

REPORT
ON
ARTISANAL AND SMALL MINES
OF
NEPAL
2005

AJOY KONAR

**WITH ASSISTANCE FROM DR KUNTALA LAHIRI-DUTT
AND
THE AUSTRALIAN NATIONAL UNIVERSITY, CANBERRA**

PREFACE AND INTRODUCTION

Nepal, officially known as the Kingdom of Nepal, is a constitutional monarchy in South Asia. Locked within the rugged ranges of the Himalayas, Nepal is bounded by the Tibet region of China on the north and India on the south, east, and west. It was cut off from the rest of the world until the early 1950s, when a palace revolution and the subsequent overthrow of the autocratic Rana dynasty marked the beginning of Nepal's emergence into the modern world. Kathmandu is the capital and largest city.

LAND AND RESOURCES

Nepal covers an area of 147,181 sq km (56,827 sq mi). It is divided into four topographical zones: the Great Himalayas, the Middle Himalayas, the Outer Himalayas, and the Tarāi. The highest zone is the Great Himalayas, in northern Nepal. Eight of the ten highest mountains in the world are located either wholly or partially in this area. These include Mount Everest (8,850 m/29,035 ft), Kānchenjunga (8,598 m/28,209 ft), Makālu (8,481 m/27,825 ft), Dhaulāgiri (8,172 m/26,811 ft), and Annapūrna 1 (8,091 m/26,545 ft).

To the south of the Great Himalayas are the Middle Himalayas, dominated in Nepal by the Mahābhārat Range, with peaks averaging less than 3,000 m (9,900 ft). Several rivers run through Nepal's Middle Himalayas including the Seti, Karnali, Bheri, Kali Gandaki, Trisuli, Sun Kosi, Arun, and Tamur. In the Middle Himalayan zone most rivers converge and form four main river systems: the Karnali, Narayani, Gandaki, and Kosi, which traverse the Mahābhārat Range through deep gorges, making navigation difficult or impossible.

South of the Middle Himalayas lies the Siwālik Range of the Outer Himalayas, with an average elevation of about 1,000 to 2,000 m (about 3,300 to 6,600 ft). This area of Nepal has a number of flat valleys well suited to agriculture.

The Tarāi, a generally flat, fertile lowland, is the southernmost topographic zone in Nepal. Much of this area comprises the northern extension of the Gangetic Plain of India. Rivers rising in the Himalayas emerge in the Tarāi and continue southward, some of them becoming tributaries of the Ganges in northern India. The Tarāi is susceptible to flooding, which occurs regularly with the summer monsoon runoff from the mountains. The fertile soils of the Tarāi make up a major agricultural area where nearly half the country's population lives.

Natural Resources

Fertile soils are limited to the Tarāi and some of the larger valleys of the Middle Himalayas. Some 20.3 percent of the country's total land area is cultivated—a figure that includes hillsides with thin, poor soils terraced for farming. Due to population pressure, the percentage of Nepal's cultivated area has increased from only 10 percent in the 1960s.

Nepal's mineral resources are limited. Low-grade deposits of iron ore are found in the mountains near Kathmandu. Small deposits of copper exist in many areas and small reserves of mica have been found in the hills northeast of Kathmandu. Mineral extraction and transport is a major problem due to the country's rugged terrain.

Water is the most important natural resource of the country. There are about 6,000 rivers and rivulets that add up to a lane of 45,000 kilometers. The total drainage area of the entire rivers amount to about 191, 000 square kilometers. Of which 74% lies in Nepal. The total average run off is estimated at about 170 billion cubic meters, and the hydroelectric power potential is estimated at 83,000 mega watts, of which about 5% could be economically harnessed. However, less than 0.5% of these economically viable potential has so been exploited.

Climate

Nepal's climate varies according to elevation. The Tarāi of southern Nepal has a tropical monsoon climate characterized by rainy summers and the southwest winds of the monsoon, and almost dry winters. The effect of the southern monsoon climate extends northward into mountain valleys. In the Middle Himalayan valleys the amount of precipitation varies with the extent of exposure to the rain-bearing monsoon winds. Several high valleys located in the rain shadow (area where precipitation is partially blocked by mountains) are dry. In the Kathmandu Valley the average rainfall is about 2,300 mm (about 90 in), most of which occurs from June to September. Between elevations of about 500 and 2,700 m (about 1,640 and 8,860 ft) there is a warm temperate climate; between about 2,700 and 3,000 m (about 8,860 and 9,840 ft) a cool temperate climate prevails. Between about 3,500 and 4,100 m (about 11,480 and 13,450 ft) summers are cool and winters are very cold. Above 4,100 m (about 13,450 ft) a severely cold, alpine climate prevails.

THE PEOPLE OF NEPAL

Nepal had a population of 18,462,081 at the time of the 1991 census. The average population density at the time was 125 persons per sq km (329 per sq mi), although nearly half the people were concentrated in the narrow Tarāi region. In contrast, the 2003 population estimate was 26,469,569. The population has grown rapidly since 1950 when there were only 9 million people. Although the government has sponsored family planning since the 1950s, these programs have been slow to affect Nepal's population growth. In 2003 the population was increasing at an annual rate of 2.3 percent. Only 12 percent of the population lived in urban areas in 2001. Major cities include Kathmandu, Lalitpur (Patan), Bhaktapur, Birātnagar, and Bīrganj.

Ethnic Groups, Languages, and Religion

Nepal's indigenous population consists of two major groups, the Indo-Nepalese, whose ancestors migrated into the country from the south, and the Tibeto-Nepalese, whose ancestors entered Nepal from the north. Although intermingling between the

two groups has occurred, cultural, linguistic, and religious differences exist both between and within the two groups. The Indo-Nepalese group comprises people who speak Sanskrit-derived languages and are strict adherents to Hinduism. Nepali, the official language, is derived from Sanskrit. Differences within the Indo-Nepalese group are marked more by caste (a system of social hierarchy) than by ethnicity. The Tibeto-Nepalese group comprises several different ethnic groups including Newar, Bhutia, Sherpa, Gurung, Magar, Tamang, Rai, and Limbu people. Although most of the Tibeto-Nepalese speak Nepali, each ethnic group also has its own language. While the majority of Nepali people practice Hinduism, the official religion, a strong shamanist element remains in the religious practices of many Tibeto-Nepalese ethnic groups (see Shaman). Buddhism is also important within the country. Buddha, the founder of Buddhism, was born in Lumbinī, in present-day Nepal. There is also a small Muslim population mainly located in the Tarāi.

Education

Under the Rana family, which ruled Nepal from 1846 to 1951, only the upper class had access to education. After the 1951 revolution, Nepal established an education system with free primary education for all children. Primary school begins at the age of 6 and lasts until age 10. Secondary education that follows lasts until the age of 15. Attendance of primary school was nearly universal in 1999–2000. Secondary school enrollment included only 54 percent (62.3 percent of the boys of that age group and 45 percent of the girls) in 1999–2000. Formal schooling in Nepal is constrained by economic and cultural factors such as a bias against educating girls and a need for children to work at home or in the fields. In 2003 the literacy rate was estimated at 45 percent of the adult population, with a large gap between male and female literacy rates. Only 28 percent of the female population was literate in 2003 compared to 63 percent of the males. Urban areas have higher literacy rates than rural areas. In 1990 Nepal launched a 12-year literacy program targeting 8 million people between the ages of 6 and 45 years old. Tribhuvan University, founded in Kathmandu in 1959, is the only doctoral-granting institution of higher education in Nepal. Nepal also has a number of colleges, all of which are either affiliated with, or follow standards set by, Tribhuvan University.

Way of Life

Nepal's society is predominantly rural. Social life in the village revolves around the family, which is headed by the father. Extended families sometimes break apart as sons separate from parents and brothers from each other in search of additional land. Family property is divided equally among sons at the time of separation. Consequently, family land holdings are extremely fragmented. Villagers often pool resources and labor to implement village-level projects such as irrigation ditches or channels. Rice is the food staple in most parts of the country. Barley, millet, and potatoes are important food staples in the Himalayas.

In Nepal women are generally subordinate to men and have less access to education, economic resources, and political power. Their plight, however, varies from one ethnic group to another. Among Tibeto-Nepalese communities female status is relatively better than in Indo-Nepalese communities. Generally, women work harder and longer than men, taking care of household chores, fetching water and animal fodder, and farming. Women in upper-class families, however, have maids who do household work and other menial chores.

A revival of artistic and intellectual expression occurred in Nepal after the overthrow of Rana rule in the early 1950s. Nepali works of poetry and literature emphasize patriotism and national pride. Hindu and Buddhist religious values inspire the expression of Nepali artists. The lives of gods, saints, and heroes and the relationship of the individual to society and the universe are explored in sculpture, architecture, and drama. Numerous temples and shrines in the Kathmandu Valley display the skill and highly developed aesthetic sense of Nepali artists. Favorite recreational activities of the Nepali include music and dance. Religious ceremonies involve the use of drums and musical instruments preserved since ancient times. In rural areas devotional songs are an important part of cultural life. Radio Nepal schedules folk music programs to foster the traditional culture of the country.

ECONOMY

The United Nations (UN) classifies Nepal as one of the least developed countries in the world. The country's gross domestic product (GDP) was \$5.6 billion in 2001, with an estimated per capita GDP of \$240. Several factors have contributed to Nepal's underdevelopment, including its landlocked geography, rugged terrain, lack of natural resources, and poor infrastructure. China, India, Japan, the United States, and several European nations have made large investments in Nepal's economy through foreign aid since 1952. Still, the country's economic growth has been slow. Nepal's economy is characterized by heavy dependence on foreign aid, a narrow range of exports, increasing economic disparity between the mountain areas and the more developed Tarāi region, excessive governmental control and regulation, and inefficient public enterprises and administration. In addition, the economy has not kept pace with the country's high population growth. In particular, the slow growth of agriculture has resulted in food shortages and malnutrition for some of Nepal's people.

Agriculture and Manufacturing

Agriculture dominates Nepal's economy. It provides a livelihood for 79 percent of the population and contributes 39 percent of GDP. The Tarāi is the main farming region of the country. Rice and corn are major food crops; potato, oilseed, sugarcane, jute, and tobacco are major cash crops. Nepal's industrial base is limited. Most industries are based on agricultural raw materials or dependent on various imported materials, mostly from India. Large manufacturing plants are owned and operated by the government. Major manufactured products include jute, sugar, cigarettes, beer,

matches, shoes, cement, and bricks. Traditional cottage industries such as basket and carpet weaving are also important to Nepal's economy.

Energy

Most of the energy consumed in Nepal comes from traditional sources such as fuel wood, the use of which contributes to deforestation. Tremendous potential exists for hydroelectric power development, but growth is inhibited by terrain, lack of infrastructure, and insufficient capital investment. Nepal has harnessed only a fraction of its potential hydropower. The country is heavily reliant on India for imported, nonrenewable sources of power such as oil and kerosene.

Transportation and Communications

Nepal has a relatively underdeveloped network of roads. There are some main roads, which connect major cities and stretch to the borders of both India and China. However, the main means of transportation is the network of footpaths and trails that interlace the mountains and valleys. There is also a small railway along the Indian border. The government-owned Royal Nepal Airlines was the only commercial airline until 1992, when the government permitted other airlines to operate. Now a number of airlines provide domestic service between Nepal's major cities as well as to its remote regions. International service is available to India, Singapore, Hong Kong, Thailand, Pakistan, and Japan. Tribhuvan International Airport outside Kathmandu is the main airport. There are also several smaller airstrips serving domestic air travel in Nepal.

Nepal has limited telecommunication services. Postal services have improved in recent years but are still inaccessible to many Nepalese. Few people own telephones, although most urban areas have public telephone services. Radio Nepal broadcasts programs in Nepali and English to more than 90 percent of the population. Television programming is limited, but programs from overseas are available via satellite in remote parts of the country. The major newspapers in Nepal include the *Gorkhapatra*, *Nepali Hindi Daily*, *Samaya*, and *Daily News*; freedom of the press was guaranteed under Nepal's 1990 constitution.

Foreign Trade

For geographical and historical reasons, most of Nepal's trade is with India. Attempts have been made to diversify trade by making new agreements with China, Pakistan, Bangladesh, the United States, the United Kingdom, Singapore, Thailand, Germany, and Japan. Nepal has a growing trade deficit with India. Major exports are clothing, carpets, grain, and leather goods. Major imports are petroleum products, fertilizer, and machinery.

Currency and Banking

Nepal's monetary unit is the Nepalese *rupee* (74.95 Nepalese rupees equal U.S. \$1; 2001 average). It is issued from the country's central bank, Nepal Rastra Bank (founded in 1956). Indian rupees are still used in Nepal, although less widely than before trade disputes between the two countries in 1989.

GOVERNMENT

Nepal's government is a constitutional monarchy. In response to major pro-democracy protests, Nepal adopted a new constitution in 1990 that established a multiparty democracy but preserved the king's status as chief of state. The 1990 constitution ended nearly 30 years of absolute monarchy in which the king dominated Nepal's politics and political parties were banned. Nepal has universal suffrage beginning at the age of 18.

Administrative and Physical Divisions

The country is administratively divided into five development regions. Those are Eastern, Central, Western, Mid Western and Far Western. These regions again divided into 75 districts. Village development committee (VDC) and Municipalities are the lower administrative units. Each VDC is comprised of 9 wards. Currently there are 3,915 VDC's and 58 Municipalities.

Political Parties

Major political parties include the Nepali Congress Party (NCP), a reform-oriented centrist party, and the Communist Party of Nepal (Unified Marxist-Leninist), or CPN-UML. Both of these parties operated illegally in Nepal from exile in India until the 1990 reforms lifted the ban on political parties. The pro-royal National Democratic Party (NDP) was formed prior to the first democratic elections in 1991. In 1998 a faction within the CPN-UML broke away to form a new party, the Communist Party of Nepal (Marxist-Leninist), or CPN-ML.

Social Services

Nepal has significant health care problems and receives aid through foreign agencies and religious groups. Diseases and chronic infections have been particularly prevalent in rural areas, including goiter, tuberculosis, and dysentery. Cases of leprosy continue to exist in some areas. Another chronic problem in Nepal is malnutrition, which is particularly severe in hill and mountain regions where people often experience food shortages.

International Organizations

Nepal has been a member of the United Nations since 1955 and participates in several international agencies such as the United Nations Food and Agricultural Organization; the United Nations Educational, Scientific, and Cultural Organization; the World Health Organization; and the Economic Council for Asia and the Far East.

In 1961 Nepal became a member of the International Bank for Reconstruction and Development (World Bank). Kathmandu is the permanent seat of the South Asian Association for Regional Cooperation.

1. NUMBER OF MINES IN NEPAL

There are 283 stone quarry officially run in Nepal, out of those 38 quarries run only in the district Lalitpur of Central Development Region of Nepal. Apart from these there are 10 lime stone quarries in Nepal

1.1 Definition of ASM

Quarries in Nepal have a minimum area of 1.2 sq. kms. as fixed by authorities.

1.2 ASM Sector Units studied

Only the black stone quarries of Nepal have been studied and this study was carried out in the district of Lalitpur.

1.3 Structure of the Industry Concerned

In respect of the quarries of Eastern India quarries of Nepal are big and employ at least 150 labours in a single quarry. The structure is like this.



1.4 ASM Standing/Advisory/Controlling Body

These quarries are not controlled by any central or regional authority. These are strictly controlled by district authorities like District Administrative Committee (DAC). Regarding permission and technical know-how one quarry owner have to go to 7 authorities like:

1) Department Mines and Geology (for technical know-how.),

- 2) Department of Topography Survey,
- 3) District Administrative Committee (DAC)
- 4) District Roads Office,
- 5) District Soil Conservation Office,
- 6) District Building and Urban Development Office,
- 7) District Forest Office.

1.5 Local Context: Physical Extent of the Area, Administrative Units

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Stone quarries are totally controlled by DAC and VDC's.

1.6 Previous Estimates by Others

There is no written or printed report found on this aspect.

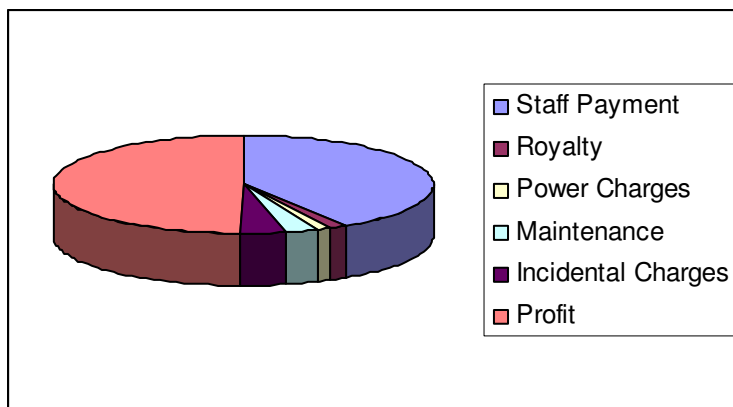
1.7 Estimates by the Author

In 283 quarries of Nepal approximately 42,000 people are engaged officially. Other than these persons at least 20,000 to 30,000 people are engaged in an unorganized way in the same field. These people collect boulders from their surroundings and break those into chips and sell directly to the building sites. They don't work in a quarry. Taking an average of Rs.120 a day, one such person earns Rs.35,000 in a year which could not be reflected in any report.

Normally, the quarry owner in Nepal has his own stone crusher and transportation. Most of them are road contractors. So percent of profit is not divided among quarry owner, crusher owner and contractor. The expense of running a quarry is only for its maintenance, staff payments for its power supply. Labours are paid in a quarry or in a crusher Rs.150 to Rs.180 a day. Price of four ton stone is Rs.1,500 at present and a quarry produces 30 tons of stone per day at present. This production was 50 to 60 ton a day four years earlier. Decrease of production caused by present country law against usage of blasting materials like dynamite.

Unlike the quarry owner of eastern India, quarry owners of Nepal are rich and resourceful persons. At the same time they have got some kind of influence over the authorities.

Percentage of profit from a quarry:



2. ORIGINS/TRADITIONS

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Edible cereal grain production and requirement of major crops in Nepal

(in M. Ton)

Crops		1999-2000	2000-2001	2001-2002	2002-2003
Rice	P	2259393	2356646	2294205	2271914
Maize	P	1007178	1001478	999831	1059751
Wheat	P	934559	914885	1008827	1069257
Millet	P	242331	231915	231714	231931
Barley	P	8478	8255	8472	8613
Total	P	4451939	4513179	453049	4641466
	R	4383443	4430128	4463027	4565820
	B	68496	83051	80022	75646

P = Production, R = Requirement, B = Balance

Economics Characteristics:

Economic Activity and Inactive Population

Status	1991 Census			2001 Census			2005 Census		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Economically Active	7,339,586	4,375,583	2,964,003	10,637,243	5,971,024	4,666,219	11,622,845	6,524,274	5,089,571
Economically Inactive	5,638,024	2,043,899	3,594,125	6,133,037	2,359,552	3,773,484	6,701,298	2,578,178	4,123,119

Major Groups of Economically Active Population

10 year and above

Census	Legislators/ Senior Officials/ Managers	Prof./ Semi Prof. / Tech Workers	Adm & Clerical Workers	Services Workers and Shop, Market Sales Workers	Farm Fishing/ Forestry Worker	Craft & Trade Workers	Prod. Labour Worker	Other and Not Started
2001	116,683	844,696	412,728	1,589,077	11,938,521	1,873,711	289,922	1,836,247
2005 Proj.	127,495	922,962	450,970	1,736,315	13,044,695	2,047,321	316,785	2,006,386

Economically Inactive Population by Reasons

10 year and above

Census	Total	Student	Homemaker / Household Chores	Aged	Pension/ Income Recipient	Physically & Mentally Handicapped	Other	Not Stated
2001	16,288,042	7,728,634	5,442,164	1,252,200	487,198	459,435	739,838	351,044
2005 Proj.	17,797,223	8,444,77	5,946,412	1,368,224	532,340	502,004	808,388	384,571

2.1 Local Economic Traditions

Previously local economic tradition was controlled by agriculture and forest wood. Nepal is not a rich country so far its mineral deposits are concerned. No big industry was built before 1960's.

2.2 Present Power Structures

RESIDENTIAL SECTOR ENERGY CONSUMPTION			
(In thousand TOE)			
Energy Type	2001-2002	2002-2003	2003-2004
1 Traditional			
Fuel Wood	6258	6389	6528
Agric. Residue	275	281	287
Animal Waste	467	477	487
2 Commercial			
Coal	0	0	0
Petro-Products	301	276	305
Electricity	47	52	56
Total	7348	7475	7663

INDUSTRIAL SECTOR ENERGY CONSUMPTION			
(In thousand TOE)			
Energy Type	2001-2002	2002-2003	2003-2004
1 Traditional			
Fuel Wood	16	17	17
Agric. Residue	31	32	33
Animal Waste	0	0	0
2 Commercial			
Coal	151	134	171
Petro-Products	33	32	28
Electricity	50	53	57
Total	281	268	306

COMMERCIAL SECTOR ENERGY CONSUMPTION			
(In thousand TOE)			
Energy Type	2001-2002	2002-2003	2003-2004
1 Traditional			

Fuel Wood	41	45	45
Agric. Residue	0	0	0
Animal Waste	0	0	0
2 Commercial			
Coal	0	0	0
Petro-Products	67	43	47
Electricity	8	9	9
Total	116	97	101

Source: Nepal Oil Corporation Ltd.

Installed Renewable Energy System								
Solar home system		Micro-hydro Electrification schemes		Turbine mills		Imp. Ghatta	Biogas Plant	
No. of system	Capacity (kWp)	No. of schemes	Capacity (kW)	No. of schemes	Capacity (kW)	No. of schemes	No. of plant	Capacity (Cu.m)
42,550	1,584.5	1,371	7,471.7	804	7,106.9	872	111,395	766,146.9

Electricity Connection from various systems					
No. of domestic Consumers, NEA & other system	No. of HH Connected to solar Home system	No. of HH Connected to Micro-hydro schemes	Total no. of HH Having Connection to Electricity	% of HH Having Connection to Electricity	% of HH Having Access to Electricity
962,905	42,550	68,961	1,074,416	25.74	32.71

Yearly Growth of Solar Home System				
Year	No. of Systems Installed	Cumulative no. of System	Installed capacity kwp	Cumulative Installed capacity kwp
2002-2003	16,598	42,550	584.2	1,584.5
2001-2002	13,676	25,952	540.2	1,000.3
2000-2001	6,082	12,276	237.0	460.1
1999-2000	2,715	6,194	97.4	223.2
1998-1999	1,899	3,479	68.3	125.8
1997-1998	736	1,580	27.4	57.5
1996-1997	562	844	20.4	30.1
1995-1996	149	282	4.9	9.7
1994-1995	36	133	1.2	4.8
1993-1994	89	97	3.3	3.6
1992-1993	8	8	0.3	0.3

Yearly Growth of improved Ghatta					
Year	No. of schemes Installed in a year	Cumulative no of Scheme	Year	No. of schemes Installed in a year	Cumulative no of Schemes
2003	25	872	1997	18	373
2002	58	847	1996	40	355
2001	107	789	1995	44	315
2000	91	682	1993 to 1995	137	271
1999	124	591	1991 to 1993	54	134
1998	94	467	1984 to 1988	80	80

Yearly Growth of Biogas Plant				
Year	No. of Plants Installed in a year	Cumulative no. of plants	Installed capacity cu.m. in a year	Cumulative Installed capacity cu.m.
2002-2003	16,340	111,395	95,380	766,146.9
2001-2002	15,527	95,055	92,480	670,766.9
2000-2001	17,857	79,528	107,472	578,286.9
1999-2000	13,265	61,671	84,622	470,817.9
1998-1999	11,052	48,406	81,725	386,192.9
1997-1998	9,869	37,354	78,348	304,467.9
1996-1997	8,387	27,485	68,673	226,119.9
1995-1996	7,157	19,098	62,777	157,446.9
1994-1995	5,117	11,941	47,055	94,669.9
1993-1994	3,506	6,824		47,614.9
1992-1993	3,318	3,318		

3. LOCATION AND DISTRIBUTION

Most of the quarries of Nepal are situated in Central Development Region, especially in he district Lalitpur, where 38 big size quarries run. The only Govt. run quarry is in Jhapa district of Eastern Development Region, which is the largest in size. In southern part of the country stones are collected from the river like Gandaki, Kaliganga etc. There are many quarries run in Biratnagar, Birganj, Bhadrapur, Botuwal & some other localities.

3.1 Regional Distribution

The most developed parts of the country lie in Central Development Region and most part of Eastern Development Region. For this reason necessity of quarries is maximum in these places.

Out of 283 quarries in Nepal, 80 run in Central Development Region, more than 150 quarries run in Eastern Development Region and rest 53 quarries lie in Mid western, Western and Far western Development Regions.

3.2 Causes of Regional Variations in Distribution

Total length of motorable road in Nepal is low, especially poorly developed regions like Western, Mid western and Far western Development Regions. Construction of building and roadways is maximum rest two regions. Number of quarries running is high only in these two regions.

ROAD									
Type of Road				Road Category					Total
BT	GR	ER	Total	NH	FRN	FRO	DR	UR	
4,780.91	4,519.84	7,633.74	16,934	3,028	1,664	168	9,775	2,198	16,833

BT = Black Topped, GR = Graveled, ER = Earthen

LENGTH OF ROADS BY TYPE IN DIFFERENT ZONES (2002) (Length in km.)				
Zones	BT	GR	ER	Total
Mechi	275.73	383.42	525.90	1185.05
Koshi	366.52	518.03	555.77	1440.32
Sagarmatha	241.89	262.75	351.15	855.79
Janakpur	359.79	756.85	961.57	2078.14
Bagamati	1083.05	456.93	1037.77	2577.75
Narayani	588.31	693.89	726.98	2009.18
Gandaki	475.60	45.00	754.50	1275.10
Lunbini	520.41	386.98	675.64	1583.03
Dhawalagiri	32.11	15.13	50.00	97.24
Rapti	137.30	345.50	526.13	1008.93
Bheri	335.26	318.71	552.30	1206.27
Karnali	0.00	0.00	0.00	0.00
Seti	236.54	244.85	328.60	809.99
Mahakali	128.40	91.80	487.50	707.70
Total	4780.91	4519.84	7533.74	16834.49

BT = Black Topped, GR = Graveled, ER = Earthen

Source: Nepal Road Statistics, Department of Roads.

The quarries run in the south, namely those collect pebbles from rivers and crush those, depend solely on export to India. There is vast and increasing demand of stone chips in the northern states of India. Out of 486 crushers of Nepal, there are nearly 300 depend on export.

4. GROWTH FACTORS

4.1 Governance Factors

Government is sympathetic towards these quarries. Though there are rules to preserve environment but forest department or, department of language has no such strictures towards these quarries.

4.1.2 Administrative Constraints

These quarries are controlled by district authorities. So there is no central controlled over these quarries so far destruction of forest and pollution of environment is concerned.

These quarries are not controlled by any central or regional authority. These are strictly controlled by district authorities like District Administrative Committee (DAC). Regarding permission and technical know-how one quarry owner have to go to 7 authorities like:

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- 3) District Administrative Committee (DAC)
- 4) District Roads Office,
- 5) District Soil Conservation Office,
- 6) District Building and Urban Development Office,
- 7) District Forest Office.

4.2 Socio-economic Factors

4.2.1 Socio-economic Environment

The country has a population size of 18,324,143. Out of these 6,701,298 (36.58%) persons are unemployed according to 2005 projection. The 63.42% of employed people mostly reside in cities or directly associated to a city. Though the country is basically dependent on agriculture yet the country on land utilization is not people friendly. People can not purchase or own land, rather they can take lease from the King of a particular land. In villages there is no land owner can be found who has more than 5 decimal of land. And there is vast area of land can be found unutilized in the Terai region and in the valleys. So village people remained poor for they had to leave their village for earning, may be from a city, which is dependent on tourism industry or they had to take a job in the neighbouring country in India.

In this country women are more labourious than men. Not only the household works, but the outside works are also carried out by women.

4.2.2 Shortage of Other Rural Income Opportunities

Agricultural work is limited in the villages and earning through agriculture is insufficient to maintain a family. Both men and women are forced to take some other job if it is possible. There are some people can be found who don't in a quarry as these are not nearby but they independently break boulders in to chips in road side huts and sell those chips to the road contractors. The earning is not sufficient. A whole day's work of 10 hours earns them only 120 – 150 rupees. Some of them came from villages some 300 – 600 kilometers away and have a temporary rental residence nearby to their work site.

4.2.3 Desire for Higher Education

In Kathmandu it can be seen that 100% of boys and girls go to school and continue their education up to secondary level as there are many Govt. schools around. Education, up to secondary level, is free there. This picture is also true to other big cities. But literacy level is low because in rural areas number of school is insufficient and people also are unaware. In villages literacy level among women is poor.

Number of Students enrolled in primary level of education by Region and Sex 2001 and 2002						
Region	2001			2002		
	Total	Girls	Boys	Total	Girls	Boys
Nepal	3853618	1726253	2127365	3928684	1605166	2323518
Eastern D. Region	883331	406342	476989	905329	417876	487453
Mountain	100041	47047	52994	96936	46076	50860
Hill	37674	161948	175726	335636	161628	174008
Terai	445616	19347	248269	472757	210172	262585
Central D. Region	1167909	504495	663414	1195337	346380	848957
Mountain	112131	50444	61687	104825	48004	56821
Hill	573532	269684	303848	58858	278569	310289
Terai	482246	184367	297879	501654	19807	481847
Western D. Region	7892591	420244	472347	877267	414896	462371
Mountain	3508	1782	1726	2945	1499	1446
Hill	629543	308188	321355	617980	302506	315474
Terai	259540	110274	149266	256342	110891	145451
Mid Western D. Region	557518	240910	316608	553580	246787	306793
Mountain	50814	17444	33370	50274	19538	30736
Hill	300089	131176	168913	296109	133907	162202
Terai	206615	92290	114325	207197	9342	113855
Far Western D. Region	352269	154262	198007	397171	179227	217944
Mountain	73944	30619	43325	74195	32630	41565
Hill	121624	52842	68782	143414	63512	79902
Terai	156701	70801	85900	179562	83085	96477

Number of Students enrolled in Lower Secondary level of education by Region and Sex 2001 and 2002						
Region	2001			2002		
	Total	Girls	Boys	Total	Girls	Boys
Nepal	1058448	446382	612066	1137101	488259	648842
Eastern D. Region	263191	118155	145036	282671	127649	155022
Mountain	22929	10467	12462	24761	11366	13395
Hill	101691	47047	54644	106097	50001	56096
Terai	138571	60641	77930	15181	66282	85531
Central D. Region	325891	133128	192763	347944	145491	20245
Mountain	24084	9848	14236	25060	10524	14536
Hill	190152	81844	108308	207253	90707	116546

Terai	111655	41436	70219	115631	44260	71371
Western D. Region	266584	121182	145402	279535	129216	150319
Mountain	903	372	531	601	309	292
Hill	195372	92341	103030	203578	97213	106365
Terai	70310	28469	41841	75356	31694	43662
Mid Western D. Region	120208	45386	74822	126199	48498	77701
Mountain	8276	1769	6507	7740	1620	6120
Hill	60093	22629	37464	65285	25915	39370
Terai	51839	20988	30851	53174	20963	32211
Far Western D. Region	52574	28531	54043	100752	37405	63347
Mountain	15124	4425	10699	15419	4929	10490
Hill	25012	7411	17601	31892	10271	21621
Terai	42438	16695	25743	53441	22205	31236

Number of Students enrolled in Secondary level of education by Region and Sex 2001 and 2002						
Region	2001			2002		
	Total	Girls	Boys	Total	Girls	Boys
Nepal	449296	186092	263204	480596	204090	276506
Eastern D. Region	123232	53924	69308	131299	58887	72412
Mountain	8996	4006	4990	9508	4288	5220
Hill	43376	18903	24473	46199	21393	24806
Terai	70860	31015	39845	75592	33206	42386
Central D. Region	145760	60589	85171	157195	66495	90700
Mountain	9461	3681	5780	9840	3866	5974
Hill	87937	39706	48231	96875	44239	52636
Terai	48362	17202	31160	50480	18390	32090
Western D. Region	109493	48781	60712	118777	53623	65154
Mountain	368	145	223	304	137	167
Hill	81309	37192	44117	87268	40259	47009
Terai	27816	11444	16372	31205	13227	17978
Mid Western D. Region	42310	14500	27810	40580	14828	25752
Mountain	3147	479	2668	2771	524	2247
Hill	21726	7295	14431	20432	7461	12971
Terai	17437	6726	10711	17377	6843	10534
Far Western D. Region	28501	8298	20203	32745	10257	22488
Mountain	6212	1720	4492	5863	1639	4224
Hill	9168	2104	7064	11794	3036	8758
Terai	13121	4474	8647	15088	5582	9506

Source: Department of Education.

Human Development Index						
HDI Bank	GDP Per Capita	GDP Index	Human Development Index Value	Education Index	Adult Literacy Rate (%) 2002	Combined gross enrollment ratio for Primary, Secondary

	2002				Male	Female	and Tertiary Schools
140	1370	0.44	0.504	0.50	61.60	26.40	61.00

Source: From Human Development Report 2004, Published for UNDP.

4.2.4 Reasons for Engaging in unorganized Mining

Total number of quarries in the country is insufficient to engage the number of people who are willing to do this kind of work. Moreover, to run a quarry requires many infrastructural facilities. But through out the country loose boulders are abundant. It is easy for the poorer people to collect those boulders and break it down in to chips so that it can be sold directly to the user. By this and unemployed person can earn his or her daily living.

4.3 Geological Factors

4.3.1 Combination of Special Geological Factors

The country is situated in the Himalayas. Except the South Eastern Terai part the total land is on mountains, be it a valley or, rugged mountain. Though the total length of roadways is insufficient for the country, but the major ingredient, stone, is easily available everywhere. Granite and basalt is very common in these mountains.

4.4 Mining Sector Factors

4.4.1 Resource Losses due to Mining Operations

Deforestation in he country is common since 1950. Unplanned mining causing destruction of forests of the country. Though there is a Govt. department to look after the forests and to prevent destruction, yet corrupt officials can be purchased by a rich quarry owner, to thinks to start or enlarge a mine.

4.4.2 Socio-economic Factors Specific to the Mining Sector

One stone quarry along with its crusher employs at least 150 people, who can earn their living through such a quarry. Interestingly enough there are many cases where both husband and wife work in the same quarry and they send their children to school as awareness of these labours is higher than any other village people.

5. SOCIO-ECONOMIC CHARACTERISTICS

5.1 Who are the Miners?

5.1.1 Introduction to the Miners

They are mostly village people from surrounding area. In many cases both husband and wife works together in the same mine. Like other Nepali women the wife has to carry out household works beside her mining duty. If the area is near any town, children of course attends school.

5.1.2 Previous Employment of Males

Mostly unemployed, some were working earlier in their agricultural field.

5.1.3 Previous Employment of Females

Women mostly were engaged with their household and field work.

5.1.4 Classification of Miners by Age

Minor labours can be seen in these quarries. Labours mostly belong to the age group from 20 to 45.

5.2 Categories of Miners

5.2.1 Actively Involved in Alternative Occupations (farming, herding...)

People come to these quarries as labours were mostly unemployed. If there is any land owner, he only has maximum 5 decimal of land. Mostly have no alternative or secondary profession.

5.2.2 Alcoholism

Alcoholism is very common among mountain people. People almost of all ages and economic status are habituated with drinking alcohol. In villages it can be seen that the male community don't do any physical work for his family, only thing they do is smoking, drinking and gossiping. Drinking among women is also common, but they don't drink outside their home except celebration time.

6. GENDER CONCERNS

6.1 Women's Work Participation: History of Region/Country

In Nepal women are generally subordinate to men and have less access to education, economic resources, and political power. Their plight, however, varies from one ethnic group to another. Among Tibeto-Nepalese communities' female status is relatively better than in Indo-Nepalese communities. Generally, women work harder and longer than men, taking care of household chores, fetching water and animal fodder, and farming. It is interesting to note that in Kathmandu 60% of the traffic police is female and they are really efficient in their job.

6.2 Gender Roles

Household with Female ownership in House, Land and Livestock				2001
Area	Percentage of HH with Female Ownership in			Total HHs
	House	Land	Livestock	
National	5.5	10.8	7.2	4174374
Urban	9.1	12.8	2.6	664507
Rural	4.8	10.5	8.1	3509867

Ever Married Young Women by 5 year age group and by literacy / education attainment and number of number of live birth (10-19 years)			
Literacy Status	Number of ever married young women aged	Number of ever married young women aged 15-19 years who have had given birth to	Child born not

	10 - 14 years	15 - 19 years	0 child	1 child	2 children	More than 2 children	stated
Illiterate	18,853	23,606	150,095	54,780	17,111	8,310	3,309
Under primary	3,534	44,212	27,571	12,629	2,813	951	257
Primary incl. secondary	3,640	109,902	75,446	27,485	4,616	1,530	0
SLC & above	18	18,902	14,668	3,222	410	85	523
Others / not stated	131	2,708	1,561	639	187	89	246
All status	26,176	408,494	269,341	98,755	25,137	10,965	4,335

6.2.1 Overview: Traditional Gender Roles in the Region/Country

Nepali girls are married within the age of 12 or 13. If a girl can not give birth to a child within 4 to 5 years she is abandoned by her husband. In villages people mostly are poor so the girl is not accepted even by his brother's family. May be this is one of the causes for illegal girl trafficking from Nepal.

Education among women is poor. Adult literacy among them is only 23%. This is even lesser in the villages. The only exception found in Kathmandu valley where more than 60% of traffic police are women.

6.2.2 Family-Kin Networks

Both in Indo-Tibetan and in Indo-Nepalese community family system are closely knit. Two or three generations from grand parents to their second generation stay together. Elderly people are respected in the family as well as in the society.

6.2.3 Women's Needs

Health service to the women and education is insufficient than necessary. Infantile death rate is high.

Extension of Health Services 2000 - 2001 to 2002 - 2003			
Description	2000-2001	2001-2002	2002-2003
Hospital	83	83	83
Hospital Beds*	5250	5250	5250
Health Posts	700	700	700
Health Centers	10	10	10
Sub Health Posts	3158	3148	3148
Primary Health Centers	180	180	180
Doctors**	1259	1259	1259
Health Assistances (H.A & A.H.W.)	5295	5295	5295
Nurses+	4655	7315	9146
Kabiraj	211	203	387

Vaidya#	210	294	354
Ayurvedic Service Centers	275	286	287
Health Workers (M.C.H.W.)	3190	3190	3190
Village Level Health Workers	3985	3985	3985
Other members (Trained Sudeni, Women Health Volunteers)	62546	62546	62546

* Including Village Health Centers. +Registered in NNC. **HMG Employed Only.
Nepal Swasthya Byabasayee Parishad.

Source: Ministry of Health

HEALTH SERVICE COVERAGE			
Reporting Status	1999-2000	2000-2001	2001-2002
SAFE MOTHEHOOD			
First Antenatal Visits as % of Expected Pregnancies	35%	41%	43%
Average n. of ANC Visits per Pregnant Women	1.7	1.8	1.9
Deliveries Conducted by TBAs as % of Expected Pregnancies	5.30%	6.50%	7.10%
Deliveries Conducted by Trained Person (including TBAs) as % of Expected Pregnancies	13.50%	13.80%	15.00%
FAMILY PLANNING			
Contraceptive Prevalence Rate (CPR)	34.50%	36.90%	37.40%
Condoms (CPR Method Mix)	1.90%	2.10%	2.20%
Pills (CPR Method Mix)	2.30%	3.0%	2.60%
Depo Provera (CPR Method Mix)	8.70%	9.70%	10.20%
IUD (CPR Method Mix)	0.70%	0.80%	0.80%
Norplant (CPR Method Mix)	0.80%	0.80%	0.80%
Sterilization (CPR Method Mix)	20.50%	20.50%	20.90%
Couple Years of Protection (CYP) by Method (% of MWRA) for New Acceptors	32.60%	31.10%	33.60%
Condoms (CYP Method Mix)	1.90%	2.20%	2.20%
Pills (CYP)	1.20%	1.40%	1.50%
Depo (CYP)	6.10%	6.80%	7.20%
IUD (CYP)	1.50%	1.60%	2.10%
Norplant (CYP)	1.00%	0.90%	0.70%
Sterilization (CYP)	20.70%	21.30%	18.80%

6.3 Gender Roles in Mining and Processing

6.3.1 Division of Labour in Mining

In mining female is to male labour is 40:60

6.3.2 Division of Labour in Processing

In mining female is to male labour is 60:40

6.3.3 Division of Labour in Transporting

In mining female is to male labour is 60:40

6.3.4 Division of Labour at Home

Total household works including fetching water and fuel wood is carried out by women only.

6.4 Wages

6.4.1 Wages in Other Activities

In other fields wages vary from Rs.4000 to Rs.6000 a month. But in other fields' percentage of female worker is 8% only.

6.4.2 Wages in ASM/Informal Mining

In mining labours earn Rs.120 to Rs.200 a day irrespective of their sex. This kind of job is in contract, not in daily wages, for example, loading or unloading a four ton truck earns Rs.200.

6.5 Work Organisation and Division of Labour

6.5.1 Gender-based Structure

Household with Female ownership in House, Land and Livestock (2001)				
Area	Percentage of HH with Female Ownership in			Total HHs
	House	Land	Livestock	
National	5.5	10.8	7.2	4174374
Urban	9.1	12.8	2.6	664507
Rural	4.8	10.5	8.1	3509867

Ever Married Young Women by 5 year age group and by literacy / education attainment and number of number of live birth (10-19 years) (2001)							
Literacy Status	Number of ever married young women aged		Number of ever married young women aged 15-19 years who have had given birth to				Child born not stated
	10 - 14 years	15 - 19 years	0 child	1 child	2 children	More than 2 children	
Illiterate	18,853	23,606	150,095	54,780	17,111	8,310	3,309

Under primary	3,534	44,212	27,571	12,629	2,813	951	257
Primary incl. secondary	3,640	109,902	75,446	27,485	4,616	1,530	0
SLC & above	18	18,902	14,668	3,222	410	85	523
Others / not stated	131	2,708	1,561	639	187	89	246
All status	26,176	408,494	269,341	98,755	25,137	10,965	4,335

Population by literacy / educational attainment and by board occupational group (2001)

Literacy/ educational attainment	All employed population		All paid Employee		Paid employee in							
					White collared Occupation		Agricultural related		Other Occupation		Occupation in paid employee not stated	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Under primary	353752	777689	40483	226396	4527	27656	6693	22177	29133	176180	130	383
Prim & Second	447788	1312948	53095	441339	13724	92685	6549	33909	32565	314054	257	691
SLC & above	183125	824008	93010	463744	73815	322872	3003	18898	16097	121568	95	406
Other / NS	71157	98212	9726	38021	2034	11550	1698	3803	5984	22640	10	28
Illiterate	2633258	2199472	326755	681195	5839	19393	74862	11407 7	24549 7	547307	557	418
All Status	3689080	5212329	523069	1850695	99939	474156	92805	19286 4	32927 6	1181749	1049	1926

Household Heads by sex and by Living arrangement with Spouse (2001)

Sex and HH head	Total HHs	Single person i.e. Head alone (%)	Living with spouse (%)	Living without spouse (%)
Female	620,984	13.1	15.9	71.0
Male	3,553,390	2.5	89.1	8.4
Both Sexes	4,174,374	4.1	78.2	17.7

Women in public service by class and sector

Level	Class	Total	Female	% Female
Gazetted	Special	41	1	2.4
	First	306	4	1.3
	Second	1,454	52	3.6
	Third	5,213	304	5.8
	Total	7,014	361	5.1
Non-gazetted	First	14,088	1,251	8.9
	Second	19,815	1,632	8.2
	Third	7,131	1,293	18.1
	Forth	1,839	58	3.2
	Peon or Equivalent	25,334	1,432	5.7

	Total	68,207	5,666	8.3
Total		75,221	6,027	8.0

7. CHILD LABOUR ISSUES

7.1 Introduction

7.1.1 Children working in domestic field

Domestic Workers							
Status	Total HH Having Domestic Workers	Domestic Workers Population			Percentage of child Domestic Workers		
		Total	Male	Female	Total	Male	Female
National	39,955	57,295	35,997	21,298	38	29	53
Rural	22,615	31,890	18,619	13,271	42	33	55
Urban	17,340	25,405	17,378	8,027	33	25	50

No clear data available on child / minor labour in other fields.

8. LABOUR PROTECTION, HEALTH AND SAFETY ISSUES

8.1 Labour Protection

No protective measure has been observed in the mines and there is no Govt. authority to enforce labour protecting laws.

8.1.1 Initiatives

No initiative has been observed which is taken by the owners.

8.1.2 Labour Protection in Mining

Labours are not protected even by insurance.

8.1.3 Labour Protection in Processing

No such thing has been observed.

8.1.4 Protective Clothing

Clothing of the labours are as usual as their home clothing.

8.2 Working Conditions

Mines run for 10 hours a day and there is no extra pressure from the owners as the labours are appointed in contract basis.

8.2.1 Opinions of Miners on Working Conditions

The mine owners in Nepal is sufficiently disturbed now by the prevention of using blasting material like dynamite imposed by the Nepal police due to the present unrest caused by the Maoist extremist.

8.2.2 Labour Pressure

There is no labour unions in this sector of stone quarries operating anywhere in the country.

8.2.3 Mining Season

Mining operation is carried out throughout the year except the period of heavy rainfall. That is also due to bad road condition in some place.

8.2.4 Annual Cycle

Normally except July – August these quarries run for the rest ten months of a year.

8.2.5 Working Hours

It is generally from 8.00 in the morning to 6.00 in the evening.

8.3 Health and Safety

No preventive and curative measure for the labours is taken by the quarry owners like appointing a doctor or insurance against accident or ill health.

8.3.1 Opinions of Miners on Health Conditions

Disease of lungs or water borne diseases are thought as curse by the labours.

9. SETTLEMENTS AND HOUSING OF MINERS

No settlement for the labours is required for these small mines. Labours come from nearby villages.

10. METHODS AND EQUIPMENT

10.1 Tasks

10.1.1 Mining Tasks

Boulders are removed from earth in a mountain and broken down into smaller boulders by blasting or by drilling and hammering.

10.1.2 Processing Tasks

Smaller boulders are taken to a stone crusher where it is broken into required sizes.

11.2 Equipment

11.2.1 Mining Equipment

Earth cutters, compressors and drills, shovels and tractors are used for mining.

11.2.2 Processing Equipment

For processing boulders stone crusher is employed.

11.3 Method – Transport

2 to 8 ton trucks and dumpers are used for carrying processed stone chips. Stone crushers are always adjacent to a quarry. Only tractors are used for carrying smaller boulders to a crusher from the mining site.

11.4 Methods and Equipment in One or Two Case Study Village(s)

In Takhel of Chapagaon – 6 of Lalitpur district of Central Development Region of Nepal there is a comparatively big quarry run by Purnalal Maharjan (73 years). This quarry is running in this site for 45 years. It was initiated by his father. Presently this quarry is supervised by him and two of his sons.

There are three stone crushers adjacent to his quarry which is also owned by him. 150 labours work in this quarry and in these crushers. He has an appointed mining engineer for prospecting near by sites. There are three managers and three mates under these managers. Labours are appointed by the mates in contract.

Salary of a manager is Rs.6000 a month and Rs.4000 a month for the mates. Labours are paid according to their volume of work and it ranges from Rs.120 to Rs.200 a day. For breaking stone the charge is Rs.25 for 150 cu.ft of stone. For loading stone it is Rs.200 for a 4 ton truck. For carrying, the charge is Rs.15 per 150 cu.ft.

Mr. Maharjan also has contract license for road construction where he utilize his product from the quarry and the crusher.

12. INCOME AND FINANCIAL FLOWS

12.1 Income

12.1.1 Daily Income

Daily income of a labour is Rs.200 on an average.

12.1.2 Monthly Income

Monthly income is s.4000 to Rs.5000.

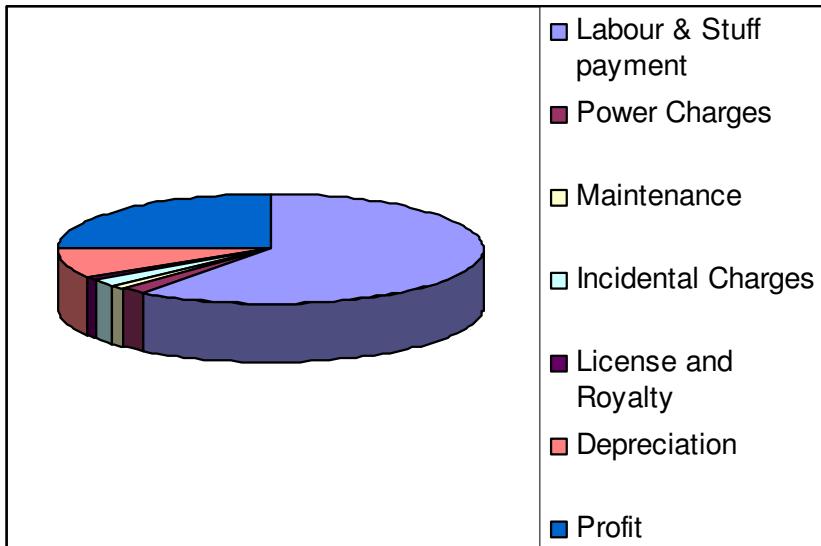
12.1.3 Annual Income

Annual income is Rs.50000 to Rs.60000.

12.2 Financial Flows

12.2.1 Estimation of Financial Flows

Expenditure and profit per annum form a quarry and stone crusher.



13. Financial Benefit from Legal Channeling

13.1 Central Government Revenue

There is no revenue paid to the Central Government according to the mining rule of the country except an initial payment to the Department of Mines of Geology for its technical know-how.

13.2 Local Government Revenue

Rs.20 per 4 ton truck is paid as revenue to the District Development Society. This is the controlling authority for these stone quarries.

14. LEGAL AND ADMINISTRATIVE ISSUES

14.1 Law and Order and Human Rights

14.1.1 Law and Order

Last four years the law and order situation in the country is totally broken down except inside the Kathmandu valley. There are six fractions of Maoist terrorist groups of controlling Nepal now in different regions.

14.1.2 Human Rights

No awareness is grown among the general people of Nepal for human rights. Except in Kathmandu there is no movement is seen from any NGO regarding human rights. It has been reported many times then different newspapers of other countries that a large number of Nepali girls are illegally shipped to India and some other countries for prostitution. The Central or Local Government is indifferent about such incidents.

14.2 Overview of Legal Issues

14.2.1 Exploration Licenses

No such license is required for black stone quarries. This is only required for lime stone quarries.

14.2.2 Mining Licenses

This is given by seven authorities:

- a) Administrative Office
- b) District Forest Office
- c) District Roads Office
- d) District Soil Conservation Office
- e) District Building & Urban Development Office
- f) District Topography Survey Office
- g) Department of Mines and Geology.

14.2.3 Central Government Measures to Legalise Informal Mining

To get a license for a quarry and to run it Central Government has no role to the owner.

14.2.4 Local Government Measures to Legalise

Local Government, that is the District Development Society and Village Development Society is the authority to give license and collect royalty from a quarry.

15. ENVIRONMENTAL ISSUES

15.1 Environmental Factors

15.1.1 Negative and Positive Factors

Opening a quarry in this country always would cause deforestation of that area. After 1950 massive and unplanned deforestation took place due to increase in population and requirement of agricultural land. The stone quarries in mountains accelerated the process of deforestation. This is causing environmental change in the country and the countries nearby.

16. COMMUNITY ISSUES

16.1 Community Benefits

Nepal is declared an underdeveloped country by UNO. There is no big industry in the country and agricultural yield is insufficient for its people. Out of five development regions of the country, three are still neglected. Those are Western. Mid western and Far western Development Regions. May be negligible in respect of the total population, but these stone quarries are the only source of income to some people.

16.1.1 Poverty Reduction and Employment Generation

Other than the people directly associated to a quarry, there are many others who are earning their living breaking and selling stone chips. Poor people collect boulders from surrounding area and break them manually into chips to sell those to a construction site. By this one earns rupees 150 to 200 a day.

17. CONTACT LIST OF NGOs, RESOURCE PERSONS AND GOVERNMENT OFFICIALS

1. Mr. Manohar Sreshtha, Cha-1-556, Tauda Tole, Ason, Kathmandu – 3, Nepal, Ph. 977-1-414330(O)/4254237@.
2. Mr. Prakash Dakal, Mining Engineer, Department of Mines and Geology, Kathmandu.
3. Nawa Raj Bista, Programme Officer, District Development Society, Lalitpur, Ph 977-1-5523410.
4. Bishnu Bahadur Chhetri, Shop accountant, DDC, Lalitpur.
5. Ganesh Maharjan, Takhel, Chapagaon-6, Lalitpur.
6. Ramesh Puri, Jawlakhel, Lalitpur.

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