DANUBE – LIST OF PRIMARY DATA FROM THE LITERATURE

Source	Comment	Value
General[1] boundary conditions		
River discharge		
Aubrey et al., 1996	Mean	250 $km^3 y^{-1}$ (≡7927 $m^3 s^{-1}$)
Bondar et al., 1991	130 yr mean	191 $km^3 y^{-1}$ (≡6047 $m^3 s^{-1}$)
Mulder and Syvitski, 1995	Mean	6420 $m^3 s^{-1}$
Panin and Jipa, 2002	Mean long-term at apex	6550 $m^3 s^{-1}$
(Panin and Jipa, 2002	Mean annual variation (apex)	5700 $m^3 s^{-1}$)
Panin and Jipa, 2002	1% probability at apex	9980 $m^3 s^{-1}$
Panin and Jipa, 2002	99% probability at apex	4240 $m^3 s^{-1}$
Panin and Jipa, 2002	Q_{max} (1970)	15540 $m^3 s^{-1}$
Panin and Jipa, 2002	Q_{min} (1954)	1610 $m^3 s^{-1}$
Popa, 1993	Mean	207 $km^3 y^{-1}$ (≡6564 $m^3 s^{-1}$)
Wright and Coleman, 1973	Mean, January	≡5544 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, February	≡5726 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, March	≡7074 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, April	≡8172 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, May	≡8614 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, June	≡8215 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, July	≡6986 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, August	≡5406 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, September	≡4536 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, October	≡4236 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, November	≡5069 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, December	≡5796 $m^3 s^{-1}$
Wright and Coleman, 1973	Mean, long term	≡6286 $m^3 s^{-1}$
Channel width		
Reschke et al., 2002	Sulina mouth[2], June 1995	160 m
Channel depth		
Reschke et al., 2002	Sulina mouth, June 1995	9 m
Mean suspended load leaving river		
Gastescu, 1996	Average SSC at apex, 1971-1980	> 1300 kg s^{-1}
Gastescu, 1996	Average SSC at apex, 1981-1990	< 950 kg s^{-1}
Mulder and Syvitski, 1995	Mean	0.3 kg m^3
Reschke et al., 2002	June 1995, at last branch of main Chilia distributary[3], surface, middle of river	36.8 mg l^{-1}
Reschke et al., 2002	June 1995, Sulina distributary, mean, depth-averaged	65.7 mg l^{-1}
Reschke et al., 2002	June 1995, St Georghe distributary[4], surface,	

[1] Note: river discharge is described in terms of high and low water years – key floods do not occur owing to the relatively large size of the river system.
[2] -0.7 km upstream
[3] 20 km upstream
[4] 1.3 km upstream

	middle of river	89.0 mg l^{-1}

General meteorology

Wind velocity

Tolmazin, 1985	Winter, typical storms	> 15 m s^{-1}

Wind direction

Tolmazin, 1985	December - February	NW and N
Tolmazin, 1985	March - May	W and NW, then S. Rare W storms
Tolmazin, 1985	Summer	All directions. S and SW end July/Aug possible
Tolmazin, 1985	Autumn	NE and E increases
Tolmazin, 1985	November – early December	E

Catchment rainfall

Milliman and Syvitski, 1992	Mean runoff	250 mm y^{-1}
Panin and Jipa, 2002	Mean basin rainfall	816 mm y^{-1}
Panin and Jipa, 2002	Mean runoff	246 mm y^{-1}
(Panin and Jipa, 2002	Mean evaporation	547 mm y^{-1})

General shelf hydrodynamics

Mean current velocity

Tolmazin, 1985	Geostrophic, winter, 20 – 150 km from coast	40 - 45 cm s^{-1}
Tolmazin, 1985	Geostrophic, summer, 20 - 150 km from coast	25-30 cm s^{-1}

General shelf sediments

Grain size distribution

Wijsman et al., 1999	August 1995, average of top 21 cm for several stations off Danube main mouths at 20 m water depth	10 – 12 μm

Plume extent/morphology

Aubrey et al., 1996	Thickness in spring	15 m
Aubrey et al., 1996	Plume terminates N of Cape Kaliakra	
Beckers et al., 2002	Modelled hydrodynamics: early spring during high discharge, an anticyclonic eddy forms off the Danube, the plume extend N, widening to the E in summer	
Beckers et al., 2002	Modelled hydrodynamics: in summer during low discharge, the current reverses in front of the Danube and flows S	
(Sur et al., 1994	CZCZ images of plume)	

DANUBE – LIST OF SECONDARY DATA FROM THE LITERATURE

Source	Comment	Value
General boundary conditions		
Critical concentration for hyperpycnal flow		
Mulder and Syvitski, 1995		42.7 kg m^3
Basin area		
Milliman and Syvitski, 1992		810 x 10^3 km^2
Panin and Jipa, 2002		817 x 10^3 km^2
River sediment discharge		
Bondar et al., 1991	130 yr mean	51.7 x 10^6 t y^{-1}
Milliman and Syvitski, 1992	Mean	67 x 10^6 t y^{-1}
Panin and Jipa, 2002	Pre Iron Gates I[5], total load	67.5 x 10^6 t y^{-1}
Panin and Jipa, 2002	Pre Iron Gates I, suspended load	61.0 x 10^6 t y^{-1}
Panin and Jipa, 2002	Pre Iron Gates I, bedload	6.5 x 10^6 t y^{-1}
Panin and Jipa, 2002	Present day, total load	25-35 x 10^6 t y^{-1}
Panin and Jipa, 2002	Present day, suspended load	20-30 x 10^6 t y^{-1}
Panin and Jipa, 2002	Present day, bedload	4-6 x 10^6 t y^{-1}
Popa, 1993	Mean	45-50 x 10^6 t y^{-1}
Popa, 1993	1960-1970	68 x 10^6 t y^{-1}
Reschke et al., 2002	Present day, total (n.b.based on point measurements in June 1995)	9.7 x 10^6 t y^{-1}
General shelf hydrodynamics		
Wave power		
Wright and Coleman, 1973	Mean annual, deep water	51.7 ft-lb s^{-1}
Wright and Coleman, 1973	Mean annual, nearshore	0.03 ft-lb s^{-1}
Discharge effectiveness index		
Wright and Coleman, 1973	Mean annual	1171
Attenuation ratio		
Wright and Coleman, 1973	Mean annual	2585.0
Plume salinity		
Aubrey et al., 1996	'Always'	10-18
General shelf sediments		
Sediment thickness		
Shreider et al., 2001	South of delta, on shelf	200 - 400 m
Sedimentation rate		
Curtis and Broadway, 1992	In front of delta, using ^{137}Cs	0.7 cm y^{-1}

[5] 1973

NW Black Sea shelf area
Panin and Jipa, 2002 127 000 km^2

Delta front area
Panin and Jipa, 2002 ~1300 km^2

Prodelta area
Panin and Jipa, 2002 ~6000 km^2

Slope sediments

Sedimentation rate
Shreider et al., 2001 Base of Odessa shelf, not allowing for compaction 120 cm ky^{-1}

DANUBE – LITERATURE DATA REFERENCES

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