

The Black Sea II: A schematic cross-section

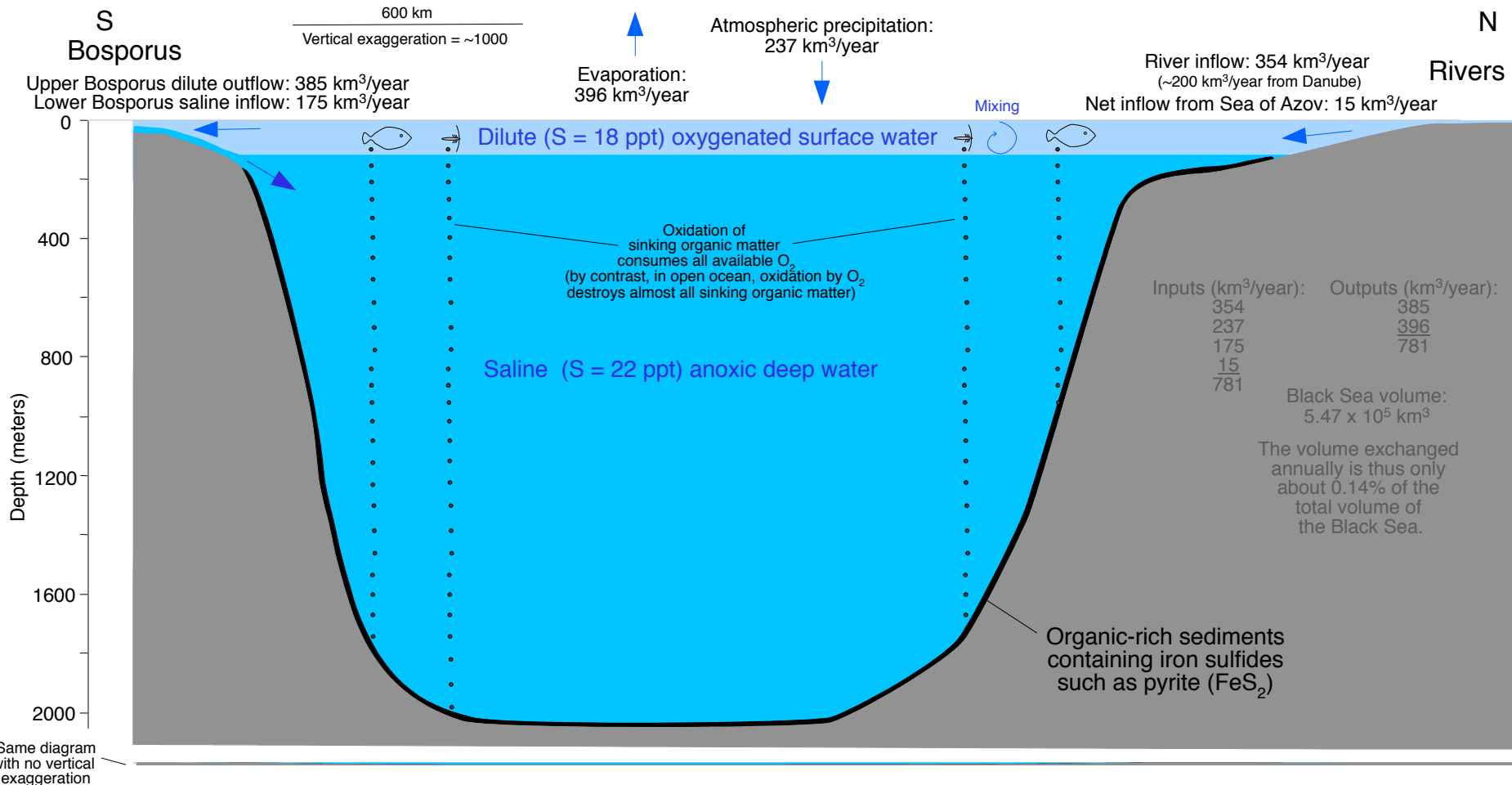
The Black Sea is a strongly stratified body of water because its deep water is much more saline than its surface water. The surface water is dilute because of inflow of freshwater from rivers, largely the Danube but also the Dnieper, Bug, and Dniester. The deep water is more saline because of inflow of seawater

from the Aegean Sea through the lower part of the Bosphorus.

The contrast in density between surface and deep water means there is little vertical mixing in the Black Sea. As a result, little atmospheric O_2 reaches the deep water, which is consequently markedly anoxic. This

anoxia allows organic-rich sediments to accumulate on the floor of the Black Sea. For this reason, the Black Sea has been studied extensively as a modern analog for ancient anoxic oceans.

Parts IIIa and IIIb further examine the differences between the Black Sea's surface water and deep water.



This diagram is an elaboration of a diagram by Holger Lueschen of the Institut für Chemie und Biologie des Meeres in Oldenburg, Germany. The flux data shown are from Kosarev, A.N., et al., 2008, Hydrometeorological conditions, in Kostianoy, A.G., and Kosarev, A.N., *The Black Sea Environment: Springer Handbook of Environmental Chemistry* v. 5Q, p. 277-307.