



Indian Minerals Yearbook 2019

(Part- II :Metals and Alloys)

58th Edition

SILVER

(FINAL RELEASE)

**GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES**

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15 Silver

Silver is soft and lustrous metal that is grouped in the category of noble metals. Its brilliant white colour, malleability and resistance to atmospheric oxidation have enhanced its value as a highly desired precious metal which is used in many industrial applications. Apart from its monetary and decorative uses, silver is known to have the highest electrical conductivity amongst all metals that enhances its potential in modern age applications, viz, for printed electric circuits, coating for electronic conductors and in alloys of gold & copper for electrical contacts. Its chloride and iodide are light-sensitive and hence used in photographic material. Silver is typically used (in paste form) on solar cells, this means the photovoltaics (PV) market has become one of the most important areas of silver demand. These two major uses have contributed to the increase in supply of scrap of silver contained products. Silver, which is the least expensive of the precious metals, is the whitest element and has the highest electrical and thermal conductivity among all the metals.

In India, there are no native silver deposits except the small and unique Bharak deposit in Rajasthan. It occurs generally with lead, zinc, copper (especially their sulphide ore) and gold ores and is extracted as a by-product from electrolysis or chemical methods. It was usually extracted by melting silver-bearing lead ore (ore containing argentiferous galena).

Silver is recovered as a co-product as well as a by-product in the country. Silver was recovered in the past as a co-product in gold refining at KGF Complex and Hutti Gold Mines in Karnataka and as a by-product in smelting and refining of lead, zinc and copper concentrates at Chanderiya and Debari smelters in Rajasthan, Tundoo and Moubandar (Ghatsila) smelters in Jharkhand and at Visakhapatnam smelter in Andhra Pradesh. The present production of silver comes from

Chanderiya lead-zinc smelter of HZL and from gold refinery of HGML.

In addition, Hindalco extracts silver as a by-product during smelting of imported copper concentrates at Dahej in Gujarat.

RESERVES/RESOURCES

As per the NMI database, based on UNFC system, the total reserves/resources of silver ore in the country as on 1.4.2015 has been estimated at about 511.95 million tonnes. Out of these, 150.44 million tonnes were placed under 'Reserves' category and 361.51 million tonnes under the 'Remaining Resources' category.

The total reserves/resources of silver in the country as on 1.4.2015 in terms of metal content was estimated at 29,982 tonnes, of which 7,172 tonnes are under 'Reserves' and 22,810 tonnes are under the 'Remaining Resources'. By States, Rajasthan accounted for about 87% reserves/resources in terms of ore, Jharkhand 5%, Andhra Pradesh 3% and Karnataka 2%. Madhya Pradesh, Uttarakhand, Odisha, Meghalaya, Sikkim, Tamil Nadu and Maharashtra together shared 3% ore reserves/remaining resources (Table - 1). As per reserves & resources summary of HZL 2018-19, grade of silver was 94 gram/tonne under Reserves category and 69.5 gram/tonne under Resources category.

PRODUCTION

Silver is recovered as a by-product from lead & zinc concentrates, copper slime and as a co-product of gold refining. As per Annual Report of HZL 2018-19, silver refining capacity was 800 tonnes per annum. HZL is also currently operating a plant for processing and refining of zinc, lead and silver at SIDCUL, Pantnagar, Uttarakhand since 2011. This facility does not add to the overall smelting capacity.

**Table – 1 : Reserves/Resources of Silver as on 1.4.2015
(By Grades/States)**

(In tonnes)

| State/Grade | Reserves | | | Remaining Resources | | | | | | Total Resources (A+B) | |
|--------------------------|------------------|------------------------------|--------------|-----------------------|-------------------------------------|--------------------|---------------------|--------------------|--------------------------|-----------------------|--------------|
| | Proved STD111 | Probable STD121 STD122 | Total (A) | Feasibility STD211 | Pre-feasibility STD221 STD222 | Measured STD331 | Indicated STD332 | Inferred STD333 | Reconnaissance STD334 | | Total (B) |
| All India : Total | | | | | | | | | | | |
| Ore | 69277075 | 8413000 72753828 | 150443903 | - | 1484543 46726460 | 29632000 | 65056000 | 218611729 | - | 361510732 | 511954635 |
| Metal | 4309.78 | 220.77 2641.39 | 7171.94 | - | 42.85 259.62 | 2037.99 | 3236.39 | 17230.19 | 2.84 | 22809.88 | 29981.82 |
| By State | | | | | | | | | | | |
| Andhra Pradesh | | | | | | | | | | | |
| Ore | - | - | - | - | - | 16950000 | - | - | - | 16950000 | 16950000 |
| Metal | - | - | - | - | - | 128.13 | - | - | - | 128.13 | 128.13 |
| Jharkhand | | | | | | | | | | | |
| Ore | - | - | - | - | - | - | - | 23840000 | - | 23840000 | 23840000 |
| Metal | - | - | - | - | - | - | - | 5.22 | - | 5.22 | 5.22 |
| Karnataka | | | | | | | | | | | |
| Ore | 10620000 | 1730000 | 12350000 | - | 69462 | - | - | 314150 | - | 383612 | 12733612 |
| Metal | 2.71 | 0.24 | 2.95 | - | 0.48 | - | - | 2.92 | - | 3.40 | 6.35 |
| Madhya Pradesh | | | | | | | | | | | |
| Ore | - | - | - | - | - | - | 2096000 | 1120000 | - | 3216000 | 3216000 |
| Metal | - | - | - | - | - | - | 150.61 | 9.25 | - | 159.86 | 159.86 |
| Maharashtra | | | | | | | | | | | |
| Ore | - | - | - | - | - | - | - | 235000 | - | 235000 | 235000 |
| Metal | - | - | - | - | - | - | - | 0.23 | - | 0.23 | 0.23 |
| Meghalaya | | | | | | | | | | | |
| Ore | - | - | - | - | - | - | 880000 | - | - | 880000 | 880000 |
| Metal | - | - | - | - | - | - | 19.80 | - | - | 19.80 | 19.80 |

SILVER

(Contd)

Table - 1 (Concl'd)

| State/Grade | Reserves | | | | Remaining Resources | | | | | Total Resources (A+B) | | |
|--------------------|---------------|----------|----------|-----------|---------------------|-----------------|----------|------------------|-----------------|-----------------------|-----------------------|-----------|
| | Proved STD111 | Probable | | Total (A) | Feasibility STD211 | Pre-feasibility | | Indicated STD332 | Inferred STD333 | | Reconnaissance STD334 | Total (B) |
| | | STD121 | STD122 | | | STD221 | STD222 | | | | | |
| Odisha | | | | | | | | | | | | |
| Ore | - | - | - | - | 960500 | 119000 | - | - | 670000 | - | 1749500 | |
| Metal | - | - | - | - | 27.34 | 3.40 | - | - | 34.17 | - | 64.91 | |
| Rajasthan | | | | | | | | | | | | |
| Ore | 58657075 | 6683000 | 72753828 | 138093903 | - | 88200 | 29524218 | 27732000 | 60350000 | 191432579 | 309126997 | |
| Metal | 4307.07 | 220.53 | 2641.39 | 7168.99 | - | 0.26 | 127.57 | 1876.39 | 3045.91 | 17137.53 | 22190.50 | |
| Sikkim | | | | | | | | | | | | |
| Ore | - | - | - | - | - | 435843 | 63780 | 300000 | - | 150000 | 949623 | |
| Metal | - | - | - | - | - | 15.25 | 0.04 | 27.60 | - | 13.80 | 56.69 | |
| Tamil Nadu | | | | | | | | | | | | |
| Ore | - | - | - | - | - | - | - | 330000 | 460000 | - | 790000 | |
| Metal | - | - | - | - | - | - | - | 15.87 | 26.68 | - | 42.55 | |
| Uttarakhand | | | | | | | | | | | | |
| Ore | - | - | - | - | - | - | - | 1600000 | 390000 | - | 3390000 | |
| Metal | - | - | - | - | - | - | - | 134.00 | 4.20 | 0.39 | 138.59 | |

Figures rounded off

SILVER

During the year 2018-19, the production of silver at 6,79,376 kg increased by 22% as compared to the previous year. The production of silver from gold refining was 204 kg in 2018-19 as against 173 kg in 2017-18. One Private Sector and one Public Sector undertaking reported production of silver during 2018-19. (Tables- 2 to 4).

In addition, Hindalco Industries Limited reported production of 70,146 kg and 71,542 kg

silver from imported copper concentrates in 2017-18 and 2018-19 respectively.

TRADING EXCHANGE

Three leading commodities exchanges, where a prospective investor can trade in silver are:

1. National Multi Commodity Exchange (NMCE)
2. National Commodity & Derivatives Exchange (NCDEX)
3. Multi Commodity Exchange (MCX)

Table – 2 : Principal Producers of Silver, 2018-19

| Name and address of the producer | Name of Plant | Location of the plant | |
|--|---------------|-----------------------|-------------|
| | | State | District |
| Hindustan Zinc Ltd, Yashad Bhavan, Udaipur- 313 004 Rajasthan | Chandera | Rajasthan | Chittorgarh |
| The Hutti Gold Mines Co. Ltd, Hutti, Distt-Raichur-584 115 Karnataka | Hutti | Karnataka | Raichur |

**Table – 3 : Production of Silver*, 2016-17 to 2018-19
(By States)**

(Quantity in kg; Value in `'000)

| State | 2016-17 | | 2017-18 | | 2018-19 (P) | |
|--------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| | Qty | Value | Qty | Value | Qty | Value |
| India | 460811 | 18320758 | 557691 | 21179042 | 679376 | 25824746 |
| Karnataka | 169 | 6639 | 173 | 6609 | 204 | 7775 |
| Rajasthan | 460642 | 18314119 | 557518 | 21172433 | 679172 | 25816971 |

* Excludes by-product recovery of silver by Hindalco Industries Ltd at Dahej, Gujarat from imported copper concentrates

**Table – 4 : Production of Silver*, 2017-18 and 2018-19
(By Sectors/States/Districts)**

(Qty in kg; Value in `'000)

| State/District | 2017-18 | | 2018-19(P) | |
|------------------------------|---------------|-----------------|---------------|-----------------|
| | Qty | Value | Qty | Value |
| India | 557691 | 21179042 | 679376 | 25824746 |
| Public sector | 173 | 6609 | 204 | 7775 |
| Private sector | 557518 | 21172433 | 679172 | 25816971 |
| Karnataka/Raichur | 173 | 6609 | 204 | 7775 |
| Rajasthan/Chittorgarh | 557518 | 21172433 | 679172 | 25816971 |

* Silver as a by-product:

i) In Karnataka, it is recovered at Raichur while refining of gold at Hutti and Uti gold mines.

ii) In Rajasthan, it is recovered at Chandera, lead-zinc smelters of HZL.

iii) Excludes by-product recovery of 70,146 kg and 71,542 kg silver from imported copper concentrates in 2017-18 and 2018-19, respectively.

RECYCLING

Recycling, a significant factor in the supply of many of the metals used in our society provides environmental benefits, such as, energy saving, reduced emission associated with energy saving etc. Photographic wastes, spent catalysts and electronic scrap are the major sources of materials for silver recycling. Other recyclable silver-bearing materials include dental alloys, jewellery and silverware. Cell phones have become one of the major sources for recycled silver recovery.

As per USGS Report entitled "Recycled Cell Phones-A Treasure Trove of Valuable Metals", references on data offered by the Falconbridge Ltd, indicate that one tonne of obsolete cellphones (exclusive of batteries) contains an average 3.14 kg of silver metal.

As per World Silver Survey 2019 report, after a slight rise in the previous year, global silver scrap supply slipped by 2% to 4,707 tonnes (151.3 Moz) report in 2018. Weaker silver prices accounted for the bulk of the decline deterring both suppliers and consumers from recycling their silver valuables. Asia was again the largest market, accounting for 37% of the global total. The region as a whole dipped 2% year-on-year, the surge in supply from India not sufficient to offset price led falls elsewhere. In western markets scrap supply eased from 2017 levels, led lower by a 3% fall from Europe, while recycling volumes in North America edged 1% higher year-on-year to a three-year high. Scrap supply in India increased by 13% year-on-year to 138 tonnes (4.4 Moz). While the sources of supply remained similar to those recorded in 2017, domestic traders revealed that inflows of old jewelery and silverware rose compared to the previous year. The general tendency in India is to exchange jewelery articles within an average of three years. This is a continuous process and in the past, when gold and silver prices were low, scrap returns were plentiful.

WORLD REVIEW

The total reserves of silver in metal content are estimated at 5,60,000 tonnes. Peru contributed (21%), Poland (18%), Australia (16%), Russia (8%), China & Mexico (7% each), Chile (5%), Bolivia & USA (4% each), are the major countries having silver reserves (Table-5).

**Table – 5 : World Reserves of Silver
(By Principal Countries)**

| (In tonnes ¹ of silver content) | |
|--|---------------------|
| Country | Reserves |
| World: Total (rounded off) | 560000 |
| Argentina | NA |
| Australia | 90000 ¹⁰ |
| Bolivia | 22000 |
| Chile | 26000 |
| China | 41000 |
| Mexico | 37000 |
| Peru | 120000 |
| Poland | 100000 |
| Russia | 45000 |
| USA | 25000 |
| Other countries | 57000 |

Source: USGS Mineral Commodity Summaries, 2020.

1: One tonne (1,000 kilograms)=32,150.7 troy ounces,

10: For Australia, Joint Ore Reserves Committee-compliant reserve were 25,000 tonnes.

Mexico, Peru, China, Australia, Russia, Chile and Poland are the main producers of silver. The total world mine production of silver in metal content was reported at 28,036 tonnes during the year 2018 which is slightly higher by 4% as compared to 26,838 tonnes in the preceding year. Mexico was the leading producer with 26% share in the total production followed by Peru (15%), China (13%), Chile, Poland & Russia (5% each) and Australia, Bolivia & Argentina (4% each), USA & Kazakhstan (3% each). World mine production of silver is furnished in Table- 6.

To provide a generalised view of the development in various countries the country-wise description sourced from the latest available publication of 'USGS' 2016 Minerals Yearbook, 'Silver [Advance Release]' is furnished below.

Argentina

In 2016, silver mine production in Argentina decreased by 29% from that of 2015.

The main reason for the decrease was the 49% decrease in production from Goldcorp Inc.'s (Canada) Cerro Negro gold-silver mine. Labour disputes over workforce reduction at the mine resulted in lower

**Table – 6 : World Mine Production of Silver
(By Principal Countries)**

(In tonnes of metal content)

| Country | 2016 | 2017 | 2018 |
|-----------------|----------------|-----------------|-----------------|
| World: | 2776300 | 26838000 | 28037000 |
| Mexico | 5408521 | 5815034 | 7243245 |
| Peru | 4375337 | 4417887 | 4162658 |
| China | 3496003 | 3502223 | 3573761 |
| Poland | 1482000 | 1490000 | 1471000 |
| Russia (a) | 1493000 | 1373000 | 1400100 |
| Chile | 1501436 | 1318582 | 1370237 |
| Australia | 1418219 | 1120175 | 1254480 |
| Bolivia | 1356620 | 1222371 | 1191024 |
| Argentina | 933100 | 995000 | 1101000 |
| Kazakhstan | 1186511 | 1060662 | 969347 |
| USA | 1140000 | 1030000 | 923000 |
| India (c) | 460811 | 557691 | 653000* |
| Other countries | 3511268 | 2935485 | 2723787 |

Source: BGS World Mineral Production, 2014-2018.

(a):- Smelted and/or refinery production.

c:- Years ended 31 March following that stated.

mining rates and higher processing rates of low-grade stockpiled ores in 2016. Cerro Negro produced 96 tonnes of silver, down from 190 tonnes in 2015. The country's leading silver-producing mines were the Pirquitas Mine, which produced 324 tonnes of silver and the San Jose Mine and McEwen Mining Inc. which produced 208 tonnes of silver. These two mines accounted for about 63% of the country's silver production in 2016.

Bolivia

Silver production in Bolivia increased by 4% in 2016 and accounted for 5% of the world's total silver production. In 2016, silver production at Coeur Mining's San Bartolomé open pit silver mine in Potosi increased slightly to 170 tonnes despite water shortage resulting from a nationwide drought. Higher levels of purchased ore more than offset lower mining rates. San Bartolomé's production accounted for about 13% of Bolivia's total silver mine output in 2016. Pan American Silver Corp.'s (Canada) San Vicente Mine produced a record 137 tonnes of silver in 2016, which was an 8% increase compared with the 128 tonnes produced in 2015, owing to higher silver ore grades and throughput.

Canada

In 2016, silver production was 403 tonnes as compared to 371 tonnes in 2015. Depletion of reserves continued to be a concern in Canada during the past few years as some commodity prices were in decline and junior exploration companies faced difficulty raising capital to finance operations. Decreasing proven and probable reserves have also been an expressed concern in the base and precious-metal industries. Although silver was not produced as a primary product in Canada in 2016, it was produced as a co-product or by-product at 37 mines across the country. Payable silver production at Agnico Eagle Mines Ltd's LaRonde Mine increased slightly to 31 tonnes, owing to increased throughput of ore from the new mining horizon in the deepest part of the mine, although the mine experienced periodic closures during the year to mitigate seismicity risk. Silver production over the life of the mine was expected to decrease owing to the shift toward deeper sections of the mine where gold grades are higher and contents of by product metals, including silver, are lower.

Mexico

In 2016, Mexico was the world's leading producer of silver despite production decreasing by 4% to 5,364 tonnes in 2016 from 5,592 tonnes in 2015. Silver production in Mexico accounted for about 20% of global production. Mexico's leading silver producers included Fresnillo plc; Goldcorp Inc. (Canada); Grupo México, S.A.B. de C.V.; Industrias Peñoles, S.A.B. de C.V.; and Pan American Silver Corp. (Canada). In 2016, Fresnillo's silver production rose by 7%, primarily owing to the startup of the San Julián Mine, higher silver ore grades at the Fresnillo & Ciénega Mines and increased silver stream contributions. The Company continued to develop its San Julián silver-gold project located in the San Julian District on the border between the States of Chihuahua and Durango. Phase I of the project, which included the construction of a mill and leaching plant, was completed in the third quarter of 2016, and phase II of the project, which included the construction of a flotation plant, was expected to be completed in the

second quarter of 2017. In 2017, annual silver production at the San Julián Mine was expected to be about 361 tonnes.

Peru

In 2016, Peru once again reported the largest year-on-year increase in silver mine production (by 272 tonnes from that of 2015). The leading silver-producing companies, in terms of output, were Compania de Minas Buenaventura S.A.A., which produced about 16% of the country’s total silver production, followed by Compania Minera Antamina S.A., 15%; Compania Minera Ares S.A.C., 10%; and Volcan Compania Minera S.A.A., 8%.

Junin Region was ranked first among the country’s silver-producing regions and accounted for about 20% of the amount produced, followed by Lima & Ancash (18% each) and Pasco (15%) Regions. Hochschild Mining completed its first full year of production at the Inmaculada gold-silver underground mine in the Ayacucho Region. The mine produced 153 tonnes of silver in 2016.

Russia

Silver production in Russia decreased slightly in 2016, primarily owing to a 9% decrease in production from Polymetal International plc’s (United Kingdom) Dukat Mine, Russia’s largest primary silver mine, where a drop in silver ore grade reduced output by 6%. Dukat accounted for 87% of Polymetal’s silver production in 2016. Also, silver production declined by 10% at Polymetal’s Omolon operations, owing to the change of ore feedstock mixes to provide higher gold and lower silver ore grades.

FOREIGN TRADE

Exports

Exports of silver metal increased by 20% to 36 tonnes in 2018-19 as compared to 30 tonnes in the preceding year. Exports were mainly to USA (39%), UAE & Germany (11% each), Iran & Canada (6% each), Turkey, Italy, Sweden, France & Saudi Arabia (3% each). There were no exports of silver ores and concentrate during 2018-19 as compared to 5 tonnes in 2017-18. Exports of silver-clad base metals also increased marginally by 4% to 1,354 kg during

2018-19 from 1307 kg in 2017-18. Similarly, exports of Semi-manufactured silver increased by 24% to 36 tonnes in 2018-19 as compared to 29 tonnes in the preceding year. Export of silver-unwrought was negligible in the year 2018-19 as compared to one tonne in the preceding year. Export of silver powder was negligible in both the years (Tables-7 to 11).

Imports

Imports of silver increased drastically by 27% to 7,475 tonnes in 2018-19 as compared to 5,879 tonnes in the preceding year. Imports were mainly from the UK (28%), Hong Kong (27%), Russia, China & USA (9% each), Netherlands (5%) and Singapore & Uzbekistan (3% each).

Imports of silver-clad base metals increased manifold to 7,503 kg in 2018-19 as against 216 kg in the previous year. Imports were mainly from USA (52%), Italy (46%), and Japan (1%) .

Imports of Semi-manufactured silver were at 561 tonnes during the year 2018-19 as compared to 464 tonnes in the previous year. Besides, imports of silver unwrought were 6,911 tonnes during the year 2018-19 as compared to 5,411 tonnes in previous year. Imports were mainly from UK (29%), Hong Kong (28%) and Russia, China & USA (9% each). In 2018-19 imports of silver powder decreased by 5% to 2 tonnes in 2018-19 from 4 tonnes reported in the previous year (Tables-12 to 16).

Table – 7 : Exports of Silver (By Countries)

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|---------------|-------------|---------------|
| | Qty (t) | Value (‘000) | Qty (t) | Value (‘000) |
| All Countries | 30 | 659078 | 35 | 818438 |
| USA | 11 | 247978 | 14 | 299017 |
| UAE | 2 | 131180 | 4 | 201183 |
| Iran | 1 | 27163 | 2 | 75740 |
| Germany | 2 | 29045 | 4 | 65578 |
| Canada | 2 | 35883 | 2 | 38739 |
| Turkey | ++ | 9797 | 1 | 16597 |
| Italy | 2 | 24143 | 1 | 16219 |
| Sweden | ++ | 3245 | 1 | 12088 |
| France | 1 | 14570 | 1 | 10150 |
| Saudi Arabia | ++ | 3919 | 1 | 7767 |
| Other countries | 9 | 132155 | 5 | 75360 |

Figures rounded off

**Table – 8 : Exports of Silver-clad Base Metals
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|------------------|-------------|------------------|
| | Qty (kg) | Value (`'000) | Qty (kg) | Value (`'000) |
| All Countries | 1307 | 3869 | 1354 | 4637 |
| Sri Lanka | 1307 | 3674 | 1340 | 3619 |
| USA | - | - | 10 | 859 |
| Canada | - | - | 4 | 159 |
| UK | ++ | 195 | - | - |

*Figures rounded off***Table – 9 : Exports of Silver: Semi-manufactured
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|------------------|-------------|------------------|
| | Qty (t) | Value (`'000) | Qty (t) | Value (`'000) |
| All Countries | 29 | 640179 | 35 | 816930 |
| USA | 11 | 247117 | 14 | 298437 |
| UAE | 2 | 131180 | 4 | 201183 |
| Iran | 1 | 27163 | 2 | 75740 |
| Germany | 2 | 29045 | 4 | 64917 |
| Canada | 2 | 35867 | 2 | 38739 |
| Turkey | ++ | 9797 | 1 | 16597 |
| Italy | 2 | 23417 | 1 | 16219 |
| Sweden | ++ | 3245 | 1 | 12088 |
| France | 1 | 14570 | 1 | 10133 |
| Saudi Arabia | ++ | 3919 | 1 | 7767 |
| Other countries | 8 | 114858 | 5 | 75111 |

*Figures rounded off***Table – 10 : Exports of Silver: Unwrought
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|------------------|-------------|------------------|
| | Qty (t) | Value (`'000) | Qty (t) | Value (`'000) |
| All Countries | 1 | 17386 | ++ | 633 |
| USA | ++ | 845 | ++ | 532 |
| UK | ++ | 15151 | ++ | 50 |
| Australia | - | - | ++ | 29 |
| Dominica | - | - | ++ | 14 |
| Nepal | - | - | ++ | 9 |
| Italy | ++ | 696 | - | - |
| Malaysia | ++ | 468 | - | - |
| Singapore | ++ | 183 | - | - |
| Mauritius | ++ | 42 | - | - |

Figures rounded off

**Table – 11 : Exports of Silver : Powder
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|-------------------|-------------|-------------------|
| | Qty (t) | Value (` '000) | Qty (t) | Value (` '000) |
| All Countries | ++ | 1513 | ++ | 874 |
| Germany | - | - | ++ | 661 |
| Zambia | - | - | ++ | 74 |
| Jordan | - | - | ++ | 52 |
| USA | ++ | 16 | ++ | 48 |
| France | - | - | ++ | 17 |
| UK | ++ | 2 | ++ | 16 |
| Bangladesh | - | - | ++ | 5 |
| South Africa | ++ | 1373 | - | - |
| Iraq | ++ | 51 | - | - |
| Italy | ++ | 29 | - | - |
| Other countries | ++ | 41 | ++ | ++ |

*Figures rounded off***Table – 12 : Imports of Silver
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|-------------------|-------------|-------------------|
| | Qty (t) | Value (` '000) | Qty (t) | Value (` '000) |
| All Countries | 5879 | 207248887 | 7475 | 261886338 |
| UK | 999 | 35699875 | 2090 | 72965697 |
| Hong Kong | 2530 | 89921782 | 1999 | 68615443 |
| Russia | 738 | 25857980 | 652 | 22696908 |
| China | 596 | 21075287 | 640 | 22394691 |
| USA | 57 | 1398911 | 648 | 21325649 |
| Netherlands | 141 | 4931566 | 360 | 12374337 |
| Uzbekistan | 120 | 4231687 | 240 | 8497412 |
| Switzerland | 84 | 2931472 | 87 | 7246591 |
| Singapore | 158 | 5654156 | 193 | 6755403 |
| Kazakhstan | 41 | 1426780 | 146 | 5120762 |
| Other countries | 415 | 14119391 | 420 | 13893445 |

Figures rounded off

**Table – 13 : Imports of Silver-clad Base Metals
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|-------------------|-------------|-------------------|
| | Qty (kg) | Value (` '000) | Qty (kg) | Value (` '000) |
| All Countries | 216 | 2740 | 7503 | 112775 |
| Italy | 142 | 1987 | 3432 | 70792 |
| USA | 22 | 498 | 3917 | 39684 |
| Japan | -- | - | 75 | 1185 |
| Germany | 50 | 233 | 36 | 523 |
| Hong Kong | - | - | 40 | 509 |
| Singapore | - | - | 1 | 44 |
| Switzerland | - | - | 2 | 35 |
| UAE | - | - | ++ | 3 |
| China | 2 | 22 | - | - |

Figures rounded off

**Table – 14 : Imports of Silver: Semi-manufactured
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|-------------------|-------------|-------------------|
| | Qty (t) | Value (` '000) | Qty (t) | Value (` '000) |
| All Countries | 464 | 15051715 | 561 | 18403622 |
| Singapore | 112 | 4043313 | 139 | 4842087 |
| Netherlands | 40 | 1382716 | 120 | 4122722 |
| UK | 16 | 590096 | 66 | 2370343 |
| Uzbekistan | - | - | 60 | 2106153 |
| Hong Kong | 57 | 1956988 | 39 | 1320110 |
| Italy | 46 | 1057382 | 53 | 1241859 |
| USA | 46 | 1032568 | 43 | 953116 |
| Switzerland | 10 | 353444 | 23 | 801111 |
| Germany | 4 | 134556 | 4 | 151855 |
| China | 19 | 621797 | 4 | 143149 |
| Other countries | 114 | 3878855 | 10 | 351117 |

Figures rounded off

**Table – 15 : Imports of Silver : Unwrought
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|-------------------|-------------|-------------------|
| | Qty (t) | Value (` '000) | Qty (t) | Value (` '000) |
| All Countries | 5411 | 192112337 | 6911 | 243338181 |
| UK | 982 | 35109771 | 2024 | 70595350 |
| Hong Kong | 2474 | 87964793 | 1961 | 67293152 |
| Russia | 725 | 25431744 | 650 | 22672366 |
| China | 576 | 20414107 | 636 | 22224814 |
| USA | 11 | 360608 | 604 | 20369651 |
| Netherlands | 101 | 3548849 | 240 | 8251616 |
| Switzerland | 74 | 2578028 | 64 | 6445480 |
| Uzbekistan | 120 | 4231687 | 180 | 6391259 |
| Kazakhstan | 26 | 918356 | 146 | 5120762 |
| Korea, Rep.of | 40 | 1442953 | 109 | 3745676 |
| Other countries | 282 | 10111441 | 297 | 10228055 |

Figures rounded off

**Table – 16 : Imports of Silver : Powder
(By Countries)**

| Country | 2017-18 (R) | | 2018-19 (P) | |
|----------------------|-------------|-------------------|-------------|-------------------|
| | Qty (t) | Value (` '000) | Qty (t) | Value (` '000) |
| All Countries | 4 | 84834 | 2 | 144533 |
| Singapore | - | - | 1 | 61885 |
| China | 1 | 39383 | 1 | 26729 |
| Italy | ++ | 14342 | ++ | 16382 |
| Germany | ++ | 8811 | ++ | 16181 |
| Taiwan | 3 | 14195 | ++ | 9850 |
| Thailand | - | - | ++ | 6266 |
| USA | ++ | 5735 | ++ | 2881 |
| Hong Kong | - | - | ++ | 2181 |
| Russia | ++ | 1383 | ++ | 2135 |
| UAE | - | - | ++ | 39 |
| Other countries | ++ | 985 | ++ | 4 |

Figures rounded off

FUTURE OUTLOOK

Silver has the dual usefulness of being a precious metal as well as an industrial metal. World over, silver is primarily traded for its industrial applications, however, Indian silver imports are largely consumed for jewellery and silverware. India is among the top 5 silver consumers in the world. About 60% of silver consumption in India is from the rural population who views it as a solid saving commodity. India does not produce silver in a significant scale and most of the silver has to be imported. Moreover, silver demand has been on the rise in major growing economies including India during the past few years. New industries, such as, medicine, manufacturing etc. are scaling up their demand for silver, and this may soon translate to higher levels of imports.

However, the counter-narrative is that notwithstanding the Government's initiative for infrastructural boost, the benefits for industrial

demand would be only to modest levels as the high inventory levels of semi-fabricated products across the supply chain would offset any demand escalation of silver. Housing projects (driven by a new government initiative) is another potential demand escalator for electrical equipment which would in turn influence the demand for silver.

As per World Silver Survey, 2019, although India increased its installed solar generating capacity by 12.2 GW last year, pushing the country's total to 26 GW, the industry still almost entirely relies on imports of solar panels and silver paste. The Ministry of Renewable Energy, however, has set an ambitious target to achieve 100 GW of solar power capacity by 2022. This will be a great opportunity for India to build silver powder producing facilities themselves in order to facilitate the projected growth in domestic solar generating power capacity.