

2nd February 2006

WELCOME SESSION

University Hall of Alicante city, "Rafael Altamira" Room

Opening Table¹

Honorable Sr. D. Rafael Blasco i Castany, *Conseller de Territori i Habitatge* of the Valencian Regional Government, is the highest political Environmental Authority in our area.

The Region of Valencia enjoys one of the most important natural heritages in Europe and the Mediterranean. In our region there are 48 protected wetlands. Six of them are included in the RAMSAR Convention. Regional Government is firmly engaged with the conservation of this heritage and is ready to collaborate with the University in order to guarantee its proper management.

Excmo. and Magnifico Sr. D. Ignacio Jimenez Raneda, Rector (President) of the University of Alicante.

It is a priority in University of Alicante policy to collaborate with Public Administrations and, in general, with society. Thus, projects like WADI, aiming to obtain a comprehensive picture of a complex system should be encouraged, and of course, we offer all the collaboration of the Rectorate. We greatly appreciate the efforts of our colleagues.

The two municipalities to which El Hondo belongs (Elche and Crevillente) were represented by their Councillors of Environment:

Mrs. M^a Carmen Candela Torregrosa (Councillor of Environment of the town of Crevillent).

On behalf of the Mayor of Crevillent and President of the *Junta Rectora* (Consulting Committee) of El Hondo Natural Park, she apologizes for his inattendance today due to the coincidence of this act with other administrative obligation, and confirms that he will be honored to welcome WADI researchers and participants during the Crevillent session. She personally welcomes WADI teams, and explains the importance afforded by the Town Council of Crevillent to one of its most appreciated natural heritages, the El Hondo Natural Park.

Mr. Emilio Doménech (Councillor of Environment of the city of Elche).

Remarks the ecological richness of Elche, with several legally protected areas, and the traditional water culture of the Elche people, revealed by the magnificent Palm

¹ This abstract is based on the transcription of the tapes and DVD registered during the sessions. However, we greatly acknowledge the notes taken by Laura Serrano and Oscar Serrano, from the University of Barcelona (Spain), and Lucia Fanini, from the University of Florence (Italy). Registration quality of the tapes was not always perfect, so this annotations greatly helped us in the transcriptions.

tree orchards, recently declared World Heritage by the UNESCO.

Dr. Carlos Martín

Briefly explains the objectives of the project and its participative and integrated approach, and welcomes both the WADI researchers and the local stakeholders who attend this meeting.

Introductory Speeches

Prof. Felicita Scapini

WADI in the framework of the European Research and Cooperation Policy.

Dr. Fatiha Bou-Salah

Gender considerations in sustainable development international policies.

Prof. Carlos Martín

The WADI project in El Hondo: a new approach to environmental management in relation to water systems.

3rd February 2006

Casa de Cultura "José Candela Lledó" Crevillent

Invited speaker

Prof. René Maury (University of Naples *L'Orientale*, Italy)

Water traditional systems in the Mediterranean: a cultural and ecological heritage.

Interventions of Stakeholders (I)

Regional Council for Environment and Habitats
Irrigation Company
Farmers Representatives
Provincial Agency for the Environment

Mrs. Ana Campo Muñoz

Biologist. Chief Environmental Manager in charge of the protected areas of the province of Alicante. She belongs to the staff of Conselleria de Territori i Habitatge.

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She makes a reference to the new European Water Policy and express her doubts about how it could be applied to the singularity of the Spanish case (El Hondo).

She remarks the diversity of legal norms, with even some degree of mutual incompatibility when translated to the real world. Also, there is a diversity of managers and technicians belonging to different administrations and, with different perceptions and sensibilities. In the case of El Hondo, we find the following stakeholders:

- National Level: Ministry of Environment and their *Confederaciones Hidrográficas* of the Waterbasins
- Regional Level: Conselleria de Territori i Habitatge (habitat and Territorial Council), with environmental management (protected areas, conservation of species, etc.) and agricultural policy (Conselleria de Agricultura)
- Local level: Municipalities, with competences on urbanism and land planning

This administrative complexity generates considerable difficulties for management.

At El Hondo Natural Park, there has been a certain amount of scientific research. For example, 4 LIFE projects have been developed, but their results, directly aimed to provide management bases for certain protected species, could not be implemented due to conflicts with local stakeholders. There is a lot of scientific data which have not been properly filed nor used.

The main problem for the management of El Hondo is the conciliation of the different interests around water use, due to increasing urban developments, agricultural uses and conservation needs. Water management should consider (a) the need for a rigorous land planning which take into account the real availability of water for development; (b) the irrigation needs for the maintenance of agriculture; even if agriculture is now in decline, it could be integrated in a sustainable land use model; and (c), the needs for environmental quality conservation, integrating species conservation and the rights of citizens to enjoy this protected space.

From WADI, and any other research projects, we expect a definition of the future of the Park, the role in it of new technologies and the implementation of a new culture of water allowing a compatibility between Park management and the uses of the different stakeholders.

Mr. Jose Antonio Sánchez

Biologist. Staff technician and representative of the *Comunidad General de Regantes Riegos de Levante*, owners of the El Hondo Water Reservoirs

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Recalls the history of the Company of *Riegos de Levante*, which begins at the pumping of water from ca. 0 m a.s.l. (near the mouth of the Segura River) to 135 m a.s.l. At this moment the water flow in the mouth was important (there were no dams in the Segura River, and water flowed freely to the river mouth). The aim of the project was to bring water from the Segura River to irrigate some agricultural areas in the province of Alicante suffering shortage of water. The project was financed by the Dreyfuss Bank of Paris and was designed by Engineer José M^a Serra.

In the 1920s, the Spanish Royal House supported the construction of the water reservoirs, to maintain the water in summer. So, a certain amount of lands besides the main canal were purchased to build this reservoir, in the area known as "El Hondo". The substrate is impermeable, so water losses by infiltration are minimal. Along the canal there is a system of sluices for the entrance of water into the reservoirs.

During the Spanish Civil War, the company was expropriated and given up to the so-called Hydrological Enterprise of Spain.

Riegos de Levante has rights to obtain an amount of 7725 l/s from the Segura River, but this quantity has never been obtained due to the scarcity of water in the lower course of the river, since dams in the upper course retain the water of the river.

The total area which can be irrigated by *Riegos de Levante* covers 39000 ha, attainable thanks to 13 pumping plants.

Two hydro-electrical power plants provides the energy needed for water pumping

(Almadenes and Alto Segura), from which electricity was conducted to the different pumping sites. In 1976, the hydro-electric and agricultural uses were divided and their management attributed to different companies.

Important environmental problems of El Hondo are the eutrophication of waters, the recurrent appearance of botulism and the impact of plumbism (due to the amount of leaden hunting pellets accumulated in El Hondo).

But the greatest problem, without doubt, is drought, the structural scarcity of water. Three possible solutions to this situation have been proposed: the transfer of external waters, the use of depurated urban waters, and the use of desalinated waters.

Mr. Jose Luis Garcia

Farmer. President of the *Sindicato de Riegos de San Felipe Neri* village. (Union of farmers with irrigation rights of San Felipe Neri), the area situated immediately to the South-west of the Park

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We farmers see ourselves as a species in risk of extinction. We have always tried to continue our activities, our way of life, but the fact is that the youngest farmers among us are 55-65 years old.

Agriculture is not economically profitable, and our very modest revenues make a great contrast with the enormous gains obtainable from the urbanistic developments carried out in fertile lands in this area. Moreover, the declaration of the Natural Park of El Hondo was felt as a serious danger for our traditional activity. WADI should provide a solution to this problems, it should search for viable ways of maintaining agricultural activities in this land. We are claiming for the future of our sons.

Some initiatives to develop agro-activities, as a project to install near San Felipe a dairy farm, were discarded by the Administration due to its supposed environmental impact on the Park. Presently, only EU or Spanish State fundings allow the supervivence of agriculture, but this is not a solution (economic balances are no good) and farmers feel that there is no future left to them.

Mr. Alejandro de la Vega

He has been director of the three Natural Parks (El Hondo, Santa Pola Salines and the Lagoons of La Mata-Torre Vieja). Presently he is Environmental Main Technician in the Diputación Provincial de Alicante and the representative of this institution in the *Junta Rectora* of the Park

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The main problem of El Hondo is that its management as a Natural Park corresponds to the *Conselleria*, but water policy in the area corresponds to the *Confederación* of the Segura Basin, so to the National Ministry of Environment. And the Segura basin is deficitary both in terms of quality and quantity of water. El Hondo has frequently reached dangerous levels of eutrophication and salinization. So, the environmental administration (*Conselleria*) must manage El Hondo without having any control on its main management problem that is water.

Moreover, the ownership of the area is private (mainly *Riegos de Levante*) and we should understand the influence of this factor. Presently, El Hondo reservoirs have no agricultural value for the company due to the bad quality of its waters (characterized by a high salinity level and eutrophy), so the economic activities of *Riegos de Levantes* is not based on them, but in the water obtained from the transfers from the Tajo river. And the Tajo water cannot be introduced in El Hondo because this would imply a loss of quality of this water mainly due to salinization.

A differentiation of uses of the reservoirs should be established, and one of the reservoirs could be dedicated to environmental uses. For example, salty water from the wells of San Felipe Neri, not usable for agriculture, could be used for maintaining the ecosystem.

In the area of El Hondo there are three water circuits: (a) the reservoirs of El Hondo, owned by *Riegos de Levante* and feeded with water transfers from the Segura; (b) the private peripheral ponds, feeded with underground and runoff waters, (c) the waters of the San Felipe Neri irrigation community.

From WADI, it should be requested to create a framework of understanding among different interests and to give a definitive solution to these problems.

Mr. Carlos Román Miralles

Farmer. President of the Comunidad de Regantes de Carrizales, the area spreading from the SE of El Hondo Park to the Salines of Santa Pola, and now declared Protected Wetland Zone. Belongs to the Municipality of Elche.

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Our community was founded in the 18^o century by the Duke of Arcos (lord of Elche), who established colonists here as enfiteuts, after having carried out great drainage works in former swampy lands.

The *Comunidad* historically received waters from the *azarbes* of Dolores and San Felipe Neri (so, drainage, remnant waters), but now it subsists mainly thanks to the water bought from *Riegos de Levante* and *Riegos El Progreso*. Carrizales covers 1300 ha and is formed by 400 colonists.

We are strongly tied to our lands. These lands are what they are thanks to the efforts of farmers, we and our ancestors. The efforts of farmers are necessary for the subsistence of the land. For example, there is the problem of the invasion of *Phragmites*, which should be controlled by our efforts. We are proud that the first machine for the control of *Phragmites* in canals used in Spain was bought by our Community. And due to this control, we have not suffered so much during the 1945

floods.

We feel that we are favoring the environment, but we have many constraints imposed by environmental policy. We demand at least a compensation. We do demand as much respect as that afforded to birds or environment.

To WADI we would demand a documentation of our history, and a recognition and valorization of historical memory.

Mr. Jose Ramón Antón Dopazo

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There are three ways for policy: 1) management, either direct or indirect; 2) promotion or encouragement, i.e., collaboration with citizen or stakeholders in order to help them to develop initiatives considered as positive and beneficial; 3) Interdiction, i.e., limitations of uses considered negative and imposition of penalties in case of violation of these norms.

In environmental policy there has been a certain tendency to enact and empower interdiction and, contrarily, there has been a parallel tendency to a lack of legal precision and poor empowerment of promotion tools.

When there is a situation of conflict, the lack of clear rules becomes more evident. In our zone, there is an overabundance of norms from heterogeneous origins and frameworks of reference, so causing confusion among stakeholders and discoordination between the different public administrations.

It is also necessary a clear definition of the nature of good to be preserved before passing norms and laws directed to its preservation and management.

The approach shouldn't be strictly conservationist, since it would generate a state of frustration among stakeholders, especially in this culturally and naturally dynamic system. In any case, confusion must be avoided because confusion is a principal cause of mistrust.

WADI is requested to furnish a clarification of the situation, relying on aspects not taken into account by norms and policies until now, and ascertaining the possibilities of the system given the real limitations for the use of the common good. It is important to insist in precision in the definition of requirements: only in this way a monitoring and evaluation program could be efficiently implemented.

Mrs. Paloma Mateache Sacristán

Former director of the then "Protected Landscapes" of El Hondo, Santa Pola Salines and the Lagoons of La Mata and Torrevieja, now Natural Parks. Presently she is in the Biodiversity Service of the Conselleria de Territori i Habitatge.

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Economic funding from the EC has had an important role in El Hondo. Thanks to it, several LIFE projects have been carried out, technicians have been employed and the *Charca Sur de Levante* (a pond peripheral to the two main water reservoirs) was purchased by the environmental administration.

The problem of the wetland management vs. water management. The lack of integration of the management strategies implemented by the different stakeholders reflects a lack of action by authorities. An example is that modernization works carried out in the irrigated areas are not being subjected to Environmental Impact Assessment.

In the present circumstances of drought, El Hondo reservoirs cannot serve for irrigation purposes, since this is harmful both to agriculture and biodiversity conservation. The existence of cultivated lands around the park is a good thing (traditional agriculture could be positive for biodiversity, although this has not been tested in our zone), but it should be recognised that this agriculture is only possible due to EC funding and to the economic compensations obtained thanks to the inclusion of these lands in the Nature 2000 web. However, this economic effort serves to nothing, and we think that investment in biodiversity values should be prioritaire.

El Hondo case shows us that it is not possible to allow an unlimited growth of water demand for agricultural uses. We must first calculate the available amount of water to determine the surface of irrigated lands that could be maintained, and not the inverse, as it happens now.

Mr. Miguel Cuervo-Arango Caso de los Cobos

Owner of the saline *Bras del Port*, one of the two private salt exploitations that form the Natural Park of the Salines of Santa Pola

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El Hondo is a very inefficient water reservoir because it has a huge surface in relation to the volume of stored water. So, loss of water by evaporation is enormous, and the problem of the salinity of water is increased here. In some sense it functions in a similar manner to the salines of Santa Pola.

We are in a very dry land, so it is not surprising the importance of subterranean waters

It should be recognised that our zone (El Hondo and the Salines form a much interconnected system) is very complex, absolutely modified by humans. So it is ingenious to apply simple solutions. Above all, the administrations should maintain a dialogue with stakeholders.

WADI should investigate the origin of some water pollution we have detected in our area.

Mrs. Paloma Gómez Ossorio

Director of the El Hondo and the Salines of
Santa Pola Natural Parks

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The maintenance of agricultural activities in El Hondo area means the preservation of the landscape, including people and its traditional use of environmental resources. Perhaps, by a segregation of water uses it would be possible to maintain both irrigation of cultivated lands and environmental conservation.

However, in order to guarantee a future for human uses in El Hondo it is necessary to offer appealing alternatives to local population, in the sense that their inclusion in a protected area should be economically beneficial for them. This implies the transition from considering natural spaces as an obstacle towards convincing people that these spaces are an economic resource. There are good opportunities for the promotion of new initiatives, awakening the interest of people, especially of young people, and fostering the social enjoyment of these spaces. Maybe, eco-tourism and other environmentally sustainable and economically sound activities would provide a solution to El Hondo problems.

Welcome to WADI researchers by the Ilmo. Sr. D. César A. Asencio, Mayor of Crevillent and President of the *Junta Rectora* of El Hondo Natural Park

He thanks WADI participants for their interest in studying El Hondo and its surrounding areas and for trying to find ways of solution of the problems it presently faces. He explains that El Hondo is a meeting point for different sectors and frequently opposite interests that should be harmonised for the system being functional. He thinks that in order to find efficient solutions, the analysis must cover the entire system, not isolated parts of it, and the surroundings of the Park.

He desires a complete success to WADI, and offers all the collaboration and the hospitality of Crevillent to the researchers involved.

Centre de Congressos "Ciutat d'Elx" Elche

Stakeholders' expositions (II)

Dr. Andreu Bonet i Jornet

Biologist. Professor of Protected Areas Management at the University of Alicante. He has also directed or has participated in research projects in El Hondo. For example, he has been the coordinator of the study on the problem of plumbism caused by hunting bullets on birds.

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The aim of this intervention would be to provide an analysis of the uses of El Hondo as educational or formative resource in higher education. Since 1993, the role of the park in this civic service has attained some importance and The University courses of Biology and Tourism have programmed some formative activities for their students in El Hondo, for example within the courses "Conservation Ecology of Vertebrates" and "Impact Assessment", in Biology or "Touristic Environmental Resources Management", in Tourism. Other courses and doctorate programs (Ecosystems Management) have also been organised, more sporadically.

The park offers a great deal of educational resources for university students in the field of biodiversity (birds, flora, etc.), analysis of hydrological cycles, ethnological aspects, historico-cultural heritage (but still scarcely used), and management policies due to its international relevance. But also it is a resource for non-formal education.

University formation is intimately linked to research. Research allows a direct transference of knowledge to students. Research projects could offer this utility, as has been seen, for example, in projects on Phragmites management, or restoration of wetlands in relation to cynegetic activities, the impact of plumbism, etc. However, there is no specific project on the quality of water (with Salines of Santa Pola). A Ph. D. Thesis is being prepared on citizen participation in Park management in the Sociology Department.

Criticism and diagnostic: from our University perspective, it should be remarked that here have been an effort for offering educational resources to the public; thus, there are some facilities (Visitors Centre, signals or pannels), but there is no information outside the Visitors Centre. There are routes, parkings, hives, access, but no recreative areas nor disability services. We would recommend: more educative resources, an animal recuperation centre, a small botanical garden, eco-museums laboratories, etc.

There is a need for improving availability of documentation. There is no documentation service for research or teaching. There are some guidelines of research proposed by the *Junta Rectora*, but there are no specific plans for developing these lines. It is important to develop a model of public use in El Hondo, including educational or formative aspects. We feel a need for formal agreements between the University and Administration to attain this objectives.

Information is not easily accessible, because of bureaucratic problems, not only for general people, but also for researchers or docents. There is at least a web page, from which some information can be down loaded.

Mr. Antonio Belda Antolí

Biology student at the University of Alicante. Presently Ph.Dr. Student. When he was student of the course Environmental Impact he collaborated with the professors in redacting teaching materials for this course. He has also collaborated with MEDCORE research

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I thank WADI organisers for taking into account University students in relation to their specific interests in El Hondo Natural Park and the other protected areas of the province of Alicante.

University formation in Alicante is general, theoretical rather than practical during the first cycle (first three years), but during the Second Cycle, there are more practical courses. During this period, field practices become more important, and some of them have been developed in El Hondo.

Main problems are affecting students: firstly, an own problem: we recognise a certain lack of interest and entrepreneurship among students, but when a student tries to increase his knowledge of real cases, he or she finds that there are notable difficulties for obtaining information, or the information is not in an usable form for us. But we feel a need for knowing real, practical management problems during our formation. University courses should potentiate practices (training stages) in private companies and administration, and field work, or the participation in environmental management (through voluntariate programs or specific agreements). We feel that new communication channels should be developed between administration and students in order to facilitate a flow of information, taking into account that we are, somehow, between experts and lay people.

Participation in research projects could be a very important formative tool for University students and it would be interesting to link research projects and teaching. Natural parks like El Hondo, and the projects here developed, should play an essential role in the formation of students related to environmental sciences. But we also request to WADI a certain interdisciplinarity, so it should involve not only biology and sciences students, but also students and young researchers from humanities, sociology, etc. This would be very enriching for all of us.

Teacher of Natural Sciences at the College of Guardamar and Associated Professor in the Dept. of Ecology of the University of Alicante. Member of the MEDCORE and teams and has collaborated also in research. He has developed several environmental education programs.

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I speak in the name of a group of teachers from the surroundings of El Hondo (M^a J. Navarro, Angel Amat and Francisco Girona) who has collaborated with the University, but whose main activity centers on school and college (pre-university) teaching. WADI pretends to involve parties, stakeholders, and we think that we, environmental educators, can offer to WADI valuable points of view. Moreover, for us this kind of projects makes no sense if all implied parts are not considered. And educators are relevant stakeholders. We are forming future citizens, and we expect to obtain environmental quality through their efforts. So their education is very important for the future of the area.

In Spain there has been two decades of formal pre-University environmental education (in schools and colleges). But have it had a real influence? We think that it has not, or not completely. We think, from our professional experience, that we failed in transmitting the very concept of 'environment'. Our pupils (and, we dare to say, also general citizenship) think that only virgin areas (and especially exotic, remote areas as the Antarctic, jungles, whales) have environmental value. In 1994 – 1995 in the journal *La Rella* we have published a study on the perceptions of our pupils from Guardamar, Elche or Callosa: for example, they don't value the *Huerta* [irrigated agro-landscape], their immediate surroundings, a space of great ecological and cultural value. And of course they do not know the importance of human traditional activities, of agriculture, in maintaining El Hondo and its surroundings. M^a. Jesus Navarro, for example, observed that her pupils from Crevillent doesn't know anymore about El Hondo than what official publicity says. We think that the lack of interest towards El Hondo problems, and the lack of a valorization of this area, arise in part from this lack of knowledge.

Through WADI we expect a change of perceptions and attitudes. We have initiated an analysis on environmental education issues on El Hondo. We do recognise the meritorius activities (even more commendable due to the scarcity of available resources) of the Park personnel, but we see a lack of integration of the Park with their socio-cultural environment. The history of El Hondo is told, but there is no a real integration of traditional knowledge (farmers wisdom, the role of women, etc.) in education programs. We have exposed some preliminary approaches in the III International Congress on Environmental Education hold in Granada last year.

We propose an environmental education focused on the integration of social and ecological environments. We would recommend an education for action, not limited to the knowledge of mere data. Citizens should be aware of their capacity of defending their environmental interests. Farmers must find a real support from other social sectors, who also should be conscious of the importance of farmers' role for the maintenance of environmental quality.

Natural Parks should be central points from which environmental education

should irradiate to the surrounding social environment.

Mr. Antonio Valero

Farmer. President of the *Comunidad de Labradores y Ganaderos de Elche* (Community of Farmers and Livestock Raisers of Elche). He is also councillor of the Company *Nuevos Riegos El Progreso*, a private company founded in 1906 in order to bring water to the Elche Countryside from the drainage canals of the Segura Lower Valley

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For us, farmers, it is important to recall the history of our zone, and I think it is important also to inform students about it. In 1906 the first initiative for bringing irrigation water to the dry zones of Elche Country was carried out by the company *Nuevos Riegos El Progreso*, which took water from the *azarbes* (drainage canals of the traditional irrigation system of the Segura Lower Valley) named *Acierto*, *Enmedio* and *Culebrina*. Due to the success of the initiative, the canal was later elevated to the *Alcudia*, with two derivative canals (W and E). Nowadays, this company continues to supply irrigation water of 1-2-3 g/l for vegetable cultures, palm orchards, etc..

After this, the *Real Compañía de Riegos de Levante* appeared. It now supplies water to 33 towns in the province of Alicante, from Orihuela to El Campello, mainly from the Tajo transfer when the Ministry of Environment allows it. In 1922, the King Alfonso XIII inaugurated the works at the point that was called since then the *Partidor del Rey*. Later, El Hondo water reservoirs were built to store waters taken from the *azarbes* of La Reina and Mayayo and from the river. This zone of El Hondo was until that time a swampy lowland area where the river Vinalopó flowed in case of great rains. In the 18th century, Cardinal Belluga drained the zone of San Felipe Neri, Dolores and San Fulgencio. In 1935-1936, the banks (*motas*) of the reservoirs were built. In 1944-1946, the reservoirs were enlarged. A person who is living testimony of these works has been in this room.

We feel sad, because “Environment” [environmental administration, environmentalists] has not taken us into account. So, we think that the University of Alicante have initiated with this project a great task for educating young people and showing them the origin of all this heritage.

Thanks to these efforts, we have what we have. We farmers have taken care of the environment. Planting trees and building environment, attending land is managing environment. We think this should be transmitted to new generations, and this is very important.

The area of Carrizales covers 13000 ha and 400 families, but they cannot irrigate their lands, because there is now no water left in the lower course of the Segura.

In the ‘80s the problems with the “Environment” in Carrizales, Hondo and surroundings have began for us. We should ask for permits for many things. There have been unnecessary conflicts between peasants and the “Environment”. We think that trees and agriculture are good. Environment has extended its area more than 1000 m to the North, till the Vereda de Sendres, where hundreds of people live, now

subjected to a lot of limitations and problems. We, farmers want to collaborate with the Administration, and feel that we are the real ecologists. But there have been many cases of farmers who have been impeded to make their job. We must sollicite permission even for very small works. We ask that authorities to take us into account. So, young farmers abandon the fields, because they have many problems from “Environment”. The project of a dairy farm was impeded by Environmental administration.

This WADI event should be important for all: youngs, farmers, workers, old people, etc.

Mr. Pedro Valero

Farmer. President of AVA-ASAJA-Elx
(Association of Young Farmers, Delegation
of Elche)

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We, farmers, feel that we are the true environmental managers. We are critical with the extremism of ecologists (*week-end ecologists*, as we call them), which only visit the countryside for a few hours, and say us what we should do. But we live and work in nature, and we know it better than them. We feel that it is possible an environmental management confluent with environment. For us, agriculture is not uncompatible (on the contrary) with environment.

We see El Hondo mainly as a water reservoir; biological values should be respected, of course, but agricultural uses, for which the resorvoirs were built, and on which we depend, should be guaranteed. This is especially important for us when there is no water available from the water transfer Tajo-Segura: El Hondo water is bad for irrigation, however it plays a vital role as emergence resource during droughts.

A dialogue between farmers (from Carrizales and other zones) and Environmental Administration is badly needed, and also the University, scientists and students should participate. I has been told that the times of impositions have finished. We hope so.

We agree with Mr. Candela: orchards, agriculture are also environment, not only virgin lands. We reject the image of protected areas as lands from where people should be excluded. We reject also the image of environment as a immobile state. We know that environment is dynamic, alive, because we see its changes. We have seen that waterfowl, for example, colonized new, human-made habitats. In the Vinalopó recently (30 years ago), because of gravel quarries, several wetlands have appeared, where birds now live. Animals become adapted to new circunstances. However, some people want a fixed state of things: they don't understand nature, because nature is always alive, and evolving.

We appreciate the aim of the project WADI, especially that of collaborating with us and obtaining information from peasants.

Mr. José González Box

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Segura Limpio is a civic platform in Bajo Segura created in 1998 as a citizen reaction against the pollution and deterioration of the Segura River during the last years. People from our area is very worried about the pollution of Segura (bad smell). But sometimes, although the evidence of abuses is clear, there is no reaction of citizens in demand of their rights. We request an integrated treatment of the river problems. We demand water quality, or even the mere existence of water, of real water, in the Segura. Now we have the same pluviometric regime than in the past, but now there is no water. Traditionally, and until some years ago, a peasant could irrigate his vegetables fields every 15-20 days; now 3 or 4 times by year.

There is also popular preoccupation about the consequences on human health of the conditions of the Segura River. We have organised citizen mobilizations in order to demand clarification from the Administration. We don't affirm that pollution is the reason of some detected cases of illness, but we have required a confirmation from authorities, a request that has not yet been satisfied.

We have had several successes, for example the installation of the Wastewater Treatment Plant of Murcia, financed by EU. But there has been no advance in other subjects, despite our meetings with the different administrations involved in water management. For example, there has been no success about the treatment of industrial wastewater. We have solicited specific industrial wastewater treatment plants. Also, there has been no advance in water management, control on destination of water concessions. There is more extraction than that permitted by Water Administration. This is the reason why there is no water now at San Antonio [the site, near the mouth of the Segura River, from where Riegos de Levante takes the water for El Hondo]. The solution requires a real, efficient control by administration of water extraction.

The traditional *Huerta* (irrigated agro-landscape) of the Segura River is a result of floodings of the river. The *Huerta* should be preserved due to its environmental and cultural values. Farmers have been abandoned, and sadly the only solution for them is the construction of houses on their lands. We have reclaimed to Conseller Blasco a real protection of our heritage, because time goes by, and the *Huerta* is being progressively destroyed by urban developments for foreigners. In all towns there are councilors of agriculture, who make nothing, but on the contrary the Councillors of urbanism are very active

Closing Table

Mrs. Paloma Gómez Ossorio

Director of the Natural Parks of El Hondo and the Salines of Santa Pola

The first positive result of this meeting is that there has been here a variety of people united to try to reach agreements and solutions.

Environment is all: birds and people. She recognizes that there is a bad image of environmental policy among some local stakeholders, as farmers, due to past conflicts, but we recognize that farmers should be respected. Protected faunal species as the *Malvasia* should not disappear, but the same is also true for farmers.

The most important point in El Hondo is very simple: we have no water. This is

perhaps the difference with respect to other WADI sites. WADI is an interesting project.

She appreciates also the attention afforded to women in the project, and expects that this will bring to an amelioration of their status in the study sites.

She thanks all WADI participants for their presence, and invites them to come again

Mr. Emilio Martínez Marco

Councillor of Urbanism and Vice-Mayor of the Municipality of Elche

Congratulates WADI on the efforts made to put in common the different points of view on environmental problems.

For him it is clear that environmental policies should be built upon social consensus, including administrations, political parties and associations. Science should provide suggestions in order to be considered in decision making. But good words are not sufficient: we need actions.

From this point of view, the main role corresponds to that of public administrations, which should rely on consensus and public participation.

On behalf of the Town Council of Elche, he thanks the participants and the partners of the project for their contributions to a better conservation of natural and cultural heritage of the city.

Mr. Ramón Rizo Aldeguer

Territorial Director (main responsible) of the Conselleria de Territori i Habitatge in Alicante province

Environmental management tries to guarantee the sustainability of human uses of the natural resources.

El Hondo has been historically a very used space. This is also true generally speaking for the Region of Valencia, where traditional water management conserves very valuable elements from Arab culture. This can offer important insights for other countries.

We expect that WADI will provide a base for management and conservation of these values, relying on consensus. And he offers all the collaboration of Valencian Environmental administration for the success of WADI.

Other contributions

Due to different reasons, some stakeholders who were contacted previously and showed their willingness to participate in WADI works, couldn't attend the presentation meeting. Some of them have given us written reports on their positions. Here we translate abstracts of the main points of these reports.

Dr. Germán López Iborra

Professor of Ecology in the University of Alicante. Specialist in bird ecology, he has developed a substantial part of his research in el Hondo wetlands

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I have carried out scientific research, mainly on bird ecology, during the last 15 years. Only a part was funded by the Conselleria.

The most evident problem of El Hondo is the progressive worsening of the water levels and of their quality in the last decades. During the time I have been working in El Hondo, there have been two periods of severe drought with the result that a large part of the Park became completely dry, so affecting very negatively its biodiversity. I feel that there is a generalized pessimism about the future of this important wetland, and, which is worse, even certain degree of lack of interest. The personnel of the *Comunidad de Riegos de Levante* has been reduced during the last years due to the retirement of several guards which have not been replaced. And even the personnel of Conselleria seems less motivated than before, due perhaps to a perception of not being sufficiently valued and supported.

Research in this Park is handicapped by the lack of good understanding between the Administration and the private owners. Frequently, due to these conflicts, the access to some key zones becomes suddenly prohibited to researchers. This is also true for the Park of the Salines of Santa Pola, which forms a natural unity with El Hondo. In fact, our knowledge of many ecological aspects will be limited if we don't consider the whole area.

Personal relationships, even the degree of friendship, are now the key for accessibility, but this should not be so: a more formal and institutionalized framework is necessary to guarantee and regulate the access of researchers to the area. The presence of scientists must be seen as a normal thing, and certainly owners or administrations shouldn't see them with distrust or as a mere source of troubles.

WADI could create a new climate for the relationships between the different stakeholders. Better than technical solutions to the serious water problems of the Park, WADI could establish channels for the dialogue and open discussion of the different proposals.

Mr. Mario Giménez Ripoll

Delegate in the Valencian Region of SEO/BirdLife, an international organization dedicated to the study and conservation of birds. This organization has been a very active group among environmentalist organizations in the defence of El Hondo Park. Presently he is the representative of conservationist groups in the *Junta Rectora* of the Natural Park.

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SEO/BirdLife is an international conservationist organization dedicated to the conservation of bird habitats. El Hondo is one of the most important Spanish

wetlands and, in the last years, it is the main locality for two endangered species: *Oxyura leucocephala* and *Marmaronetta angustirostris*. For this reason, a good state of El Hondo is for us a priority.

We have collaborated with the environmental administration in divulgative and education programs.

Formerly, the reservoirs served the irrigation interests and maintained a rich biodiversity, but now the water that could be pumped from the Segura River is very scarce and polluted. In summer, coinciding with the nesting period of birds, the demand of water for irrigation is maximal and this causes that the reservoirs in some occasions became dry. So, we could say that there is a situation of incompatibility between agricultural and environmental uses of El Hondo. Management of El Hondo is thus contradictory with legal normative, as the White-headed Duck Recuperation Plan of in the Valencian Region (Decree 93/2005), and the PRUG of the Park. However, this same PRUG acknowledges the right of the owners of the reservoirs (CRL) to manage the water. This situation is unsustainable because it doesn't satisfy neither the needs of farmers nor the conservations needs. But at the same time this situation offers an opportunity for solution because all parts are conscious of the need of a change.

We advocate for a segregation of agricultural and environmental uses. This could be implemented by connecting the Reservoirs and the peripheral ponds to the web of drainage canals (azarbes), and by reserving El Hondo reservoirs for environmental purposes. The agricultural needs could be satisfied by delimiting a certain area of El Hondo, and increasing its depth. This solution was in fact firstly proposed by Riegos de Levante, but it seems to have been abandoned.

Other solutions are a change on water concessions or looking for new water sources (from desalation facilities, for example).

There is a need of technical information on water balances in the area, of a real communication with all stakeholders and of creating an atmosphere suitable for discussion/negotiation. It seems that these needs figure among WADI objectives, so our demand to the project is simple: to be able of accomplishing its declared aims.

Mrs. Tere Antón Díaz

Vice-President of the *Asociación de Mujeres y Familias del Ámbito Rural del Campo de Elche* (AMFAR-Elche) (Association of Rural Women and Families of the Elche Countryside)

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The greatest part of our associates are women living in the rural areas of Elche surrounding El Hondo. There is a consciousness among them of the disappearance of many traditions related to water use which were specific of women (especially related to domestic water: drinking, washing water), but also of many other knowledge on the use of natural resources, as ornamental plants, culinary domestic, elaboration of some products, handicrafts. Many of these traditional knowledges were wise manners to exploit available natural resources.

We feel that the rural world is a combined result of the activities of men and women, although the importance of women are often not adequately taken into account when experts speak about the rural world, or natural areas, and their

problems.

Shoe-making domestic activities as a necessary part of shoe-making industry (the most important economic activity in Elche during the 20^o century) was very important for rural women, furnishing a much-needed income to rural households. The recent crisis of this industry in Elche has created an absolutely new situation. However, women now can access to a series of activities or jobs seldom permitted, and this is an evident improvement, but we are proud of our traditional wisdom related to traditional women activities. We are promoting divulgative activities and practical workshops on many of these traditional activities, for example palm leaves handicraft, one of the most characteristic symbols of Elche traditional culture. We have observed that young women are very willing of learning these somehow forgotten handicrafts.

We have some relations with other women organizations, as the associations of housewives of the rural areas, but we think that there is a need for a greater coordination among the rural women associations in order to obtain greater achievements for the rural women of the Elche countryside.

Thanks to all the participants in the meeting, who kindly have expressed their points of view and knowledge on El Hondo problems.

Especial thanks to the Conselleria de Territori i Habitatge for its support, and to the authorities and staff of the University of Alicante and the Town Councils of Elche and Crevillent for their hospitality and their help in the organization of the meeting.