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The University of Iowa's International Perspectives in Water Resources Planning programme

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ABSTRACT: Each year, the University of Iowa, Iowa City, USA, course in International Perspectives in Water Resources Planning focuses on a country or a world region for intensive study, which culminates in travel to the area of study. The course exposes students to the multifaceted issues involved in water resources planning and prepares them for careers that are becoming increasingly global in nature. The course is an initiative of the IIHR – Hydroscience & Engineering (formerly Iowa Institute of Hydraulic Research), a world-renown centre of research in fluid mechanics, water resources engineering, and hydrology. The course encourages interdisciplinary participation to enhance engineers' and social scientists' understanding of the natural environment and the consequences of encroaching human interventions. Up till now, the course was organised for the study of and travel to India (1998), Taiwan and Japan (1999), China (2000), and Central Europe (2001). The article summarises activities of these visits, provides overall course considerations, includes student reactions and suggests recommendations for instructors involved in similar activities. The article highlights the 2001 course for Central Europe, which comprised nations of the former Eastern bloc.

PROGRAMME OVERVIEW

Since 1998, the University of Iowa, Iowa City, USA, has sponsored an annual course entitled *International Perspectives in Water Resources Planning*. This two- to three-week foreign study course gives students in-depth exposure to technical, historical, cultural, social, economic, ethical and environmental conditions that influence water resource projects in countries or regions outside of the USA.

The course is an initiative of a world-renowned centre of education and research in fluid mechanics, water resources engineering and hydrology, namely the IIHR – Hydroscience & Engineering (IIHR) (formerly Iowa Institute of Hydraulic Research), [1]. Recognising that extensive future water resource system development is likely to take place outside of the USA, the IIHR organised this study abroad programme to introduce students to international realities and complexities related to water and the environment.

The general purpose of the programme is to expose students to the multifaceted issues surrounding water resources, including economic, legal, environmental, institutional, social and political conditions. The programme's purpose reflects the IIHR's mission to provide students with sensitivity to international issues.

The course encourages multidisciplinary participation and includes engineers, as well as scientists and social scientists from other water-related fields. The opportunity for students from varied disciplines and perspectives to participate in the course together further enhances their understanding of the natural environment and the consequences of human activities. The course has also drawn faculty from departments outside those of Civil and Environmental Engineering. Past courses have included faculty in geology and law.

The IIHR encourages participation by young professionals and junior faculty, although the majority of the participants are graduate students and college seniors. The course is open to students from any university to provide preparation for the increasingly international practice of water resources planning and management.

Information on the number, gender, grade level, major and university affiliation of the student participants in each course is provided in Table 1. As this table shows, most of the course participants have been graduate students, although undergraduates and young professionals have also participated. In addition to students in civil and environmental engineering, there have been student participants majoring in mechanical engineering, geography, biology, physical education, law, watershed science, as well as urban and regional planning.

Course enrolment has ranged from 8-20 students, with as many as 50% of the students coming from universities other than the University of Iowa, including students from universities outside of the USA.

Each course is structured to complement engineering academic curricula. The course begins with preparatory lectures at the University of Iowa on the history, culture, economy and water resources objectives and projects of the country(ies) to be visited. Lectures are videotaped and sent to students from other universities. Each trip is carefully planned with the assistance of water resources authorities from the host countries. The local contact persons, usually former IIHR alumni or associates, who facilitate the planning and development of the instructional tours, as well as the social and leisure aspects of the course, have played a pivotal role in the success of the course. Indeed, the organisation of this course is feasible because of the IIHR's extensive international contacts.

Table 1: Composition of participants in the International Perspectives in Water Resources and Management study abroad programmes (1998-2001).

Course	Students (M/F)*	Grade	Major	University
India (1998)	11 (9/2)	2 UG** 9 G***	7 CEE 1 ME 1 Geography 1 Biology 1 Physical Education	10 University of Iowa 1 Pensacola Christian College
Taiwan-Japan (1999)	10 (6/4)	8 G 2 YP****	10 CEE	6 University of Iowa 2 University of Minnesota 1 Colorado State University 1 University of Kansas
China (2000)	20 (13/7)	3 UG 14 G 3 YP	15 CEE 1 ME 3 Law 1 Watershed Science	11 University of Iowa 3 University of Stuttgart (Germany) 2 University of Illinois 2 Colorado State University 1 Cornell University 1 Florida Sate University
Central Europe (2001)	8 (2/6)	1 UG 7 G 1 YP	5 CEE 2 Urban and Regional Planning 1 Watershed Science	4 University of Iowa 2 Colorado State University 1 Rowan College 1 Guelph University (Canada)

Note: M/F* = Male/Female; UG** = undergraduates; G*** = graduates; YP****= young professionals/junior faculty.

During the trips, students visited numerous water resources projects, attended workshops and lectures held at universities and specialised agencies with participants from academia, local and national water authorities, institutes and industry. The agenda in each country has been tailored to expose students to significant regional water resource management objectives and projects, as well as to provide valuable cultural experiences and historical information. Throughout the course, activities were scheduled to provide participants with opportunities to interact professionally and socially with local university students, managers and technical staff. The travel itinerary has also included visits to historically or culturally significant sites in each county.

Course costs have been covered by multiple funding sources, including student contributions, IIHR sponsors; the College of Engineering and University support, host organisations, and external resources. To date, the cost for students has not exceeded US$1,500. Arrangements facilitated by local contacts and host organisations have minimised costs to enable greater student participation.

Upon completion of the foreign study, students prepare a report on an area of interest. These reports typically compare water project approaches or issues abroad with similar situations in the USA, or contrast approaches taken in multiple countries or regions visited. Participants earn from 0 to 3 semester hours of credit, depending on arrangements with the instructors for writing assignments and work evaluation methods.

The first course, organised in 1998, focused on India. Subsequent courses investigated water planning in Taiwan and Japan (1999), China (2000), and Central Europe (2001). The next course will be held in South America.

HISTORY OF THE PROGRAMME

The International Perspectives on Water Resources Planning course was the brainchild of the IIHR Director, Dr V.C. Patel, who has a strong interest in international relations. The organisation of the first course (India 1998) was made possible through a collaborative agreement between the IIHR and Dharmsinh Desai Institute of Technology in Gujarat State. Although Dr Patel participated, the course was led by the IIHR's Professor Subhash Jain, who is also a native of India and is very familiar with Indian issues and customs.

Through Dr Patel's inspiration, several IIHR-affiliated faculty have agreed to lead courses in different parts of the world. Many of the faculty affiliated with the IIHR have international backgrounds, extensive overseas experience, or both. In many cases, instructors joined an earlier course prior to planning their own. Professor Witold Krajewski, a leader of the 2001 Central Europe course, participated in part of the 1999 China course, while Professor Pedro Alvarez, who will lead the South America course, participated in the 2001 Central Europe course.

Common elements among the courses include visits with water agencies to learn about water policies and concerns in the host countries, site visits to water projects and universities, and extensive opportunities to interact with water resources students and professionals in the countries visited. Each course has also focused on social and political concerns unique to the country or region, providing students with a context to appreciate the complexities of local and regional water resources issues.

India (1998)

The first course in India (1998) placed special emphasis on issues pertaining to water resource projects in the Gujarat region [2]. The programme included 19 days of travel in India. Workshops and lectures focused on issues such as the design, construction and safety of dams, irrigation projects and other water-related projects in India. A highlight of the trip to India was the controversial Narmada Development Project, which students visited after having gained extensive project background during class lectures and talks in India. This vast project has displaced tens of thousands of people who have been moved to colonies because the villages in which their families have lived and worked for centuries are now underwater.

The project site visit ended with a tour of one of the rehabilitation colonies. The Narmada Project and its centrepiece, the Sardar Sarovar Dam, are controversial because of the costs, environmental and human impacts, and politics involved. However, students also saw the desperate need for irrigation and electricity in the region. Student participants reported that they could not simply apply Western judgement standards to the project controversies and came away from the course with a better understanding of the needs behind the project.

Taiwan-Japan (1999)

In the 1999 course, students compared the ambitious and rapidly progressing Taiwan with the fully-developed nation of Japan. In both countries, the increasing importance of public education and input on water projects was apparent.

Water policy makers in the two countries discussed the challenges of working with the public to gain support for important water projects. Students also learned about Taiwan's relationship with China and the challenges created by the resulting political uncertainties.

China (2000)

In 2000, the China course focused on the Three Gorges Project, which will be the largest hydropower installation in the world. The itinerary began with visits to Tsinghua University and the Institute of Water Resources and Hydraulic Research in Beijing. Cultural sites such as the Great Wall of China and the Forbidden City were also visited while students were in China's capital.

The remainder of the China course took place along the Chang Jiang River (also known as the Yangtze River), on which the Three Gorges Dam will be built. Students visited Wuhan University and spent a few days with Wuhan students. Students then travelled by boat upriver through the picturesque Three Gorges to see the region that will be impacted when the dam is completed. Students also visited the Centre for Relocation of the Three Gorges Project.

Faculty from the Departments of Geoscience and Law were included among the course leaders and two junior faculty members also participated. Among the University of Iowa faculty leading the course were two Chinese emigrants to the USA. The students learned first-hand from these faculty members of their experiences while living in China during the Cultural Revolution, and were able to compare these stories of life at that time with the comparative freedom of modern China.

Central Europe (2001)

The fourth course, in 2001, focused on Hungary, Poland and Romania in Central Europe. Figure 1 provides a summary of the daily itinerary. The IIHR organised this course in close collaboration with the Budapest University of Technology and Economics (UTE) in Hungary, Warsaw University of Technology (WUT) in Poland, and the Technical University of Civil Engineering Bucharest (TUCEB) in Romania. Contact persons for these universities were prominent personalities in the host countries, including Professors Janos Jozsa in Hungary, Janusz Kindler in Poland and Constantin Iamandi in Romania.

As students travelled through Romania, Hungary and Poland, they were exposed to multifaceted issues surrounding water resource projects. The technical focus of the course included field visits to major hydraulic structures on the Danube, Tisza and Vistula rivers. These included large-scale flood prevention and mitigation projects and hydropower plants in all three countries visited, plus irrigation systems in Hungary and Romania.

Students also visited mitigation projects for air, water and land protection in Poland and Romania, as well as water treatment plants, maritime ports and the Danube Delta in Romania.

The Central Europe course focused on the modernisation and development of societies evolving from previously Communist regimes. Students witnessed the level of progress of structural policy reform in each country. While Romania was still struggling to institute major organisational and structural reforms, Hungary has achieved a more stable institutional authority, with a strong emphasis on environmental concerns, reflecting the Green Party's strength in Hungarian politics. Poland, more advanced technologically and financially than Romania, was still attempting to reshape its political structures in order to achieve its water treatment goals, and appeared to be struggling with a depressed economy and high unemployment.

Students learned to appreciate re-emerging cultural differences in these Central European countries, where nationalism had previously been discouraged by Communist regimes. They observed contrasts among the boisterous southern Romanians, the neat and reserved Finno-Ugric Hungarians, and the friendly and proud Slavic Poles.

Through their visit to Central Europe, participants were made aware of the impact of the European Union (EU) on water resource management projects and policy reforms. Students learned the importance of multinational cooperation for water projects in a region where countries have several shared rivers.

STUDENTS' PERCEPTIONS OF THE INSTRUCTIONAL TRIP

At the end of the programme, students were asked what they felt the programme's highlights were. Below are some of the aspects of the programme that students mentioned as leaving the greatest impressions.

Romania

During their time in Romania, students traversed many terrains and experienced multiple landscapes, from the capital city of Bucharest to the Danube Delta and the Carpathian Mountains. Upon their arrival in Bucharest, students experienced the challenges of life in Romania firsthand. They gained an immediate appreciation for the obvious need for more water treatment plants, better water quality and reliable potable water supplies for the entire population.

Personal experiences with poor drinking water quality and uncertain hot water availability for showers reinforced their understanding of water planning programmes described for them by representatives of the Romanian Water Association.

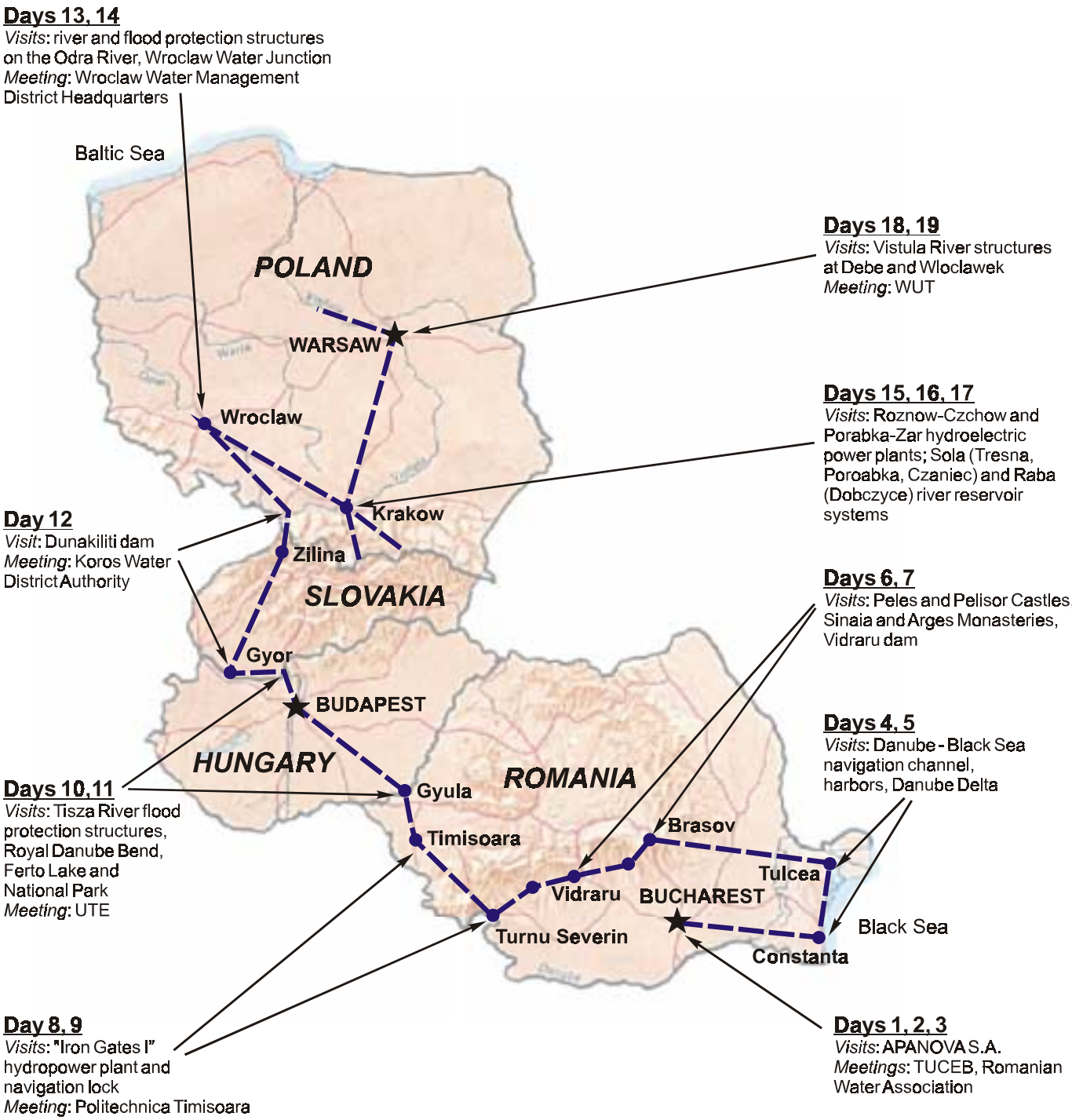

Figure 1: Itinerary of the 2001 International Perspective course in Central Europe.

While touring the historical centre of Bucharest, students learned of many political, economic and historic events that led to the systematic breakdown, which has left the nation struggling in the global economy and, likewise, struggling to meet its water needs. Lectures and first-hand experiences helped students to understand the lag of development in Romania since the 1989 Revolution, which marked the end of both the control and support of the Soviet government and the collapse of the Ceausescu dictatorship.

During a site visit to the Romanian Water Association, a newly formed professional organisation, students learned of recent efforts to establish a structural framework for Romanian water resource management. Officials provided insights into the importance of creating institutional structures for proper water planning in Romania in order to meet the pre-accession criteria prescribed by the EU, as well as to provide Romanians with a better quality of life. Students witnessed the rebuilding a nation's water management structures and the goals and mechanics of this process.

One of the most memorable experiences of the course was a visit to the Danube Delta. Students were joined by a local businessperson, his family and friends. They took a day trip on a boat, along with several Romanian university students, through the Danube Delta biosphere reserve, which is one of the most important nature preserves in Europe. During their travels through the winding channels, reminiscent of the Mississippi bayou, students had a chance to talk with their hosts about similarities and differences in their countries and cultures. The day trip provided a forum for American and Romanian students to educate each other on a wide range of

subjects, including engineering, politics, movies and religion. Following the boat trip, the Romanian hosts arranged traditional cuisine coupled with dancing and music for the students at the Water Ministry guesthouse where they stayed. The cultural exchanges that occurred during this day trip exemplify the importance of this and other study abroad programmes.

Students visited a number of major water projects in Romania, including the Vidraru Dam and hydropower plant, which is Romania's largest interior water dam, high in the Carpathian Mountains. Engineering and planning students had the unique experience of touring a water project of great magnitude, such as is often studied in the classroom, but rarely observed first hand.

Another major site visited was the Iron Gates I dam, hydropower plant and navigation lock. This project was built on the Danube River in a symmetrical design across the international borderline through agreements between the former Yugoslavia and Romania. Although the dam was built to accommodate navigation, the use of the Danube as a major means of transportation of goods continues to be impaired by structural damage upstream due to the past war in the former Yugoslavia. Students were able to witness and appreciate the long-lasting economic burdens faced by developing countries' surviving past war activity. Students were cautioned to keep a low profile at this site because some local citizens in the area continued to harbour hard feelings towards Americans in the wake of US intervention in the war.

Hungary

In contrast with Romania, Hungary has pre-accession EU status and has been relatively successful in changing institutional structure policies to comply with EU criteria. An example of these changes is the recent reorganisation from a centralised water-planning agency to 12 district water authorities. Hungary has also been more successful economically than Romania.

The Hungarian tour started in the Körös River Valley. The Körös River flows into Hungary from Romania, where it is called the Cris River. This river has been the subject of a recent international water dispute following a toxic spill from a Romanian mine.

Lectures and film presentations by the Körös Valley Authority informed students that the water problems in this lowland country are primarily flood-related. Films illustrating past flood devastation were shown. Students visited the system of dykes and retention basins that the local water authority used during flood periods. Students were intrigued by the Authority's coordinated efforts to demolish dykes when necessary and quickly rebuild them during flood periods. They were also impressed by the political will that has resulted in this flood response programme. Students observed that this type of proactive crisis-mitigation response was one of the reasons Hungary's status in the EU has been accelerated.

Students made a short visit to Budapest, a cultural *jewel* of Europe. They also visited the Ópusztaszer National Park, where they saw a re-enactment of the Magyar invasion of the Magyars that had brought the Hungarian people to Europe. A highlight of this visit was the demonstration of the ancient Magyars' fighting prowess on horseback.

In the Ferto-Hanság Nemzeti Hungarian National Park, students learned about Hungary's goal of protecting the environment through reserves. Students took a boat ride through the natural protected zones with an environmental guide who described the Park's flora and fauna. During this tour, students also passed a *checkpoint tower* at the Austrian border that has been left as a reminder of the days of the so-called Iron Curtain. The Park is part of a larger, international Park shared with Austria. Citizens had initially opposed governmental control of the Park, but eventually came to support the Park's protection.

Students visited an area on the Slovakian border where the Hungarian government had successfully restored dried up backwater habitats while continuing to support the forestry that is so important to the regional economy. Small dams control water depths throughout the region and allow water to flow to the wetlands. Following a boat tour through this area, students spoke with a local reporter who published a story on their visit. Students learned how important public support and media have been for restoration efforts in that region. These natural areas visits highlighted the priority Hungary places on the environment, in contrast with Romania.

Poland

Students concluded their 2001 travels in Poland. Like Hungary, Poland has pre-accession EU status and is at a similar stage of economic development. Through their visits and discussions with host students and faculty, students gained an understanding of flood protection and prevention efforts and water quality issues in Poland. Students learned some of the social aspects of the current political and economic transition. High unemployment has presented many challenges for Polish politicians and has prevented rapid change.

Students began their technical tour in Wrocław, near the German border, where they learned about the devastating flood of 1997. Flood protection systems in the country have been revamped under the *National Programme of Reconstruction and Modernisation*. Poland's dedication to improvement is demonstrated by a US$200 million loan agreement from the World Bank to implement a crisis mitigation programme, including plans for flood protection works, dams and water transport improvements. The crisis mitigation initiative in southern Poland is part of that country's efforts to meet EU entry requirements. The strong influence of the EU on water projects in Poland was evident during most of the site visits.

Students visited several reservoirs and hydroelectric power plants in Poland, including a reservoir cascade system along the Soła River. During a visit to the Porąbka-Żar hydroelectric power plant, they learned how authorities have reacted to periods of peak demand and the importance of hydroelectric power to this country.

Discussions with water authority personnel and university faculty in Kraków and Warsaw taught students that Poland has been less willing to move towards water authority decentralisation than Hungary. Students learned about the Vistula River Catchments, models for water supply and water quality in Poland. The focus of Polish water planning has been on flood management. The main problem in project development has been a lack of water quality evaluation.

Students came to appreciate the flood management problems and solutions provided by Polish officials. They learned about the continued impact of past wars and border changes.

Students also had the opportunity to visit Auschwitz (Oświęcim), which, with neighbouring Bierkenau (Brzezinka), was the largest Nazi concentration camp. Students also visited the old town of Warsaw, which had been completely restored after having been levelled during the Warsaw Uprising in World War II.

STUDENT PROJECTS

Following their travels, students met with faculty to select topics for their final papers. They discovered that the trip was just the beginning of their course experience. Students often selected topics related to their graduate research, incorporating new insights from site visits and lectures in Central Europe.

Students were encouraged to evaluate differences and similarities between the three visited countries, as well as to compare projects they had visited with projects in the USA and elsewhere. The wide range of topics selected reflects the range of disciplines and research interests of programme participants.

Several students from the 2001 course, as well as students from earlier courses, have submitted their final papers for publication or presentations at conferences or professional seminars. The following are examples of papers submitted for the 2001 course:

- Martin K. Matsen, a University of Iowa Urban and Regional Planning graduate student, wrote an analysis of environmental priorities for water management projects in Central Europe. He critiqued water management processes he had observed from the perspective of an environmental planner.
- Emile Hall, a Colorado State University Watershed Programme graduate student, and Shira Perlis, a Rowan University senior in Civil and Environmental Engineering, wrote a collaborative paper on drinking water treatment strategies, standards and problems in Central European countries. Hall and Perlis provided city-specific case studies for Bucharest, Romania, Budapest, Hungary, and Kraków, Poland. They evaluated political influences on water quality management in each city.
- Lichun Zhang, a University of Iowa Civil and Environmental Engineering graduate student, wrote about the current role of hydraulics in Central European nations as compared to the USA. An alumnus of Tsinghua University in Beijing, Zhang had been a student host for the programme during the 2000 China course. She concluded that future hydraulic engineering education cannot be limited to new developments in hydro-techniques, but must include exposure to the environmental and societal consequences of hydraulic project implementation.
- Yenory Morales, a University of Iowa Civil and Environmental Engineering graduate student, designed and assembled the post-travel 2001 course Web site [3].
- Catherine Shrier, a Colorado State University doctoral candidate, and Michaela Bell, a University of Iowa Master's student, have summarised the course in the present article.

PARTICIPANTS' REACTIONS AND RECOMMENDATIONS

At several points during the course, students were asked to provide feedback on the programme and to provide recommendations for future courses. Students also completed programme evaluations at the end of the course.

Throughout the four-year history of the course, student feedback has been positive. One India course participant stated, *It has made me a better person … The lectures gave us an entirely new outlook on the issues related to water resources in India …*

Another student noted that *Meeting with students was an invaluable experience, one of the most important parts of the trip…*

Other student comments include: *This experience will be invaluable to me in my professional career … altogether a worthwhile investment of time and money*, and *I hope this class will continue … I thoroughly enjoyed the trip and recommend the course to anyone.*

Students and faculty participants recommended some future course improvements. Based on their experiences and feedback from students, 2001 course leaders Professors Marian Muste and Witold F. Krajewski have made several recommendations to improve the organisation of details for future trips, including the following:

- Course instructors should arrive at least two days in advance of the students to finalise arrangements.
- Continuous dialogue should take place between the country contact persons and programme leaders prior to departure.
- A thorough exploration of communication ease, transportation options and health and safety issues should be made before departing.
- Students should have a brief orientation on behavioural expectations and academic expectations.
- Given the special conditions under which this course is offered, no more than 15 participant students are recommended.
- Every fifth day of the trip should include half a day of rest and recovery.
- There should be no more that five hours of travel time per day.
- Discussion sessions should be held at the end of each day to facilitate continuous feedback and ensure understanding of the next day's activities.
- Students are encouraged to share their unique experiences with professional organisations upon their return.

CONCLUSIONS

Although students and faculty are reviewing further programme improvements, these recommendations are mostly *fine-tuning* of a programme that is already considered to be excellent. This programme can be utilised as a model for other universities.

Programme benefits include the following:

- Students gain an understanding of unique institutional and legal constraints on decisions made in international

environments. Meetings with prominent leaders in institutes and agencies of the visited countries provide students with a better perspective of the driving forces behind the selection of water project alternatives abroad.

- The course includes site visits at major water resources projects for water supply, flood protection, hydropower and ecological restoration. While engineering students and students in other water-related disciplines frequently study such projects in the class, they typically have very few opportunities to visit and tour such facilities. Opportunities to talk with onsite managers about project objectives and associated challenges also give students greater insights into such projects.
- Students interact with students and faculty from the host countries and visit facilities at engineering schools in each country. This enables participants to see how water engineers are trained in other countries and exposes them to differences in academic requirements. The opportunities to interact with students, faculty and other citizens of countries visited also provide valuable insight into the social, political and economic contexts in which people live and water policy decisions are made.
- The course is held for two to three weeks during *break* periods between semesters. The 1998 India course was held in January. The other three courses were held in late May and early June. By providing an opportunity to study water resources issues abroad during a break, rather than requiring an entire semester or summer, this course enables many students to participate in the programme, including those who would not otherwise experience foreign study due to their academic programme demands or work requirements.
- Students from water-related disciplines in engineering, the sciences and social sciences participate in the same course together. This enables students to *cross pollinate* their academic backgrounds, teach one another and gain a more holistic understanding of the many forces acting on decision-makers in water resources planning.
- The course provides a multifaceted, once-in-a-lifetime experience at minimal expense. The IIHR has sought extensive outside financial support to ensure that student participation is financially feasible. To date, partial scholarships for all students have been provided through a combination of sources.

Additional information on activities and events of the International Perspectives Study Abroad in Central Europe 2001 can be found on the Web at:
http://www.iihr.uiowa.edu/education/international/europe/index.html

Descriptions of past courses and announcements of future courses are posted on the IIHR's Web site at:
http://www.iihr.uiowa.edu/education/index.html#inter

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3rd Global Congress on Engineering Education: Congress Proceedings

edited by Zenon J. Pudlowski

This volume of Congress Proceedings is comprised of papers submitted for the *3rd Global Congress on Engineering Education*, which was held at Glasgow Caledonian University (GCU), Glasgow, Scotland, UK, between 30 June and 5 July 2002. The prime objective of this Congress was to bring together educators, professional organisations and industry leaders from around the world to continue discussions covering important issues, problems and challenges in engineering and technology education for this new millennium.

The papers in these Proceedings present global research and development activities with three opening addresses, 18 keynote addresses, 16 lead papers and almost 70 regular papers that have been contributed by authors from 30 countries across the globe. The papers present readers with a significant source of information on a wide spectrum of issues and topics in engineering and technology education. They detail findings describing current issues and trends, effective methods in the training of engineers and technologists, curriculum design and evaluation and the relevance of liberal education, the management of academic institutions and engineering faculties, social and philosophical aspects of engineering and its impact on modern societies, international case studies, the application of new technologies, academia/industry interaction programmes, sustainable development and international collaborative programmes and systems.

The 3rd Global Congress could be characterised as an academically fruitful event with most papers in these Proceedings being of a very high academic standard. Furthermore, all papers have gone through a strict refereeing process to ensure their relevance for years to come.

To purchase a copy of the hardbound Congress Proceedings, a cheque for $A120 (+ $A10 for postage within Australia, and $A20 for overseas postage) should be made payable to Monash University - UICEE, and sent to: Administrative Officer, UICEE, Faculty of Engineering, Monash University, Clayton, Victoria 3800, Australia. Tel: +61 3 990-54977 Fax: +61 3 990-51547