## **Appendices**

## **Appendix A: Notes on Basins**

The following matterial is taken from Wolf et al. (1999).

Amazon — Three sections of the boundary between Ecuador and Peru have been in dispute. The areas cover over 324,000 km² and include portions of the Amazon and Maranon rivers. The districts of Tumbes, Jaen, and Maynas are claimed by Ecuador and administered by Peru. In December 1998, Peru and Ecuador signed a joint agreement on the implementation of a permanent development policy for the border region. A joint commission was created to determine their common land boundary (Biger et al., 1995; CIA, 1998; Cohen,1998; BBC Summary of World Broadcasts, 12/3/98; Xinhua News Agency, 12/11/1998).

Amur — Two disputed sections of the boundary between China and Russia remain to be settled. China holds that the main channel of the Amur River is followed northeast to a point opposite the city of Khabarovsk. Russia claims that the line follows the Kazakevicheva channel southeastward to the Ussuri River. The two countries dispute control of islands in the Amur and Ussuri Rivers, despite a 1987 agreement that established the line as running through the median lines of the main navigable and unnavigable channels. The five disputed islands in the Amur—Popov, Savelyev, Evrasikha, Nizhne-Petrovskiy and Lugovskoy amount to 3,000 km<sup>2</sup> of territory. Also in dispute are the Tarbarov and Bolshoy Ussuriyskiy islands, located in a 30 km section of the boundary at the confluence of the Amur and Ussuri rivers, and the Bolshoy Island, located in the upper reaches of the Argun River (Biger et al., 1995; CIA, 1998; IBRU, 1999).

Aral Sea — Most of the boundary shared between China and Tajikistan is in dispute, including in the Pamir mountain region (CIA, 1998; IBRU, 1999).



Sprinklers at a ball park. Photo credit: Brenda Miraglia.



Amur River. Photo credit: Mikhail A. Yatskov.

Kyrgyzstan and Tajikistan have a territorial dispute regarding their boundary in the Isfara Valley area (CIA, 1998).

Atrak — Kyrgyzstan and Tajikistan have a territorial dispute regarding their boundary in the Isfara Valley area (CIA, 1998).

Congo/Zaire — It has been informally reported that the indefinite segment of the Democratic Republic of the Congo-Zambia boundary has been settled. Therefore, the Democratic Republic of the Congo-Tanzania-Zambia tripoint in Lake Tanganyika also may no longer be indefinite (CIA, 1998).

A long segment of the boundary between the Democratic Republic of the Congo (Kinshasa) and the Republic of the Congo (Brazzaville) along the Congo River remains indefinite, as no division of the river or its islands has been made (CIA, 1998).

Danube — Disputes are ongoing between Bosnia-Herzegovina and Serbia, over Serbian populated areas. According to the Serbian Republic of Bosnia-Herzegovina (SRBH), the external boundaries are marked by the Una river in the west, the Sava river in the north, the state boundary with the Federal Republic of Yugoslavia in the east, and Croatia and the Serbian Republic Krajina in the south (CIA, 1998; IBRU, 1999).

Eastern Slavonia, which was held by Serbs during the ethnic conflict in the former Yugoslavia, was returned to Croatian control by the UN Transitional Administration for Eastern Slavonia on January 15, 1998 (CIA, 1998).

Under an International Court of Justice (ICJ) ruling, Hungary and Slovakia were to agree on the future of the Gabcikovo Dam complex by March 1998. The dispute, however, has yet to be resolved. Completion of the dam system would alter the boundaries between Hungary and Slovakia established under the 1920 Treaty of Trianon (CIA, 1998; IBRU, 1999).



Paraná River beach. Photo credit: Rolando León.

The boundary commission formed by The Former Yugoslav Republic of Macedonia and Serbia and Montenegro in April 1996 to resolve differences in delineation of their mutual boundary has made no progress so far (CIA, 1998).

Romania considers certain territories of Moldova and Ukraine-including Bessarabia (45,600 km²) and Northern Bukovina-as historically part of Romania. This territory was incorporated into the former Soviet Union following the Molotov-Ribbentrop Pact in 1940 (CIA, 1998; Cohen,1998).

Daugava — Border problems between Byelarus and Lithuania in part lie in the fact that the new boundary is different from the old Soviet administrative division between the two republics. Areas of dispute include the land around the Adutiskis railway station and the Druskininkai resort claimed by Byelarus. Demarcation of the boundary between Byelarus and Lithuania is underway (CIA, 1998; IBRU 1999).

The 1997 boundary agreement Lithuania and Russia remains to be ratified (CIA, 1998).

Dniester — Romania considers certain territories of Moldova and Ukraine — including Bessarabia (45,600 km²) and Northern Bukovina — as historically part of Romania. This territory was incorporated into the former Soviet Union following the Molotov-Ribbentrop Pact in 1940 (CIA, 1998; Cohen,1998).

Ganges-Brahmaputra-Meghna — India and China dispute approximately 83,000 km², including three of the four political divisions of the Northeast Frontier Agency — the Sumdurong Cho sector. This region falls in the Ganges-Brahmaputra Basin (Conflict and Border Disputes, 1993; Cohen, 1998; IBRU 1999).

Portions of the boundary between Bangladesh and India are indefinite. Much of the boundary between the two countries is based on administrative units that do not shift with the rivers as they change course or level over time. Alluvial or "char" land that is exposed as a river shifts often leads to dispute, as the land is highly valued for agriculture (CIA, 1998; IBRU, 1999).

Incomati — Swaziland has asked South Africa to open negotiations on reincorporating some nearby South African territories that are populated by ethnic Swazis or that were long ago part of the Swazi Kingdom (CIA, 1998).

Indus — Disputed boundaries between China and India include approximately 25,900 km<sup>2</sup> in the regions of Sang, Demchok, and Aksai, China (Biger et al., 1995; Cohen, 1998).

India and Pakistan dispute the status of the Jammu and Kashmir region, an area of approximately 220,000 sq. miles (Biger et al., 1995; CIA, 1998).

Jordan — The West Bank and Gaza Strip are Israelioccupied with the exception of territories under control of the Palestinian Authority, as delineated in the 1995 "Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip," commonly referred to as "Oslo II", and in the 1998 agreement signed at Wye. Permanent status is to be determined during further negotiation (CIA, 1998).

Israel and Syria dispute the Golan Heights, which is currently administered by Israel (CIA, 1998).

Topographically, Egypt is riparian to the Jordan River basin. However, Egyptian territory does not contribute water to the basin, except for the possibility of by intermittent wadis.



Tigris River tributary. Photo credit: Babak Sedighi.

Kura-Araks — The boundaries of the Caspian Sea remain to be determined among Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan (CIA, 1998).

La Plata — Two short sections of the boundary between Brazil and Uruguay are in dispute: the Arroio Invernada (Arroyo de la Invernada) area of the Rio Quarai (Rio Cuareim) and the islands at the confluence of the Rio Quarai and the Uruguay River (CIA, 1998).

A short section of the boundary between Brazil and Paraguay, just west of Salto das Sete Quedas (Guaira Falls) on the Rio Parana, has yet to be precisely delimited (CIA, 1998).

Lake Chad — Lake Chad varies in extent between rainy and dry seasons — from 50,000 to 20,000 km². Demarcation of international boundaries in the vicinity of Lake Chad is complete and awaits ratification by Cameroon, Chad, Niger, and Nigeria. Determining the boundaries of sectors involving rivers draining into Lake Chad is complicated by flooding and the uncovering or covering of islands. The lack of demarcated boundaries has led to border incidents in the past (Biger et al., 1995; CIA, 1998).

Maputo — Swaziland has asked South Africa to open negotiations on reincorporating some nearby South African territories that are populated by ethnic Swazis or that were long ago part of the Swazi Kingdom (CIA, 1998).

Maroni — Suriname and French Guiana are in dispute over which of the upper tributaries of the Maroni River was originally intended to carry the boundaries down to the Brazilian boundary. The disputed area is administered by France as a region of the overseas department of French Guiana and claimed by Suriname. The area lies between the Riviere Litani and the Riviere Marouini, both headwaters of the Lawa (Biger et al., 1995; CIA, 1998).

Mekong — Parts of the boundary between the People's Democratic Republic of Laos and Thailand are indefinite,



St. Lawrence River. Photo credit: Jane Thomas.



La Plata River, aerial view. Photo credit: Rolando León.

including overlapping claims in the Gulf of Thailand, an area potentially containing oil and gas deposits, and an island located near the boundary between Cambodian Koh Kong and the Thai province of Trat (CIA, 1998; IBRU, 1999).

Parts of the boundary between Laos, People's Democratic Republic of and Thailand are indefinite. The two countries have an agreement to demarcate their boundary, but demarcation was suspended in February, 1998 (CIA, 1998; IBRU, 1999).

Narva — The December 1996 technical boundary agreement reached between Estonian and Russian negotiators remains to be ratified. Estonia claimed over 2,000 km<sup>2</sup> of territory in the Narva and Pechory regions of Russia-based on the boundary established under the 1920 Peace Treaty of Tartu (CIA, 1998).

Latvia claimed the Abrene/Pytalovo section of the border ceded by the Latvian Soviet Socialist Republic to Russia in 1944, based on the 1920 Treaty of Riga. A draft treaty delimiting the boundary between Latvia and Russia has not been signed. The Abrene/Pytalovo region is crossed by the Utroya River, a tributary of the Vclikaya river (CIA, 1998; Cohen, 1998).

Neman — Border problems between Byelarus and Lithuania in part lie in the fact that the new boundary is different from the old Soviet administrative division between the two republics. Areas of dispute include the land around the Adutiskis railway station and the Druskininkai resort claimed by Byelarus. Demarcation of the boundary between Byelarus and Lithuania is underway (CIA, 1998; IBRU 1999).

The 1997 boundary agreement Lithuania and Russia remains to be ratified (CIA, 1998).

Nile — Egypt's administrative boundary with Sudan does not coincide with the international boundary and creates the "Hala'ib Triangle," a barren area of 20,580 km² north of the 22nd parallel (CIA, 1998).



Madre de dios River. Photo credit: M. Giordano.

Ob — The boundaries of the Caspian Sea remain to be determined among Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan (CIA, 1998).

Oral/Ural — The boundaries of the Caspian Sea remain to be determined among Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan (CIA, 1998).

Orange — Although topographically Botswana is riparian to the Orange River basin, it is unknown whether Botswana territory contributes water to the Orange River. Botswana's political status as riparian to the Orange River basin remains to be clarified among the basin states (Conley and van Niekerk, 1998).

Namibia and South Africa are undergoing negotiations to confirm the exact positions of their boundary along the Orange River (Conley and van Niekerk, 1998).

Rhine — While the Meuse basin is topographically part of the Rhine basin, European nations treat it as a politically separate basin (Huisman et al., 1998).

Ruvuma — Malawi is in dispute with Tanzania over the boundary in Lake Nyasa (Lake Malawi) (CIA, 1998).

Sarata — Romania considers certain territories of Moldova and Ukraine—including Bessarabia (45,600 km²) and Northern Bukovina—as historically part of Romania. This territory was incorporated into the former Soviet Union following the Molotov-Ribbentrop Pact in 1940 (CIA, 1998; Cohen,1998).

Struma — The boundary commission formed by The Former Yugoslav Republic of Macedonia and Serbia and Montenegro in April 1996 to resolve differences in delineation of their mutual boundary has made no progress so far (CIA, 1998).

Tigris-Euphrates-Shatt al Arab — Iran and Iraq restored diplomatic relations in 1990, but work continues on developing written agreements to settle outstanding disputes from their eight-year war, including boundary demarcation, prisoners-of-war, and freedom of navigation and sovereignty over the Shatt al Arab waterway (CIA, 1998).

Vardar — The boundary commission formed by The Former Yugoslav Republic of Macedonia and Serbia and Montenegro in April 1996 to resolve differences in delineation of their mutual boundary has made no progress so far (CIA, 1998).

Volga — The boundaries of the Caspian Sea remain to be determined among Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan (CIA, 1998).

Zambezi — The quadripoint between Botswana, Namibia, Zambia and Zimbabwe is in disagreement (CIA, 1998).

The dispute between Botswana and Namibia over the uninhabited Kasikili (Sidudu) Island in the Linyanti (Chobe) River is presently before the International Court of Justice. Botswana and Namibia are also contesting at least one other island in the Linyanti River (CIA, 1998).



Child with garden hose. Photo credit: Caryn Davis.