

# Access to Sanitation by Country, 1970-2008

## Description

Adequate sanitation is also a fundamental requirement for basic human well-being, and improving access is one of the Millennium Development Goals (MDGs). Data are given here for the percent of urban, rural, and total populations, by country, with access to sanitation services for 1970, 1975, 1980, 1985, 1990, 1994, 2000, 2002, 2004, 2005, and 2008, the most recent year for which data are available. The World Health Organization (WHO) collected these data over various periods. Most of the data presented were drawn from responses by national governments to WHO questionnaires. Participants in data collection include the JMP, the United Nations Children's Fund, and the Water Supply and Sanitation Collaborative Council, which has continued sector monitoring and aims to support and strengthen the monitoring efforts of individual countries. Countries used their own definitions of "rural" and "urban."

For all WHO Assessments since 2000, new definitions were provided for "improved" sanitation with allowance for acceptable local technologies. The 40 largest countries in the developing world account for 90 percent of population. As a result, WHO spent extra effort to collect comprehensive data for these countries. The excreta disposal system was considered adequate if it was private or shared (but not public) and if it hygienically separated human excreta from human contact. The following technologies were included in the 2000 assessment as representing improved sanitation:

- Connection to a public sewer
- Connection to septic system
- Pour-flush latrine
- Simple pit latrine
- Ventilated improved pit latrine

In comparison, unimproved sanitation facilities refer to:

- Public or shared latrine
- Open pit latrine
- Bucket latrine

## Limitations

As is the case with drinking water data, definitions for access to sanitation vary from country to country, and from year to year within the same country. Countries generally regard sanitation facilities that break the fecal-oral transmission route as adequate. In urban areas, adequate sanitation may be provided by connections to public sewers or by household systems such as pit privies, flush latrines, septic tanks, and communal toilets. In rural areas, pit privies, pour-flush latrines, septic tanks, and communal toilets are considered adequate. Direct comparisons between countries and across time within the same country are difficult and are additionally complicated by the fact that these data hide disparities among regions and socioeconomic classes.

WHO Assessments since 2000 have attempted to shift from gathering information from water providers only to including consumer-based information. The current approach uses household surveys in an effort to assess the actual use of facilities. Access to sanitation services, as reported by WHO, does not imply that the level of service is “adequate” or “safe.” The assessment questionnaire did not include any methodology for discounting coverage figures to allow for intermittence or poor quality of the service provided. More details of the methods used, and their limitations, can be found at [http://www.who.int/docstore/water\\_sanitation\\_health/Globassessment/GlobalTOC.htm](http://www.who.int/docstore/water_sanitation_health/Globassessment/GlobalTOC.htm).

## SOURCES

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DATA TABLE 4 Access to Sanitation by Country, 1970–2008

| Region and Country         | Fraction of Population with Access to Improved Sanitation |      |      |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------------------|---|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                            | URBAN   |      |      |      |      |      |      |      |      |      | RURAL |      |      |      |      |      |      |      |      |      | TOTAL |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                            | 1970  | 1975 | 1980 | 1985 | 1990 | 1994 | 1999 | 2000 | 2002 | 2004 | 2005  | 2008 | 1970 | 1975 | 1980 | 1985 | 1990 | 1994 | 1999 | 2000 | 2002  | 2004 | 2005 | 2008 | 1970 | 1975 | 1980 | 1985 | 1990 | 1994 | 1999 | 2000 | 2002 | 2004 | 2005 | 2008 |
| <b>AFRICA</b>              | 47  | 75   | 57   | 75   |      |      |      |      |      |      |       |      | 47   | 82   | 82   | 86   | 88   | 88   | 88   | 88   | 88    | 88   | 88   | 88   | 73   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Algeria                    | 13  | 100  | 80   |      | 90   | 99   | 99   | 98   | 98   | 98   | 98    | 98   | 47   | 82   | 82   | 86   | 88   | 88   | 88   | 88   | 88    | 88   | 88   | 88   | 73   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Angola                     |   |      | 40   | 29   | 25   | 34   | 70   | 56   | 56   | 80   | 86    | 86   | 8    | 30   | 16   | 16   | 15   | 18   | 18   | 18   | 18    | 18   | 18   | 18   | 20   | 19   | 21   | 16   | 44   | 30   | 31   | 50   | 57   |      |      |      |
| Benin                      | 83  | 48   | 58   | 60   | 54   | 46   | 58   | 59   | 22   | 24   | 1     | 1    | 6    | 12   | 11   | 3    | 4    | 14   |      |      |       |      |      |      | 16   | 33   | 45   | 20   | 23   | 32   | 33   | 11   | 12   |      |      |      |
| Botswana                   |   |      | 93   | 100  |      |      | 57   | 57   | 72   | 74   | 74    | 74   | 28   | 85   | 25   | 25   | 36   | 39   |      |      |       |      |      |      | 40   | 89   | 41   | 42   | 57   | 60   |      |      |      |      |      |      |
| Burkina Faso               | 49  | 47   | 38   | 44   | 42   | 88   | 45   | 42   | 32   | 33   | 33    | 33   | 11   | 16   | 5    | 6    | 6    | 6    | 4    | 4    | 4     | 4    | 4    | 4    | 7    | 9    | 18   | 29   | 12   | 13   | 11   | 11   |      |      |      |      |
| Burundi                    | 96  | 40   | 84   | 64   | 60   | 79   | 47   | 47   | 49   | 49   | 49    | 49   | 35   | 56   | 16   | 50   | 35   | 35   | 46   | 46   | 46    | 46   | 46   | 46   | 35   | 58   | 18   | 51   | 36   | 36   | 46   | 46   |      |      |      |      |
| Cameroon                   |   |      | 100  |      |      |      | 99   | 63   | 58   | 58   | 56    | 56   | 1    |      |      |      | 85   | 33   | 43   | 35   | 35    | 35   | 35   | 43   |      |      |      | 43   |      |      |      |      |      |      |      |      |
| Cape Verde                 |   |      | 34   | 32   | 40   | 95   | 61   | 61   | 65   | 65   | 65    | 65   | 10   | 9    | 10   | 32   | 19   | 19   | 34   | 38   | 38    | 38   | 38   | 38   | 11   | 10   | 24   | 71   | 42   | 43   | 52   | 54   |      |      |      |      |
| Central African Republic   | 64  | 100  | 45   |      | 43   | 47   | 47   | 39   | 43   | 96   | 100   | 100  | 46   |      | 23   | 12   | 12   | 23   | 28   | 72   | 100   |      |      |      | 46   | 46   | 31   | 27   | 27   | 29   | 34   |      |      |      |      |      |
| Chad                       | 7   | 9    | 73   | 81   | 30   | 24   | 23   | 23   | 23   | 23   | 23    | 23   | 7    | 13   | 0    | 4    | 4    | 4    | 4    | 1    | 1     | 1    | 1    | 21   | 29   | 8    | 9    | 9    | 9    | 9    |      |      |      |      |      |      |
| Comoros                    |   |      | 98   | 38   | 41   | 49   | 50   | 50   | 50   | 50   | 50    | 50   | 98   | 15   | 29   | 29   | 30   | 30   | 30   | 30   | 30    | 30   | 30   | 30   | 98   | 23   | 33   | 35   | 36   |      |      |      |      |      |      |      |
| Congo                      | 8   | 10   |      | 14   | 14   | 28   | 31   | 31   | 31   | 6    | 9     | 9    | 2    | 25   | 29   | 29   | 29   | 29   | 29   | 29   | 29    | 29   | 29   | 29   | 9    | 27   | 30   | 30   |      |      |      |      |      |      |      |      |
| Congo, Democratic Republic | 5   | 65   | 46   | 23   | 53   | 43   | 42   | 23   | 23   | 5    | 6     | 6    | 9    | 11   | 4    | 6    | 23   | 25   | 19   | 23   | 5     | 22   | 22   | 21   | 9    | 20   | 29   | 30   | 20   | 23   |      |      |      |      |      |      |
| Cote D'Ivoire              | 23  | 81   | 59   | 61   | 46   | 37   | 36   | 36   | 36   | 36   | 36    | 36   | 100  | 51   | 23   | 29   | 11   | 11   | 11   | 5    | 5     | 5    | 5    | 92   | 54   | 40   | 37   | 23   | 23   |      |      |      |      |      |      |      |
| Djibouti                   |   |      | 43   | 78   | 77   | 99   | 55   | 88   | 65   | 63   | 63    | 63   | 20   | 17   | 50   | 27   | 50   | 18   | 10   | 10   | 10    | 10   | 10   | 39   | 64   | 90   | 91   | 50   | 82   | 58   | 56   |      |      |      |      |      |
| Egypt                      |   |      | 80   | 20   | 98   | 84   | 86   | 97   | 97   | 97   | 97    | 97   | 26   | 5    | 91   | 56   | 58   | 90   | 92   | 92   | 92    | 92   | 92   | 50   | 11   | 94   | 68   | 70   | 93   | 94   |      |      |      |      |      |      |
| Equatorial Guinea          |   |      | 54   | 61   | 60   | 60   | 60   | 60   | 60   | 60   | 60    | 60   | 24   | 48   | 46   | 46   | 46   | 46   | 46   | 46   | 46    | 46   | 46   | 33   | 54   | 53   | 53   | 51   |      |      |      |      |      |      |      |      |
| Eritrea                    |   |      | 66   | 34   | 32   | 52   | 52   | 52   | 52   | 52   | 52    | 52   | 1    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4    | 13   | 9    | 9    | 13   | 14   |      |      |      |      |      |      |      |      |
| Ethiopia                   | 67  | 56   | 96   | 58   | 19   | 44   | 28   | 29   | 8    | 8    | 8     | 8    | 96   |      | 6    | 4    | 7    | 7    | 8    | 14   | 14    | 14   | 14   | 15   | 6    | 13   | 10   | 12   |      |      |      |      |      |      |      |      |
| Gabon                      |   |      | 25   | 37   | 37   | 34   | 33   | 33   | 33   | 33   | 33    | 33   | 4    | 30   | 30   | 30   | 30   | 30   | 30   | 30   | 30    | 30   | 30   | 21   | 36   | 36   | 33   | 33   |      |      |      |      |      |      |      |      |
| Gambia                     |   |      | 100  | 83   | 41   | 72   | 72   | 67   | 68   | 68   | 68    | 68   | 27   | 23   | 35   | 46   | 46   | 63   | 65   | 65   | 65    | 65   | 65   | 44   | 37   | 53   | 53   | 65   | 67   |      |      |      |      |      |      |      |
| Ghana                      | 92  | 95   | 47   | 51   | 63   | 53   | 62   | 74   | 27   | 17   | 18    | 40   | 40   | 17   | 16   | 60   | 36   | 64   | 46   | 11   | 6     | 7    | 55   | 56   | 26   | 30   | 61   | 42   | 63   | 58   | 18   | 11   | 13   |      |      |      |
| Guinea                     | 70  | 54   | 94   | 25   | 31   | 31   | 34   | 2    | 2    | 2    | 2     | 2    | 0    | 41   | 6    | 11   | 10   | 11   | 10   | 11   | 13    | 13   | 13   | 70   | 58   | 13   | 18   | 17   | 19   |      |      |      |      |      |      |      |

continues

DATA TABLE 4 continued

| Region and Country    | Fraction of Population with Access to Improved Sanitation |      |      |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |    |    |    |    |
|-----------------------|---|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|----|----|----|----|
|                       | URBAN   |      |      |      |      |      |      |      |      |      | RURAL |      |      |      |      |      |      |      |      |      | TOTAL |      |      |      |      |      |      |      |      |    |    |    |    |
|                       | 1970  | 1975 | 1980 | 1985 | 1990 | 1994 | 2000 | 2002 | 2004 | 2005 | 2008  | 1970 | 1975 | 1980 | 1985 | 1990 | 1994 | 2000 | 2002 | 2004 | 2005  | 2008 | 1994 | 1999 | 2000 | 2002 | 2004 | 2005 | 2008 |    |    |    |    |
| Guinea-Bissau         | 21  | 29   | 32   | 88   | 57   | 57   | 47   | 49   | 13   | 18   | 17    | 34   | 23   | 23   | 8    | 9    | 15   | 21   | 20   | 47   | 34    | 35   | 20   | 21   |      |      |      |      |      |    |    |    |    |
| Kenya                 | 85  | 98   | 89   | 69   | 96   | 56   | 46   | 27   | 45   | 48   | 19    | 81   | 43   | 41   | 31   | 32   | 50   | 55   | 30   | 77   | 86    | 48   | 43   | 30   | 31   |      |      |      |      |    |    |    |    |
| Lesotho               | 44  | 51   | 13   | 22   | 1    | 93   | 61   | 61   | 39   | 40   | 10    | 12   | 14   | 14   | 2    | 7    | 96   | 32   | 25   | 11   | 13    | 14   | 15   | 6    | 92   | 37   | 28   | 29   |      |    |    |    |    |
| Liberia               | 100   | 100  | 100  | 6    | 38   | 49   | 49   | 24   | 25   | 9    | 2     | 2    | 7    | 7    | 4    | 4    | 19   | 18   | 97   | 97   | 97    | 97   | 16   | 17   | 18   | 26   | 27   | 16   | 17   |    |    |    |    |
| Libya                 | 100   | 100  | 100  | 9    | 55   | 50   | 70   | 49   | 48   | 15   | 15    | 3    | 70   | 27   | 26   | 9    | 10   | 88   | 15   | 42   | 33    | 34   | 11   | 11   | 15   | 42   | 33   | 34   | 11   | 11 |    |    |    |
| Madagascar            | 88  | 100  | 100  | 70   | 96   | 66   | 62   | 51   | 51   | 81   | 3     | 51   | 98   | 42   | 61   | 55   | 57   | 83   | 53   | 77   | 46    | 61   | 54   | 56   | 53   | 77   | 46   | 61   | 54   | 56 |    |    |    |
| Malawi                | 63  | 79   | 90   | 81   | 58   | 93   | 59   | 59   | 44   | 45   | 3     | 10   | 21   | 100  | 38   | 39   | 31   | 32   | 8    | 19   | 27    | 31   | 69   | 45   | 46   | 35   | 36   | 33   | 42   | 34 | 24 | 26 |    |
| Mali                  | 100   | 5    | 8    | 44   | 64   | 49   | 45   | 50   | 99   | 100  | 90    | 86   | 100  | 100  | 99   | 94   | 90   | 77   | 82   | 94   | 92    | 100  | 100  | 99   | 99   | 94   | 91   | 91   | 91   | 91 | 91 | 91 |    |
| Mauritania            | 51  | 63   | 100  | 100  | 100  | 100  | 95   | 93   | 93   | 83   | 4     | 16   | 18   | 42   | 31   | 52   | 50   | 52   | 29   | 40   | 75    | 61   | 73   | 68   | 69   | 40   | 75   | 61   | 73   | 68 | 69 |    |    |
| Mauritius             | 75  | 62   | 100  | 69   | 100  | 83   | 88   | 83   | 83   | 4    | 12    | 70   | 26   | 14   | 19   | 4    | 4    | 20   | 43   | 27   | 32    | 15   | 17   | 43   | 27   | 32   | 15   | 17   | 43   | 27 | 32 | 15 | 17 |
| Morocco               | 10  | 30   | 36   | 24   | 71   | 71   | 79   | 43   | 43   | 32   | 34    | 1    | 3    | 4    | 4    | 4    | 4    | 1    | 3    | 7    | 17    | 15   | 20   | 12   | 13   | 9    | 9    | 9    | 9    | 9  | 9  | 9  |    |
| Mozambique            | 80  | 61   | 85   | 48   | 53   | 36   | 36   | 36   | 5    | 11   | 21    | 45   | 30   | 36   | 29   | 28   | 35   | 36   | 63   | 38   | 44    | 32   | 32   | 32   | 32   | 32   | 32   | 32   | 32   | 32 | 32 | 32 |    |
| Namibia               | 83  | 87   | 60   | 77   | 88   | 12   | 56   | 56   | 47   | 50   | 52    | 56   | 50   | 55   | 17   | 8    | 38   | 38   | 49   | 55   | 53    | 57   | 51   | 56   | 21   | 8    | 41   | 42   | 49   | 54 | 54 |    |    |
| Niger                 | 10  | 30   | 36   | 71   | 71   | 79   | 43   | 43   | 32   | 34   | 1     | 3    | 4    | 4    | 4    | 4    | 1    | 3    | 7    | 17   | 15    | 20   | 12   | 13   | 9    | 9    | 9    | 9    | 9    | 9  | 9  | 9  |    |
| Nigeria               | 80  | 61   | 85   | 48   | 53   | 36   | 36   | 36   | 5    | 11   | 21    | 45   | 30   | 36   | 29   | 28   | 35   | 36   | 63   | 38   | 44    | 32   | 32   | 32   | 32   | 32   | 32   | 32   | 32   | 32 | 32 | 32 |    |
| Reunion               | 83  | 87   | 60   | 77   | 88   | 12   | 56   | 56   | 47   | 50   | 52    | 56   | 50   | 55   | 17   | 8    | 38   | 38   | 49   | 55   | 53    | 57   | 51   | 56   | 21   | 8    | 41   | 42   | 49   | 54 | 54 |    |    |
| Rwanda                | 10  | 30   | 36   | 71   | 71   | 79   | 43   | 43   | 32   | 34   | 1     | 3    | 4    | 4    | 4    | 4    | 1    | 3    | 7    | 17   | 15    | 20   | 12   | 13   | 9    | 9    | 9    | 9    | 9    | 9  | 9  | 9  |    |
| Sao Tome and Principe | 80  | 61   | 85   | 48   | 53   | 36   | 36   | 36   | 5    | 11   | 21    | 45   | 30   | 36   | 29   | 28   | 35   | 36   | 63   | 38   | 44    | 32   | 32   | 32   | 32   | 32   | 32   | 32   | 32   | 32 | 32 | 32 |    |
| Senegal               | 100   | 87   | 57   | 83   | 94   | 70   | 79   | 68   | 69   | 2    | 38    | 40   | 48   | 34   | 34   | 36   | 38   | 36   | 46   | 58   | 70    | 52   | 57   | 49   | 51   | 46   | 58   | 70   | 52   | 57 | 49 | 51 |    |
| Seychelles            | 100   | 87   | 57   | 83   | 94   | 70   | 79   | 68   | 69   | 2    | 38    | 40   | 48   | 34   | 34   | 36   | 38   | 36   | 46   | 58   | 70    | 52   | 57   | 49   | 51   | 46   | 58   | 70   | 52   | 57 | 49 | 51 |    |
| Sierra Leone          | 31  | 60   | 55   | 17   | 23   | 53   | 53   | 23   | 24   | 6    | 10    | 31   | 8    | 31   | 30   | 30   | 6    | 6    | 12   | 24   | 39    | 11   | 28   | 39   | 12   | 13   | 28   | 39   | 12   | 13 | 13 | 13 |    |
| Somalia               | 77  | 44   | 44   | 44   | 47   | 48   | 50   | 52   | 35   | 5    | 5     | 14   | 14   | 14   | 7    | 6    | 47   | 18   | 46   | 86   | 67    | 65   | 75   | 77   | 46   | 86   | 67   | 65   | 75   | 77 | 77 |    |    |
| South Africa          | 100   | 100  | 73   | 73   | 79   | 87   | 50   | 50   | 56   | 55   | 4     | 10   | 4    | 48   | 24   | 24   | 19   | 18   | 22   | 22   | 62    | 34   | 34   | 34   | 34   | 22   | 62   | 34   | 34   | 34 | 34 | 34 |    |
| Sudan                 | 100   | 100  | 73   | 73   | 79   | 87   | 50   | 50   | 56   | 55   | 4     | 10   | 4    | 48   | 24   | 24   | 19   | 18   | 22   | 22   | 62    | 34   | 34   | 34   | 34   | 22   | 62   | 34   | 34   | 34 | 34 | 34 |    |
| Swaziland             | 99  | 100  | 100  | 36   | 78   | 59   | 61   | 61   | 25   | 25   | 37    | 44   | 44   | 44   | 50   | 53   | 36   | 45   | 36   | 45   | 36    | 52   | 48   | 53   | 55   | 36   | 52   | 48   | 53   | 55 | 55 |    |    |



DATA TABLE 4 continued

| Region and Country           | Fraction of Population with Access to Improved Sanitation |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
|------------------------------|---|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|----|-----|-----|----|-----|-----|-----|-----|-----|-----|
|                              | URBAN   |      |      |      |      |      |      |      | RURAL |      |      |      |      |      |      |      | TOTAL |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
|                              | 1970  | 1975 | 1980 | 1985 | 1990 | 1994 | 2000 | 2002 | 2004  | 2005 | 2008 | 1970 | 1975 | 1980 | 1985 | 1990 | 1994  | 2000 | 2002 | 2004 | 2005 | 2008 | 2002 | 2004 | 2005 | 2008 |    |     |     |    |     |     |     |     |     |     |
| Montserrat                   |   |      |      |      |      |      | 96   | 96   | 96    | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96    | 96   | 96   | 96   | 96   | 96   | 96   | 100  | 100  | 100  |    |     |     |    |     |     |     |     |     |     |
| Netherlands Antilles         |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| Nicaragua                    | 34  | 35   |      |      |      | 34   | 96   | 78   | 56    | 62   | 63   | 8    | 24   | 16   |      | 27   | 68    | 51   | 34   | 35   | 37   |      |      |      |      | 31   | 84 | 66  | 47  | 50 | 52  |     |     |     |     |     |
| Panama                       | 87  | 78   | 83   | 99   |      |      | 87   | 89   | 89    | 75   | 75   | 69   | 76   | 59   | 61   |      | 94    | 51   | 51   | 51   | 51   | 78   | 77   | 71   | 81   |      | 86 | 99  | 72  | 73 | 68  | 69  |     |     |     |     |
| Puerto Rico                  |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| Saint Kitts                  |   |      |      |      |      |      | 96   | 96   | 96    | 96   | 96   | 96   | 96   | 96   | 96   | 96   | 96    | 96   | 96   | 96   | 96   | 96   | 96   | 95   | 96   | 96   |    |     |     |    |     |     |     |     |     |     |
| Saint Lucia                  |   |      |      |      |      |      | 89   | 89   | 89    | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89    | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   | 89   |    |     |     |    |     |     |     |     |     |     |
| Saint Vincent                |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| Trinidad/Tobago              |   |      |      |      |      | 100  | 100  | 100  | 92    | 92   | 92   | 92   |      |      |      |      | 92    | 100  | 100  | 92   | 92   |      |      |      |      | 97   | 88 | 100 | 100 | 92 | 92  |     |     |     |     |     |
| Turks/Caicos Islands         | 51  | 83   | 96   | 100  |      |      | 100  | 94   | 98    | 98   | 98   | 98   | 96   | 97   | 88   | 95   |       | 94   | 98   | 98   | 81   | 92   | 93   | 98   |      |      |    |     |     |    | 100 | 100 | 100 | 100 | 100 | 100 |
| United States of America     |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| United States Virgin Islands |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| <b>SOUTH AMERICA</b>         |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| Argentina                    | 87  | 100  | 80   | 75   |      |      | 89   | 92   | 91    | 91   | 91   | 79   | 83   | 35   | 35   |      | 48    | 83   | 77   | 77   | 85   | 97   | 69   |      |      |      | 85 | 91  | 90  | 90 |     |     |     |     |     |     |
| Bolivia                      | 25  | 37   | 33   | 38   |      |      | 58   | 82   | 58    | 60   | 33   | 34   | 4    | 9    | 4    | 10   | 14    | 16   | 38   | 23   | 22   | 9    | 12   | 18   | 21   | 26   | 41 | 66  | 45  | 46 | 24  | 25  |     |     |     |     |
| Brazil                       | 85  |      |      |      |      |      | 86   | 84   | 55    | 83   | 83   | 86   | 87   | 24   | 1    | 1    | 32    | 3    | 40   | 35   | 37   | 37   | 58   | 63   | 71   | 44   | 77 | 75  | 75  | 78 | 80  |     |     |     |     |     |
| Chile                        | 33  | 36   | 100  | 100  |      |      | 82   | 98   | 96    | 95   | 98   | 98   | 10   | 11   | 10   | 4    |       | 93   | 64   | 62   | 83   | 83   | 29   | 32   | 83   | 84   |    |     |     |    |     |     |     |     |     |     |
| Colombia                     | 75  | 73   | 93   | 96   | 84   |      | 76   | 97   | 96    | 96   | 81   | 81   | 8    | 13   | 4    | 13   | 18    | 33   | 51   | 54   | 54   | 55   | 47   | 48   | 61   | 64   | 63 | 85  | 86  | 86 | 74  | 74  |     |     |     |     |
| Ecuador                      |   |      |      |      |      |      | 73   | 98   | 56    | 87   | 70   | 80   | 94   | 95   | 96   | 7    | 17    | 29   | 38   | 34   | 37   | 59   | 82   | 81   | 84   | 43   | 65 | 48  | 64  | 59 | 72  | 89  | 90  | 92  |     |     |
| French Guiana                |   |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |       |      |      |      |      |      |      |      |      |      |    |     |     |    |     |     |     |     |     |     |
| Guyana                       | 95  | 99   | 73   | 100  |      |      | 97   | 86   | 86    | 85   | 85   | 92   | 94   | 80   | 79   | 81   |       | 57   | 85   |      |      |      |      |      |      |      | 79 | 78  |     |    |     |     |     |     |     |     |
| Paraguay                     | 16  | 28   | 95   | 89   | 31   |      | 95   | 94   | 94    | 88   | 90   |      |      |      |      |      |       | 81   | 60   | 78   | 80   | 93   | 96   | 78   | 86   | 86   |    |     |     |    |     |     |     |     |     |     |
| Peru                         | 52  | 57   | 67   | 76   | 62   |      | 90   | 72   | 74    | 79   | 81   | 16   |      |      |      |      |       | 95   | 58   | 61   | 39   | 40   | 6    | 10   | 86   | 85   | 46 | 95  | 78  | 80 | 69  | 70  |     |     |     |     |
| Suriname                     |   |      |      |      |      |      | 100  | 78   |       |      |      |      |      |      |      |      |       |      | 34   | 76   | 76   | 66   | 66   | 88   | 62   |      |    | 83  | 93  | 94 | 84  | 84  |     |     |     |     |

|                   |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|--|--|--|
| Uruguay           | 97  | 97  | 59  | 59  | 96  | 95  | 100 | 99  | 100 | 13 | 17 | 6  | 59  | 89  | 85  | 99  | 96  | 99  | 82 | 83 | 51 | 59  | 95  | 94  | 100 | 99  | 100 |     |    |    |    |    |    |  |  |  |
| Venezuela         |     |     | 60  | 57  | 64  | 86  | 71  | 71  | 94  | 45 |    | 12 | 5   | 72  | 30  | 69  | 48  | 48  | 57 |    | 52 | 50  | 58  | 74  | 68  | 68  | 91  |     |    |    |    |    |    |  |  |  |
| <b>ASIA</b>       |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Afghanistan       | 69  | 63  | 5   | 13  | 38  | 25  | 16  | 49  | 56  | 60 | 16 | 15 |     | 1   | 8   | 5   | 29  | 29  | 30 | 21 | 21 |     | 8   | 12  | 8   | 34  | 35  | 37  |    |    |    |    |    |  |  |  |
| Armenia           |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Azerbaijan        |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Bahrain           |     |     | 100 | 100 |     |     |     |     |     |    |    |    | 100 | 0   |     |     |     |     |    |    |    | 100 |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Bangladesh        | 87  | 40  | 21  | 24  | 40  | 77  | 82  | 75  | 51  | 57 | 56 | 1  | 3   | 4   | 30  | 44  | 39  | 35  | 48 | 52 | 6  | 5   | 3   | 5   | 10  | 35  | 53  | 48  | 39 | 50 | 53 |    |    |  |  |  |
| Bhutan            |     |     | 80  | 66  | 65  | 65  | 65  | 65  | 87  | 87 |    | 3  | 18  | 70  | 70  | 70  | 54  | 54  |    |    |    |     | 7   | 41  | 69  | 70  | 70  | 64  | 65 |    |    |    |    |  |  |  |
| Brunei Darus      |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Cambodia          | 100 |     |     |     |     |     |     |     |     |    |    | 76 |     |     | 10  | 8   | 8   | 15  | 18 |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| China             |     |     | 100 | 58  | 58  | 68  | 69  | 69  | 58  | 58 |    |    | 81  | 7   | 24  | 29  | 28  | 50  | 52 |    |    |     | 86  | 21  | 38  | 44  | 44  | 53  | 55 |    |    |    |    |  |  |  |
| Cyprus            | 100 | 94  | 100 | 96  | 100 | 100 | 100 | 100 | 100 | 92 | 95 |    | 100 | 100 | 100 | 100 | 100 | 100 | 95 | 95 |    | 100 | 98  | 100 | 100 | 100 | 100 | 100 |    |    |    |    |    |  |  |  |
| East Timor        |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Gaza Strip        |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Georgia           |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Hong Kong         |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| India             | 85  | 87  | 27  | 31  | 44  | 70  | 73  | 58  | 59  | 54 | 54 | 1  | 2   | 1   | 3   | 14  | 14  | 22  | 18 | 21 | 18 | 20  | 7   | 9   | 14  | 29  | 31  | 30  | 33 | 28 | 31 |    |    |  |  |  |
| Indonesia         | 50  | 60  | 29  | 33  | 79  | 73  | 87  | 71  | 73  | 66 | 67 | 4  | 5   | 21  | 38  | 30  | 40  | 52  | 38 | 40 | 33 | 36  | 12  | 15  | 23  | 37  | 44  | 51  | 66 | 52 | 55 | 49 | 52 |  |  |  |
| Iran              | 100 | 100 | 96  | 100 | 89  | 86  | 86  |     |     |    |    | 48 | 59  | 43  | 35  | 37  | 74  | 78  |    |    |    |     | 70  | 78  | 69  | 72  | 67  | 81  | 84 |    |    |    |    |  |  |  |
| Iraq              | 82  | 75  | 100 | 96  |     |     |     |     |     |    |    | 1  | 11  |     | 31  | 48  | 48  | 61  | 66 | 47 | 47 |     | 74  | 36  | 79  | 80  | 79  | 71  | 73 |    |    |    |    |  |  |  |
| Israel            |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Japan             |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Jordan            |     |     | 94  | 92  | 100 | 100 | 94  | 94  | 98  | 98 |    | 34 | 100 |     | 98  | 85  | 87  | 96  | 97 |    |    | 70  | 100 | 95  | 99  | 93  | 93  | 98  | 98 |    |    |    |    |  |  |  |
| Kazakhstan        |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Korea Democratic  |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| People's Republic |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Korea Republic    | 59  | 80  | 100 | 100 | 67  | 76  |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Kuwait            |     |     | 100 | 100 |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Kyrgyzstan        |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |
| Laos              | 10  | 13  | 30  | 70  | 84  | 61  | 67  | 77  | 86  |    |    | 2  | 4   | 8   | 13  | 34  | 14  | 20  | 30 | 38 |    | 3   | 5   | 12  | 24  | 46  | 24  | 30  | 43 | 53 |    |    |    |  |  |  |
| Lebanon           |     |     |     |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |    |    |    |     |     |     |     |     |     |     |    |    |    |    |    |  |  |  |

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