THE EBRO: LIST OF PRIMARY[1] DATA FROM THE PUBLISHED LITERATURE

Source	Comment	Value
General[2] boundary Conditions		
River discharge		
Cacchione et al., 1990	Mean	600 $m^3 s^{-1}$
Durand et al., 2002	Max Oct. 1996 – Sept. 1997	2500 $m^3 s^{-1}$
Durand et al., 2002	July 6th 1997 (pulsed)	250 $m^3 s^{-1}$
Durand et al., 2002	Feb. 6th 1997	880 $m^3 s^{-1}$
Durand et al., 2002	Nov. 7th 1996	100 $m^3 s^{-1}$
Ibañez et al., 1996	Mean annual reduction this century	592 to 426 $m^3 s^{-1}$
Guillén and Palanques, 1992	Winter and Spring max	600-900 $m^3 s^{-1}$
Guillén and Palanques, 1992	Summer minimum	<200 $m^3 s^{-1}$
Guillén and Palanques, 1992	Max 20th cent (1915)	992 $m^3 s^{-1}$
Guillén and Palanques, 1992	Min 20th cent (1949)	165 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean May 1988	675 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean Sept 1988	230 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean Jan. 1989	210 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean July 1989	110 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean Oct. 1989	150 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean Jan. 1990	165 $m^3 s^{-1}$
Guillén and Palanques, 1992	Mean Feb. 1990	200 $m^3 s^{-1}$
Guillén et al., 2002	7th – 8th April 1997	< 250 $m^3 s^{-1}$
Jiménez et al., 1999	17th – 25th Dec 1996	850-1200 $m^3 s^{-1}$
Jiménez et al., 1999	25th Dec 1996-17th Jan 1997	~900 $m^3 s^{-1}$
Maidana et al., 2002	Nov. 1996	60 – 100 $m^3 s^{-1}$
Maidana et al., 2002	Nov. 4th 1996 (night)	200 $m^3 s^{-1}$
Maidana et al., 2002	July 1997 (regulated)	130 $m^3 s^{-1}$
Maldonado, 1972	Spring and autumn (max)	>900 $m^3 s^{-1}$
Maldonado, 1972	Summer (min)	<200 $m^3 s^{-1}$
Maldonado, 1972	1912-1935 (max)	15 000 $m^3 s^{-1}$
Maldonado, 1972	1912-1935 (mean)	600 $m^3 s^{-1}$
Maldonado, 1986	1951-1965 (mean)	500 $m^3 s^{-1}$
Palanques, 1987	Mean Tortosa, Feb 86-Feb 87	289 $m^3 s^{-1}$
Palanques et al., 1990	Peak	10 000 $m^3 s^{-1}$
Palanques et al., 1990	Mean	300-600 $m^3 s^{-1}$
Palanques et al., 2002	Nov. 1996 – Nov. 1997	150 – 300 $m^3 s^{-1}$
Palanques et al., 2002	Dec. 1996	~ 1000 $m^3 s^{-1}$
Pauc, 1970	Mean	600 $m^3 s^{-1}$
Puig et al., 2001	4th Oct-6th Nov 1997,Tortosa, daily mean	110-175 $m^3 s^{-1}$
Salat et al., 2002	Nov. 1996 , mean 10 day	124 $m^3 s^{-1}$
Salat et al., 2002	Feb. 1997, mean 24 day	1873 $m^3 s^{-1}$
Salat et al., 2002	July 1997, mean 10 day	263 $m^3 s^{-1}$
Tolosa et al., 1995	Mean	250 $m^3 s^{-1}$
Wright and Coleman, 1973	January, long-term mean	≡ 722 $m^3 s^{-1}$
Wright and Coleman, 1973	February, long-term mean	≡776 $m^3 s^{-1}$
Wright and Coleman, 1973	March, long-term mean	≡886 $m^3 s^{-1}$

[1] As defined in *Eurodelta WP2 report (D2a) "Data evaluation and time series analysis of river floods in major Mediterranean and Black Sea systems"*

[2] Key flood events no longer occur due to damming; data are unavailable for key flood events prior to damming

Wright and Coleman, 1973	April, long-term mean	≡739 $m^3 s^{-1}$
Wright and Coleman, 1973	May, long-term mean	≡699 $m^3 s^{-1}$
Wright and Coleman, 1973	June, long-term mean	≡586 $m^3 s^{-1}$
Wright and Coleman, 1973	July, long-term mean	≡266 $m^3 s^{-1}$
Wright and Coleman, 1973	August, long-term mean	≡150 $m^3 s^{-1}$
Wright and Coleman, 1973	September, long-term mean	≡193 $m^3 s^{-1}$
Wright and Coleman, 1973	October, long-term mean	≡334 $m^3 s^{-1}$
Wright and Coleman, 1973	November, long-term mean	≡552 $m^3 s^{-1}$
Wright and Coleman, 1973	December, long-term mean	≡719 $m^3 s^{-1}$
Wright and Coleman, 1973	Long-term mean	≡552 +/-13 $m^3 s^{-1}$

Mean river mouth flow velocity

Guillén and Palanques, 1992	May 1988, surface, no salt wedge	80 cm s^{-1}
Guillén and Palanques, 1992	May 1988, bed, no salt wedge	50 cm s^{-1}
Guillén and Palanques, 1992	Sept. 1988 – Feb. 1990, freshwater	26-80 cm s^{-1}
Guillén and Palanques, 1992	Sept. 1988 – Feb. 1990, saltwedge	< 7 cm s^{-1}

Channel width

Guillén and Palanques, 1992	Mean, few km pre-mouth	~ 200 m

Channel depth

Guillén and Palanques, 1992	Mean, few km pre-mouth	5-6 m

Mean suspended load leaving river

Bayerri, 1934-35	1934-35, max	10 000 mg l^{-1}
Bayerri, 1934-35	1934-35, mean	770-1700 mg l^{-1}
Guillén and Palanques, 1992	May 1988, surface	15-18 mg l^{-1}
Guillén and Palanques, 1992	May 1988, near bed	18-22 mg l^{-1}
Guillén and Palanques, 1992	Sept. 1988 – Feb. 90 (freshwater)	5-16 mg l^{-1}
Guillén and Palanques, 1992	Sept. 1988 – Feb. 90 (saltwedge)	~ 4 mg l^{-1}
Guillén and Palanques, 1992	Sept. 1988 – Feb. 90 (saltwedge, near bed)	20 mg l^{-1}
Guillén and Palanques, 1997	May 1988	21.3 mg l^{-1}
Guillén and Palanques, 1997	Sept. 1988	16.8 mg l^{-1}
Guillén and Palanques, 1997	Jan. 1989	7.4 mg l^{-1}
Guillén and Palanques, 1997	July 1989	9.8 mg l^{-1}
Guillén and Palanques, 1997	Oct. 1989	9.8 mg l^{-1}
Guillén and Palanques, 1997	Jan. 1990	9.3 mg l^{-1}
Guillén and Palanques, 1997	Feb. 1990	7.8 mg l^{-1}
Guillén and Palanques, 1997	July 1990	8.4 mg l^{-1}
Guillén and Palanques, 1997	Sept. 1990	3.0 mg l^{-1}
Guillén and Palanques, 1997	March 1991	35.2 mg l^{-1}
Guillén et al., 2002	7^{th} – 8^{th} April 1997, lower river	< 15 mg l^{-1}
Maldonado, 1972	Pre 1972, low stages	3.5 g l^{-1}
Maldonado, 1972	Pre 1972, mean	~200 mg l^{-1}
Maldonado, 1972	1912-1935, mean	1143 mg l^{-1}
Palanques, 1987	Feb 86-Feb 87, mean river water at mouth	16 mg l^{-1}
Palanques, 1987	Feb 86-Feb 87, mean salt wedge at mouth	8 mg l^{-1}
Palanques et al., 1990	Feb 86-Feb 87, mean water column	227 mg l^{-1}

Grain size distribution

Guillén and Palanques, 1992	May 1988 (river bottom)	Muddy sand
Guillén and Palanques, 1992	Sept. 1988 – Feb. 1990 (river bottom)	Mud

Guillén and Palanques, 1992	Mean, suspended sediment (river water)	19.2 μm
Guillén and Palanques, 1992	Mean, suspended sediment (saltwedge)	9.9 (5-15) μm

Fluid density

Guillén and Palanques, 1992	Summer temp (freshwater)	24.5 – 27.0°C
Guillén and Palanques, 1992	Summer temp (saltwedge)	22.0 – 25.0 °C
Guillén and Palanques, 1992	Winter temp (freshwater)	9.3 – 12.8°C
Guillén and Palanques, 1992	Winter temp (saltwedge)	10.0 – 14.1°C
Guillén and Palanques, 1992	Salinity (freshwater)	4.5
Guillén and Palanques, 1992	Salinity (saltwedge)	> 35

River bed slope

Davy, 1978	Mean, entering delta plain	0.00022°

General meteorology

Wind velocity

Durand et al., 2002	Mean mestrals, autumn	13 m s^{-1}
Durand et al., 2002	July 6th 1997, mestral	6 m s^{-1}
Durand et al., 2002	Feb. 6th 1997, N for 12 hr, after W for 24 h	6 m s^{-1}
Durand et al., 2002	Nov. 7th 1996, wind veer from NW to SW	2 – 4 m s^{-1}
Espino, 1994	Mean llevants	~ 4 m s^{-1}
Espino, 1994	Mean mestrals	~ 8 m s^{-1}
Espino, 1994	Mean garbis	~ 2 m s^{-1}
Font, 1983; Han et al., 1983	Spring and summer	<10 m s^{-1}
García, 1982	Mestrals	4-11 m s^{-1}
García, 1982	Garbins (summer)	0-4 m s^{-1}
García, 1982	Llevants (autumn and winter)	2-8 m s^{-1}
Guillén et al., 2002	7th – 8th April 1997 NE Gregal storm	16 m s^{-1}
Jimenez et al., 1999	17 Dec 1996-17 Jan 1997	Max 25 m s^{-1}
Puig et al., 2001	12th – 16th Oct. 1997	20 m s^{-1}
Puig et al., 2001	29th Oct – 1st Nov 1997	~20 m s^{-1}

Wind direction

Espino, 1994	Mean llevants	~ E
Espino, 1994	Mean mestrals	~ NW
Espino, 1994	Mean garbis	~ S
García, 1982	Mestrals	NW
García, 1982	Garbins (summer)	SW
García, 1982	Llevants (autumn and winter)	NE and E
Jimenez et al., 1999	Mean, 17 Dec 1996-17 Jan 1997	W
Puig et al., 2001	12– 16th Oct. 1997, Mestral	NW
Puig et al., 2001	29th Oct – 1st Nov 1997, Gregal	NE

General shelf hydrodynamics

Significant wave height

Jimenez, 1996	Max from NE	5 - 6 m
Jiménez et al., 1997	17 Dec1996-17 Dec1997 (‘Storm waves’)	>1.5 m < 3 m
Jiménez et al., 1997	17 Dec1996-17 Dec1997, mean	0.75 m
Palanques et al., 2002	Oct. – March	2-3.5 (max 4.6) m

Palanques et al., 2002	April, May, Sept.	1 (max 4) m
Palanques et al., 2002	June – Sept.	~ 0.6 m
Puig et al., 2001	12th – 16th Oct. 1997, max	2.8 m
Puig et al., 2001	29th Oct – 1st Nov 1997, max	4.6 m
Puig et al., 2001	'Normal'	< 4 m

Significant wave period

Cacchione et al., 1990	Nov 10th – 12th 1984 (61 m depth, 40 km S of mouth)	10 s
Jimenez et al., 1999	Dec 29th 1996 (E storm)	5 - 11 s
Puig et al., 2001	12th – 16th Oct. 1997	5-7 s
Puig et al., 2001	29th Oct – 1st Nov 1997	≤11 s
Puig et al., 2001	'Normal'	< 10 s
Palanques et al., 2002	Oct. – March	10 (max 14) s

Wave propagation direction

Guillén et al., 2002	7th – 8th April 1997 NE Gregal storm	shore-normal
Jimenez, 1996	25%	W
Jimenez, 1996	20%	NW
Jimenez, 1996	With Max H_s	SW
Jiménez et al., 1997	Nov-May (mean) (highest waves)	W
Jiménez et al., 1997	Mestral	NW

Mean current velocity

Font et al., 1990	Computed permanent SW barotropic flow	~10 cm s^{-1}
Got et al., 1985	Max deep water current	~50 cm s^{-1}
Han et al. 1983	Average in Catalan-Balearic Sea	5 cm s^{-1}
Palanques and Drake, 1990	Outer shelf, W limb of Catalan gyre	~15 cm s^{-1}

Mean current direction

Cacchione et al., 1990	S of delta	anticyclonic
Cacchione et al., 1990	9th Oct – 25th Nov 1984, prevailing	SSE
Font et al., 1990	Permanent barotropic	SW
Font et al., 1990	N of delta	clockwise
Got et al., 1985	Mean	SW
Got et al., 1985	Occasional in summer	NE
Got et al., 1985	Mean, in front of delta	Seawards
Jimenez et al., 1999	17th Dec 1996 – 17th Jan 1997 at 8.5 and 12.5 m water depths, Ebro delta shoreface	N (some reversals)
Palanques and Drake, 1990	Outer shelf, W limb of Catalan gyre	S

(Ocean water temperature)

Cacchione et al., 1990	60 m, 40 km S of mouth, 1 mab, 13-17 Oct. 1984	from 14 →16.5°C
Cacchione et al., 1990	60 m, 40 km S of mouth, 1 mab, 8 – 16 Nov. 1984	from 15 →18°C
Font 1983	Late summer stratified	20°C
Font et al., 1990.	Oct. 1984, surface water near mouth	17.5°C
Jimenez et al., 1999	Dec 29th 1996, (E storm, near bottom, 12.5 m depth)	13-15°C
Puig et al., 2001	Oct – Nov 1997 (near-bottom, 60 m contour, 10 km S of mouth)	14.6°C

Puig et al., 2001	Oct – Nov 1997 (near-bottom, 60 m contour, 10 km S of mouth, during storms)	21°C
Puig et al., 2001	Oct – Nov 1997 (near-bottom, 60 m contour, 10 km S of mouth, during Gregal)	17°C
Salat et al., 2002	Nov. 1996 (‘autumn’), mean surface	19.25°C
Salat et al., 2002	Feb. 1997 (‘winter’), mean surface	12.65°C
Salat et al., 2002	July 1997 (‘summer’), mean surface	22.29°C

(Ocean water salinity)

Jimenez et al., 1999	Dec 29th 1996 (E storm, near bottom, 12.5 m depth)	35-38
Puig et al., 2001	Oct – Nov 1997 (near-bottom, 60 m contour, 10 km S of mouth)	37.7-37.9
Salat et al., 2002	Nov. 1996 (‘autumn’), mean surface	37.86
Salat et al., 2002	Feb. 1997 (‘winter’), mean surface	36.54
Salat et al., 2002	July 1997 (‘summer’), mean surface	37.57

Plume extent/morphology

Durand et al., 2002	July 6th 1997, plume extension from shore during Mestral	SE for ~10 km
Jiménez et al 1999	N-NE winds (winter 1996-97)	S, near coast
Palanques and Drake, 1990	April 1985	‘large’
Palanques and Drake, 1990	May 1986	‘large’
Salat et al., 2002	Nov. 1996	350 km^2
Salat et al., 2002	Feb. 1997	7000 km^2
Salat et al., 2002	July 1997	2100 km^2

General shelf sediments

Sediment bulk density

Nelson, 1990	Prodelta mean	1.14 g cm^3

Sediment grain size distribution

Cacchione et al, 1990	Shelf SPM aggregates	8-12 μm
Cacchione et al, 1990	Disaggregated bottom muds	2 μm
Cacchione et al, 1990	Surface, 61 m depth, 40 km S of mouth 80% clay; 20% fine silt	μ=2μm; μ=10μm
Cacchione et al., 1990	Oct 84-Feb 85, 20 m depth, 25 km SW of mouth, bottom 5 m	110 μm
Diaz et al., 1990	Mean, pre 1990	4μm
Diaz et al., 1996	Proximal prodelta, maximum silt	30-50% silt
Diaz et al., 1996	Proximal prodelta	8.5ϕ
Diaz et al., 1996	Distal prodelta	10.5ϕ
Diaz et al., 1996	Prodelta polymineral aggregates	7-8 ϕ
Diaz et al., 1996	Plume sediment discharged directly from river	μ = 10 ϕ
Diaz et al., 1996	Plume sediment resuspended from prodelta	μ = 9 ϕ
Guillén et al., 2002	Dec. 1996 - Jan. 1997, 8.5 -12.5 m	Mud = 7 – 20%
Jimenez et al., 1999.	Dec96-Jan 97, delta shoreface, 8.5 m, medium to fine sand (4.4% mud)	μ = 135 μm
Jimenez et al., 1999	Dec96-Jan 97, delta shoreface, 12.5 m up to 14 % mud	μ = 105 μm

Jimenez et al., 1999	Jan. 17th 1997, delta shoreface, 12.5 m	Up to 41 % mud
Palanques and Drake, 1990	Mid shelf mud deposit	60-70% clay
Palanques and Drake, 1990	Mid shelf mud deposit	30-40% silt
Palanques et al., 1990	Outer edges, Mid shelf mud deposit	2-4 μm
Palanques et al., 1990	Middle, Mid shelf mud deposit	1-2 μm

Background ocean suspended sediment concentration

Palanques and Drake, 1990	Shelf, calm conditions	<3mg l^{-1}
Palanques and Drake, 1990	Oct 84-May 86, 61 m site, surface SPM	<0.1 to 1 mg l^{-1}
Palanques and Drake, 1990	Oct 84, 61 m site, surface SPM	0.23 mg l^{-1}
Palanques and Drake, 1990	May 86, 61 m site, surface SPM	0.37 mg l^{-1}

Seabed slope

Diaz et al., 1990	Prodelta areas	0.1-0.5°
Diaz et al., 1990	Prodelta topset beds, <30 m water depth	~0.2°
Diaz et al., 1990	Prodelta foreset beds, 30-60 m water depth	≤0.5°
Diaz et al., 1990	Prodelta bottomset beds, >60 m water depth	≤0.1°
Diaz et al., 1990	Outer shelf	<0.1°
Diaz et al., 1996	Delta front(max)	0.6°
Puig et al., 2001	Inner shelf(<30 m)	0.2°
Puig et al., 2001	Mid shelf(30 - 60 m)	0.5°
Puig et al., 2001	Mid shelf(>60 m)	0.1°

THE EBRO: LIST OF SECONDARY[3] DATA FROM THE PUBLISHED LITERATURE

Source	Comment	Value
General boundary Conditions		
River sediment discharge		
Bayerri, 1934-35	1934	14 x 10^6 t y^{-1}
Camp and Guillén 1988	1987-88	<0.46 x 10^6 t y^{-1}
Camp and Guillén 1988	1987-88	>0.13 x 10^6 t y^{-1}
Camp and Guillén 1988	1987-88 ('normal')	0.3 x 10^6 t y^{-1}
Catalán, 1969	1962	2.2 x 10^6 t y^{-1}
Evans and Arche, 2002	Potential	42.9 x 10^6 t y^{-1}
Guillén and Palanques, 1992	1988-1990	0.12 x 10^6 t y^{-1}
Ibañez et al., 1996	Pre-dam	30 x 10^6 t y^{-1}
Ibañez et al., 1996	Pre-lower Ebro dams (end 1960's)	10 x 10^6 t y^{-1}
Ibañez et al., 1996	Post-dam	0.3 x 10^6 t y^{-1}
Ibañez et al., 1996	1996	0.1-0.2 x 10^6 t y^{-1}
Jimenez et al., 1990	~1990 (sand supply)	0.03 x 10^6 m^3 y^{-1}
Maldonado, 1972	1912-1935	>21 x 10^6 t y^{-1}
Nelson, 1990	Post-Messinian	~10 x 10^6 t y^{-1}
Nelson 1990	Holocene	>15.7 x 10^6 t y^{-1}
Palanques, 1987	1983-1986	0.15 x 10^6 t y^{-1}
Palanques and Drake, 1990	Holocene	≥ 6.2 x 10^6 t y^{-1}
Palanques et al., 1990	Feb.86-Feb.87(from mean SSC)	>0.15 x 10^6 t y^{-1}
Palanques et al., 1990	Pre-dam	15-20 x 10^6 t y^{-1}
Palanques et al., 1990	Post-dam	0.2-1 x 10^6 t y^{-1}
Poulos and Collins, 2002(synthesis)	Pre-dam	15-21 x 10^6 t y^{-1}
Poulos and Collins, 2002(synthesis)	Post-dam	0.2 x 10^6 t y^{-1}
Poulos and Collins, 2002(synthesis)	Potential	22.0 x 10^6 t y^{-1}
Bedload flux		
Guillén and Palanques, 1992	Net, with surface currents < 15 cm s^{-1}	Zero
River discharge threshold for riverine sand transport		
Jiménez et al., 1990	Mean	400 m^3 s^{-1}
Basin area		
Chiocci et al., 1997		85 000 km^2
Cacchione et al., 1990		>85 000 km^2
Evans and Arche, 2002		85 820 km^2
Palanques and Drake, 1990		85 835 km^2
General meteorology		
Storm frequency		
Jiménez et al., 1997	1990-1994	NW 48 %
Jiménez et al., 1997	1990-1994	E 38.9 %
Jiménez et al., 1997	1990-1994	S 13.3 %

[3] As defined in *Eurodelta WP2 report (D2a) "Data evaluation and time series analysis of river floods in major Mediterranean and Black Sea systems"*

Wind duration

Espino, 1994	Mean llevants	~ 48 hr
Espino, 1994	Mean mestrals	~ 24 hr
Espino, 1994	Mean garbis	~ 48 hr
Guillén et al., 2002	7^{th} – 8^{th} April 1997, NE Gregal storm	ENE

Catchment rainfall

(Palanques et al., 1990	Runoff	220 mm y^{-1})

General hydrodynamics

Tidal range

Cacchione et al., 1990	Nov 12^{th} – 15^{th} 1984, N winds, 20 m s^{-1}	35 cm
Jimenez et al., 1997	1984-94, exceedance of meteorological tide over MHWL	49 %
Jimenez et al., 1999	Mean	20 cm
Jimenez et al., 1999	Storm surge	40 cm
Maldonado, 1972	Seiche	50 cm

Wave height

Cacchione et al., 1990	6% of time	> 3 m
Cacchione et al., 1990	25% of time	1-3 m
Gracia et al., 1989	Average offshore	1 m
Guillén et al., 2002	7^{th} – 8^{th} April 1997 NE Gregal storm	0.2 – 1.6 m
Jimenez, 1996	98% of time	< 4 m
Palanques and Drake, 1990	10^{th} - 12^{th} Nov 1984, swell waves (1.03 mab, 61 m depth, 40 km S of mouth)	≤ 1.5 m

Peak wave periods

Gracia et al., 1989	Average offshore	~ 3.5 s
Guillén et al., 2002	7^{th} – 8^{th} April 1997 NE Gregal storm	5.9 – 6.7 s
Jimenez, 1996	98% of time	2 – 10 s
Jiménez et al., 1997	1990-1994 E and S storms	≤ 11 s
Jiménez et al., 1997	1990-1994 NW storms	≤ 7 s
Maldonado, 1972	Seiche	~13 minutes
Palanques and Drake, 1990	'Not common'	> 7-8 s
Palanques and Drake, 1990	9^{th} Oct – 25^{th} Nov 1984, swell waves (1.03 mab, 61 m depth, 40 km S of mouth)	> 8 s
Palanques and Drake, 1990	10^{th} - 12^{th} Nov 1984, swell waves (1.03 mab, 61 m depth, 40 km S of mouth)	9-10 s

Wave type

Jimenez, 1996	65%	Sea
Jimenez, 1996	35%	Swell

Wave power

Wright and Coleman 1973	Mean annual deep water	168.8 ft-lb s^{-1}
Wright and Coleman 1973	Mean annual nearshore	0.11 ft-lb s^{-1}

Discharge effectiveness index

Wright and Coleman 1973	Mean annual	267.8

Attenuation ratio

Wright and Coleman 1973	Mean annual	1299.5

Bottom current velocity

Cacchione et al., 1990	Nov 10^{th} – 12^{th} 1984 (1 mab, 61 m depth, 40 km S of mouth)	≤ 10 cm s^{-1}
Cacchione et al., 1990	Nov 12^{th} – 25^{th} 1984 (1 mab, 61 m depth, 40 km S of mouth)	≤ 20 cm s^{-1}
Cacchione et al., 1990	9^{th} Oct – 25^{th} Nov 1984, mean (1.03 mab, 61 m depth, 40 km S of mouth)	~2 cm s^{-1}
Guillén et al., 2002	7^{th} – 8^{th} April 1997, NE Gregal storm, bottom orbital velocity	< 8 - 47 cm s^{-1}
Guillén et al., 2002	7^{th} – 8^{th} April 1997, NE Gregal storm, 8.5 m water depth	2 - 32 cm s^{-1}
Guillén et al., 2002	7^{th} – 8^{th} April 1997, NE Gregal storm, 12.5 m water depth	5 – 22 cm s^{-1}
Han et al., 1983	Infrequent winter storms (50-60 m depth)	>20 cm s^{-1}
Jimenez et al., 1999	Dec 29^{th} 1996, E storm, near bottom, rms orbital currents at 12.5 m depth)	10-60 cm s^{-1}
Palanques and Drake, 1990	9^{th} Oct – 25^{th} Nov 1984, oscillatory currents (1.03 mab, 61 m depth, 40 km S of mouth)	< 5 cm s^{-1}
Palanques and Drake, 1990	10^{th} - 12^{th} Nov 1984, swell wave orbital currents (1.03 mab, 61 m depth, 40 km S of mouth)	10-14 cm s^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, inner shelf, 1 mab, 12 m water depth	~ 8 cm s^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mid shelf, 5 mab, 60 m water depth	~ 8 cm s^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, outer shelf, 5 mab, 100 m water depth	~ 14 cm s^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, inner shelf, 1 mab, 12 m water depth	≤ 63 cm s^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mid shelf, 5 mab, 60 m water depth	≤ 48 cm s^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, outer shelf, 5 mab, 100 m water depth	≤ 35 cm s^{-1}
Puig et al., 2001	12^{th} – 16^{th} Oct 1997, Mestral (5 mab, 60 m contour)	1.1- 42.5 cm s^{-1}
Puig et al., 2001	29 Oct – 1 Nov 1997, Gregal (5 mab, 60 m contour)	1.1- 48.5 cm s^{-1}
Puig et al., 2001	Oct – Nov 1997, non-storms (5 mab, 60 m contour)	1.1- 20 cm s^{-1}
Puig et al., 2001	Oct – Nov 1997, int. waves (5 mab, 60 m contour)	≤ 20 cm s^{-1}

Bottom shear stress due to waves

Puig et al., 2001	29^{th} Oct – 1^{st} Nov 1997, Gregal (60 m contour, internal waves)	≤ 0.61 N m^{-2}
Puig et al., 2001	Oct – Nov 1997 (5 mab, 60 m contour, int. waves)	0.05 N m^{-2}

Bottom current direction

Cacchione et al., 1990	8^{th} – 11^{th} Nov. 1984	N
Cacchione et al., 1990	12^{th} – 25^{th} Nov. 1984	S
Guillén et al., 2002	7^{th} – 8^{th} April 1997, NE Gregal storm, inner shelf	NE for 12 hours (SE winds, 2 m s^{-1}), then SE as a result of Gregal

Critical shear velocity

Guillén et al., 2002	7th – 8th April 1997, NE Gregal storm, 8.5 m water depth	1 → 1.9 cm s^{-1}
Guillén et al., 2002	7th – 8th April 1997, NE Gregal storm, 12.5 m water depth	1.5 cm s^{-1} →
Guillén et al., 2002	7th – 8th April 1997, NE Gregal storm, 8.5 m water depth	≤ 3.9 cm s^{-1}
Guillén et al., 2002	7th – 8th April 1997, NE Gregal storm, 12.5 m water depth	≤ 3.0 cm s^{-1}

Critical shear stress

Guillén et al., 2002	7th – 8th April 1997, NE Gregal storm, 8.5 m water depth, d_{50} = 135 μm	0.16 N m^{-2}
Guillén et al., 2002	7th – 8th April 1997, NE Gregal storm, 12.5 m water depth, d_{50} = 105 μm	0.14 N m^{-2}

Catalan Front salinity boundary

Font, 1983		38.3 S

Depth to thermocline

Font 1983	Late summer	40-50 m

Depth to pycnocline

Palanques and Drake, 1990	Across-shelf, Oct 1984	30-50 m
Palanques and Drake, 1990	Near mouth, Oct 1984	25-30 m

<u>General shelf sediments</u>

Sedimentation rate

Palanques and Drake, 1990	Seismic facies thickness, proximal prodelta	~2.5 mm y^{-1}
Palanques and Drake, 1990	Seismic facies thickness, middle prodelta	~1.2 mm y^{-1}
Palanques and Drake, 1990	Seismic facies thickness, distal prodelta	0.6 - 1 mm y^{-1}
Zuo et al., 1997	Radiometric, N and S of river mouth	≥ 0.3 cm y^{-1}
Zuo et al., 1997	Radiometric, NE of river mouth, 75 m depth	0.20 cm y^{-1}
Zuo et al., 1997	Radiometric, opposite river mouth, 51 m	0.21 cm y^{-1}
Zuo et al., 1997	Radiometric, S of river mouth, 52 m	0.36 cm y^{-1}
Zuo et al., 1997	Radiometric, 'Prodelta'	0.05-0.2 cm y^{-1}

Prodelta/mid shelf mud belt extent

Diaz et al., 1990	20-80 m water depth, 110 km S of mouth	
Diaz et al., 1990	Extends offshore 20 km	
Diaz et al., 1990	10-15 m water depth to 80 m in front of delta	
Diaz et al., 1990	10-15 m water depth to 60 m, 70 km S of delta	
Diaz et al., 1996	Prodelta area	2300 km^2
Diaz et al., 1996	17-25 km wide mud belt in front of delta	
Nelson, 1990	Holocene prodelta depocenter	1602 km^2
Palanques and Drake, 1990	20-80/90 m water depth, to 40°S	
Palanques et al., 1990	20-90 m around delta front	
Palanques et al., 1990	25-70 m further S of delta front	

Prodelta/mid shelf mud belt thickness

Diaz et al., 1990	Max.in prodelta depocenter, in front of subaerial delta	>25 m
Diaz et al., 1990	Distal prodelta	5-10 m
Farrán and Maldonado, 1990	Max Buda (prodelta) unit, near mouth	80 m
Palanques et al., 1990	Max at 20 m isobath, few km SW of delta	20 m

Bottom nepheloid layer (BNL) thickness

Palanques and Drake	Max, Oct 84 - May 86	~10 m
Puig et al., 2001	Nov 96 - July 97	5-10 m

BNL suspended sediment concentration (SSC)

Cacchione et al., 1990	Oct 9th – Nov 25th 1984, 0.4 mab	5-14 mg l^{-1}
Cacchione et al., 1990	Oct 9th – Nov 25th 1984, 0.4 mab, mean	7.0 mg l^{-1}
Cacchione et al., 1990	Oct 9th – Nov 25th 1984, 1.9 mab	0-5 mg l^{-1}
Diaz et al., 1996	Prodelta - mean near-bottom SPM	~1.5 mg l^{-1}
Guillén et al., 2002	Nov. 1996 – Nov. 1997, inner shelf, storms, 1 mab, 12 m water depth	~ 7000 mg l^{-1}
Palanques and Drake, 1990	Oct 84, near-bottom SPM, 61 m site	> 2 mg l^{-1}
Palanques and Drake, 1990	Oct 84-May 86, near-bottom SPM, 61 m	0.1 – 4.2 mg l^{-1}
Palanques and Drake, 1990	9th Oct – 24th Nov 1984, near-bottom SPM, 0.3 mab, 61 m depth	3 → 13 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mean, inner shelf, 1 mab, 12 m water depth	120 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, inner shelf, fair weather, 1 mab, 12 m water depth	< 30 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, inner shelf, storms, 1 mab, 12 m water depth	> 640 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mean. mid shelf, 5 mab, 60 m water depth	1.97 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mid shelf, fair weather, 5 mab, 60 m water depth	0.5 – 4 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mid shelf, storms, 5 mab., 60 m water depth	≤ 13.8 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, mean, outer shelf, 5 mab, 100 m water depth	0.34 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, outer shelf, fair weather, 5 mab., 60 m water depth	< 0.1 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, outer shelf, storms, 5 mab, 60 m water depth	≤ 2.3 mg l^{-1}
Palanques et al., 2002	Nov. 1996 – Nov. 1997, 8.5 m water, 1 mab	7000 mg l^{-1}
Palanques et al., 2002	Nov. 1996 - Nov. 1997, 12.5 m water, 1 mab	3300 mg l^{-1}
Puig et al., 2001	Nov 96- July 97, top of BNL (60 m water depth, 10 km S of mouth)	0.5 mg l^{-1}
Puig et al., 2001	Nov 96- July 97, 2 mab (60 m water depth, 10 km S of mouth)	2.5-4.5 mg l^{-1}

Plume SSC

Diaz et al., 1996	Mean, surface nepheloid layer	~ 0.5 mg l^{-1}
Durand et al., 2002	July 6th 1997	2.5 – 6 mg l^{-1}
Guillén and Palanques, 1992	SPM range	0.6 – 4 mg l^{-1}

Shelf suspended sediment flux

Cacchione et al., 1990	Oct 84-Feb 85, bottom 5m, observed (60 m depth, 40 km S of mouth)	≤ 2200 mg cm^{-1} s^{-1}
Cacchione et al., 1990	Oct 84-Feb 85, bottom 5 m, computed (20 m depth, 25 km SW of mouth)	≤ 10 mg cm^{-1} s^{-1}
Puig et al., 2001	Gregal winds, Oct-Nov 1997	5.2-5.7 mg m^{-2} s^{-1}
Puig et al., 2001	Along-shelf, Oct-Nov 1997	124 mg m^{-2} s^{-1}
Puig et al., 2001	Across-shelf, Oct-Nov 1997	7.4 mg m^{-2} s^{-1}
Puig et al., 2001	Resultant to SW, Oct-Nov 1997	125 mg m^{-2} s^{-1}

Shelf sediment transport rate

Cacchione et al., 1990	Oct 9th – Nov 25th 1984, along-shelf, 1 mab	2 cm s^{-1} (to SW)
Puig et al., 2001	Oct-Nov 1997, along-shelf	3.57 kg m^{-2}
Puig et al., 2001	Oct-Nov 1997, across-shelf	0.33 kg m^{-2}

Bedform height

Cacchione et al., 1990	Mean due to bioturbation, (60 m depth, 40 km S of mouth)	2.2 cm
Guillén et al., 2002	7th April 1997, ripple height, inner shelf	1 cm
Guillén et al., 2002	7th – 8th April 1997, predicted during NE Gregal storm, 8.5 m water depth	1.6 cm
Guillén et al., 2002	7th – 8th April 1997, predicted during NE Gregal storm, 12.5 m water depth	1.3 cm

Bedform spacing

Cacchione et al., 1990	Mean , bioturbation (60 m depth, 40 km S of mouth)	15 cm
Guillén et al., 2002	7th April 1997, ripple wavelength, inner shelf	10 cm

Shelf area

Diaz et al., 1990	10 500 km^2
Diaz et al., 1996	18 400 km^2

Shelf width

Diaz et al., 1990	Opposite delta	18-40 km
Diaz et al., 1990	S of delta	70 km

Depth to shelf break

Diaz et al., 1990	100-150 m
Diaz et al., 1996	~120 m

Holocene depocenter area

Nelson, 1990	Shoreline	269 km^2
Nelson, 1990	Delta	753 km^2
Nelson, 1990	Prodelta	1602 km^2
Nelson, 1990	Upper slope	1968 km^2
Nelson, 1990	Middle and lower slope	2398 km^2
Nelson, 1990	Base of slope	5950 km^2
Nelson, 1990	Valencia Fan	10830 km^2

Holocene depocenter % storage of sediment

Nelson, 1990	Shoreline	7.2
Nelson, 1990	Delta	51.2
Nelson, 1990	Prodelta	18.3
Nelson, 1990	Upper slope	0.9
Nelson, 1990	Middle and lower slope	12.5
Nelson, 1990	Base of slope	7.9
Nelson, 1990	Valencia Fan	1.9

Prodelta % storage of sediment

Palanques and Drake, 1990	Proximal prodelta	70
Palanques and Drake, 1990	Middle prodelta	15
Palanques and Drake, 1990	Distal prodelta	15

Holocene depocenter dry bulk density

Nelson, 1990	Shoreline	1.14 g cm^3
Nelson, 1990	Delta	1.14 g cm^3
Nelson, 1990	Prodelta	1.14 g cm^3
Nelson, 1990	Upper slope	0.927 g cm^3
Nelson, 1990	Middle and lower slope	0.992 g cm^3
Nelson, 1990	Base of slope	0.878 g cm^3
Nelson, 1990	Valencia Fan	0.845 g cm^3

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