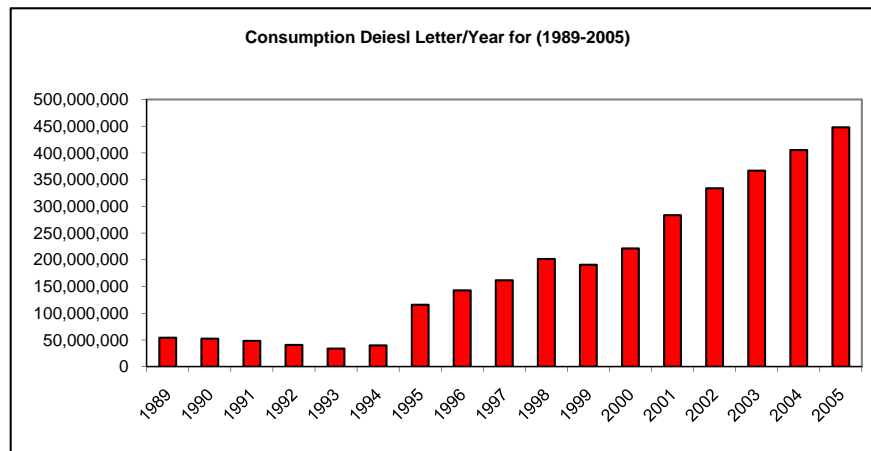
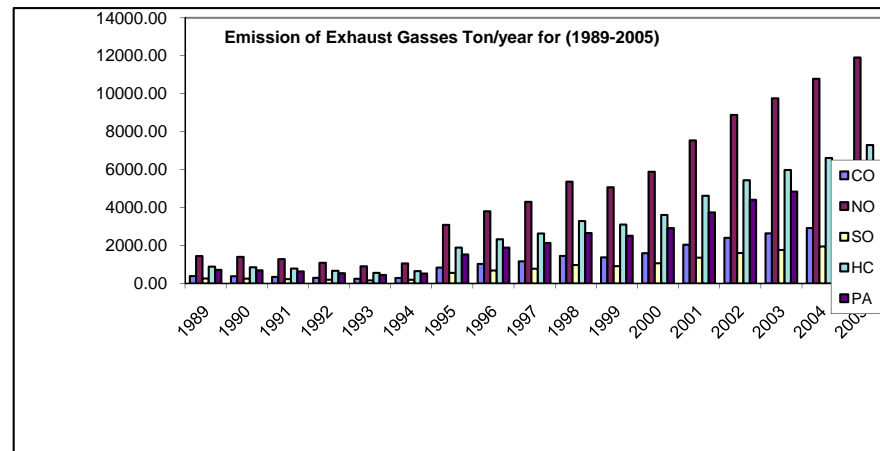


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| Republic of Yemen  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ministry of Water and Environment                                |  |  |  |  |  |  |  |  |  |  |  |  |
| Environment Protection Authority                                 |  |  |  |  |  |  |  |  |  |  |  |  |
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| <b>Assment of Account Quality for Emission of Exhaust Gasses</b> |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>from (1989-2006) in the Republic of Yemen</b>                 |  |  |  |  |  |  |  |  |  |  |  |  |
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| Source: * Ministry of Oil and Mieral Resource                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Yemen Oil of Company   |  |  |  |  |  |  |  |  |  |  |  |  |
| * Astem Air Pollution (General 5 Volumes)                        |  |  |  |  |  |  |  |  |  |  |  |  |
| co,New Yourk, 1975   |  |  |  |  |  |  |  |  |  |  |  |  |

**Fuel Consumption Diesel(Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Aden for the Years (1989-2005)**

| Year | Consumption<br>(Letter/Year) |         |          | GassesTo<br>n/Year |         |         |
|------|------------------------------|---------|----------|--------------------|---------|---------|
|      |                              | CO      | NO       | SO                 | HC      | PA      |
| 1989 | 54,207,933                   | 390.30  | 1441.93  | 260.20             | 883.59  | 715.54  |
| 1990 | 52,483,899                   | 377.88  | 1396.07  | 251.92             | 855.49  | 692.79  |
| 1991 | 48,071,049                   | 346.11  | 1278.69  | 230.74             | 783.56  | 634.54  |
| 1992 | 40,761,435                   | 293.48  | 1084.25  | 195.65             | 664.41  | 538.05  |
| 1993 | 33,962,873                   | 244.53  | 903.41   | 163.02             | 553.59  | 448.31  |
| 1994 | 39,768,171                   | 286.33  | 1057.83  | 190.89             | 648.22  | 524.94  |
| 1995 | 115,959,049                  | 834.91  | 3084.51  | 556.60             | 1890.13 | 1530.66 |
| 1996 | 142,885,484                  | 1028.78 | 3800.75  | 685.85             | 2329.03 | 1886.09 |
| 1997 | 161,578,251                  | 1163.36 | 4297.98  | 775.58             | 2633.73 | 2132.83 |
| 1998 | 201,552,557                  | 1451.18 | 5361.30  | 967.45             | 3285.31 | 2660.49 |
| 1999 | 190,574,993                  | 1372.14 | 5069.29  | 914.76             | 3106.37 | 2515.59 |
| 2000 | 221,260,076                  | 1593.07 | 5885.52  | 1062.05            | 3606.54 | 2920.63 |
| 2001 | 283,528,942                  | 2041.41 | 7541.87  | 1360.94            | 4621.52 | 3742.58 |
| 2002 | 333,840,837                  | 2403.65 | 8880.17  | 1602.44            | 5441.61 | 4406.70 |
| 2003 | 366,884,020                  | 2641.56 | 9759.11  | 1761.04            | 5980.21 | 4842.87 |
| 2004 | 405420074                    | 2919.02 | 10784.17 | 1946.02            | 6608.35 | 5351.54 |
| 2005 | 447759202                    | 3223.87 | 11910.39 | 2149.24            | 7298.47 | 5910.42 |
| 2006 |                              |         |          |                    |         |         |

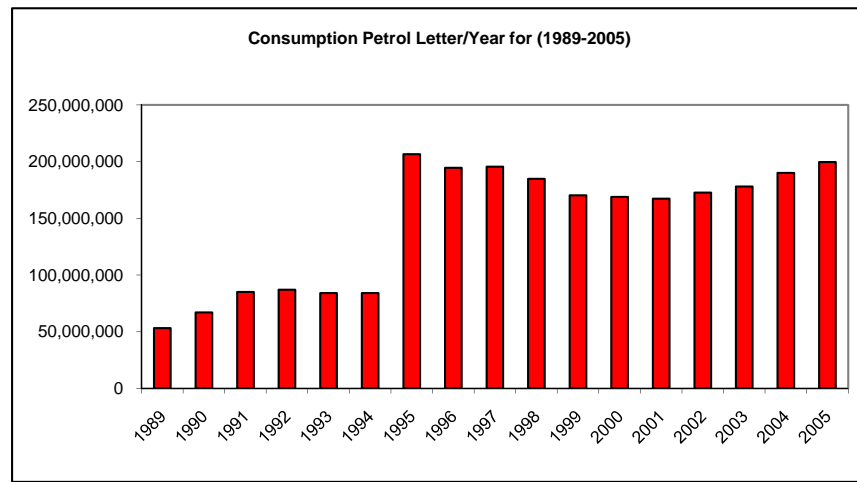


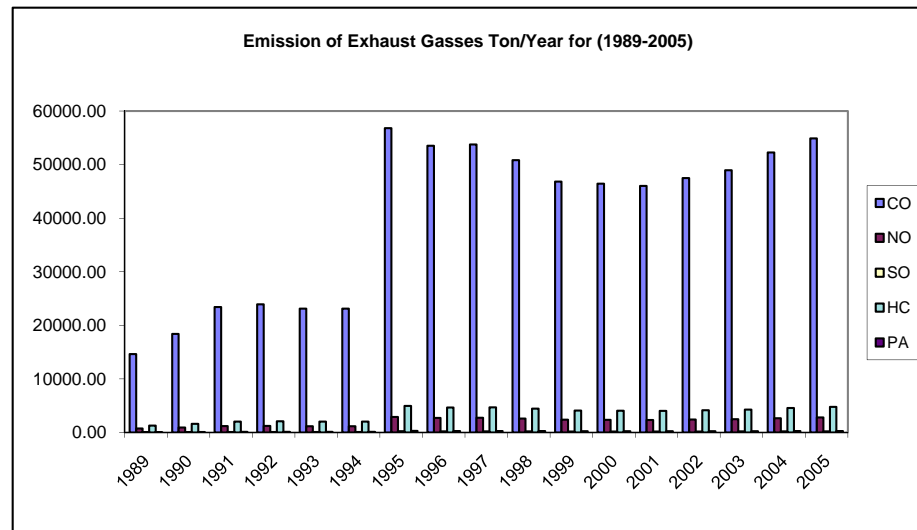


**Fuel Consumption Petrol(Letter/Year) and the Estimation of Exhaust Gasses**

Emission  
(Ton/Year)  
in Aden for  
the Years  
(1989-2005)

|      | Consumption<br>Letter/Year | GassesTo<br>n/Year |         |        |         |        |
|------|----------------------------|--------------------|---------|--------|---------|--------|
|      |                            | CO                 | NO      | SO     | HC      | PA     |
| 1989 | 53,176,432                 | 14623.52           | 744.47  | 58.49  | 1276.23 | 74.45  |
| 1990 | 66,946,576                 | 18410.31           | 937.25  | 73.64  | 1606.72 | 93.73  |
| 1991 | 85,132,268                 | 23411.37           | 1191.85 | 93.65  | 2043.17 | 119.19 |
| 1992 | 87,026,640                 | 23932.33           | 1218.37 | 95.73  | 2088.64 | 121.84 |
| 1993 | 84,025,306                 | 23106.96           | 1176.35 | 92.43  | 2016.61 | 117.64 |
| 1994 | 84,055,974                 | 23115.39           | 1176.78 | 92.46  | 2017.34 | 117.68 |
| 1995 | 206,573,321                | 56807.66           | 2892.03 | 227.23 | 4957.76 | 289.20 |
| 1996 | 194,578,321                | 53509.04           | 2724.10 | 214.04 | 4669.88 | 272.41 |
| 1997 | 195,506,984                | 53764.42           | 2737.10 | 215.06 | 4692.17 | 273.71 |
| 1998 | 184,807,735                | 50822.13           | 2587.31 | 203.29 | 4435.39 | 258.73 |
| 1999 | 170,329,341                | 46840.57           | 2384.61 | 187.36 | 4087.90 | 238.46 |
| 2000 | 168,889,168                | 46444.52           | 2364.45 | 185.78 | 4053.34 | 236.44 |
| 2001 | 167,379,207                | 46029.28           | 2343.31 | 184.12 | 4017.10 | 234.33 |
| 2002 | 172,663,564                | 47482.48           | 2417.29 | 189.93 | 4143.93 | 241.73 |
| 2003 | 178,037,973                | 48960.44           | 2492.53 | 195.84 | 4272.91 | 249.25 |
| 2004 | 190,104,683                | 52278.79           | 2661.47 | 209.12 | 4562.51 | 266.15 |
| 2005 | 199,605,169                | 54891.42           | 2794.47 | 219.57 | 4790.52 | 279.45 |
| 2006 |                            |                    |         |        |         |        |
|      |                            |                    |         |        |         |        |

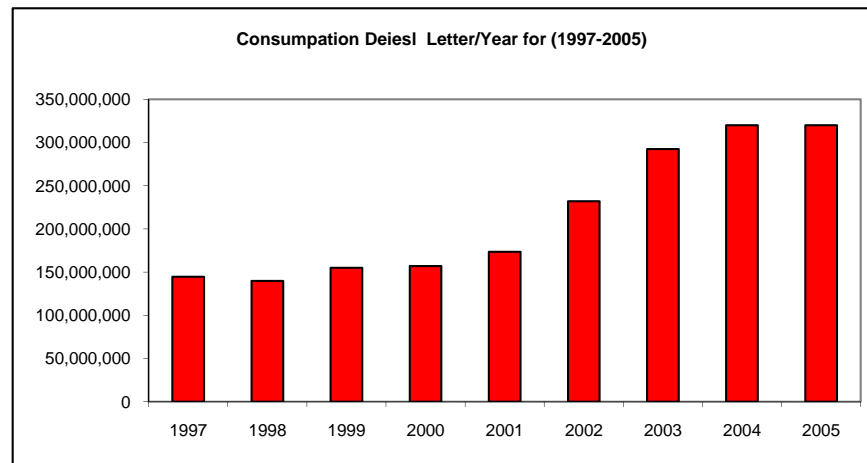


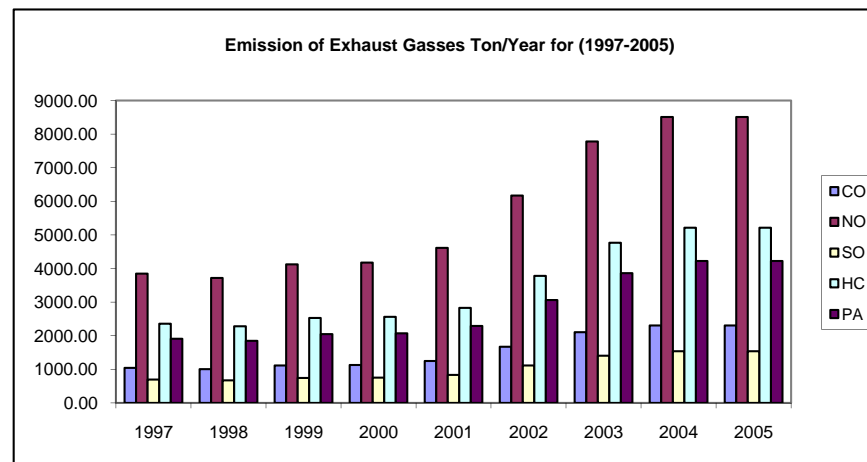


**Fuel Consumption Diesel (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Capital of City for the Years (1997-2000)**

| Year | Consumation<br>(Letter/Year) | Gasses(Ton/Year) |         |         |         |         |
|------|------------------------------|------------------|---------|---------|---------|---------|
|      |                              | CO               | NO      | SO      | HC      | PA      |
| 1997 | 144,715,439                  | 1041.95          | 3849.43 | 694.63  | 2358.86 | 1910.24 |
| 1998 | 139,833,722                  | 1006.80          | 3719.58 | 671.20  | 2279.29 | 1845.81 |
| 1999 | 154,985,316                  | 1115.89          | 4122.61 | 743.93  | 2526.26 | 2045.81 |
| 2000 | 157,030,651                  | 1130.62          | 4177.02 | 753.75  | 2559.60 | 2072.80 |
| 2001 | 173,505,341                  | 1249.24          | 4615.24 | 832.83  | 2828.14 | 2290.27 |
| 2002 | 232,096,573                  | 1671.10          | 6173.77 | 1114.06 | 3783.17 | 3063.67 |
| 2003 | 292,453,178                  | 2105.66          | 7779.25 | 1403.78 | 4766.99 | 3860.38 |
| 2004 | 319,976,851                  | 2303.83          | 8511.38 | 1535.89 | 5215.62 | 4223.69 |
| 2005 | 319,976,851                  | 2303.83          | 8511.38 | 1535.89 | 5215.62 | 4223.69 |
| 2006 |                              |                  |         |         |         |         |
|      |                              |                  |         |         |         |         |
|      |                              |                  |         |         |         |         |

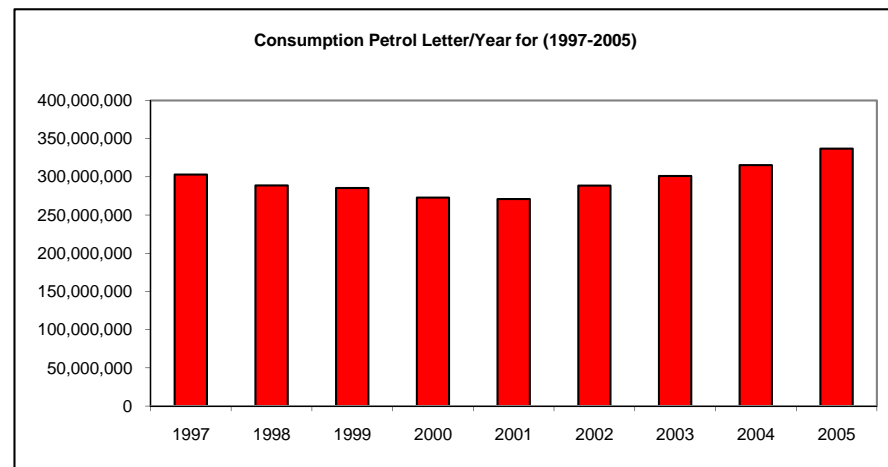


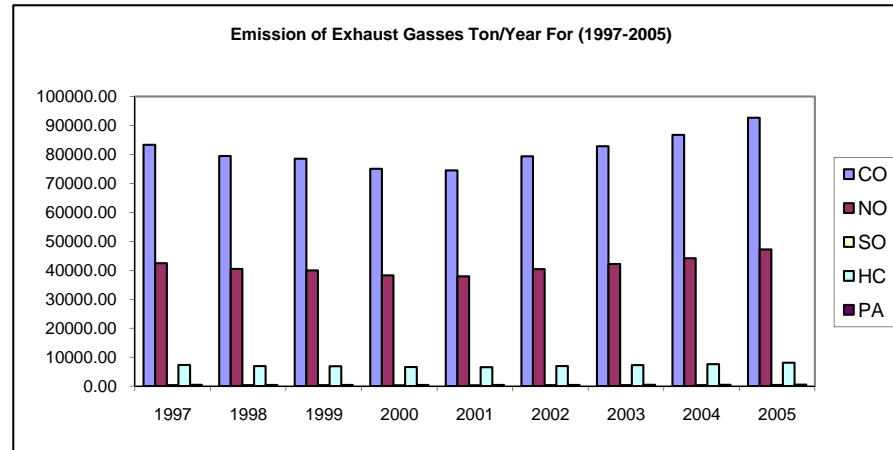




**Fuel Consumption Petrol (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Capital of City for the Years (1997-2005)**

| Year | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |          |        |         |        |
|------|------------------------------|--------------------|----------|--------|---------|--------|
|      |                              | CO                 | NO       | SO     | HC      | PA     |
| 1997 | 302,944,932                  | 83309.86           | 42412.29 | 333.24 | 7270.68 | 424.12 |
| 1998 | 288,841,552                  | 79431.43           | 40437.82 | 317.73 | 6932.20 | 404.38 |
| 1999 | 285,387,600                  | 78481.59           | 39954.26 | 313.93 | 6849.30 | 399.54 |
| 2000 | 272,908,773                  | 75049.91           | 38207.23 | 300.20 | 6549.81 | 382.07 |
| 2001 | 270,905,830                  | 74499.10           | 37926.82 | 298.00 | 6501.74 | 379.27 |
| 2002 | 288,491,488                  | 79335.16           | 40388.81 | 317.34 | 6923.80 | 403.89 |
| 2003 | 301,206,420                  | 82831.77           | 42168.90 | 331.33 | 7228.95 | 421.69 |
| 2004 | 315,389,491                  | 86732.11           | 44154.53 | 346.93 | 7569.35 | 441.55 |
| 2005 | 336,864,461                  | 92637.73           | 47161.02 | 370.55 | 8084.75 | 471.61 |
| 2006 |                              |                    |          |        |         |        |

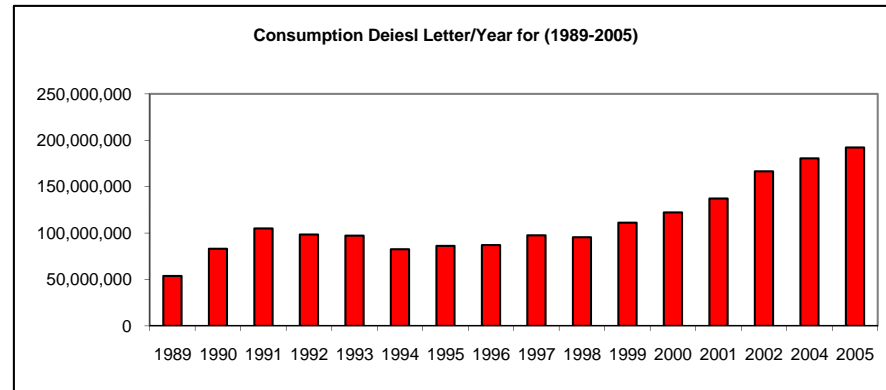


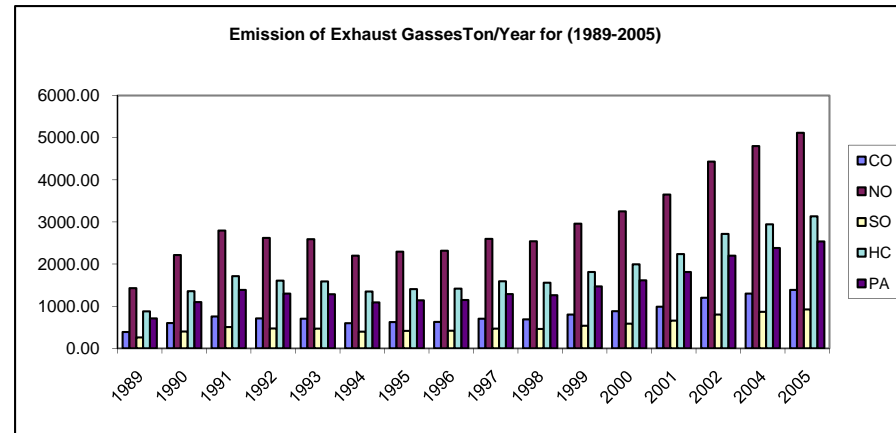


**Fuel Consumption Diesel (Letter/Year) and the Estimation of Exhaust Gasses**

**Emission (Ton/Year) in Dhamar for the Years (1989-2005)**

| Year | Consumption<br>(Letter/Year) | GassesTon/Year |         |        |         |         |
|------|------------------------------|----------------|---------|--------|---------|---------|
|      |                              | CO             | NO      | SO     | HC      | PA      |
| 1989 | 53,723,355                   | 386.81         | 1429.04 | 257.87 | 875.69  | 709.15  |
| 1990 | 83,173,668                   | 598.85         | 2212.42 | 399.23 | 1355.73 | 1097.89 |
| 1991 | 105,032,736                  | 756.24         | 2793.87 | 504.16 | 1712.03 | 1386.43 |
| 1992 | 98,448,005                   | 708.83         | 2618.72 | 472.55 | 1604.70 | 1299.51 |
| 1993 | 97,323,125                   | 700.73         | 2588.80 | 467.15 | 1586.37 | 1284.67 |
| 1994 | 82,643,580                   | 595.03         | 2198.32 | 396.69 | 1347.09 | 1090.90 |
| 1995 | 86,257,050                   | 621.05         | 2294.44 | 414.03 | 1405.99 | 1138.59 |
| 1996 | 87,013,401                   | 626.50         | 2314.56 | 417.66 | 1418.32 | 1148.58 |
| 1997 | 97,597,375                   | 702.70         | 2596.09 | 468.47 | 1590.84 | 1288.29 |
| 1998 | 95,472,688                   | 687.40         | 2539.57 | 458.27 | 1556.20 | 1260.24 |
| 1999 | 111,239,684                  | 800.93         | 2958.98 | 533.95 | 1813.21 | 1468.36 |
| 2000 | 122,219,342                  | 879.98         | 3251.03 | 586.65 | 1992.18 | 1613.30 |
| 2001 | 137,201,051                  | 987.85         | 3649.55 | 658.57 | 2236.38 | 1811.05 |
| 2002 | 166,592,390                  | 1199.47        | 4431.36 | 799.64 | 2715.46 | 2199.02 |
| 2004 | 180,517,787                  | 1299.73        | 4801.77 | 866.49 | 2942.44 | 2382.83 |
| 2005 | 192,298,600                  | 1384.55        | 5115.14 | 923.03 | 3134.47 | 2538.34 |
| 2006 |                              |                |         |        |         |         |



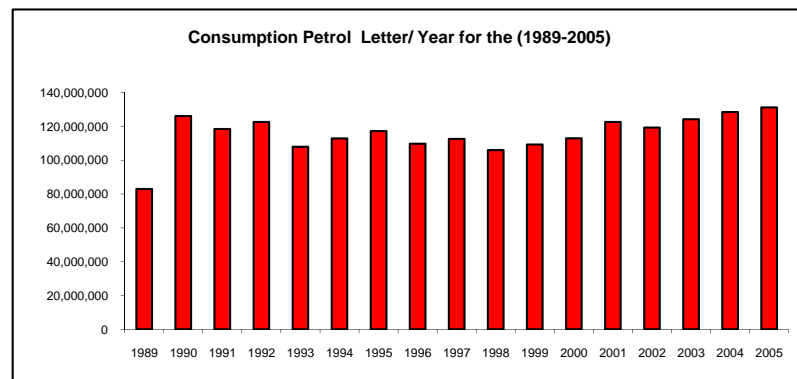


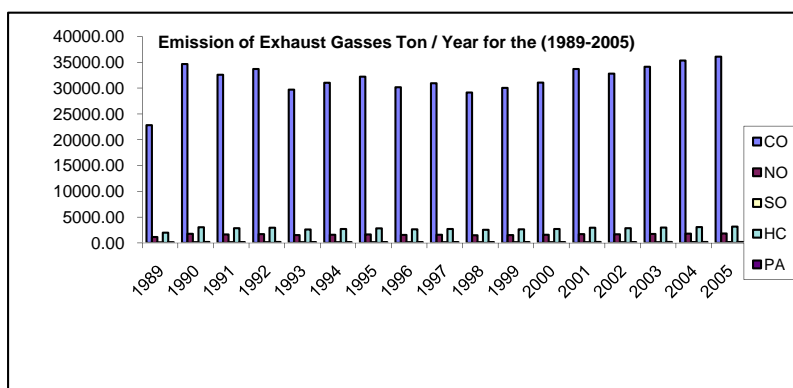


**Fuel Consumption Petrol (Letter/Year) and the Estimation of Exhaust Gasses**

**Emission (Ton/Year) in Dhamar for the Years (1989-2005)**

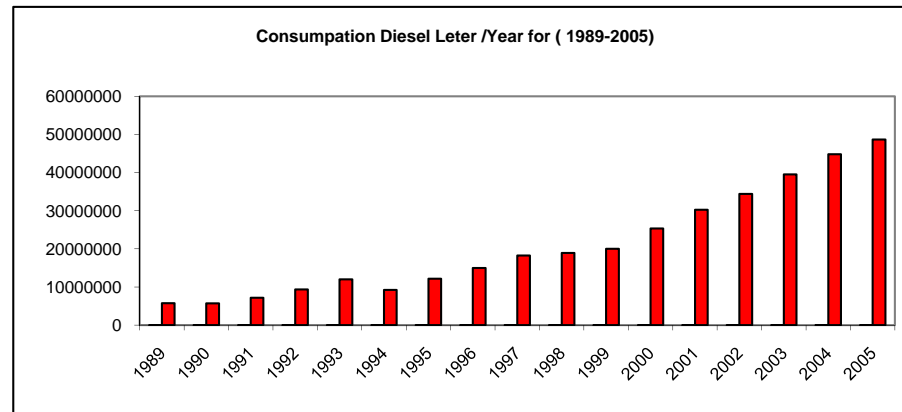
| Year | Consumption<br>(Letter/Year) | GassesTon/Year |         |        |         |        |
|------|------------------------------|----------------|---------|--------|---------|--------|
|      |                              | CO             | NO      | SO     | HC      | PA     |
| 1989 | 82,968,405                   | 22816.31       | 1161.56 | 91.27  | 1991.24 | 116.16 |
| 1990 | 126,092,929                  | 34675.56       | 1765.30 | 138.70 | 3026.23 | 176.53 |
| 1991 | 118,470,312                  | 32579.34       | 1658.58 | 130.32 | 2843.29 | 165.86 |
| 1992 | 122,582,350                  | 33710.15       | 1716.15 | 134.84 | 2941.98 | 171.62 |
| 1993 | 107,968,825                  | 29691.43       | 1511.56 | 118.77 | 2591.25 | 151.16 |
| 1994 | 112,821,255                  | 31025.85       | 1579.50 | 124.10 | 2707.71 | 157.95 |
| 1995 | 117,157,685                  | 32218.36       | 1640.21 | 128.87 | 2811.78 | 164.02 |
| 1996 | 109,702,950                  | 30168.31       | 1535.84 | 120.67 | 2632.87 | 153.58 |
| 1997 | 112,568,243                  | 30956.27       | 1575.96 | 123.83 | 2701.64 | 157.60 |
| 1998 | 105,983,169                  | 29145.37       | 1483.76 | 116.58 | 2543.60 | 148.38 |
| 1999 | 109,268,754                  | 30048.91       | 1529.76 | 120.20 | 2622.45 | 152.98 |
| 2000 | 112,944,181                  | 31059.65       | 1581.22 | 124.24 | 2710.66 | 158.12 |
| 2001 | 122,595,761                  | 33713.83       | 1716.34 | 134.86 | 2942.30 | 171.63 |
| 2002 | 119,251,351                  | 32794.12       | 1669.52 | 131.18 | 2862.03 | 166.95 |
| 2003 | 124,156,420                  | 34143.02       | 1738.19 | 136.57 | 2979.75 | 173.82 |
| 2004 | 128,499,447                  | 35337.35       | 1798.99 | 141.35 | 3083.99 | 179.90 |
| 2005 | 131,214,187                  | 36083.90       | 1837.00 | 144.34 | 3149.14 | 183.70 |
| 2006 |                              |                |         |        |         |        |

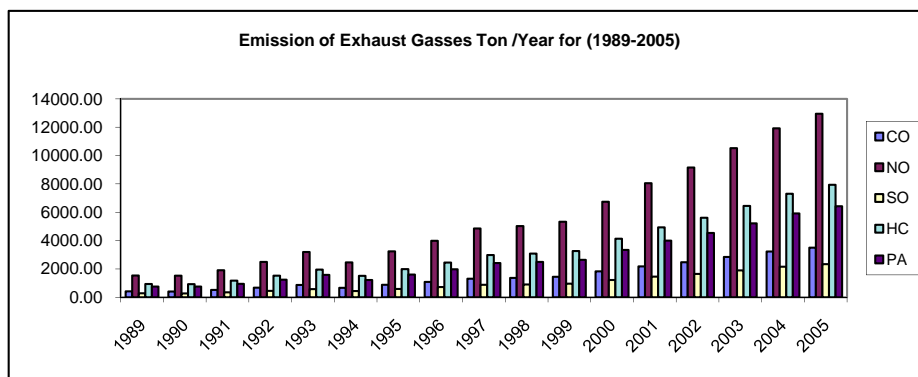




Fuel Consumption Diesel(Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Hadramout for the Years (1989-2005)

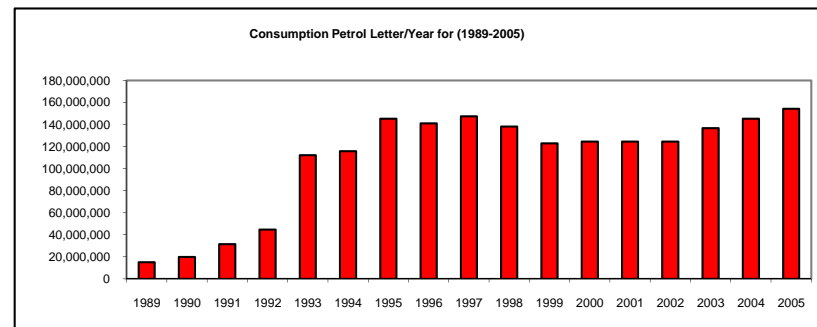
| Year | Consumption<br>(Letter/Year) | GassesTon/Year |          |         |         |         |
|------|------------------------------|----------------|----------|---------|---------|---------|
|      |                              | CO             | NO       | SO      | HC      | PA      |
| 1989 | 57,629,403                   | 414.93         | 1532.94  | 276.62  | 939.36  | 760.71  |
| 1990 | 57,134,922                   | 411.37         | 1519.79  | 274.25  | 931.30  | 754.18  |
| 1991 | 71,826,690                   | 517.15         | 1910.59  | 344.77  | 1170.78 | 948.11  |
| 1992 | 93,725,307                   | 674.82         | 2493.09  | 449.88  | 1527.72 | 1237.17 |
| 1993 | 120,018,315                  | 864.13         | 3192.49  | 576.09  | 1956.30 | 1584.24 |
| 1994 | 92,485,160                   | 665.89         | 2460.11  | 443.93  | 1507.51 | 1220.80 |
| 1995 | 121,720,009                  | 876.38         | 3237.75  | 584.26  | 1984.04 | 1606.70 |
| 1996 | 149,976,008                  | 1079.83        | 3989.36  | 719.88  | 2444.61 | 1979.68 |
| 1997 | 182,657,499                  | 1315.13        | 4858.69  | 876.76  | 2977.32 | 2411.08 |
| 1998 | 189,029,374                  | 1361.01        | 5028.18  | 907.34  | 3081.18 | 2495.19 |
| 1999 | 200,314,253                  | 1442.26        | 5328.36  | 961.51  | 3265.12 | 2644.15 |
| 2000 | 253,603,454                  | 1825.94        | 6745.85  | 1217.30 | 4133.74 | 3347.57 |
| 2001 | 302,716,208                  | 2179.56        | 8052.25  | 1453.04 | 4934.27 | 3995.85 |
| 2002 | 344,026,456                  | 2476.99        | 9151.10  | 1651.33 | 5607.63 | 4541.15 |
| 2003 | 395,428,399                  | 2847.08        | 10518.40 | 1898.06 | 6445.48 | 5219.65 |
| 2004 | 448,217,259                  | 3227.16        | 11922.58 | 2151.44 | 7305.94 | 5916.47 |
| 2005 | 486,795,382                  | 3504.93        | 12948.76 | 2336.62 | 7934.76 | 6425.70 |
| 2006 |                              |                |          |         |         |         |



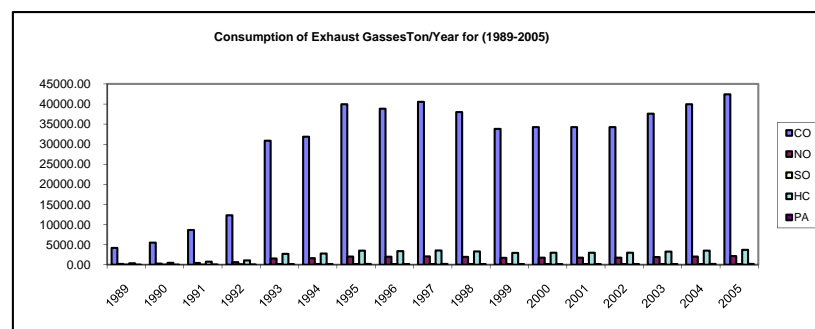


Fuel Consumption Petrol (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Hadramout for the Years (1989-2005)

| Year | Consumption   | GassesTon/Year |         |        |         |        |
|------|---------------|----------------|---------|--------|---------|--------|
|      | (Letter/Year) | CO             | NO      | SO     | HC      | PA     |
| 1989 | 15,139,224    | 4163.29        | 211.95  | 16.65  | 363.34  | 21.19  |
| 1990 | 19,934,880    | 5482.09        | 279.09  | 21.93  | 478.44  | 27.91  |
| 1991 | 31,478,404    | 8656.56        | 440.70  | 34.63  | 755.48  | 44.07  |
| 1992 | 44,776,700    | 12313.59       | 626.87  | 49.25  | 1074.64 | 62.69  |
| 1993 | 112,187,496   | 30851.56       | 1570.62 | 123.41 | 2692.50 | 157.06 |
| 1994 | 115,871,867   | 31864.76       | 1622.21 | 127.46 | 2780.92 | 162.22 |
| 1995 | 145,257,521   | 39945.82       | 2033.61 | 159.78 | 3486.18 | 203.36 |
| 1996 | 141,148,326   | 38815.79       | 1976.08 | 155.26 | 3387.56 | 197.61 |
| 1997 | 147,459,593   | 40551.39       | 2064.43 | 162.21 | 3539.03 | 206.44 |
| 1998 | 138,147,250   | 37990.49       | 1934.06 | 151.96 | 3315.53 | 193.41 |
| 1999 | 122,891,291   | 33795.11       | 1720.48 | 135.18 | 2949.39 | 172.05 |
| 2000 | 124,479,287   | 34231.80       | 1742.71 | 136.93 | 2987.50 | 174.27 |
| 2001 | 124,593,863   | 34263.31       | 1744.31 | 137.05 | 2990.25 | 174.43 |
| 2002 | 124,548,279   | 34250.78       | 1743.68 | 137.00 | 2989.16 | 174.37 |
| 2003 | 136,672,620   | 37584.97       | 1913.42 | 150.34 | 3280.14 | 191.34 |
| 2004 | 145,275,653   | 39950.80       | 2033.86 | 159.80 | 3486.62 | 203.39 |
| 2005 | 154,239,405   | 42415.84       | 2159.35 | 169.66 | 3701.75 | 215.94 |
| 2006 |               |                |         |        |         |        |
|      |               |                |         |        |         |        |







**Fuel Consumption Diesel (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Hodiedah for the Years (1989-2005)**

| Year | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |          |         |         |         |
|------|------------------------------|--------------------|----------|---------|---------|---------|
|      |                              | CO                 | NO       | SO      | HC      | PA      |
| 1989 | 97,543,150                   | 702.31             | 2594.65  | 468.21  | 1589.95 | 1287.57 |
| 1990 | 125,133,456                  | 900.96             | 3328.55  | 600.64  | 2039.68 | 1651.76 |
| 1991 | 235,387,435                  | 1694.79            | 6261.31  | 1129.86 | 3836.82 | 3107.11 |
| 1992 | 232,719,272                  | 1675.58            | 6190.33  | 1117.05 | 3793.32 | 3071.89 |
| 1993 | 277,800,685                  | 2000.16            | 7389.50  | 1333.44 | 4528.15 | 3666.97 |
| 1994 | 285,601,544                  | 2056.33            | 7597.00  | 1370.89 | 4655.31 | 3769.94 |
| 1995 | 289,938,910                  | 2087.56            | 7712.38  | 1391.71 | 4726.00 | 3827.19 |
| 1996 | 296,811,165                  | 2137.04            | 7895.18  | 1424.69 | 4838.02 | 3917.91 |
| 1997 | 308,364,410                  | 2220.22            | 8202.49  | 1480.15 | 5026.34 | 4070.41 |
| 1998 | 280,361,312                  | 2018.60            | 7457.61  | 1345.73 | 4569.89 | 3700.77 |
| 1999 | 307,306,874                  | 2212.61            | 8174.36  | 1475.07 | 5009.10 | 4056.45 |
| 2000 | 342,492,600                  | 2465.95            | 9110.30  | 1643.96 | 5582.63 | 4520.90 |
| 2001 | 353,193,032                  | 2542.99            | 9394.93  | 1695.33 | 5757.05 | 4662.15 |
| 2002 | 404,701,149                  | 2913.85            | 10765.05 | 1942.57 | 6596.63 | 5342.06 |
| 2003 | 463,703,113                  | 3338.66            | 12334.50 | 2225.77 | 7558.36 | 6120.88 |
| 2004 | 503,780,781                  | 3627.22            | 13400.57 | 2418.15 | 8211.63 | 6649.91 |
| 2005 | 519,079,347                  | 3737.37            | 13807.51 | 2491.58 | 8460.99 | 6851.85 |
| 2006 |                              |                    |          |         |         |         |

Fuel Consumption Petrol(Letter/Year) and the Estimation of Exhaust Gasses

Emission (Ton/Year) in Hodedah for the Years (1989-2005)

| Year | Consumption<br>(Letter/Year) | GassesT<br>on/Year |         |        |         |        |
|------|------------------------------|--------------------|---------|--------|---------|--------|
|      |                              | CO                 | NO      | SO     | HC      | PA     |
| 1989 | 135,065,295                  | 37142.96           | 1890.91 | 148.57 | 3241.57 | 189.09 |
| 1990 | 178,284,280                  | 49028.18           | 2495.98 | 196.11 | 4278.82 | 249.60 |
| 1991 | 201,491,200                  | 55410.08           | 2820.88 | 221.64 | 4835.79 | 282.09 |
| 1992 | 199,979,481                  | 54994.36           | 2799.71 | 219.98 | 4799.51 | 279.97 |
| 1993 | 218,415,525                  | 60064.27           | 3057.82 | 240.26 | 5241.97 | 305.78 |
| 1994 | 235,911,859                  | 64875.76           | 3302.77 | 259.50 | 5661.88 | 330.28 |
| 1995 | 240,265,485                  | 66073.01           | 3363.72 | 264.29 | 5766.37 | 336.37 |
| 1996 | 230,648,300                  | 63428.28           | 3229.08 | 253.71 | 5535.56 | 322.91 |
| 1997 | 233,963,675                  | 64340.01           | 3275.49 | 257.36 | 5615.13 | 327.55 |
| 1998 | 217,082,259                  | 59697.62           | 3039.15 | 238.79 | 5209.97 | 303.92 |
| 1999 | 217,007,049                  | 59676.94           | 3038.10 | 238.71 | 5208.17 | 303.81 |
| 2000 | 225,990,446                  | 62147.37           | 3163.87 | 248.59 | 5423.77 | 316.39 |
| 2001 | 232,750,373                  | 64006.35           | 3258.51 | 256.03 | 5586.01 | 325.85 |
| 2002 | 284,860,637                  | 78336.68           | 3988.05 | 313.35 | 6836.66 | 398.80 |
| 2003 | 264,992,967                  | 72873.07           | 3709.90 | 291.49 | 6359.83 | 370.99 |
| 2004 | 285,216,420                  | 78434.52           | 3993.03 | 313.74 | 6845.19 | 399.30 |
| 2005 | 295,868,439                  | 81363.82           | 4142.16 | 325.46 | 7100.84 | 414.22 |
| 2006 |                              |                    |         |        |         |        |

Fuel Consumption Diesel (Letter/Year) and the Estimation of  
Exhaust Gasses  
Emission (Ton/Year) in Marib for the Years (1989-2005)

|      | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |         |        |         |         |
|------|------------------------------|--------------------|---------|--------|---------|---------|
|      |                              | CO                 | NO      | SO     | HC      | PA      |
| 1989 | 50,619,590                   | 364.46             | 1346.48 | 242.97 | 825.10  | 668.18  |
| 1990 | 39,584,420                   | 285.01             | 1052.95 | 190.01 | 645.23  | 522.51  |
| 1991 | 36,903,410                   | 265.70             | 981.63  | 177.14 | 601.53  | 487.13  |
| 1992 | 53,561,810                   | 385.65             | 1424.74 | 257.10 | 873.06  | 707.02  |
| 1993 | 60,728,840                   | 437.25             | 1615.39 | 291.50 | 989.88  | 801.62  |
| 1994 | 61,266,215                   | 441.12             | 1629.68 | 294.08 | 998.64  | 808.71  |
| 1995 | 68,635,670                   | 494.18             | 1825.71 | 329.45 | 1118.76 | 905.99  |
| 1996 | 78,585,770                   | 565.82             | 2090.38 | 377.21 | 1280.95 | 1037.33 |
| 1997 | 26,124,030                   | 188.09             | 694.90  | 125.40 | 425.82  | 344.84  |
| 1998 | 58,056,420                   | 418.01             | 1544.30 | 278.67 | 946.32  | 766.34  |
| 1999 | 73,253,560                   | 527.43             | 1948.54 | 351.62 | 1194.03 | 966.947 |
| 2000 | 88,214,770                   | 635.15             | 2346.51 | 423.43 | 1437.90 | 1164.43 |
| 2001 | 83,100,600                   | 598.32             | 2210.48 | 398.88 | 1354.54 | 1096.93 |
| 2002 | 94,505,130                   | 680.44             | 2513.84 | 453.62 | 1540.43 | 1247.47 |
| 2003 | 100,864,180                  | 726.22             | 2682.99 | 484.15 | 1644.09 | 1331.41 |
| 2004 | 111,960,840                  | 806.12             | 2978.16 | 537.41 | 1824.96 | 1477.88 |
| 2005 | 109,978,870                  | 791.85             | 2925.44 | 527.90 | 1792.66 | 1451.72 |
| 2006 |                              |                    |         |        |         |         |

Fuel Consumption Petrol (Letter/Year) and the  
Estimation of Exhaust Gasses  
Emission (Ton/Year) in Marib for the Years (1989-2000)

|      | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |        |       |         |       |
|------|------------------------------|--------------------|--------|-------|---------|-------|
|      |                              | CO                 | NO     | SO    | HC      | PA    |
| 1989 | 45,905,140                   | 12623.91           | 642.67 | 50.50 | 1101.72 | 64.27 |
| 1990 | 55,114,300                   | 15156.43           | 771.60 | 60.63 | 1322.74 | 77.16 |
| 1991 | 36,645,060                   | 10077.39           | 513.03 | 40.31 | 879.48  | 51.30 |
| 1992 | 39,561,690                   | 10879.46           | 553.86 | 43.52 | 949.48  | 55.39 |
| 1993 | 43,124,350                   | 11859.20           | 603.74 | 47.44 | 1034.98 | 60.37 |
| 1994 | 65,721,475                   | 18073.41           | 920.10 | 72.29 | 1577.32 | 92.01 |
| 1995 | 65,353,500                   | 17972.21           | 914.95 | 71.89 | 1568.48 | 91.49 |
| 1996 | 59,059,160                   | 16241.27           | 826.83 | 64.97 | 1417.42 | 82.68 |
| 1997 | 46,839,190                   | 12880.78           | 655.75 | 51.52 | 1124.14 | 65.57 |
| 1998 | 34,519,011                   | 9492.73            | 483.27 | 37.97 | 828.46  | 48.33 |
| 1999 | 36,713,160                   | 10096.12           | 513.98 | 40.38 | 881.12  | 51.40 |
| 2000 | 36,613,657                   | 10068.76           | 512.59 | 40.28 | 878.73  | 51.26 |
| 2001 | 37,287,950                   | 10254.19           | 522.03 | 41.02 | 894.91  | 52.20 |
| 2002 | 37,843,787                   | 10407.04           | 529.81 | 41.63 | 908.25  | 52.98 |
| 2003 | 39,209,660                   | 10782.66           | 548.94 | 43.13 | 941.03  | 54.89 |
| 2004 | 41,250,330                   | 11343.84           | 577.50 | 45.38 | 990.01  | 57.75 |
| 2005 | 40,272,960                   | 11075.06           | 563.82 | 44.30 | 966.55  | 56.38 |
| 2006 |                              |                    |        |       |         |       |

Emission (Ton/Year) in Marib for the Years (1989-1996)

|      |            |        |         |        |         |         |
|------|------------|--------|---------|--------|---------|---------|
| 1989 | 50,619,590 | 364.46 | 1346.48 | 242.97 | 825.10  | 668.18  |
| 1990 | 39,584,420 | 285.01 | 1052.95 | 190.01 | 645.23  | 522.51  |
| 1991 | 36,903,410 | 265.70 | 981.63  | 177.14 | 601.53  | 487.13  |
| 1992 | 53,561,810 | 385.65 | 1424.74 | 257.10 | 873.06  | 707.02  |
| 1993 | 60,728,840 | 437.25 | 1615.39 | 291.50 | 989.88  | 801.62  |
| 1994 | 61,266,215 | 441.12 | 1629.68 | 294.08 | 998.64  | 808.71  |
| 1995 | 68,635,670 | 494.18 | 1825.71 | 329.45 | 1118.76 | 905.99  |
| 1996 | 78,585,770 | 565.82 | 2090.38 | 377.21 | 1280.95 | 1037.33 |
| 1997 | 26,124,030 | 188.09 | 694.90  | 125.40 | 425.82  | 344.84  |
| 1998 | 58,056,420 | 418.01 | 1544.30 | 278.67 | 946.32  | 766.34  |

**Fuel Consumption Diesel (Letter/Year) and the Estimation of Exhaust  
Gasses  
Emission (Ton/Year) in Sana'a for the (1989-2005)**

|      | Consumation<br>(Letter/Year) | Gasses(Ton/Year) |         |         |         |         |
|------|------------------------------|------------------|---------|---------|---------|---------|
|      |                              | CO               | NO      | SO      | HC      | PA      |
| 1989 | 217,605,834                  | 1566.76          | 5788.32 | 1044.51 | 3546.98 | 2872.40 |
| 1990 | 164,558,923                  | 1184.82          | 4377.27 | 789.88  | 2682.31 | 2172.18 |
| 1991 | 214,211,635                  | 1542.32          | 5698.03 | 1028.22 | 3491.65 | 2827.59 |
| 1992 | 217,206,437                  | 1563.89          | 5777.69 | 1042.59 | 3540.46 | 2867.12 |
| 1993 | 201,525,616                  | 1450.98          | 5360.58 | 967.32  | 3284.87 | 2660.14 |
| 1994 | 184,752,742                  | 1330.22          | 4914.42 | 886.81  | 3011.47 | 2438.74 |
| 1995 | 200,323,871                  | 1442.33          | 5328.61 | 961.55  | 3265.28 | 2644.28 |
| 1996 | 205,960,744                  | 1482.92          | 5478.56 | 988.61  | 3357.16 | 2718.68 |
| 1997 | 90,308,905                   | 650.22           | 2402.22 | 433.48  | 1472.04 | 1192.08 |
| 1998 | 107,735,460                  | 775.70           | 2865.76 | 517.13  | 1756.09 | 1422.11 |
| 1999 | 131,370,740                  | 945.87           | 3494.46 | 630.58  | 2141.34 | 1734.09 |
| 2000 | 154,452,860                  | 1112.06          | 4108.45 | 741.37  | 2517.58 | 2038.78 |
| 2001 | 160,541,488                  | 1155.90          | 4270.40 | 770.60  | 2616.83 | 2119.15 |
| 2002 | 184,688,455                  | 1329.76          | 4912.71 | 886.50  | 3010.42 | 2437.89 |
| 2003 | 208,688,039                  | 1502.55          | 5551.10 | 1001.70 | 3401.62 | 2754.68 |
| 2004 | 266,656,073                  | 1919.92          | 7093.05 | 1279.95 | 4346.49 | 3519.86 |
| 2005 | 231,813,508                  | 1669.06          | 6166.24 | 1112.70 | 3778.56 | 3059.94 |
| 2006 |                              |                  |         |         |         |         |

**Fuel Consumption Petrol (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Sana'a for the (1989-2005)**

|      | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |          |        |         |        |
|------|------------------------------|--------------------|----------|--------|---------|--------|
|      |                              | CO                 | NO       | SO     | HC      | PA     |
| 1989 | 370,925,413                  | 102004.49          | 51929.56 | 408.02 | 8902.21 | 519.30 |
| 1990 | 329,306,130                  | 90559.19           | 46102.86 | 362.24 | 7903.35 | 461.03 |
| 1991 | 322,047,147                  | 88562.97           | 45086.60 | 354.25 | 7729.13 | 450.87 |
| 1992 | 340,168,836                  | 93546.43           | 47623.64 | 374.19 | 8164.05 | 476.24 |
| 1993 | 350,680,098                  | 96437.03           | 49095.21 | 385.75 | 8416.32 | 490.95 |
| 1994 | 354,947,146                  | 97610.47           | 49692.60 | 390.44 | 8518.73 | 496.93 |
| 1995 | 385,199,070                  | 105929.74          | 53927.87 | 423.72 | 9244.78 | 539.28 |
| 1996 | 375,683,238                  | 103312.89          | 52595.65 | 413.25 | 9016.40 | 525.96 |
| 1997 | 94,187,000                   | 25901.43           | 13186.18 | 103.61 | 2260.49 | 131.86 |
| 1998 | 93,605,029                   | 25741.38           | 13104.70 | 102.97 | 2246.52 | 131.05 |
| 1999 | 98,751,573                   | 27156.68           | 13825.22 | 108.63 | 2370.04 | 138.25 |
| 2000 | 123,971,751                  | 34092.23           | 17356.05 | 136.37 | 2975.32 | 173.56 |
| 2001 | 133,551,754                  | 36726.73           | 18697.25 | 146.91 | 3205.24 | 186.97 |
| 2002 | 128,636,122                  | 35374.93           | 18009.06 | 141.50 | 3087.27 | 180.09 |
| 2003 | 143,650,391                  | 39503.86           | 20111.05 | 158.02 | 3447.61 | 201.11 |
| 2004 | 149,569,990                  | 41131.75           | 20939.80 | 164.53 | 3589.68 | 209.40 |
| 2005 | 153,576,595                  | 42233.56           | 21500.72 | 168.93 | 3685.84 | 215.01 |
| 2006 |                              |                    |          |        |         |        |



**Fuel Consumption Diesel (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Taiz for the Years (1989-2005)**

|      | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |         |        |         |         |
|------|------------------------------|--------------------|---------|--------|---------|---------|
|      |                              | CO                 | NO      | SO     | HC      | PA      |
| 1989 | 113,606,621                  | 817.97             | 3021.94 | 545.31 | 1851.79 | 1499.61 |
| 1990 | 111,687,866                  | 804.15             | 2970.90 | 536.10 | 1820.51 | 1474.28 |
| 1991 | 125,722,512                  | 905.20             | 3344.22 | 603.47 | 2049.28 | 1659.54 |
| 1992 | 116,107,626                  | 835.97             | 3088.46 | 557.32 | 1892.55 | 1532.62 |
| 1993 | 95,385,154                   | 686.77             | 2537.25 | 457.85 | 1554.78 | 1259.08 |
| 1994 | 100,621,501                  | 724.47             | 2676.53 | 482.98 | 1640.13 | 1328.20 |
| 1995 | 100,669,610                  | 724.82             | 2677.81 | 483.21 | 1640.91 | 1328.84 |
| 1996 | 103,753,287                  | 747.02             | 2759.84 | 498.02 | 1691.18 | 1369.54 |
| 1997 | 105,317,633                  | 758.29             | 2801.45 | 505.52 | 1716.68 | 1390.19 |
| 1998 | 114,865,412                  | 827.03             | 3055.42 | 551.35 | 1872.31 | 1516.22 |
| 1999 | 138,660,510                  | 998.36             | 3688.37 | 665.57 | 2260.17 | 1830.32 |
| 2000 | 154,452,860                  | 1112.06            | 4108.45 | 741.37 | 2517.58 | 2038.78 |
| 2001 | 211,744,968                  | 58229.87           | 2964.43 | 232.92 | 5081.88 | 296.44  |
| 2002 | 242,173,806                  | 66597.80           | 3390.43 | 266.39 | 5812.17 | 339.04  |
| 2003 | 251,335,096                  | 69117.15           | 3518.69 | 276.47 | 6032.04 | 351.87  |
| 2004 | 309,136,913                  | 85012.65           | 4327.92 | 340.05 | 7419.29 | 432.79  |
| 2005 | 281,858,677                  | 77511.14           | 3946.02 | 310.04 | 6764.61 | 394.60  |
|      |                              |                    |         |        |         |         |

**Fuel Consumption Petrol (Letter/Year) and the Estimation of Exhaust Gasses  
Emission (Ton/Year) in Taiz for the Years (1989-2000)**

| Year | Consumption<br>(Letter/Year) | GassesTo<br>n/Year |            |          |          |          |
|------|------------------------------|--------------------|------------|----------|----------|----------|
|      |                              | CO                 | NO         | SO       | HC       | PA       |
| 1989 | 182,704,135                  | 50243.64           | 2557.86    | 200.97   | 4384.90  | 255.79   |
| 1990 | 197,685,666                  | 54363.56           | 2767.60    | 217.45   | 4744.46  | 276.76   |
| 1991 | 197,649,309                  | 54353.56           | 2767.09    | 217.41   | 4743.58  | 276.71   |
| 1992 | 183,729,275                  | 50525.55           | 2572.21    | 202.10   | 4409.50  | 257.22   |
| 1993 | 141,374,262                  | 38877.92           | 1979.24    | 155.51   | 3392.98  | 197.92   |
| 1994 | 144,664,569                  | 39782.76           | 2025.30    | 159.13   | 3471.95  | 202.53   |
| 1995 | 152,412,558                  | 41913.45           | 2133.78    | 167.65   | 3657.90  | 213.38   |
| 1996 | 138,526,093                  | 38094.68           | 1939.37    | 152.38   | 3324.63  | 193.94   |
| 1997 | 137,033,980                  | 37684.34           | 1918.48    | 150.74   | 3288.82  | 191.85   |
| 1998 | 126,698,122                  | 34841.98           | 1773.77    | 139.37   | 3040.75  | 177.38   |
| 1999 | 128,637,668                  | 35375.36           | 1800.93    | 141.50   | 3087.30  | 180.09   |
| 2000 | 130,089,571                  | 35774.63           | 1821.25    | 143.10   | 3122.15  | 182.13   |
| 2001 | 133,950,184                  | 36836.301          | 1875.30258 | 147.3452 | 3214.804 | 187.5303 |
| 2002 | 133,957,394                  | 36838.283          | 1875.40352 | 147.3531 | 3214.977 | 187.5404 |
| 2003 | 142,489,003                  | 39184.476          | 1994.84604 | 156.7379 | 3419.736 | 199.4846 |
| 2004 | 144,737,169                  | 39802.721          | 2026.32037 | 159.2109 | 3473.692 | 202.632  |
| 2005 | 148,330,230                  | 40790.813          | 2076.62322 | 163.1633 | 3559.926 | 207.6623 |
| 2006 |                              |                    |            |          |          |          |