State-wise Mineral Scenario

During the year 2010-11, mineral production was reported from 32 States/Union Territories of which the bulk of value of mineral production of about 90.03% was confined to 11 States (including offshore areas) only. Offshore areas continued to be in leading position, in terms of value of mineral production in the country and had the share of 25.64% in the national output. Next in order was Odisha with a share of 10.62% followed by Rajasthan (8.58%), Andhra Pradesh (7.81%), Jharkhand (7.72%), Chhattisgarh (6.65%), Gujarat (6.33%), Madhya Pradesh (5.28%), Assam (4.64%), Goa (3.49%) and Karnataka (3.27%) and in the total value of mineral production. Remaining 21 States/Union Territories having individual share of 3% or less than 3% all together accounted for 9.97% of total value during the year under review.

State-wise analysis revealed that during the year 2010-11, the value of mineral production in most of the mineral producing States have shown a mixed trend as compared to that in the previous year. The States which have indicated an increase in the value of mineral production are Chhattisgarh (41.94%), Himachal Pradesh (41.81%), Odisha (31.64%), Karnataka (26.20%), Uttar Pradesh (9.95%) and Tripura (8.36%) during the year under review. However, some of the principal mineral producing States revealed decrease in value of mineral production and some of those includes Jammu & Kashmir (33.67%), Kerala (11.25%), Arunachal Pradesh (7.19%), Andhra Pradesh (6.52%), West Bengal (6.35%), Maharashtra (2.82%) and Assam (1.42%).

SCENARIO OF MINERAL RICH STATES

The review of Mineral rich States of India is given in the subsequent paragraphs.

1. ANDHRA PRADESH

Mineral Resources

Andhra Pradesh is the leading producer of chrysotile asbestos, barytes, mica, felspar, vermiculite, quartz, laterite, silica sand, dolomite and limestone. State accounts for 94% barytes, 78% Kyanite, 61% ball clay, 70% corundum, 6% diamond, 42% calcite, 41% mica, 26% garnet, 23% ilmenite, 20% limestone and 15% dolomite resources of the country. State is endowed with the internationally known black, pink, blue and multicoloured varieties of granites. Krishna-Godavari basin areas of the State have emerged as new promising areas for hydrocarbons-specialiy natural gas. Important minerals occurring in the State are apatite in Visakhapatnam district; asbestos in Cuddapah district; ball clay in West Godavari district; barytes in Anantapur, Cuddapah, Khammam, Krishna, Kurnool, Nellore and Prakasam districts; calcite in Anantapur, Cuddapah, Kurnool and Visakhapatnam districts; china clay in Adilabad, Anantapur, Chittoor, Cuddapah, East Godavari, West Godavari, Guntur, Kurnool, Mahaboobnagar, Nalgonda, Nellore, Rangareddy, Visakhapatnam and Warangal districts; coal in Adilabad, East and West Godavari, Karimnagar, Khammam and Warangal districts; corundum in Anantapur and Khammam districts; dolomite in Anantapur, Cuddapah Khammam, Kurnool and Warangal districts; felspar in Anantapur, Cuddapah West Godavari, Hyderabad, Khammam, Mahaboobnagar, Medak, Nalgonda, Nellore, Rangareddy and Vizianagaram districts; fireclay in Adilabad, Chittoor, Cuddapah, East Godavari, West Godavari, Kurnool, Nalgonda and Srikakulam districts; garnet in East Godavari, Khammam and Nellore districts; granite in Anantapur, Chittoor, Cuddapah, Guntur, Khammam, Medak, Nalgonda, Nellore, Prakasam, Rangareddy, Srikakulam, Vizianagaram and Warangal districts; iron ore (hematite) in Anantapur, Cuddapah, Guntur, Khammam, Krishna, Kurnool Nellore & Prakasam districts; iron ore (magnetite) in Adilabad, Prakasam and Warangal districts; lead-zinc in Cuddapah, Guntur and Prakasam districts; limestone in Adilabad, Anantapur, Cuddapah, East Godavari, West Godavari, Guntur, Hyderabad, Karimnagar, Krishna, Kurnool, Mahaboobnagar, Nalgonda, Nellore, Rangareddy, Srikakulam, Visakhapatnam and Vizianagaram districts; manganese ore in Adilabad, Srikakulam and Vizianagaram districts; mica in Khammam and Nellore districts; ochre in Anantapur Cuddapah, West Godavari, Guntur, Kurnool and Visakhapatnam districts; pyrophyllite in Anantapur Chittoor & Cuddapah districts; quartz/silica sand in Anantapur, Chittoor, Cuddapah, West Godavari, Guntur, Hyderabad, Khammam, Krishna, Kurnool,
Mahaboobnagar, Medak, Nalgonda, Nellore, Prakasam, Rangareddy, Srikakulam, Visakhapatnam, Visianagram and Warangal districts; quartzite in Chittoor, cuddapah Kurnool, Srikakulam, Visakhapatnam and Visianagram districts; steatite in Anantapur, Chittoor, Cuddapah, Khammam and Kurnool districts and vermiculite in Nellore and Visakhapatnam districts. Petroleum and natural gas deposits of importance are located in the onshore and offshore areas of Krishna-Godavari basin of the State. Other minerals that occur in the State are bauxite in East Godavari and Visakhapatnam districts; chromite in Khammam and Krishna districts; copper in Guntur, Khammam, Kurnool and Prakasam districts; diamond in Anantapur, Krishna and Kurnool districts; fuller’s earth in Medak and Rangareddy districts; gold in Anantapur, Chittoor and Kurnool districts; graphite in East Godavari, West Godavari, Khammam, Srikakulam, Visakhapatnam and Vizianagaram districts; gypsum in Guntur, Nellore and Prakasam districts; kyanite in Khammam, Nellore and Prakasam districts; magnesite in Cuddapah district; marble in Khammam district; pyrite in Kurnool district; sillimanite in Srikakulam & West Godavari districts; silver in Guntur district; titanium minerals in East Godavari, Krishna, Nellore, Srikakulam and Visakhapatnam districts; and tungsten in East Godavari district.

Production

The value of mineral production in Andhra Pradesh at 16587.51 crore in 2010-11 was less by about 6.52% as compared to that in the previous year. Almost all important minerals are produced in Andhra Pradesh. The principal minerals produced in the State were coal, natural gas (utilised), iron ore, limestone, petroleum (crude), barytes and which together accounted for 53.32% of total value of mineral production in the State during the year 2010-11. Coal alone contributed 41.35% of the total value of mineral production in the State.

Andhra Pradesh claims the Third position among the States in the country with a contribution of 7.81% to the total value of the mineral production. The share of Andhra Pradesh in the production of principal minerals was barytes 99.74%, mica (crude) 98.75%, felspar 43.33%, vermiculite 90.20%, quartz 43.27%, laterite 54.46%, silica sand 36.74%, dolomite 21.17%, clay (others) 12.67%, Sand (others) 87.31% and apatite 67.23 % in the country.

Among the important minerals produced in the State, output of manganese ore increased by 8.54% and petroleum (crude) by 0.33%. In the same manner, increase was observed in coal 1.80% barytes 8.44%, asbestos 6.17%, ball clay 26.72, garnet 21.85%, laterite 5.77%, ocher 3.30% and vermiculite 97.68 %. However, the production iron ore decreased by 77.0%, kaolin 89.14shale by 14.87%, steatite by 23.0% natural gas by 6.49%, lime kankar by 21.15%, fireclay by 9.67 and dolomite by 32.02%.

The production value of minor minerals was estimated at 7550.0 crore for the year 2010-11. The number of reporting mines in the State was 427 in 2010-11, as compared to 456 in the previous year. The index of mineral production in Andhra Pradesh (base 1993-94=100) was 309.88 in 2010-11, as against 293.54 in the previous year.

2. CHHATTISGARH

Mineral Resources

Chhattisgarh is the sole producer of tin concentrates and is one of the leading producers of coal, dolomite and iron ore. State accounts for about 36% tin ore, 4% diamond, 18% iron ore (hematite), 17% coal and 11% dolomite resources of the country. Important mineral occurrences of the State are bauxite in Bastar, Bilaspur, Dantewada, Jashpur, Kanker, Kawardha (Kabirdham), Korba, Raigarh and Sarguja districts; china clay in Durg and Rajnandgaon districts; coal in Koria, Korba, Raigarh and Sarguja districts; dolomite in Bastar, Bilaspur, Durg, Janjgir - Champa, Raigarh and Raipur districts; iron ore (hematite) in Bastar district, Bailadila deposit in Dantewada district, Chhote Dongar deposit in Kanker district, Rowghat, Chargaon, Metabodeli and Hahaladdi deposits in Rajnandgaon district, Boria Tibbu deposits in Dalli-Rajhara area, Durg district. Bailadila-Rowghat hill ranges in the State are considered to be one of the biggest iron ore fields in India. Limestone occurs in Bastar, Bilaspur, Durg, Janjgir-Champa, Kawardha (Kabirdham), Raigarh, Raipur and Rajnandgaon.
districts; quartzite in Durg, Raipur, Rajnandgaon and Raigarh districts; and talc/steatite in Durg district. Other minerals occurring in the State are corundum in Dantewada district; diamond and other gemstones in Raipur, Mahasamund and Dhamtari districts; gold in Raipur, Jashpur, Kanker and Mahasamund districts; fire clay in Bilaspur, Raigarh and Rajnandgaon districts; fluorite in Rajnandgaon district; garnet and marble in Bastar district; emerald and gold in Raipur district; granite in Bastar, Kanker and Raipur districts; quartz/silica sand in Durg, Raigarh, Raipur and Rajnandgaon districts; and tin in Bastar and Dantewada districts.

Production

The value of mineral production in Chhattisgarh at ₹14133.87 crore in 2010-11, got increased by 41.96%, as compared to that in the previous year. The State is ranked fifth in the country and accounted for 6.65% of the total value of the production. The important minerals produced in the State in the year 2010-11 were coal, iron ore, bauxite, dolomite and limestone which together accounted for about 98.13% of the entire value of mineral production in the State. Chhattisgarh was the sole producer of tin concentrate. The State was the leading producer of coal with a share of 21.30% and that of iron ore was 14.01% in the country. The production of coal increased by 3.50%, bauxite by 25.07% and limestone by 25.96%. There was a decrease in production of quartzite by 100%.

The production value of minor minerals was estimated at ₹261.19 crore for the year 2010-11. The number of reporting mines in Chhattisgarh was 151 in 2010-11 as against 152 in the previous year. The index of mineral production in Chhattisgarh (base 1993-94=100) was 264.33 in the year 2010-11 as against 250.7 in the previous year.

3. GOA

Mineral Resources

Goa is well known for its iron and manganese ores. Bauxite and laterite are the other minerals produced in the State. Iron and manganese ore belts extend from South-East to North-West of the State. Important iron ore deposits are located in Bicholim, Sanguem and Satari talukas. Manganese ores are associated with iron ores and occur as pockets of various sizes in a form of concretionary pebbles in shales. Important manganese ore deposits are confined to the Southern and South-Eastern parts of Sanguem taluka. Bauxite occurs in North & South Goa.

Production

The value of mineral production in Goa in 2010-11 got increased by 32.67% as compared to the previous year and was at ₹7409.82 crore. About 99.90% of the total value of mineral production in Goa was contributed by iron ore. Production of bauxite and minor minerals was also reported from the State in the year 2010-11. During the year under review, production of bauxite increased by more than three times and production of iron ore decrease by 3.71% and manganese ore by 23.38% over the previous year.

The production value of minor minerals was estimated at ₹5.73 crore for the year 2010-11. There were 75 reporting mines in both the years. The index of mineral production in Goa (base 1993-94=100) was 257.56 in the year 2010-11 as against 267.33 in the previous year.

4. GUJARAT

Mineral Resources

Gujarat is the sole producer of agate, chalk, and perlite and is leading producer of fluorite (concentrate), fireclay, silica sand, lignite, laterite, petroleum and natural gas and bauxite in the country. State is the sole holder of country’s resources of perlite, 66% of fluorite, 28% of diatomite, 18% of bentonite and 12% of wollastonite.

Important mineral occurrences in the State are agate found in Deccan Trap flows in Bharuch district; bauxite in Amreli, Bhavnagar, Jamnagar, Junagadh, Kheda, Kachchh, Porbander, Sabarkantha and Valsad districts; ball clay in Kachchh district; bentonite in Amreli, Bhavnagar, Jamnagar, Kachchh and Sabarkantha district; china clay in Amreli, Banaskantha, Bhavnagar,
Jamnagar, Junagadh, Kachchh, Mehsana and Sabarkantha districts; chalk in Porbandar district; diatomite in Bhavnagar district; dolomite in Bhavnagar and Vadodara districts; fireclay in Bharuch, Kachchh, Mehsana, Rajkot, Sabarkantha, Surat and Surendranagar districts; fluorite in Vadodara and Bharuch districts; fuller’s earth in Bhavnagar and Kachchh districts; gypsum in Bhavnagar, Jamnagar, Junagadh, Kachchh and Surendranagar districts; lignite in Bharuch, Bhavnagar, Kachchh and Surat districts; limestone in Amreli, Junagadh, Kheda, Kachchh, Panchmahals, Porbandar, Rajkot, Sabarkantha, Surat, Vadodara and Valsad districts; ochre in, Bhavnagar, Kachchh and Patan districts; perlite in Rajkot district; petroleum and natural gas in oil fields of Ankaleshwar, Kalol, Navgam, Balol and Cambay in Cambay onshore and offshore basins; quartz/silica sand in Bharuch, Bhavnagar, Dahod, Kheda, Kachchh, Panchmahals, Rajkot, Sabarkantha, Surat, Surendranagar, Vadodara and Valsad districts; and steatite in Sabarkantha district. Other minerals that occur in the State are apatite and rock phosphate in Panchmahals district; calcite in Amreli and Bharuch districts; copper ore in Banaskantha district; granite in Banaskantha, Mehsana and Sabarkantha districts; graphite in Panchmahals district; lead-zinc and marble in Banaskantha and Vadodara districts; manganese ore in Panchmahals and Vadodara districts; vermiculite in Vadodara district; and wollastonite in Banaskantha district.

Production

The value of mineral production in Gujarat in 2010-11 at `12731.07 crore, recorded about 0.55% increase as compared to that in the previous year. The State was ranked sixth in the country and accounted for about 6.33% of the total value of mineral production in India during the year. Gujarat was the sole producer of agate, chalk and fluorite (concentrate) and the leading producer of Kaolin, Marl, and silica sand in the country.

The State was also the second largest producer of lignite and petroleum (crude) in the country during the year 2010-11. Production of ochre by more than four times, manganese ore by more than three times, silica sand by more than double and that of lignite 24.49%, agate 72.73, laterite 26.89, %. The most of the minerals reporting fall in production during 2010-11 like bauxite 66.0, ball clay by 35.5%, clay (others) by 55.92% dolomite by 75.6% and fireclay by 64.35 %. Fall in production was due to less plant requirement, shortage of labour etc.

The production value of minor minerals was estimated at `725.67 crore for the year 2010-11. The number of reporting mines in the State was 412 in 2010-11 as compared to 446 in the previous year. The index of mineral production in Gujarat (base 1993-94=100) was 111.19 in the year 2010-11 as against 112.78 in the previous year.

5. JHARKHAND

Mineral Resources

Jharkhand carved out of Bihar in November, 2000 is one of the leading mineral producing States. It is one of the leading producers of coal, kyanite, gold, silver, bauxite and felspar. Uranium ore is being mined and processed by Uranium Corporation of India Ltd. (UCIL) for use as fuel in the country’s nuclear power reactors through four underground mines, an opencast mine, two processing plants and a by-product recovery plant, all in East Singhbhum district. Jharkhand accounts for about 36% rock phosphate, 29% coal, 29% iron ore (hematite), 30% apatite, 22% andalusite, 18% copper ore and 5% silver ore resources of the country.

Important minerals occurring in the State are bauxite in Dumka, Gumla, Latehar, Lohardaga and Palamau districts; china clay in Dumka, Hazaribagh, Lohardaga, East & West Singhbhum, Sahebganj and Ranchi districts; coal in Bokaro, Deoghar, Dhanbad, Giridih, Godda, Hazaribagh, Palamau, Pakur, and Ranchi districts; copper in Hazaribagh and East Singhbhum districts; dolomite in Garhwa and Palamau districts; felspar in Deoghar, Dhanbad, Dumka, Giridih, Hazaribagh, Jamtara, Koderma, Latehar Palamau and Ranchi districts; fireclay in Dhanbad, Dumka, Giridih, Godda, Hazaribagh, Palamau, Ranchi and West Singhbhum districts; gold in East Singhbhum district; graphite in Palamau district; iron ore (hematite) in West Singhbhum district; iron ore (magnetite) in Gumla, Hazaribagh, Latehar, Palamau and East Singhbhum districts; kyanite in East Singhbhum, Saraikela, Kharaswan, districts; limestone in Bokaro,
Dhanbad, Garhwa, Giridih, Hazaribagh, Palamau, Ranchi, East & West Singhbhum districts; manganese ore in East Singhbhum district; mica in Giridih and Koderma districts; ochre in West Singhbhum district; dunite/pyroxenite in East Singhbhum district; quartz/silica sand in Deoghar, Dhanbad, Dumka, Giridih, Godda, Hazaribagh, Koderma, Palamau, Ranchi, Sahebganj, East & West Singhbhum districts; and quartzite in East & West Singhbhum districts.

Other minerals that occur in the State are in Garwha district; andalusite and rock phosphate in Palamau district; apatite, chromite, cobalt, nickel, gold and silver in East Singhbhum district; asbestos in East & West Singhbhum districts; barytes in Palamau and East Singhbhum districts; bentonite in Pakur and Sahebganj districts; garnet in Hazaribagh district; granite in Deoghar, Dhanbad, Dumka, Giridih, Godda, Gumla, Hazaribagh, Koderma, Lohardaga, Palamau, Ranchi, East & West Singhbhum districts; sillimanite in Hazaribagh district; talc/steatite in Giridih, Palamau, East & West Singhbhum district; titanium minerals in Ranchi and East Singhbhum districts; and vermiculite in Giridih and Hazaribagh districts.

Production

The value of mineral production in Jharkhand during the year 2010-11 at ` 16402.08 crore got increased by about 6.35 % over the previous year. The State claiming fourth position in the country accounted for 7.72% of the total value of mineral production during 2010-11. Jharkhand was the leading producer of kyanite and second leading producer of graphite in the country. The state was third leading producer of felspar during the year. Coal, the principal mineral produced in the State contributed 88.58% of the total value of mineral production in the State. The other principal minerals produced in the State were iron ore, bauxite, pyroxenite, quartzite and copper concentrate.

Among the important minerals, production of coal increased by 3.39%, iron ore 2.78%, fireclay by 66.71%, bauxite by 9.41%, Graphite 66.71% and quartzite by 129.65% during the year 2010-11 as compared to the previous year. However, the output of manganese ore declined by 85.56%, limestone by 9.72%, laterite by 76%, gold ore by 20.36%, Silica Sand by 6.94% and kyanite by 19.75% owing to disruptions by naxal outfits and less market demand.

The production value of minor minerals was estimated at ` 40.14 crore. The number of reporting mines in Jharkhand during 2010-11 was 291 as against 299 during previous year. The index of mineral production in Jharkhand (Base1993-94=100) was 148.45 in 2010-11 as compared to 143.82 in the previous year.

6. KARNATAKA

Mineral Resources

Karnataka has the distinction of being the main gold producing State in the country. The State is the sole producer of felsite and leading producer of iron ore, chromite and dunite. Karnataka hosts country’s 78% vanadium ore, 73% iron ore (magnetite), 42% tungsten ore, 37% asbestos, 34% titaniferous magnetite, 30% limestone, 25% granite, 22% manganese ore, 14% corundum, 17% dunite, 17% gold (primary), 13% kyanite and 12% iron ore (hematite) resources. The important minerals occurring in the State are bauxite in Belgaum, Chickballapur Chickmagalur, Uttar and Dakshin Kannad & Udupi districts; china clay in Bangalore, Belgaum, Bellary, Bidar, Chickmagalur, Dharward, Gadag, Hassan, Haveri, Kolar, Uttar and Dakshin Kannad, Shimoga and Tumkur districts; chromite in Chikmagalur, Hassan and Mysore districts; dolomite in Bagalkot, Belgaum, Bijapur, Chitrardurga, Mysore, Uttar Kannad and Tumkur districts; dunite/pyroxenite in Chickmagalur, Hassan and Mysore districts; felspar in Bangalore, Belgaum, Chitrardurga, Hassan and Raichur districts; fireclay in Bangalore, Chitrardurga, Dharward, Hassan, Kolar, Shimoga and Tumkur districts; gold in Chitradurga, Dharward, Gulbarga, Hassan, Haveri, Kolar, Raichur and Tumkur districts; iron ore (hematite) in Bagalkot, Bellary, Chickmagalur, Chitradurga, Davangere Dharward, Gadag, Hareri Uttar Kannad, Shimoga and Tumkur districts; iron ore (magnetite) in Chickmagalur, Hassan, Uttar and Dakshin Kannad and Shimoga districts; kyanite in Chickmagalur, Chitradurga, Coorg, Mandya, Mysore, Shimoga and Dakshin Kannad districts; limestone in Bagalkot, Belgaum, Bellary, Bijapur, Chickmagalur, Chitrardurga, Davangere, Gadag, Gulbarga, Hassan, Mysore,
Uttar and Dakshin Kannad, Shimoga, Tumkur and Udupi districts; magnesite in Coorg, Mandya and Mysore districts; manganese ore in Belgaum, Bellary, Chickmagalur, Chitradurga, Davangere, Gadag Uttar Kannad, Shimoga and Tumkur districts; ochre in Bellary, Bidar and Kolar districts; quartz/silica sand in Bagalkot, Bangalore, Belgaum, Bellary, Chickmagalur, Chitradurga, Davangere, Dharwad, Gulbarga, Hassan, Haveri, Kolar, Koppal, Mandya, Mysore, Uttar & Dakshin Kannad, Raichur, Shimoga, Tumkur and Udupi districts; and steatite in Bellary, Chickmagalur, Chitradurga, Hassan, Mandya, Mysore, Raichur and Tumkur districts.

Other minerals that occur in the State are asbestos in Chickmagalur, Hassan, Mandya, Mysore and Shimoga districts; barytes and pyrite in Chitradurga district; calcite in Belgaum, Bijapur and Mysore districts; copper in Chickmagalur, Chitradurga, Gulbarga, Hassan, Uttar Kannad, Raichur and Shimoga districts; corundum in Bangalore, Bellary, Chitradurga, Coorg, Hassan, Mandya, Mysore and Tumkur districts; fuller’s earth in Belgaum and Gulbarga districts; granite in Bagalkot, Bangalore, Bellary, Bijapur, Chamrajnagar, Gulbarga, Hassan, Kolar, Koppal, Uttar Kannad, Raichur and Tumkur districts; graphite in Kolar and Mysore districts; gypsum in Gulbarga district; molybdenum in Kolar and Raichur districts; nickel in Uttar Kannad district; sillimanite in Hassan, Myspre and Dakshin Kannad districts; silver in Chitradurga and Raichur districts; titanium minerals in Hassan, Uttar Kannad and Shimoga districts; tungsten in Gadag, Kolar and Raichur districts; vanadium in Hassan, Uttar Kannad and Shimoga districts; and vermiculite in Hassan, Mandya and Mysore districts.

Production

The value of mineral production in Karnataka during the year 2010-11 at 6941.71 crore got increased by 26.20 % over the previous year. Iron ore, gold, manganese ore and limestone being the important minerals produced in the State together accounted for about 99.42% of the total value of mineral production during the year. Karnataka was the major producer of gold with a share of 99.40% and the major producer of limeshell with a share of 38.1%, dunite (10.6%), shale (18.5%) and Iron Ore(18.21%) of total production in the country. Among the important minerals, production of gold ore increased by 41.08%, chromite by 30.97%, Limestone by 3.28%, magnesite by 8.34%, quartzite by 50.60% and fireclay by 121.35%. The production of felspar declined by 66.97%, bauxite by 46.87%, quartz by 96.36%, shale by 40.28%, laterite by 35.93% and dunite by 94.72 %. Decline in production was also noticed in kaolin 49.93% and silver 10.43 %.

The production value of minor minerals was estimated at 17.99 crore for the year 2010-11. The number of reporting mines in Karnataka was 238 in 2010-11 as against 233 in the previous year. The index of mineral production in Karnataka (Base 1993-94=100) was 264.02 in the year 2010-11 as compared to 289.21 in the previous year.

7. MADHYA PRADESH

Mineral Resources

Madhya Pradesh is the only diamond producing State and is the leading producer of copper concentrate, pyrophyllite and diaspore. State hosts country’s 63% diaspore, 41% molybdenum ore, 56% pyrophyllite, 90% diamond, 24% copper ore, 17% rock phosphate, 13% manganese ore 16% fireclay and 7% ochre resources. Important mineral occurrences in the State are bauxite in Anuppur Balaghat, Guna, Jabalpur, Katni, Mandla, Rewa, Satna, Shahdol Shivpuri, Sidhi & Vidisha districts; calcite in Badwani, Jhabua and Khargone districts; china clay in Betul, Chhatarpur, Chhindwara, Gwalior, Hoshangabad, Jabalpur, Katni, Khargone, Naringshpur, Raisen, Satna, Shahdol and Sidhi districts; copper in Balaghat, Betul and Jabalpur districts; coal in Betul, Shahdol and Sidhi districts; diamond in Chhatarpur & Panna district; diaspore & pyrophyllite in Chhatarpur, Sagar, Shivpuri and Tikamgarh districts; dolomite in Balaghat, Chhatarpur, Chhindwara, Damoh, Dewas, Harda, Hoshangabad, Jabalpur, Jhabua, Katni, Mandla, Naringshpur, Sagar and Seoni districts; fireclay in Betul, Chhindwara, Jabalpur, Katni, Naringshpur, Panna, Sagar, Shahdol and Sidhi districts; iron ore (hematite) in Betul, Gwalior, Jabalpur and Katni districts; limestone in Balaghat, Chhindwara, Damoh, Dhar, Hoshangabad, Jabalpur, Jhabua, Khargone, Katni, Mandsaur, Morena, Naringshpur, Rewa, Sagar, Satna,
Sehore, Shahdol and Sidhi districts; manganese ore in Balaghat, Chhindwara, Jabalpur and Jhabua districts; ochre in Dhar, Gwalior, Jabalpur, Katni, Mandla, Rewa, Satna, Shahdol and Umaria districts; quartz/silica sand in Balaghat, Dewas, Dhar, Jabalpur, Khandwa, Khargone, Morena, Rewa and Shahdol districts; talc/steatite/soapstone in Dhar, Jabalpur, Jhabua, Katni, Narsinghpur and Sagar districts; and vermiculite in Jhabua district.

Other minerals that occur in the State are calcareous shales (used in slate pencil) in Mandsaur district; barites in Dewas, Dhar, Shivpuri, Siddhi and Tikamgarh districts; felspar in Jabalpur and Shahdol districts; fuller’s earth in Mandla district; gold in Jabalpur and Sidhi districts; granite in Betul, Chhatarpur, Chhindwara, Datia, Jhabua, Panna, Seoni and Shivpurvi districts; graphite in Betul and Sidhi districts; gypsum in Shahdol district; lead-zinc in Betul district; molybdenum in Balaghat district; potash in Panna district; quartzite in Sehore district; rock phosphate in Chhatarpur, Jhabua and Sagar districts; and sillimanite in Sidhi district.

Production
The value of mineral production in Madhya Pradesh at `11,225.04 crore in the year 2010-11 got increased by about 0.66 % as compared to the previous year. Madhya Pradesh contributed 5.28% to the total value of mineral production and was Seventh among States in the country. The State was the sole producer of diamond in the country. The State was the leading producer of pyrophyllite with a share of 87.70%, copper concentrates 57.60% Manganese ore(25.1%), and clay (others) (54.6%) in the national output of respective minerals. Madhya Pradesh was, also, the major producer of shale (19.8%), Diaspore (44.60%) and phosphorite 6.20 %. During 2010-11, the production of manganese ore increased by 18.93%, Shale 8.05%, Copper concentrate 21.36%, iron ore 64.93% and clay (others) by 37.26 %. However, downward trend in production was shown in bauxite by 44.57%, phosphorite by 37.15%, dolomite by 12.26, kaolin by 66.54% laterite by 46.08, ocher by 24.86 and shale by 6.10 %.

The production value of minor minerals was estimated at `1,702.58 crore for the year 2010-11. The number of reporting mines in Madhya Pradesh was 295 in 2010-11 as against 287 in the previous year. The index of mineral production in Madhya Pradesh (base 1993-94=100) was 216.74 in 2010-11 as against 219.99 in the previous year.

8. MAHARASHTRA

Mineral Resources
Maharashtra is the sole producer of corundum and is the second largest producer of manganese ore after Odisha. The principal mineral-bearing belts in Maharashtra are Vidarbha area in the East and Konkan area in the West. Important mineral occurrences are bauxite in Kolhapur, Raigad, Ratnagiri, Satara, Sindhudurg and Thane districts; china clay in Amravati, Bhandara, Chandrapur, Nagpur, Sindhudurg and Thane districts; chromite in Bhandara, Chandrapur, Nagpur and Sindhudurg districts; coal in Nagpur, Chandrapur and Yavatmal districts; dolomite in Chandrapur, Nagpur and Yavatmal districts; fireclay in Amravati, Bhandara, Chandrapur, Nagpur and Ratnagiri districts; fluorite and Shale in Chandrapur district; iron ore (hematite) in Chandrapur, Gadchiroli and Sindhudurg districts; iron ore (magnetite) in Gondia district; kyanite in Bhandara and Nagpur districts; laterite in Kolhapur district; limestone in Ahmednagar, Chandrapur, Dhule, Gadchiroli, Nagpur, Nanded, Sangli and Yavatmal districts; manganese ore in Bhandara and Nagpur districts; corundum, pyrophyllite and sillimanite in Bhandara and Chandrapur districts; quartz and silica sand in Bhandara, Gadchiroli, Gondia, Kolhapur, Nagpur, Ratnagiri and Sindhudurg districts and quartzite in Bhandara, Gadchiroli Gondia and Nagpur districts.

Other minerals that occur in the State are barytes in Chandrapur and Gadchiroli districts; copper in Bhandara, Chandrapur, Gadchiroli and Nagpur districts; felspar in Sindhudurg district; gold in Bhandara and Nagpur districts; granite in Bhandara, Chandrapur, Dhule, Gadchiroli, Nagpur, Nanded, Nasik, Sindhudurg and Thane districts; graphite in Sindhudurg district; lead-zinc in Nagpur district; marble in Bhandara and Nagpur districts; ochre and tungsten in Nagpur district; silver and vanadium in Bhandara district; steatite in Bhandara, Ratnagiri and Sindhudurg districts; and titanium minerals in Gondia and Ratnagiri districts.
Production

The value of mineral production in Maharashtra during the year 2010-11 at ` 5917.29 crore got decreased by 2.82% as compared to that in the previous year. Maharashtra accounted for about 2.78% of the total value of mineral production in the country during the year under review. It was the major producer of fluorspar (graded) in the country during the year 2010-11. The State was the major producer of manganese ore and kyanite accounting for 21.63% and 36.31% respectively of total production of the mineral in the country. Among other important minerals, the State reported higher production during the year 2010-11 in respect of Kyanite by 88%, iron ore by 431.10% manganese ore by 1.56% and bauxite by 7.5 % and fall in production was reported in respect of fireclay by 54.57%, fluorspar by 48.25% and sillimanite by 62.07 %. During the year under review no production of chromite, corundum and lateite was reported.

The value of production of minor minerals was estimated at ` 317.31 crore for the year 2010-11. The number of reporting mines was 157 in the year 2010-11 as against 158 in the previous year. The index of mineral production in Maharashtra (base 1993-94 = 100) in 2010-11 was 193.3, as against 200.09 in the previous year.

9. ODISHA

Mineral Resources

Odisha is the leading producer of chromite, graphite, bauxite, manganese ore, iron ore, sillimanite, quartzite, pyroxenite and dolomite. The State hosts country’s sole resources of ruby and platinum group of metals 86%. It accounts for country’s 93% chromite, 92% nickel ore, 69% cobalt ore, 52% bauxite, 51% titaniferous magnetite,44% manganese ore, 40% limestone, 22% pyrophyllite, 33% iron ore (hematite), 20% each mica & sillimanite, 25% each fireclay and garnet, 24% coal, 5% zircon and 20% vanadium ore resources.

Important minerals that occur in the State are bauxite in Bolangir, Kalahandi, Kandhamal, Keonjhar, Koraput, Malkangiri Roygada and Sundergarh districts; china clay in Bargarh, Boudh, Bolangir, Keonjhar, Mayurbhanj, Sambalpur and Sundergarh districts; chromite in Balasore, Dhenkanal, Jajpur and Keonjhar districts. Chromite deposits of Sukinda and Nuasahi ultramafic belt constitute 95% of the country’s chromite resources. Coal occurs in IB river Valley coalfield, Sambalpur district and Talcher coalfield, Dhenkanal district; dolomite in Bargarh, Keonjhar, Koraput, Sambalpur and Sambhar districts; dunite/pyroxenite in Keonjhar district; fireclay in Angul, Bhubaneswar, Cuttack, Dhenkanal, Jharsuguda, Khurda, Puri, Sambalpur and Sundergarh districts; garnet in Ganjam and Sambalpur districts; graphite in Bargarh, Boudh, Bolangir, Kalahandi, Kandhamal, Koraput, Nuapada and Rayagada districts; iron ore (hematite) in Dhenkanal, Jajpur, Keonjhar, Koraput, Mayurbhanj, Sambalpur and Sundergarh districts; iron ore (magnetite) in Keonjhar and Mayurbhanj districts; limestone in Bargarh, Kalahandi, Koraput, Malkangiri, Nuapada, Sambalpur and Sundergarh districts; manganese ore in Bolangir, Keonjhar, Koraput, Mayurbhanj, Sambalpur and Sundergarh districts; Pyrophyllite in Keonjhar district; quartz/silica sand in Boudh, Bolangir, Kalahandi, Mayur bhang, Ragada, Sambalpur and Sundergarh districts; quartzite in Bolangir, Dhenkanal, Jajpur, Keonjhar, Jharsuguda, Mayurbhanj, Sambalpur and Sundergarh districts; sillimanite in Ganjam and Sambalpur districts; talc/steatite in Keonjhar, Mayurbhanj and Sambalpur districts; titanium minerals in Dhenkanal, Ganjam, Jajpur and Mayurbhanj districts; and zircon in Ganjam district.

Other minerals that occur in the State are Asbestos in Keonjhar district; cobalt in Jajpur district; copper in Mayurbhanj and Sambalpur districts; granite in Angul, Boudh, Bolangir, Cuttack, Deogarh, Dhenkanal, Ganjam, Keonjhar, Khurda, Koraput, Mayurbhanj, Nuapada, Rayagada and Sambalpur districts; lead in Sargipalli area, Sundergarh district; Mica in Sonepur district; and nickel in Jajpur, Keonjhar and Mayurbhanj districts. Occurrences of ruby and emerald are reported from Bolangir and Kalahandi districts, respectively. Platinum Group of Metals occur in Keonjhar district; silver in Sundergarh district; tin in Koraput and Malkangiri districts; and vanadiferous magnetite occurs in Balasore and Mayurbhanj districts.

Production
The value of mineral production in Odisha increased by 31.64% in the year 2010-11 over the previous year and was at `22567.67 crore. The State contributed 10.62% of the total value of mineral production and claims first position among the States in the country during the year under review. The important minerals produced in Odisha were coal, bauxite, chromite, iron ore, manganese ore and limestone which together accounted for about 99% of the total value of mineral production in the year 2010-11.

Odisha was the leading producer of chromite with a share of 99.80%, pyroxenite (77.13%), bauxite (38.42%) sillimanite (37.53%), manganese ore (22.62), dolomite (22.45%) and coal (19.23%) in the total production of respective mineral in India during the year 2010-11. The State was also the major producer of graphite with a share of 17.54% in the total production in the country.

Of the important minerals, production of chromite increased by 24.41%, manganese ore by 7.66%, garnet by 26.73% and limestone by 27.20% in the year 2010-11 as compared to that in the previous year. On the other hand, decrease in production was reported for iron ore by 5.62%, dolomite by 13.62%, graphite by 56.27%, kaoline by 38.37%, pyroxenite by 19.27% and quartzite by 84.58% during the year under review. No production of fireclay, iolite, pyrophilite, quartz and silica sand was reported during the year.

The production value of minor minerals was estimated at `85.68 crore for the year 2010-11. The number of reporting mines in the year 2010-11 was 173 as against 221 in the previous year. The index of mineral production in Odisha (base 1993-94 = 100) was 445.39 in 2010-11 as against 438.27 in the previous year.

10. RAJASTHAN

Mineral Resources

Rajasthan is the sole producer of jasper, lead & zinc concentrate and wollastonite. Rajasthan was the sole producer of garnet (gem) till 2004-05. Almost entire production of calcite and natural gypsum in the country comes from Rajasthan. State is a major producer of asbestos, copper concentrate, ochre, phosphorite/rock phosphate, silver, steatite, ball clay, fluorite and felspar. The State is also an important producer of marble having various shades. Makrana area is world famous centre for marble mining.

Country’s more than 88% resources of wollastonite, lead & zinc ore (89%) and potash (94%) are located in Rajasthan. State has a main share in the total resources of silver ore (87%), gypsum (82%), bentonite (80%), fuller’s earth (74%), diatomite (72%), ochre (81%), marble (63%), felspar (66%), calcite (50%), mica (21%), talc/steatite/soapstone (50%), asbestos (61%), copper ore (50%), ball clay (38%), rock phosphate (30%), tungsten (27%), fluorite (29%), granite (23%), gold (primary) (17%) and china clay (16%). Important minerals occurring in the State are asbestos (amphibole) in Ajmer, Bhilwara, Dungarpur, Pali, Rajasthan and Udaipur districts; ball clay in Bikaner, Nagaur and Pali districts; barytes in Alwar, Bharatpur, Bhilwara, Bundi, Chittorgarh, Jalore, Pali, Rajasthan and Udaipur districts; calcite in Ajmer, Alwar, Bhilwara, Jaipur, Jhunjhunu, Pali, Sikar, Sirohi and Udaipur districts; china clay in Ajmer, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittorgarh, Dausa, Jaipur, Jaisalmer, Jhunjhunu, Kota, Nagaur, Pali, Sawai Madhopur and Udaipur districts; and copper in Khetri belt in Jhunjhunu district and Dariba in Alwar district. Deposits of copper are also reported to occur in Ajmer, Bharatpur, Bhilwara, Bundi, Chittorgarh, Dungarpur, Jaipur, Pali, Rajasthan and Udaipur districts. Dolomite occur in Ajmer, Alwar, Bhilwara, Chittorgarh, Dausa, Jaipur, Jaisalmer, Jhunjhunu, Jodhpur, Rajasthan, Sikar and Udaipur districts; feldspar in Ajmer, Alwar, Bharatpur, Bhilwara, Jaipur, Pali, Rajasthan, Sikar Tonk & Udaipur districts; fireclay in Alwar, Barmer, Bharatpur, Bikaner, Jaisalmer, Jhunjhunu and Sawai Madhopur districts; fluor spar in Ajmer, Dungarpur, Jalore, Jhunjhunu, Sikar, Sirohi and Udaipur districts; garnet in Ajmer, Bhilwara, Jaipur, Jhunjhunu, Sikar and Tonk districts; gypsum in Barmer, Bikaner, Churu, Sri Ganganagar, Hanumangarh, Jaisalmer, Jalore, Nagaur and Pali districts; iron ore (hematite) in Alwar, Dausa, Jaipur, Jhunjhunu, Sikar and Udaipur districts; iron ore (magnetite) in Bhilwara,
Jhunjhunu and Sikar districts; lead-zinc in Zawar in Udaipur district, Bamnia Kalan, Rajpura-Dariba in Rajasmand and Rampura/Agucha in Bhilwara district. Lead-zinc occurrences are also reported from Ajmer, Chittorgarh, Pali and Sirohi districts. Lignite deposits occur in Barmer, Bikaner, Jaisalmer and Nagaur districts. Flux grade limestone occurs in Jodhpur and Nagaur districts and chemical grade limestone in Jodhpur, Nagaur and Alwar districts. Cement grade deposits of limestone are widespread and occur in Ajmer, Alwar, Banswara, Bhilwara, Bikaner, Bundi, Chittorgarh, Churu, Dungarpur, Jaipur, Jaisalmer, Jhunjhunu, Kota, Nagaur, Pali, Sawai Madhopur, Sikar, Sirohi and Udaipur districts. Magnesite occurs in Ajmer, Dungarpur, Pali and Udaipur districts; marble in Ajmer, Banswara, Bhilwara, Bundi, Chittorgarh, Dungarpur, Jaipur, Nagaur, Sikar, Sirohi and Udaipur districts; mica in Ajmer, Bhilwara, Rajsamand & Tonk district; ochre in Barar Bharatpur, Bhilwara, Bikaner, Chittorgarh, Jaipur, Sawai Madhopur and Udaipur districts; pyrite in Sikar district; pyrophyllite in Alwar, Bhilwara Jhunjhunu, Rajsamand and Udaipur districts; quartz/silica sand in Ajmer, Alwar, Bharatpur, Bhilwara, Bikaner, Bundi, Dausa, Jaipur, Jaisalmer, Jhunjhunu, Jodhpur, Kota, Pali, Rajsamand, Sawai Madhopur, Sikar, Sirohi, Tonk and Udaipur districts; quartzite in Ajmer, Alwar, Jhunjhunu and Sawai Madhopur districts; rock phosphate in Alwar, Banswara, Jaipur, Jaisalmer and Udaipur districts; talc/steatite/soapstone in Ajmer, Alwar, Banswara, Bharatpur, Bhilwara, Chittorgarh, Dausa, Dungarpur, Jaipur, Jhunjhunu, Karauli, Pali, Rajsamand, Sawai Madhopur, Sirohi, Tonk and Udaipur districts; vermiculite in Ajmer and Barmer districts; and wollastonite in Ajmer, Dungarpur, Pali, Sirohi and Udaipur districts.

Other important minerals that occur in the State are apatite in Udaipur and Sikar districts; bauxite in Kota district; bentonite in Barmer, Jaisalmer and Jhalawar districts; corundum in Tonk district; diatomite in Barmer and Jaisalmer districts; emerald in Ajmer and Rajsamand districts; fuller’s earth in Barmer, Bikaner, Jaisalmer and Jodhpur districts; granite in Barmer, Banswara, Barmer, Bhilwara, Chittorgarh, Jaipur, Jaisalmer, Jalore, Jhunjhunu, Jodhpur, Pali, Rajsamand, Sawai Madhopur, Sikar, Sirohi, Tonk and Udaipur districts; graphite in Ajmer, Alwar and Banswara districts; kyanite and sillimanite in Udaipur district; manganese ore in Banswara and Udaipur districts; potash in Jaisalmer and Nagaur districts; silver in Ajmer, Bhilwara, Jhunjhunu, Rajsamand and Udaipur districts; tungsten at Degana in Nagaur district. Tungsten deposits are also reported to occur in Sirohi district.

**Production**

The value of mineral production in Rajasthan during the year 2010-11 at ` 18241.38 crore, got increased by 208.78% as compared to the previous year. Its share to the total value of mineral production in the country in the year 2010-11 was about 8.58%. The State produces almost all varieties of minerals in the country. Rajasthan was the sole producer of lead concentrate, zinc concentrate, calcite, selenite and wollastonite. Almost the entire production of silver, Ochre, steatite and gypsum, in the country was reported from the State. Besides, Rajasthan was the major producer of copper concentrate accounting for 33.36%, ochre 93.60%, phosphorite / rock phosphate 93.8%, silver 99.70%, talc/soapstone/steatite 74.20%, ball clay 69.50%, fireclay 66.70%, felspar 50.80%, mica (w/s) 20.7%, limestone 18.3%, and quartz 25.1% of the total production in the country. Production of petroleum (crude),fluorite and mica (crude) increased by manifold and that of iron ore and manganese ore by double during the year under review. Increase in production was also reported for Natural Gas(ut.) 59.41%, lignite by 16.24%, phosphorite by 44.90%, fireclay by 53.98%, siver by 6.88%, wollastonite by 37.93% and gypsum by 29.12% , as compared to that in the previous year. Production of selenite declined by 53.91%, silica sand 53.91%, quartz 25.85%, auritate 24.42%, ochre 7.25%, limestone 7.74%, kaolin 6.37%, clay (others) 95.19% and calcite by 20.16 % during the year under review.

The value of production of minor minerals was estimated at ` 4586.17 crore for the year 2010-11. The number of reporting mines in Rajasthan was 269 in the year 2010-11, as against 289 in previous year. The index of mineral production in Rajasthan (base 1993 - 94 = 100) was 275.67 in 2010-11 as against 247.18 in the previous year.
Tamil Nadu is leading producer of garnet (abrasive), graphite, lignite, magnesite, lime kankar and dunite. State accounts for country’s 80% lignite, 74% vermiculite, 63% dunite, 65% rutile, 52% molybdenum, 49% garnet, 32% ilmenite and 27% sillimanite resources. Important minerals occurring in the State are bauxite in Dindigul, Namakkal, Nilgirirand Salem districts; dunite/pyroxenite in Salem district; felspar in Coimbatore, Dindigul, Erode, Kanchipuram, Karur, Namakkal, Salem and Tiruchirapalli districts; fireclay in Cuddalore, Kanchipuram, Perambalur, Pudukottai, Sivaganga, Thiruvallur, Tiruchirapalli, Vellore and Villupuram districts; garnet in Chidambaram, Kanyakumari, Thanjavur, Tirunelveli and Kottabomman districts; granite in Dharmapuri, Erode, Kanchipuram, Madurai, N. Arcot & Ambedkar, P. Muthuramalingam, Salem, Thiruvannamalai, Tiruchirappalli, Tirunelveli, Vellore and Villupuram districts; graphite in Madurai, Ramnathapuram, Sivaganga and Vellore districts and gypsum in Coimbatore, Perambalur, Ramnathapuram, Tiruchirappalli, Tirunelveli, Tuticorin and Virudhanagar districts. Lignite deposits are located in Cuddalore Ariyalur, Thanjavur, Thiruvarur, Nagapattinam and Ramanathapuram districts; limestone in Coimbatore, Cuddalore, Dindigul, Kanchipuram, Karur, Madurai, Nagapattinam, Namakkal, Perambalur, Salem, Thiruvarur, Tiruchirappalli, Tirunelveli, Vellore, Villupuram and Virudhunagar districts; magnesite in Coimbatore, Dharmapuri, Karur, Namakkal, Nilgiri, Salem, Tiruchirappalli, Tirunelveli and Vellore districts; quartz/silica sand in Chengai-Anna, Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kanchipuram, Karur, Madurai, Namakkal, Periyar, Perambalur, Salem, Thiruvarur, Thiruvarur, Nagapattinam, Tiruchirappalli, Villupuram, Virudhunagar and Vellore districts; steatite in Coimbatore, Salem, Tiruchirappalli and Vellore districts; titanium minerals in Kanyakumari, Nagapattinam, Ramanathapuram, Thiruvarur, Tirunelveli and Tuticorin districts; vermiculite in Dharmapuri, Tiruchirappalli and Vellore districts and zircon in Kanyakumari district.

Other minerals that occur in the State are apatite in Dharmapuri and Vellore districts; barytes in Erode, Madurai, Perambalur, Tirunelveli and Vellore districts; bentonite in Chengai-Anna district; calcite in Salem district; china clay in Cuddalore, Dharmapuri, Kanchipuram, Nilgiri, Sivaganga, Thiruvarur, Thiruvannamalai, Tiruchirappalli and Villupuram districts; chromite in Coimbatore and Salem districts; copper, lead-zinc and silver in Villupuram district; corundum and gold in Dharmapuri district; dolomite in Salem and Tirunelveli districts; emerald in Coimbatore district; iron ore (magnetite) in Dharmapuri, Erode, Namakkal, Nilgiri, Salem, Thiruvannamalai, Tiruchirappalli and Villupuram districts; kyanite in Kanyakumari and Tirunelveli districts; molybdenum in Dharmapuri, Dindigul and Vellore districts; pyrite in Vellore district; sillimanite in Kanyakumari, Karur and Tirunelveli districts; tungsten in Madurai and Dindigul districts; and wollastonite in Dharmapuri and Tirunelveli districts.

**Production**

The value of mineral production in Tamil Nadu at ₹4522.49 crore in the year 2010-11 increased by 1.47% as compared to that in the previous year. The States contributed 2.13% in the total value of mineral production in the country during the year under review. The principal minerals produced in the State were lignite, petroleum (crude), natural gas (utilised), garnet and limestone which together accounted for 97.76%, of the value of the minerals produced in the State in the year 2010-11. The State was the major producer of garnet (abrasive) 91.72%, graphite (rom) 43.63%, lignite 61.47%, magnesite 71.72%, lime kankar 99.84% and dunite 89.40% in national production of respective minerals. During the year under review, production of bauxite and feldspar increased manifold as compared to previous year. Increase in production was also reported for lignite by 3.61%, fireclay 15.91%, steatite 29.50% and silica sand 19.57 %. On the other hand, production of petroleum (crude decreased by 2.09%, natural gas (utilised) 6.03%, graphite(rom) 3.13% and ball clay 31.29 %.

The production value of minor minerals was estimated at ₹59.07 crore for the year 2010-11. The number of reporting mines was 179 in the year 2010-11 as against 175 in the previous
year. The index of mineral production in Tamil Nadu (base 1993 - 94 = 100) was 201.67 in the year 2010-11 as against 204.2 in the previous year.

Erosion in N Bank of HD River
Source: IBM