) have cultivated area of 1 – 10 kanals while 2<sup>nd</sup> largest group of respondents (28.21%) had cultivated area of 11 – 20 kanals. Only 10.26% of the sample household had no cultivated land. The shortage of cultivated area forces the households to look for other sources of incomes.

### **Uncultivated Area**

Wastelands or uncultivated are generally left to the nature where climatically matched and biotical resistant species are found growing in the area. The local people freely visit such areas for grazing their livestock, fuel wood collection and harvesting or Mazri leaves.

The analysis points out that 50% of the population owned uncultivated areas while 50% do not have any uncultivated area. One can easily conclude that almost half of the population possessing land falls in the category of having land that is agriculturally unproductive. This indicates that the land remains waste because of irrigation problems and low productivity under given circumstances. This wasteland can be used for cultivation of Mazri to increase production and generate income.

### **Collection of Mazri Leaves**

The poor and landless population of the study area is mostly engaged in sowing and harvesting of agriculture crops, home workers, daily labourers, collect Mazri leaves and hand interlacing of different products.

The data analysis unfold that majority population (78.21%) in the area engaged in the collection, manufacturing and marketing of Mazri products are the male members. Only a small portion of females (19.23%) of the poorest households is engaged in collection of Mazri leaves and interlacing while sitting within the boundary of their house. This indicates that cultural and religious restrictions rarely allow females to go out for marketing of their products. They generally bank upon either male members of the household or middlemen for marketing their products. Only 2.56% of the households had both the members involved in collection of Mazri.

### **Sources of Mazri Leaves**

It is generally believed that the people keep their resources intact and try to meet their needs from areas that are common properties and where access is free.

The data analysis shows that the majority of the sample respondents (100%) collect Mazri leaves from their own, private and shamilat lands. No respondents were collecting from designated forest areas under the control of Forest Department because there is no state forest in the study area. This unfolds that most of the people have their own lands where Mazri grows.

### **Demand of Mazri Leaves**

Analysis of sample data shows that the majority (96.15%) buys Mazri leaves either from local collectors or market. Only small portion of population (3.85%) does not buy Mazri leaves from the market and collects themselves from the adjoining areas.

### **Supply Sources**

Data analysis indicates that majority (71.79%) buys Mazri leaves from the local people or contractor and only 24.36% buy it from main market. This predicts that local people and contractor are easily accessible by the consumers or charge prices or provide Mazri leaves on credits.

### **Contractor**

The middlemen play important role in distribution of goods and services, particularly transportation of raw material at low rates and selling it at competitive prices. The analysis of sample data also indicate that majority (85.90%) of raw material is supplied in the market by the contractor. He is one who bears harvesting, transportation and other overhead costs to bring the Mazri leaves from place of growing to the market. Only a small portion of the sample population (14.10%) was composed of local people who were engaged in supply of raw material to the market.

### **Rotation for Leaves Collection**

The analysis of sample data pointed out that majority of the population (73.36%) was collecting leaves from the same area and plants after six months rotation period. Only small portion of sample respondents (25.64%) were collecting the leaves with rotation period larger than six months. By adopting shorter rotations not only the quality of produce declines but also there is ample chance of losing the desired increment put on by the growing stock of Mazri.

A plant of Mazri can yield leaves for fifty years and average yield annually is almost 10 kg. Demand for Mazri products is increasing, consequently Mazri forests are decreasing due to over exploitation at an alarming rate.

### **Income Level per Year**

The analysis of sample data indicates that the majority of population (65.95%) generates annual income upto Rs.5000 from their Mazri products. Only one

fourth of the population (25.64%) dealing with Mazri business was able to make income between Rs.5000 – 10000 per annum. The small number of people (6.41%) had income above Rs.10000 per annum.

### **Mazri Products**

The analysis of sample data specified that majority (53.85%) were engaged in manufacturing or selling of fans and ropes made up from Mazri leaves. Only one fourth of the sample population (25.64%) made baskets followed by 20.51% of the population dealing with all the Mazri products.

### **Hoshap Mazri Market**

Hoshap is the main market of Mazri raw material. It is situated on Turbat Punjgor Road about 120 km from Turbat City. This market was established in 1970 and spreads over an area of 25 kanals and almost fifteen persons have a claim of ownership on this area.

In the study area, cutting charges PKR 10/- per bundle, charges for owner Rs.20/-. These collectors collect it from far flung areas and mountains. They collect these Mazri leaves at a common place from where it is transported through tractors at a specified place/market. These tractors charge Rs.5 per km for 940 kg load.

The wholesalers from all over country come and purchase the required quantity of Mazri leaves and send it through trucks to Karachi. The wholesalers purchase the Mazri raw materials at Rs. 100 to Rs. 110 per 40 kg. The cost increases up to Rs.130 after including other charges. This purchase price includes various cost components i.e., transportation cost, permit, loading, unloading and the association commission/tax (Rs.1.40 and Rs.0.40 per maund on market at the rate of Rs.140 to 160 per maund (40kg).

### **Conclusion**

Locally growing Mazri is an important plant resource for the stability of local environment and uplift of the socio-economic condition of the local community. It provides raw material for cottage industry for manufacturing of a number of products including ropes, baskets, mats, hand fans etc. However, this valuable resource is under threat of degradation due to over-exploitation and indiscriminate cutting, whereas the other factors including; population pressure, encroachment of forest lands, exploitation by middlemen, improper marketing system are also contributing to degradation of this resource.

The Forest Department has to come forward for developing proper management system for Mazri in the field as well as marketing system for the benefit of local community.

## Recommendations

In line with the Government's Forest Policy of 2001, which emphasizes on the promotion of community and social forestry in the country, the department should ensure sustainable management of natural resources through community participation. Other recommendations are:

- Improved protection and management system of Mazri forest involving local community.
- Skill development of the community in innovative products of Mazri and other cottage industry.
- Training to communities through Village Based Organizations for sustainable management of natural resources.
- Income-generation of local communities through Mazri products, and other alternative sources.
- Development of scientifically based processes from harvesting of leaves to finished products of Mazri.
- Development of an appropriate and efficient marketing system in the business of Mazri raw material and its products.
- Proper advertisement and marketing of various products.
- Reduction in the use of fuel wood through introduction of fuel-efficient stoves and coal dust briquettes.
- To introduce alternative sources of energy in the area.
- Establishment of forest nurseries so that plants are made available for forest plantations to community at low prices.

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