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(IGBP)



RIVER DISCHARGE TO THE SEA A Global River Index (GLORI)

Prepared by
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Introduction to GLORI

Rivers represent the major pathway for the transfer of water and solids from land to the sea. Collectively they annually discharge about 40,000 km³ of water and more than 25 billion tons of particulate and dissolved solids.

Although the number of papers discussing river-derived water and solids has increased appreciably in recent years, there has been no central index to which the interested scientist, manager or student can refer for data concerning a river or series of rivers. UNESCO produced a preliminary data base in 1971, but no subsequent index was issued; the original effort remains in a few office files, but regrettably is generally unknown and unused.

A World River Index (WORRI) report was prepared by UNESCO in 1978, largely through the efforts of M. Meybeck, but, like the earlier UNESCO effort, it was not published. Milliman and Meade (1983) and later Milliman and Syvitski (1992) accumulated many of the accessible data regarding basin area, water discharge and suspended load. Meybeck has maintained a personal index of world rivers, most of which appears in the present effort.

GLORI Data Base

The present global river index, whose acronym is GLORI, represents a first attempt to collate all available data in a single volume. It should be emphasized that we only list rivers that discharge to the sea or to a major body of water that itself discharges to the sea. Rivers discharging into the Black Sea, for instance, are listed, but those discharging into the Caspian Sea are not.

The parameters presented in this index are basic: river name, body of water (generally ocean) to which the river discharges, drainage basin area, river length, maximum elevation in the drainage basin, mean annual water discharge (Q), mean annual total suspended sediment load (TSS), and mean annual total dissolved sediment load (TDS); references are also listed with each entry. We have entered all rivers with basin areas greater than 1000 km² for which only water discharge is available; but rivers larger than 100 km² are listed if suspended or dissolved sediment data are given. We list nearly 800 rivers (including about 20 for which we could not find data regarding their drainage basin area), and their distribution relative to basin size is depicted in Figure 1. In addition, there are approximately 30 rivers whose location we could not verify on available maps; we have highlighted in shadow font the names of these rivers on the spreadsheets to indicate uncertainty as to whether the rivers actually discharge to the sea.

In total, the collective basin area of rivers with water discharge data represents slightly more than 75 percent of the land area draining into the oceans. Not surprisingly, fewer rivers have been monitored for suspended or dissolved sediment loads, 66 and 62 percent of the land area draining to the oceans, respectively. In terms of drainage basin area, the best studied river systems in the world are those in Russia, Europe and North America (U.S.A. and Canada), whereas the islands in Oceania are the poorest documented, with only about 10 percent of the total drainage area cited in this data base (Table 1).

Using this Data Base

Each river is listed under that country through which the river discharges to the sea. For instance, most of the Colorado River lies in the United States, but it discharges through Mexico; therefore, we classify this river as Mexican. Similarly, the Ganges and Brahmaputra rivers are grouped as Bangladeshi rivers, not Indian.

We have listed the river data for 80 countries, which have been grouped into 54 series of maps on which are located the drainage paths for those rivers for which data appear in the following pages.

Table 1. Distribution of drainage areas in various land masses for which there are data for fluvial water, suspended sediment, and dissolved solid discharge to the sea.

| Land Mass | Water | Suspended Sediment | Dissolved Sediment |
|------------|-------|--------------------|--------------------|
| N. America | 14 | 11 | 11 |
| C. America | 0.1 | 0 | 0 |
| S. America | 13 | 11 | 11 |
| Europe | 6 | 5 | 2 |
| Africa | 12 | 12 | 9 |
| Russia | 14 | 13 | 13 |
| S. Asia | 13 | 12 | 12 |
| Oceania | 0.4 | 0.3 | 0.2 |
| Australia | 2 | 2 | 1 |

To access the data for any river, the reader can refer directly to the country listed on pp vi-vii. Conversely, if one does not know the name of a specific river, the general location might be identified the world map on p. v. from which one can reference the correct country in the index. From this one can access the country map: the numbers on the map refers to the river, whose relevant data appear in the accompanying table.

Cautions in Using This Data Base

Mean values for river discharge and sediment load can hide a wide range of shorter term values as well as a multitude of errors. Some of the data, for example, come from primary sources, such as the U.S. Geological Survey or the Geological Survey of Canada. Other data, however, are derived from other indices (such as UNESCO, 1971), which means that we may know little of where or for how long the measurements were made, or the techniques used in obtaining them. Some rivers have been measured for many years, other data entries in this index may represent only one or two years worth of data. Where the number of years of observations are known, we have high-lighted the data as less than 5 years (*italics*), 5-20 years (outline) or >20 years (**bold**) of measurements.

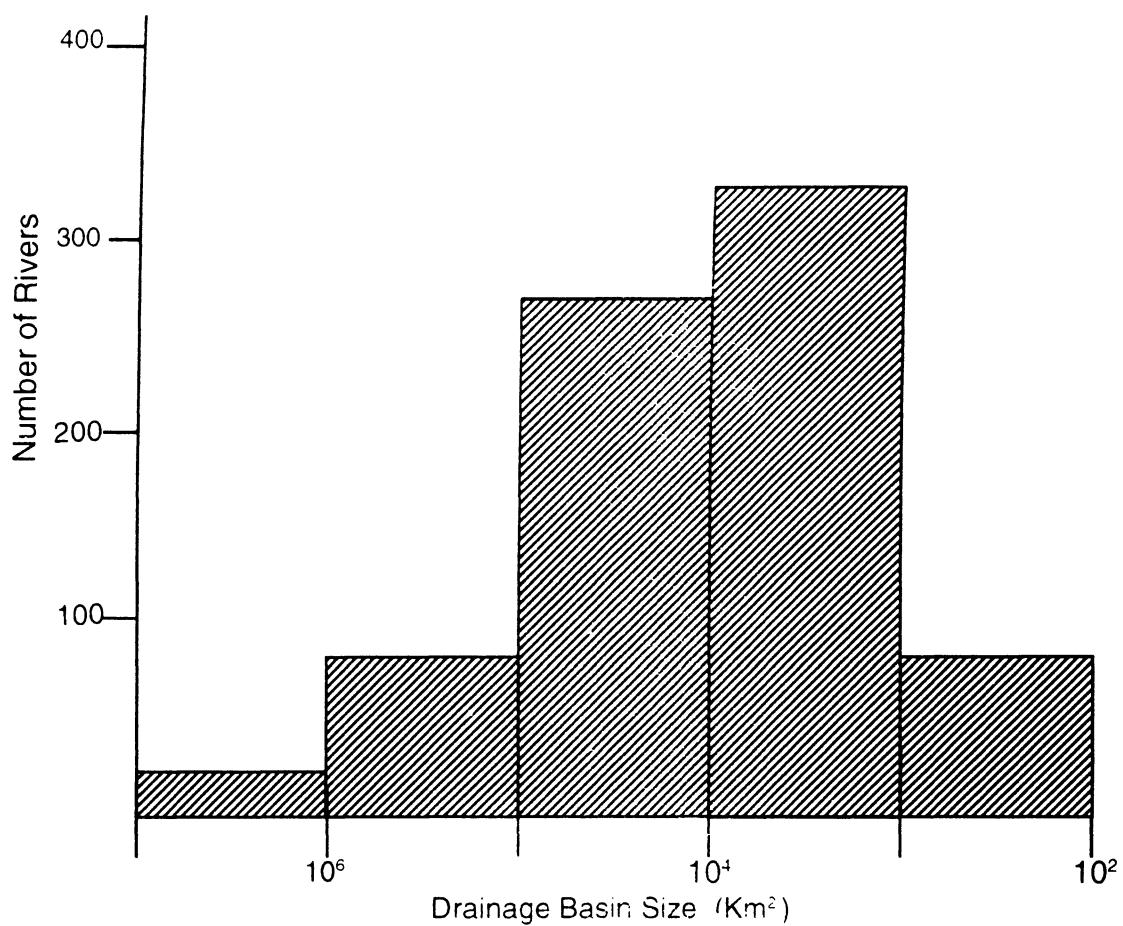


Figure 1. Distribution of drainage basin size for the nearly 800 rivers represented in this data base. Nearly all the rivers larger than $100,000 \text{ km}^2$ are listed in this index, whereas the majority of rivers smaller than $10,000 \text{ km}^2$ are not, because of the lack of available measurements for smaller rivers.

Smaller rivers can experience episodic flooding whose discharge values can be two to five orders of magnitude greater than normal. The sediment load for Chira River in Peru, for example, is based on two years worth of observations, one during an El Niño year, the other during a normal rainfall year. As a result, the average for these two years differs by more than an order of magnitude. Small rivers, therefore, particularly need long-term records if their average discharge is to represent a meaningful value.

Finally, we note that the data for many rivers may not represent present-day values or, conversely, that present-day values may not represent historical values. Dammed rivers, for instance, may now discharge little sediment or water to the sea, whereas recently deforested or developed river basins may have far greater sediment erosion than they did previously.

Plea to the Interested Reader

We must emphasize that this present report should be considered as a preliminary report. We realize that some data may be wrong and that we may have ignored many other rivers for which there are data that we could not find.

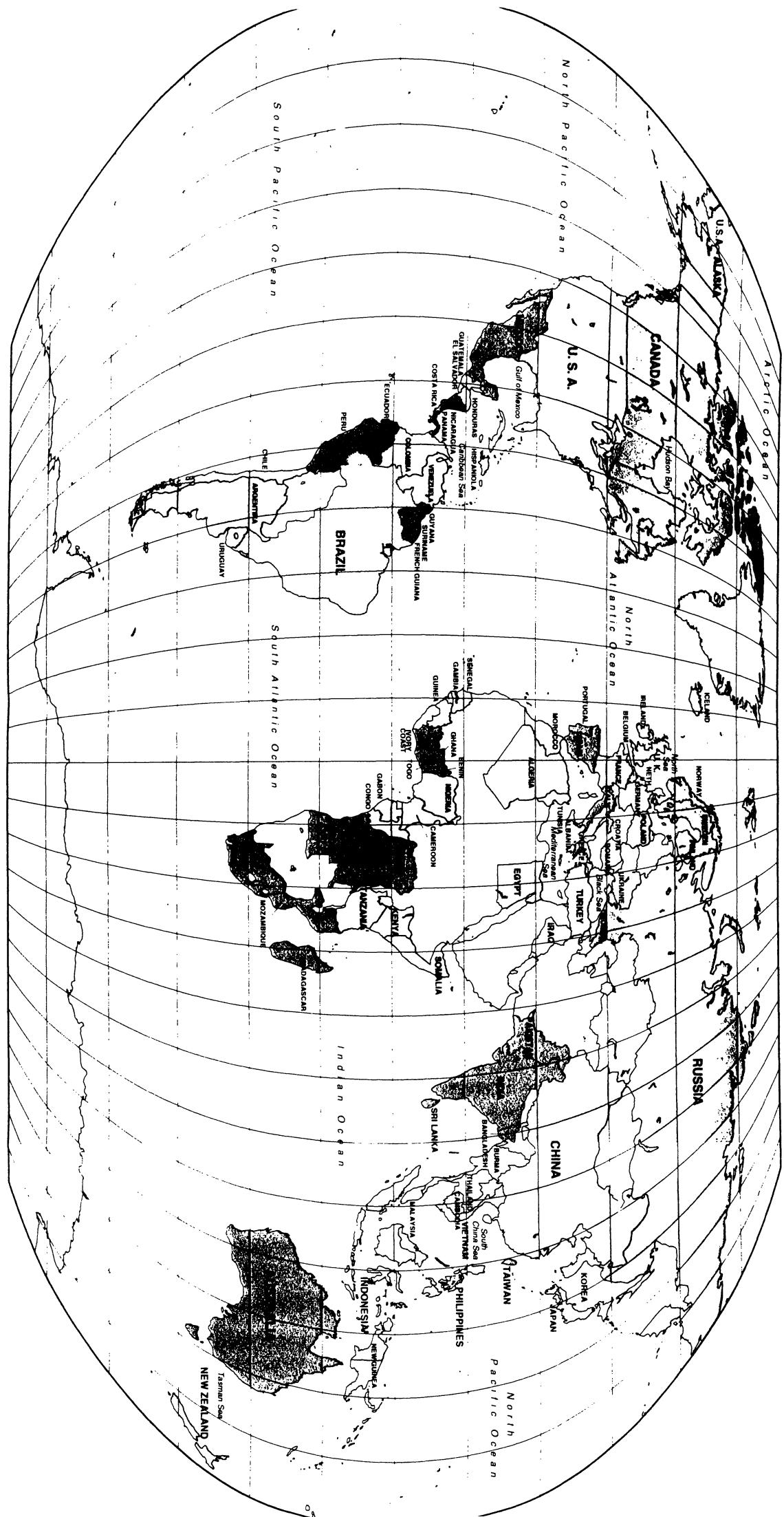
There are clearly many rivers not listed here for which some data may occur. We urge the interested reader to contact one of us if there are corrections to be made or new rivers to be added. We will acknowledge you in the next edition of this data base.

Acknowledgments

The effort was sponsored by LOICZ, who also funded a preliminary workshop in Strasburg (France) in May 1994, hosted by Jean-Luc Probst and attended by Robert Meade (Denver), Stefan Kempe (Darmstadt), Michel Meybeck (Paris) and John Milliman (Gloucester Point). We acknowledge Jean-Luc Probst (Strasburg) for supplying data for Algeria, Tunisia and Morocco, Peter Harris (Hobart) for access to his Australian river data base, and Edgardo Gomez (Quezon City) for supplying data from Philippine rivers. We are particularly grateful to Harold Burrell and Wanda Cohen (Gloucester Point) for their help in preparing the final text for publication. Much of Milliman's and Rutkowski's funding for the preparation of this report came from the National Science Foundation (NSF-ATM 9222405) and the Office of Naval Research (N00014-94-1-0179).

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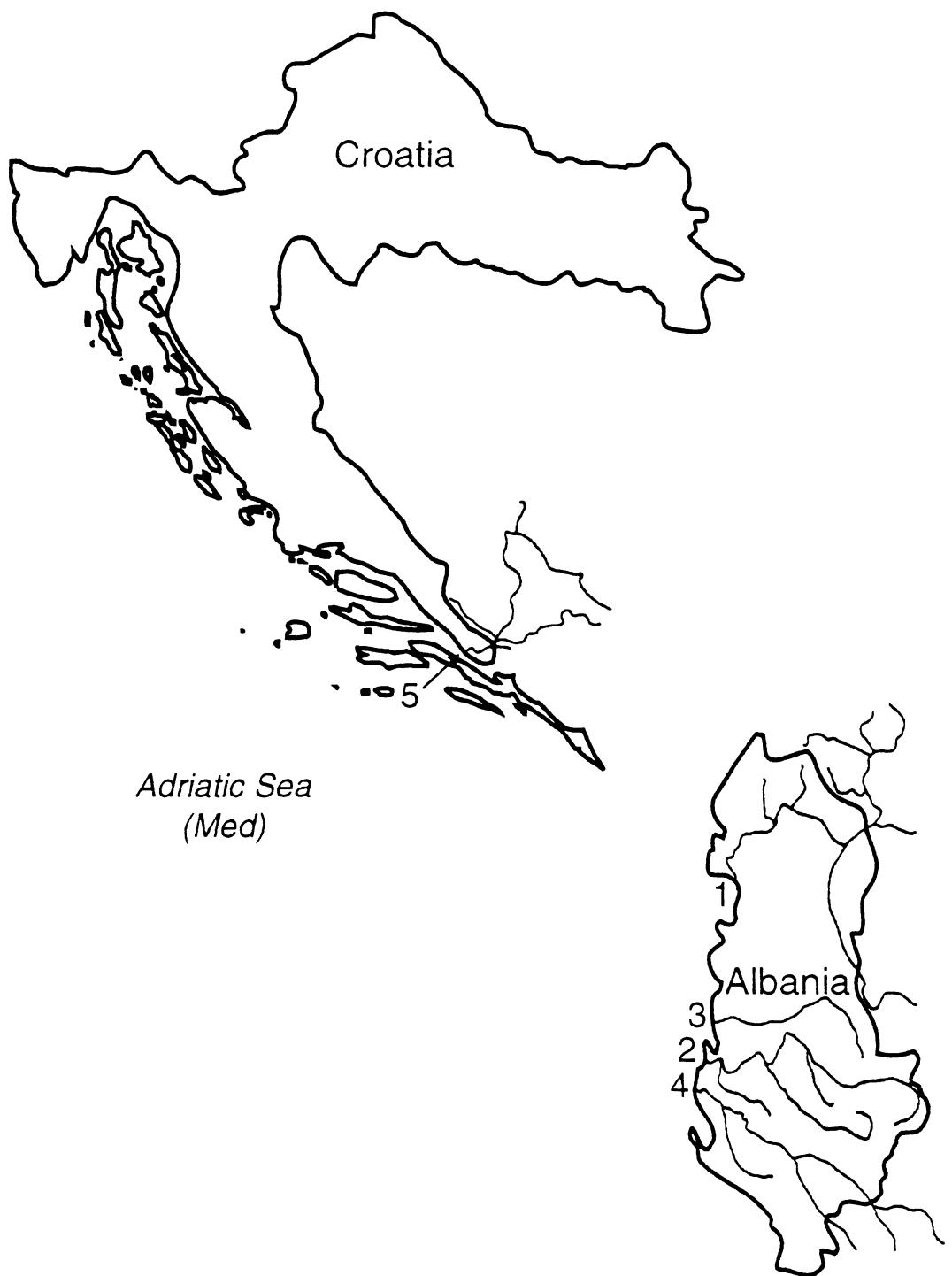


World Index to Maps

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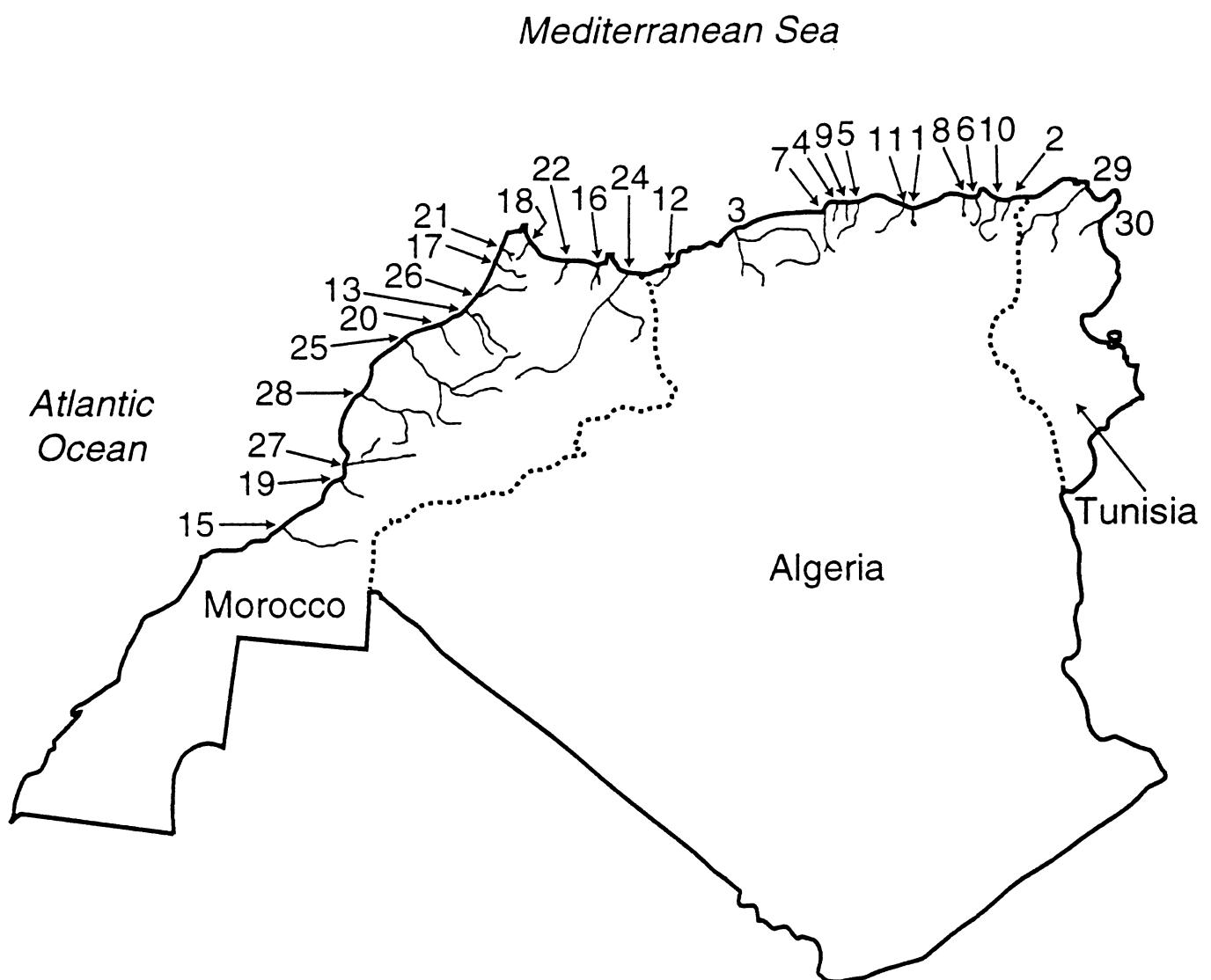
GLORI - Albania and Croatia

| Albania | | Ocean | Area(103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS(106t/yr) | TDS (106t/yr) | Reference(s) |
|----------------|-----------|--------------|--------------------------------|--------------------|---------------------|------------------------------|---------------------|----------------------|---------------------|
| 1 | Drini | Med | | 12 | 280 | | 15 | | 1,2,5 |
| 2 | Semanj | Med | | 5.2 | | | 22 | | 4 |
| 3 | Shkumbini | Med | | 1.9 | 140 | | 6.8 | | 3 |
| 4 | Vijosse | Med | | 5.2 | | | 1 | | 1 |
| Croatia | | | | | | | | | |
| 5 | Neretva | Med | | 13 | 220 | | 12 | | 6 |

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4. Holeman, 1968
5. Rand McNally, 1980
6. UNESCO (WORRI), 1978

Algeria, Morocco, and Tunisia



Global River Index -Algeria

| Algeria River | Ocean | Area(10^3km^2) | Length(km) | Max Elev(m) | Q(km^3/yr) | TSS($10^6 \text{t}/\text{yr}$) | TDS($10^6 \text{t}/\text{yr}$) | Reference(s) |
|----------------------|--------------|--|-------------------|--------------------|--|--|--|---------------------|
| 1 Agrioun | Med | 0.66 | | | 0.17 | 4.8 | 4 | |
| 2 B. Namoussa | Med | 0.57 | | | 0.15 | 0.18 | 4 | |
| 3 Chellif | Med | 4.4 | 700 | | 1.3 | 4 | | 1,2,4 |
| 4 El Harrach | Med | 0.39 | | | 0.13 | 0.63 | | 3 |
| 5 Isser | Med | 3.6 | | | 0.36 | 8.3 | | 4 |
| 6 Kebir O | Med | 1.1 | | | 0.23 | 0.22 | | 4 |
| 7 Mazafran | Med | 1.8 | | | 0.44 | 3 | | 4 |
| 8 Saf-Saf | Med | 0.3 | | | 0.07 | 0.37 | | 4 |
| 9 Sebaou | Med | 1.5 | | | 0.51 | 1.2 | | 4 |
| 10 Seybousse | Med | 5.5 | 200 | | 0.43 | 1.2 | | |
| 11 Soummam | Med | 8.5 | | | 0.79 | 4.1 | | |
| 12 Tafna | Med | 6.9 | | | 0.28 | 1 | | 4 |

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Global River Index - Morocco

| Morocco River | Ocean | Area (103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS (10 ⁶ t/yr) | TDS (10 ⁶ t/yr) | Reference(s) |
|----------------|-------|----------------------------|-------------|-------------|-------------------------|----------------------------|----------------------------|--------------|
| 13 Bou Regreg | Atl | 9.8 | | | 0.56 | 4.7 | 6 | |
| 14 Oum Er Rbia | Atl | 2.3 | | | 0.04 | 0.22 | 2 | |
| 15 Draa | Atl | 15 | | | 0.42 | 14 | 6 | |
| 16 Kerte | Med | 3.1 | | | 0.25 | | 3 | |
| 17 Loukos | Atl | 1.8 | | | 0.9 | 1.8 | 6 | |
| 18 Martine | Med | 1.2 | | | | | 3 | |
| 19 Massa | Atl | 3.8 | | | 0.16 | 1.6 | 6 | |
| 20 Mellah | Atl | 1.8 | | | 0.16 | 1 | 6 | |
| 21 Mharhar | Atl | 0.18 | | | 0.06 | 0.21 | 6 | |
| 22 Moulaya | Med | 51 | 450 | | 1.6 | 6.7 | 5 | |
| 23 Tifiss | | | | 1.8 | 0.16 | 0.95 | 5 | |
| 24 Nekor | Med | 0.79 | | | 0.9 | 2.8 | 1 | |
| 25 Oum Er Rbia | Atl | 30 | | | 3.3 | 6.6 | 5 | |
| 26 Sebou | Atl | 40 | | | 4.4 | 26 | | |
| 27 Souss | Atl | 16 | | | 0.31 | 1.6 | | |
| 28 Tensift | Atl | 20 | | | 0.91 | 0.04 | 3 | |

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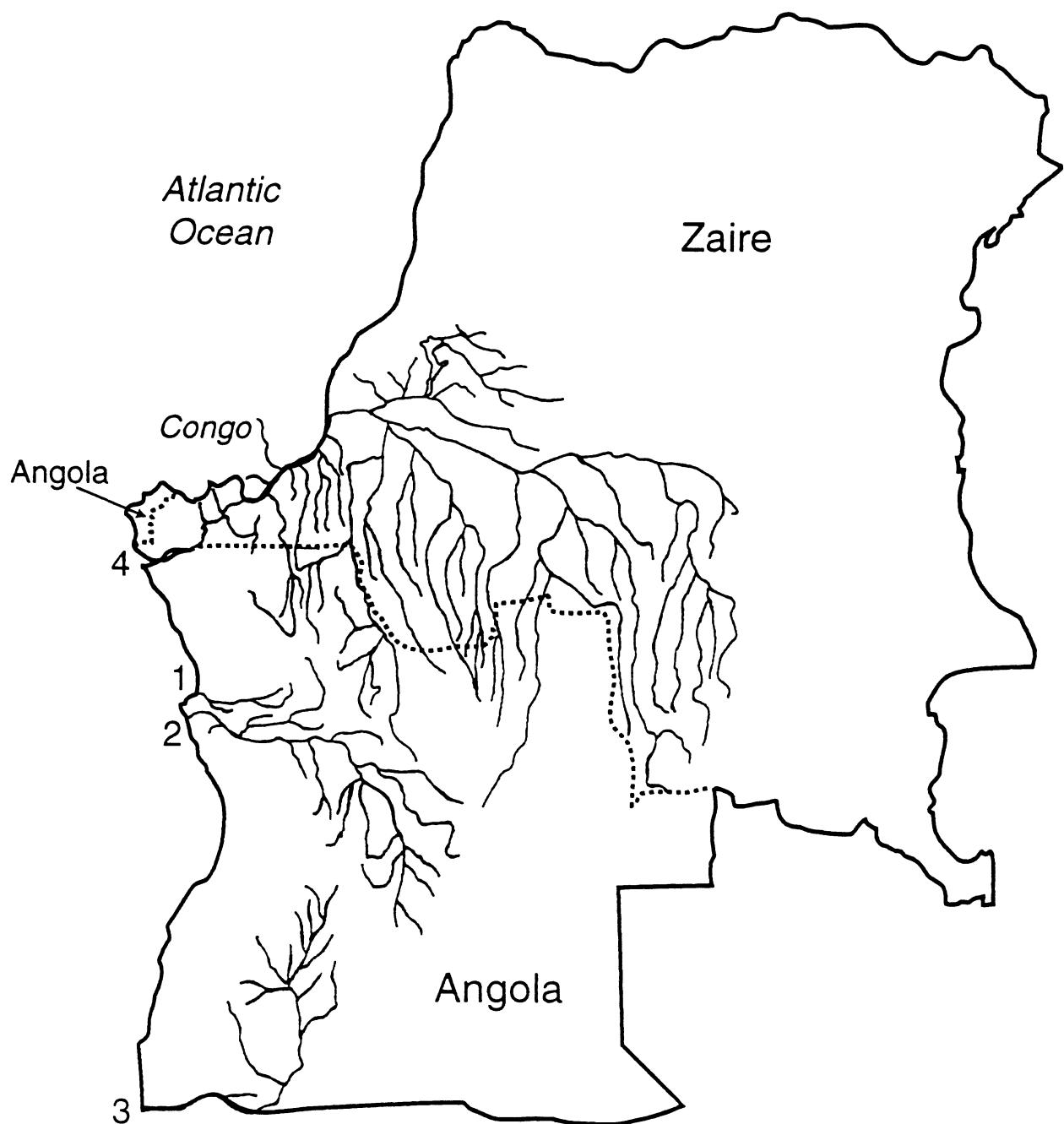
Global River Index - Tunisia

| Tunisia River | Ocean | Area(103km ²) | Length(km) | Max Elev(m) | Q(km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------|-------|---------------------------|------------|-------------|------------------------|--------------|--------------|--------------|
| 29 Medjedha | Med | | 22 | | 0.94 | 9.4 | | 2,3 |
| 30 Miliane | Med | | 2 | | 0.02 | 0.9 | | 1 |

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3. Rand McNally, 1980

Angola and Zaire



Glo. Riv. In. - Angola & Zaire

| Angola River | Ocean | Area(103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------------|--------------|--------------------------------|--------------------|---------------------|------------------------------|---------------------|---------------------|---------------------|
| 1 Bengo | Atl | 7.4 | | | | 1.2 | | 1,7 |
| 2 Cuanza | Atl | 150 | | 630 | | 26 | | 1,2,7 |
| 3 Cunene | Atl | 110 | | 830 | | 6.8 | | 1,2,7 |
| Zaire | | | | | | | | |
| 4 Congo(Zaire) | Atl | 3800 | | 4700 | | 1100 | | 43 |
| | | | | | | | | 37 3,4,5,6,8,9,10 |

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Argentina, Chile, and Uruguay



Global River Index - Argentina

| Argentina River | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------------|--------------|--------------------------------|--------------------|--------------------|------------------------------|---------------------|---------------------|---------------------|
| 1 Chubut | Atl | | 16 | 850 | | | | 1,2,3 |
| 2 Colorado | Atl | | 65 | 1000 | | | | 1,4 |
| 3 Negro | Atl | | 95 | 1000 | | | | 5,4,1,2,3,4 |
| 4 Parana/Uruguay | Atl | | 2800 | 4800 | | | | 51,1,2,5,6,7,8 |
| 5 Pescado | Atl | | 5.1 | | | | | |
| 6 Santa Cruz | Atl | | 15 | | | | | 1 |

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7. Probst, 1992
8. Drago and Amsler, 1988

Global River Index - Chile

| Chile River | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------------|--------------|--------------------------------|--------------------|--------------------|------------------------------|---------------------|---------------------|---------------------|
| 7 Aconcagua | Pac | 2.6 | 70 | 1 | | | | |
| 8 Aisen | Pac | 3.1 | 110 | 1.4 | | | | 1 |
| 9 Baker | Pac | 24 | 310 | 31 | | | | 1 |
| 10 Bio-Bio | Pac | 24 | 380 | 15 | | | | 1 |
| 11 Bueno | Pac | 3.7 | 120 | 11 | | | | 1 |
| 12 Choapa | Pac | 3.6 | 150 | 0.34 | | | | 1 |
| 13 Cisnes | Pac | 5.2 | 140 | 7.9 | | | | 1 |
| 14 Copiapo | Pac | 5.1 | 170 | 0.07 | | | | 1 |
| 15 Huasco | Pac | 3 | 150 | 0.15 | | | | 1 |
| 16 Limari | Pac | 6.2 | 110 | 0.25 | | | | 1 |
| 17 Maipo | Pac | 15 | 230 | 3.2 | | | | 1 |
| 18 Maule | Pac | 22 | 88 | 13 | | | | 1 |
| 19 Puelo | Pac | 8.6 | 150 | 21 | | | | 1 |
| 20 Rapel | Pac | 13 | 210 | 5 | | | | 1 |
| 21 Tolten | Pac | 3 | 120 | 10 | | | | 1 |
| 22 Valdivia | Pac | 11 | 150 | 14 | | | | 1,3 |

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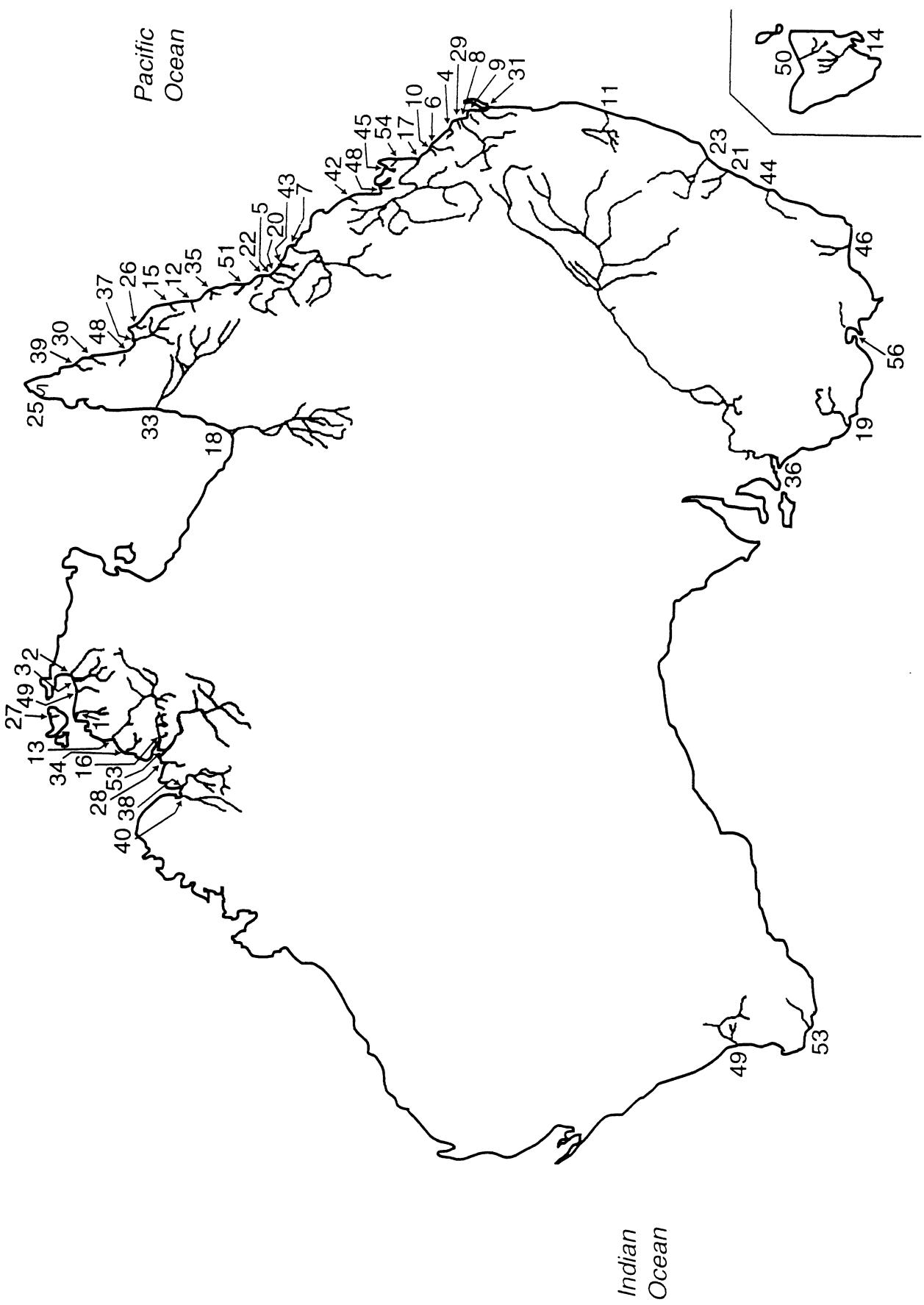
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Global River Index - Uruguay

| Uruguay River | Ocean | Area(103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|--------------------------|--------------|--------------------------------|--------------------|---------------------|------------------------------|---------------------|---------------------|---------------------|
| 23 Cebollati | Atl | | 18 | | | 3.2 | | 2 |
| 24 Santa Lucia | Atl | 3.2 | | 1.2 | | | | 1 |

Bibliography:

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2. UNESCO, 1971



Global River Index-Australia

| Australia | River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-----------|-------------------|--------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 1 | Adelaide | Pac | 7.6 | 2 | 6.9 | 0.4 | 0.3 | 0.3 | 1 |
| 2 | Alligator, East | Pac | 14 | 12 | 6.6 | 0.5 | 0.2 | 0.2 | 1 |
| 3 | Alligator, South | Pac | 12 | 3.9 | 0.7 | 0.4 | 0.3 | 0.3 | 1 |
| 4 | Baffle Ck | Pac | 1.1 | 2.5 | 0.5 | 0.2 | 0.2 | 0.2 | 2 |
| 5 | Black | Pac | 2.5 | 2.5 | 0.4 | 0.3 | 0.3 | 0.3 | 2 |
| 6 | Boyne | Pac | 130 | 680 | 10 | 0.7 | 0.7 | 0.7 | 2,3 |
| 7 | Burdekin | Pac | 33 | 400 | 1.7 | 0.3 | 0.3 | 0.3 | 3,4,12 |
| 8 | Burnett | Pac | 3.3 | 3.3 | 0.7 | 0.3 | 0.3 | 0.3 | 2 |
| 9 | Burram | Pac | 2.3 | 2.3 | 0.3 | 0.2 | 0.2 | 0.2 | 2 |
| 10 | Calliope | Pac | 6.4 | 340 | 3.6 | 1.2 | 1.2 | 1.2 | 4,12 |
| 11 | Clarence | Pac | 2.1 | 52 | 6.7 | 0.75 | 0.75 | 0.75 | 2 |
| 12 | Daintree | Pac | 9.2 | 170 | 4.3 | 0.11 | 0.11 | 0.11 | 1,12 |
| 13 | Daly | Pac | 2.2 | 2.2 | 1.8 | 0.75 | 0.75 | 0.75 | 2 |
| 14 | Derwent (Tasm) | Indian | 11 | 170 | 1.6 | 2.2 | 2.2 | 2.2 | 1,12 |
| 15 | Endeavour | Pac | 140 | 560 | 7.1 | 1.5 | 1.5 | 1.5 | 1,5,12 |
| 16 | Fitzmaurice | Pac | 110 | 830 | 3 | 9.3 | 9.3 | 9.3 | 0.3,1,3 |
| 17 | Fitzroy | Pac | 4.2 | 4.2 | 0.8 | 0.4 | 0.4 | 0.4 | 4 |
| 18 | Flinders | Pac | 3.6 | 470 | 2.8 | 1.5 | 1.5 | 1.5 | 2 |
| 19 | Glenelg | Indian | 22 | 22 | 5 | 1.6 | 1.6 | 1.6 | 2 |
| 20 | Haughton | Pac | 2.8 | 2.8 | 1.8 | 1.1 | 1.1 | 1.1 | 1,4,12 |
| 21 | Hawkesbury | Pac | 3.3 | 470 | 1.9 | 0.8 | 0.8 | 0.8 | 2 |
| 22 | Herbert | Pac | 10 | 10 | 2.2 | 2.2 | 2.2 | 2.2 | 1 |
| 23 | Hunter | Pac | 22 | 22 | 4.7 | 1.9 | 1.9 | 1.9 | 1 |
| 24 | Jacky Jacky Creek | Pac | 3.8 | 3.8 | 2.4 | 0.5 | 0.5 | 0.5 | 1 |
| 25 | Jardine | Pac | 2.3 | 2.3 | 4.7 | 1.9 | 1.9 | 1.9 | 1 |
| 26 | Jeannie | Pac | 12 | 12 | 0.5 | 0.5 | 0.5 | 0.5 | 2 |
| 27 | Johnson | Pac | 3 | 3 | 0.5 | 0.3 | 0.3 | 0.3 | 2 |
| 28 | Keep | Pac | 2.8 | 2.8 | 1.6 | 0.6 | 0.6 | 0.6 | 2 |
| 29 | Kolan | Pac | 1.2 | 1.2 | 0.76 | 0.76 | 0.76 | 0.76 | 2 |
| 30 | Lockhart | Pac | 2.8 | 2.8 | 0.6 | 0.6 | 0.6 | 0.6 | 2 |

| | | | | | | | |
|------------------|--------|------|------|------|-----------|-------------|--------|
| 31 Mary | Pac | 9.6 | 270 | 2.3 | 0.9 | | 1,2,12 |
| 32 M'Grey | | 11 | | 2 | 0.1 (1.7) | | |
| 33 Mitchell | Pac | 72 | 560 | 1.2 | 0.43 | 1,12 | 1 |
| 34 Mossman | Pac | 0.49 | | 0.7 | 0.4 | | 2 |
| 35 Moyle | Pac | 7.5 | | 0.64 | | | 1 |
| 36 Mulgrave-Russ | Pac | 2 | | 4.2 | 1.6 | | 2 |
| 37 Murray | Indian | 1100 | 3500 | 12 | 28 | 8.4 1,3,6,7 | |
| 38 Normanby | Pac | 25 | | 5.9 | 2.7 | | 2 |
| 39 Ord | Pac | 55 | | 5.1 | 3.5 | | 1 |
| 40 Pascoe | Pac | 4.3 | | 4.2 | 1.2 | | 2 |
| 41 Pentecost | Pac | 29 | | 4.3 | | | 2 |
| 42 Plane Creek | Pac | 2.7 | | 1.4 | 0.55 | | 1 |
| 43 Ross | Pac | 1.8 | | 0.4 | 0.3 | | 2 |
| 44 Shoalhaven | Indian | 8 | | 1.8 | 0.93 | 8,9,10,11 | |
| 45 Shoalwater Ck | Pac | 3.7 | | 0.8 | 0.3 | | 2 |
| 46 Snowy | Indian | 5.1 | 430 | 2200 | | | 4,13 |
| 47 Stewart | Pac | 2.8 | | 1.6 | 0.5 | | 2 |
| 48 Styx | Pac | 3.1 | | 0.8 | 0.3 | | 2 |
| 49 Swan Avon | Indian | 124 | 390 | 0.88 | | 5,12 | |
| 50 Tamar (Tasm) | Indian | 12 | | 3.1 | 0.14 | | 1 |
| 51 Tully | Pac | 1.7 | | 3.7 | 1.2 | | 2 |
| 52 Victoria | Pac | 78 | | 5 | | 1,12 | |
| 53 Warren | Pac | 1.4 | | | | 4 | |
| 54 Water Park Ck | Pac | 1.9 | | 0.7 | 0.3 | | 2 |
| 55 Wildman | Pac | 4.8 | | 0.8 | | 1 | |
| 56 Yarra | Pac | 4.1 | 180 | 1.1 | 0.15 | 1,12 | |

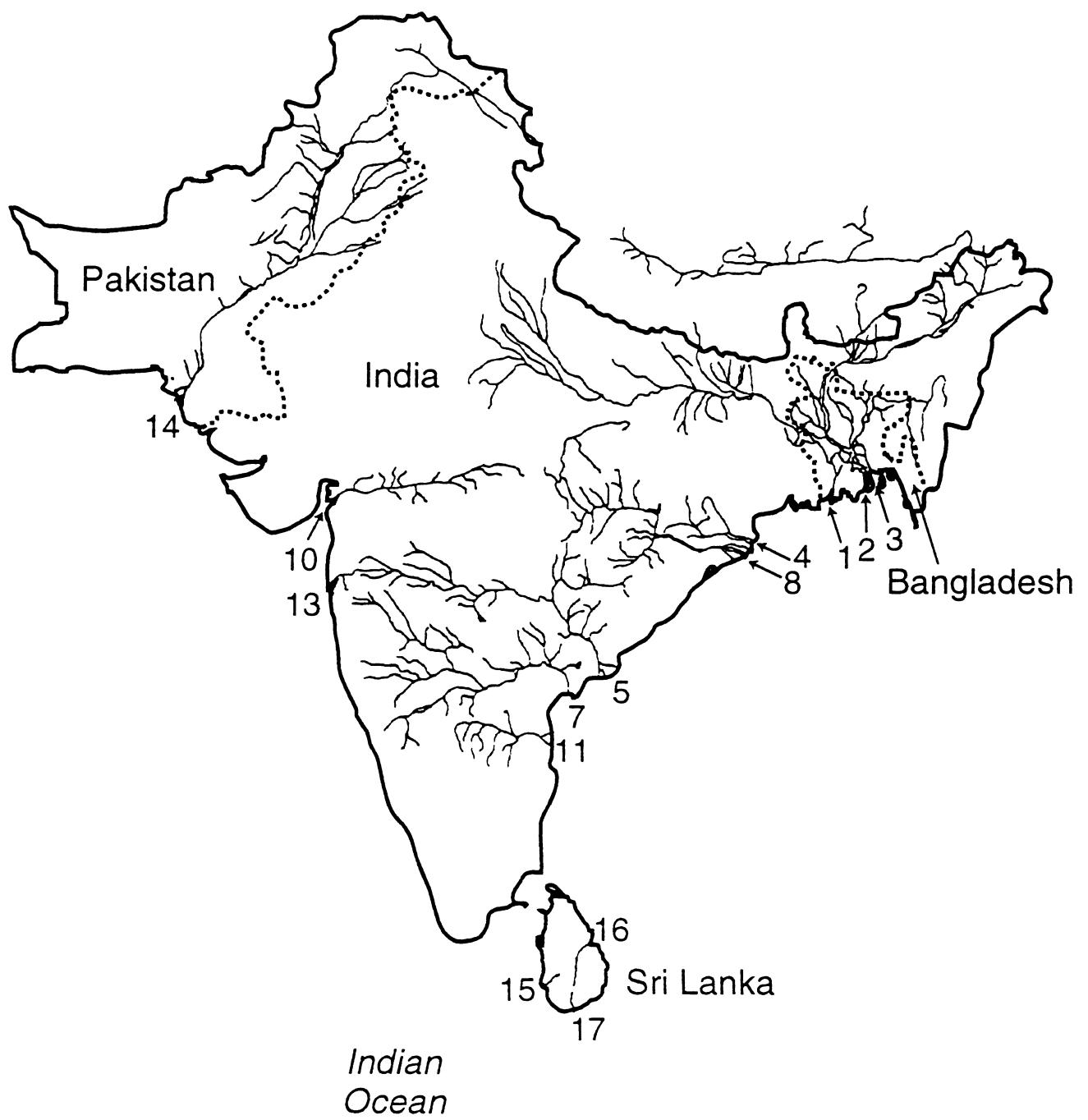
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Global River Index-Australia

- | | |
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Bangladesh, India, Pakistan, and Sri Lanka



Global River Index - Bangladesh

| Bangladesh River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS (106t/yr) | TDS (106t/yr) | Reference(s) |
|------------------|--------|---------------------------|-------------|--------------|-------------------------|---------------|---------------|--------------|
| 1 Bramaputra | Indian | 580 | 2600 | 5700 | 630 | 540 | 63 | 1,2,5 |
| 2 Ganges | Indian | 980 | 2200 | 2160 | 590 | 520 | 110 | 1,2,5 |
| 3 Meghna | Indian | 80 | 900 | 110 | | | | 3,4 |

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5. Esser and Kohlmaier, 1991

Global River Index - India

| India River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------|--------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|---------------------|
| 4 Brahmani | Indian | 28 | 480 | | 16 | 20 | | 1, 2, 6, 7 |
| 5 Godavari | Indian | 310 | 1400 | | 92(100) | 170 | | 17, 3, 5, 6 |
| 6 Kaveri | Indian | 87 | 760 | | 21 | 1.4 | | 8, 3, 1, 7 |
| 7 Krishna | Indian | 250 | 1300 | | 32(67) | 4(8.5) | | 12, 1, 3, 6, 7 |
| 8 Mahanadi | Indian | 88 | 1300 | | 67 | 31(61) | | 8, 1, 1, 3, 4, 6, 8 |
| 9 Mani | Indian | 25 | | | 11 | 9.7 | | 2.8 |
| 10 Narmada | Indian | 88 | 1300 | | 47 | 70 | | 10, 1, 6 |
| 11 Penner | Indian | 49 | 560 | | 5.2(3) | 6.9 | | 1, 1, 2, 6, 7 |
| 12 Sabarmathi | Indian | 14 | 400 | | 1.4 | 4.6 | | 0.5, 6, 7 |
| 13 Tapti | Indian | 49 | | | 10(18) | | | 6 |
| | | | | | | 2.5 | | 3 |
| | | | | | | | | 6 |

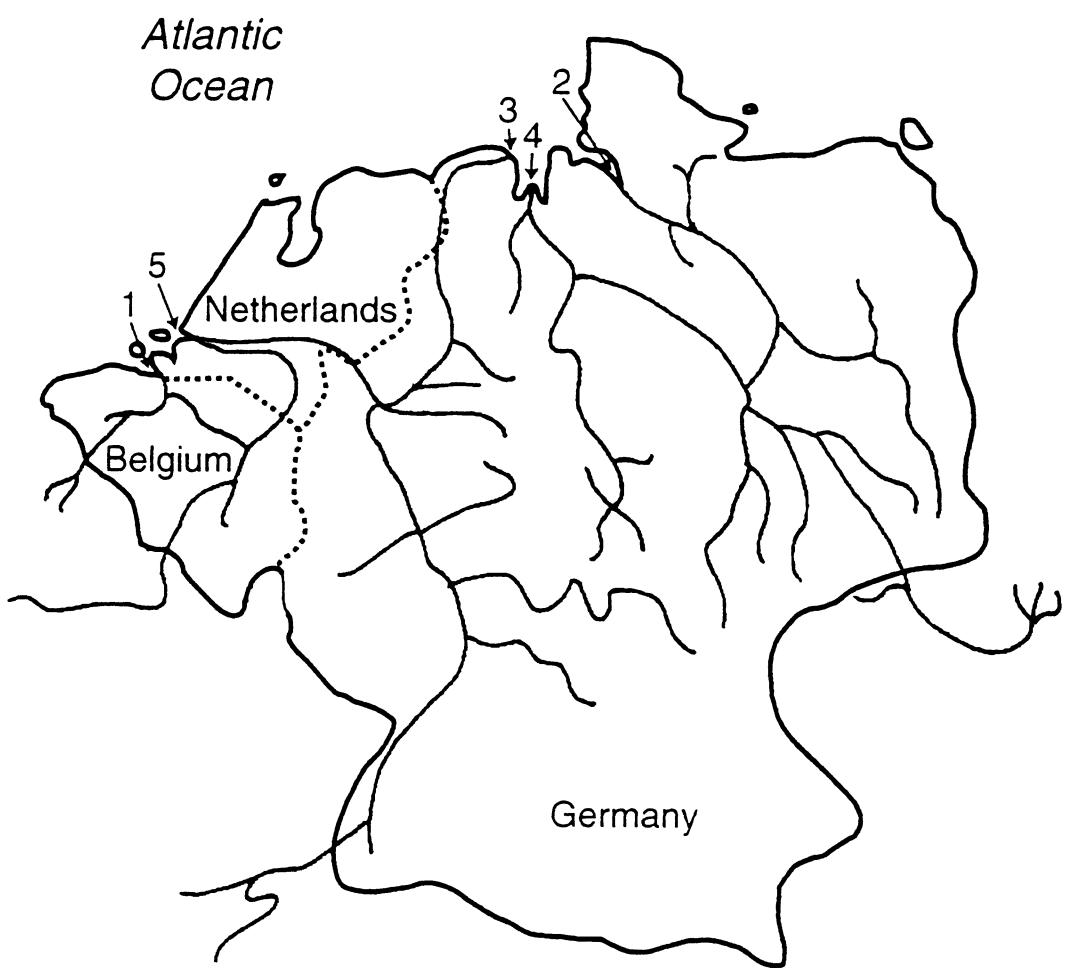
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6. Ramesh and Subramanian, 1993
7. Rand McNally, 1980
8. Harrison, in press

GLORI - Pakistan and Sri Lanka

| Pakistan River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q(km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|--------------------------|--------------------------|---------------------------|-------------|-------------|------------------------|----------------|--------------|--------------|
| 14 Indus | Arabian | 970 | 3200 | 3800 | | 240 59(250)100 | | 13 1,2,3,4,5 |
| Sri Lanka(Ceylon) | | | | | | | | |
| 15 Kelani | Indian | 2.1 | | | 5.6 | | | 6 |
| 16 Mahaweli | Indian | 7.3 | 330 | | 7.1 | | | 6,7 |
| 17 Walawe | Indian | 1.6 | 130 | | 1.4 | | | 6,7 |
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Belgium, Germany, and Netherlands



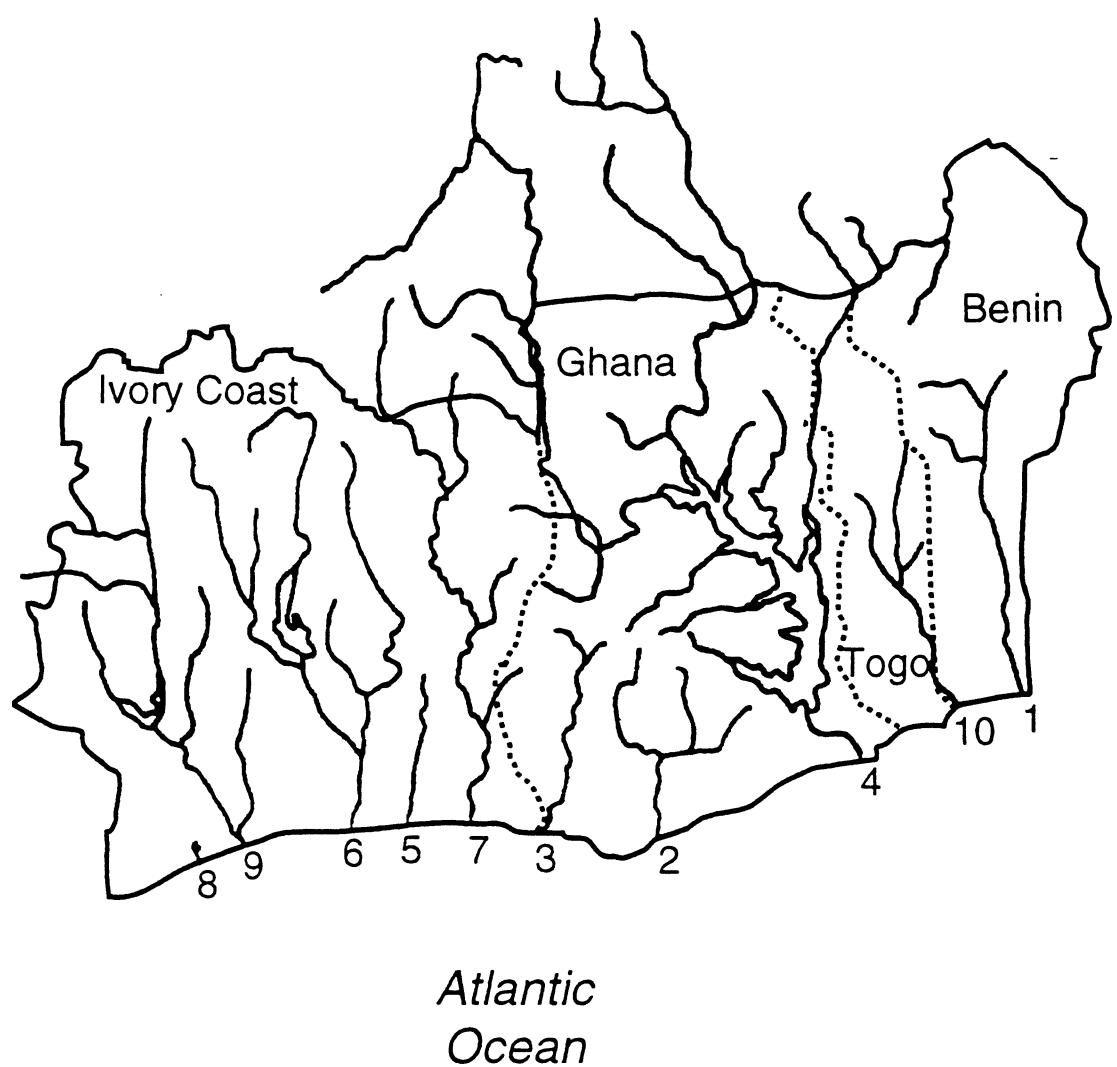
GLORI - Bel., Ger., and Nether.

| Belgium | River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|--------------------|-------|-------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|---------------|
| 1 Scheldt | Atl | | 22 | | 430 | | | | 1 |
| Germany | | | | | | | | | |
| 2 Elbe | Atl | | 1100 | | | 2.4 | 0.84 | 16 | 3,4,7 |
| 3 Ems | Atl | | 370 | | | 1.9 | | 0.06 | 3,5,8 |
| 4 Weser | Atl | | 720 | | | 1.1 | 0.33 | | 26 3,4,5 |
| Netherlands | | | | | | | | | |
| 5 Meuse | Atl | | 29 | | | 10 | 0.7 | 5,6 | |
| 6 Rhine | Atl | | 220 | | 1400 | 750 | 80 | 2.8 | 58 4,5,6,9,10 |

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9. Eisma et al, 1982
10. Esser and Kohlmaier, 1991

Benin, Ghana, Ivory Coast, and Togo



| Benin (Dahomey) River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|--|-------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 1 Oueme | Atl | 50 | 480 | | 4.8 | | | 1,9 |
| Ghana | | | | | | | | |
| 2 Pra | Atl | 2.3 | 240 | 7.9 | | | | |
| 3 Tano | Atl | 1.6 | 400 | 4.5 | 0.35 | | | 6,8,9 |
| 4 Volta | Atl | 400 | 1600 | 2.8 | 40 | 0 (19) | | |
| Cote d'Ivoire | | | | | | | | |
| 5 Agneby | Atl | 4.6 | | 0.37 | | | | |
| 6 Bandama | Atl | 97 | 780 | 9.7 | 0.79 | | | 1,2 |
| 7 Comoe | Atl | 76 | 1200 | 13 | | | | 2,3,4 |
| 8 S. Pedro | Atl | 3.3 | | 0.07 | | | | |
| 9 Sassandra | Atl | 75 | 660 | 13 | | | | |
| Togo | | | | | | | | |
| 10 Mono | Atl | 22 | 400 | | 4.9 | | | |
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Brazil



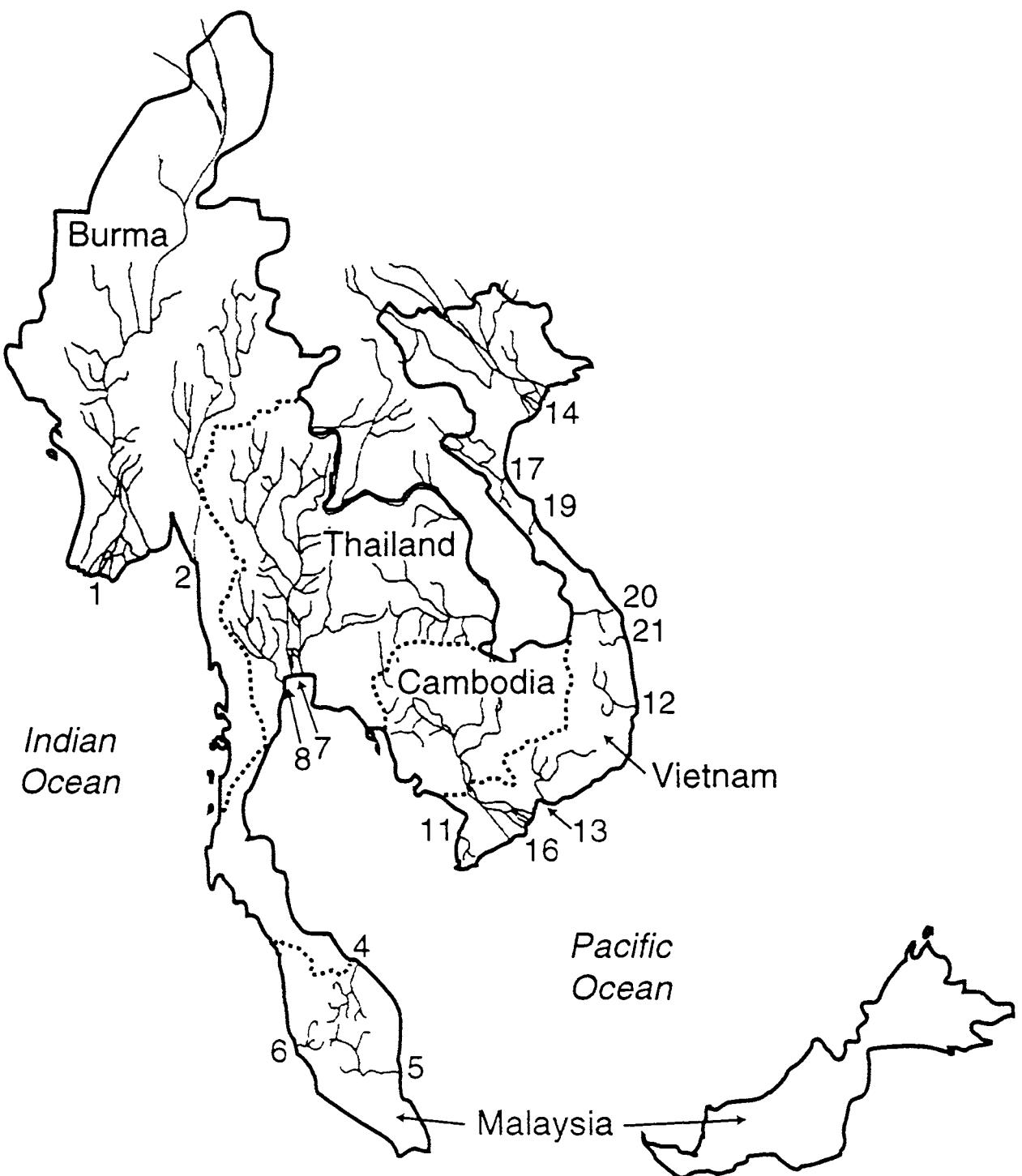
Global River Index - Brazil

| Brazil River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS (106t/yr) | TDS (106t/yr) | Reference(s) |
|-----------------|-------|---------------------------|-------------|--------------|-------------------------|---------------|---------------|--------------|
| 1 Amazon | Atl | 6300 | 6400 | | 6300 | 1200 | | 270 1,2 |
| 2 Doce | Atl | 85 | 580 | | 20 | | | 3,8 |
| 3 Jequitinhonha | Atl | 63 | 800 | | 13 | | | 3,8 |
| 4 Paraíba | Atl | 56 | | | | | | 4 |
| 5 Parnaíba | Atl | 320 | 1400 | | | 32 | | |
| 6 São Francisco | Atl | 630 | 3200 | | | 120 | | 6 |
| 7 Tocantins | Atl | 700 | 1600 | | | 350 | | 3 |

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8. Rand McNally, 1980
9. Harrison, in press

Burma, Cambodia, Malaysia, Thailand, and Vietnam



GLORI-Burma, Cam., & Malaysia

| Burma(Myanmar) | | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-----------------------|--------|--------------|--------------------------------|--------------------|--------------------|------------------------------|---------------------|---------------------|---------------------|
| River | | | | | | | | | |
| 1 Irrawaddy | Indian | | 430 | 2300 | | 430 | 260 | 86 | 1,2 |
| 2 Salween | Indian | | 170 | 2800 | | 50 | | | 1 |
| Cambodia | | | | | | | | | |
| 3 Mekong | | | 3.2 | | | 0.09 | | | 4 |
| Malaysia | | | | | | | | | |
| 4 Kelantan | Pac | | 12 | | 240 | 15 | | 3,5 | |
| 5 Pahang | Pac | | 26 | | 320 | 21 | | 3 | |
| 6 Perak | Indian | | 13 | | | 12 | | 3 | |

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Global River Index-Thailand

| Thailand River | Ocean | Area(103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-----------------------|--------------|--------------------------------|--------------------|---------------------|------------------------------|---------------------|---------------------|---------------------|
| 7 Chao Phya | Pac | 160 | 1200 | | 30 | | | 5.3 1,2 |
| 8 Mae Klong | Pac | 27 | | | 13 | | | 3,4,5 |
| 9 Ping | | | 4 | | 0.05 | | | 4 |

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Global River Index - Vietnam

| Vietnam River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------|-------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 10 An-Nong | | | | 1.5 | | 3.7 | | 1 |
| 11 Cai | Pac | | | 2 | | 4.8 | | 1 |
| 12 Da-Rang | Pac | | | 12 | | | | 1 |
| 13 Dong-Nai | Pac | | | 22 | | | | 1 |
| 14 Hong He | Pac | | | 160 | 1200 | 16 | | |
| 15 Kon | | | | 1.4 | | 120 | 1,2 | |
| 16 Mekong | Pac | | | 790 | 4500 | 1.8 | 130 | 1 |
| 17 Song-Koi | Pac | | | | 800 | 470 | 70 | 3 |
| 18 Tien-Giang | | | | 1.8 | | 160 | 57 | 1,3,4 |
| 19 Thach-Han | Pac | | | | | 120 | | 5 |
| 20 Thu-Bon | Pac | | | | | | | 1 |
| 21 Tra-Khuc | Pac | | | | | | | 1 |

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Cameroon, Congo, Gabon, and Nigeria



Global River Index - Cameroon

| Cameroon River | Ocean | Area(10³km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(10⁶t/yr) | TDS(10⁶t/yr) | Reference(s) |
|-----------------------|--------------|---|--------------------|--------------------|------------------------------|--------------------------------|--------------------------------|---------------------|
| 1 Lobe | Atl | | 1.9 | | | | | 1 |
| 2 Lokoundje | Atl | | 1.2 | | | | | 1 |
| 3 Ntem | Atl | | 31 | | | | | 1 |
| 4 Nyong | Atl | | 19 | | | | | 1,3 |
| 5 Sanaga | Atl | | 130 | 860 | | | | 2.1,1,2 |
| 6 Wouri | Atl | | 8.2 | | | | | 1 |

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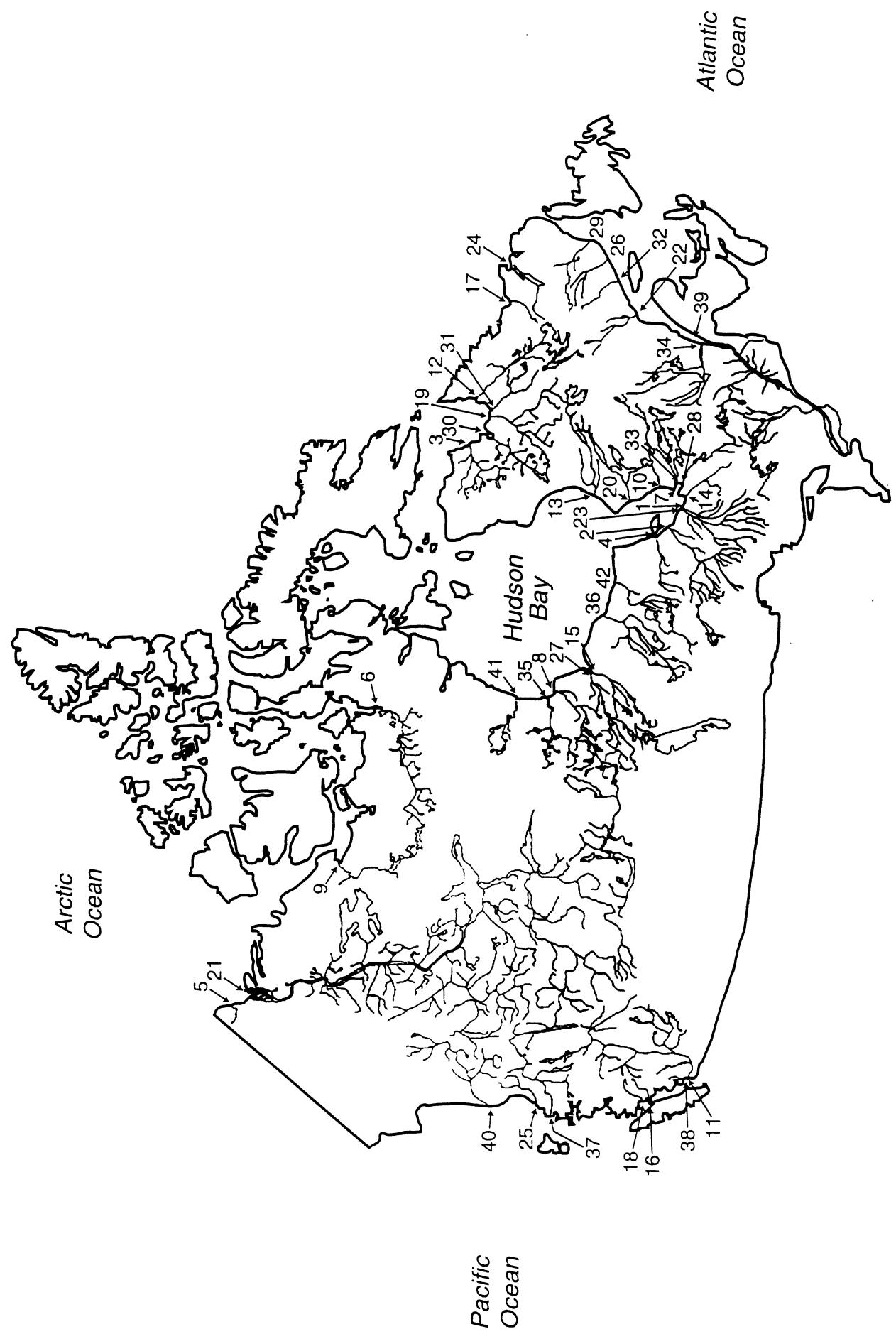
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GLORI - Congo, Gabon, & Nigeria

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 8. NEDECO, 1959
 9. van Blommestein (FAO), 1969
 10. Martins and Probst, 1991
 11. Czaya, 1981

Canada



| Canada River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(10 ⁶ t/yr) | TDS(10 ⁶ t/yr) | Reference(s) |
|--------------------|-------------|---------------------------|-------------|--------------|-------------------------|---------------------------|---------------------------|--------------|
| 1 Abitibi | Arctic (HB) | 2.4 | 370 | | 0.14 | | | 2,7 |
| 2 Albany | Arctic (HB) | 130 | 970 | | 44 | | | 5.2 1,3 |
| 3 Arnaud | Arctic | 49 | | | 21 | | | 0.16 1,3 |
| 4 Attawapiskat | Arctic (HB) | 50 | 760 | 11 | 0.2 | | | 0.14 1,2,3,7 |
| 5 Babbage | Arctic | 50 | | | 3.5 | | | 4 |
| 6 Back | Arctic | 110 | 960 | 16 | 0.18 | | | 1 |
| 7 Broadback | Arctic (HB) | | | 12 | | | | 1,4 |
| 8 Churchill | Arctic (HB) | 290 | 1800 | 50 | | | | 1 |
| 9 Coppermine | Arctic | | 850 | 11 | | | | 4,6 |
| 10 Eastmain | Arctic(HB) | | | 29 | | | | 7,14 |
| 11 Fraser | Pac | 47 | 680 | | | | | 1 |
| 12 Georges | Arctic | 220 | 1400 | 29 | | | | 0.38 |
| 13 Grand Riv Balei | Arctic(HB) | 41 | 550 | 110 | | | | 11 1,5 |
| 14 Harricana | Arctic (HB) | 43 | 700 | 21 | | | | 0.39 1,3 |
| 15 Hayes | Arctic(HB) | 29 | 400 | 18 | | | | 1 |
| 16 Homathko | Pac | 110 | 480 | 18 | | | | 0.3 |
| 17 Kanairkotk | Atl | 5.7 | | 0.8 | | | | 3,7 |
| 18 Kliniklim | Pac | | | 0.8 | | | | 1,3,7 |
| 19 Koksoak | Arctic | 6.5 | 150 | 11 | | | | 1,3,7 |
| 20 LaGrande | Arctic (HB) | 130 | | 1 | | | | 6 |
| 21 Mackenzie | Arctic | 97 | | 80 | | | | 15 |
| 22 Moisie | Atl | 1800 | 4200 | 54 | | | | 5.2 1,6 |
| 23 Moose | Arctic (HB) | 19 | 1220 | 330 | | | | 1,7 |
| 24 Naskaupi | Atl | 110 | | 13 | | | | 1 |
| 25 Nass | Pac | 21 | | 43 | | | | 0.7 |
| 26 Natashquan | Atl | | | 11 | | | | 6.9 1,8,13 |
| 27 Nelson | Arctic (HB) | 1100 | | 11 | | | | 1 |
| 28 Nottaway | Arctic (HB) | 65 | 320 | 30 | | | | 0.04 |
| 29 Petit Mecanina | Atl | | 320 | 13 | | | | 6.6 |
| 30 R. aux Feuilles | Arctic | 20 | 2700 | 110 | | | | 2 |
| 31 Rivere de la Ba | Arctic | 43 | 330 | 37 | | | | 14 |
| | | 32 | | 17 | | | | 31 |
| | | | | 18 | | | | 7,9 |
| | | | | 18 | | | | 3,14 |
| | | | | 18 | | | | 1 |
| | | | | 18 | | | | 0.26 1,3 |

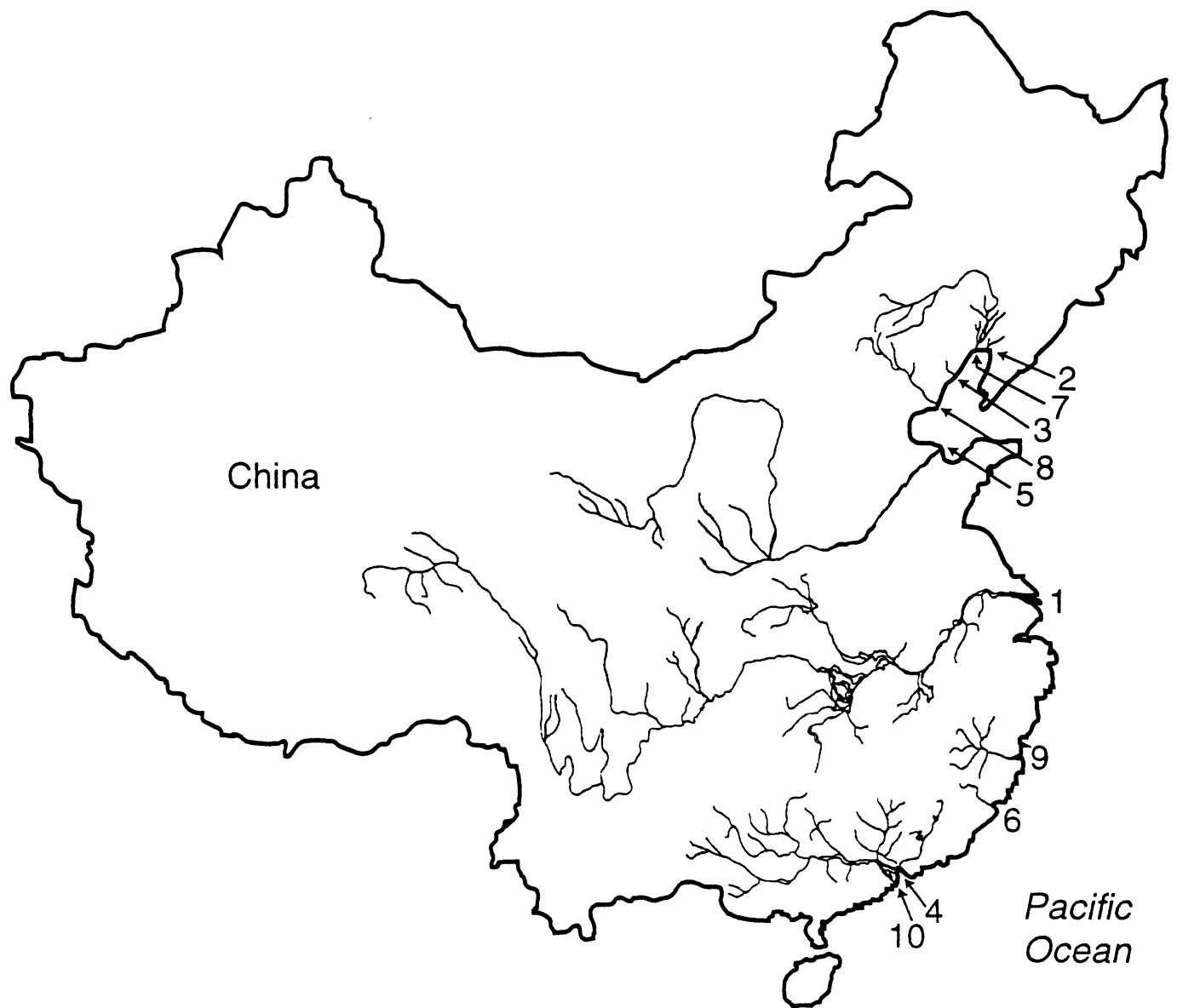
Global River Index -Canada

| | | | | | | | | |
|-----------------|-------------|------------|------|-----|-----|-----|------|------|
| 32 Romaine | Atl | Arctic(HB) | 14 | 400 | | | 0.16 | 7,10 |
| 33 Rupert | Arctic(HB) | 43 | 610 | | 28 | | 0.06 | 1,7 |
| 34 Saguenay | Atl | 90 | 700 | | 55 | 0.4 | 2 | |
| 35 Seal | Arctic (HB) | 100 | 390 | | 11 | 1.4 | | 1,4 |
| 36 Severn | Arctic (HB) | 55 | 510 | | 15 | | | |
| 37 Skeena | Pac | 3.6 | | | 55 | | | |
| 38 Squamish | Pac | 3.6 | | | 11 | | | |
| 39 St. Lawrence | Atl | 1200 | 3100 | | 1.8 | | | |
| 40 Stikine | Pac | 18 | 540 | | 450 | 4 | | 1,2 |
| 41 Thaianne | Arctic(HB) | | | | 12 | | | |
| 42 Winisk | Arctic(HB) | 67 | 740 | | 16 | | | |
| | | | | | 13 | | | 1,5 |
| | | | | | | | | |

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China



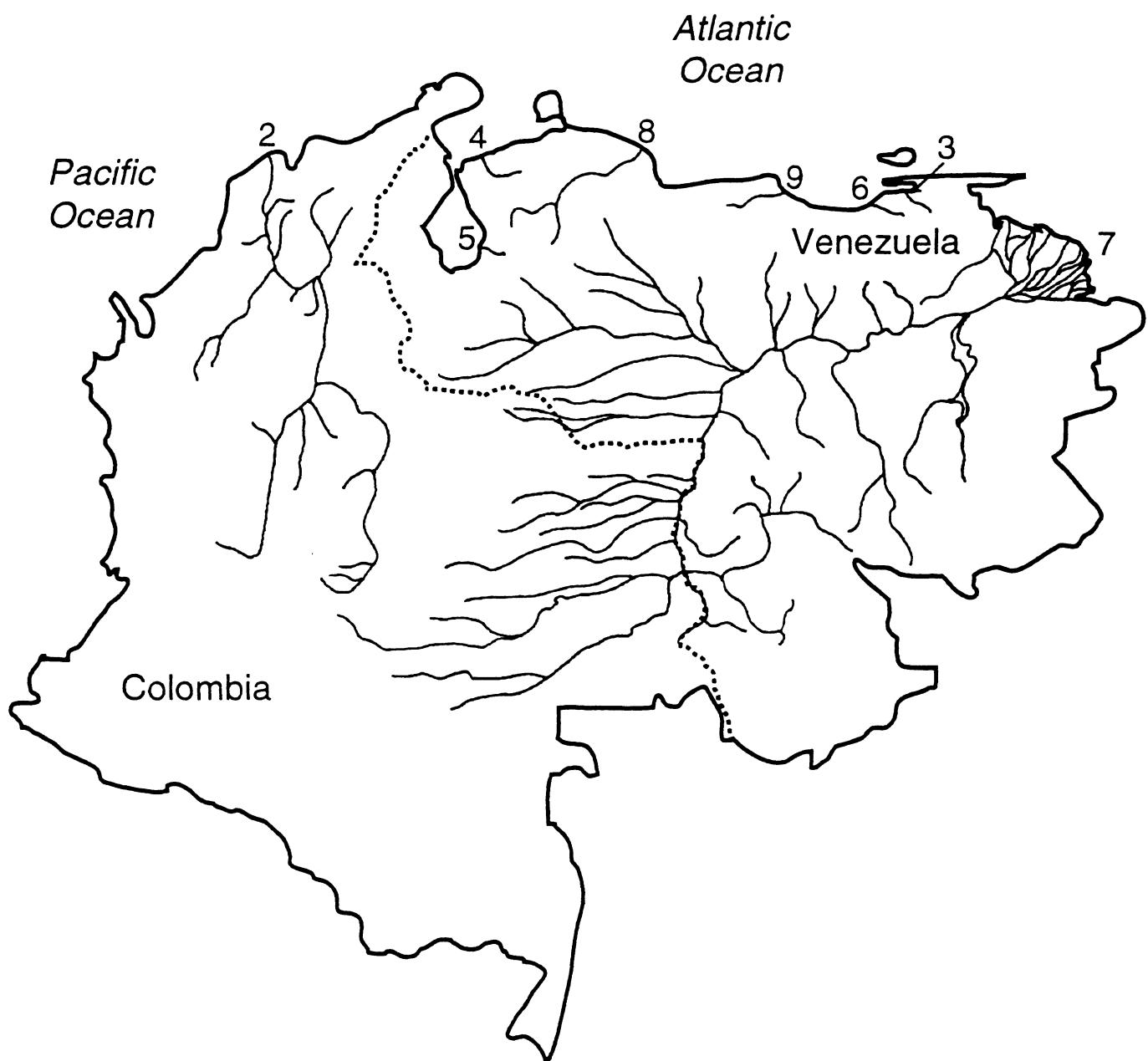
Global River Index - China

| China River | Ocean | Area (10³ km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS (10⁶t/yr) | TDS (10⁶t/yr) | Reference(s) |
|------------------------|--------------|---|--------------------|---------------------|------------------------------|---------------------------------|---------------------------------|---------------------|
| 1 Changjiang | Pac | 1900 | 5500 | 3200 | 9(1) | 930 | 480 | 180 2,3 |
| 2 Daliaohe | Pac | 27 | | | | 110(36) | | 2.5 2,4 |
| 3 Daling | Pac | 20 | | | | 1 | 36 | 4 |
| 4 Dongjiang | Pac | 25 | | | | 23 | | |
| 5 Huanghe | Pac | 770 | 4700 | 3100 | | 59 | 1100 | 1 |
| 6 Juilongjiang | Pac | 15 | | | | 15 | 17 | 2 |
| 7 Liaohe | Pac | 230 | | 1300 | | 3.1 | 1.3 | 1 |
| 8 Luanhe | Pac | 44 | | 880 | | 41 | | 4 |
| 9 Menjiang | Pac | 61 | | | | 58 | 7.5 | 1 |
| 10 Xijiang | Pac | 440 | 2200 | | | 300 | 69 | 2.4 1,2 |
| | | | | | | | 58 | 1,2,4 |

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Colombia and Venezuela



GLORI - Colombia and Venezuela

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Costa Rica, Nicaragua, and Panama



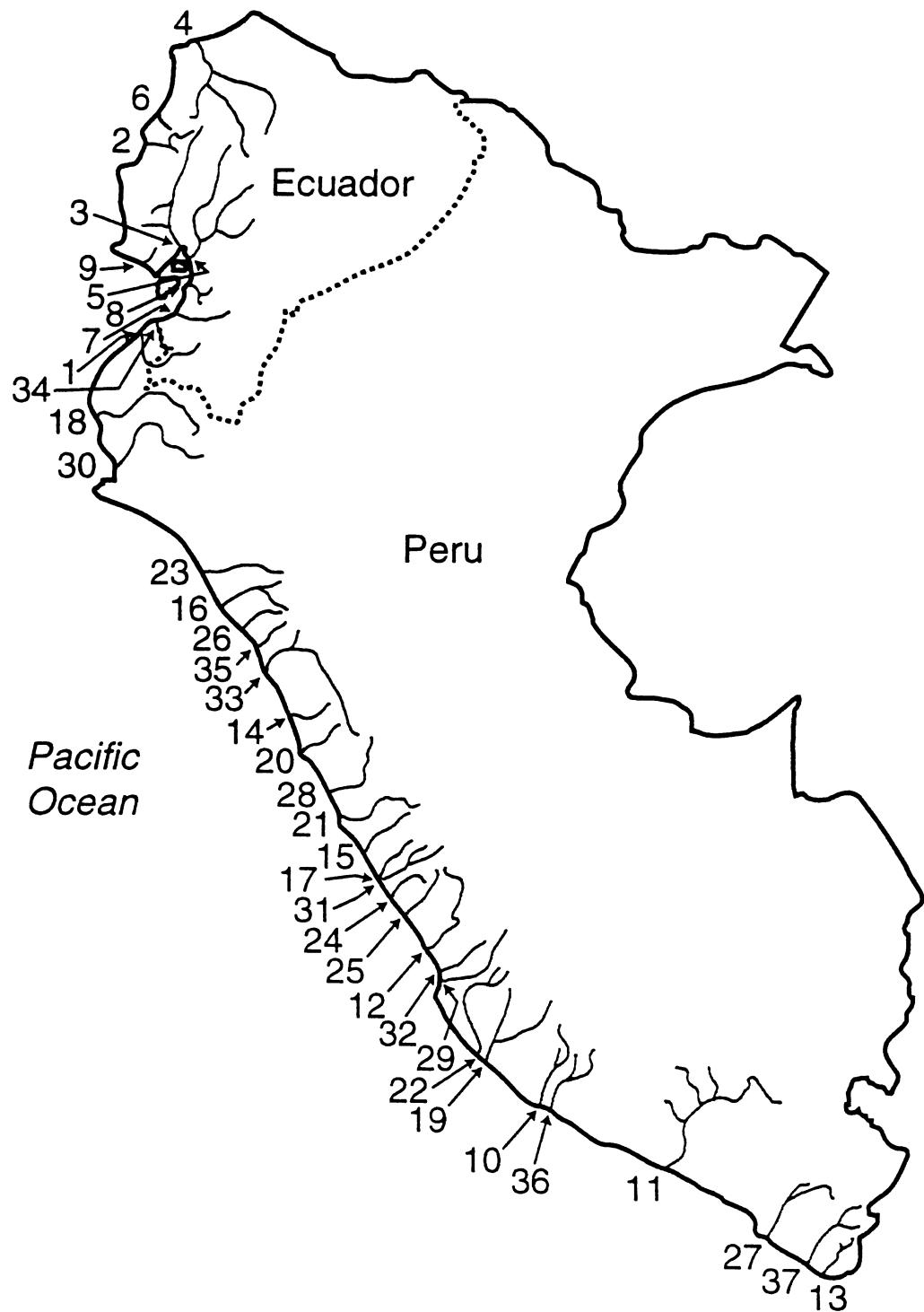
GLORI - C. Rica, Nic., Panama

| Costa Rica | River | Ocean | Area(103km ²) | Length(km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------|-------------|-------|---------------------------|------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 G. de Terraba | Atl | | | | 4.8 | | | | 2 |
| 2 Coco | Atl | | | | | | | | |
| 3 San Juan | Atl | | | | | | | | |
| Nicaragua | | | | | | | | | |
| 2 | Coco | Atl | 5.8 | | | | | | |
| 3 | San Juan | Atl | 30 | | | | | | |
| Panama | | | | | | | | | |
| 4 | Bayano | Pac | 3.9 | | | | | | |
| 5 | Changuinola | Atl | 2.7 | | | | | | |
| 6 | Chiriqui | Pac | 1.4 | | | | | | |
| 7 | Santa Maria | Pac | 1.2 | | | | | | |
| 8 | Tabasara | Atl | 1.1 | | | | | | |

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Ecuador and Peru



Global River Index - Ecuador

| Ecuador River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------|-------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 1 Catamayo-Chir. | Pac | | 7 | | | 0.3 | | |
| 2 Chone | Pac | | 2.6 | | | 0.1 | | |
| 3 Daule | Pac | | 9 | | | 8.7 | | |
| 4 Esmeraldas | Pac | | 2.1 | | | 2.6 | | |
| 5 Guayes | Pac | | 35 | | | 4.7 | | |
| 6 Jama | Pac | | 1.6 | | | 0.1 | | |
| 7 Jubones | Pac | | 5.3 | | | 0.4 | | |
| 8 Puyango-Tumb. | Pac | | 3.7 | | | 0.4 | | |
| 9 Zapotal | Pac | | 2.3 | | | 4.8 | | |

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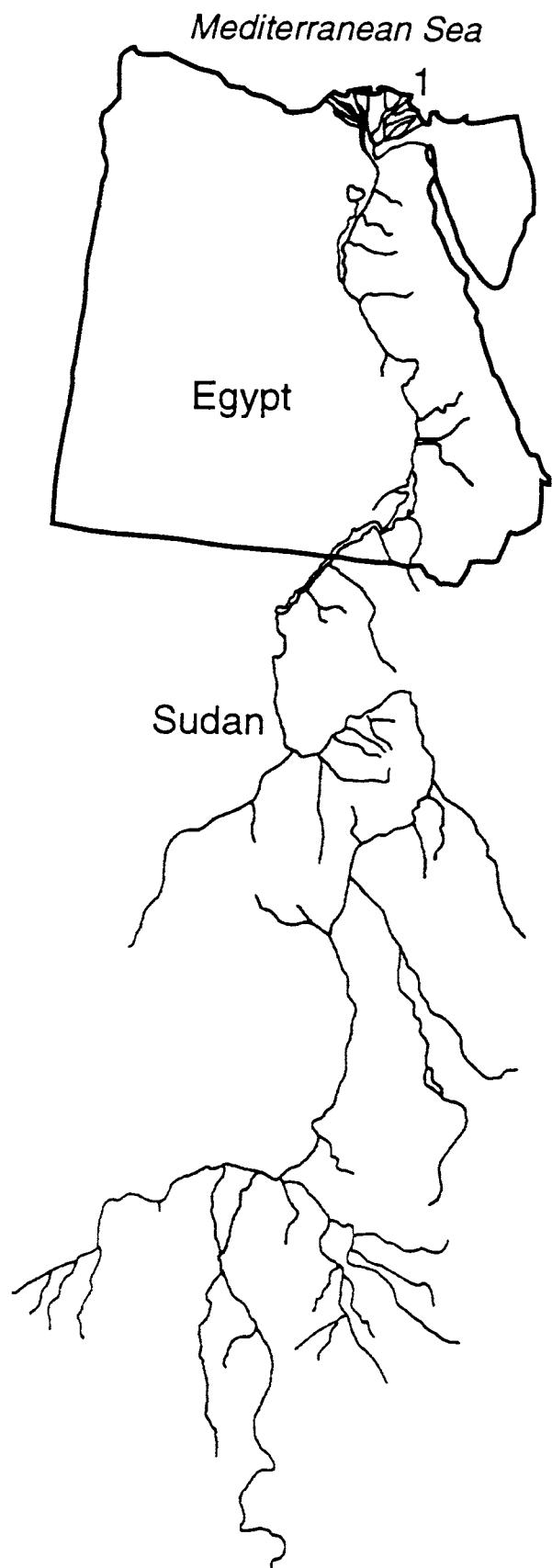
Global River Index - Peru

| Peru River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------|-------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 10 Acari | Pac | 4.1 | | | | | | 1 |
| 11 Camana o Majes | Pac | 17 | | | | | | 1 |
| 12 Canete | Pac | 6.7 | | | | | | 1 |
| 13 Caplina | Pac | 2.2 | | | | | | 1 |
| 14 Casma | Pac | 2.9 | | | | | | 1 |
| 15 Chancay | Pac | 5.2 | | | | | | 1 |
| 16 Chicama | Pac | 4.8 | | | | | | 1 |
| 17 Chillón | Pac | 2 | | | | | | 1 |
| 18 Chira | Pac | 20 | | | | | | 1,2 |
| 19 Grande | Pac | 13 | | | | | | 1 |
| 20 Huarmey | Pac | 2.1 | | | | | | 1 |
| 21 Huaura | Pac | 5.5 | | | | | | 1 |
| 22 Ica | Pac | 7.4 | | | | | | 1 |
| 23 Jequetepeque | Pac | 4.2 | | | | | | 1 |
| 24 Lurín | Pac | 2.5 | | | | | | 1 |
| 25 Mala | Pac | 2.1 | | | | | | 1 |
| 26 Moche | Pac | 2.1 | | | | | | 1 |
| 27 Moquegua | Pac | 3.4 | | | | | | 1 |
| 28 Pativilca | Pac | 4.7 | | | | | | 1 |
| 29 Pisco | Pac | 4.4 | | | | | | 1 |
| 30 Piura | Pac | 13 | | | | | | 1 |
| 31 Rimac | Pac | 3.5 | | | | | | 1 |
| 32 San Juan | Pac | 3.9 | | | | | | 1 |
| 33 Santa | Pac | 12 | | | | | | 1 |
| 34 Tumbes | Pac | 1.9 | | | | | | 1 |
| 35 Viru | Pac | 2 | | | | | | 1 |
| 36 Yauca | Pac | 4.5 | | | | | | 1 |
| 37 Zaña | Pac | 2 | | | | | | 1 |

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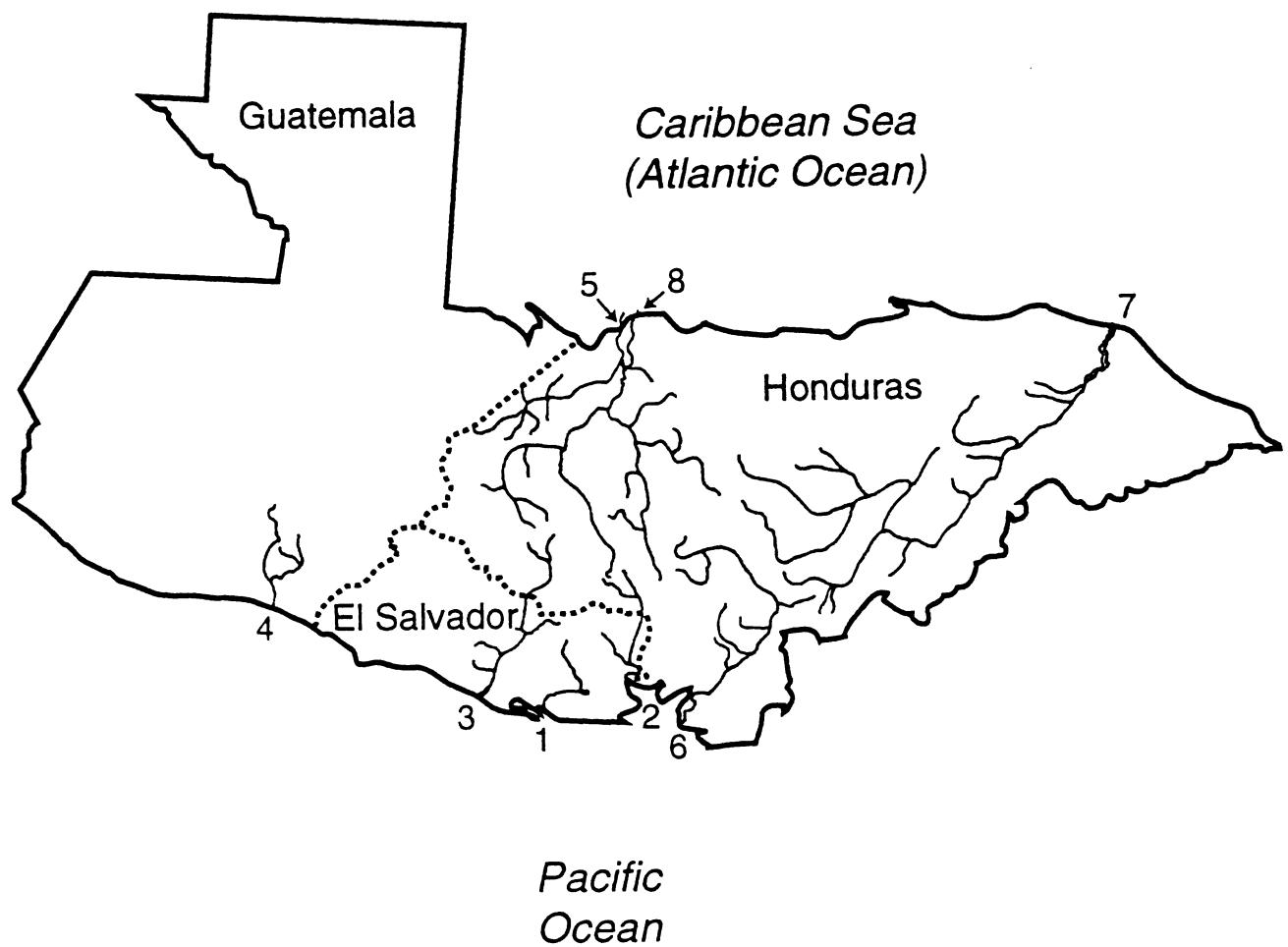
Egypt



Global River Index - Egypt

| Egypt | River | Ocean | Area(103km2) | Length (km) | Max Elev (m) | Q (km3/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---|--------------|--------------|---------------------|--------------------|---------------------|-------------------|---------------------|---------------------|---------------------|
| 1 | Nile | Med | 3000 | 6700 | 1600 | | 90 0 (120) | | (6, 1). 1,2,3 |
| Bibliography: | | | | | | | | | |
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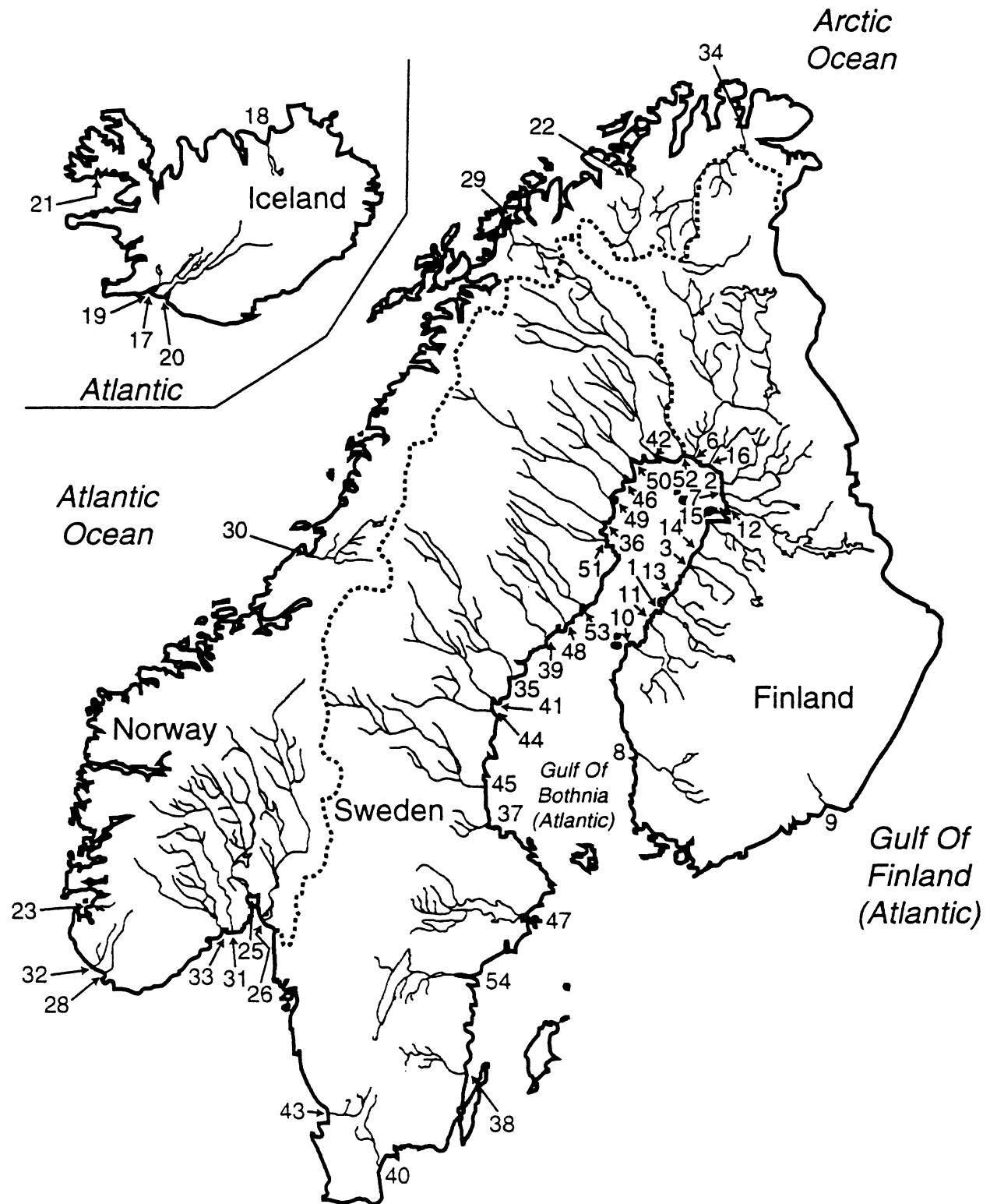
El Salvador, Guatemala, and Honduras



GLORI-EI. Sal., Guat., Hon.

| El Salvador | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q(km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------------|--------------|--------------------------------|--------------------|--------------------|-----------------------------|---------------------|---------------------|---------------------|
| 1 G. San Miguel | Pac | | 2.4 | | | | | 1 |
| 2 Goascoran | Pac | | 1.7 | | | | | 2 |
| 3 Lempa | Pac | | 18 | | | | | 2 |
| Guatemala | | | | | | | | |
| 4 Los Esclavos | Pac | | 3.2 | | 0.33 | | | 1 |
| Honduras | | | | | | | | |
| 5 Chamelecon | Atl | | 1.8 | | | 1.4 | | 3 |
| 6 Choluteca | Pac | | 6.3 | | | 1.1 | | 1 |
| 7 Patuca | Atl | | 26 | | | 26 | | |
| 8 Ulua | Atl | | 23 | | | 17 | | |
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Finland, Iceland, Norway, and Sweden



Global River Index - Finland

| Finland River | Ocean | Area(103km2) | Length (km) | Max Elev(m) | Q (km3/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|----------------------|--------------|---------------------|--------------------|--------------------|-------------------|---------------------|---------------------|---------------------|
| 1 Ahtavan | Atl(G. of B) | 2 | | | | 0.5 | | 1 |
| 2 Iijoki | Atl(G. of B) | 14 | | | | 5.4 | | 1 |
| 3 Kala | Atl(G. of B) | 4.2 | | | | 1.1 | | 1 |
| 4 Kallioinen | | 26 | 6.6 | | | 6.6 | | |
| 5 Karjalaari | | 2 | | | | 0.6 | | 2,3 |
| 6 Kemi | Atl(G. of B) | 51 | | 550 | | 17 | | 1 |
| 7 Kiiminkijoki | Atl(G. of B) | 3.9 | | | | 1.4 | | 1 |
| 8 Kokemäen | Atl(G. of B) | 27 | | | | 6.8 | | 1 |
| 9 Kymi | Atl(G. of F) | 37 | | | | 9.1 | | |
| 10 Kyronjoki | Atl(G. of B) | 4.9 | | | | 0.01 | | 1,3,4 |
| 11 Lapuan | Atl(G. of B) | 4.1 | | | | 1.4 | | 1 |
| 12 Oulu | Atl(G. of B) | 23 | | | | 0.98 | | 1 |
| 13 Perhon | Atl(G. of B) | 2.7 | | | | 7.8 | | 1 |
| 14 Pyhä | Atl(G. of B) | 3.7 | | | | 0.69 | | 1 |
| 15 Siikka | Atl(G. of B) | 4.4 | | | | 1 | | 1 |
| 16 Simojoiki | Atl(G. of B) | 3.2 | | | | 1.1 | | 1 |
| | | | | | | 1.5 | | 1 |

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Global River Index - Iceland

| Iceland | River | Ocean | Area(10 ³ km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(10 ⁶ t/yr) | TDS(10 ⁶ t/yr) | Reference(s) |
|---------|------------------|-------|--|-------------|-------------|-------------------------|---------------------------|---------------------------|--------------|
| 17 | Hvita (Arnes) | Atl | 9.8 | | 9.8 | | 3.8 | | 2 |
| 18 | Laxa(Thingeyjic) | Atl | | 3 | | | 1.3 | | 2 |
| 19 | Ofulsá | Atl | 5.8 | | 12 | | | 1 | 1 |
| 20 | Tjorsa | Atl | | 7.2 | | 1.1 | | 1 | |
| 21 | Vatnádalsá | Atl | 1.5 | | 0.27 | | | 2 | |

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Global River Index - Norway

| Norway River | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------|--------------|--------------------------------|--------------------|--------------------|------------------------------|---------------------|---------------------|---------------------|
| 22 Altavassdraget | Nor. Sea | 7.4 | | | | 2.6 | | 2,3 |
| 23 Ardalseva | Atl | | | | | 1.4 | | 2 |
| 24 Brømsvassdraget | | | | | | 1.3 | | 2 |
| 25 Dramselv | Atl | 17 | | | | 10 | | 3 |
| 26 Glomma | Atl | 42 | 610 | | | 23 | | |
| 27 Jostedøla | | | | | | 1.3 | | |
| 28 Kvina | Atl | | | | | 1.9 | | 2 |
| 29 Malselvvassdra | Nor. Sea | 6 | | | | 2.7 | | 2 |
| 30 Namsen | Nor. Sea | 6.3 | | | | 5.7 | | 2,3 |
| 31 Numedalslågen | Atl | 5.7 | | | | 8.5 | | 2,3 |
| 32 Sira | Atl | | | | | 3.7 | | 2,3 |
| 33 Skienvvassdra | Atl | 11 | | | | 3.7 | | 2 |
| 34 Tana | Arctic | 16 | | | | 9 | | 2,3 |
| | | | | | | 5.9 | | 3 |

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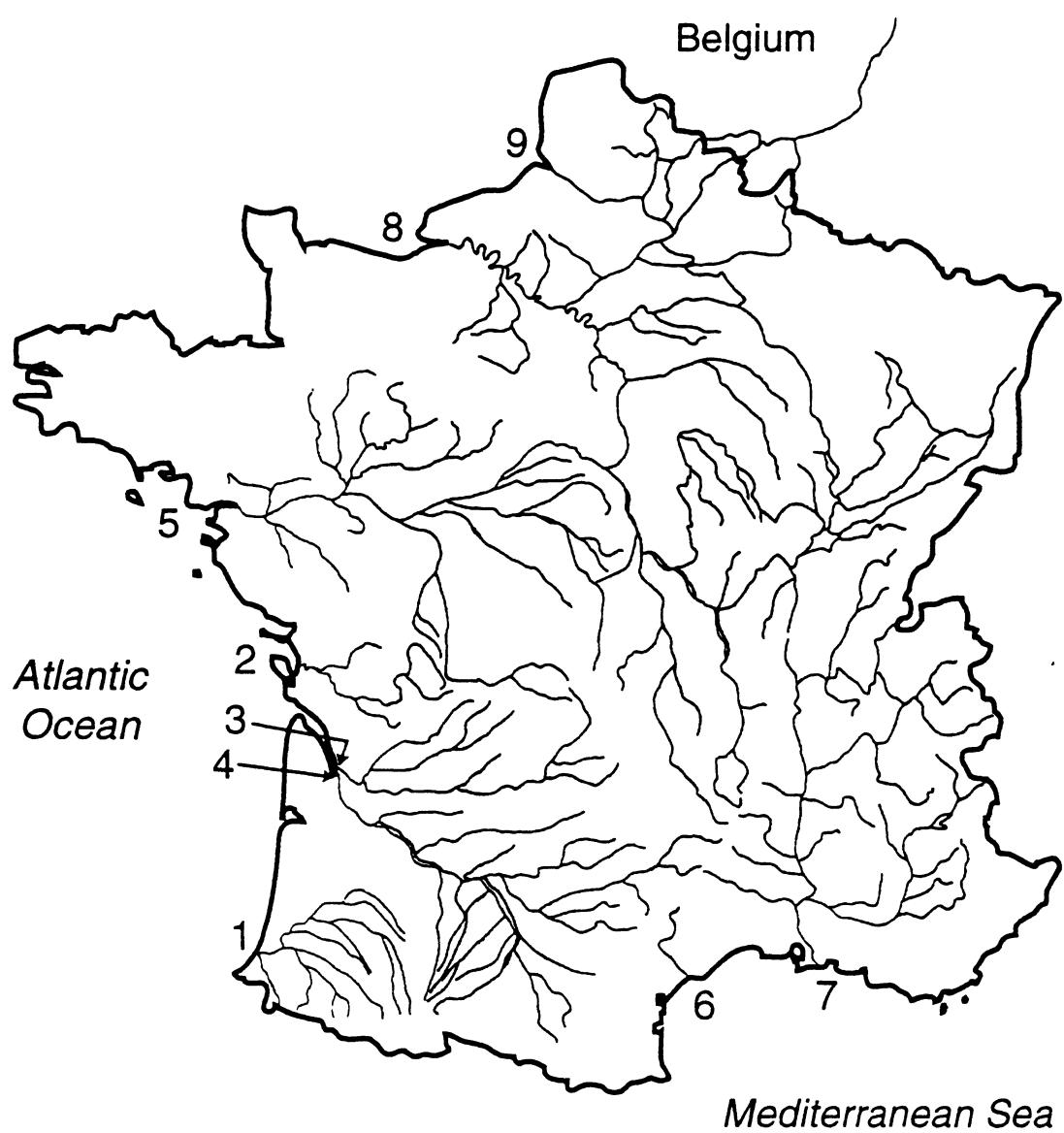
Global River Index - Sweden

| Sweden | River | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------|----------------|--------------|--------------------------------|--------------------|--------------------|------------------------------|---------------------|---------------------|---------------------|
| 35 | Angermanalver | Atl | 32 | 440 | 15 | 0.06 | | | 1,5,6 |
| 36 | Byske alv | Atl | 3.6 | 210 | 1.3 | | | | 3,5 |
| 37 | Dalalven | Atl | 29 | 550 | 11 | 0.03 | 0.23 | 2,5,6 | |
| 38 | Eman | Atl | 4.5 | 240 | 0.88 | | | | 5 |
| 39 | Gide alv | Atl | 3.4 | 240 | 1.1 | | | | |
| 40 | Helgean | Atl | 4.8 | 180 | 1.5 | | | | |
| 41 | Indalsalvan | Atl | 27 | 440 | 14 | | | | |
| 42 | Kalixalven | Atl | 24 | 450 | 8.9 | 0.04 | | | 4,5,6 |
| 43 | Lagan | Atl | 6.4 | 250 | 2.3 | | | | 4,5 |
| 44 | Ljungan | Atl | 13 | 360 | 4.4 | 0.01 | | | 3,5,6 |
| 45 | Ljusnan | Atl | 20 | 430 | 7.3 | | | | |
| 46 | Lule alv | Atl | 25 | 450 | 16 | 0.04 | | | 3,5 |
| 47 | Malaren-Norrst | Atl | 23 | | 5.2 | | | | 4,5 |
| 48 | Ore alv | Atl | 3 | 220 | 1 | 0.03 | | | 5,6 |
| 49 | Pite alv | Atl | 11 | 360 | 5.4 | 0.07 | | | 3,5,6 |
| 50 | Ranealven | Atl | 4.1 | 210 | 1.3 | 0.002 | | | 4,5,6 |
| 51 | Skelleftealven | Atl | 12 | 400 | 5 | 0.009 | | | 3,5,6 |
| 52 | Tornealven | Atl | 35 | 510 | 12 | 0.1 | | | 4,5,6 |
| 53 | Ume-Vindelalve | Atl | 27 | 450 | 14 | | | | 3,5 |
| 54 | Vattern-Motala | Atl | 15 | 100 | 2.8 | | | | 3,5 |

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France



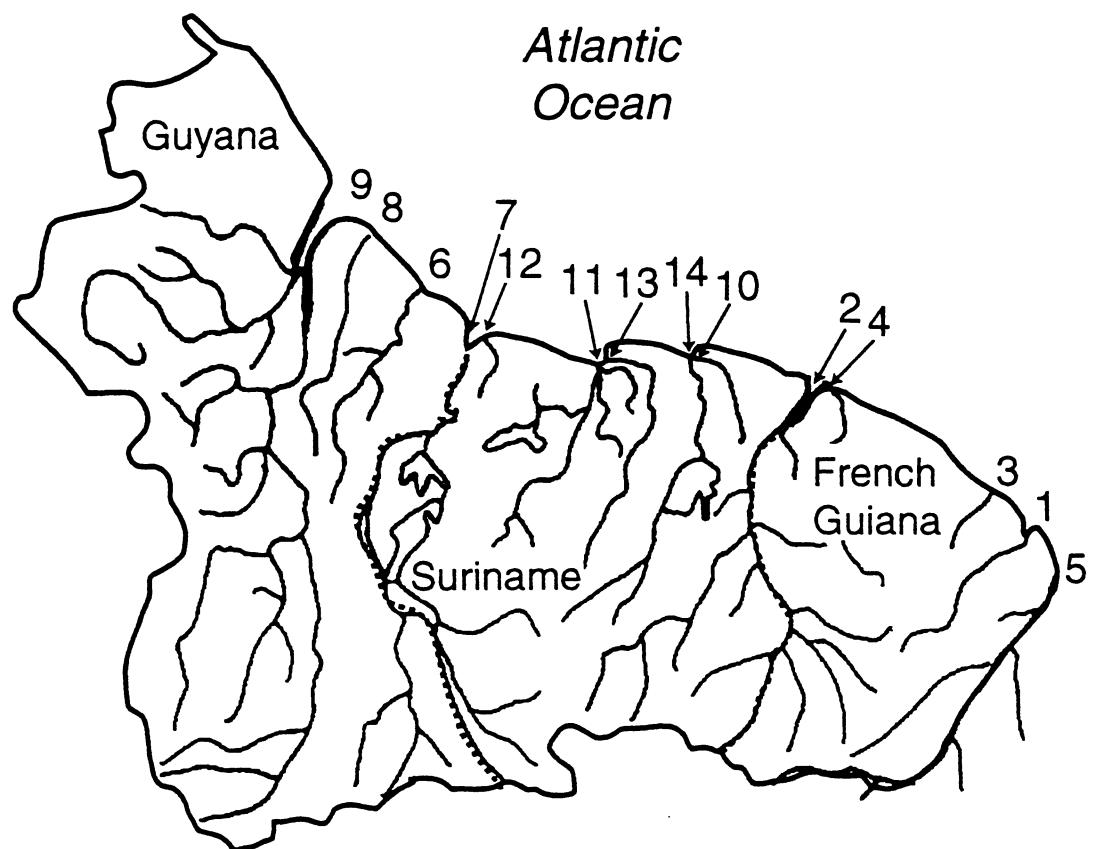
Global River Index - France

| France River | Ocean | Area(103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------|--------------|--------------------------------|--------------------|---------------------|------------------------------|---------------------|---------------------|---------------------|
| 1 Adour | Atl | 16 | 340 | | | 0.24 | 0.75 | 2,3,8 |
| 2 Charente | Atl | 4.6 | 350 | | | | | 1,5,8 |
| 3 Dordogne | Atl | 14 | 470 | 1700 | | | | 1,5,8 |
| 4 Garonne | Atl | 85 | 650 | | | | 38 | 1,2,4,5,6 |
| 5 Loire | Atl | 120 | 1100 | | | | 38 | 1,2,5,6 |
| 6 Orb | Med | 1.8 | | | | 1.3 | 1.5 | |
| 7 Rhone | Med | 96 | 1000 | | | 54 | 56 | 17,1,2,5,6,7 |
| 8 Seine | Atl | 79 | 780 | | | 16 | 3.5 | 19,1,2,5,6 |
| 9 Somme | Atl | 5.5 | 240 | | | 0.85 | | 1,5,8 |

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7. GEMS, 1983
8. Rand McNally, 1980

French Guiana, Guyana, and Suriname



GLORI - Fr. Guiana and Guyana

| French Guiana River | Ocean | Area(10 ³ km ²) | Length(km) | Max Elev (m) | Q(km ³ /yr) | TSS(10 ⁶ t/yr) | TDS(10 ⁶ t/yr) | Reference(s) |
|---|-------|--|------------|--------------|------------------------|---------------------------|---------------------------|--------------|
| 1 Approugua | Atl | 1.1 | | 12 | | 0.43 | | 1 |
| 2 Lawa-Maroni | Atl | 2.8 | 720 | | | 6.3 | | 1,6 1,2,3 |
| 3 Mahuri | Atl | 3.7 | | 7.2 | | 0.24 | | 1 |
| 4 Mana | Atl | 1.1 | 320 | | | 2.3 | | |
| 5 Oyapok | Atl | 1.7 | | 16 | | | | 2 |
| Guyana | | | | | | | | |
| 6 Berbice | Atl | 2 | | 1.2 | | | | 4 |
| 7 Corantijn | Atl | 6.9 | | | | 4.7 | | 1 |
| 8 Demerara | Atl | 1.6 | | | | 2.2 | | 4 |
| 9 Essequibo | Atl | 160 | 970 | | | 6.9 | | |
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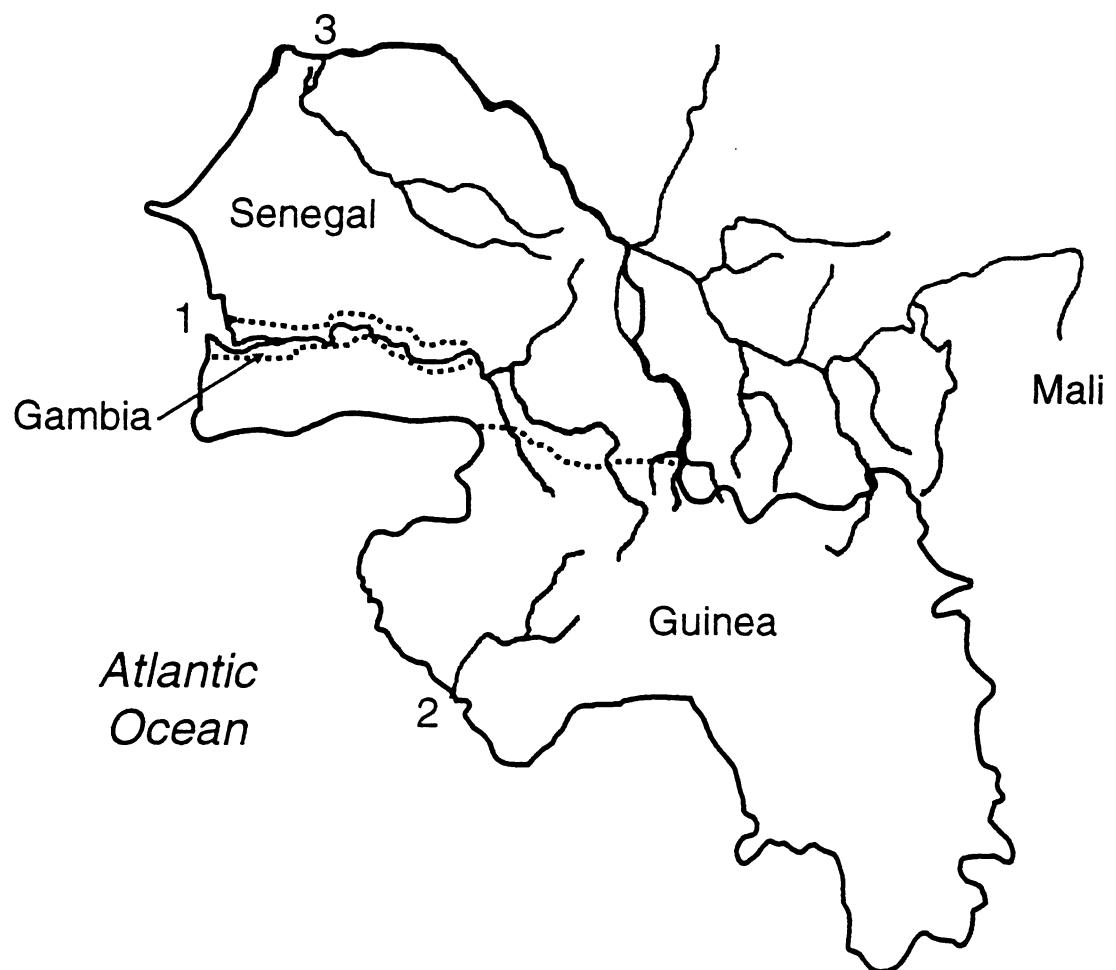
Global River Index - Suriname

| Suriname River | Ocean | Area(103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------------|--------------|--------------------------------|--------------------|---------------------|------------------------------|---------------------|---------------------|---------------------|
| 10 Commewijne | Atl | 6.7 | | | | 3.8 | | 1 |
| 11 Coppename | Atl | 20 | 410 | | | 15 | | |
| 12 Nickerie | Atl | 9.7 | | | | 6.3 | | |
| 13 Saramacca | Atl | 16 | 400 | | | 7.6 | | |
| 14 Suriname | Atl | 16 | 370 | | | 14 | | 1,4 |

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Gambia, Guinea, and Senegal



GLORI-Gambia,Guinea,Senegal

| Gambia River | Ocean | Area(103km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------------|--------------|--------------------------------|--------------------|--------------------|------------------------------|---------------------|---------------------|---------------------|
| 1 Gambia | Atl | 77 | 1200 | 4.9 | 0.2 | 0.22 | 0.22 | 1,4 |
| Guinea | | | | | | | | |
| 2 Konkoure | Atl | 16 | 260 | | | | | 2,5 |
| Senegal | | | | | | | | |
| 3 Senegal | Atl | 270 | 1400 | | 22 | 1.2 | 1,3,4 | 21 |

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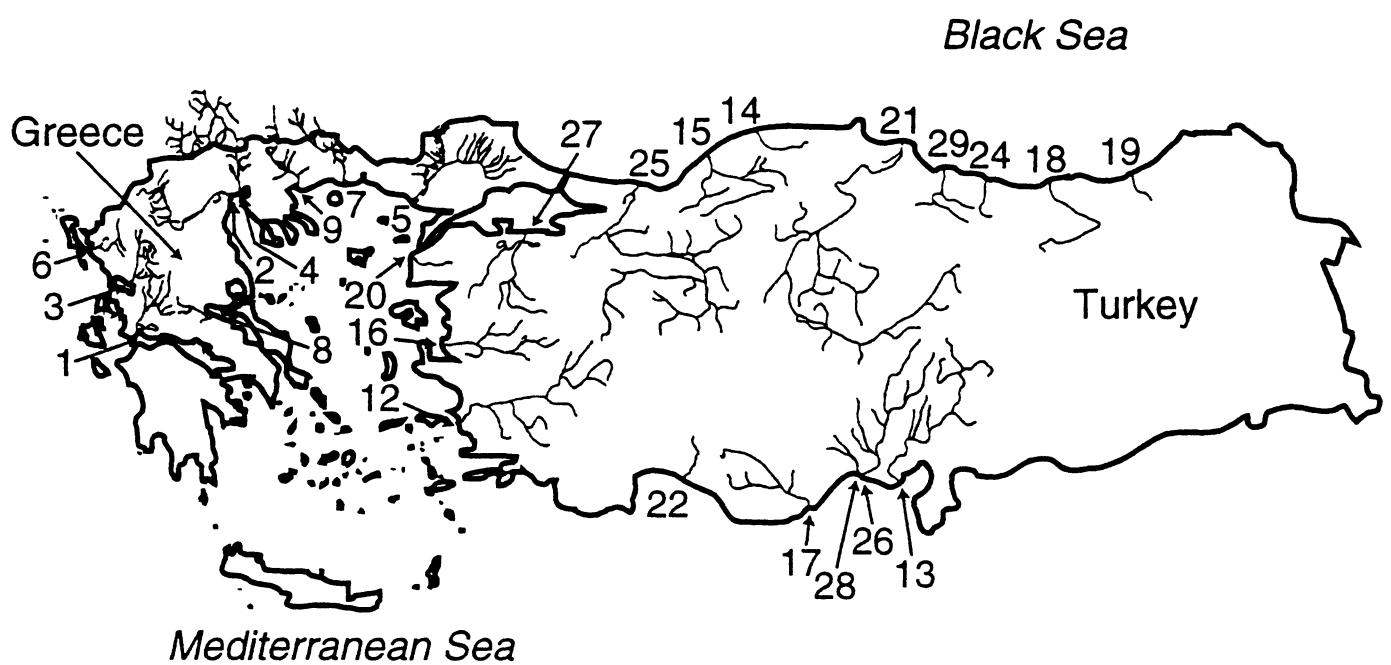
Georgia, Romania and Ukraine



GLORI - Geor., Rom., Ukr.

| Georgia River | Ocean | Area(10³km²) | Length(km) | Max Elev(m) | Q(km³/yr) | TSS(10⁶t/yr) | TDS(10⁶t/yr) | Reference(s) |
|---|--------------|---|-------------------|--------------------|-----------------------------|--------------------------------|--------------------------------|---------------------|
| 1 Rioni | Black Sea | 16 | 290 | | 4.9(12) | | 7.1 | 1,2,4 |
| Romania | | | | | | | | |
| 2 Danube | Black Sea | 810 | 2800 | 1200 | | 2000 | 40(83) | 3 |
| Ukraine | | | | | | | | |
| 3 Dnieper | Black Sea | 540 | 2200 | | 52 | | 2.1 | 9 1,2 |
| 4 Dniester | Black Sea | 62 | 1300 | | 10 | | 2.5 | 6.2 1,2 |
| Bibliography: | | | | | | | | |
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Greece and Turkey



Global River Index - Greece

| Greece River | Ocean | Area(10³km²) | Length (km) | Max Elev(m) | Q (km³/yr) | TSS(10⁶t/yr) | TDS(10⁶t/yr) | Reference(s) |
|---------------------|--------------|---|--------------------|--------------------|------------------------------|--------------------------------|--------------------------------|---------------------|
| 1 Acheloos | Med | 1.3 | | | 5.2 | 0.83 | 1,2 | |
| 2 Aliakmon | Med | 2.3 | | | 4.2 | 2.3 | 2,3 | |
| 3 Arachthos | Med | 1.9 | | | 7.2 | | 2 | |
| 4 Axios | Med | 2.5 | | | | | 3 | |
| 5 Evros | Med | 1.4 | | | | | 3 | |
| 6 Kalamas/Thiassos | Med | 1.5 | | | | | 3 | |
| 7 Nestos | Med | 6.2 | | | | | 4 | |
| 8 Sperchiios | Med | 16 | | | | | 3 | |
| 9 Strymon | Med | 17 | | | | | 1 | |

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Global River Index - Turkey

| Turkey | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|--------|-------------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 10 | Anatolya | 20 | | | | 14 | | 1 |
| 11 | Aşç | 7.8 | | | | 1.5 | | 1 |
| 12 | B.Menderes | 25 | 560 | | 3.1 | | 0.68 | 2 |
| 13 | Ceyhan | 22 | | | 7.2 | | 2,3 | |
| 14 | Devrakani | 1.1 | | | 0.25 | | 5.5 | |
| 15 | Filyos | 13 | Black Sea | | 2.9 | | 0.18 | 5 |
| 16 | Gedez | 18 | Black Sea | | 2.3 | | 4.1 | 5 |
| 17 | Goksu | 10 | Med | | 4 | | 2.3 | 2 |
| 18 | Harsit | 2.6 | Med | | 2.5 | | 3 | |
| 19 | Iyidere | 0.84 | Black Sea | | 0.8 | | 5 | |
| 20 | K. Menderes | 6.9 | Black Sea | | 0.52 | | 0.18 | |
| 21 | Kizil Irmak | 74 | Black Sea | | 0.92 | | 4.5 | |
| 22 | Manavgat | 0.93 | Med | | 1 | | 1 | |
| 23 | Marmara | 24 | Med | | 6 | 0.46(23) | 1.5 | |
| 24 | Melet | 1 | 1100 | | 4.1 | | 7.9 | |
| 25 | Sakarya | 58 | 640 | | 5.8 | | | |
| 26 | Seyhan | 22 | Black Sea | | 0.34 | 0.27 | | |
| 27 | Susurluk | 23 | Med | | 6.4 | 6.2(8.8) | 2,5,6 | |
| 28 | Tarsus | 1.4 | Med | | 5.9 | | 2,3 | |
| 29 | Yesil Irmak | 34 | Black Sea | | 4.2 | | 2 | |
| | | | | | 0.1 | 0.13 | 5 | |
| | | | | | 5 | 44 | 5 | |

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Hispaniola

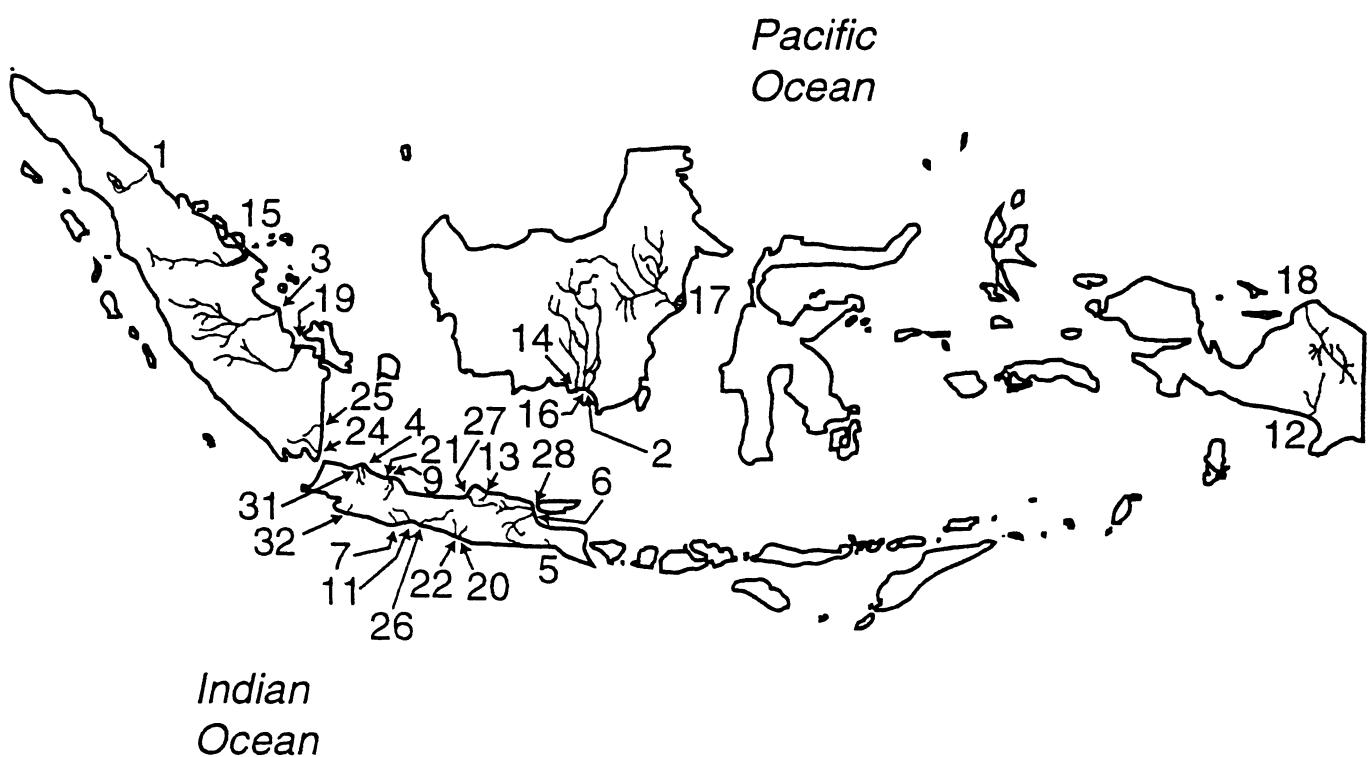


*Caribbean Sea
(Atlantic)*

Global River Index - Hispaniola

| Hispaniola River | Ocean | Area(10 ³ km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(10 ⁶ t/yr) | TDS(10 ⁶ t/yr) | Reference(s) |
|----------------------|-------|--|-------------|-------------|-------------------------|---------------------------|---------------------------|--------------|
| 1 Artibonite | Atl | | | 6.9 | | | 3.2 | 1 |
| Bibliography: | | | | | | | | |
| 1. OAS, 1972 | | | | | | | | |

Indonesia



| Indonesia River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------|--------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Asahan | Pac | 7.5 | 100 | | | | | 1 |
| 2 Barito | Pac | 57 | 650 | | | | | 1,4,1,2 |
| 3 Batang Hari | Pac | 53 | | | | | | 3 |
| 4 Bekasi | Pac | 1.4 | 70 | | | | | 1 |
| 5 Bondojudo | Indian | 1.8 | 35 | | | | | 1 |
| 6 Brantas | Pac | 12 | 280 | | | | | 1,3 |
| 7 Cijolang | Indian | 0.38 | | | | | | 4 |
| 8 Cilutung | Pac | 0.6 | | | | | | 4 |
| 9 Cimanuk | Pac | 3.2 | 150 | | | | | 1,4 |
| 10 Cimnur | | 0.58 | | | | | | 4 |
| 11 Citanduy | Indian | 2.5 | | | | | | 4 |
| 12 Digul | Pac | 25 | | | | | | 3 |
| 13 Djuana | Pac | 1.3 | 80 | | | | | 1 |
| 14 Kahayan | Pac | 26 | | | | | | 3 |
| 15 Kampar | Pac | 18 | | | | | | 3 |
| 16 Kapuas | Pac | 77 | | | | | | 1,2 |
| 17 Mahakam | Pac | 65 | | | | | | 2 |
| 18 Mamberamo | Pac | 53 | | | | | | 3 |
| 19 Musi | Pac | 55 | | | | | | 4,4 |
| 20 Opak | Indian | 1.7 | 50 | | | | | 1 |
| 21 Pemali | Pac | 1.4 | 65 | | | | | 1 |
| 22 Progo | Indian | 2.5 | 100 | | | | | 1 |
| 23 Sungai Barito | | 1.3 | 95 | | | | | 1 |
| 24 Sekampung | Pac | 4.9 | 140 | | | | | 1 |
| 25 Sepuh | Pac | 7.1 | 160 | | | | | 1 |
| 26 Seraju | Indian | 3.7 | 110 | | | | | 1 |
| 27 Serang | Pac | 4.8 | 120 | | | | | 1 |
| 28 Solo | Pac | 16 | 350 | | | | | 1,2,3 |
| 29 Tjipunaugeara | | 1.5 | 75 | | | | | 1 |
| 30 Tjittanduj | | 3.6 | 120 | | | | | 50 |
| | | | | | | 14.6(239) | 34 | |
| | | | | | | | 19 | |
| | | | | | | | | 50 |

Global River Index - Indonesia

| | | | | |
|--------------|--------|---|-----|----|
| 31 Tjitarum | Pac | 6 | 220 | 76 |
| 32 Tjiudjung | Indian | 2 | 90 | 31 |
| | | | | |
| | | | | |
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Iraq



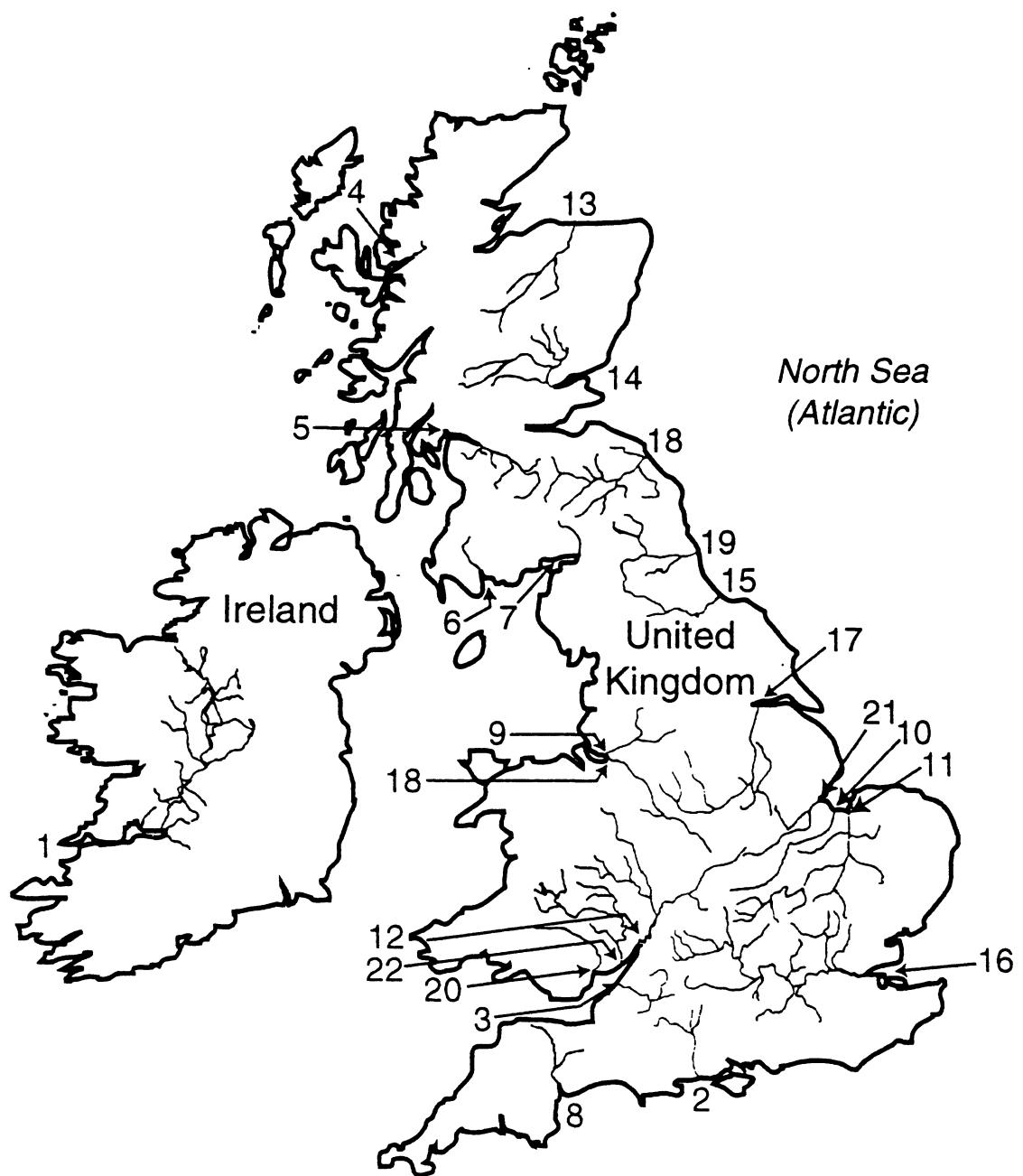
Global River Index - Iraq

| Iraq River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-----------------|--------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Shatt al Arab | Indian | 3800 | 2800 | 46 | 100 | 100 | 18 | 1,2 |

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Ireland and United Kingdom



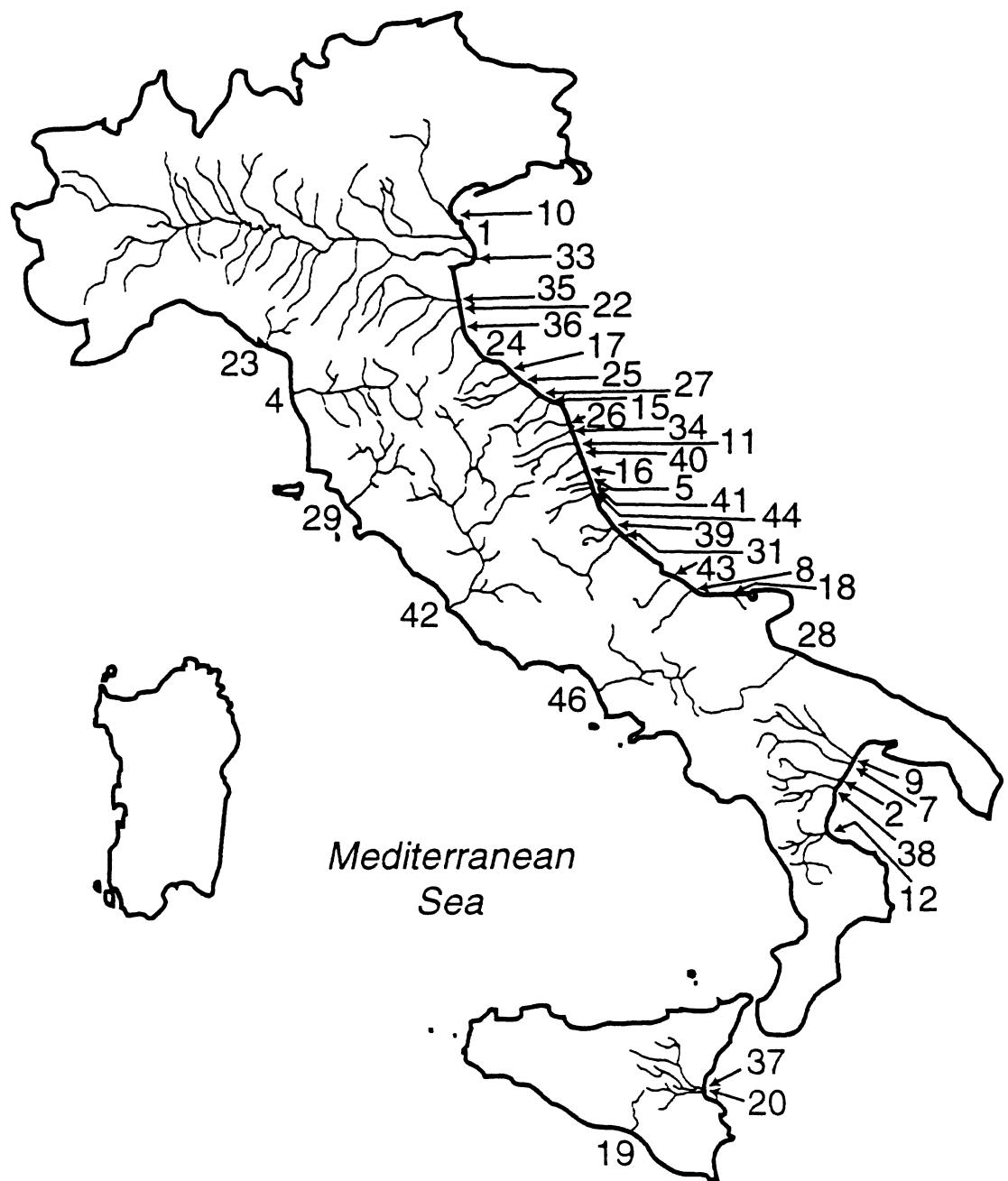
| Ireland River | Ocean | | Area(103km ²) | Length(km) | Max Elev(m) | Q(km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|----------------|-------------|--|---------------------------|------------|-------------|------------------------|--------------|--------------|--------------|
| 1 Shannon | Atl | | 11 | 260 | 570 | 5.7 | | | 8,11 |
| | U.K. | | | | | | | | |
| 2 Avon | Atl | | 2.2 | 120 | | 0.42 | 1,2,8,10 | | |
| 3 Bristol Avon | Atl | | 0.67 | 23 | | 0.02 | | | 3 |
| 4 Carron | Atl | | 1.9 | 100 | | 0.008 | 9,11 | | |
| 5 Clyde | Atl | | 0.26 | | | 0.11 | 1,3,8 | | |
| 6 Creedy | Atl | | 0.31 | | | 0.01 | 0.01 | | 3 |
| 7 Esk | Atl | | 0.6 | | | 0.18 | | | 2 |
| 8 Exe | Atl | | 2 | | | 0.01 | | | 3 |
| 9 Mersey | Atl | | 1.5 | | | 1.3 | | | 5 |
| 10 Nene | Atl | | 3.3 | 180 | | 0.29 | 0.01 | 1,4,8 | |
| 11 Ouse | Atl | | 6.8 | 210 | | 2 | | 5,10 | |
| 12 Severn | Atl | | 2.7 | 140 | | 2.6 | 0.44 | 1,3,8 | |
| 13 Spey | Atl | | 6.5 | 110 | | | | 1,8,10 | |
| 14 Tay | Atl | | 2 | 100 | | 6 | 1.6 | | |
| 15 Tees | Atl | | 15 | 400 | | 0.63 | | 6,10 | |
| 16 Thames | Atl | | 8.2 | 150 | | 2.4 | 0.08 | 0.23 1,7,8,9 | |
| 17 Trent | Atl | | 4.3 | 140 | | | | 1,7,8,9,10 | |
| 18 Tweed | Atl | | 2.2 | 89 | | 0.009 | 0.08 | 1,8,9,10 | |
| 19 Tyne | Atl | | 0.91 | | | | | 1,3,8,10 | |
| 20 Usk | Atl | | 0.53 | | | | | 0.44 | 1,3,8 |
| 21 Welland | Atl | | 4 | 220 | | 0.11 | 0.01 | | |
| 22 Wye | Atl | | | | | 2.4 | 0.2 | 1,3,8 | 4 |

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Italy



Global River Index - Italy

| Italy River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------|-------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Adige | Med | 12 | 400 | | 6.9 | 0.5 | | 1,2,8 |
| 2 Agri | Med | 0.28 | | | 0.25 | 0.07 | | 1 |
| 3 Arctidice (I) (E) | | 0.12 | | | 0.02 | 0.08 | | 1 |
| 4 Arno | Med | 8.1 | 250 | | | | | 2,2,3,4,8 |
| 5 Aso | Med | 0.28 | 70 | 1900 | | 0.18 | | 5 |
| 6 Avisio | | 0.16 | | | 0.03 | 0.1 | | 1 |
| 7 Basento | Med | 1.4 | | | | | | |
| 8 Biferno | Med | 1.3 | | | | | | |
| 9 Bradano | Med | 2.7 | | | 0.2 | 2.8 | | 1 |
| 10 Brenta | Med | 1.6 | | | | 0.19 | | 1,6 |
| 11 Chienti | Med | 1.3 | | | | 0.25 | 1.3 | 1,5 |
| 12 Crati | Med | 1.3 | | | | 0.85 | 1.2 | 1 |
| 13 D'Agliano | | 0.14 | | | | 0.02 | 0.04 | 1 |
| 14 Esaro | | 0.52 | | | | 0.35 | 0.27 | 1 |
| 15 Esino | Med | 1.2 | | | | 1100 | 0.9 | 5 |
| 16 Ete Vivo | Med | 0.18 | 30 | 580 | | 0.29 | | 5 |
| 17 Foglia | Med | 0.7 | | 1000 | | 0.25 | 1.4 | |
| 18 Fortore | Med | 1.1 | | | | 0.42 | 1.5 | 1 |
| 19 Gela | Med | 0.24 | | | | 0.02 | 0.13 | 1 |
| 20 Gornalunga | Med | 0.23 | | | | 0.005 | 0.03 | 1 |
| 21 Jaleo | | 0.16 | | | | 0.4 | 0.4 | 1 |
| 22 Lamone | Med | 0.52 | 95 | | | 0.28 | | 1,5 |
| 23 Magra | Med | 0.94 | | | | 1.3 | | 1 |
| 24 Marecchia | Med | 0.36 | | | | 0.31 | | 1 |
| 25 Metauro | Med | 1.4 | | | | 0.43 | | 5,6 |
| 26 Misa | Med | 0.38 | | | | | | 5 |
| 27 Musona | Med | 0.64 | | | | | | 5 |
| 28 Ofanto | Med | 2.7 | | | | | | 1 |

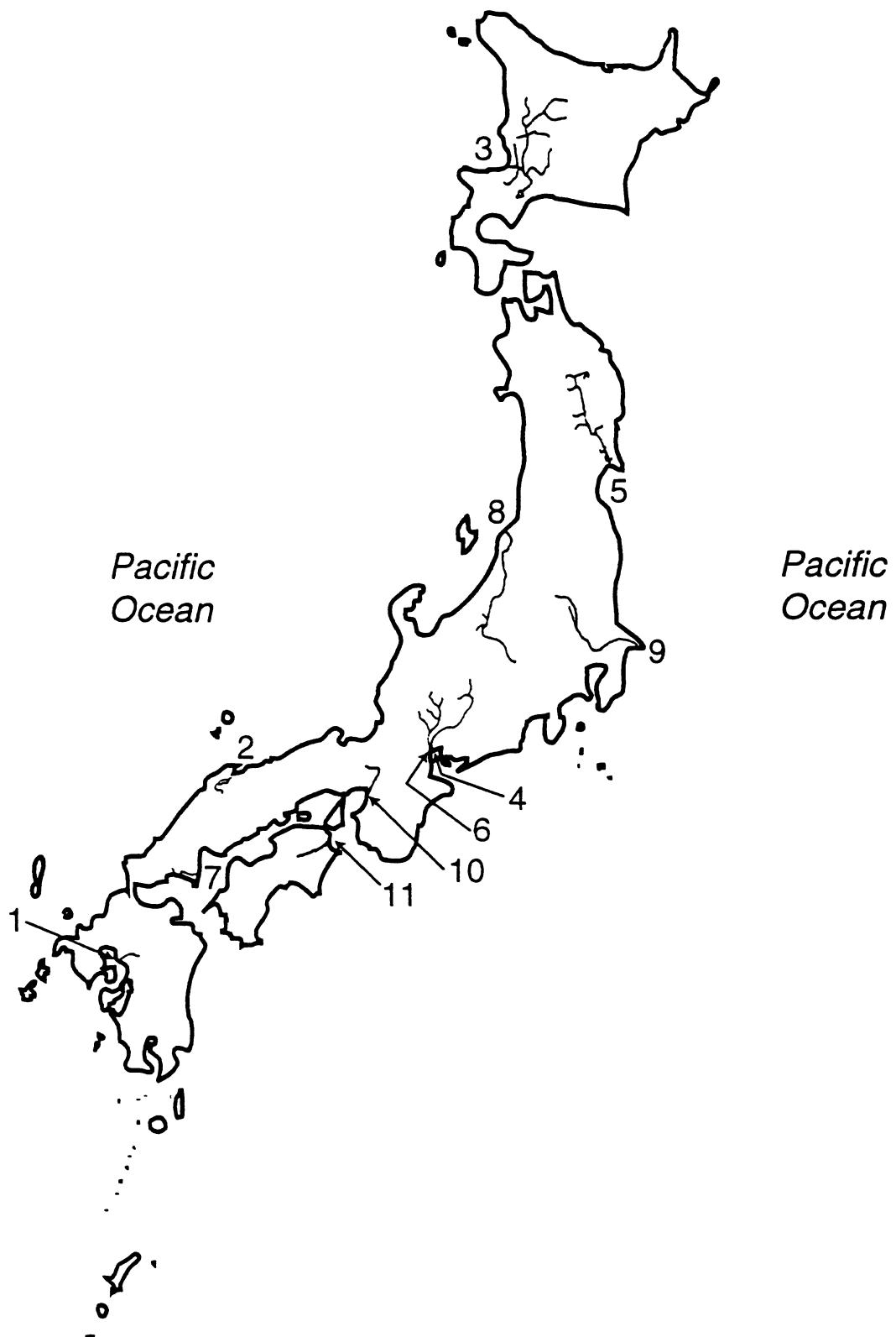
Global River Index - Italy

| | | | | | | | | | | |
|----|---------------|-----|------|-----|------|------|----------|-----|--|---|
| 29 | Ombrone | Med | 2.6 | | | 1.9 | | 1.6 | | 1 |
| 30 | Orcia | Med | 0.58 | | | 1.1 | | 1.6 | | 1 |
| 31 | Pescara | Med | 3.1 | | | | | | | |
| 32 | Pescara | Med | 0.41 | | | | | | | |
| 33 | Po | Med | 70 | 680 | | | | | | |
| 34 | Potenza | Med | 0.77 | | | | | | | |
| 35 | Reno | Med | 3.4 | 100 | | | | | | |
| 36 | Savio | Med | 0.6 | 55 | | | | | | |
| 37 | Simento | Med | 1.8 | | | | | | | |
| 38 | Sinna | Med | 1.1 | | | | | | | |
| 39 | Tavo | Med | 0.21 | | | | | | | |
| 40 | Tenna | Med | 0.49 | 70 | 1200 | | | | | |
| 41 | Tesino | Med | 0.11 | 35 | 750 | | | | | |
| 42 | Tevere(Tiber) | Med | 1.7 | 400 | | | | | | |
| 43 | Trigno | Med | 0.54 | | | | | | | |
| 44 | Tronto | Med | 1.2 | 100 | 1900 | | | | | |
| 45 | Vafio | Med | 0.26 | 5.5 | | | | | | |
| 46 | Voltumo | Med | | | | 3.1 | 4.2 | 1.4 | | |
| | | | | | | 0.03 | 0.1 | 1 | | |
| | | | | | | 5.9 | 5.7 | | | |
| | | | | | | 0.25 | 0.42 | 1 | | |
| | | | | | | 7.4 | 7.5(3.1) | | | |
| | | | | | | 0.45 | 0.45 | 5 | | |
| | | | | | | 0.12 | 0.12 | 5 | | |
| | | | | | | 1.1 | 1.1 | 5 | | |
| | | | | | | 0.06 | 0.06 | 1 | | |
| | | | | | | 0.53 | 0.53 | 1 | | |
| | | | | | | 2.5 | 2.5 | 1 | | |
| | | | | | | 0.65 | 0.65 | 1 | | |
| | | | | | | 0.31 | 0.31 | 1 | | |
| | | | | | | 1600 | 1600 | 5 | | |
| | | | | | | 46 | 46 | 1 | | |
| | | | | | | 1.8 | 1.8 | 1 | | |
| | | | | | | 0.45 | 0.45 | 1 | | |
| | | | | | | 1.1 | 1.1 | 1 | | |
| | | | | | | 0.3 | 0.3 | 1 | | |
| | | | | | | 1.1 | 1.1 | 1 | | |
| | | | | | | 1.6 | 1.6 | 1 | | |
| | | | | | | 16 | 16 | 1 | | |
| | | | | | | 2,5 | 2,5 | 1 | | |
| | | | | | | 8 | 8 | 1 | | |
| | | | | | | 5,8 | 5,8 | 1 | | |

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Japan



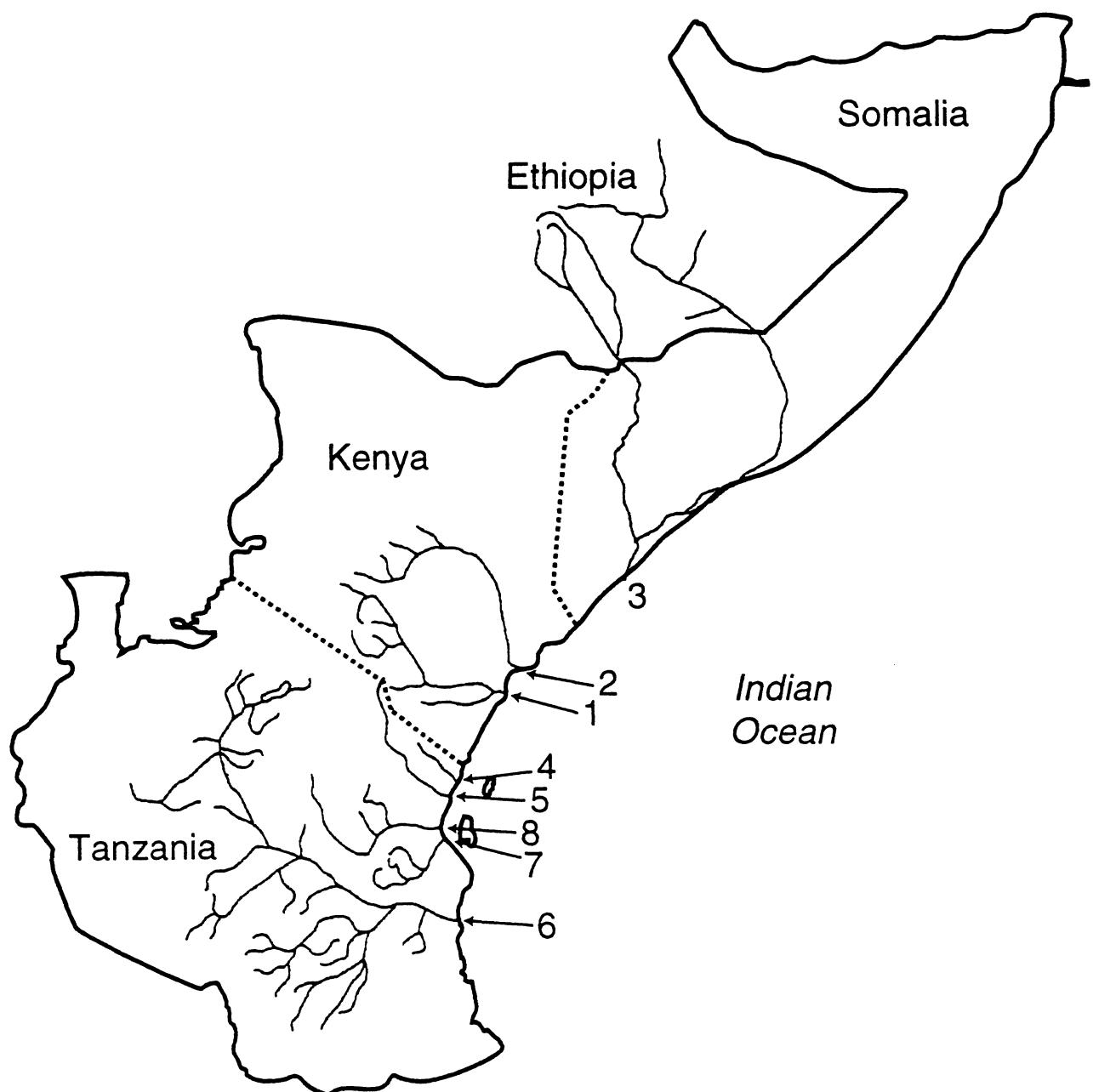
Global River Index - Japan

| Japan River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS (106t/yr) | TDS (106t/yr) | Reference(s) |
|----------------|-------|---------------------------|-------------|--------------|-------------------------|---------------|---------------|--------------|
| 1 Chikugo | Pac | 2.9 | 120 | | | 3.7 | | 1 |
| 2 Hii | Pac | 0.92 | | | | 0.9 | 0.9 | 2 |
| 3 Ishikari | Pac | 1.4 | 260 | | | 15 | | 3 |
| 4 Kiso | Pac | 9.1 | 190 | | | 10 | | 1 |
| 5 Kitakami | Pac | 10 | 250 | | | 9.4 | | 1 |
| 6 Nagara | Pac | 2 | | | | 3.6 | 0.4 | 4 |
| 7 Ota | Pac | 8.2 | 110 | | | 2.3 | | 1 |
| 8 Shinano | Pac | 12 | 370 | | | 16 | | 1 |
| 9 Tone | Pac | 17 | 300 | | | 15 | 3.2 | |
| 10 Yodo | Pac | 8.2 | 75 | | | 9.7 | 1.9 | 3 |
| 11 Yoshino | Pac | 3.6 | 190 | | | 5.3 | | 1 |

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Kenya, Somalia, and Tanzania



GLORI - Kenya and Somalia

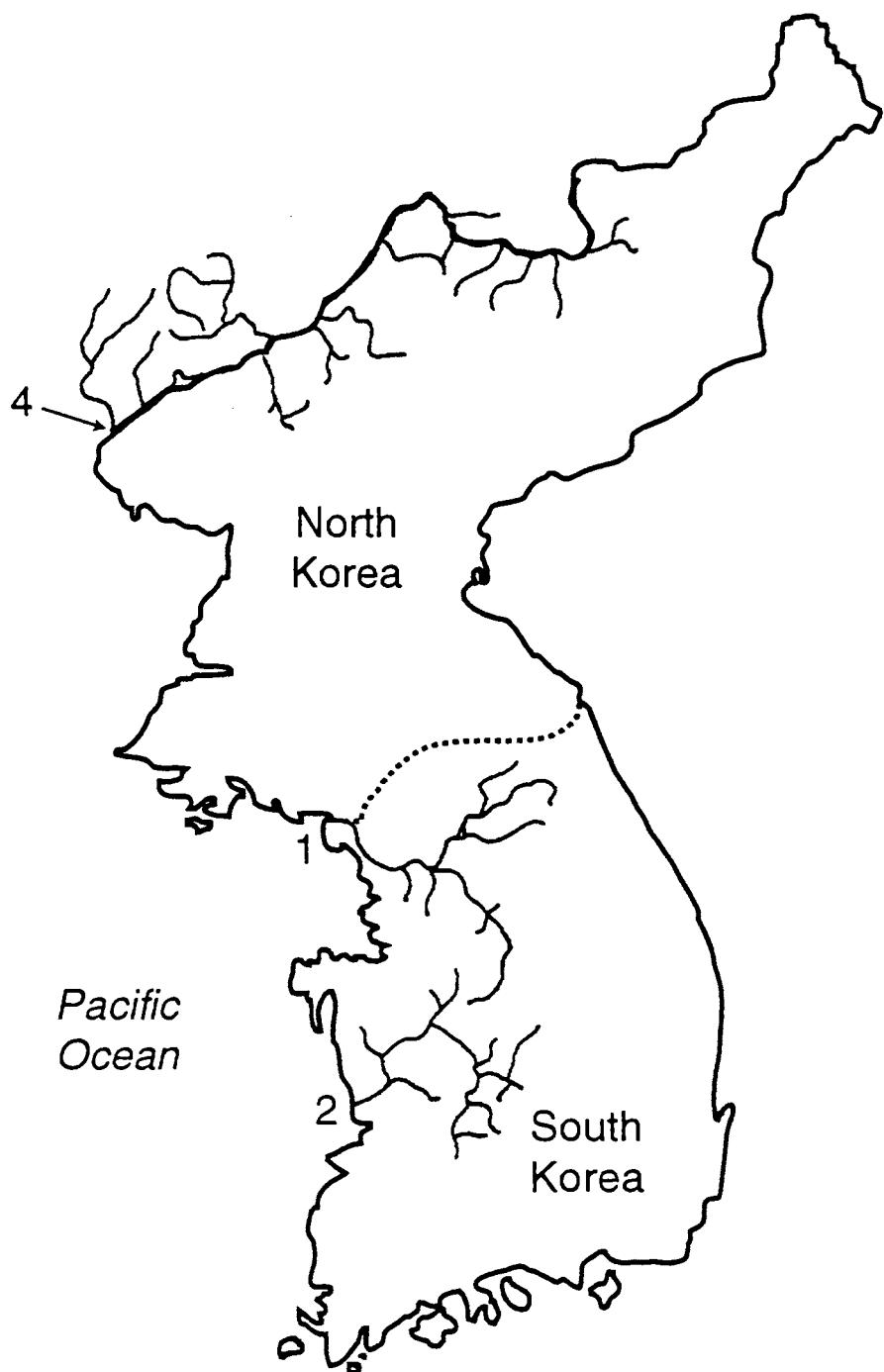
| Kenya River | Ocean | Area(103km²) | Length(km) | Max Elev(m) | Q(km³/yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------------|----------------------------|--------------------------------|-------------------|--------------------|-----------------------------|---------------------|---------------------|---------------------|
| 1 Sabaki | Indian | | 40 | | | 1 | | 2 |
| 2 Tana | Indian | | 42 | 800 | | 4.7 | | 3,4,5 |
| Somalia | | | | | | | | |
| 3 Shebeli | Indian | | 200 | 2000 | | 2 | | 1 |
| Bibliography: | | | | | | | | |
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| Tanzania River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|----------------|--------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 4 Mkomazi | Indian | | 3 | | | | 0.15 | 1 |
| 5 Pangani | Indian | | 25 | | | | | 1 |
| 6 Rufiji | Indian | | 180 | 1400 | | | 31 | 1,2,3 |
| 7 Ruvu | Indian | | 15 | | | | 17 | |
| 8 Wami | Indian | | 36 | | | | | 1 |

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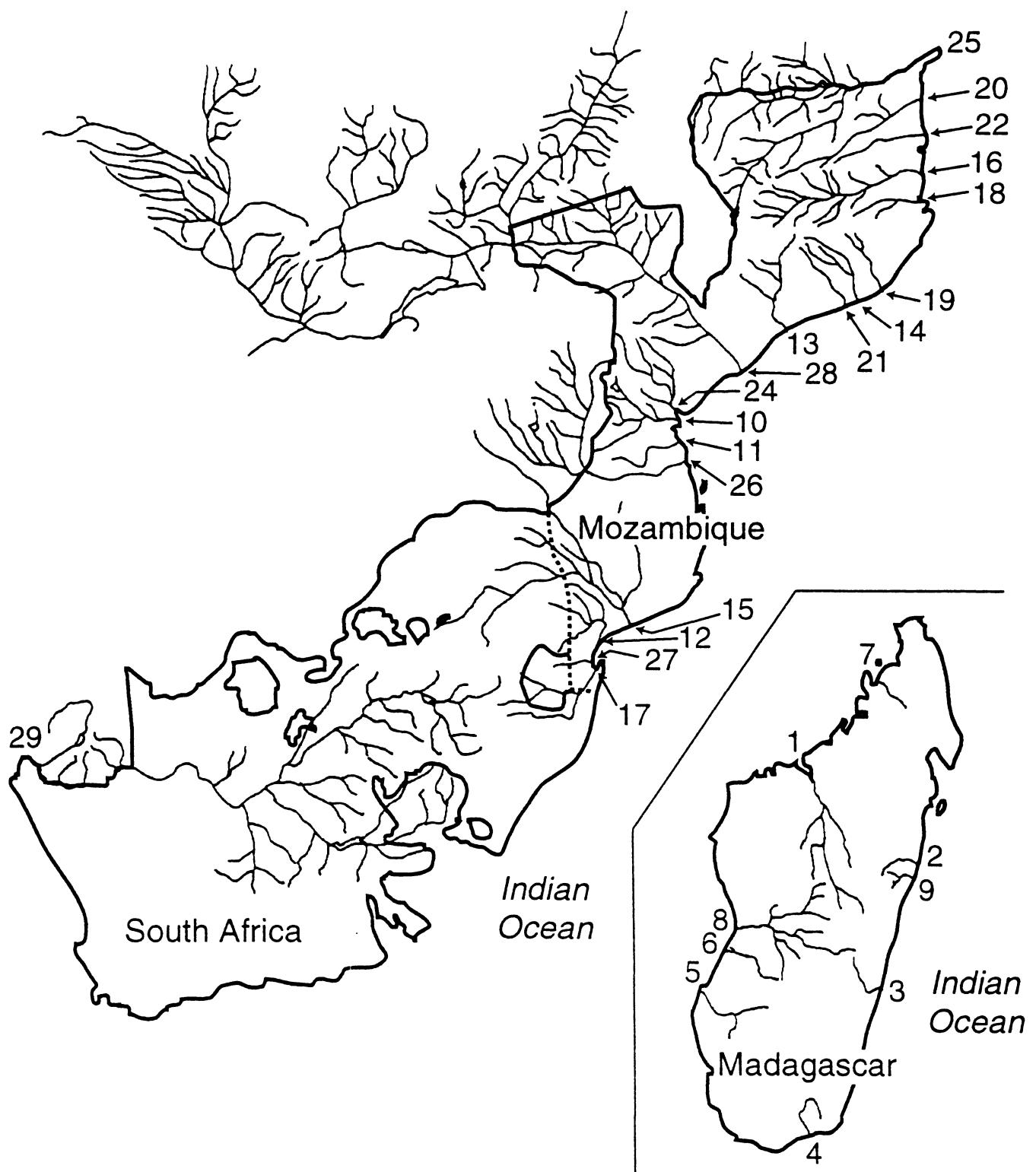
Korea



Global River Index - Korea

| Korea River | Ocean | Area(10 ³ km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(10 ⁶ t/yr) | TDS(10 ⁶ t/yr) | Reference(s) |
|-------------------------|-------|--|-------------|--------------|-------------------------|---------------------------|---------------------------|--------------|
| 1 Han | Pac | 25 | 470 | 3(≥10) | 15 | 5.6 | | 1,2,5 |
| 2 Kum | Pac | 10 | 250 | | 12 | 10 | | 1,3,5 |
| 3 Nakdong | Pac | 23 | | | | | | 1,4 |
| 4 Yalu | Pac | 64 | 800 | | | | | |
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Madagascar, Mozambique, and South Africa



Global River Index - Madagascar

| Madagascar River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|------------------|--------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Betsiboka | Indian | 1.8 | 520 | 3.4 | — | — | — | 1,4 |
| 2 Ivondro | Indian | 2.8 | — | 3.3 | — | — | — | 1 |
| 3 Mananjary | Indian | 2.3 | — | 3.1 | — | — | — | 1 |
| 4 Mandrare | Indian | 1.2 | — | 3.1 | — | — | — | — |
| 5 Mangoky | Indian | 5.0 | 560 | 1.5 | — | — | — | 1,4 |
| 6 Morondava | Indian | 4.2 | — | 1.8 | — | — | — | 1,2 |
| 7 Sambirano | Indian | 3 | — | 3.6 | — | — | — | 3 |
| 8 Tsiribihina | Indian | 4.5 | 523 | 3.1 | — | — | — | 2,4 |
| 9 Vohitra | Indian | 1.8 | — | 2.3 | — | — | — | 1 |

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| Mozambique River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------|--------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|----------------|
| 10 Buzi | Indian | 29 | | | 1.4 | | | 1 |
| 11 Gorongosa | Indian | 13 | | | | | | 1 |
| 12 Incomati | Indian | 46 | | | 2.3 | | | 1 |
| 13 Licungo | Indian | 28 | | | 1.2 | | | 1 |
| 14 Ligonha | Indian | 16 | | | 0.82 | | | 1 |
| 15 Limpopo | Indian | 410 | 1600 | | 5.3 | 33 | | 1,3,1,2,3,4,9 |
| 16 Lurio | Indian | 61 | 560 | | 7.3 | | | 1,2 |
| 17 Maputo | Indian | 30 | | | 2.8 | | | 1 |
| 18 Mecuburi | Indian | 8.9 | | | 0.46 | | | 1 |
| 19 Meluli | Indian | 9.7 | | | 1.9 | | | 1 |
| 20 Messalo | Indian | 24 | | | 1 | | | 1 |
| 21 Molocue | Indian | 6.5 | | | 0.86 | | | 1 |
| 22 Montepuez | Indian | 9.5 | | | 0.19 | | | 1 |
| 23 Nonalflo | Indian | 8.8 | | | 1 | | | 1 |
| 24 Pungoe | Indian | 29 | | | 3.1 | | | 1 |
| 25 Ruvuma | Indian | 150 | 800 | | | | | 1,2 |
| 26 Save | Indian | 100 | 680 | | 5 | | | 1,2,5 |
| 27 Umbeluzi | Indian | 5.6 | | | 0.31 | | | 1 |
| 28 Zambezé | Indian | 1,300 | 2700 | | 100 | 20(48) | | 14,1,2,3,6,10 |
| South Africa | | | | | | | | |
| 29 Orange | Atl | 1100 | 1900 | | 1600 | 11(89) | 17(89) | 2,02,2,3,5,7,8 |

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GLORI-Mozambique & S. Africa

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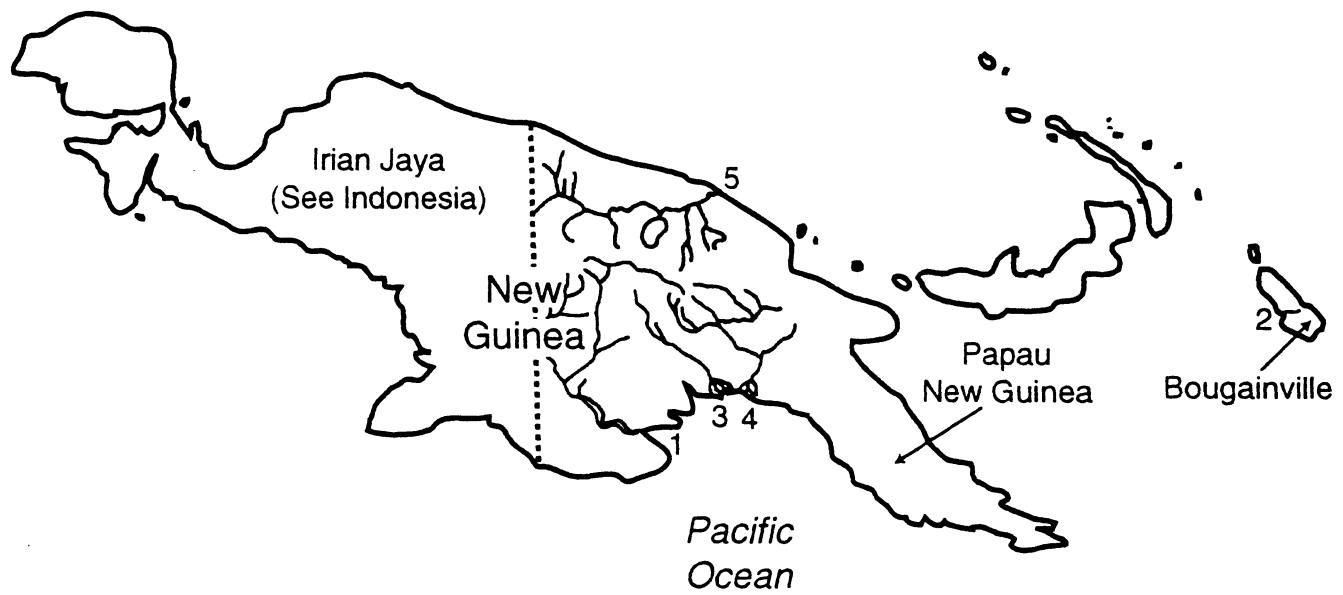
Mexico



Global River Index - Mexico

| Mexico River | Ocean | Area(103km ²) | Length (km) | Max Elev (m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------------|-------|---------------------------|-------------|--------------|-------------------------|--------------|--------------|--------------|
| 1 Ameica | Pac | 12 | 230 | 3 | | | 0.56 | 1,6 |
| 2 Balsas | Pac | 120 | 720 | 16 | | | | 1,6 |
| 3 Colorado | Pac | 640 | 3200 | 0(20) | 0.1 | | 120 | 3 |
| 4 Grijalva | Atl | 36 | 320 | 23 | | | | 4,5,6 |
| 5 Panuco | Atl | 66 | 160 | 17 | | | | 2,6 |
| 6 Santiago | Pac | 130 | 960 | 7.4 | | | | 2,6 |
| 7 Usumacinta | Atl | 100 | 430 | 53 | | | | 1,2,6 |
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New Guinea

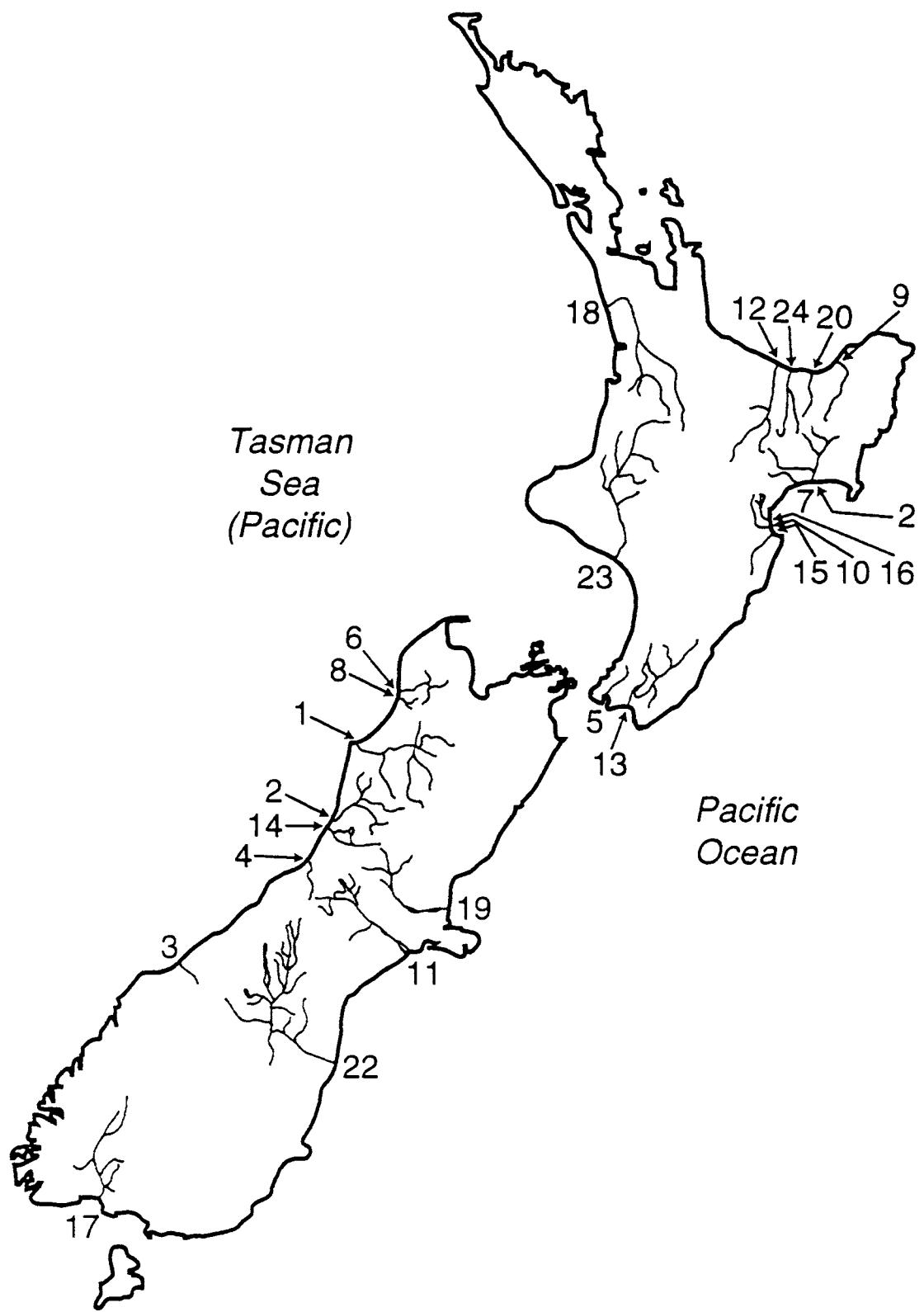


GLORI - New Guinea

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New Zealand



| New Zealand River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------|-------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Buller | Pac | 6.4 | 130 | 700 | 16 | 1.7 | 1,2 | |
| 2 Grey | Pac | 3.9 | 120 | | 9.3 | 3.1 | 3,5,6 | |
| 3 Haast | Pac | 1 | 74 | 1500 | 6 | 17 | 2 | |
| 4 Hokitika | Pac | 1.1 | 1 | 1300 | 3.1 | 12 | 2 | |
| 5 Hutt | Pac | 0.64 | 69 | | 2.6 | 0.49 | 2 | |
| 6 Karamoa | Pac | 1.2 | 69 | 800 | 3.5 | 0.39 | 2,5 | |
| 7 Mohaka | Pac | 2.4 | 700 | | 0.89 | | 3 | |
| 8 Mokihinui | Pac | 0.75 | | 800 | | 2.9 | 2 | |
| 9 Motu | Pac | 1.4 | | 800 | | 2.7 | 3 | |
| 10 Ngaruroro | Pac | 1.9 | | 800 | | 0.88 | 3 | |
| 11 Rakaia | Pac | 2.6 | 89 | 1300 | 6.2 | | 4,3 | |
| 12 Rangitaiki | Pac | 0.23 | | | | 0.02 | 3 | |
| 13 Ruamahanga | Pac | 0.64 | | 600 | | 0.23 | 3 | |
| 14 Taramakau | Pac | 2.4 | 1 | | | | 3 | |
| 15 Tukiuki | Pac | 0.79 | | 600 | | | 3 | |
| 16 Tutaekuri | Pac | 8.2 | 97 | 2000 | 17 | | 1,2,5 | |
| 17 Waiau | Pac | 1.9 | | | | 13 | 1,4 | |
| 18 Waikato | Pac | 3.2 | 150 | 1300 | 3.8 | | 2 | |
| 19 Waimakariri | Pac | 0.64 | | 600 | | 0.38 | 3 | |
| 20 Waioeka | Pac | 1.6 | | 600 | | 9.3 | 3 | |
| 21 Waipaoa | Pac | 9.7 | | | 7.4 | | 1 | |
| 22 Waitaki | Pac | 6.6 | | 600 | | | 3 | |
| 23 Wanganui | Pac | 1.6 | | | | 2.2 | 3 | |
| 24 Whakatane | Pac | | | | | 0.38 | 3 | |

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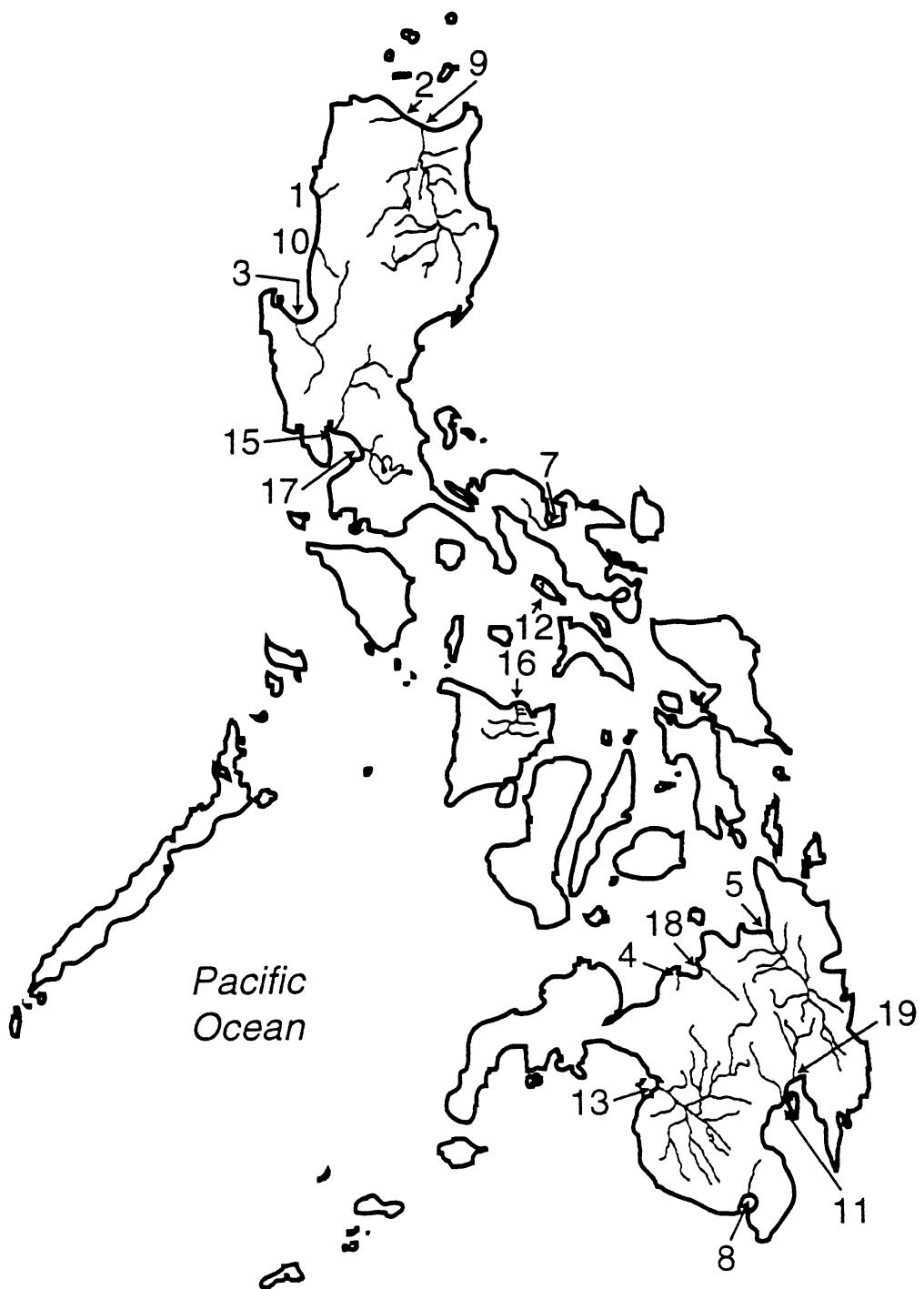
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Global River Index-New Zealand

| | | | | | | | |
|----|----------------------|--|--|--|--|--|--|
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Philippines



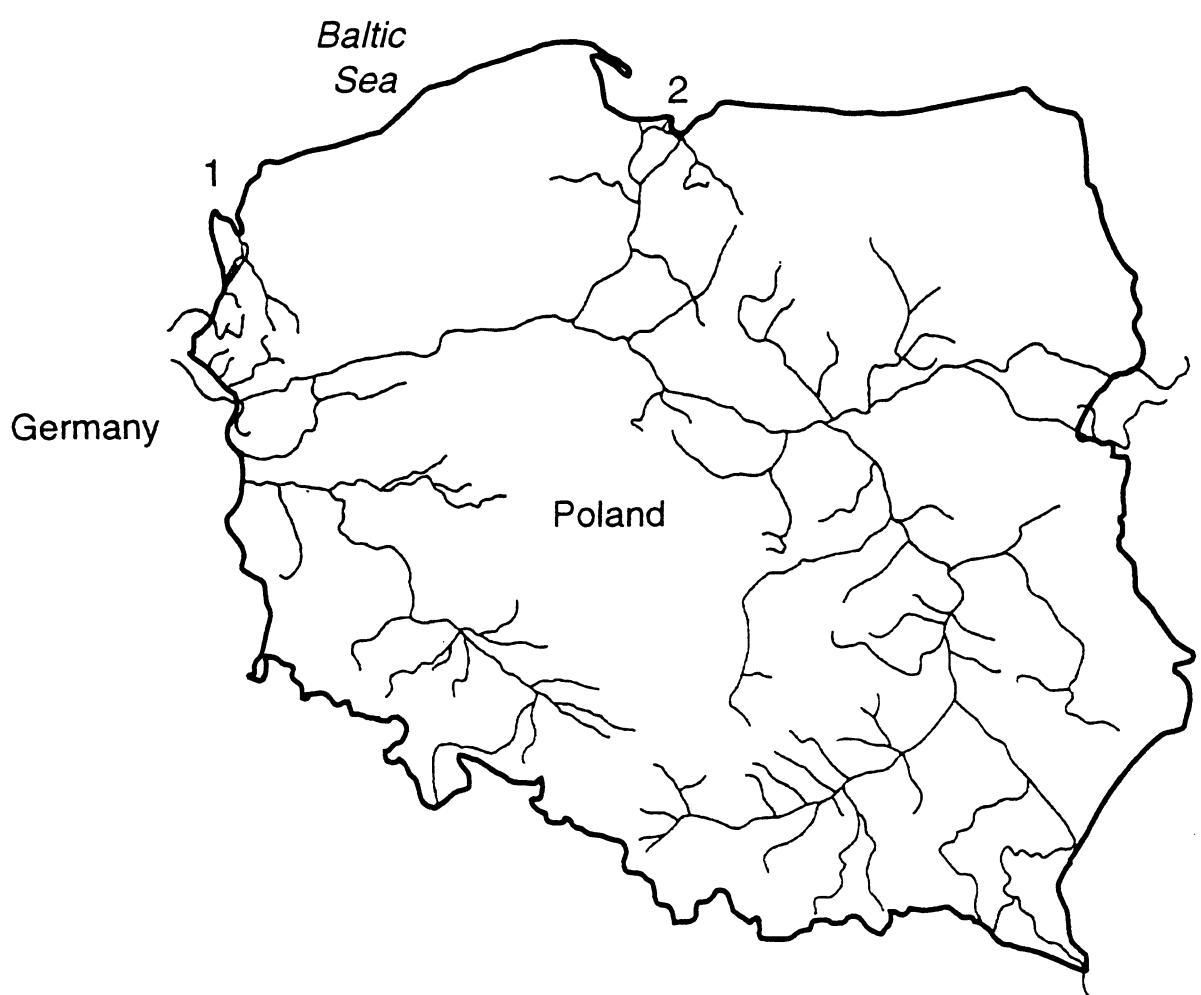
Global River Index-Philippines

| Philippines River | Ocean | Area (103km²) | Length (km) | Max Elev (m) | Q (km³/yr) | TSS (106t/yr) | TDS (106t/yr) | Reference(s) |
|--------------------------|--------------|---------------------------------|--------------------|---------------------|------------------------------|----------------------|----------------------|---------------------|
| 1 Abra | Pac | 5.1 | >900 | | 1.3 | | | 1 |
| 2 Abulug | Pac | 3.4 | | | 7.1 | | | 1 |
| 3 Agno | Pac | 2.2 | 270 | | 4 | 5 | | 1,2,3 |
| 4 Agus | Pac | 1.6 | | | 1.9 | | | 1 |
| 5 Agusan | Pac | 1.1 | | | 2.8 | | | 1,3 |
| 6 Arigat | Pac | 0.57 | | | | 4.6 | | 2 |
| 7 Bicol | Pac | 3.8 | | 2,400 | | 5.1 | | 1 |
| 8 Buayan-Malung | Pac | 1.4 | | 2,300 | | 2.9 | | 1 |
| 9 Cagayan | Pac | 2.6 | | | | 54 | | 1,3 |
| 10 Chico | Pac | 3.3 | | | | 8.5 | | 3 |
| 11 Davao | Pac | 1.6 | | | | 3.2 | | 1 |
| 12 Illog | Pac | 1.5 | | | | 1.8 | | 3 |
| 13 Mindanao | Pac | 2.3 | | | | 27 | | 1 |
| 14 Pernambaga | Pac | 0.83 | | | | 1.5 | 1.1 | 2 |
| 15 Pampanga | Pac | 9.7 | | | | 11 | 1 | 1,2,3 |
| 16 Panay | Pac | 2.2 | | | | 2.3 | | 1 |
| 17 Pasig-Laguna | Pac | 4.7 | 17 | | | 7.5 | | 1 |
| 18 Tagoloan | Pac | 1.7 | | | | 4.3 | | 1 |
| 19 Tagum-Libugar | Pac | 3.1 | | | | 6.1 | 1 | 1 |

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Poland



Global River Index - Poland

| Poland River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-----------------|------------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Oder | Baltic Sea | 120 | 910 | | | 16 | 0.13 | 1,3 |
| 2 Vistula | Baltic Sea | 200 | 1100 | | 3.3 | 2.5 | | 2,3 |

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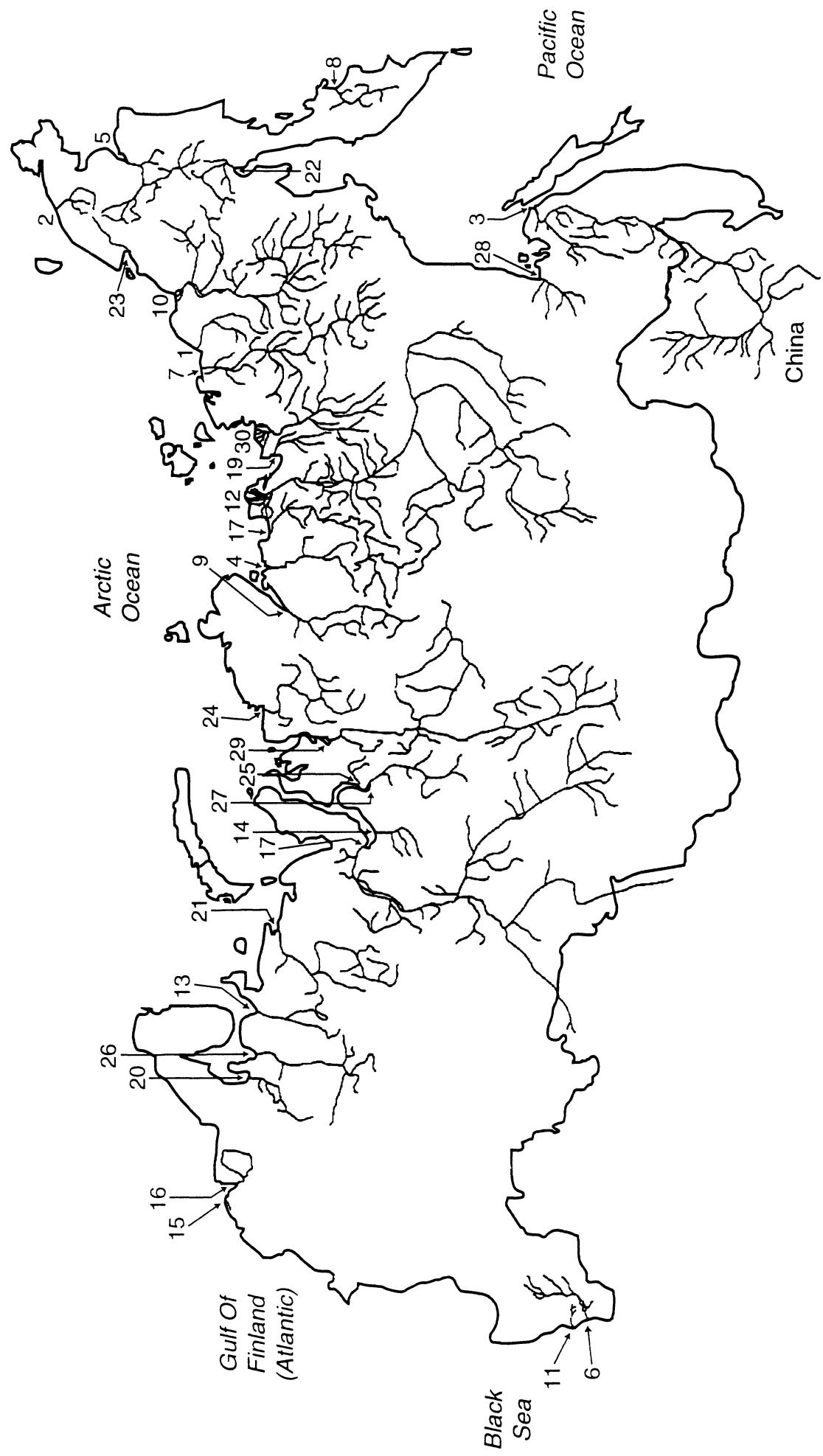
Portugal and Spain



GLORI - Portugal & Spain

| Portugal River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q(km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|--------------------------|-------|---------------------------|-------------|-------------|------------------------|--------------|--------------|--------------|
| 1 Douro | Atl | 98 | 780 | — | 20 | — | — | 5 |
| 2 Guadiana | Atl | 72 | 830 | — | — | 0.07 | — | 5 |
| 3 Mondego | Atl | 4.9 | — | — | — | — | — | 4 |
| 4 Tagus | Atl | 76 | 1000 | — | — | 2.6 | — | — |
| Spain | | | | | | | | |
| 5 Ebro | Med | 85 | 930 | — | — | 17 | 1.5(18) | 1,2,3 |
| 6 Guadalquivir | Atl | 56 | 560 | — | — | 7.3 | — | 1,2,4 |
| 7 Jucar | Med | 2.1 | — | — | — | — | — | — |
| 8 Llobregat | Med | 4.9 | — | — | — | 1.6 | — | 1,2 |
| 9 Segura | Med | 15 | — | — | — | 0.69 | — | 2,4 |
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Russia



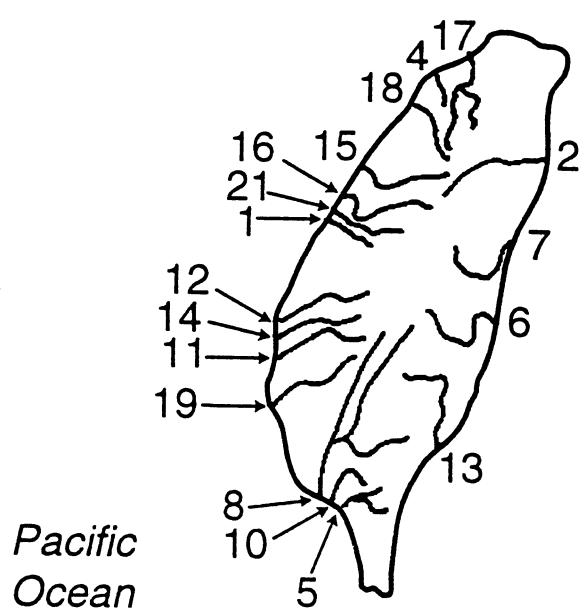
Global River Index- Russia

| Russia River | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|-------------------|------------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Alazeya | Arctic | 68 | | | 0.8 | 0.7 | | 1,11 |
| 2 Amygema | Arctic | 30 | | | 9.2 | 0.35 | 0.16 | 1,2 |
| 3 Amur | Pac | 1800 | 4400 | | 320 | 52 | 24 | 3,4 |
| 4 Anabar | Arctic | 100 | 2800 | | 17 | 0.4 | 0.87 | 1,11 |
| 5 Anadir | Bering Sea | 190 | 1100 | | 60 | | 19 | 3 |
| 6 Don | Black Sea | 420 | 2000 | 200 | 26 | 6.4 | 8.53 | 2,5,6,12 |
| 7 Indigirka | Arctic | 360 | 2000 | | 61 | 1.3 | 3.6 | 1,11 |
| 8 Kamtchatka | Pac | 47 | | | 1.5 | | | 6 |
| 9 Khatanga | Arctic | 360 | 1600 | | 85 | 1.7 | 7.9 | 1,10,11 |
| 10 Kolyma | Arctic | 660 | 2600 | | 130 | 16 | 6.5 | 1,10,11 |
| 11 Kuban | Black Sea | 48 | 870 | 2000 | 13 | 7.7 | 2 | 3,7,12 |
| 12 Lena | Arctic | 2500 | 4400 | | 520 | 18 | 60 | 1,11 |
| 13 Mezen | Arctic | 78 | 970 | | 27 | 0.9 | 3.5 | 1 |
| 14 Nadym | Arctic | 64 | | | 18 | 0.4 | | 1,11 |
| 15 Narva | Baltic | | | | 14 | | | 9 |
| 16 Neva | Atl | 280 | 1100 | | 80 | | | 3 |
| 17 Ob | Arctic | 2500 | 5400 | | 430 | 16 | 47 | 1,11 |
| 18 Olenjok | Arctic | 220 | 2300 | | 36 | 1.1 | 14 | 1,11 |
| 19 Omoloy | Arctic | 39 | | | 7 | 0.13 | | 1,11 |
| 20 Onega | Arctic | 57 | 420 | | 18 | 0.3 | 3 | 1,3,10 |
| 21 Pechora | Arctic | 320 | 1900 | | 130 | 13 | 8.7 | 1 |
| 22 Peshina | Pac | 71 | 710 | | 22 | | | 3 |
| 23 Polyavaam | Arctic | 6.8 | | | | 0.05 | | 11 |
| 24 Pyasina | Arctic | 180 | 710 | | 86 | 3.4 | | 1 |
| 25 Pyr | Arctic | 110 | 400 | | 34 | 0.6 | 1.3 | 1,11 |
| 26 Severnay Dvina | Arctic | 360 | 1800 | | 120 | 4.5 | 24 | 1,7,8,9,10 |
| 27 Taz | Arctic | 150 | | | 44 | 0.9 | 4.3 | 1,11 |
| 28 Uda | Pac | 61 | 460 | | 25 | | 3,9 | |
| 29 Yana | Arctic | 320 | 1400 | | 34 | 3.5 | 3.1 | 1,6,8,11 |
| 30 Yenisei | Arctic | 2600 | 5500 | | 620 | 13 | 60 | 1,7,11 |

Global River Index- Russia

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Taiwan



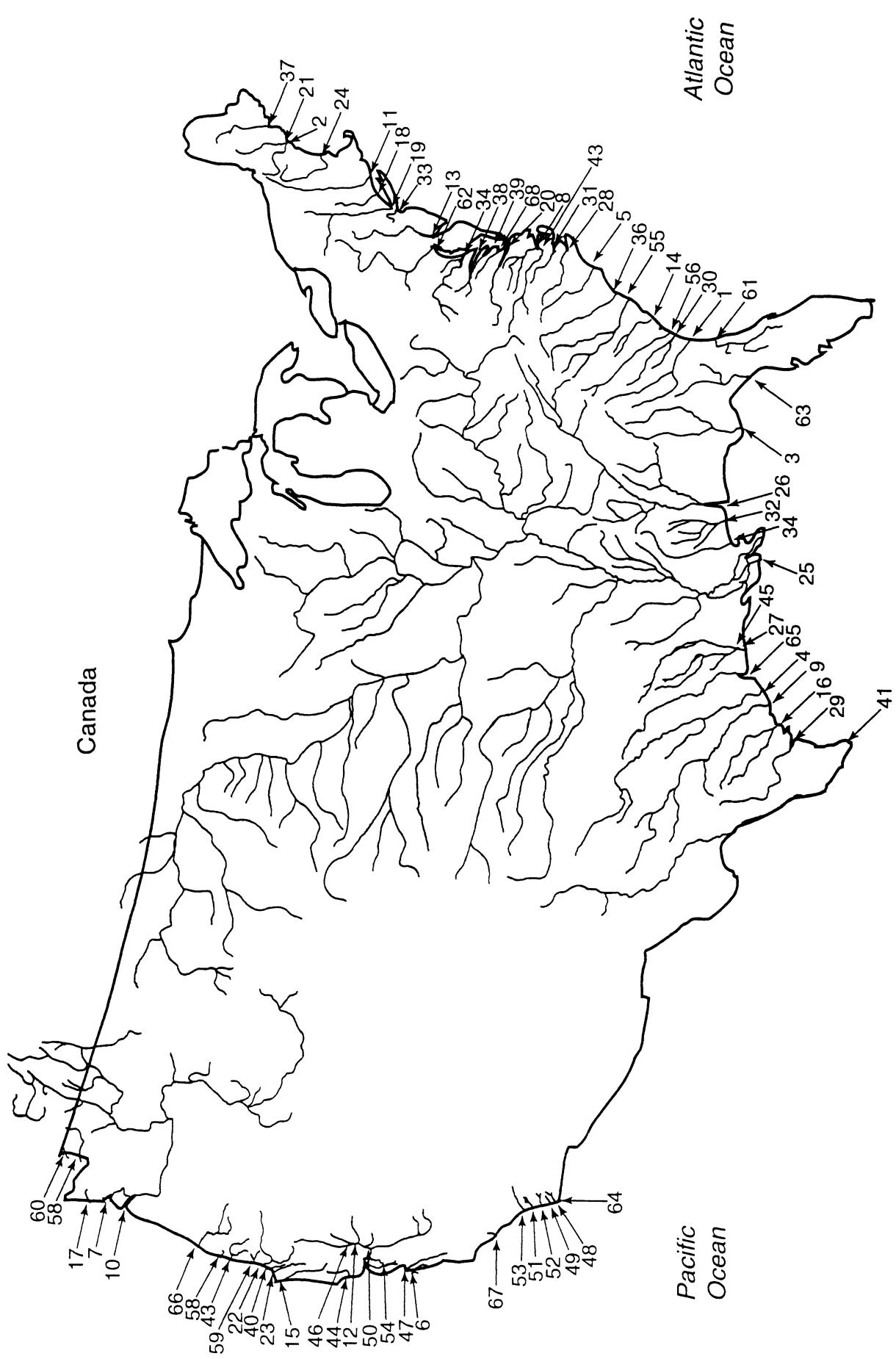
Global River Index - Taiwan

| Taiwan River | Ocean | Area (103km ²) | Length (km) | Max Elev. (m) | Q (km ³ /yr) | TSS(10 ⁶ t/yr) | TDS(10 ⁶ t/yr) | Reference(s) |
|---------------|-------|----------------------------|-------------|---------------|-------------------------|---------------------------|---------------------------|--------------|
| 1 Chishui | Pac | 3.8 | 65 | 550 | 5.2 | 2.1 | | 1 |
| 2 Choshui | Pac | 3.1 | 190 | 3400 | 6.1 | 6.4 | | 1 |
| 3 Erhien | | 0.35 | 65 | 460 | 0.5 | 1.3 | | 1 |
| 4 Houtung | Pac | 0.54 | 58 | 2600 | 0.9 | 4.4 | | 1 |
| 5 Hsiatanshui | Pac | 3.3 | 170 | 4000 | 4.2 | 20 | | 1 |
| 6 Hsiukuluau | Pac | 1.8 | 81 | 2400 | 3.8 | 21 | | 1 |
| 7 Hualien | Pac | 1.5 | 57 | 2300 | 8.5 | 36 | | 1 |
| 8 Kaoping | Pac | 3.3 | 170 | 4000 | 8.5 | | | 1 |
| 9 Lanying | Pac | 9.8 | 73 | 3500 | 2.8 | 8 | | 1 |
| 10 Linpian | Pac | 0.34 | 42 | 2900 | 0.86 | 1.8 | | 1 |
| 11 Pachang | Pac | 0.47 | 80 | 1900 | 0.74 | 3.2 | | 1 |
| 12 Peikang | Pac | 0.64 | 82 | 520 | 1 | 2.3 | | 1 |
| 13 Peinan | Pac | 1.6 | 84 | 3700 | | 24 | | 1 |
| 14 Potzu | Pac | 0.43 | 76 | 1400 | 0.55 | 0.83 | | 1 |
| 15 Taan | Pac | 0.76 | 96 | 3300 | 1.6 | 4.9 | | 1 |
| 16 Tachia | Pac | 1.2 | 140 | 2600 | 2.6 | 4 | | 1 |
| 17 Tanshui | Pac | 2.7 | 160 | 3500 | 7 | 11 | | 1 |
| 18 Touchien | Pac | 0.6 | 63 | 2200 | 0.99 | 2.6 | | 1 |
| 19 Tsengwen | Pac | 1.2 | 140 | 2400 | 2.4 | 31 | | 1 |
| 20 Tungkeng | Pac | 0.47 | 47 | 1100 | 1.1 | 0.61 | | 1 |
| 21 Wu | Pac | 2.1 | 120 | 2600 | 3.7 | 6.8 | | 1 |
| 22 Yenchiui | | 0.22 | 87 | 140 | 0.3 | 2.2 | | 1 |

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**United States Of America
(not including Alaska)**



Global River Index - USA

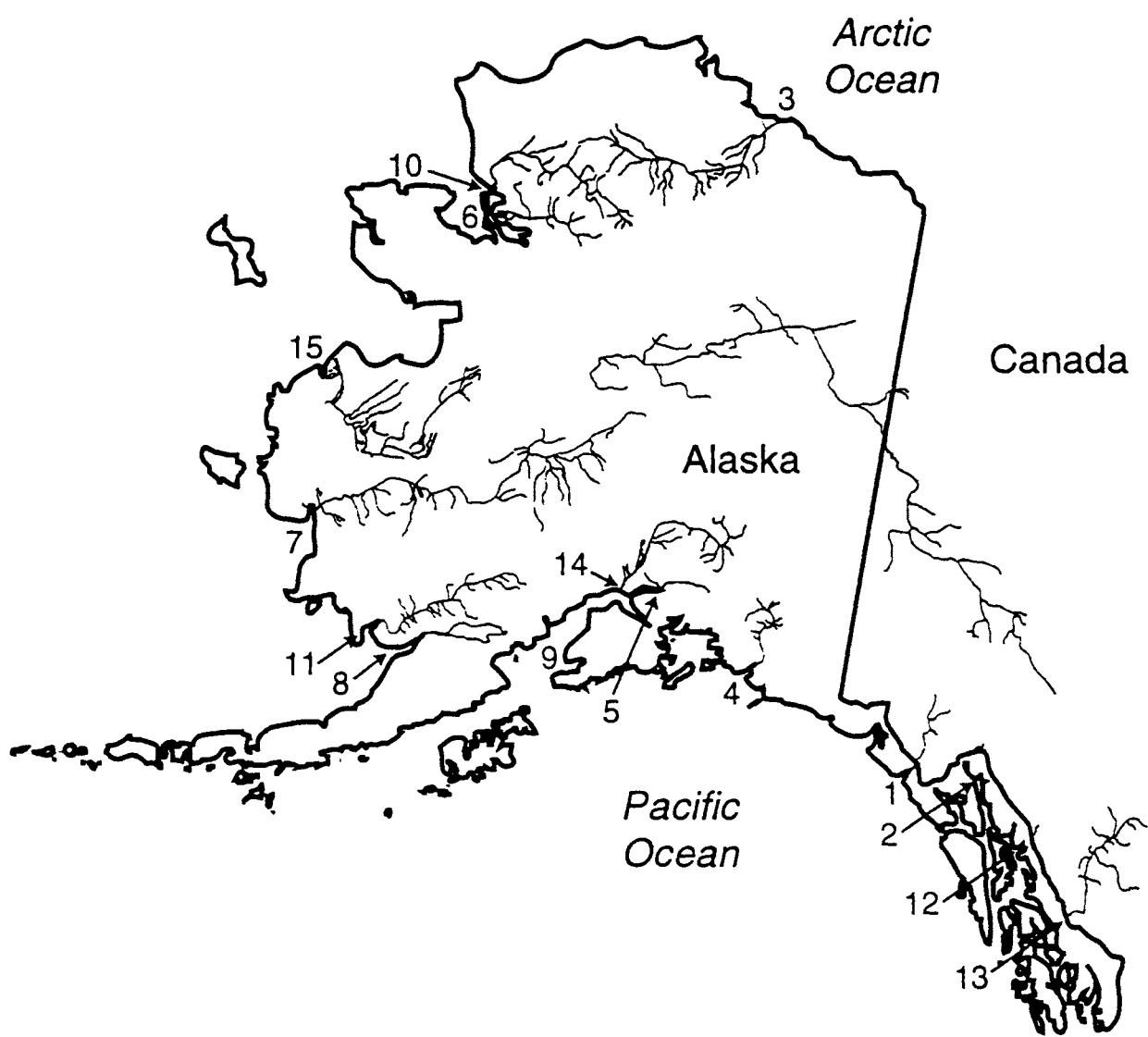
| USA River | Ocean | Area (103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS (106t/yr) | TDS (106t/yr) | Reference(s) |
|------------------|-------|----------------------------|-------------|-------------|-------------------------|---------------|---------------|-------------------|
| 1 Altamaha | Atl | 35 | | 300 | 1.2 <1(2.5) 5 | | 0.9 | 2,3,5,6,15 14. |
| 2 Androscoggin | Atl | 8.8 | | 400 | 0.17 | | 1.1 | 2,3,5,7,15 |
| 3 Apalachicola | Atl | 44 | 800 | 22 | 1.6 | 2.8 | 1,3,9,15 | |
| 4 Brazos | Atl | 120 | 2000 | 7.1 | 0.29 | 0.17 | 1,2,3,15 | |
| 5 Cape Fear | Atl | 13 | | 2.9 | 0.11 | | 1,14 | |
| 6 Carmel | Pac | 0.63 | | 0.1 | 0.12 | 0.05 | 1,2,3,15 | |
| 7 Chehalis | Pac | 3.3 | | 8.8 | | 0.6 | 1,3,8,13,15 | |
| 8 Chowan | Atl | 13 | | 2.4 | | 2.1 | 1,9,10 | |
| 9 Colorado | Atl | 110 | 1300 | 900 | 250 (15) | | 5,15 | |
| 10 Columbia | Pac | 670 | 2000 | 2800 | 250 (15) | | | |
| 11 Connecticut | Atl | 28 | 650 | 700 | 1.4 | | | |
| 12 Cosumnes | Pac | 1.4 | | | 0.14 | | | |
| 13 Delaware | Atl | 17 | 210 | 570 | 10 | 0.65 | 0.94 | 1,3,5,15 |
| 14 Edisto | Atl | 7 | | | 2.4 | 0.04 | 1,15 | |
| 15 Eel | Pac | 7.8 | | | 7 | 2.1 | 1 | 1,3,15 |
| 16 Guad-S. Anton | Atl | 23 | | | 2.1 | | 0.6 | 2,3,15 |
| 17 Hoh | Pac | 0.65 | | | 2.2 | 0.5 | 1,14 | |
| 18 Housatonic | Atl | 2.5 | | 250 | 0.72 | | 1,4,15 | |
| 19 Hudson | Atl | 34 | 500 | 500 | 1.2 | 0.2 | 1,3 | 1,2,3,9,15 |
| 20 James | Atl | 16 | 540 | 900 | 6.2 | 0.11 | 0.75 | 1,3,4,15 |
| 21 Kennebeck | Atl | 14 | | | 7.5 | | | |
| 22 Klamath | Pac | 31 | | | 1.5 | 2.4 | 1.6 | 3,5,11,15 |
| 23 Mad | Pac | 1.2 | | | 1.3 | 2.4 | | |
| 24 Merrimack | Atl | 12 | 180 | 900 | 6.5 | 0.2 | 0.46 | 1,3,5,15 |
| 25 Mississippi | Atl | 3300 | 5900 | 1200 | 490 (400) | | 140 | 10,12,15,17 |
| 26 Mobile | Atl | 110 | 1200 | 300 | 52 | 4.5 | 6.3 | 1,3,5 |
| 27 Neches | Atl | 21 | | | 0.73 | | 0.67 | 2,3,15 |
| 28 Neuse | Atl | 6.9 | | | 2.5 | 0.08 | 0.17 | 3,1,3 |
| 29 Nueces | Atl | 4.3 | | | 0.72 | 0.71 | 0.18 | 2,3,8,15 |

Global River Index - USA

| | | | | | | | | | | | |
|----|---------------------|-----|------|------|------|----------|---------|-------|-----|--------|-----------|
| 30 | Ogeechee | Atl | 6.8 | | | 4.2 | | 0.06 | | 0.48 | 1,2,3 |
| 31 | Pamlico | Atl | 11 | | 700 | | 0.21 | | 3,8 | | |
| 32 | Pascagoula | Atl | 17 | | | 8.5 | | | | 15,16 | |
| 33 | Passaic | Atl | 1.9 | | | 1 | 0.01 | | | 1,15 | |
| 34 | Patuxent | Atl | 0.9 | | 65 | 0.3 | 0.02 | | | 1,14 | |
| 35 | Pearl | Atl | 17 | | | 6.6(5.4) | 1.6 | | | 0.32 | 1,2,3,15 |
| 36 | Peedee | Atl | 23 | | 500 | 6.9 | 0.5 | | | 0.39 | 1,3,8,15 |
| 37 | Penobscott | Atl | 17 | | | 10 | | | | 0.55 | 3,4,15 |
| 38 | Potomac | Atl | 30 | 460 | 450 | 9.2 | 1.4 | | | 0.17 | 1,3,5 |
| 39 | Rappahannock | Atl | 1.6 | 340 | 100 | 2.1 | 0.087 | | | 1,4,12 | |
| 40 | Redwood | Pac | 0.73 | | | 8.8 | 1.2 | | | 1,19 | |
| 41 | Rio Grande | Atl | 670 | 2800 | 3600 | 3.9 | 0.56 | | | 2,2 | 1,3,5 |
| 42 | Roanoke | Atl | 25 | 660 | | 6.8(7.1) | <1(2.0) | | | 0.49 | 3,5,6,15 |
| 43 | Rouge | Pac | 1.8 | | | 2.6 | 0.06 | | | 0.19 | 1,2,3 |
| 44 | Russian | Pac | 3.4 | | 100 | 7.3 | 0.75 | | | 1,2,15 | |
| 45 | Sabine | Atl | 13 | | 610 | 2.1 | 1.3 | | | 0.6 | 1,3,5,15 |
| 46 | Sacramento | Pac | 70 | | | 7.3 | 2.3 | | | 1.6 | 1,2,3,15 |
| 47 | Salinas | Pac | 11 | | | 17 | 0.3 | 0.531 | | 14,18 | |
| 48 | San Diego | Pac | 1.1 | | | 0.04 | 0.0006 | | | 1,2 | |
| 49 | San Dieguito | Pac | 8.6 | | | | 0.002 | | | | |
| 50 | San Joaquin | Pac | 35 | 560 | | 4 | 0.25 | | | 1,3 | 3,5,15,18 |
| 51 | San Juan Capistrano | Pac | 0.3 | | | 0.01 | 0.11 | | | 1,14 | |
| 52 | San Luis Ray | Pac | 1.4 | | | 0.02 | 0.06 | | | 1,14 | |
| 53 | Santa Ana | Pac | 4.3 | | | 0.05 | 0.2 | | | 1,2,15 | |
| 54 | Santa Clara | Pac | 4.1 | | | 5.2 | 5.2 | | | 1,2,15 | |
| 55 | Santee | Atl | 36 | | | 13 | 0.86 | | | 1,5 | |
| 56 | Savannah | Atl | 25 | 500 | 300 | 11 | <1(2.8) | | | 0.5 | 5,6,15 |
| 57 | Sixes | Pac | 0.3 | | | 0.39 | | | | | |
| 58 | Skagit | Pac | 8 | | | 15 | 0.33 | | | 0.52 | 1,2,3,15 |
| 59 | Smith | Pac | 1.6 | | | 3.4 | 0.28 | | | 1,2 | |
| 60 | Snoqualmie | Pac | 1.5 | | | 3.2 | 0.23 | | | 1,14 | |
| 61 | St. John's (FL) | Atl | 7.9 | | 220 | | 2.9 | | | 2,15 | |

| USA - Alaska Rivers | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------------------|--------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|--------------|
| 1 Alsek | Pac | 2.8 | | | 2.7 | | | 1,2 |
| 2 Chilikat | Pac | 1.9 | | | 7.2 | 2.4 | | 3,4 |
| 3 Colville | Arctic | 50 | | | 2.5 | 6 | | 4,5,6 |
| 4 Copper | Pac | 63 | 460 | | 3.2 | (70)131 | | 1,3,7,8 |
| 5 Knik Arm | Pac | 2.9 | | | 6 | 10 | | 3,4 |
| 6 Kobuk | Arctic | 31 | | | 1.6 | | | 1,2 |
| 7 Kuskokwim | Pac | 130 | 1100 | | 6.0 | 5-10(?) | | 1,2,5,7,9 |
| 8 Kvichak | Pac | 25 | | | 1.3 | | | 1,2 |
| 9 Nimlichik | Pac | 0.33 | | | 3.1 | 0.004 | | 3,4 |
| 10 Noatak | Arctic | Pac | | | 1 | | | 2 |
| 11 Nushagak | Pac | 32 | | | 3.1 | | | 1,2 |
| 12 Spreel | Pac | 0.58 | | | 3.1 | 2.4 | | 3,4 |
| 13 Stikine | Pac | 51 | 610 | | 5.0 | 44 | | 3,8,1,3,6 |
| 14 Susitna | Pac | 16 | 600 | | 4.0 | 21 | | 7.6 |
| 15 Yukon | Pac | 840 | 3700 | 2040 | 210 | 60 | | 1,3,5,6,7,12 |
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| 12. Harrison, in press | | | | | | | | |

U.S.A. - Alaska



GLORI - U.S.A. - Alaska

| USA - Alaska Rivers | Ocean | Area(103km ²) | Length (km) | Max Elev(m) | Q (km ³ /yr) | TSS(106t/yr) | TDS(106t/yr) | Reference(s) |
|---------------------|--------|---------------------------|-------------|-------------|-------------------------|--------------|--------------|---------------|
| 1 Alsek | Pac | 28 | | | 27 | | | 1,2 |
| 2 Chilkat | Pac | 1.9 | | | 7.2 | | | 3,4 |
| 3 Colville | Arctic | 50 | | | 25 | | | 4,5,6 |
| 4 Copper | Pac | 63 | 460 | | 32 (70) 131 | 6 | | 1,3,7,8 |
| 5 Knik Arm | Pac | 2.9 | | | 6 | 14 | | 3,4 |
| 6 Kobuk | Arctic | 31 | | | 16 | | | 1,2 |
| 7 Kuskokwim | Pac | 130 | 1100 | | 60 | 5-10(?) | | 1,2,5,7,9 |
| 8 Kvichak | Pac | 25 | | | 12 | | | 1,2 |
| 9 Ninilchik | Pac | 0.33 | | | 3.1 | 0.004 | | 3,4 |
| 10 Noatak | Arctic | | | | 11 | | | 2 |
| 11 Nushagak | Pac | 32 | | | 31 | | | 1,2 |
| 12 Speel | Pac | 0.58 | | | 3.1 | 2.4 | | 3,4 |
| 13 Stikine | Pac | 51 | 610 | | 50 | 44 | | 3,8,1,3,6 |
| 14 Susitna | Pac | 16 | 500 | | 40 | 21 | | 7,6,1,3,5,6,7 |
| 15 Yukon | Pac | 840 | 3200 | | 2040 | 210 | 60 | 34,1,7,10,11 |

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