TWINBASIN MISIONS : REPORTING GUIDELINES

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Mission reference
2005 C1 T 1 M1

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Mission Report

Wording of mission	*In short, objective or content of mission* The *Júcar-Buzau* project is focused on specific areas of interest based on Integrated Water Resources Management (IWRM), that have been identify as: • Implementation of the Water Framework Directive (WFD): works developed, Article 5 requirements … • Flood prevention: plans and programs • Automatic hydrologic information systems • Monitoring networks (biological, physic-chemical) • Administrative framework. Based on the TWINBASIN^{XN} project, it is expected that Basin Organisations (BOs) will: • Promote a friendly cooperation between water managers • Tight ties among basin organisations • Improve communication between the basins participating in the twinning • Encourage exchange of expertise, knowledge and technical personnel • Strengthen effectiveness of integrated water management within organisations • Improve, overall, the functioning of these institutions The experience of the "*Júcar-Buzau*" project will take part of the pilot **stage of the TWINBASIN project**.

1. CONTEXT

Place, location	*Country visited, Basin Organization concerned, other information about location* SPAIN, CONFEDERACIÓN HIDROGRÁFICA DEL JÚCAR (CHJ) Address: AVDA. BLASCO IBÁÑEZ Nº 48, Postal Code: 46010 VALENCIA, SPAIN
Mission duration	4 – 11 April 2005

2. OBJECTIVES

Initial objectives		Results	Results indicator
1	Exchange of information on the WFD implementation of: understanding the approach concerning basin characterisation, according to Article 5 requirements	Good assimilation of concepts and methodologies, mainly concerning: - treatment of temporary streams (an issue common to both basins)	Possible simplification of the Romanian (?) RO approach of considering temporary stream in analysis.
		- Preliminary designation of heavily modified water bodies (HMWBs)	Possible improvement for HMWBs delineation as reaches located downstream reservoirs (using mainly biological indexes)
		- Economical analysis / model of cost recovery (MOCR)	Possible application of MOCR at Buzau-Ialomita BO if the methodology is available and applicable
		- Pressures due to weirs: water bodies affected by backwater effect	Possible application in Buzau-Ialomita RB. Very useful idea!
		- GIS & presentation of the information system GESHIDRO, according to the WFD requirements	Possible and very necessary implementation of an information system at Buzau-Ialomita BO if more IT specialists are hired and the Spanish colleagues can provide them technical assistance in the field
2	Automatic hydrologic information systems and flood prevention plans	- Explanation of functioning - Observation of panels within SAIH room. - Visit to hydrologic works constructed to avoid flood damages. - Visit to an automatic hydrologic station on the field	Romanian representatives have stored much useful information which can be used by them in the implementation of DESWAT (DEStructiveWater-Abatement and Control) project, in their basin, related to the automatic system of collecting and processing the data necessary for the flood prevention
		- Presentation of flood prevention plans and proceeding of civil protection	Possible improvement for proceeding with all the authorities
		- Presentation of the hydrological models for predictions, risk maps, etc	Possible application in Buzau-Ialomita RB

3	Understand qualitative and quantitative monitoring networks (surface waters and groundwaters)	Understanding the functioning of the ICA (quality), SAICA (physic-chemical), ICAB (biological) and piezometric networks	Possible adaptation of the monitoring networks, if the following conditions are accomplished: ➔ A higher support from the budget (Ministry of Environment and Water Management) ➔ To submit for different European founds
4	Administrative framework (organisation of the River basin authority) - determine in which areas the BOs can help improve each other's functioning (development of a capacity building strategy).	Assimilation of CHJ functioning within the structure of the River Basin Organization: Water Commissariat, Technical Directorate, General Secretary, Planning Office	The Planning Office (ESP) is the equivalent of the RBM Plans (RO). Although, the structure is very similar, in further missions it would be interesting to know in depth each department main advantages and flaws to compare them with the ones in Apele Romane.

3. ACTIVITIES DEVELOPED DURING THE MISSION

Activity 1	**Topic: *Institutional Framework*** *(Legal aspects, Regulation, Institutional, Finance, Communication …)*
Description (*Exchange of experience or practice, Increasing of knowledge and learning, Development of methodology, Training …)*	Exchange of experience and learning about the administrative framework of CHJ based on the visit done the CHJ building, presentations and description of departments, areas and their functioning

Activity 2	**Topic: *Automatic hydrologic information systems and flood prevention programs***
Description	Visit to the SAIH Dpt (Automatic Hydrologic Information System) Introduction to the SAIH Functioning of the SAIH - Technical visit in the field – SAIH Teruel Station / Turia river and SAIH Torrebaja Station / Turia river (the last one under construction) Flood prevention plans – description. Structural measures: dams, channels - Technical visit – hydraulic planning of temporary river Poyo, between Paiporta and Catarroja municipalities, for preventing floods and applying ecological restoration on the channel

	↓ Technical visit - Reservoir of Arquillo San Blas / Guadalaviar River (affluent of the Turia River) (H = 54 m, V = 21 hm^3, S = 347 ha); Reservoir of Loriguilla / Turia River (H = 78 m, V = 71 hm^3, S = 83 ha)

Activity 3	**Topic: *Qualitative and quantitative monitoring networks (surface waters and groundwaters)***
Description	Increasing of knowledge and learning about: ▪ ICA network (quality network recently adapted to WFD requirements) ▪ SAICA network (physic-chemical) ▪ ICAB network (biological) ▪ Piezometric network ↓ Technical visit – SAICA Ademuz Station / Turia river

Activity 4	**Topic: *Implementation of the Water Framework Directive***
Description	Presentation of the works developed according to Article 5 requirements in the CHJ within the Planning Dpt. : ▪ Basin characterisation; ▪ Pressures and impacts; ▪ Protected areas; ▪ Economic analysis; ▪ GIS, risk maps. ↓ Technical visit (water bodies delineation): Turia river (downstream Arquillo San Blas reservoir - downstream reservoir of Loriguilla / Turia river), including areas were the landscape and natural features of the River Basin can be observed (NW of the basin) ↓ Technical visit (protected areas)– Albufera Parc (S = 21.120 ha); Marjal de El Moro Wetland / LIC (S = 618,85 ha); Marjal d'Almenara Wetland (Multi-stakeholder new protection plan established) Presentation of the information system GESHIDRO, according to the WFD requirements

4. LESSONS LEARNT during the mission *(what could be shared with other partners and/or introduced in guidelines, as far as IWRM is concerned)*

- **About Methodology:**

The methodologies for River Basin analysis, according to WFD requirements, concerning

1) **The treatment of the temporary streams** (an issue common to both basins). For Romanian side, it is a crucial problem in river basins characterization: Buzau-Ialomita RB has considered all rivers (S > 10 sq. km) for typology, therefore it has identified ecotypes, including for non-permanent rivers; also, these ephemeral rivers were delineated as surface water bodies. However, only the permanent rivers have been taken into account for the risk assessment analysis, reference conditions, etc. In comparison with the Romanian approach, the CHJ has considered only significant rivers (Q > 100 l/s ; S > 10 sq. km) for the basin characterization on whole (typology, SWBs delineation, IMPRESS analysis, etc). After this exchange, we could take into account a simpler approach concerning the treatment of temporary streams.

2) **the preliminary designation of heavily modified water bodies** (HMWBs). In Buzau-Ialomita River Basin, it has been established quantitative criteria for hydro-morphological pressures assessment, as abiotic criteria for the preliminary heavily modified water bodies designation. It should be underlined that the criteria for HMWBs designation are very similar in both basins. In addition, both countries have many reservoirs. It has to be underlined that, in CHJ, the HMWBs delineation approach based on criteria that concern reaches located downstream reservoirs is very interesting; the length of reaches is set up using not only the flow regimes and tributary inflows, but also the biological indexes – that take into account macroinvertebrates amounts, algae presence, etc. This system is very usefully and, based on available information on macroinvertebrates in Romania, a similar criterion could be applied.

3) **The assessment of pressures** (morphological pressures within IMPRESS analysis)
   - ➔ **Due to weirs**: is very interesting, original and useful. The criteria are: *significant fish* and *water level increment*. It results on water bodies affected by backwater effect, as following: reaches with trout and water level increment > 1,0 m and reaches with *barbus* and water level increment > 0,5 m. This is a very important issue for all Romanian river basins and the Romanian delegation was very pleased to have an answer to this question (we found out that the same criteria is used in Germany, too !).
   - ➔ **Dam regulation**: the criterion used is *regulation index*; it should be improved.

4) **The monitoring**. Very interesting presentation / approach of monitoring water development, mainly concerning the new network according to the WFD requirements (e.g. hazardous substances).

- **About Practice:**

The technical visit to the Poyo wadi (or intermittent channel) , between Paiporta and Catarroja municipalities (scope: flood prevention) was very useful, concerning the ecological restoration of the channel. The concrete engineering solutions for slope / gradient restoration are very interesting. Even in Romania, there are some proposal projects related to the ecological restoration, it has not yet begun any engineering work on the field. The fact that CHJ people provided us photos of the visited area, in different stages of the execution, was very much appreciated.

Concerning the biological network, the concrete use of the "determinators" could be very interesting for the Water Quality Laboratory within Buzau-Ialomita River Basin, as well as the laboratory works experience (chemical analysis, identification of biological samples, etc).

5. DISSEMINATION (opportunities and difficulties). In what measure these learnt lessons are applicable to:

a) The Basin Organization the expert belongs to:
The learnt lessons are applicable to the Buzau-Ialomita River Basin Authority, especially for the departments: River Basin Management and Planning Office, Flood prevention Office, Hydraulic works exploitation Office, Water Quality Protection Office, Water Quality Laboratory. The dissemination could be made on the site of the Buzau-Ialomita River Basin Authority or, directly, by e-mail, to the people involved in different activities.

b) National IWRM practice:
The learnt lessons are applicable to the APELE ROMANE National Administration and the Ministry of Environment and Water Management, as well. The dissemination could be made on the site of the APELE ROMANE National Administration (www.rowater.ro) or, directly, by e-mail, to the people involved in different activities.

c) Regional experiences:
The learnt lessons are applicable to the Full-members and Observers of Regional Network CEE NBO - *Central and Eastern European Network of Basin Organization*.The dissemination of information could be made within CEE NBO meetings (General Assembly, Liaison Bureau and workshops), by e-mail - to the CEE NBO Liaison Bureau members and to the members of Expert's Committee – or put on the network site (www.ceenbo.org).

d) Worldwide:
The learnt lessons and obtained information are applicable to the *International Network of Basin Organizations*. The most interested in this matter is *Mediterranean Network of Basin Organization* and, related to the implementation of the Water Framework Directive, the *EURO-INBO* group. The information could be disseminated by Internet, through the site of INBO (www.inbo.org). Also by using existing news tools, such as EMWIS.

The experience of the "*Júcar-Buzau*" project will take part of the pilot stage of the TWINBASIN project. Through this twinning and similar experiences, more information on good water management practises on IWRM will be gathered, and could be compiled in guides. These, jointly with concluding reports obtained from twinning projects, could be useful worldwide to strengthen the role of River Basin Organisations and their connections. In order to promote this capitalization and facilitate exchange, a specific web site has been designed (www.twinbasin.org).

6. IDENTIFIED TIPS

➲ *Identified tips which could be useful for colleagues*

It is important to come to an agreement on the agenda before starting the mission, in order to exactly identify areas of interest. A lodging place close to the area of work is always recommended, so less time is spent on commuting.

Also, it would be useful if all lectures on different topics are given in English and the PowerPoint presentations, as well.

7. PERSONAL COMMENTS

➲ *What does the missionary think about his mission*

The mission was very interesting and good organized. It should be mentioned that over 20 people were involved in the different activities developed (presentations, work field, program organizing etc). We noticed the involvement of the high level staff in receiving the Romanian delegation and the warmth of all Spanish people met during the visit of CHJ.

A very important remark is that water management systems are very similar in both countries. We found out that Spain is the closest country of Romania concerning the Integrated Water Resource Management (IWRM) concept; there are also other close points / issues, as the organisation and attributions of the River Basin Authorities, the principles and concepts that the WFD implementation is based on, etc.

The program was prepared in detail and BOs agreed on its content prior to the departure of the Romanian representatives. The main topics envisaged were: river basin management, the implementation of the European Water Framework Directive and the management of extreme events, according to the twinning project. Two CH Júcar representatives will visit the Buzau-Ialomita BO at the beginning of July 2005.

It would be very useful and we fully support the idea of a possible establishment of a second round of exchanges within TWINBASIN project (September 2005).

8. CONTACTS

➲ *principal local contacts met*

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9. BIBLIOGRAPHY

➲ *Main documents, manuals or supports used during the mission which could be useful for colleagues*

Name	**Description / Notice**
Ministry of Environment, Confederación Hidrográfica del Júcar, 2002. *Les Organismes de Bassin en Espagne,* 19 pages	Presentation on water management existing criteria, actual situation (in French)
Confederación Hidrográfica del Júcar (Brochure)	Short presentation on covered area, governance and administration, administrative units
Ministry of Environment, Confederación Hidrográfica del Júcar, 1999. *Jucar Basin Hydrological Plan.* Editing CHJ, Printing Engloba, 31 pages	The aim of this publication is to present the most significant aspects of the Plan from the perspective of water, as an essential resource, so as to promote a social development which respects the environmental values.
Ministry of Environment. Confederación Hidrográfica del Júcar, *La Directiva Marco Europea del Agua. Una nuevo perspectiva en politica de aguas.* 25 pages	WFD – the new perspective in the water field . Jucar Pilot River Basin (in Spanish)
Confederación Hidrográfica del Júcar, 2004. *Jucar Pilot River Basin. Provisional Article 5 Report pursuant the WFD*. 208 pages	Report 2004 of Jucar RBMP, according to the WFD requirements
Confederación Hidrográfica del Júcar. *Propuesta de clasificacion de los embalses catalanes segun la Directiva 2000/60/CE del Parlamento Europeo.* 2 pages (Note)	Proposal of reservoirs typology according with system B, Annex 2, WFD (in Spanish)
Ministry of Environment, Confederación Hidrográfica del Júcar. *Automatic Hydrologic Information System (SAIH). Jucar Basin Water Authority*, 3 pages (Note)	Short review of the SAIH Jucar, description, services, future trends
Ministry of Environment, Confederación Hidrográfica del Júcar. *Automatic Water Quality Information System (SAICA).* 4 pages (Note)	Main objectives of SAICA, Automatic Alert Station equipment and process diagram.
Jose Francisco Martinez Mas, Enrique Correcher Martinez, Amparo Pinon, Miguel Angel Martinez, Ana Maria Pujante Mora. *El diseño de la red biológica en la cuenca del Jucar*. 11 pages (without tables and figures)	Design of the biological network in the Jucar basin - based on the analysis of hydromorphological, physical-chemical and biological parameters (macroinvertebrates, diatoms, macrofits and fishes) – year 2000, 221 sampling points in 106 rivers of Jucar basin (in Spanish)
ADASA SISTEMAS. *Dossier business.* 20 pages	Presentation products
The Jucar River Basin Authority	Presentation PowerPoint (on organization structure). Manuel Alcalde & Carlos Fernandez
Automatic Hydrological Information Systems	Presentation PowerPoint. Onofre Gabaldo

Inland waters quality monitoring	Presentation PowerPoint. Correcher Martínez, Enrique & Susana Fernández
The biological network in the Jucar's basin	Presentation PowerPoint. Ana Pujante Mora
Jucar Pilot River Basin	Presentation PowerPoint (on WFD implementation). Teodoro Estrela

Websites		
Name	**Description / Notice**	**Address**
MENBO (MEditerranean Network of Basin Organisations)	*Information on IWRM activities and projects at the river basin level. Events, conferences and useful links related to water management.*	*www.remoc.org*
CHJ, Confederación Hidrográfica del Júcar	*All information regarding the Júcar River Basin Authority: functions, works, projects, WFD activities, events and news.*	*www.chj.es*
MMA, Spanish Ministry of Environment	*Broad environmental information of Spain. Links to all Spanish River Basin Authorities, natural parks, water issues…*	*www.mma.es*
Water Information Systems: EMWIS, HISPAGUA	*Updated information regarding water mainly in the Mediterranean area.*	*www.emwis.org http://hispagua.cedex.es*
Natural Parks in the Valencian Region, Regional Government	*All natural parks, an areas of special environmental interest, in the Autonomous Region of Valencia*	*www.cma.gva.es/cidam/espacios/parques/*
Spanish Center of Studies and Experimentation of Public Works (CEDEX)	*Information on water related works and infrastructures in Spain.*	*http://www.cedex.es/*

N.B. This framework provides necessary information for further capitalisation and dissemination, but should not prevent experts from making any other comments (as far as basins characterisation is concerned, for instance).