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BASIN RESOURCES PROTECTION

Administrative Structure and Coordination

Water Information Systems

Social and Economic Perspective

ERASMUS MUNDUS SCHOLAR'S PERSPECTIVE ON WATER AND COASTAL MANAGEMENT EDUCATION IN EUROPE

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The Erasmus Mundus programme was launched by the European Commission in 2004 in order to push back the frontiers of European Higher Education and to attract students from outside European Union (EU). This programme is planned to encourage partnerships and exchanges between Europe and other countries to promote the excellence of higher education and intercultural understanding. The European Joint Masters in Water and Coastal Management (WCM) is an innovative programme that integrates river-basin and coastal management. Third country and EU nationals are supported by European Commission under the aegis of Erasmus Mundus studentship to study in leading European and partnership universities. The WCM programme is designed to train future managers to deal with river basin and coastal problems and issues. In this study, the students' give their perspectives and experiences on the application of the knowledge acquired during the programme.

Keywords: Erasmus Mundus, Water and Coastal Management, Higher education, Intercultural understanding

INTRODUCTION

Why Erasmus? The programme was named after the famous Dutch internationalist who lived in the 15th century. Gerrit Gerritzon, better known as Desiderius Erasmus, was a human catalyst of the Renaissance in Europe. He was a scholar who fostered the New Learning and by ridiculing ignorance and superstition, and by reviving sound learning and teaching in an innovative manner to eradicate abuse by society through reforms [Devonshire, 1968]. As a European, Erasmus lived and traveled throughout the continent, and used the latest technology of his day (the printing press) to circulate his ideas, and make an independent living. By launching the Erasmus Mundus programme, the European Union is providing studentships for exceptional students from third countries to study in over 80 European Masters programs [URL 1].

The European Joint Masters in Water and Coastal Management was started as part of this programme to train managers for Integrated River-Basin and Coastal Zone Management. The international programme is based on an existing and expanding network of universities in European countries. The Joint Masters programme is jointly organized by four Universities in Europe, namely, University of Algarve - Portugal, University of Cadiz - Spain, University of Bergen - Norway and University of Plymouth – UK. The programme is hosted by one of these participating institutions every year, to promote Teaching Staff Mobility. Lectures are grouped into the modules on particular fields of expertise in environmental, water and coastal management, as well as a wide range of regional case-histories. This programme is intended for 18 months: 1 year academic classes and 6 months research project and thesis [Crozet *et al.*, 2006]. Furthermore, the lecturers are imparted by experts in the field from 48 European Universities. The students have flexible choices in choosing from wide range modules, i.e. they may pursue fields of particular interest to their professional training [URL 2]. Meanwhile, the students are required to complete at least five modules from each of the following disciplines: environmental, fresh water and coastal management, equivalent to 30 ECTS (European Credit Transfer System), in order to be aware of each area. Moreover, case study modules consider the Water Framework Directive (WFD) and Integrated Coastal Zone Management (ICZM) implementation in different regions. Assessment is based on student output rather than examinations. The main form of assessment is submitted work and presentations by the students on topics set by the lecturers. There are three types of studentship (grants):

1- ERASMUS student mobility grants are available for European students.

2- ERASMUS MUNDUS studentships are available for non European students to study in Europe.

3- European MUNDUS grants are available for European students to obtain 15 ECTS in a non European partner University under Erasmus Mundus Action 3.

These studentship support student mobility, hence students must 30 ECTS (one third of the total credits) in another participating university. Most lectures are taught in English. Additionally, this programme gives opportunity for students to learn host European native languages. For instance, Portuguese intensive language course was organized by the University of Algarve as an additional module, worth 2 ECTS credit, which gives students to develop their linguistic abilities.

Application of Students´ Knowledge on Own Country Issues

The main advantages and affirmative aspects of this programme are application of the problems studied during the classes. This programme allows students to come up with the best possible resolution for the problems of their own countries. As water/coastal issues are world-wide common problems, potential solution requires rational use of available water resources and protection of aquatic and terrestrial biodiversity. The following section will deal with the potential problems of students' respective countries:

Case1: For instance, in Uzbekistan, water management is the most important issue because of last forty years of mismanagement of water which now threatens agriculture, soil quality and availability of water for all purposes. There are two main rivers (Amudarya and Syrdarya), which spread water all over the country. Finally, it drains into the Aral Sea but intensive irrigation of cotton fields throughout the country is thwarting that. Furthermore, the Aral Sea problem has emerged as one of the greatest man-made and natural disaster in the world which gained international attention [Gulomov *et. al.*, 2001]. The main reasons were identified as reduction in irrigation capacity of Aral Basin Rivers due to global climate changes, human impact on the environment, diminishing of water quality, secondary salination of irrigated land and inefficient use of water and land resources. As a result, the sea has started shrinking and the caused terrible socio-economical and environmental impact to the country (Figure 1).

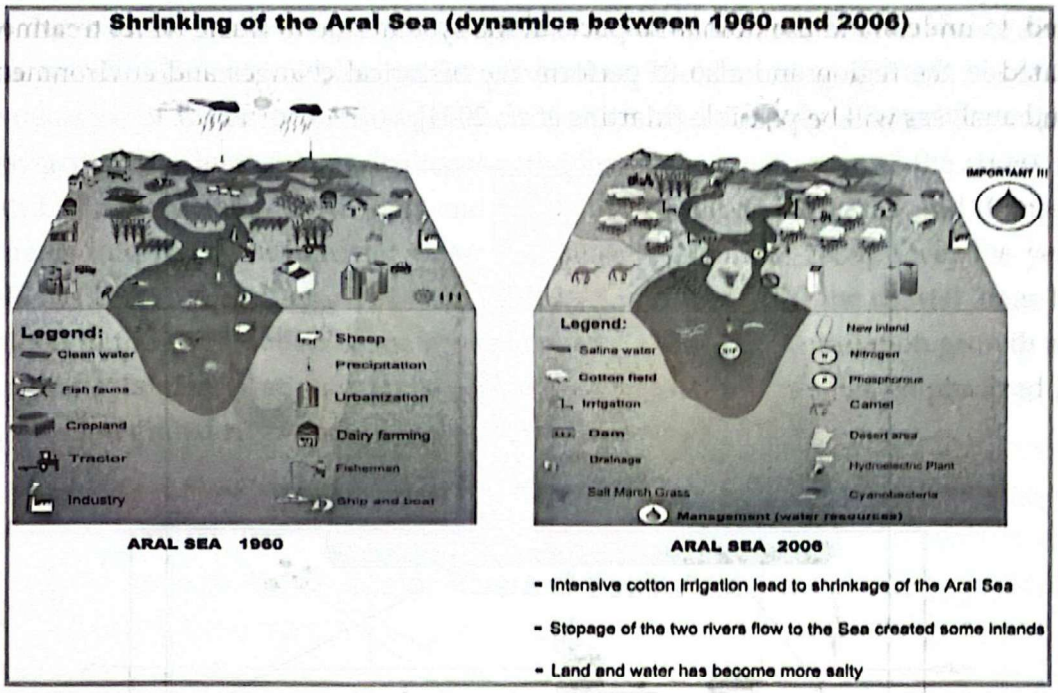


Figure 1. Conceptual Diagram of changes of Aral Sea

At this moment, Uzbekistan needs people who are experts in water resources management. Hence, WCM gives the opportunity to students to study and learn about sustainable use of available water resources as well as possible solutions to improve socio-economical and environmental conditions of the area.

Case 2: Tourism is an important economic activity in Algarve, southern part of Portugal. Faro was the cultural capital of Portugal in 2005 and Vilamoura in the Algarve region hosted the 2005 World Golf Championships. Both of these cities are located in this southern coastline region. As a whole, the country borders with Atlantic Ocean and has many international tourist places; this makes it imperative for coastal zone management and engineering. Increased tourism over the last few years has considerably contributed to the diminishing of water quality in estuaries, river basins and lagoons.

The Ria Formosa lagoon, located in Algarve region, is a shallow coastal lagoon with more than 80 Km2 area and an average depth is less than two meters [Martins *et. al.* 2004]. The population increase due to tourism is reflected in higher discharges of treated urban waste waters into the lagoon in summer season. There are mainly four waste water treatment (WWT) discharges in the region shown as white points in figure 2. The traditional activity of shellfish farming has also increased in parallel with the population, using more areas in Ria Formosa lagoon.

In this lagoon, monitoring efforts evolved in a way that results from different sampling techniques and models (i.e., www. mohid.com) were integrated in order to have a complete picture of the system [Demirel *et al.*, 2006]. When the project is fin-

ished, to understand the human impacts in the system due to waste water treatments located in the region and also to perform the historical changes and environmental trend analyses will be possible [Martins *et al.*, 2004].

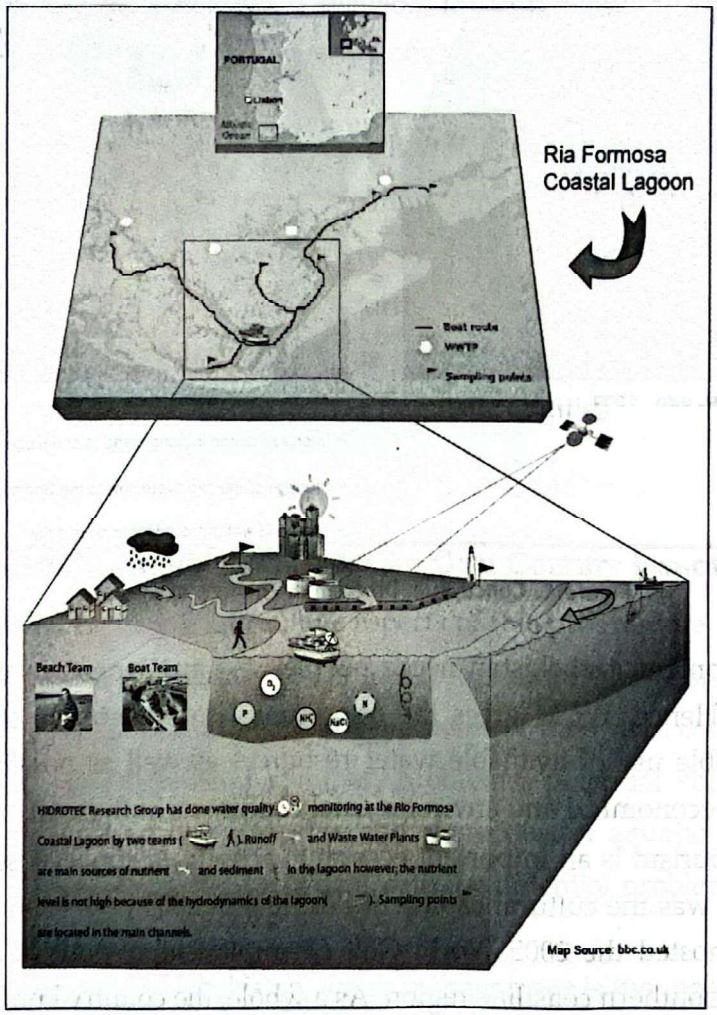


Figure 2. Conceptual diagram of water quality monitoring in Ria Formosa, derived from Demirel *et al.*, (2006)

Since coming from a country like Turkey which has many important and sensitive coastal regions such as Blue lagoon, Koycegiz lagoon and Antalya coast, the use of such models generated in Ria Formosa case can be implemented in this country by the involvement and suggestions of future WCM managers.

Case 3: In the case of India, there are many national and transboundary rivers with its bordering countries like Pakistan, Bangladesh, and China. The major rivers of India are Ganges, Brahmaputra, Yamuna, Indus, Krishna, Godavari, Mahanadi, *etc.* (see figure. 3). India has a coastline of about 7500 km (Diksha A and Murari L) with a very wide range of coastal ecosystems such as mangroves, coral reefs, sea grasses, etc. India's economy is mainly dependent on agriculture and water from these rivers is important sources for irrigation. After independence was declared, the Government of India had taken into consideration of constructing large to medium

size dams on all the rivers to provide water facilities to farmers and also to make country self sufficient in hydro power generation. The damming of rivers has led to the decrease of water in the downstream of rivers and severely affected the coastal ecosystems. The intensive agricultural activities in the upstreams of the rivers are contributing large amount of salts and nutrients as well as industrial and domestic effluents into rivers and coastal water [Golder and Nandini, 2004]. Over the years there has been research on river basins but lack of attention to the coastal areas has resulted in the degradation of the coastal zones. Further, the population growth and environmental degradation in the river basins and coastal zones has emphasized the need for integrated river and coastal zone management.

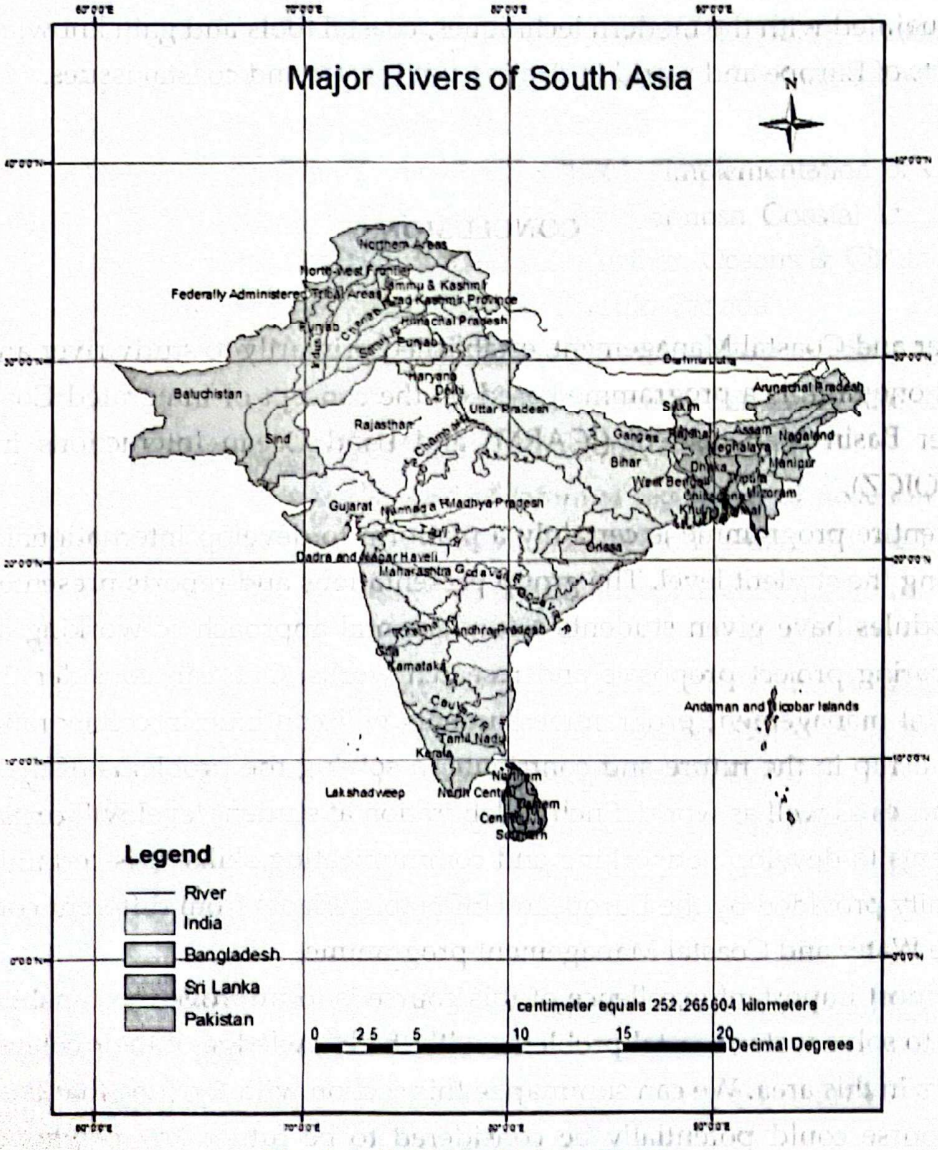


Figure 3. Map of South Asian Rivers

(Map created Using ESRI ArcGIS metadata and Survey of India Map)

Furthermore, the two main disasters, super cyclone and tsunami, that occurre in the Indian subcontinent in the last decade, has caused most serious and unex pected catastrophes to the Indian coast. There has been significant degradation i coastal resources in recent years due to poorly planned development activities an over exploitation of natural resources [Swaminathan, 2005]. Thus, keeping this i view, the water and coastal management plans have to be formulated based on plan that are successfully implemented elsewhere.

It is observed that there are similar issues in other South Asian Countries like Pakistan, Sri-Lanka and Bangladesh. There are not many coastal research activities in these countries and thus, very less research data is available. Hence, this course gives an opportunity for the students coming from India and other South Asian countries to be acquainted with the modern techniques, coastal tools and gain knowledge from the experts of Europe and world in dealing with water and coastal issues.

CONCLUSIONS

Water and Coastal Management, established primarily to study river and coastal basins as one unit, is a programme based on the concept of Integrated Coastal Area and River Basin Management (ICARM) and Land Ocean Interactions in Coastal Zones (LOICZ).

The entire programme is certainly a platform to develop international coopera tion among the student level. The group presentations and reports presented during some modules have given students a fundamental approach of working as a team and preparing project proposals and research works. One can consider that water and coastal management programme students will continue in collaborating scien tific friendship in the future and contribute in solving the problems of their respec tive countries as well as world. Such collaboration at student level will certainly help the students to develop networking and communicating skills. It is certainly a great opportunity provided by the European Union to students from different countries to study the Water and Coastal Management programme.

The most important excellence of this course is to improve the capability of the students to solve water/coastal problems with the knowledge of their colleagues and professors in this area. We can summarize this section with the idea that the students of this course could potentially be considered to be future key players in water coastal related issues of the world.

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INTRODUCTION

Water resources, which are vital for life, have been decreasing day by day and also are subjected to the danger of pollution. Due to the fact that water resources cross several regions with different characteristics, local actions only would not be adequate for their safeguarding. It is scientific certainty that water resources should be evaluated on the basis of the entire basin. Should both the cross border and national water resources be exploited in the framework of basin management, effective protection could be realized.

Rivers provide water and nutrients for agriculture, habitat to diverse flora and fauna, routes for commerce, recreation and electricity.

An international congress on river basin management, which is aimed at protecting and managing water resources and preventing flood hazards, is organized by DSİ in collaboration with WWC.

The River Basin Management Congress and Exhibition is one of the preparatory events for the 5th World Water Forum. Conclusions of the International River Basin Management Congress will contribute to the 5th World Water Forum which will be held in Istanbul in 2009.

This congress attempts to gather international experts, academicians, public and private sector representatives and researchers working on matters related to river basins, in an effort to exchange information on methodologies and techniques used in the river basin management.

By means of this congress, technical personnel attending it will be equipped with new knowledge about subjects of "Basin Resources Protection", "Basin Water Management", "River Basin Flood Management", Practices on River Basin Management".

This congress proceedings contain 131 articles. I congratulate the organizing committee for their contributions to the organization of this congress and preparation of the congress.

I would like to thank my colleagues, eminent faculty members, representatives of international organizations, engineers working for public and private sectors for their participation and valuable contributions and wish them many more years of successful work.

Prof. Dr. Veysel EROĞLU
Director General DSİ

I

BASIN RESOURCES PROTECTION

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REPUBLIC OF TURKEY
MINISTRY OF ENERGY AND NATURAL
GENERAL DIRECTORATE OF STATE HYDRAULIC

INTERNATIONAL CONGRESS RIVER BASIN MANAGEMENT

Volume I



22 - 24 March 2007
Antalya - TURKEY

REPUBLIC OF TURKEY
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INTERNATIONAL CONGRESS ON RIVER BASIN MANAGEMENT

VOLUME I

22-24 March 2007
Antalya, TURKEY

Uluslararası Kongre

Nehir Havzaları Yönetimi

International Congress

River Basin Management

PROGRAM / PROGRAMME

22 - 24 Mart / March 2007
Antalya - TÜRKİYE
Gloria Golf Resort Hotel

Uluslararası Kongre

Nehir Havzaları Yönetimi

International Congress

River Basin Management

PROGRAM / *PROGRAMME*

21 Mart / *March* 2007, Çarşamba / *Wednesday*

10:00 - 17:00	Kayıt / *Registration*

22 Mart / *March* 2007, Perşembe / *Thursday*

08:30 - 17:00	Kayıt / *Registration*
10:00 - 12:00	**BAŞBAKANIMIZ SAYIN RECEP TAYYİP ERDOĞAN'IN HİMAYELERİNDE AÇILIŞ VE PROTOKOL KONUŞMALARI /** ***OPENING CEREMONY AND OPENING ADDRESSES UNDER THE AUSPICES OF THE RT. HON. RECEP TAYYİP ERDOĞAN, PRIME MINISTER OF THE REPUBLIC OF TURKEY***
11:35 - 12:00	SERGİ AÇILIŞI / *OPENING OF THE EXHIBITION*
12:00 - 13:00	ÖĞLE YEMEĞİ / *LUNCH*

GENEL OTURUM / *PLENARY SESSION*

13:45 - 14:45	OTURUM BAŞKANI / *CHAIRMAN:* **Prof. Dr. Hasan Zuhuri SARIKAYA**, Çevre ve Orman Bakanlığı Müsteşarı, **TÜRKİYE** / Undersecretary of Ministry of Environment and Forestry, **TURKEY**
13:45 - 14:05	**Jerome DELLI PRISCOLI**, WWC Yönetim Kurulu Üyesi, **ABD** / *Alternate of Governor, WWC,* ***USA***
14:05 - 14:25	**Andras Szollosi-Nagy**, UNESCO Su Bilimleri Bölümü Direktörü, **FRANSA** / *Deputy Adg/Sc and Director of Division of Water Sciences,* ***FRANCE***
14:25 - 14:45	**Prof. Dr. Zekai ŞEN,** Su Vakfı Başkanı, TÜRKİYE / President of Turkish Water Foundation, **TURKEY**
14:45 - 15:00	**KAHVE MOLASI** / *COFFEE BREAK*

OTURUM I / *SESSION I* BASIN RESOURCES PROTECTION

22 Mart / *March* 2007, Perşembe / *Thursday*

SALON - I / ROOM I

15:00 - 16:40	OTURUM BAŞKANI / *CHAIRMAN:* **Prof. Dr. Zekai ŞEN,** Su Vakfı Başkanı, **TÜRKİYE** / President of Turkish Water Foundation, **TURKEY**
15:00 - 15:20	HYDROLOGIC NETWORKS AND WATER RESOURCES MANAGEMENT, **Engin KONCAGÜL, FRANCE**
15:20 - 15:40	**INTEGRATED WATER RESOURCE MANAGEMENT AT RIVER BASIN LEVEL IN FRANCE A PARTICIPATORY WAY TO FINANCE & MONITOR WATER INVESTMENTS IN A SUSTAINABLE MANNER, Guy FRADIN, FRANCE**
15:40 - 16:00	ISTANBUL WATER BASIN MANAGEMENT AND EUROPEAN UNION WATER FRAMEWORK DIRECTIVE, **Dursun Ali ÇODUR, Mehmet PATAN, Orhan C. GÖKTAŞ, Deniz AYDIN, Nevzat UYAROĞLU, TURKEY**
16:00 - 16:20	**WATER INFRASTRUCTURE OF KURA RIVER BASIN WITHIN AZERBAIJAN, Farda İMANOV, AZERBAIJAN**
16:20 - 16:40	**Soru-Cevap /Q-A Session**

OTURUM II / *SESSION II* BASIN WATER MANAGEMENT

SALON - II / ROOM II

15:00 - 16:40	OTURUM BAŞKANI / *CHAIRMAN:* **Prof. Dr. Benedito BRAGA,** Dünya Su Konseyi Başkan Yardımcısı, **BREZİLYA** / Vice President of WWC, **BRAZIL**
15:00 - 15:20	IMPACT OF CLIMATE CHANGE ON THE HYDROLOGY AND WATER RESOURCES OF PENINSULAR MALAYSIA, **M.L.KAVVAS, Z.Q.CHEN, N.OHARA, A.J. BİN SHAABAN, M.Z.M.AMİN, USA**
15:20 - 15:40	**THE HYDROLOGICAL INTERACTIONS BETWEEN ATBARA RIVER AND THE MAIN NILE AT THE CONFLUENCE AREA, Sohair S.ZAGHLOUL, Prof. Mohamed EL-MOATTASSEM, Ahmed A. RADY, EGYPT**
15:40 - 16:00	APPLICATION OF POLYUREA COATING ON CONCRETE LINING OF INTERMEDIATE LEVEL OUTLET AT TEHRI DAM PROJECT – A CASE STUDY **R.K.VISHNOI, Satish C. SHARMA, INDIA**
16:00 - 16:20	**ORGANIZATION AND DEVELOPMENT PROJECT OF QAZVIN PARTICIPATORY IRRIGATION MANAGEMENT (PIM), Ali GHASEMI, IRAN**
16:20 - 16:40	**Soru-Cevap /Q-A Session**
16:40 - 16:55	**KAHVE MOLASI** / *COFFEE BREAK*

OTURUM III / *SESSION III* BASIN RESOURCES PROTECTION

22 Mart / *March* 2007, Perşembe / *Thursday*

SALON - I / ROOM I

16:55 - 18:35	**OTURUM BAŞKANI** / *CHAIRMAN:* **Prof. Dr. Yusuf Ziya İRBEÇ** Balkan Üniversitesi Kurucu Rektörü, **MAKEDONYA** / Founder Rector of Balkan University, **MACEDONIA**
16:55 - 17:15	DIMENSION OF WATER LOSS THROUGH DISTRIBUTION SYSTEM AND REDUCTION METHODS IN TURKEY, **İzzet ÖZTÜRK, Vedat UYAK, Lütfi AKÇA, Mehmet ÇAKMAKCI, TURKEY**
17:15 - 17:35	**THE EFFECT OF WATER RESOURCES ON SOCIOECONOMI OF CENTRAL ASIA, Dr Nurlan MAMATOV, KYRGYZSTAN**
17:35 - 17:55	**TO THE QUESTION CONCERNING WATER LEGICLATION'S UNIFICATION: COUNTRIES OF CENTAL ASIA, Rysbekov YU.KHAİ, UZBEKISTAN**
17:55 - 18:15	**CONCEPTUAL APPROACH FOR THE DETERMINATION OF POINT SOURCES IN MELEN WATERSHED, E. MANTAŞ, E.AYDIN,G.İNSEL, H.ÖZGÜN, M.ÇAKMAKÇI, D.ÖZTÜRK, L.AKÇA, E.ÇOKGÖR, İ.ÖZTÜRK, TURKEY**
18:15 - 18:35	**Soru-Cevap /Q-A Session**

OTURUM IV / *SESSION IV* BASIN WATER MANAGEMENT

SALON - II / ROOM II

16:55 - 18:35	**OTURUM BAŞKANI** / *CHAIRMAN:* **Major General, Bruce M. LAWLOR,** Centuria Corporation Genel Müdürü, **ABD** / Chief Executive of Centuria Corporation **USA**
16:55 - 17:15	TOWARDS A CULTURE OF PARTICIPATION IN WATER MANAGEMENT: DIFFICULTIES ENCOUNTERED AND SOLUTIONS PROPOSED IN STAKEHOLDERS APPROACHES, **Jean-Louis OLIVER, FRANCE**
17:15 - 17:35	**PRESENT CONDITIONS, FUTURE POTENTIALS, DROUGHT ANALYSIS AND MANAGEMENT OF RESERVOIRS AROUND ISTANBUL, A.Cüneyt GEREK, Murat ALP, Vildan ŞAHİN, İsmail KILINÇ, Aynur ZÜRAN, TURKEY**
17:35 - 17:55	**DECISION SUPPORT TOOLS FOR INTEGRATED WATER RESOURCES MANAGEMENT, Jesper KJELDS, M.Sc. T JACOBSEN, J. HUGHES, J. KREJCİK, DENMARK**
17:55 - 15	**EFFECTS OF HUMAN ACTIVITIES ON WATER QUALITY:A CASE STUDY – MOGAN & EYMIR BASIN, F. BARBAROS, C. P. ÇETİNKAYA, N. HARMANCIOĞLU, TURKEY**
18:1 - 35	**Soru-Cevap /Q-A Session**
19:0	**AKŞAM YEMEĞİ** / *DINNER*

GENEL OTURUM / *PLENARY SESSION*

23 Mart / *March* 2007, Cuma / *Friday*

08:30 - 09:30	**OTURUM BAŞKANI / *CHAIRMAN:* Prof. Dr. Dogan ALTINBILEK** Uluslararası Su Enerjisi Birliği (IHA) Başkanı/ Uluslararası Su Kaynakları Birligi (IWRA) Başkan Yardımcısı, **TÜRKİYE** / President, International Hydropower Association (IHA) / Vice President, International Water Resources Association (IWRA) **TURKEY**
08:30 - 08:50	**Luis BERGA**, ICOLD Başkanı, **İSPANYA** / *President of ICOLD,* ***SPAIN***
08:50 - 09:10	**José Luis Luege Tamargo,** Ulusal Su Komisyonu Direktörü, **MEKSIKA** / *Director General of the National Water Commission,* ***MEXICO***
09:10 - 09:30	**Jean Francois Donzier**, Uluslararası Su Ofisi Genel Direktörü, **FRANSA** / *Director General of Office International Del'Eau,* ***FRANCE***
09:30 - 09:45	**KAHVE MOLASI** / *COFFEE BREAK*

OTURUM V / *SESSION V* BASIN RESOURCES PROTECTION

23 Mart / *March* 2007, Cuma / *Friday*

SALON - I / ROOM I

09:45 - 11:20	**OTURUM BAŞKANI** / *CHAIRMAN:* **M.Gopalakrishnan,** ICID Genel Sekreteri, **HİNDİSTAN** / Secretary General of ICID, **INDIA**
09:45 - 10:05	**ERASMUS MUNDUS SCHOLAR'S PERSPECTIVE ON WATER AND COASTAL MANAGEMENT EDUCATION IN EUROPE, Sreedhar GANAPURAM, Ahmad HAMIDOV, Mehmet Cuneyd DEMİREL, Esin BOZKURT, U. KINDAP, A. NEWTON, TURKEY**
10:05 - 10:25	**CHRONICLES OF RIVER BASIN MANAGEMENT IN NIGERIA, James O AKANMU, Onu ELUWA, Imo EKPO, NIGERIA**
10:25 - 10:45	**TOTAL POLLUTION LOAD DISCHARGED TO CREEKS AND RIVER BUYUK MENDERES NEAR DENİZLİ CITY, Figen TURAN, Erdal KAÇAN, Prof.Dr.Güngör ÜLKÜ, TURKEY**
10:45 - 11:05	RIVER BASIN MANAGEMENT PLANS IN TURKEY DURING THE ACCESSION PERIOD TO EUROPEAN UNION, **Dr. Ahmet H. ALPASLAN, Attila ATAÇ, Nedim YEŞİL, TURKEY**
11:05 - 11:20	**Soru-Cevap /Q-A Session**

OTURUM VI / *SESSION VI* BASIN WATER MANAGEMENT

SALON - II / ROOM II

09:45 - 11:20	**OTURUM BAŞKANI** / *CHAIRMAN:* **Carlos Fernandez-Jauregui,** UNESCO-WWAP Yardımcı Koordinatörü, **FRANSA** / Deputy Coordinator of UNESCO-WWAP, **FRANCE**
09:45 - 10:05	**INTEGRATED WATER RESOURCES MANAGEMENT FROM A POLICY TRANSFER PERSPECTIVE, Farkhad MUKHTAROV, MSc, AZERBAIJAN**
10:05 - 10:25	**LAND USE AND WATER QUALITY RELATIONSHIPS IN THE CILIWUNG RIVER BASIN, INDONESIA, Melati Ferianita FACHRUL, Diana HENDRAWAN, Anita SİTAWATİ, INDONESIA**
10:25 - 10:45	**ASSESSING THE IMPACT OF CLIMATE CHANGE ON THE WATER RESOURCES OF THE SEYHAN RIVER BASIN, TURKEY Y. FUJIHARA, K. TANAKA, T. NAGANO, T. WATANABE, T KOJIRI, JAPAN**
10:45 - 11:05	**DEVELOPMENT OF DECISION SUPPORT SYSTEM (DSS) FOR HIGH ASWAN DAM RESERVOIR SEDIMENTATION, Dr. Hossam EL-SERSAWY, EGYPT**
11:05 - 11:20	**Soru-Cevap /Q-A Session**
11:20 - 11:35	KAHVE MOLASI / *COFFEE BREAK*

OTURUM VII / *SESSION VII* PRACTICES ON RIVER BASIN MANAGEMENT

23 Mart / *March* 2007, Cuma / *Friday*

SALON - I / ROOM I

11:35 - 12:55	**OTURUM BAŞKANI** / *CHAIRMAN:* **Valentina PIDLISNYUK,** Sürdürülebilir Kalkınma ve Çevre Eğitimi Merkezi Direktörü, UKRAYNA / Director of Sustainable Development and Ecological Education Center, **UKRAINE**
11:35 - 11:55	THE KEY ROLE OF USERS IN INTEGRATED WATER RESOURCES MANAGEMENT IN THE FERGANA VALLEY, **Gabrıel REGALLET, B. GUNGOREN, V. SOKOLOV, UZBEKISTAN**
11:55 - 12:15	GLOBAL WATER POLICIES AND RIVER BASIN MANAGEMENT:REFLECTIONS ON WATER RESOURCES MANAGEMENT IN TURKEY, **BELGİN ÇAKMAK, Prof. Dr.AYŞEGÜL KİBAROĞLU, Doç. Dr. AHMET DOĞAN, TURKEY**
12:15 - 12:35	FAO's SELECTED EXPERIENCES IN RIVER BASIN MANAGEMENT, **L. FE'D'OSTİANI, G. MUNOZ, ITALY**
12:35 - 12:55	RUHR-YESILIRMAK WATERSHEDS: INFRASTRUCTURE MANAGEMENT AND IMPLEMENTATIONS, **Ahmet SAMSUNLU, TURKEY**
12:55 - 13:10	**Soru-Cevap /Q-A Session**

OTURUM VIII / *SESSION VIII* RIVER BASIN FLOOD MANAGEMENT

SALON - II / ROOM II

11:35 - 12:55	OTURUM BAŞKANI / *CHAIRMAN*: Prof. Dr. Ünal ŞORMAN, Orta Doğu Teknik Üniversitesi, **TÜRKİYE** / Middle East Technical University, **TURKEY**
11:35 - 11:55	**DEGRADATION PROCESSES IN DELTAS OF THE RIVERS WITH FLOW REGULATION, Vladimir STARODUBTSEV, UKRAINE**
11:55 - 12:15	CAUSES AND EFFECTS OF FLOOD HAZARDS IN TURKEY, **Abdullah CEYLAN, Ilker ALAN, Alaattin UĞURLU, TURKEY**
12:15 - 12:35	DESIGN OF DECISION SUPPORT SYSTEM TOOLS FOR INTEGRATED PROTECTION AND WATER QUALITY MANAGEMENT IN MELEN WATERSHED, **Ali ERTÜRK, Melike GÜREL, Dursun Zafer ŞEKER, Alpaslan EKDAL, Çiğdem TAVŞAN, Ayşegül UĞURLUOĞLU, Ayşegül TANIK, İzzet ÖZTÜRK, TURKEY**
12:35 - 12:55	APPLICATION OF MIKE11 MODEL FOR THE SIMULATION OF SNOWMELT RUNOFF IN YUVACIK DAM BASIN, TURKEY, **Fatih KESKİN, Aynur ŞENSOY, A. Arda ŞORMAN, A. Ünal ŞORMAN, TURKEY**
12:55 - 13:10	**Soru-Cevap /Q-A Session**
13:10 - 13:50	ÖĞLE YEMEĞİ / *LUNCH*

OTURUM IX / *SESSION IX* PRACTICES ON RIVER BASIN MANAGEMENT

23 Mart / *March* 2007, Cuma / *Friday*

SALON - I / ROOM I

14:00 - 15:40	OTURUM BAŞKANI / *CHAIRMAN:* **Dr. Farhad YAZDANDOOST,** Su Araştırma Ens. Başkanı, **İRAN** / President of Water Research Ins., **IRAN**
14:00 - 14:20	WATER RESOURCES PROBLEMS IN KYRGYZSTAN, **Dr. Nurlan MAMATOV, Bakıt RAYİMCANOV, Matrayim CUSUPOV, KYRGYZSTAN**
14:20 - 14:40	**WATER DEMAND MANAGEMENT, PROBLEMS AND PROSPECTS OF IMPLEMENTATIONS IN NIGERIA, Engr. Isa Umsan EMOABİNO, Engr. A. ALANYADE, NIGERIA**
14:40 - 15:00	**GEDIZ BASIN MANAGEMENT: PROBLEMS AND POSSIBLE REMEDIES, Zühal AKYÜREK, Kerem CİĞİZOĞLU, Mahmut ÇETİN, Ziyaattin DURMAZ, İbrahim GÜRER, Nilgün HARMANCIOĞLU, Bihrat ÖNÖZ, Sebahat ÖZCAN, Birol ÖZER, Hamza ÖZGÜLER, Mustafa PARLAK, Kemal SEYREK, Ünal ŞORMAN, Miktat YAVUZ, TURKEY**
15:00 - 15:20	MANAGEMENT OF VOLGA-KAMA WATER RESERVOIRS SYSTEM, **S.BEDNARUK, YU.MOTOVILOV, R.KHAMITOV, V.FEDUNOV, E.KHILENKO, RUSSIA**
15:20 - 15:40	**Soru-Cevap /Q-A Session**

OTURUM X / *SESSION X* RIVER BASIN FLOOD MANAGEMENT

SALON - II / ROOM II

14:00 - 15:40	OTURUM BAŞKANI / *CHAIRMAN:* **Tarek MERABTANE,** UNESCO Sudan Kaynaklanan Doğal Afetler ve Risk Yönetimi Uzmanı, **JAPONYA** / Expert UNESCO ICHARM **JAPAN**
14:00 - 14:20	PREDICTION OF FLOOD FREQUENCIES BY STOCHASTIC-DETERMINISTIC HYDROLOGIC MODEL, **Assoc. Prof. Dr. Yakup DARAMA, Dr. Ahmet ALPASLAN, TURKEY**
14:20 - 14:40	**UPGRADING OF THE HYDROLOGICAL FORECASTING SYSTEM IN POLAND, Jorge DREHER, Martin FUCHS, Jerzy NIEDBAŁA, Janusz NIWIŃSKI, AUSTRIA**
14:40 - 15:00	**FORECASTING FLOOD HYDROGRAPHS AT TIBER RIVER BASIN IN ITALY BY ARTIFICIAL NEURAL NETWORKS, Gökmen TAYFUR, Tommaso MORAMARCO, TURKEY**
15:00 - 15:20	**REGIONAL FLOOD FREQUENCY ESTIMATION FOR THE GÖKSU RIVER BASIN THROUGH L-MOMENTS, Alper Serdar ANLI, Halit APAYDIN, Fazli OZTURK, TURKEY**
15:20 - 15:40	**Soru-Cevap /Q-A Session**
15:40 - 15:55	**KAHVE MOLASI** / *COFFEE BREAK*

OTURUM XI / *SESSION XI* PRACTICES ON RIVER BASIN MANAGEMENT

23 Mart / *March* 2007, Cuma / *Friday*

SALON - I / ROOM I

15:55 - 17:35	**OTURUM BAŞKANI** / *CHAIRMAN:* **Prof. Dr. Liu HENG,** Nanjing Su Araştırma Enstitüsü, **ÇİN** / Vice President of Nanjing Hydraulic Research Institute, **CHINA**
15:55 - 16:15	USING THE WEPP MODEL TO PREDICT SEDIMENT YIELD IN A SAMPLE WATERSHED IN KAHRAMANMARAS REGION, **Alaaddin YÜKSEL, Abdullah E. AKAY, Recep GÜNDOĞAN, Mahmut REİS, TURKEY**
16:15 - 16:35	**RIVER BASIN MANAGEMENT IN CENTRAL AND NORTHERN GREECE, Roar A. JENSEN, Dr. Anders REFSGAARD, Henrik SØRENSEN, DENMARK**
16:35 - 16:55	**GIS BASED PCRASTER-POLFLOW APPROACH TO MODELING OF COUPLED SURFACE WATER AND GROUNDWATER HYDROLOGY IN THE BÜYÜK MENDERES CATCHMENT, Doç.Dr. Ömer Faruk DURDU, TURKEY**
16:55 - 17:15	INTEGRATED DOVINE RIVER BASIN MANAGEMENT PLAN: LITHUANIAN CASE STUDY, **Zenonas GULBINAS, LITHUANIA**
17:15 - 17:35	**Soru-Cevap /Q-A Session**

OTURUM XII / *SESSION XII* RIVER BASIN FLOOD MANAGEMENT

SALON - II / ROOM II

15:55 - 17:35	**OTURUM BAŞKANI** / *CHAIRMAN:* **Prof. Dr. Aly SHADY,** Uluslararası Su Kaynaları Birliği Kurucu Üyesi, **KANADA** / Founding Member of IWRA, **CANADA**
15:55 - 16:15	ARTIFICIAL NEURAL NETWORK MODELS IN RAINFALL - RUNOFF MODELLING OF TURKISH RIVERS, **H.Kerem CIĞIZOĞLU, Pınar AŞKIN, Ahmet ÖZTÜRK, Atilla GÜRBÜZ, Ömer AYHAN, Mehmet YILDIZ, İsmail UÇAR, TURKEY**
16:15 - 16:35	**DAILY STREAMFLOW FORECASTING USING ARTIFICIAL NEURAL NETWORKS, Emrah DOĞAN, Sabahattin IŞIK, Tarık TOLUK, Mehmet SANDALCI, TURKEY**
16:35 - 16:55	**FLOOD AND FLASH FLOOD ANALYSIS FOR BARTIN RIVER BASIN, Doç. Dr. Hüseyin TUROĞLU, TURKEY**
16:55 - 17:15	**ESTIMATION OF FLOOD DISCHARGE FOR SMALL WATERSHED USING SCS CURVE NUMBER AND GEOGRAPHIC INFORMATION SYSTEM, Y. İnci TEKELİ, Suat AKGÜL, Orhan DENGİZ, Turhan AKÜZÜM, TURKEY**
17:15 - 17:35	**Soru-Cevap /Q-A Session**
19:00	**AKŞAM YEMEĞİ** / *DINNER*

OTURUM XIII / *SESSION XIII* PRACTICES ON RIVER BASIN MANAGEMENT

24 Mart / *March* 2007, Cumartesi / *Saturday*

09:00 - 10:40	**OTURUM BAŞKANI** / *CHAIRMAN:* **Prof. Dr. Shaden ABDEL-GAWAD,** Ulusal Su Araştırma Merkezi Başkanı, **MISIR** / President of National Water Research Center **EGYPT**
09:00 - 09:20	DEVELOPMENT OF THE SURFACE WATER QUANTITY AND WATER QUALITY MONITORING IN UKRAINE: PROBLEMS AND NEEDS, **Viacheslav MANUKALO, UKRAINE**
09:20 - 09:40	**CATCHMENT MANAGEMENT IN THE SEMI-ARID AREA OF CENTRAL SOUTH AFRICA: IMPLICATIONS FOR RIVER BASIN MANAGEMENT, YE WOYESSA, M HENSLEY, LD van RENSBURG, SOUTH AFRICA**
09:40 - 10:00	**WATER DEMAND AND SUPPLY BALANCE FOR YEŞİLIRMAK RIVER BASIN, Sermet ADIGÜZEL, Ali Osman ERDEM, Kağan SOLMAZ, TURKEY**
10:00 - 10:20	**MULTIOBJECTIVE OPTIMAL PLANNING IN MULTIPLE RESERVOIR SYSTEMS, Mahmut SERT, Mücahit OPAN, Temel TEMİZ, TURKEY**
10:20 - 10:40	**Soru-Cevap /Q-A Session**
10:40 - 11:00	KAHVE MOLASI / *COFFEE BREAK*
11:00 - 12:30	**KAPANIŞ OTURUMU / *CLOSING SESSION***
12:30 - 13:45	ÖĞLE YEMEĞİ / *LUNCH*
14:00 - 19:00	SOSYAL PROGRAM / *SOCIAL PROGRAMME*

POSTER SUNUMLAR / *POSTER PRESENTATIONS*

24 Mart / *March* 2007, Cumartesi / *Saturday*

TURKEY SURFACE WATER POTENTIAL AND ITS CHANGE IN TIME, **Mehmet YILDIZ, Mustafa ÖZKAYA, Atilla GÜRBÜZ, İsmail UÇAR, TURKEY**

ROLE OF HYDROLOGY, NUTRIENTS AND FISH IN INTERACTION WITH GLOBAL CLIMATE CHANGE IN EFFECTING ECOLOGY OF SHALLOW LAKES IN TURKEY, **Meryem BEKLİOĞLU, TURKEY**

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