



## TWINBASIN MISIONS: REPORTING GUIDELINES

<b>Date:</b> <b>13.10.2005</b>
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<b>Mission reference</b>
2005 C1 T 1 M1

<b>Expert Name and function</b>	<b>Expert 1 – ARANCHA FIDALGO</b> <b>Expert 2 – ONOFRE GABALDÓ</b>
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### Mission Report

<b>Wording of mission</b>	<p><i>In short, objective or content of mission</i></p> <p>The <i>Júcar-Buzau</i> project is focused on specific areas of interest based on Integrated Water Resources Management (IWRM), that have been identify as:</p> <ul style="list-style-type: none"> <li>• Implementation of the Water Framework Directive (WFD): works developed, specifically those that apply to the Article 5 requirements.</li> <li>• Flood prevention: plans and programs developed.</li> <li>• Automatic hydrologic information systems: functioning and management</li> <li>• Monitoring networks (biological, physic-chemical): for both surface and groundwaters</li> <li>• Administrative framework: functioning of the River Basin Authority, departments and structure</li> </ul> <p>Based on the TWINBASIN<sup>XN</sup> project principles, it was expected from the missions to:</p> <ul style="list-style-type: none"> <li>• Promote a friendly cooperation between water managers</li> <li>• Tight ties among river basin organisations (RBOs)</li> <li>• Improve communication between the basins participating in the twinning</li> <li>• Encourage exchange of expertise, knowledge and technical personnel</li> <li>• Strengthen effectiveness of integrated water management within organisations</li> <li>• Improve, overall, the functioning of these institutions</li> </ul> <p>Through the agenda previously agreed between the participating RBOs, the mission included practical information exchange through: informal meetings, visits to the dependencies of the Buzau RBO, oral presentations and technical visits to the fieldwork.</p> <p>The experience of the “<i>Júcar-Buzau</i>” project has taken part of the pilot <b>stage of the TWINBASIN project.</b></p>
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#### 1. CONTEXT

<b>Place, location</b>	<i>Country visited, Basin Organization concerned, other information about location</i> ROMANIA, ADMINISTRATIA NATIONALA APELE ROMANE /Directia Apelor Buzau-Ialomita (DABI) Address: Str. Bucegi, Nr 20 bis, Postal Code: 120228 BUZAU, ROMANIA
<b>Mission duration</b>	9 – 17 July 2005

## 2. OBJECTIVES

Initial objectives	Results	Results indicator
<p><b>1 Exchange of information on the WFD implementation of: understanding the approach concerning basin characterization, according to Article 5 requirements</b></p>	<p>Both participants learnt about the works developed by the Romanian RBO regarding WFD implementation. They were able to compare progress, methodologies and problems with their own work developed at the Júcar RBO.</p>	<p>Application of information received: questions proposed by Romanian colleagues. A good comparison of methodologies was made possible after the visit.</p>
	<p>Characterization of water bodies (surface and groundwater). Overview of antropic pressures on water bodies (surface and groundwater)</p>	<p>Comparison and agreement of different methodologies used to determine <u>risk and pressures</u> (may be later studied in detailed and compare more in depth with to those used in CHJ)</p>
	<p>Public Participation (special office to support associated tasks)</p>	<p>Comparison of public participation strategies (not fully developed in both cases)</p>
	<p>Transboundary issues and management.</p>	<p>Romanian asked for additional information on this topic (Júcar is not a shared basin, will provide information from other basins)</p>
	<p>Although the management of temporary streams is an issue common to both basins, in that area of Romania water availability is much greater, thus methodology of characterization may differ. Much information presented on intermittent flows. Specific problems on their characterization.</p>	<p>Buzau asked for recommendations on how to treat intermittent flows: how to address pressures, and measures when there is no permanent flow. To assure the current methodology and the problems aroused with the WFD implementation. Similar solutions are being applied.</p>
	<p>Reference conditions: information asked by Ministry to establish starting phases</p>	<p>Difficult and very technical topic, which would need exchange with specific personnel in charge of it.</p>
	<p>Coastal lagoons exchange information (black sea).</p>	<p>Coastal lagoons: general description, status. DABI and Ministry representatives interested in taking a closer look of this issue (there are many Km of coastal line in Spain and high degree of urbanization and human pressure).</p>

<b>2</b>	<b>Flood Prevention Plans</b>	<p>Unfortunately and due to extreme events occurring during the mission, participants were able to witness flood events, their consequences and the technical response to them.</p> <p>Some information was also provided regarding the prevention plans used: infrastructural and non-infrastructural.</p> <p>Due to the magnitude of events the response to floods was “more centralized”, and decision-making came mainly from Apele Romane directly to the regional Directorates.</p>	<p>A comparison and later improvement of quick protocol response to flood events could be done in the Júcar RBO. (Although magnitude and urbanization levels differ, the response system technical and political is similar)</p> <p>Analysis of benefits/disadvantages of centralized vs. regionalized response could be done. In Spain, some responsibilities lie directly on the ministry, while others are linked to regional governments, municipalities etc. The share of tasks and responsibilities differs. This area should be further studied, to widely understand flood response process.</p>
		<p>Presentation of flood prevention plans.</p>	<p>Comparison and discussion of the plans applied in each case.</p>
<b>3</b>	<b>Automatic hydrologic information systems</b>	<p>Explanation of functioning of the national and Buzau system. (Under development at the basin level)</p>	<p>Presentation of budget characteristics (different programs and projects applied, most from US origin: DESWAT, WATMAN)</p>
		<p>Observation of panels within the Ministry and Apele Romane Head Office (Bucharest) as well as Buzau RBA</p> <p>Visit to hydraulic works constructed to avoid flood damages: dams</p> <p>Similar AHIS (although more centralized)</p>	<p>Systems are being implemented in some areas, and improved in others. It might be early to determine how it fully functions. They have a good manual system of data collection, which may change in the future through digitalization. Its organisation may be interesting for the implementation system.</p>
<b>4</b>	<b>Monitoring Networks (qualitative, quantitative for surface and groundwaters)</b>	<p>Understanding the functioning of the quality, physic-chemical, biological and piezometric networks (many stations).</p> <p>The surveillance, operational and investigation surface networks (under WFD requirements) are under development.</p>	<p>Júcar RBO: identifying to which type of monitoring network each measuring point relates.</p> <p>More readily information available at the national level (more homogeneous information).</p> <p>Networks that have been established more recently are strictly following WFD criteria (Júcar networks have suffered changes in order to be adapted)</p>
<b>5</b>	<b>Administrative framework Organisation of the River basin Authority: departments and their functioning.</b>	<p>Technicians learnt about the administrative structure of the Ministry, “Apele Romane” N. A., (there are 11 RB directorates in the country) and Directorate of Buzau-lalomita.</p> <p>They met representatives from many different departments and from the National Institute of Hydrology and Water Management, which gave them</p>	<p>The administrative framework is very similar; almost all departments had a homologous one in Spain. It would be interesting to see each department’s functioning in depth, as well as coordination among directorates and Apele Romane.</p>

	the opportunity to see the different tasks carried out in each department.	
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### 3. ACTIVITIES DEVELOPED DURING THE MISSION

<b>Activity 1</b>	<b>Topic: <i>Institutional Framework</i></b> ( <i>Legal aspects, Regulation, Institutional, Finance, Communication ...</i> )
<b>Description</b> ( <i>Exchange of experience or practice, Increasing of knowledge and learning, Development of methodology, Training ...</i> )	Exchange of experience and learning about the administrative framework of Apele Romane in Bucharest, and Buzau-Ialomita Visit to the DABI building, description of departments, areas and their functioning. The representatives visited the different departments, meeting their major representatives and learning about their functions in situ.  Diagrams and general information provided.

<b>Activity 2</b>	<b>Topic: <i>Automatic hydrologic information systems and flood prevention programs</i></b>
<b>Description</b>	<ol style="list-style-type: none"> <li>1) Visit to the Automatic Hydrologic Information System of Apele Romane.</li> <li>2) Visit to the National Institute of Hydrology and Water Management: mostly covering groundwaters management and control.</li> <li>3) Presentation on Dams information (high number, and well distribution established)</li> </ol>
<b>Activity 3</b>	<b>Topic: <i>Flood Prevention (Infrastructural measures)</i></b>
<b>Description</b>	<p>Flood Prevention Activity</p> <p>Visit to the Siriu Dam and Buzau River</p> <p>Presentation of additional information from Bolboci, Dridu*, Maneciu and Paltinu Dams (WFD: highly modified water body)</p> <p>Flood prevention plans – description. Structural measures: dams, channels</p> <ul style="list-style-type: none"> <li>- During the visit important information on dam security, water quality, building materials and methodologies and water supply was provided.</li> <li>- Major differences observed with the Júcar RBO were observed regarding biological and geographical characteristics of the Dam.</li> <li>- Water drainage within the dam</li> <li>- A well-developed Dam security plan is used.</li> </ul>

	Dridu* (no visit, but information provided)
<b>Activity 3</b>	<b>Topic: <i>Qualitative and quantitative monitoring networks (surface waters and groundwaters)</i></b>
<b>Description</b>	<p>Visit to the Upper and lower reaches of the Buzau River  Visit to a medium-size treatment plant of Buzau: many similarities in structures, methods.</p> <p>Important and very complete laboratory for water analyses in Apele Romane, (public –Romania-vs. private analyses-Spain-The lab in CHJ only carries out some measures, but most analyses are done through independent private labs)  Well-established biological network. Great number of monitoring points in groundwaters, and very high frequency and periodicity for monitoring (taking samples)</p>
<b>Activity 4</b>	<b>Topic: <i>Implementation of the Water Framework Directive</i></b>
<b>Description</b>	<p>2004 Report of Buzau River Basin Management Plan (and technical visit).</p> <p>Presentation of the works developed according to Article 5 requirements:</p> <ul style="list-style-type: none"> <li>▪ Basin characterization</li> <li>▪ Pressures and impacts</li> </ul>
<b>Extra Activities</b>	<p>Visit to the Muddy Volcanoes (active volcanic area near Buzau)  Geologically interesting, since the different landscapes were observed during the visit. Buzau is characterized by presenting a variety of areas: active volcanic areas, mountainous, forested areas, plateaus etc. In general more water availability than in the Júcar RBO.</p>

#### **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) Administrative Framework

It was observed that there is a closer water management follow-up from Apele Romane towards the directorates. In this respect, it seems that data at national level is more readily available and homogeneous in Romania. Many of the presentations offered, described data and facts at the national level. Responsibilities and share of tasks has a major difference in both cases. In Spain, there are two major lines of water management: “high” and “low”. Being the “high” management the storage, regulation and transport of surface water from dams, and “low” the water treatment, distribution networks and urban channelisation within populated areas. Spanish RBOs are mainly in charged of the “high” management, while municipalities, users associations, and private

companies control the “low” management. This is in part due to the historical role of local groups in water management. In this sense, the major difference between both countries is that Apele Romane is in charge of both “high” and “low” management, presenting thus, an increase of functions and responsibilities.

## 2) The treatment of the temporary streams

the team expressed difficulties to characterized and measure temporary streams. Extra information on this topic was requested, due to their complexity (variety of ecosystems associated, quality and quantity problems). It is evident that it is a “hot topic” (very characteristic of Mediterranean basins, but also elsewhere as in this case) that would need a further analysis.

## 3) Hydraulic works safety surveillance

Dam visit (more structural characteristics). There was information exchanged on dams, their functioning and safety programs.

The surveillance activities are structured on 3 levels:

- Level 1:

Visual inspections, measurements at the machines and measure devices, preliminary understanding of results interpreted by the exploitation personnel, certified by the competent authorities.

- Level 2:

Synthesis of the observations results, measurements on a certain determined period of time made by their own personnel and the specialised institutions.

- Level 3:

Analyse and approval of the synthesis report developed by the UCC committee of the National Administration “Romanian Waters”

For exceptional causes there are 3 levels: Attention, Alert and Alarm.

The legislation regarding surveillance system is based on:

- Law 10/1995 regarding the quality in construction.
- Normative P130/1999, which refers to in time behaviour of constructions.
- Law 466/2001 for approval of the OUG 244/2000, regarding the safety of the dams.

## 4) Pressure assessment (morphological pressures within IMPRESS analysis)

Pressure and risk analysis is well developed in both cases. **It would be recommended to put in contact experts directly working on this issue, or promote exchange of specific questions related to the characterization and monitoring of heavily modified water bodies (HMWBs).**

## 5) Monitoring

Monitoring networks in both RBOs have similar characteristics and follow the WFD criteria). In Buzau-Ialomita Directorate, there are on-going activities on the development and monitoring networks, according the WFD requirements. It must be pointed out that the development of **Biological monitoring networks** in both cases are very similar, but at the same time, very difficult and, therefore, it could be another very useful subject of future exchange.

- **About Practice:**

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

### a) **The Basin Organization the expert belongs to:**

They are applicable in the sense that results were shared with other departments of the Júcar RBO. Although the coordination and development of the mission was done through the

Planning Department, others as the Water Commissariat, the Quality Laboratory, the Secretariat, and the Technical Department, shared views and technical questions. During mission 1, personnel from all these different departments participated by providing presentations and documentation, and by sharing technical views. During mission 2, the Planning Dpt. sent the request of providing specific technical questions to bring to Romania. All results were shared (via e-mail and meetings) within the Júcar RBO staff, which helped on realizing the importance and usefulness of this type of exchanges.

The existence of a specific office dedicated to public participation in Apele Romane, was taken as a pioneer initiative. Júcar RBO has an interest in studying its development and success to follow a similar action. Currently, it is the planning department, within the Júcar RBO the one in charge of public participation, as well as the press office. A specific strategy is being developed and applied.

**b) National IWRM practice:**

The Planning Dpt. also shared results with the Head quarters in Madrid of the Ministry of Environment. This was mainly due with the international affairs department and the Planning Sub-Secretariat of the Ministry.

It is important to notice that results were also shared with the Spanish Minister, and technical aspects were discussed during the institutional meeting of the Director Petru Serban in Spain that took place at the end of July 2005.

Results on how a different country may resolve WFD implementation practices may of course help not only the Júcar RBO, but also be applied to other Spanish RBOs.

**c) Regional experiences:**

Similarly to the first mission, and because the Mediterranean Network of Basin Organisations is hosted by the Júcar RBO, the learnt lessons may be shared at Mediterranean regional meetings. The technical and human experience may encourage other Mediterranean countries to participate in the TWINBASIN project and benefit from technical missions applied to IWRM.

**d) Worldwide:**

Hopefully, after the first phase of the project has concluded, general recommendations and guidelines to develop a successful technical exchange on IWRM will be developed to share at international meetings and workshops, through INBO, other collaborating international entities as GWPO, national Ministries of Environments, NGOs etc. The use of websites, bi-lateral meetings, brochures and CDs may help in disseminating results, and pin-point possible cooperation problems.

## **6. IDENTIFIED TIPS**

### **➔ *Identified tips which could be useful for colleagues***

It is important to maintain fluent and frequent communication prior and after the mission, to ensure its success and the technical interests agreeing with the project's objective. All possible technical and logistical questions should be clarified to avoid misunderstanding or disappointments.

Language, may of course, become a working barrier. It is important to identify technicians that will be able to communicate in one or another language.

It is highly important to "select" or "propose" technicians of an RBO that truly have an interest in the other country's water management techniques, culture and people. Without motivation, the mission's success would be jeopardized.

Establish monothematic meetings: during the exchange there were many topics covered, but it was hard to focus and clarify specific aspects of just one area. It might be interesting to establish, in future exchanges, specific meetings with experts (e.g. transboundary water bodies, reference conditions, intermittent flows).

## 7. PERSONAL COMMENTS

### ➤ *What does the missionary think about his mission*

The Romanian technicians involved in this mission offered a great technical and human support to the Spanish visitors. Even during the severe flooding situation, they had personnel readily available to take care of the visitors.

Because of the strong rains, some of the technical visits on the field were cancelled and changed for similar ones, but did not alter the general objectives of the mission.

The similarities of “Latin-European” cultures helped on the understanding of the participating technicians. The fact that Spanish and Romanian are some how alike and that technical words are similar, helped in the communication process. It is also apparent the similarities in cultures, easing the stay and exchange of views.

As it was noticed by the Romanian visitors on the first mission, both administrative systems are highly similar. The hierarchic, departmental and functioning systems are similar. However, in Romania Apele Romane in Bucharest has a greater role in decision making compared to the specific RBOs directorates in some concrete aspects. Which may be, in part due to cultural reasons, governmental or economic factors that affect the centralization factor. It would be interesting to take a closer look at this topic and make a real comparison of both systems.

Although the technical interests were clear, and the problems of WFD implementation similar in both cases, Romanians expressed a high interest in learning about transboundary management in Spain. It might be a possibility to establish a second round of missions, focusing on this issue, and promoting an exchange with a Spanish Basin that deals directly with this issue with Portugal (where shared basins represent an important percentage): e.g.: the RBOs of Tajo, Duero, or Guadiana. This second mission could be coordinated through Júcar, by establishing with Apele Romane the specific points of interest in transboundary management.

It was clear through these experiences that both Ministries of Environment are currently focused on applying an Integrated Water Resource Management (IWRM) through the strict implementation of the WFD.

This second mission followed the guidelines and principles established by the TWINBASIN project, achieving the objectives established prior to the development of the missions.

## 8. CONTACTS

### ➤ *Principal local contacts met*

Name	Occupation	E-mail	Phone Number
Daniela Radulescu	Secretary of CEENBO	<i>daniela.radulescu@rowater.ro</i>	+40 (2) 13 155535
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Mirela Marinescu	Chief of RB Management Plan	<i>mirela.marinescu@daib.rowater.ro</i>	

## 9. BIBLIOGRAPHY

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

<b>Name</b>	<b>Description / Notice</b>
Structures and responsibilities in the field of drinking water supply and wastewater treatment, (6 slides)	Presentation
Basin Committee description	Part of Romanian law translated into English
Delineation and characterization of groundwater bodies in Romania	Presentation
Presentation of the state of plan of the implementation of the WFD in Romania and the national strategy used for the	Power Point presentation, Petru Serban

basin characterization	
Water Management Romania	Power Point presentation
Report 2004 Buzau-Ialomita River Basin Management Plan	Power Point presentation, Maria Marinescu, Head of RBMDSC
Monitoring Systems for the Water Quality	Power Point presentation, Biol. Oana Ristea and Biol. Sena Soaita
Flood Prevention. National Administration of Romanian Water Buzau-Ialomita Directorate	Power Point presentation, Eng. Adriana Petcu
La Direction des Eaux Somes-Tisa	Brochure. L'Administration Nationale « Apele Romane »
La Direction des Eaux Siret	Printed copy of Power Point presentation
La Direction de Eaux Olt	Printed copy of Power Point presentation
L'Administration Nationale "Les Eaux Roumaines"	Printed copy of Power Point presentation. La Direction des Eaux. DOBROGEA - LITTORAL
La mise en place de la Directive Cadre dans le domaine de l'eau. Le Plan de Gestion du bassin Hydrographique.	Printed copy of Power Point presentation
Romanian Waters	Brochure. National Administration. Apele Romane.

<b>Websites</b>		
<b>Name</b>	<b>Description / Notice</b>	<b>Address</b>
Apele Romane	<i>Information on the governmental institution in charged of water management, its projects, works, WFD activities, events and news</i>	<a href="http://www.rowater.ro/">http://www.rowater.ro/</a>
<i>Buzau-Ialomita Directorate</i>	<i>All information regarding the Buzau-Ialomita River Basin Authority: functions, works.</i>	<a href="http://www.rowater.ro/ViewTopic.asp?Topic=1017&amp;lang=EN">http://www.rowater.ro/ViewTopic.asp?Topic=1017&amp;lang=EN</a>
<i>Central and Eastern European Network of Basin Organisations</i>	<i>All information related to INBO's regional network: activities, projects, budgets etc.</i>	<a href="http://www.ceenbo.org/">http://www.ceenbo.org/</a>
<i>Romanian Centre for River restoration</i>	<i>Activities, projects, agreements, structure and organization of this Centre, which Secretariat depends on Apele Romane.</i>	<a href="http://www.rcrr.org/">http://www.rcrr.org/</a>
<i>Aquadoc Romanian focal point</i>	<i>Water information system</i>	<a href="http://aquadoc.rowater.ro/">http://aquadoc.rowater.ro/</a>
<i>Hydrotechnical magazine</i>	<i>With updated Romanian articles on hydraulics</i>	<a href="http://www.revistahidrotehnica.ro/">http://www.revistahidrotehnica.ro/</a>
<i>Romanian Institute of Statistics</i>	<i>Statistical data of the country</i>	<a href="http://www.insse.ro/">http://www.insse.ro/</a>

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