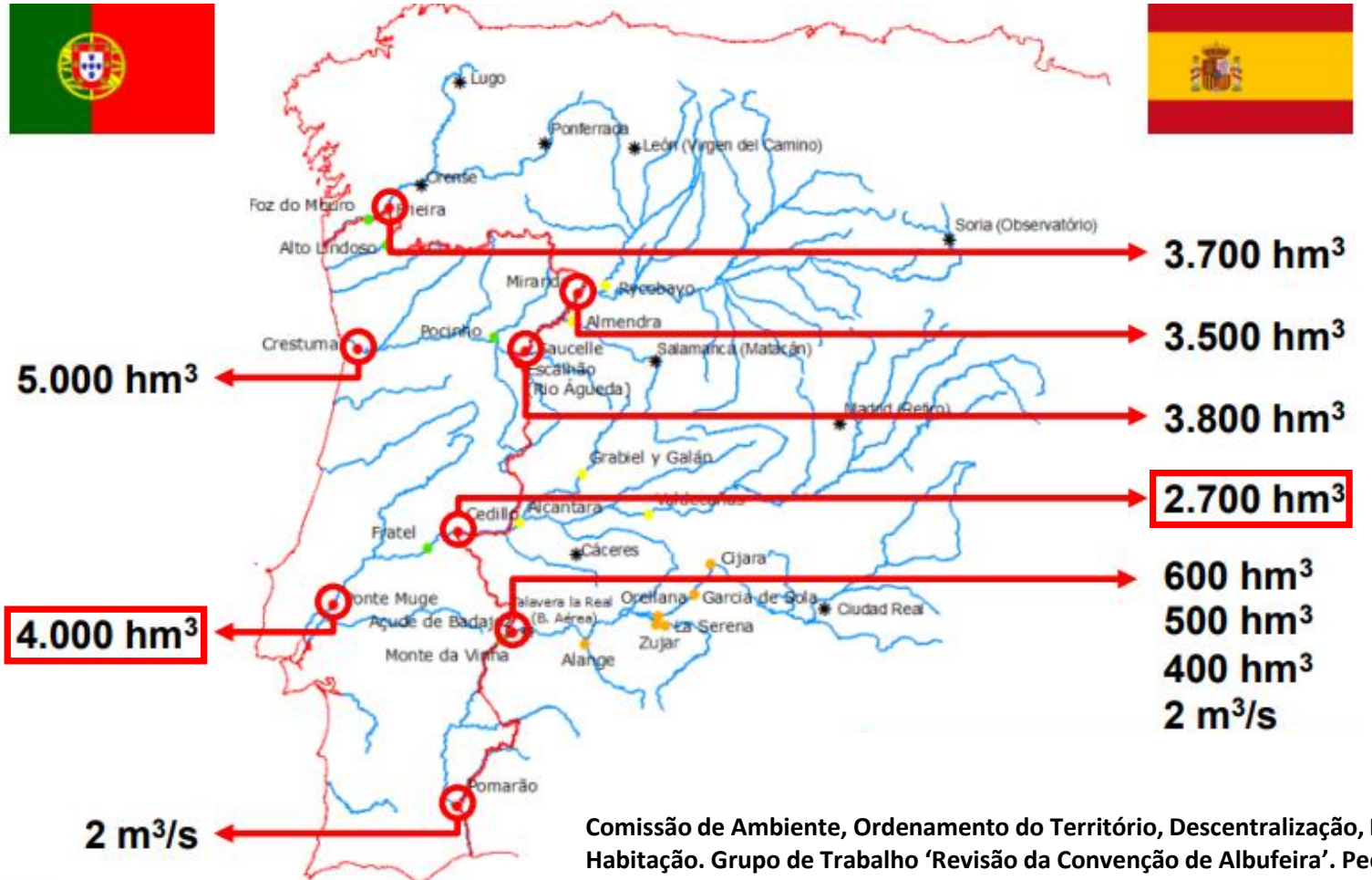
Os caudais no Rio Tejo: enquadramento na Convenção de Albufeira e Diretiva Quadro da Água

Debate

(Informação “acessível”)

Maria Manuela Portela


Lugo
Ponferrada
León (Virgen del Camino)
Orense
Foz do Minho
Soria (Observatório)
Alto Lindoso
Miranda
Riocabayo
Almendra
Crestuma
Pocinho
Salamanca (Matacán)
Escalhão
(Rio Águeda)
Madrid (Retiro)
Grabiel y Galán
Cedillo
Alcantara
Fratel
Cáceres
Cijara
Monte Muge
Orellana
Garcia de Sola
Ciudad Real
Açude de Badajoz
(B. Aérea)
La Serena
Zujar
Monte da Vinha
Alange
Pomarão
5.000 hm³
4.000 hm³
2 m³/s
3.700 hm³
3.500 hm³
3.800 hm³
2.700 hm³
600 hm³
500 hm³
400 hm³
2 m³/s

Em 2008 foram acrescentadas obrigações de caudais trimestrais e semanais mínimos

Comissão de Ambiente, Ordenamento do Território, Descentralização, Poder Local e Habitação. Grupo de Trabalho 'Revisão da Convenção de Albufeira'. Pedro Cunha Serra, Exposição inicial, 9 de Maio de 2018

Período	Caudais Integrais (hm^3)		
	Barragem de Cedilho	Ponte de Muge (estação	
		Sub-bacia portuguesa	Total
Anual	2700	1300	4000
Trimestral de 31/outubro a 31/dezembro	295	150	445
Trimestral de 1/janeiro a 31/março	350	180	530
Trimestral de 1/abril a 30/junho	220	110	330
Trimestral de 1/julho a 30/setembro	130	60	190
Caudal Integral semanal	7	3	10

Área	Bacia hidrográfica (BH) do rio Tejo		
	Secção da barragem de Cedilho		Total
	A montante	A jusante	
km^2	58059	22541	80600
Em percentagem da BH rio Tejo	72%	28%	100%

Os caudais integrais mínimos na EH de Ponte Muge devem corresponder aos caudais integrais mínimos em Cedillo mais os caudais integrais mínimos na sub-bacia portuguesa entre Cedillo e Ponte Muge

Período	Caudais Integrais (hm^3)		
	Barragem de Cedilho	Ponte de Muge (estação	
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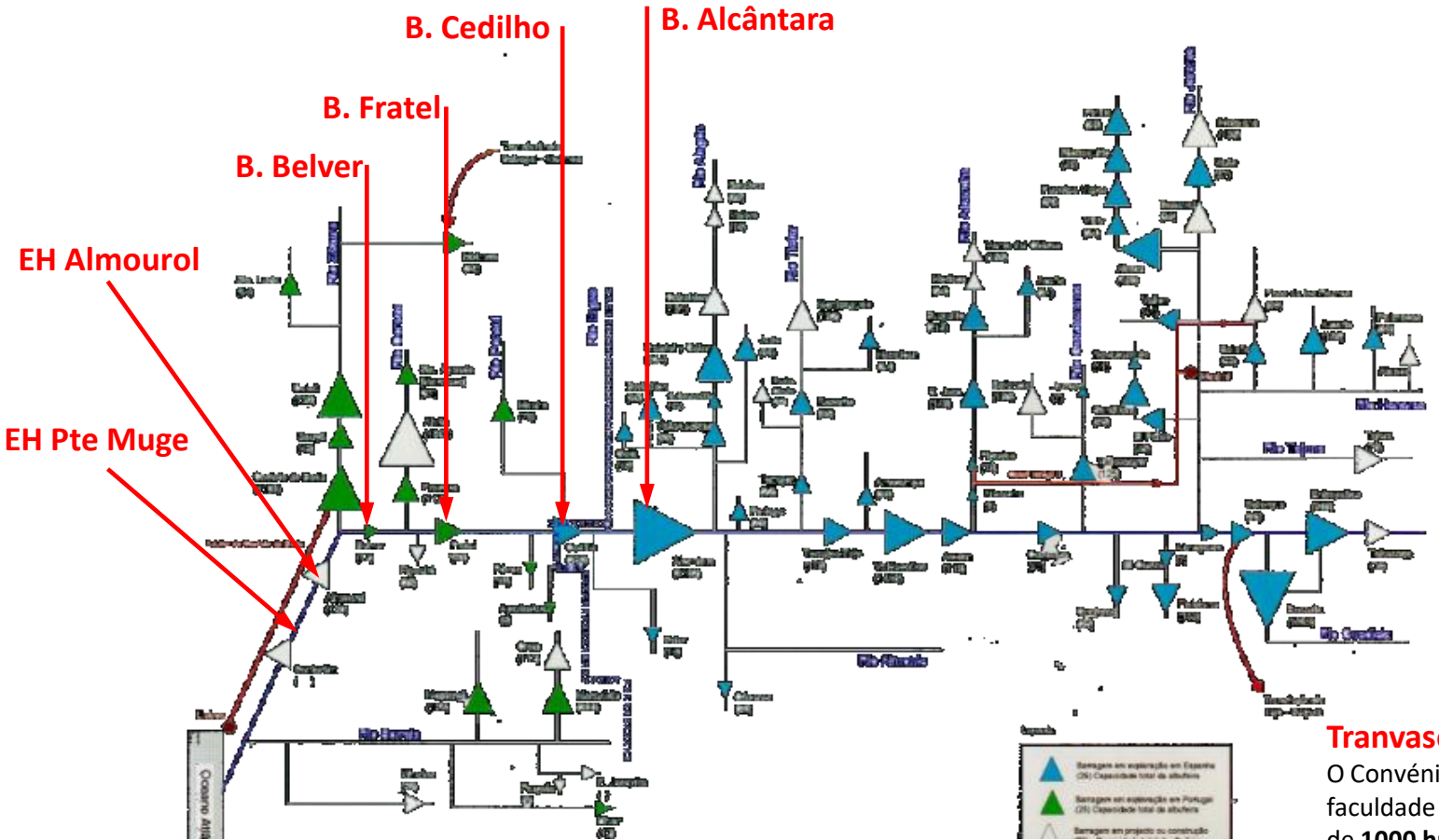
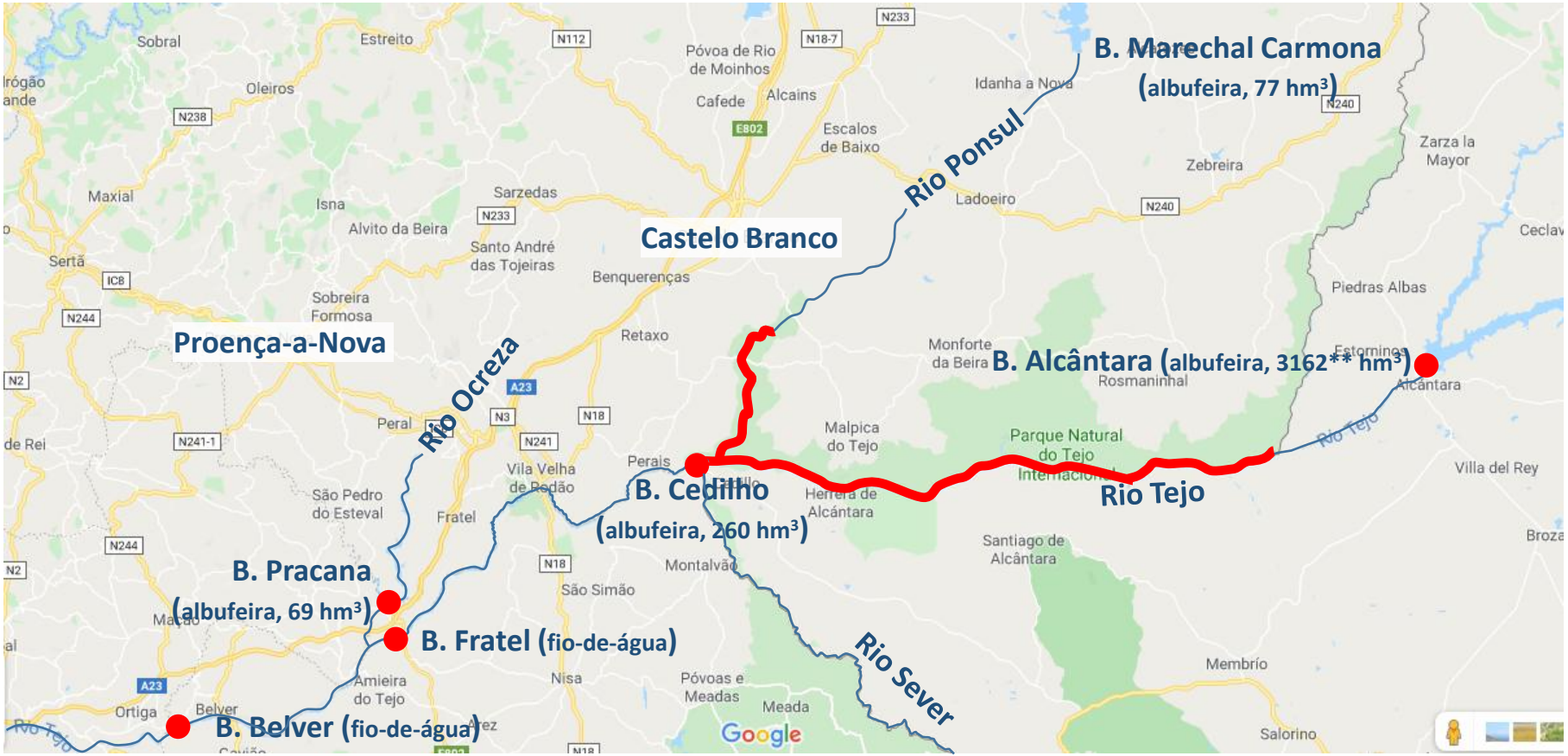


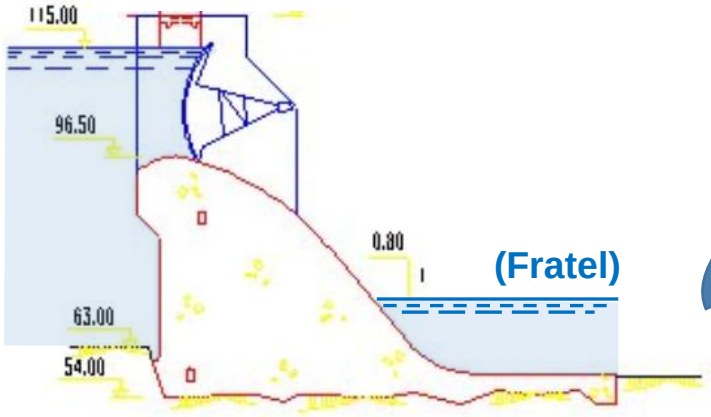
Tranvase Tejo-Segura

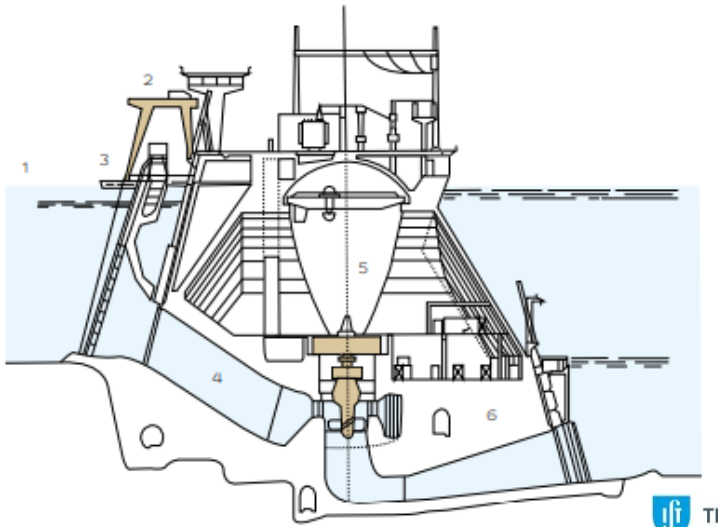
O Convénio de 1968 contempla já a faculdade de transferência até ao valor de **1000 hm³/ano**

** Capacidade total. Segunda maior albufeira de Espanha. Primeira, La Serena, rio Zújar, bh Guadiana, 3219 hm ³)



** Capacidade total. Segunda maior albufeira de Espanha. Primeira, La Serena, rio Zújar, bh Guadiana, 3219 hm ³)

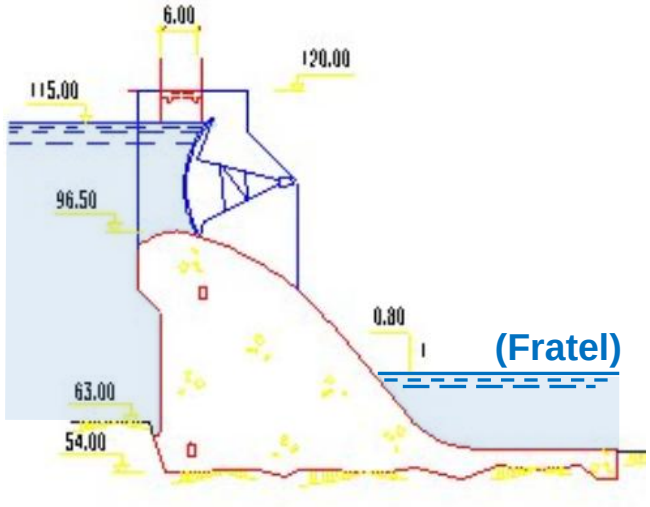


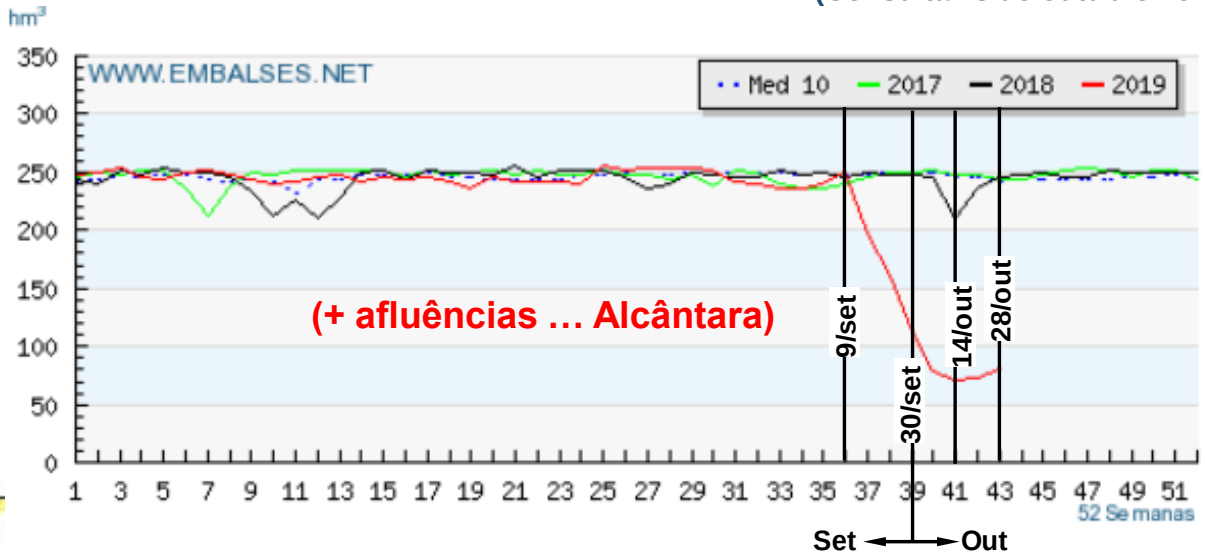


Aproveitamento de Cedilho

- ✓ Área da bacia hidrográfica: 58059 km^2
- ✓ Afluência anual média (?): 7277 hm^3 (125 mm)
- ✓ Capacidade da albufeira: 260 hm^3

(Consulta 28 de outubro 2019)





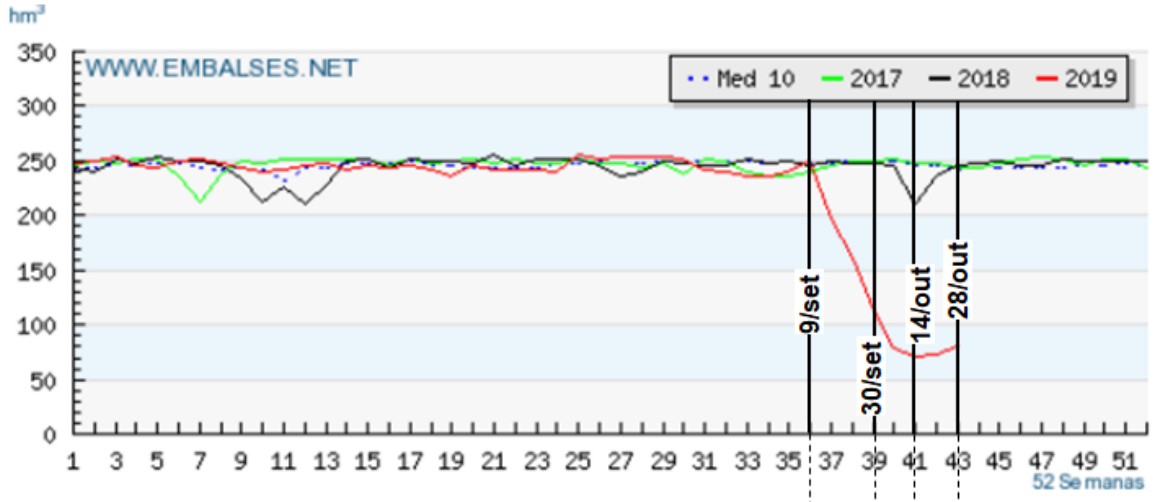
Aproveitamento de Cedilho

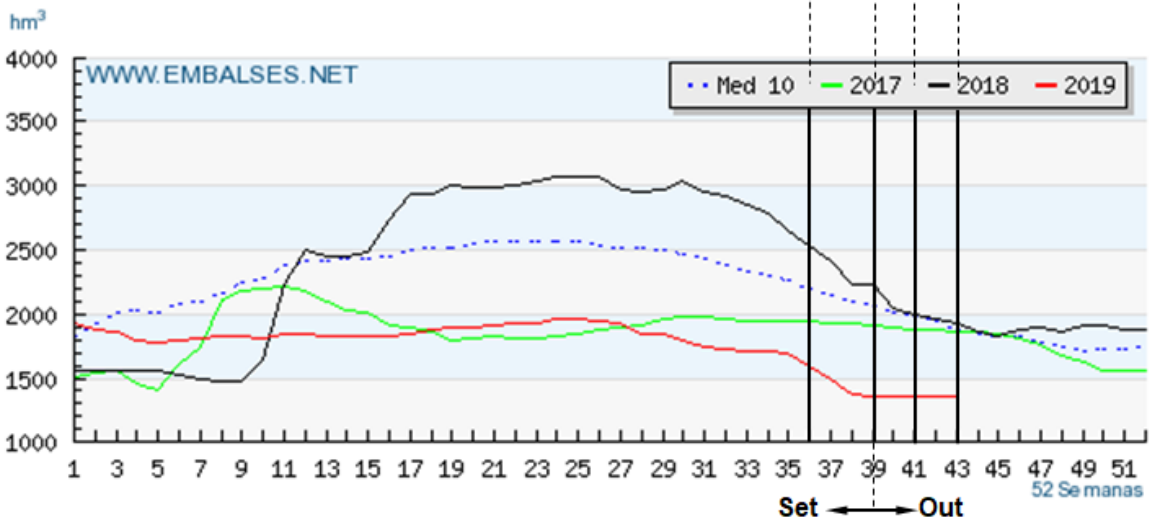
- ✓ Área da bacia hidrográfica :58.059 km²
- ✓ Afluência anual média: 7277 hm³ (125 mm)
- ✓ Capacidade da albufeira : 260 hm³

Embalse: CEDILLO				
Agua embalsada (21-10-2019):	**80**	**hm³**	**30.77**	**%**
Variacion semana Anterior:	7	hm³	2.69	%
Capacidad:	260	hm³		
Misma Semana (2018):	246	hm³	94.62	%
Misma Semana (Med. 10 Años):	241	hm³	93.04	%

TÉCNICO LISBOA

(Consulta 28 de outubro 2019)





Cedilho

(Δ aprox. 180 hm³)

Período	Barragem de Cedilho
Anual	2700
31/dezembro	295
1/janeiro a 31/março	350
1/abril a 30/junho	220
1/julho a 30/setembro	130
Caudal Integral semanal	7

995

Alcântara

(Δ aprox. 250 hm³)

Rede hidrométrica ao longo do rio Tejo
Estações sem registos
Estações com registos
Proença-a-Nova
Rio Ocreza
Rio Ponsul
Rio Sever
V. Velha de Rodão
B. Cedilho
Rosmaninhal
B. Pracana
B. Fratel
B. Belver
Almourol
Tramagal
Ómnias - Santarém
Ponte Muge
Google

Nome	Área da BH (km^2)	Nome	Área da BH (km^2)
Rosmaninhal (montante)	53496.77	Quinta da Cardiga	67613.68
Foz do Sever	58942.57	Ponte da Chamusca	67673.71
Vila Velha de Rodão	59247.00	Chamusca	67689.86
Albufeira de Fratel	59639.21	Porto da Freixo	68287.60
Figueiró	59639.24	Ponte de Santarám	68429.19
Albufeira de Belver	61539.98	**Ómnias (Santarém)**	**68430.32**
Alferrarede	61838.15	Mouchão de Santa Marta	68443.69
Abrantes-Lopo	61973.80	Porto das Faias	68444.96
Pte.de Abrantes	61975.39	**Ponte Muge**	**69607.45**
Tramagal	**62348.00**	Morgado	69613.65
Santa Margarida do Sabugal	62323.92	Porto da Palha	69846.45
Praia do Ribatejo	67403.90	Espadanal	70820.29
Almourol	**67482.30**	Cais do Carregado	71151.51
Tancos	67529.69	Vila Franca de Xira (jusante)	71326.19
Barquinha	67530.31		

EHs (29) localizadas ao longo do rio Tejo, referenciadas no SNIRH

Com algum tipo de registo

... estações de monitorização do regime de caudais localizam-se . . . (Tejo) Ponte Muge

TÉCNICO LISBOA

APRH

XXI REUNIÓN PLENARIA DE LA COMISIÓN PARA LA APLICACIÓN Y DESARROLLO DEL CONVENIO

MADRID, 25 DE OCTUBRE DE 2018

XXI REUNIÃO PLENÁRIA DA COMISSÃO PARA A APLICAÇÃO E DESENVOLVIMENTO DO CONVÉNIO

MADRID, 25 DE OUTUBRO DE 2018

CONVENIO DE ALBUFEIRA

CONVENÇÃO DE ALBUFEIRA

INFORME HIDROMETEOROLÓGICO ANUAL 2017 / 2018

RÉGIMEN DE CAUDALES

RELATÓRIO HIDROMETEOROLÓGICO ANUAL 2017 / 2018

REGIME DE CAUDAIS

Año hidrológico 2017/2018

Ano hidrológico 2017/2018

Bacia hidrográfica do rio Tejo

CADC, outubro 2018

APRH

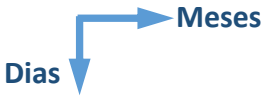
TÉCNICO LISBOA

Página 63: *"Na bacia hidrográfica do rio Tejo o ponto de controlo localiza-se numa estação hidrométrica extinta (!!!)*

Página 63: *"Na bacia hidrográfica do rio Tejo o ponto de controlo localiza-se numa **estação hidrométrica extinta** mas cujos valores são passíveis de ser estimados a partir da estação activa de **Almourol**, que cobre 98% da área da bacia definida em Ponte Muge. Assim, para obter as afluências a Ponte Muge multiplica-se os registos de Almourol pelo factor 1,02".*

Página 63: "*Na bacia hidrográfica do rio Tejo o ponto de controlo localiza-se numa estação hidrométrica extinta mas cujos valores são passíveis de ser estimados a partir da estação activa de Almourol, que cobre 98% da área da bacia definida em Ponte Muge. Assim, para obter as afluências a Ponte Muge multiplica-se os registos de Almourol pelo factor 1,02.*

No caso da estação de Almourol apresentar falhas ou os dados não serem totalmente fiáveis os valores de caudal são determinados a partir dos dados hidrométricos de três estações, Castelo de Bode, Belver e Fábrica da Matrena. As duas primeiras estações localizam-se em barragens, sendo utilizados os caudais efluentes diários."



Ano de 2017/2018 - caudais médios diários (SNIRH)

EH de Almourol

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	-	-	76.1	-	214.9	571.2	241.0	-	95.4	254.1	160.0	214.9
2	-	-	60.0	-	78.9	279.8	264.8	152.8	61.8	275.9	127.5	99.0
3	117.5	49.3	100.5	-	75.8	334.6	209.9	93.1	88.2	349.1	280.3	365.1
4	51.0	54.0	73.7	-	76.8	505.1	201.4	147.4	69.8	350.7	465.7	349.4
5	76.6	-	189.3	-	167.2	534.9	387.5	71.2	102.8	262.9	241.0	325.2
6	50.3	-	454.8	-	248.8	627.6	366.7	71.6	103.0	214.2	323.8	182.8
7	41.3	46.7	286.8	42.0	250.5	492.3	290.8	171.8	109.2	238.0	261.6	156.1
8	39.0	59.7	172.1	120.7	318.2	647.4	278.7	474.4	167.2	101.4	123.7	132.1
9	103.4	56.0	72.7	126.2	437.9	687.5	304.5	174.1	93.9	127.0	126.4	226.1
10	91.0	113.2	81.9	-	98.6	-	237.6	122.9	50.9	260.0	57.2	236.6
11	39.5	70.0	130.2	-	73.6	-	484.6	255.5	76.4	282.2	81.4	-
12	-	44.8	106.3	-	73.4	-	618.3	325.6	90.9	355.4	194.8	424.0
13	-	-	60.5	-	87.9	1324.2	1153.3	55.8	59.5	365.8	69.7	569.7
14	53.5	-	-	39.2	50.3	1311.2	651.3	37.0	89.5	201.4	139.7	520.4
15	-	-	-	44.2	68.7	1844.0	249.4	50.1	127.7	76.1	109.8	243.0
16	-	149.0	-	41.5	54.9	1438.9	315.7	44.3	214.5	52.5	176.2	36.1
17	-	105.8	-	38.8	137.4	1320.7	203.7	40.6	112.6	104.7	137.7	139.3
18	-	74.6	-	56.0	90.5	1695.4	253.0	134.9	-	125.7	105.4	200.7
19	-	-	-	76.7	46.1	1272.8	261.7	402.1	344.8	275.6	-	381.4
20	40.9	-	46.3	62.7	69.8	1180.2	502.1	130.8	448.3	299.7	149.8	567.4
21	53.5	147.4	61.4	53.8	52.5	1094.0	340.5	263.5	539.1	153.1	279.5	454.1
22	-	101.3	-	80.0	53.0	1133.7	-	336.7	392.3	-	338.8	337.8
23	60.8	-	41.0	56.5	43.0	1014.2	573.3	342.8	-	165.4	447.5	73.9
24	44.5	-	47.2	108.4	79.7	668.6	694.2	264.0	202.3	434.1	214.4	153.7
25	47.5	-	45.4	140.4	71.4	642.6	757.5	126.4	263.4	407.5	216.2	137.7
26	35.9	-	43.6	122.9	160.3	688.8	455.5	171.8	486.0	521.8	65.4	192.7
27	-	-	45.8	63.9	494.7	781.6	581.9	87.3	611.6	310.1	181.3	191.4
28	-	195.5	55.7	-	514.1	652.2	356.8	153.3	523.4	363.0	315.8	337.4
29	-	174.3	61.2	39.9		507.4	100.2	303.8	-	278.8	256.4	111.5
30	77.7	-	57.5	54.9		231.0	116.8	257.2	830.4	145.1	215.4	68.2
31	41.7		66.9	116.5		201.7		101.9		200.9	312.0	

(308 dias com registos)

Meses

Dias

Ano de 2017/2018 - caudais médios diários (SNIRH)

EH de Almourol

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	-	-	76.1	-	214.9	571.2	241.0	-	95.4	254.1	160.0	214.9
2	-	-	60.0	-	78.9	279.8	264.8	152.8	61.8	275.9	127.5	99.0
3	117.5	49.3	100.5	-	75.8	334.6	209.9	93.1	88.2	349.1	289.3	365.1
4	51.0	54.0	73.7	-	76.8	505.1	201.4	147.4	69.8	350.7	465.7	349.4
5	76.6	-	189.3	-	167.2	534.9	387.5	71.2	102.8	262.9	241.0	325.2
6	50.3	-	454.8	-	248.8	627.6	366.7	71.6	103.0	274.2	323.8	182.8
7	41.3	46.7	286.8	42.0	250.5	492.3	290.8	171.8	109.2	238.0	261.6	156.1
8	39.0	59.7	172.1	120.7	318.2	647.4	278.7	474.4	167.1	101.4	123.7	132.1
9	103.4	56.0	72.7	126.2	437.9	687.5	304.5	174.1	98.9	127.0	126.4	226.1
10	91.0	113.2	81.9	-	98.6	-	237.6	122.9	50.9	260.0	57.2	236.6
11	39.5	70.0	130.2	-	73.6	-	484.6	255.5	76.4	282.2	81.4	-
12	-	44.8	106.3	-	73.4	-	618.3	325.6	90.9	355.4	194.8	424.0
13	-	-	60.5	-	87.9	1324.2	1153.3	55.8	59.5	365.8	69.7	569.7
14	53.5	-	-	39.2	50.3	1311.2	651.3	37.0	89.5	201.4	139.7	520.4
15	-	-	-	44.2	68.7	1844.0	749.4	50.1	127.7	76.1	109.8	243.0
16	-	149.0	-	41.5	54.9	1438.9	315.7	44.3	214.5	52.5	176.2	36.1
17	-	105.8	-	38.8	137.4	1320.7	203.7	40.6	112.6	104.7	137.7	139.3
18	-	74.6	-	56.0	90.5	1695.4	253.0	134.9	-	125.7	105.4	200.7
19	-	-	-	76.7	46.1	1272.8	261.7	402.1	344.8	275.6	-	381.4
20	40.9	-	46.3	62.7	69.8	1180.2	502.1	130.8	448.3	299.7	149.8	567.4
21	53.5	147.4	61.4	53.8	52.5	1094.0	340.5	263.5	539.1	153.1	279.5	454.1
22	-	101.3	-	80.0	53.0	1133.7	-	336.7	392.3	-	338.8	337.8
23	60.8	-	41.0	58.5	43.0	1014.2	573.3	342.8	-	165.4	447.5	73.9
24	44.5	-	47.2	108.4	79.7	668.6	694.2	264.0	202.3	434.1	214.4	153.7
25	47.5	-	45.4	140.4	71.4	642.6	757.5	126.4	263.4	407.5	216.2	137.7
26	35.9	-	48.6	122.9	160.3	688.8	455.5	171.8	486.0	521.8	65.4	192.7
27	-	-	45.8	63.9	494.7	781.6	581.9	87.3	611.6	310.1	181.3	191.4
28	-	195.5	55.7	-	514.1	652.2	356.8	153.3	523.4	363.0	325.8	337.4
29	-	174.3	61.2	39.9		507.4	100.2	303.8	-	278.8	256.4	111.5
30	77.7	-	57.5	54.9		231.0	116.8	257.2	330.4	145.1	215.4	68.2
31	41.7		66.9	116.5		201.7		101.9		200.9	312.0	

EH de Fábrica da Matrena

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	-	0.8	-	-	-	-	13.0	10.3	4.5	2.9	2.0	1.7
2	-	0.9	-	-	-	-	12.4	9.5	4.3	2.9	2.0	1.6
3	-	1.2	-	-	-	-	12.6	9.1	4.2	2.9	2.0	1.7
4	-	1.7	-	-	-	-	13.5	8.7	4.2	2.8	1.9	1.7
5	-	1.3	-	-	-	-	12.7	8.2	4.3	2.7	1.9	1.8
6	-	1.1	-	-	-	-	14.2	7.9	4.3	2.6	1.9	1.8
7	-	1.0	-	-	-	-	25.9	7.6	4.2	2.6	1.8	1.9
8	-	1.0	-	-	-	12.1	20.6	7.5	4.7	2.7	1.9	1.6
9	-	1.0	-	-	-	68.5	32.4	7.3	4.5	2.7	1.9	1.7
10	-	1.0	-	-	-	105.1	45.7	7.0	4.4	2.7	1.9	1.7
11	-	1.0	-	-	-	64.0	56.6	6.7	4.3	2.7	1.9	1.7
12	-	1.0	-	-	-	40.4	47.2	6.5	4.1	2.7	1.8	1.6
13	-	-	-	-	-	32.6	[illegible]	6.2	3.9	2.7	1.9	1.6
14	-	-	-	-	-	[illegible]	32.6	6.1	3.7	2.6	1.9	1.6
15	-	-	-	-	-	64.1	27.2	6.0	3.6	2.6	1.9	1.6
16	-	-	-	-	-	44.2	23.3	5.6	3.5	2.9	1.8	1.6
17	-	-	-	-	1.5	75.6	20.3	5.4	3.3	2.7	1.8	1.6
18	-	-	-	-	1.5	56.4	18.1	5.3	3.1	2.6	1.8	1.6
19	-	-	-	2.2	1.6	50.1	16.4	5.8	3.0	2.6	1.7	1.6
20	1.0	-	-	2.1	1.5	41.8	15.2	5.8	2.9	2.5	1.7	1.6
21	0.9	-	-	2.1	-	28.5	15.4	5.6	3.9	2.5	1.7	1.6
22	0.9	-	-	-	-	23.2	14.9	4.9	4.1	2.4	1.6	1.6
23	0.8	-	-	-	-	20.2	13.3	4.9	3.7	2.4	1.7	1.6
24	0.9	-	-	-	-	24.8	12.2	5.3	3.3	2.3	1.6	1.6
25	0.9	-	-	-	-	25.2	11.4	6.8	3.2	2.3	1.6	1.6
26	0.9	-	-	2.3	-	21.0	10.7	7.0	3.2	2.4	1.6	1.6
27	0.9	-	-	2.1	-	17.7	10.2	5.5	3.0	2.4	1.7	1.5
28	0.8	-	-	2.0	-	15.9	10.1	5.2	2.9	2.2	1.8	1.5
29	0.8	-	-	1.9		14.8	11.1	4.9	2.9	2.2	1.8	1.5
30	0.8	-	-	-		14.9	11.1	4.8	2.9	2.2	1.8	1.5
31	0.8		-	-		14.4		4.7		2.1	1.8	

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(águas subterrâneas)

Albufeira de Castelo de Bode

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	3.2	0.0	0.0	1.9	16.6	12.2	195.4	49.3	53.2	23.2	74.3	17.9
2	66.5	13.0	13.3	13.2	13.2	34.4	185.1	142.5	6.7	36.9	83.1	47.5
3	68.4	15.7	5.9	12.0	20.7	47.5	185.5	48.2	6.3	26.4	36.2	66.9
4	29.1	0.0	15.3	0.0	14.5	14.7	188.3	56.8	58.7	28.1	38.9	57.6
5	28.0	0.0	29.4	24.7	11.1	35.0	160.2	22.0	66.0	27.3	34.8	65.7
6	10.6	7.5	12.4	0.0	22.4	71.1	168.7	53.0	59.3	41.5	60.1	10.4
7	4.2	19.4	6.6	14.6	18.2	94.3	178.2	38.5	53.8	17.7	40.6	34.8
8	16.2	41.8	0.0	116.4	9.1	129.8	138.6	45.3	89.6	20.7	14.3	12.4
9	15.7	3.6	0.0	1.9	8.6	180.5	156.2	18.8	18.1	89.0	25.2	24.3
10	25.1	-	7.6	0.0	12.7	84.5	97.2	12.5	11.2	97.4	20.8	9.4
11	1.6	0.9	57.9	0.0	12.7	95.8	125.9	4.3	28.2	88.4	26.0	46.6
12	1.4	0.0	20.4	0.0	12.7	170.6	165.5	4.3	32.5	84.4	1.5	27.8
13	0.0	0.0	0.0	0.0	12.5	163.6	180.7	0.0	15.8	85.9	8.5	56.6
14	0.0	0.0	0.0	0.0	13.1	174.9	186.3	3.4	79.3	59.8	4.3	58.1
15	0.0	33.6	0.0	0.0	11.9	181.8	177.2	7.7	29.1	31.6	19.6	0.0
16	4.9	2.8	0.0	0.0	12.1	187.5	173.7	8.6	-	49.8	6.6	23.6
17	0.0	-	0.0	2.7	12.5	182.7	114.8	5.3	-	93.4	9.4	26.8
18	16.6	4.7	0.0	27.5	12.5	183.6	122.0	4.8	-	98.8	15.3	66.3
19	2.1	0.0	9.6	14.3	12.5	182.3	113.4	7.2	130.5	74.0	29.0	43.4
20	21.7	17.9	12.4	0.0	12.6	195.0	120.1	26.1	85.4	37.3	54.9	80.6
21	22.3	21.9	49.9	0.0	12.6	188.2	71.0	14.7	68.4	56.0	43.3	84.5
22	22.7	1.7	0.0	7.6	12.6	189.2	125.3	70.7	64.9	21.9	74.2	62.3
23	27.1	0.0	6.1	1.8	12.6	189.3	126.0	47.4	38.4	54.7	61.0	48.2
24	15.8	0.0	21.3	9.6	12.6	158.1	84.0	85.7	82.1	74.9	31.7	51.8
25	16.9	0.0	4.3	6.3	12.6	-	63.6	21.3	61.6	67.3	44.1	64.0
26	3.1	2.2	7.7	22.4	14.0	194.4	111.5	52.1	44.1	52.3	36.6	89.6
27	0.0	32.5	22.5	2.8	94.0	191.2	106.1	59.3	67.9	31.3	38.8	103.4
28	0.0	38.4	17.9	0.0	12.5	186.9	65.8	57.9	60.0	70.7	75.0	81.4
29	0.0	8.5	32.9	4.0		185.8	10.5	126.9	23.1	38.0	34.1	34.0
30	0.0	0.0	39.1	30.6		180.0	113.1	96.0	25.1	36.2	14.4	22.8
31	21.2		4.8	25.2		187.5		48.1		26.9	20.4	

Albufeira de Belver

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	13.9	13.8	36.8	12.6	115.1	307.5	19.0	15.1	14.6	307.8	64.3	47.3
2	68.7	13.3	79.9	13.9	45.7	284.8	103.8	16.5	65.9	309.3	84.4	214.8
3	16.5	28.8	50.0	12.7	44.7	296.0	17.8	51.1	50.7	327.3	389.5	313.7
4	19.1	13.6	76.5	12.7	87.6	471.3	60.1	93.4	12.8	326.8	412.4	288.8
5	38.9	12.9	280.1	16.1	204.3	456.9	254.2	13.1	54.9	162.8	218.0	251.7
6	34.9	13.5	443.9	20.6	237.3	484.2	169.8	17.6	28.1	260.0	305.4	179.5
7	18.1	16.0	163.9	23.9	244.0	309.0	174.4	280.0	119.4	173.0	147.1	71.6
8	72.5	13.5	141.7	89.0	351.9	585.1	90.5	322.8	80.6	18.2	162.6	237.7
9	65.4	111.7	58.8	11.5	312.4	423.4	86.1	127.1	15.6	144.2	21.4	204.7
10	30.8	-	80.4	11.7	32.0	1928.8	165.4	154.9	12.3	214.1	28.9	292.7
11	19.5	57.9	51.2	37.0	41.3	911.1	348.4	360.8	81.4	215.7	156.3	372.5
12	33.8	16.0	59.9	20.5	74.6	822.8	487.2	170.8	38.3	338.2	105.0	430.7
13	48.8	15.4	14.4	14.0	33.4	1023.3	728.9	12.9	28.8	260.8	149.4	461.6
14	13.3	51.4	13.1	21.5	40.6	1072.7	227.6	13.0	24.0	58.3	130.1	428.0
15	12.9	152.2	13.6	19.5	32.1	1508.4	51.2	32.7	167.3	14.7	72.5	45.5
16	13.0	204.2	15.1	12.5	62.1	919.5	122.4	14.5	-	14.3	225.2	67.0
17	14.2	-	13.1	25.3	136.7	1164.1	111.1	56.3	-	33.7	126.2	123.0
18	15.8	83.8	14.2	46.9	14.1	1273.0	111.3	245.1	-	67.1	86.2	199.7
19	15.0	44.2	19.6	25.3	45.8	768.3	267.2	301.0	152.9	333.1	61.7	444.0
20	13.2	287.2	13.2	44.1	24.2	817.8	301.2	187.2	486.8	212.8	201.8	494.1
21	12.5	71.4	14.3	44.6	29.3	732.7	352.7	318.3	418.5	46.2	313.7	356.1
22	12.4	248.8	14.4	49.8	14.0	802.7	456.9	254.7	388.7	17.8	293.8	136.0
23	13.5	87.8	19.8	65.0	58.4	706.5	484.7	330.4	245.9	279.3	346.5	29.1
24	12.2	99.3	20.2	98.3	40.4	302.2	573.8	96.6	114.9	385.3	247.4	162.2
25	12.5	51.4	23.8	141.1	58.3	-	578.0	144.7	374.2	362.0	48.6	109.8
26	13.1	30.3	14.1	77.0	323.1	497.2	255.4	60.7	417.1	453.4	40.5	150.0
27	35.9	290.6	13.5	13.2	440.0	553.6	388.2	15.2	538.9	290.3	267.8	148.8
28	12.4	242.1	18.0	12.8	492.7	309.6	179.2	183.4	414.8	370.9	240.0	241.4
29	56.7	186.5	12.7	18.5		231.3	22.1	251.1	379.1	90.5	175.4	48.7
30	12.4	66.0	16.2	28.7		32.5	23.6	66.8	163.3	210.2	309.9	16.9
31	13.5		11.6	175.7		55.7		53.4		171.1	299.5	

Ano de 2017/2018 - caudais médios diários (SNIRH)

Meses →
Dias ↓

EH de Almourol

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	-	-	76.1	-	214.9	571.2	241.0	-	95.4	254.1	160.0	214.9
2	-	-	60.0	-	78.9	279.8	264.8	152.8	61.8	275.9	127.5	99.0
3	117.5	49.3	100.5	-	75.8	334.6	209.9	93.1	88.2	349.1	[illegible]	365.1
4	51.0	54.0	73.7	-	76.8	505.1	201.4	147.4	69.8	350.7	465.7	349.4
5	76.6	-	189.3	-	167.2	534.9	387.5	71.2	102.8	[illegible]	241.0	325.2
6	50.3	-	454.8	-	248.8	627.6	366.7	71.6	103.0	214.2	323.8	182.8
7	41.3	46.7	[illegible]	42.0	250.5	492.3	290.8	171.8	109.2	238.0	261.6	156.1
8	39.0	59.7	172.1	120.7	318.2	647.4	278.7	474.4	[illegible]	101.4	123.7	132.1
9	103.4	56.0	72.7	[illegible]	437.9	687.5	304.5	174.1	[illegible]	127.0	126.4	226.1
10	91.0	113.2	81.9	-	98.6	-	237.6	122.9	50.9	260.0	57.2	236.6
11	39.5	70.0	130.2	-	73.6	-	484.6	[illegible]	76.4	282.2	81.4	-
12	-	44.8	106.3	-	[illegible]	-	618.3	[illegible]	90.9	355.4	194.8	424.0
13	-	-	60.5	-	87.9	1324.2	1153.3	55.8	59.5	365.8	69.7	569.7
14	53.5	-	-	39.2	50.3	[illegible]	[illegible]	37.0	89.5	201.4	139.7	520.4
15	-	-	-	44.2	68.7	[illegible]	[illegible]	50.1	127.7	76.1	109.8	243.0
16	-	149.0	-	41.5	54.9	1438.9	315.7	44.3	214.5	52.5	176.2	36.1
17	-	105.8	-	38.8	137.4	[illegible]	[illegible]	40.6	112.6	104.7	137.7	139.3
18	-	74.6	-	56.0	90.5	[illegible]	[illegible]	134.9	-	125.7	105.4	200.7
19	-	-	-	76.7	46.1	1272.8	261.7	402.1	344.8	275.6	-	381.4
20	40.9	-	46.3	62.7	[illegible]	1180.2	502.1	[illegible]	448.3	299.7	149.8	567.4
21	53.5	147.4	61.4	53.8	52.5	1094.0	340.5	[illegible]	539.1	153.1	279.5	454.1
22	-	101.3	-	80.0	53.0	1133.7	-	336.7	[illegible]	-	338.8	337.8
23	60.8	-	41.0	[illegible]	43.0	1014.2	573.3	342.8	-	165.4	447.5	73.9
24	44.5	-	47.2	108.4	79.7	668.6	694.2	264.0	202.3	434.1	214.4	153.7
25	47.5	-	45.4	140.4	71.4	642.6	757.5	126.4	263.4	[illegible]	216.2	137.7
26	35.9	-	[illegible]	122.9	160.3	688.8	455.5	171.8	486.0	[illegible]	65.4	192.7
27	-	-	45.8	63.9	494.7	781.6	581.9	87.3	611.6	310.1	181.3	191.4
28	-	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	363.0	[illegible]	337.4
29	-	174.3	61.2	39.9		507.4	100.2	303.8	-	278.8	256.4	111.5
30	77.7	-	57.5	54.9		[illegible]	[illegible]	[illegible]	330.4	145.1	215.4	68.2
31	41.7		66.9	116.5		201.7		101.9		200.9	312.0	

(2018/2019, 262 dias com registos)

EH de Fábrica da Matrena

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	-	0.8	-	-	-	-	13.0	10.3	4.5	2.9	2.0	1.7
2	-	0.9	-	-	-	-	12.4	9.5	4.3	2.9	2.0	1.6
3	-	1.2	-	-	-	-	12.6	9.1	4.2	2.9	2.0	1.7
4	-	1.7	-	-	-	-	13.5	8.7	4.2	2.8	1.9	1.7
5	-	1.3	-	-	-	-	12.7	8.2	4.3	2.7	1.9	1.8
6	-	1.1	-	-	-	-	14.2	7.9	4.3	2.6	1.9	1.8
7	-	1.0	-	-	-	-	25.9	7.6	4.2	2.6	1.8	1.9
8	-	1.0	-	-	-	12.1	20.6	7.5	4.7	2.7	1.9	1.6
9	-	1.0	-	-	-	68.5	32.4	7.3	4.5	2.7	1.9	1.7
10	-	1.0	-	-	-	105.1	45.7	7.0	4.4	2.7	1.9	1.7
11	-	1.0	-	-	-	64.0	56.6	6.7	4.3	2.7	1.9	1.7
12	-	1.0	-	-	-	49.4	47.2	6.5	4.1	2.7	1.8	1.6
13	-	-	-	-	-	32.6	47.9	6.2	3.9	2.7	1.9	1.6
14	-	-	-	-	-	49.1	32.6	6.1	3.7	2.6	1.9	1.6
15	-	-	-	-	-	64.1	27.2	6.0	3.6	2.6	1.9	1.6
16	-	-	-	-	-	44.2	23.3	5.6	3.5	2.9	1.8	1.6
17	-	-	-	-	1.5	75.6	20.3	5.4	3.3	2.7	1.8	1.6
18	-	-	-	-	1.5	56.4	18.1	5.3	3.1	2.6	1.8	1.6
19	-	-	-	2.2	1.6	50.1	16.4	5.8	3.0	2.6	1.7	1.6
20	1.0	-	-	2.1	1.5	41.8	15.2	5.8	2.9	2.5	1.7	1.6
21	0.9	-	-	2.1	-	28.5	15.4	5.6	3.9	2.5	1.7	1.6
22	0.9	-	-	-	-	23.2	14.9	4.9	4.1	2.4	1.6	1.6
23	0.8	-	-	-	-	20.2	13.3	4.9	3.7	2.4	1.7	1.6
24	0.9	-	-	-	-	24.8	12.2	5.3	3.3	2.3	1.6	1.6
25	0.9	-	-	-	-	25.2	11.4	6.8	3.2	2.3	1.6	1.6
26	0.9	-	-	2.3	-	21.0	10.7	7.0	3.2	2.4	1.6	1.6
27	0.9	-	-	2.1	-	17.7	10.2	5.5	3.0	2.4	1.7	1.5
28	0.8	-	-	[illegible]	[illegible]	[illegible]	[illegible]	5.2	[illegible]	[illegible]	[illegible]	1.5
29	0.8	-	-	1.9		14.8	11.1	4.9	2.9	2.2	1.8	1.5
30	0.8	-	-	-		[illegible]	[illegible]	[illegible]	[illegible]	2.2	1.8	1.5
31	0.8		-	-		14.4		4.7		2.1	1.8	

(2018/2019, 131 dias com registos)

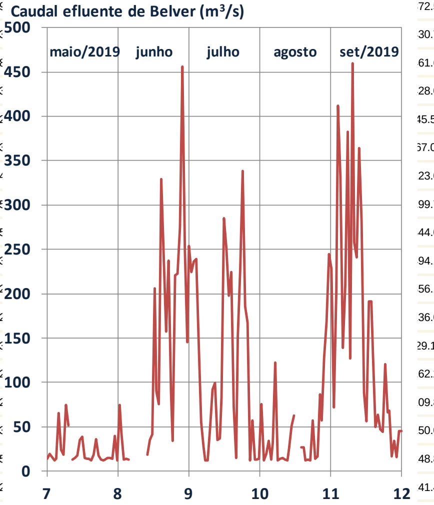
Albufeira de Castelo de Bode

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	3.2	0.0	0.0	1.9	16.6	12.2	195.4	49.3	53.2	23.2	74.3	17.9
2	66.5	13.0	13.3	13.2	13.2	34.4	185.1	142.5	6.7	36.9	83.1	47.5
3	68.4	15.7	5.9	12.0	20.7	47.5	185.5	48.2	6.3	26.4	36.2	66.9
4	29.1	0.0	15.3	0.0	14.5	14.7	188.3	56.8	58.7	28.1	38.9	57.6
5	28.0	0.0	29.4	24.7	11.1	35.0	160.2	22.0	66.0	27.3	34.8	65.7
6	10.6	7.5	12.4	0.0	22.4	71.1	168.7	53.0	59.3	41.5	60.1	10.4
7	4.2	19.4	6.6	14.6	18.2	94.3	178.2	38.5	53.8	17.7	40.6	34.8
8	16.2	41.8	0.0	116.4	9.1	129.8	138.6	45.3	89.6	20.7	14.3	12.4
9	15.7	3.6	0.0	1.9	8.6	180.5	156.2	18.8	18.1	89.0	25.2	24.3
10	25.1	-	7.6	0.0	12.7	84.5	97.2	12.5	11.2	97.4	20.8	9.4
11	1.6	0.9	57.9	0.0	12.7	95.8	125.9	4.3	28.2	88.4	26.0	46.6
12	1.4	0.0	20.4	0.0	12.7	170.6	165.5	4.3	32.5	84.4	1.5	27.8
13	0.0	0.0	0.0	0.0	12.5	163.6	180.7	0.0	15.8	85.9	8.5	56.6
14	0.0	0.0	0.0	0.0	13.1	174.9	186.3	3.4	79.3	59.8	4.3	58.1
15	0.0	33.6	0.0	0.0	11.9	181.8	177.2	7.7	29.1	31.6	19.6	0.0
16	4.9	2.8	0.0	0.0	12.1	187.5	173.7	8.6	-	49.8	6.6	23.6
17	0.0	-	0.0	2.7	12.5	182.7	114.8	5.3	-	93.4	9.4	26.8
18	16.6	4.7	0.0	27.5	12.5	183.6	122.0	4.8	-	98.8	15.3	66.3
19	2.1	0.0	9.6	14.3	12.5	182.3	113.4	7.2	130.5	74.0	29.0	43.4
20	21.7	17.9	12.4	0.0	12.6	195.0	120.1	26.1	85.4	37.3	54.9	80.6
21	22.3	21.9	49.9	0.0	12.6	188.2	71.0	14.7	68.4	56.0	43.3	84.5
22	22.7	1.7	0.0	7.6	12.6	189.2	125.3	70.7	64.9	21.9	74.2	62.3
23	27.1	0.0	6.1	1.8	12.6	189.3	126.0	47.4	38.4	54.7	61.0	48.2
24	15.8	0.0	21.3	9.6	12.6	158.1	84.0	85.7	82.1	74.9	31.7	51.8
25	16.9	0.0	4.3	6.3	12.6	-	63.6	21.3	61.6	67.3	44.1	64.0
26	3.1	2.2	7.7	22.4	14.0	194.4	111.5	52.1	44.1	52.3	36.6	89.6
27	0.0	32.5	22.5	2.8	94.0	191.2	106.1	59.3	67.9	31.3	38.8	103.4
28	0.0	38.4	17.9	0.0	12.5	186.9	65.8	57.9	60.0	70.7	75.0	81.4
29	0.0	8.5	32.9	4.0		185.8	10.5	126.9	23.1	38.0	34.1	34.0
30	0.0	0.0	39.1	30.6		180.0	113.1	96.0	25.1	36.2	14.4	22.8
31	21.2		4.8	25.2		187.5		48.1		26.9	20.4	

Albufeira de Belver

Dia	OUT	NOV	DEZ	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET
1	13.9	13.8	36.8	12.6	115.1	307.5	19.0	15.1	14.6	307.8	64.3	47.3
2	68.7	13.3	79.9	13.9	45.7	284.8	103.8	16.5	65.9	309.3	84.4	214.8
3	16.5	28.8	50.0	12.7	44.7	296.0	17.8	51.1	50.7	327.3	389.5	313.7
4	19.1	13.6	76.5	12.7	87.6	471.3	60.1	93.4	12.8	326.8	412.4	288.8
5	38.9	12.9	280.1	16.1	204.3	456.9	254.2	13.1	54.9	162.8	218.0	251.7
6	34.9	13.5	443.9	20.6	237.3	484.2	169.8	17.6	28.1	260.0	305.4	179.5
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	12.4	66.0	16.2	28.7		32.5	23.6	66.8	163.3	210.2	309.9	16.9
31	13.5		11.6	175.7		55.7		53.4		171.1	299.5	

Maio a setembro de 2019



Postos a considerar no cálculo da precipitação de referência (com registos completos no ano de 2017/2018)

Presa de Crestuma
Río Águeda
Presa de Saucelle
Salamanca
Madrid
Tajo
Rego de Murta
Tejo
Ladoeiro
Salto de Cedillo
Fábrica da Matrena
Castelo do Bode
Almourol
B. Belver
Cáceres
Cijara
Guadiana
Garcia Sola
Orellana
Ponte Muge
Badajoz
Ciudad Real
Azud de Badajoz
Zújar
La Serena
Alange

Albufeiras (35) localizadas na BH do rio Tejo

Nome	Capacidade útil (hm^3)	Nome	Capacidade útil (hm^3)
Castelo de Bode	900.50	Veiros	8.80
Cabril	615.00	Belver	8.50
Maranhão	180.90	Apartadura	6.98
Montargil	142.70	Freixeirinha	6.20
Marechal Carmona	77.30	*Vale do Cobrão (Ct)*	*6.20*
Pracana	69.00	Poio	5.00
Santa Luzia	51.00	*Venda Velha (Ct)*	*4.70*
Minutos	50.00	*Tabueira (Ct)*	*3.50*
Marateca	32.70	Magos	3.00
Meimoa	27.00	Açafal	1.80
Fratel	21.00	Toulica	1.59
Póvoa	18.80	Cova do Viriato	1.48
Bouçã	15.22	Gameiro	1.30
Divor	11.89	Zambujo	1.23
		Pisco	1.04
		Penha Garcia	1.00
		Covão do Ferro	0.87
		Corgas	0.53
		Furadouro	0.40
		Capinha	0.34
		Penedo Redondo	0.06

Capacidade (hm^3)		
	Albufeiras (14) > 10 hm^3	2213
	Albufeiras (21) < 10 hm^3	65
	Total	2278

Albufeiras (35) localizadas na BH do rio Tejo

Nome	Capacidade útil (hm^3)	Nome	Capacidade útil (hm^3)
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Bouçã	15.22		
Divor	11.89		
		Corgas	0.53
		Furadouro	0.40
		Capinha	0.34
		Penedo Redondo	0.06
Capacidade (hm^3)	Albufeiras (14) > 10 hm^3		2213
	Albufeiras (21) < 10 hm^3		65
	Total		2278

REVISTA APDA
ASSOCIAÇÃO PORTUGUESA DE DISTRIBUIÇÃO E DRENAGEM DE ÁGUAS
EDIÇÃO 14 | 3º TRIMESTRE 2019

De acordo com elementos do Conselho Nacional da Água, os volumes armazenados nas albufeiras existentes em Portugal e Espanha, nas três principais Bacias Luso – Espanholas são os que se apresentam no quadro seguinte.[3]

	Espanha	Portugal
	Volume armazenado (hm^3)[1]	Volume armazenado (hm^3)[2]
Tejo	11 012	2 781 (incluindo 235 sem capacidade de regularização)

[3] A Água e os Rios do Futuro – Conselho Nacional da Água, junho 2019

A Água e os Rios do Futuro – Conselho Nacional da Água, junho 2019

Albufeiras (35) localizadas na BH do rio Tejo

Nome	Capacidade útil (hm^3)	Nome	Capacidade útil (hm^3)
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Minutos	50.00	*Tabueira (Ct)*	*3.50*
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Póvoa	18.80	Cova do Viriato	1.48
Bouçã	15.22	Gameiro	1.30
Divor	11.89	Zambujo	1.23
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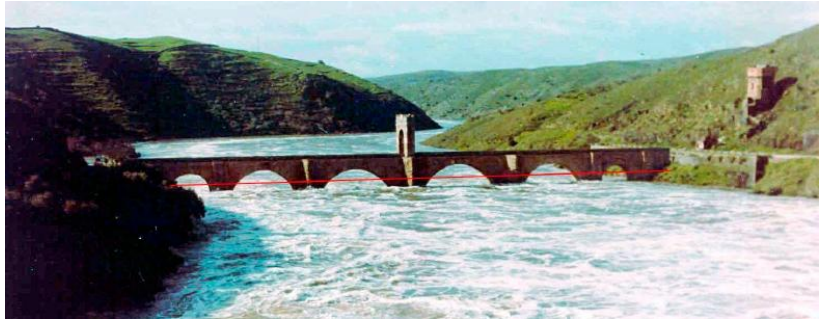
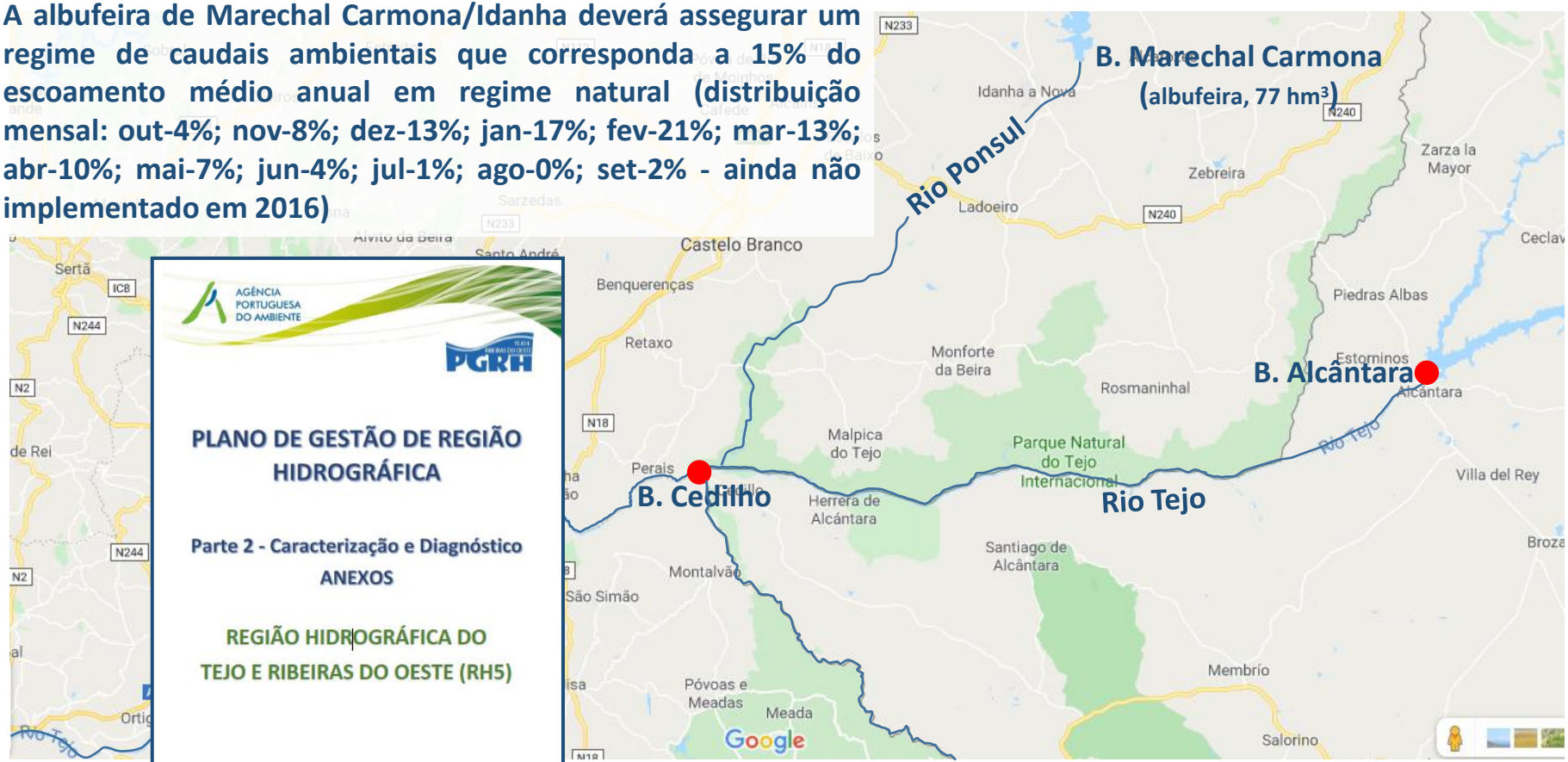


Cheia de 1965 (Pérez et al., 2018, *Assessment of the structural integrity of the roman bridge of Alcántara (Spain) using TLS and GPR*, Remote Sens.. DOI:10.3390/rs10030387)

A albufeira de Marechal Carmona/Idanha deverá assegurar um regime de caudais ambientais que corresponda a 15% do escoamento médio anual em regime natural (distribuição mensal: out-4%; nov-8%; dez-13%; jan-17%; fev-21%; mar-13%; abr-10%; mai-7%; jun-4%; jul-1%; ago-0%; set-2% - ainda não implementado em 2016)



Os caudais no Rio Tejo: enquadramento na Convenção de Albufeira e Diretiva Quadro da Água

Debate

(Informação “acessível”)

Maria Manuela Portela

HIDRO-ELÉCTRICA ALTO ALENTEJO

HE 52

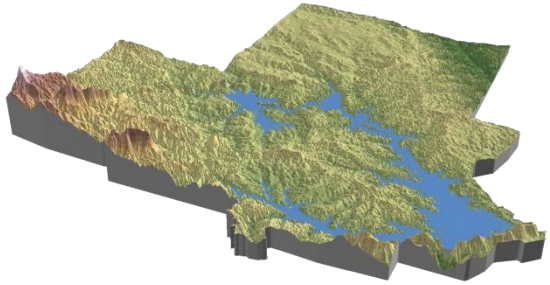
APROVEITAMENTO HIDROELÉCTRICO
DO
RIO OCREZA
EM
ALVITO

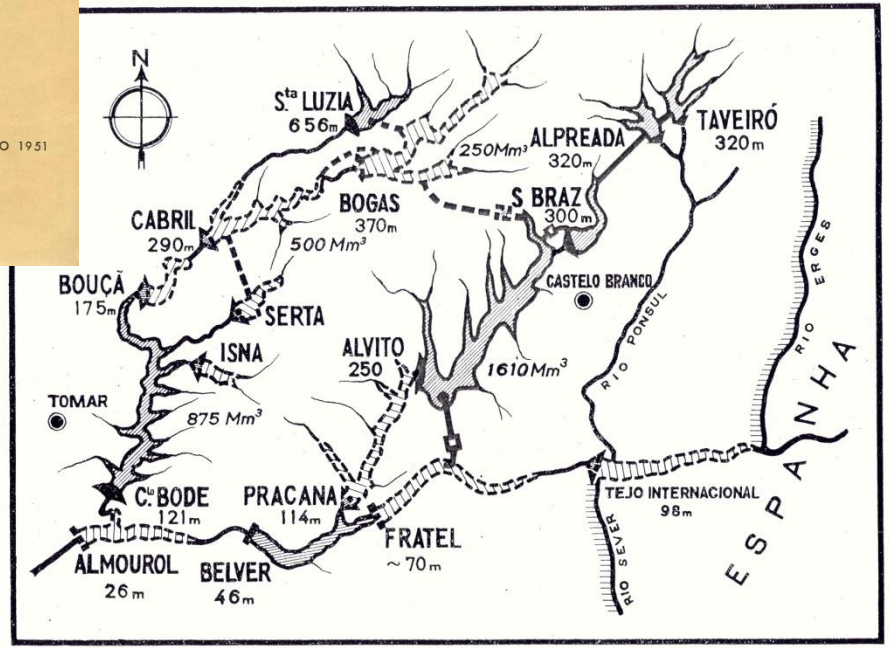
ANTE-PROJECTO

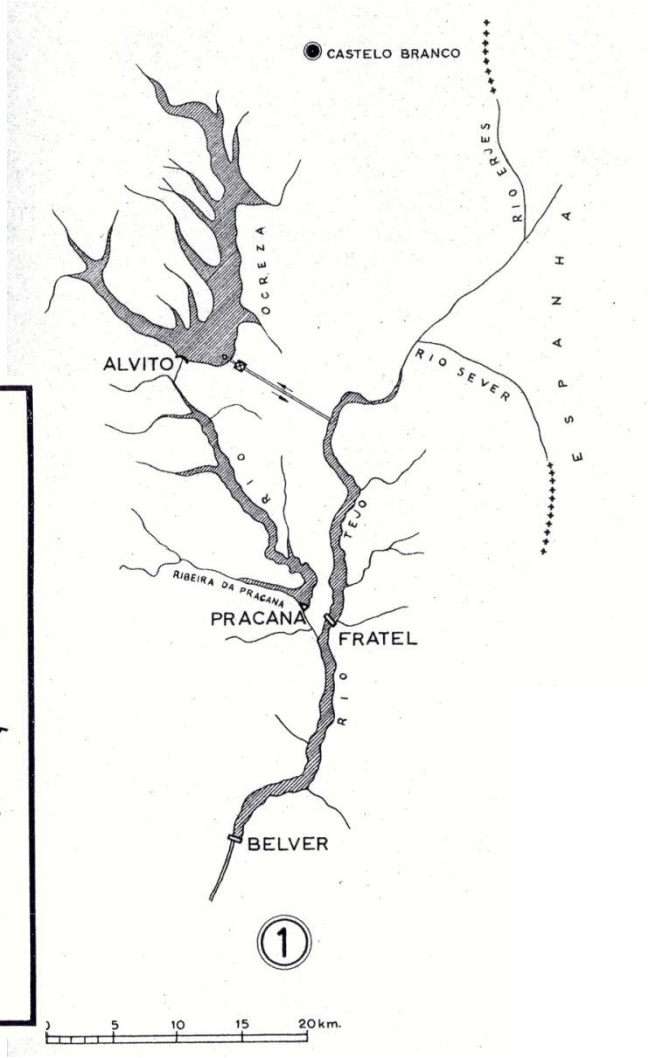
Memória

MAIO 1951

ETELI
EMPREZA TÉCNICA LUSO-ITALIANA
LISBOA







Parecer, de março de 2010, da Comissão de Avaliação sobre a barragem do Alvito (rio Ocreza, a montante de Pracana), com NPA à cota 221 e restituição para a albufeira de Pracana (C_{util}=343 hm^3): favorável condicionado … condicionantes à execução do projeto, estudos complementares, medidas de minimização, planos de acompanhamento ambiental da obra, recuperação paisagística e monitorização …