MINISTERIO DE MEDIO AMBIENTE

SECRETARÍA GENERAL PARA EL TERRITORIO Y LA DIVERSIDAD

DIRECCIÓN GENERAL DEL AGUA

# EURO INBO 2005
## International meeting on the implementation of the European Water Framework Directive

## "WATER AND PARTICIPATION. INTERNATIONAL EXPERIENCES" THE ALBUFEIRA AGREEMENT

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ENVIRONMENT MINISTRY

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# 3. THE ALBUFEIRA AGREEMENT

# BACKGROUND TO THE ALBUFEIRA AGREEMENT

- CONVENTIONAL FRAMEWORK IS WORN-OUT

- POLITICAL CHANGES IN BOTH COUNTRIES

- INCREASING DEMAND

- THE 93' HYDROLOGICAL PLAN ISSUE

- ALQUEVA DAM REQUIREMENTS

- BOCACHANZA CONFLICT

- NEW INTERNATIONAL RELATIONS FRAMEWORK

- ✓ UN New York Agreement

- ✓ Water Framework Directive

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# BASIC DETERMINING FACTORS

- CHANGE OF SCENE

- FRAMEWORK AGREEMENT

- COOPERATION AREAS

- PROVISIONING GUARANTEE

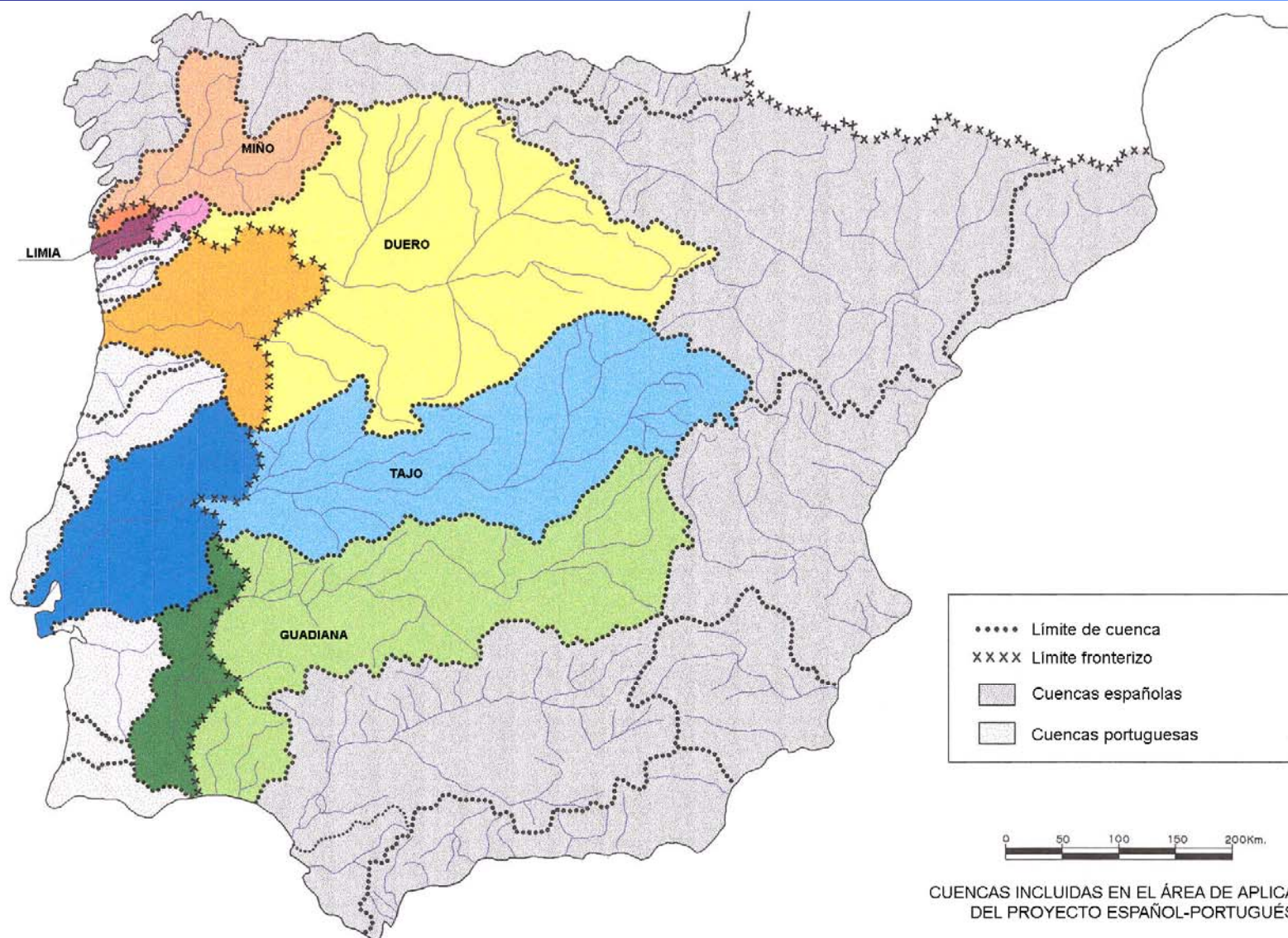- HIGH LEVEL COMMITMENT

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# AGREEMENT STRUCTURE

INFORMATION EXCHANGE

- PROBLEM SOLVING

- COOPERATION AREAS

✓ Extreme events

✓ Organizational development

✓ International presence

- AGREEMENT INSTITUTIONS

- AGREED ACTIONS IMPLEMENTATION

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MIÑO

LIMIA

DUERO

TAJO

GUADIANA

0    50    100    150    200Km.

CUENCAS INCLUIDAS EN EL ÁREA DE APLICACIÓN
DEL PROYECTO ESPAÑOL-PORTUGUÉS

| Basin | Area | | | | | Natural run-off average (km³/year) | | |
|---|---|---|---|---|---|---|---|---|
| | Total area | Spain | | Portugal | | | | |
| | (km²) | (km²) | % | (km²) | % | Spain | Portugal | Total |
| Miño | 17.080 | 16.230 | 95 | 850 | 5 | 11,2 | 0,8 | 12,0 |
| Limia | 2.480 | 1.300 | 52 | 1.180 | 48 | 1,9 | 1,5 | 3,5 |
| Douro | 97.600 | 79.000 | 81 | 18.600 | 19 | 15,0 | 8,2 | 23,2 |
| Tagus | 80.600 | 55.800 | 69 | 24.800 | 31 | 12,2 | 6,4 | 18,6 |
| Guadiana | 66.800 | 55.300 | 83 | 11.500 | 17 | 5,0 | 1,7 | 6,7 |
| **Total shared basins** | **264.560** | **207.630** | **78** | **56.930** | **22** | **43,1** | **19,9** | **63,1** |
| | | | | | | Natural run-off average (hm³/year/km²) | | |
| | | | | | | 0,208 | 0,350 | 0,238 |
| Cantábrica | 24.642 | 24.642 | 100 | 0 | 0 | 19,6 | 0 | 19,6 |
| Atlantic-Galicia | 11.827 | 11.827 | 100 | 0 | 0 | 11,8 | 0 | 11,8 |
| Between Miño-Douro (Cavado, Ave) | 3.714 | 0 | 0 | 3.711 | 100 | 0 | 6,2 | 6,2 |
| Between Miño-Tagus (Mondego) | 14.228 | 0 | 0 | 14.228 | 100 | 0 | 6,7 | 6,7 |
| Sado, Mira and Algarve | 13.900 | 0 | 0 | 13.900 | 100 | 0 | 1,5 | 1,5 |
| South-Atlantic (Odiel, Tinto) | 4.612 | 4.612 | 100 | 0 | 0 | 1,1 | 0 | 1,1 |
| Guadalquivir | 54.970 | 54.970 | 100 | 0 | 0 | 6,9 | 0 | 6,9 |
| Between Guadalquivir and Giblaltrar | 7.792 | 7.792 | 100 | 0 | 0 | 0,9 | 0 | 0,9 |
| Sur, Segura, Júcar | 79.827 | 79.287 | 100 | 0 | 0 | 7,5 | 0 | 7,5 |
| Ebro | 84.554 | 84.544 | 100 | 0 | 0 | 18,2 | 0 | 18,2 |
| Between Ebro and France | 16.493 | 16.493 | 100 | 0 | 0 | 2,7 | 0 | 2,7 |
| **Total not-shared basins** | **316.559** | **284.167** | **90** | **31.839** | **10** | **68.7** | **14,4** | **83,1** |
| **Total** | **581.119** | **491.797** | **85** | **88.769** | **15** | **111,8** | **34,3** | **146,2** |

# WATER VOLUME'S PATTERN

- GUARANTY PORTUGAL'S PROVISION

- BOTH COUNTRIES SHOULD CONTRIBUTE

- RIVER BAISIN CHARACTERISTICS ARE TAKEN INTO ACCOUNT

- EXCEPTIONS DURING DROUGHT PERIODS OF TIME

- MINIMUM WATER VOLUME GUARANTEDD DEPENDING ON THE USE IT IS INTENDED TO

- IT IS OF A TEMPORARY NATURE

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## Flow regime (Minimum flow)

| Basin | Gauging Station | Minimum Flow (mcm/year) | START of exception period | END of exception period |
|---|---|---|---|---|
| Miño | Salto de Freira | 3.700 | $P^{(R)}$ up to $1^{st}$ July $< 70\%\ P^{(M)}$ | following month to December if $P^{(R)} > P^{(M)}$ |
| Douro | Miranda dam<br>P. Saucelle + Águeda G.S.<br>Crestuma dam | 3.500<br>3.800<br>5.000 | $P^{(R)}$ up to $1^{st}$ June $< 65\%\ P^{(M)}$ | following month to December if $P^{(R)} > P^{(M)}$ |
| Tagus | Salto de cedillo<br>Ponte de Muge G.S. | 2.700<br>4.000 | $P^{(R)}$ up to $1^{st}$ April $> 60\%\ P^{(M)}$ or $P^{(R)}$ up to $1^{st}$ April $< 70\%\ P^{(M)}$ and $P^{(R)}$ previous year $< 80\%\ P^{(M)}$ | following month to December if $P^{(R)} > P^{(M)}$ |
| Guadiana | Badajoz dam<br>Pomarao G.S. | 600-300<br>2 m³/s daily | according to rainfall and state of reference reservoirs | following month to December if volume in ref. reservoirs $> 3.150$ mcm |

$P^{(R)}$ is the accumulated reference rainfall in the basin from the beginning of hydrological year to the date indicated.
$P^{(M)}$ is the mean accumulated rainfall in the basin in the same period.

## Flow regime (detail of minimum flow in the GUADIANA)

a)    Total annual flow in Badajoz dam (mcm/year):

| Volume in reference reservoirs (mcm) | % Accumulated rainfall above the mean as at $1^{st}$ March | |
|---|---|---|
| | $> 65\%$ | $< 65\%$ |
| $> 4.000$ | 600 | 400 |
| between 3.150 and 4.000 | 500 | 300 |
| between 2.650 and 3.150 | 400 | Exception |
| $< 2.650$ | Exception | Exception |

b)    Mean daily flow in Badajoz dam and in Pomarao: 2 m³/sec in all cases

This regime will not be applied until the Alqueva reservoir begins to be filled.

The REFERENCE RESERVOIRS of the Guadiana basin are:

| La Serena | 3.219 mcm | García Sola | 554 mcm |
|---|---|---|---|
| Zújar | 309 mcm | Orellana | 808 mcm |
| Cíjara | 1.505 mcm | Alange | 852 mcm |

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# REFERENCE RAIN GUAGES

| Basin | Gauging Stations | Weighting |
|---|---|---|
| Miño | Lugo | 30 % |
| | Orense | 47 % |
| | Ponferrada | 23 % |
| Douro | Salamanca (Matacán) | 33,30 % |
| | León (Virgen del Camino) | 33,30 % |
| | Soria (Onservatory) | 33,30 % |
| Tagus | Cáceres | 50 % |
| | Madrid (Retiro Park) | 50 % |
| Guadiana | Talavera la Real (Air Base) | 80 % |
| | Cuidad Real) | 20 % |
| *The mean values are understood to be calculated in accordance with the registers of the period 1945/46 to 1996/97 and will be updated every 5 years.* | | |

# AGREEMENT INSTITUTIONS

- PARTIES CONFERNCE
- ✓ Ministerial level
- ✓ Political support to the Agreement's principles
- ✓ Higher level problem solving body
- AGREEMENT COMMISSION (CADC)
- ✓ Arrangement
- ✓ Technical Agreements
- ✓ Problem solving

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# CADC WAY OF WORKING

- TECHNICAL STUDIES DEVELOPMENT

- WORKING GROUPS
  - Arrangement
  - Rol
  - External expertise rol
  - Expertise network

- PROBLEM SOLVING BODY
  - Problem's concept
  - Acting in good faith and avoid blockage
  - Legitimized people



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# MANAGEMENT MODELS

- GENERAL OBJECTIVES DEFINITION
  - Global management

- Quality issues management
  - Water volume measurement programme
  - Parties independent development
  - Commissin to act as a guarantor

- DETAILED ISSUES MANAGEMENT

- QUANTITATIVE MANAGEMENT
  - Rol of the regulatory infrastructure
  - Importance of the economical issues
  - Limits to joint management
  - Coordinated management

# PROBLEM SOLVING

- INFORMATION EXCHANGE
  - Systematic
  - Strengthen cooperation when conflicts arise
  - Act at one's part request

- WORKING METHODOLOGY
  - Environmental Impact Assesment technics
  - Established in International Agreements
  - Support to working groups

- NEGOTIATIONS
  - Own agreement authorities
  - Arbitration

# TRUSTFUL ATMOSPHERE

- BOTH ARE AWARE OF EACH OTHER'S SITUATION

- ADMINISTRATION STRUCTURES
  - Equivalent institutions

- CAN BE SPREAD TO OTHER SOCIAL GROUPS
  - Specially to border population

- DATA TO UNDERSTAND THE MANAGEMENT STRATEGY
  - Availability limits

- INFORMAL NETWORKS