

Table 2 Silicon fluxes at the sediment-water interface in different ecosystems of the world ocean

Ecosystem	Flux ($\text{mol Si m}^{-2} \text{ year}^{-1}$)			
	$F_{S(\text{rain})}$	$F_{B(\text{net deposit})}$	$F_{D(\text{benthic})}$	$F_{D(\text{benthic})}/F_{S(\text{rain})}$
Open ocean				
BATS (North Atlantic)	0.018	0.001	0.017	0.95
Northeast Atlantic	0.020	0.001	0.019 ^a	0.95
Porcupine Abyssal Plain (North Pacific)	0.065	0.008	0.057	0.88
Indian Ocean (northwest Somali Basin)	0.280	0.018	0.262	0.94
Equatorial Pacific	0.140	0.009	0.131	0.94
Southern Ocean				
Permanently open ocean zone	2.24	0.210	2.03	0.91
Polar frontal zone	0.805	0.075	0.73	0.91
Outer Ross Sea	0.374	0.007	0.367	0.98
Inner Ross Sea	2.13	1.24	0.89	0.42

Abbreviations: BATS, Bermuda Atlantic Time-Series Study; $F_{S(\text{rain})}$, opal rain rates; $F_{B(\text{net deposit})}$, opal net accumulation rates; $F_{D(\text{benthic})}$, silicon recycled at the sediment-water interface. Table modeled after Ragueneau et al. (2009).

^aCalculated by the difference between the measured rain rate and opal accumulation rate (Pondaven et al. 2000).

Pondaven P, Ragueneau O, Tréguer P, Hauvespre A, Dezileau L, Reyss JL. 2000. Resolving the “opal paradox” in the Southern Ocean. *Nature* 405:168–72

Ragueneau O, Regaudie-de-Gioux A, Moriceau B, Gallinari M, Vangriesheim A, et al. 2009. A benthic Si balance on the Congo margin: origin of the 4000 m DSi anomaly and implications for the transfer of Si from land to ocean. *Deep-Sea Res. II* 56:2197–207