

UNESCO / Keizo Obuchi



Research Fellowships Programme
in **2005**: Results Achieved
2006

“I believe that the foundations of education consist in fostering the life force, a cooperative and helping spirit and a heart which respects our natural environment” Keizo Obuchi, former Prime Minister of Japan

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Preface

Keizo Obuchi had a firm belief that the key to success in every country is to consolidate the capacity-building of the nation's human resources, especially by investing resources in members of the younger generation, since they will determine the future.

Sharing this belief, I created the UNESCO/Keizo Obuchi Research Fellowship Programme in his honour. Since 2001, with the generous support of the Japanese Government, we have been able to award 20 fellowships each year to deserving candidates from developing countries and countries in transition.

The aim of these fellowships is to support innovative and imaginative postgraduate research in four areas of development to which Mr Obuchi was very committed: environment, dialogue among civilizations, information and communication technologies (ICTs) and peaceful conflict resolution.

Keizo Obuchi was a visionary leader whose policies reflected his strong belief in human solidarity and respect for the environment. The tenets of his political philosophy were founded on a commitment to lead Japan to become a nation of "wealth and virtue".

Upon assuming the highest office in the Government, he strove with wisdom and resolve to forge a new vision, one that would allow Japan to address the multitude of challenges confronting it in the third millennium, while building on the virtues and principles that had shaped its past. By engaging people in direct dialogue, he fostered a close link with the people and was able to create a vision of the twenty-first century that sought to promote world peace and stability. In this respect, he believed that the wealth of the nation lay in its embrace of great aspirations, not only for its own society, but also with regard to Japan's significant role within the international community.

Yet, the spirit of his commitment to a more prosperous world lives on, etched in the hearts not only of the Japanese people, but also of many throughout the world who shared with him the values and principles he advocated so resolutely.

Keizo Obuchi's invaluable contribution to humanity will long be remembered.



Koïchiro Matsuura
Director-General, UNESCO



Koichiro Matsuura
Director-General of UNESCO
Keizo Obuchi
then Prime Minister of Japan
2000





Keizo Obuchi
then Prime Minister

Who was Keizo Obuchi and why this programme?

Mr Keizo Obuchi, former Prime Minister of Japan, was born on 25 June 1937 in Nakanojo, Japan and sadly passed away on 14 May 2000 at the age of 62. Son of a politician, he resolved to become a politician himself. Soft-spoken and charismatic, he was known as a man of modesty and integrity. He built a reputation as an exemplary official and was a particularly adept negotiator. Member of Japan's Diet (Parliament) for over thirty years, he served as Japan's Foreign Minister in 1997 until he was elected Prime Minister in July 1998. Mr Obuchi was known in the international arena for his commitment to development issues and his resolve to put Japan at the forefront of countries involved in consolidating the efforts of the international community to further progress in the social and economic development of humankind.

The Government of Japan has committed itself to cooperating with UNESCO in enhancing capacity-building of human resources in developing countries. It is in that framework, under a Funds-in-Trust Project and the UNESCO Co-Sponsored Fellowships Programme, that the Government of Japan has, since 2001, generously financed 20 research fellowships each year, in memory of the late Mr Keizo Obuchi. With a view to keeping alive and honouring the spirit of former Prime Minister Obuchi and his belief in "people building the next era", these fellowships are awarded to deserving candidates from developing countries, especially the least developed countries (LDCs), who were eager to undertake research on one or more of the topics. The aim of the fellowships is to support innovative and imaginative post-graduate research in the areas of development to which former Prime Minister Obuchi was committed and which coincide with areas of particular interest to UNESCO, namely:

- **Environment**
- **Intercultural Dialogue**
- **Information and Communication Technologies**
- **Peaceful Conflict Resolution**

Who is eligible?

Applicants must meet the following criteria:

- The respective National Commission for UNESCO of the invited developing Member State must endorse any candidature submitted for consideration (applications from individuals cannot be entertained).
- Candidates under this Programme must be **post-graduate researchers**, already holding either a M.A. or M.Sc. and wishing to pursue research work outside their own country (preferably in their own region), with a view to enhancing knowledge in one of the four specific fields listed earlier.
- Candidates must be no more than 40 years of age.
- Candidates must be persons of high intellectual promise who may be expected to make significant contributions to their country upon their return.
- The selected fellow must carry out the research studies outside of their own country under the auspices of an academic supervisor in a host institution.

Who selects the beneficiaries?

Selection Committees made of experts in the four areas listed above make recommendations for the final decision of the Director-General of UNESCO. Applications are judged on the basis of the merit of each application and its pertinence to the UNESCO/Keizo Obuchi Research Fellowships Programme.

What did they receive and what they will receive?

For the 2001, 2002, 2003 and 2004 cycles, each selected beneficiary was awarded US \$7,500 to cover the costs of undertaking research study abroad. Due to the success of the programme, the Japanese authorities have decided to increase the maximum amount of the fellowship, which will be determined according to the duration and place of research (between US \$6,000 and US \$10,000). The maximum amount may not exceed **US \$10,000**.

What are the expected results of this programme?

To date, the UNESCO/Keizo Obuchi Research Fellowships Programme has contributed to:

- **Strengthening** UNESCO's capacity-building activities.
- **Upgrading** of knowledge of state-of-the-art developments.
- **Facilitating** the transfer and sharing of knowledge, the exchange of information, and technical cooperation among developing countries (TCDC).
- **Supporting** innovation, research and information in a number of fields of the Organization's competence.
- **Promoting** the forging of links and contacts.
- **Ensuring** a "multiplier effect" as knowledge acquired abroad is brought home.
- **Fostering** friendship, international understanding and peace among the beneficiaries and in the host countries.

Why this booklet?

The purpose of this booklet is to provide a brief overview of the results of the research undertaken by the 20 fellowship beneficiaries selected for the 2005 and 2006 cycles:

Who are they?

What research did they do?

What did they achieve?

“To ensure that the new era brings a bright world rich in hope for ourselves and future generations, I am resolved to bring together the wisdom of the people to build the next era, based on the creed of hard hands and a soft heart.”

Keizo Obuchi
then Prime Minister [From Policy
Speech to the 143rd Session
of the Japanese DIET Tokyo,
7 August 1998]



Keizo Obuchi
then Prime Minister
testing a land mine-detection device
in Cambodia, one of the most mine
infested countries in the world.
11 January 2000



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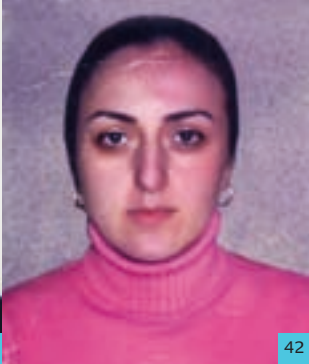
116

The Twenty UNESCO / Keizo Obuchi Research Fellows 2005

20	Environnement		
22	Armenia	Lilit Grigoryan	Mathematical modelling of heavy metals migration in water ecosystems
24	Indonesia	Bambang Hariyadi	Traditional forests and agroforests in the Jangkat Community, Jambi, Indonesia
26	Islamic Republic of Iran	Hamid Taheri Shahraini	Extraction of water quality parameters using satellite data [...]
28	Lebanon	Liz Azzi	Environmental sustainability and residential comfort: comparison between vernacular and contemporary residences [...]
30	Madagascar	Michel Omer Laivao	Taxonomic revision of the Pandanaceae family in Madagascar
32	Myanmar	Cherry Aung	Oceanography: ecology of Benthic meiofauna of Bay of Bengal
34	Palestinian Authority	Ayman W. Dardona	Nutrient dynamics and quality simulation model in coastal waters
36	Zimbabwe	Ellen Mangore	Effects of wastewater reuse on groundwater quality
60	Intercultural Dialogue		
62	Argentina	Eloisa Blanca Mussat	Conversion to Pentecostalism in the Wayuu community [...]
64	Ecuador	Marcelo Bonilla Urvina	The politics of Intercultural dialogue and the deconstruction of citizenship [...]
66	Mexico	Cutberto Hernandez Legorreta	Incultural Process in South East Asia [...]
68	Peru	Rafael Antonio Florez Paz	Development of the process of introspection in Neo-Confucianism
70	Serbia	Ana Koprivica	Promotion of cultural and religious diversity in Cuba
88	Information and Communication Technologies		
90	Bulgaria	Svelta Nikolova Boytcheva	Prototype and implementation of main modules of e-learning system [...]
92	Cuba	Ania Rosa Hernandez Quintana	Evolution of paradigms that influence the organization and representation of knowledge in cyberspace
94	Nigeria	Ezekiel Chidi Odiogo	Information and communication technology policy and strategy
108	Peaceful Conflict Resolution		
110	Cameroon	Charles Assamba Ongodo	Development of a regional approach for conflict resolution in West and Central Africa [...]
112	Guinea	Hassatou Balde	Status of implementation of the 2001 United Nations Programme of Action on Small Arms and Light Weapons [...]
114	The F.Y. Macedonia	Islam Yusufi	Peaceful conflict resolution on democratic processes in the Balkan countries
116	Sudan	Mohamed Mustafa Abbas	Towards cooperation instead of conflict in the Nile Basin



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100



102



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The Twenty UNESCO / Keizo Obuchi Research Fellows 2006

42 Environnement		
40	Azerbaijan	Dilzara Nadir Aghayeva Current condition of <i>Ulmus</i> spp. div. affected by Dutch elm disease and <i>Castanea sativa</i> showing signs of chestnut blight in Azerbaijan
42	Georgia	Bela Japoshvili Monitoring on ichthyofauna in Paravani Lake
44	Kyrgyzstan	Elena Evgenievna Ten SO 17025 laboratory quality control practices and ISO microbiological analytical standard methods [...]
46	Malawi	Mzime Regina Ndebele A study of global climate change and production in Lake Kariba, Zimbabwe
48	Malaysia	Su Yean Teh Management modelling of everglades wetlands hydrology and ecosystems
50	Mali	Vital Traoré Evaluating pollution by carcinogenic and mutagenic xenobiotics of aquatic ecosystems in Bamako [...]
52	Palestinian Authority	Munther Fathi Mohammed Salem Using TiO ₂ with sunlight and H ₂ O ₂ to eliminate some organic pollutants in water and wastewaters
54	Romania	Oana Nanmanona Frincu Nucleic-Acid-Based Biosensors for environmental assessment of toxic chemicals
56	Venezuela	Crisanto Antonio Silva Aguilera Assessing water resources using sedimentation in present days and Maya water reservoirs in the Yucatan peninsula, Mexico
72 Intercultural Dialogue		
74	Cameroon	Ousmanou Adama Interreligious dialogue and peaceful coexistence in the North Province of Cameroon
76	Colombia	Jairzinho Francisco Panqueba Cifuentes Western economic categories and indigenous identities in the twenty-first century [...]
78	The former Yugoslav Republic of Macedonia	Goran Sekulovski Religion, nation, ideology and empire: Balkan identity through the prism of Kilikis 1859-1891
80	Peru	Juan Javier Rivera Andia Toward a better understanding between cultures in Latin America [...]
82	Poland	Nicole Dolowy Protecting cultural diversity in different European countries [...]
84	Slovakia	Silvia Zászlós Intercultural Dialogue in the European Union
96 Information and Communication Technologies		
98	Bulgaria	Eugenia Petrova Kovatcheva E-Learning: development of an hierarchical adaptive model for assessment of competence-based learning
100	Burkina Faso	Armand Joseph Kabore Technology transfers and community media ownership in Burkina Faso [...]
102	Madagascar	Harinaina Ramanambe Speech recognition and processing
104	Rwanda	Peter Kintu The contribution of ICTs towards the development of education, science, culture and the building of a knowledge society
118 Peaceful Conflict Resolution		
120	Senegal	Mamadou Soumare The problem of war in the Dialogues of Plato

“Our world faces profound and unprecedented threats. Climate change, rapid urbanization and population growth, escalating energy and food costs, the loss of biodiversity and the increasing risk of natural hazards: these are just some of the challenges confronting humanity at the beginning of this twenty-first century.”

Koïchiro Matsuura,
Director-General of UNESCO

[on the occasion of the African Regional Conference for the launch of the International Year of Planet Earth, Arusha, Tanzania, 8 May 2008]

“ The orientation of...society towards mass production, mass consumption and mass waste is imposing a major burden of global environment. There is an urgent need to realign the ways of...society and create a ‘recycling society’ underpinned by the recycling of materials across all levels of socio-economic activity, namely production, distribution, consumption and disposal.”

Keizo Obuchi
then Prime Minister

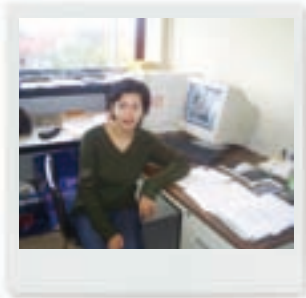
[From Policy Speech to the 147th Session of the Japanese DIET, Tokyo, 28 January 2000]

2005

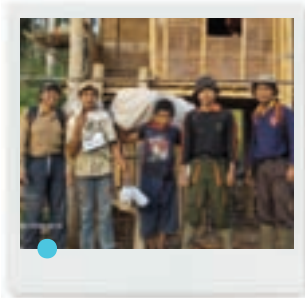
- **Lilit Grigoryan**
Armenia
- **Bambang Hariyadi**
Indonesia
- **Hamid Taheri Shahraini**
Islamic Republic of Iran
- **Liz Azzi**
Lebanon
- **Michel Omer Laivao**
Madagascar
- **Cherry Aung**
Myanmar
- **Ayman W. Dardona**
Palestinian Authority
- **Ellen Mangore**
Zimbabwe

2006

- **Dilzara Nadir Aghayeva**
Azerbaijan
- **Bela Japoshvili**
Georgia
- **Elena Evgenievna Ten**
Kyrgyzstan
- **Mzime Regina Ndebele**
Malawi
- **Su Yean Teh**
Malaysia
- **Vital Traoré**
Mali
- **Munther Fathi Salem**
Palestinian Authority
- **Oana Nanmanona Frîncu**
Romania
- **Crisanto Antonio Silva**
Venezuela



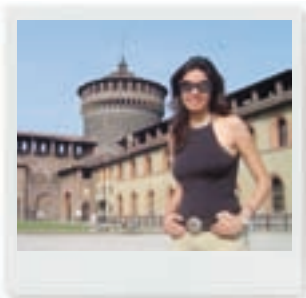
Lilit Grigoryan
University of Antwerp, Belgium



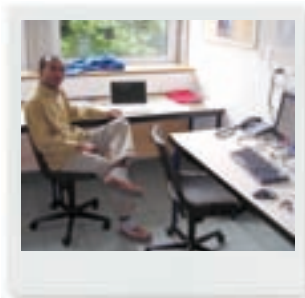
Bambang Hariyadi
Together with my students and local porters, I was ready to go to the local forest for doing vegetation analysis



Hamid Taheri Shahraini
From left to right, Professor Juergen Fischer (director of the Institute for Space Sciences), myself and Dr Frank Fell, manager of Informus Co., one of my principal project advisers.]



Liz Azzi
Politecnico di Milano
Scuola di Dottorato e di Ricerca
Milan, Italy



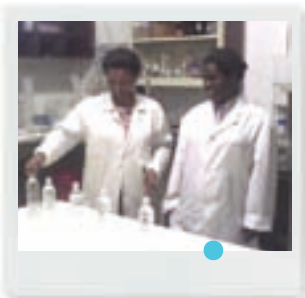
Michel Omer Laivao
University of Neuchâtel, Switzerland



Cherry Aung
In Sagar Kanya



Ayman W. Dardona
Clarkson University, United States



Ellen Mangore
University of the Witwatersrand
School of Civil and Environmental
Engineering
Johannesburg, South Africa

Environment/What the fellows say

“I work as a senior researcher at the Center for Ecological-Noosphere Studies of the National Academy of Sciences of the Republic of Armenia. I would now like to express my thanks. First of all, I am indebted to the UNESCO Fellowships Programme Section, to its Chief, Mr Ali Zaid, and to the UNESCO/Keizo Obuchi Research Fellowships Programme for giving me the possibility to do this work and for their support. I am also very grateful to Dr Anna Van Griensven with whom I hope to remain in contact in the future. My special thanks go to Professor Rene Van Grieken for the close collaboration. I would like to thank Dr Armen Saghatelyan, Director of CENS NAS RA for his support, and, of course, I thank my husband for his understanding and support.”

Lilit Grigoryan

“... the UNESCO/Keizo Obuchi Research Fellowships Programme has enabled me to work with Serampas, indigenous people who live in the interior of the Sumatran tropical rain forest in Indonesia and has helped me towards completing my PhD in the department of botany at the University of Hawaii...”

Bambang Hariyadi

“Using this fellowship, I learned a great deal in an advanced research institute in a developed country, did advanced research and transferred its results in the form of new technology to my own country. In addition, the fellowship was a way for me to communicate with top researchers in an advanced research institute and it has offered me new possibilities for conducting joint, high-level research in the future.”

Hamid Taheri Shahraini

“The UNESCO/Keizo Obuchi Fellowship helped to finance my study. It has encouraged young researchers like myself to design and promote healthy, comfortable and sustainable residences for the future.”

Liz Azzi

“I am about to finish my PhD in Biology at Neuchâtel University. The 2005 UNESCO/Keizo Obuchi Research Fellowship enabled me to pursue the research that I had begun before obtaining my PhD. It was very helpful and opened new horizons for me, especially as I expect to obtain a good career position once I have completed my degree.”

Michel Omer Laivao

“I sincerely wish to express my deep sense of appreciation and gratitude to the Director-General of UNESCO and to the Keizo/Obuchi Research Fellowships Programme. I hope that through my efforts I have honoured the spirit of former Prime Minister Obuchi and his belief in “people building in the next era”.”

Cherry Aung

“The most important aspect of the Fellowships Programme was my participation in an international conference pertaining to my research, the First International Conference for Science and Development, held at the Islamic University of Gaza.”

Ayman W. Dardona

“I had the opportunity of working under experienced academic supervisors and in a well-equipped laboratory, which enhanced my research skills and my ability to supervise students' research projects. The results of my work will bring greater recognition to my university.”

Ellen Mangore

Fellow

Lilit Grigoryan

Beneficiary country

Armenia

Country of study

Belgium

**Born on 1 December 1975
in Etchmiadzin, Armenia**

Last degree obtained

Yerevan State University,
Yerevan, Armenia:
Geographer, Teacher of
Geography (22 July 1999).

**Scholarly work
and publications**

*Studies of Heavy Metals in
Snow Cover in Yerevan City:*
Proceedings of the 3rd
Republican Youth Scientific
Conference, Yerevan, pp. 135-
136, Saghatelyan A.K.,
Nalbandyan M.A., Grigoryan
L.P., Sargsyanc A.G., 2002.

*The Peculiarities of Heavy
Metal Pollution of Water
Bodies within Yerevan
Agglomeration:* Proceedings
of the 4th Republican Youth
Scientific Conference,
Yerevan, pp. 219-220,
Nalbandyan M.A., Grigoryan
L.P., Mikaelyan M.G., 2003.

*River Hrazdan Water Quality
Assessment in the bounds of
Yerevan City:* Geographic
Series, N2(19), pp. 100-104,
Nalbandyan M.A., Grigoryan
L.P., Mikaelyan M.G., 2004.

Contact

lilog@mail.ru
eco-centr@rambler.ru

Place of research

University of Antwerp,
Department of Chemistry,
Antwerp, Belgium

Research undertaken

from 9 January
to 8 April 2006

Mathematical modelling of heavy metals migration in water ecosystems

The Soil and Water Assessment Tool (SWAT) is a physically based continuous-event hydrologic model developed to predict the impact of land management practices on water, sediment, and agricultural chemical yields in large, complex watersheds with varying soils, land use, and management conditions over long periods of time. For simulation, a watershed is subdivided into a number of homogenous sub-basins (hydrologic response units or HRUs) having unique soil and land use properties. The input information for each sub-basin is grouped into categories of weather; unique areas of land cover, soil, and management within the sub-basin; ponds/reservoirs; groundwater; and the main channel or reach draining the sub-basin. The loading and movement of run-off, sediment, nutrient and pesticide loadings to the main channel in each sub-basin is simulated considering the effect of several physical processes that influence hydrology.

SWAT enables long-term simulations of agricultural pollution on a daily time step. It is based on the QUAL2E and the RWQM programmes. SWAT requires land use data to determine the area of each land category to be simulated within each sub-watershed.

In addition to land use information, SWAT relies on soil data to determine the range of hydrologic characteristics found within each sub-watershed. In particular, the option allows the user to select land use or soil data that are in either shape or grid format.

The main objective during my stay in Antwerp was to become familiar with the methods described above using the SWAT system. As full data for my research area was not available, the focus was on using SWAT tutorial material. At the same time I learned the ArcView GIS system, which will facilitate such tasks as the collection of geographic data, geo-processing and mapping in future research.

For my simulation, I developed a Digital Elevation Model (DEM) for my research area at a scale of 1:200 000. For the time being I have only hydrology data and data on heavy metals (Cu, Pb, Cr, Mo, Ni, Cd) in rivers. I am currently working on the development of digital maps, containing information on land use, distribution of vegetation, and soils. Weather data for 2003-2005 are also being collected and this will take some months. Once all the source data is available, the information will be processed with SWAT. Expected results are a model of heavy metal migration in the Agstev river basin in Armenia.

Lilit Grigoryan, 26 June 2006

Fellow

Bambang Hariyadi

Beneficiary country

Indonesia

Country of study

United States of America



**Born on 4 January 1966
in Gading Rejo, Lampung,
Indonesia**

Last degree obtained

Bogor Agricultural
University (IPB), Bogor,
Indonesia: Master of Science
in Botany (8 July 2000)

**Scholarly work
and publications**

*Conservation of the
Honeybee's Host Tree in
Pelepat, Jambi.* University
of Jambi, Indonesia, 2002,
Hariyadi, B, Subagyo, A. and
Asra, R.

*Hypolepis punctata (Thunb.)
Mett. ex Kuhn.* In: Winter,
W.P. de & V.P. Amoroso
(eds.), *Prosea Plant
Resources of South East Asia
15 (2) Ferns and Fern Allies*,
Leiden, Backhuys. 2003.
Winter, W.P and Hariyadi, B.

*The Distribution and
Abundance of Fern in Bukit
Sari Botanical Garden*
(thesis). Bogor Agricultural
University, Indonesia. 2000.

Contact

bambang@hawaii.edu

Place of research

University of Hawaii at Manoa,
Department of Botany,
Honolulu, Hawaii, USA.
Field research: Jangkat
Community, Jambi, Indonesia

Research undertaken

from 1 September 2005
to 31 May 2006

Traditional forests and agroforests in the Jangkat community, Jambi, Indonesia

Jangkat refers to a group of indigenous people who inhabit the area of Jangkat, a region on the border of the Kerinci Seblat National Park in western Sumatra in Indonesia. Some of them occupy pristine forest enclaves within the Park. The Jangkat lived in the area for a long time before the park was established. The group consists of two main sub-clans: Sungai *Tenang* and *Serampas*. They did not remain at particular sites but instead kept moving from one site to another. A number of plants such as *aur duri* (*Bambusa blumea*), durian (*Durio zibethinus*), *petai* (*Parkia speciosa*) confirm their earlier sites. The old *Serampas* were grouped in three small hamlets with a few households; today that has increased to five villages comprised of about 80 households each and scattered throughout the area. To some extent, they still live in a traditional manner by practicing their inherited traditional living system, which is being institutionalized into local custom.

The local worldview includes a perception of the presence of their ancestors and the *orang gunung* (mountain people) inhabiting the local landscape. In the eyes of the *Serampas*, the *orang gunung* live in an unseen kingdom in the surrounding mountains and may appear in human form but mainly just in spirit. The *orang gunung* can interfere with farming and inhabit a person's body. The *Serampas* practise a number of traditional rituals including *kenduri psko*, an annual traditional ceremony, to address the presence of their ancestors and the *orang gunung*.

The Jangkat, mainly *Serampas*, practise shifting cultivation and are nearly subsistent. A few of them grow local rice varieties organically on irrigated wetlands. In recent decades, they have begun to incorporate some cash crops, especially cinnamon and coffee, into their shifting cultivation. The economic

incentive of growing cinnamon has increased cinnamon acreage throughout the region. Unavoidably, the practice has ultimately changed the entire local farming system.

Local natural resources provide copious materials to meet the villagers' basic needs. They hunt wild game including deer, antelope, fish, and birds, which significantly contributes to their protein intake. Moreover, *Serampas* have a long list of useful plants from the secondary and primary forests that they use for various purposes including food, medicine, tool and construction materials, and cultural associated supplies. They combine their knowledge about local plants with their worldview and traditional values to develop local techniques of hunting, fishing, farming, and other livelihood activities.

Their traditional system significantly influences the way they shape and utilize existing natural resources. The synergic interaction between *Serampas* and their environment had secured both the people and the landscape over generations. However, despite the fact that the local traditional system is quite resilient in tackling external pressures, it has gradually become powerless because it has had to struggle alone and fight more and stronger opponents, especially external stakeholders. This research attempts to document some of the local ecological knowledge of a community which is undergoing rapid and widespread changes.

Bambang Hariyadi, 31 August 2006

Fellows

Hamid Taheri Shahraini

Beneficiary country

Iran

Country of study

Germany



**Born on 21 March 1976
in Sabzevar, Iran**

Last degree obtained

Sharif University of Technology, Tehran, Islamic Republic of Iran: Ph.D., in civil engineering–water engineering (13 May 2007)

Scholarly work and publications

Spatio-temporal Mapping of Smoke Fraction Index Generated by the Kuwaiti Oil Well Fires. Asian Journal of Geoinformatics, Vol. 3, No. 1, pp. 29-35, 2002.

Modeling Spatial Variability of Daily Rainfall in Southwest of Iran. Scientia Iranica, Vol. 10, No. 2, pp. 164-174, 2003.

Application of Active Learning Method for the estimation of geophysical variables in the Caspian Sea from satellite ocean color observations. International Journal of Remote Sensing, Vol. 28, 19-20, pp. 4677-4684, 2007.

Application of Active Learning Method to retrieve pigment from spectral remote sensing reflectance data. International Journal of Remote Sensing, Accepted, 2007.

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Place of research

Free University of Berlin, Institute for Space Sciences Berlin, Germany

Research undertaken

from 15 December 2005 to 15 June 2006

Extraction of water quality parameters using satellite data and inverse modeling of radiative transfer equation by active learning method

It is necessary to monitor the in-water constituents, such as Chlorophyll-a (Chl-a), Suspended Particulate Matter (SPM) and Colored Dissolved Organic Matter (CDOM)) for different water bodies. But monitoring the spatiotemporal changes of water constituents across water bodies using conventional in-situ measurements is difficult, time consuming and expensive. Satellite remote sensing measurement of ocean colour provides an additional tool for monitoring the in-water constituents of all water bodies.

Since remotely sensed data are noisy because of instrumental and measuring constraints, we must choose robust methods for the retrieval of water constituents from satellite images. We propose to use the Active Learning Method (ALM) for the inverse modeling approach. The heart of ALM is a fuzzy interpolation method which is called Ink Drop Spread (IDS). First, we used ALM for in-water pigment retrievals from spectral remote sensing reflectance data. We developed a new compatible heuristic search and fuzzy modeling methods for the ALM. Three databases (SeaBAM, Synthetic and NOMAD) were used for the evaluation of the ALM approach. The ALM procedure identified the relevant wavelengths for chlorophyll and pigment detection. Comparisons between ALM and other methods showed that it is a very robust method and the main factor of its robustness is the IDS processor. Results of this part of the study demonstrate the ability of ALM to retrieve in-water constituents.

After the demonstration of ALM abilities for inverse modelling, we utilized ALM for the model-based inverse modelling of radiative transfer calculations and thus the retrieval of in-water constituents (Chl-a, SPM and CDOM) of the Caspian Sea from MERIS data. The performance of ALM for the inverse modelling was compared with Artificial Neural Networks (ANN). The results showed that ALM has a better performance and more reliable results than ANN. ALM also showed some specific abilities in the training phase. Given the abilities of ALM and its performances on real data, it deserves to be added as a new method to the list of appropriate inverse modelling methods for the retrieval of in-water constituents of remotely sensed data.

In addition, empirical-based ALM inverse models were developed for the retrieval of Chl-a and CDOM in the Anzali wetland, and a model-based ALM inverse model was developed for the retrieval of SPM in the Anzali wetland.

Finally an automatic computer code was developed which is able to extract the spatial distribution of Chl-a, CDOM and SPM in the Caspian Sea and Anzali wetland using the derived ALM inverse models and MERIS-FR images automatically.

Hamid Taheri Shahraini, 17 August 2006

Fellow

Liz Azzi

Beneficiary country

Lebanon

Country of study

Italy



**Born on 4 August 1978
in Beirut, Lebanon**

Last degree obtained

Université Libanaise, Faculté des beaux-arts, Jounieh, Lebanon: diplôme d'études supérieures spécialisées en paysagisme (DESS) (14 January 2003).

**Scholarly work
and publications**

Vernacular principals and contemporary aspirations: Analysis of Mediterranean climate residences, SB07 – Turin, International conference, Sustainable building south Europe, 2007. Azzi, L., Piardi, S.

Contact

azzi.liz@hotmail.com

Place of research

Politecnico di Milano
Scuola di Dottorato
e di Ricerca
Milan, Italy

Research undertaken

from 1 September 2005
to 31 May 2006

Environmental sustainability and residential comfort: comparison between vernacular and contemporary residences: suggestions for better thermal comfort in a Mediterranean climate

The research deals with thermal comfort in a Mediterranean climate and a comparison between two types of residences: vernacular and contemporary.

Thermal comfort was defined as a state of mind which expresses satisfaction with the environment. A study was conducted on comfort parameters in order to understand human needs, taking into consideration international parameters. I then looked at passive design strategies to become familiar with the major guidelines for sustainable architecture.

I went back to vernacular architecture in order to learn from the past – how we used to achieve good thermal comfort without using all the technologies and energies that we use today. Natural ventilation potential and protection from the sun were the keys in the Mediterranean climate; interiors need to be cooled, since we have a hot, moderate climate with an omnipresent sun from April through October.

After analysing vernacular residences in the Mediterranean, I had to select the case studies. Six case studies were chosen, divided into contemporary and traditional residences. The first case study of vernacular architecture was located in Fez, Morocco and consisted of a courtyard house with a central fountain, very few and small exterior openings. The second case study, located in Beirut, Lebanon, was a traditional house, built of stone, with symmetric openings on the four facades and big bay windows. The third case study, located in Puglia, Italy, was a trullo, with a very small interior space, few and small openings to the outside, and very thick walls of 1.5 to 2 m.

As for contemporary residences, I chose famous architects, to verify if their design was sensitive to their environment. My first choice was the Portuguese architect Souto de Moura with a courtyard house built in Porto, Portugal. My second and third choices were in Ancona, Italy – apartments designed by Zucchi, and Barcelona, Spain – the same typology as apartments designed by Moneo.

I analysed the climate of each city using several software programs in order to get the full range of data during the summer. I then simulated the buildings in order to verify their thermal comfort and to see if their level of comfort conformed to international standards. After checking the validity of the results, I made some suggestions involving modification of their interior space to ameliorate the buildings' natural ventilation and improve their comfort.

In conclusion, I was able to verify that vernacular residences have a positive level of thermal comfort and are adapted to their climate, while contemporary houses, even if they are designed by famous architects, do not necessarily respond and adapt passively to their climate.

My work was based on the necessity of building specific instruments in the field of interior architecture, exploring a field that uses the specialized skills of an engineer and the design touch of an interior architect. I critically defined the parameters of the interior architecture project from this perspective and would like to encourage the promotion of healthy, comfortable and sustainable residences for the future.

Liz Azzi, 9 May 2007

Fellow

Michel Omar Laivao

Beneficiary country

Madagascar

Country of study

Switzerland

**Born on 8 September 1965
in Antalaha, Madagascar**

Last degree obtained

Université de Madagascar:
Diplôme d'Etudes
Approfondies (D.E.A.) de
Sciences Biologiques
Appliqués en Ecologie
Végétale (January 1995).

Scholarly work and publications

*Révision de Pandanus sect.
Foullioya Warb. (Pandaceae)
à Madagascar.* Adansonia,
sér. 3 29(1), 2007.

*Sur les Pandanus
(Pandaceae) à stigmates
saillants de la côte est de
Madagascar.* Adansonia, sér.
3 28(2), 267-285, 2006.

*Biogeography and
Systematics of Madagascar
Pandanus.* The Natural
History of Madagascar (The
University of Chicago Press,
Chicago). 460-467, 2003.

*New Findings on Pandanus
sect. Imerinenses and sect.
Rjkiella (Pandaceae) from
Madagascar.* Adansonia
25:53-63, 2003.

*Endémisme et biogéographie
du genre Pandanus en
Afrique et à Madagascar.*
Bioterre, Rev. Inter. Sci.
de la Vie et de la Terre,
125-138, 2002.

*Révision de Pandanus sect.
Dauphinensia St. John
(Pandaceae) à Madagascar.*
Bot. Helv. 112 : 47-67, 2002.

*Une nouvelle section du genre
Pandanus (Pandaceae)
à Madagascar: Pandanus
Tridentistigma.* Adansonia,
sér. 3, 23 (1) : 49-57, 2001.

*Une nouvelle espèce de
Pandanus sect. Martellidendron
(Pandaceae) de la péninsule
de Masoala, Madagascar.*
Bot. Helv. 110 : 41-49, 2000.

*Contribution à l'étude de la
flore médicinale de
Bemaraha* et leur caractéris-
tique écologique (cas de
quelques plantes à usage
multiple).* Mémoire de DEA,
106 pages, 1995.

(* Bemaraha is a natural
park on a limestone plateau:
first UNESCO World
Heritage site in Madagascar.)

Contact

laivao2002@yahoo.fr

Place of research

University of Neuchâtel,
Laboratoire de Botanique
évolutive, Neuchâtel,
Switzerland.

Research undertaken

from 25 March
to 25 August 2006

Taxonomic revision of the Pandanaceae family in Madagascar

The *Pandanaceae* family presents a uniquely palaeotropical distribution. This family of dioecious monocotyledons is composed of four genera: *Pandanus*, with the widest distribution of the family (all the palaeotropical regions), includes approximately 700 species of trees and bushes; *Frecynetia*, with a more limited distribution (Asia, Indo-Malaysia, Pacific islands and Oceania), covers 300 species of liana; *Saravanga*, limited to the Philippines, New Guinea and the Solomon Islands, includes two species of large trees; while *Martellidendron*, endemic to Madagascar and the Seychelles, includes only seven species of trees.

In the field of taxonomy, several historic classification errors affected all the work undertaken during the twentieth century. The present study is based on new data concerning the genus *Pandanus* (macromorphological, micromorphological) collected during several field studies and visits to the herbaria of Antananarivo, Geneva, Neuchâtel, Kew and Paris.

The *Pandanaceae* family has 20 sections, of which 19 contain the genus *Pandanus* and one contains the genus *Martellidendron*. It has 14 endemic sections which are distributed among dry forests, moist forests, eastern coastal forests and mountainous vegetal formation.

The Malagasy *Pandanaceae* currently includes 90 species, 99 per cent of which are endemic.

New sections are described: sect. *Insuetia* Laivao, Callm. & Buerki nov. sect., sect. *Callmanderia* Laivao & Buerki nov. sect. and sect. *Guillaumetia* (Huynh & Stone) Laivao, Callm. & Buerki stat. nov. New species are also described: *Pandanus humberti* Laivao, Callm. & Buerki sp. nov. (sect. *Foullioya*), *Pandanus callmanderiana* Laivao & Buerki sp. nov. (sect. *Callmanderia*).

In addition, a key for the determination of sections and keys for the determination of species of *Pandanus* for each section are elaborated.

The species growing in the eastern moist forest and in the coastal forest of the East are the most threatened by human activities.

Omar Laivao, 6 May 2008
Translated from French by UNESCO

Fellow

Cherry Aung

Beneficiary country

Myanmar

Country of study

India



**Born on 25 October 1971
in Shan State, Keng Ton,
Myanmar**

Last degree obtained

University of Mawlamyine,
Mawlamyine, Myanmar:
Master of Science in Marine
Science (10 May 2001).

**Scholarly work
and publications**

*Community structure and
distribution of some mangro-
ve plants in Thanlwin River,*
Scientia 1999.

*The study on the primary
productivity of Thanlwin
River from a nutrient point
of view,* 2004.

*The study on the benthic
macrofauna of North
Andaman Sea and Bay of
Bengal,* 2004.

Contact

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Place of research

National Institute
of Oceanography (NIO),
Goa, India

Research undertaken

from 28 December 2005
to 27 September 2006

Oceanography: Ecology of Benthic Meiofauna in the Bay of Bengal

The Selection Committee of the UNESCO/Keizo Obuchi Research Fellowships Programme supported the present study on “Oceanography: Ecology of Benthic Meiofauna in the Bay of Bengal”. The research was conducted over a period of 12 months (29 December 2005 to 28 December 2006), with a three-month extension. The work was undertaken at the National Institute of Oceanography, Goa, India under the guidance of Dr Z. A. Ansari, senior scientist from the Biological Oceanography Division.

The Andaman Sea, the eastern extension of the Bay of Bengal, is one of the least investigated regions for benthic fauna in the Indian Ocean, except for a few studies from the central Andaman Sea. The present study is the first investigation on benthic fauna related to the geographical evidence in the North Andaman Sea on the Myanmar coast. The samples were collected during the Indian-Myanmar Joint Oceanographic Study Cruise, April-May 2002. The totals of 123 stations were conducted in the depth range of 10 to 1000 metres. Sample analysis, data processing and map drawing were done at the National Institute of Oceanography during the fellowship period. The impact of sediment movement on the distribution of meiofauna was also studied. Taxonomic identification on phylum Nematoda was carried out up to family level and in some cases genus level during the extension period.

A total of 23 taxa were recorded, and the densities range from 55 to 2215/10cm². The highest density was recorded in the Gulf of Martaban. Sediment movement appears to be an important factor in controlling the patchiness and distribution of meiofauna. Nematodes and copepods are the most resilient in unstable sediment. The data generated is expected to improve our understanding of the biological aspects (benthos) of the Andaman Sea in general and of the Ayeyawaddy continental shelf and the Gulf of Martaban in particular.

Cherry Aung, 7 April 2007

Fellow

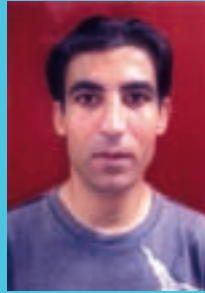
Ayman W. Dardona

Beneficiary territory

Palestinian Authority

Country of study

United States of America



**Born on 1 March 1976
in Jaballia,
Palestinian Authority**

Last degree obtained

UNESCO-IHE, Institute for Water Education, Netherlands: Master of Science in Environmental Science and Technology with specialization in Limnology and Wetland Ecosystems (24 March 2004).

**Scholarly work
and publications**

Biogeochemical cycling of Nitrogen in Tropical Wetlands, Master's Thesis, UNESCO, IHE, Netherlands, April 2004.

A simulation model for nitrogen retention in a papyrus wetland near Lake Victoria, Uganda (East Africa).

A. Dardona and Dr A.A. van Dam, UNESCO-IHE, The Netherlands, January 2007.

Contact

dardonageo@yahoo.com

Place of research

Clarkson University
Department of Civil and Environmental Engineering
New York, United States

Research undertaken

from 1 September 2005
to 25 February 2006

Nutrient Dynamics and Quality simulation model in Coastal Waters

Anthropogenic discharges into coastal water often results in water eutrophication and a significant decline in water quality. The objective of this research was to investigate the nutrient dynamics associated with discharges along the coastal area of Gaza strip, extending from Al Sudaneh in the north to El Byder in the south. The research involved time-series analysis over a five-month period from September 2005 until January 2006. Site positions were located using a GPS system where physical data, including pH, DO, TDS, turbidity, salinity, and EC, were measured in the field using portable equipment. Chemical parameters, including ammonia-nitrogen and nitrate-nitrogen, were measured in the Rural and Environmental Labs of the Islamic University of Gaza. Data were measured monthly for each parameter during the study period. The research hypothesis is that sites close to sewage discharge will exhibit higher nitrogen concentrations than other sites further away from sewage outlets. It is therefore assumed that there are spatial variations with respect to nitrogen concentrations among the four sites. Also, it is assumed that concentrations may vary as a function of time, where the study involves two main seasons, September and October, and November and January.

Data were analyzed using Excel software. Several statistical tests were performed, including ANOVA, T-tests, and linear correlations. The results show that among the physical parameters only turbidity varies spatially, with the site 52 showing the highest turbidity values. None of the physical

parameters show variations over time. Ammonia-nitrogen trends show no spatial variations, although ammonia nitrogen was significantly higher in the fall (September and October) than in the winter (November and January). This time dependency of ammonia concentrations may be due to a dilution effect owing to variations in the speed of coastal region ocean currents. High concentrations of turbidity at the site S2 may be due to the fact that the site is close to beach camp wastewater treatment outfalls.

In conclusion, this study shows that there is no spatial variation in ammonia concentrations but that there are time-variations in ammonia concentrations. There is no direct impact of the fishing port on the ammonia concentrations. Finally, there is no ammonia accumulation in the study area, and the coastal waters can be described during this period as oligotrophic states. Several recommendations have been made in this study, the most important being to reduce turbidity at beach camp outfalls in the surrounding area. In addition, more data should be collected to complete a mass balance of the nitrogen around the coastal region. A system for monitoring sea water will be useful for scientists and decision-makers. This may be helpful for simulating a dynamics model of nutrients in coastal waters in the long turn.

Ayman Wy Dardona, 10 January 2007

Fellow **Ellen Mangore**

Beneficiary country **Zimbabwe**

Country of study **South Africa**



**Born on 2 March 1972
in Nyanga, Zimbabwe**

Last degree obtained

National University of Science and Technology (NUST), Bulawayo, Zimbabwe: Master of Philosophy (18 October 2002).

Scholarly work and publications

Land-use impacts on the quality of groundwater in Bulawayo, Water SA, 30(4), Mangore, E. and Taibegnu, A. E., Zimbabwe 2004,

Rainwater Harvesting: An Alternative for Resettled Farmers. Technical Report to NUST Research Board. Bulawayo, Zimbabwe. Mangore, E. and Kandenga T., 2005.

Contact

enmangore@nust.ac.zw
enmangore@yahoo.com

Place of research

University of the Witwatersrand
School of Civil and Environmental Engineering
Johannesburg, South Africa

Research undertaken

from 2 April
to October 2006

Effects of wastewater reuse on groundwater quality

The development and assessment of measures for environmental protection of groundwater resources call for appreciable knowledge of the processes that make up a specific ecological structure and the interrelationship among these processes. Such prudence is often required when wastewater is used for groundwater recharge, especially in the shallow, unconfined systems that are vulnerable to quality degradation.

Wastewater use presents an excellent prospect for an additional and convenient water resource, but one of the chief challenges to advances in the implementation of such projects is public acceptance.

Where the wastewater is used for aquifer recharge and later withdrawn for potable use, the dreaded aspect of toilet-to-glass public perception is precluded.

In this work, laboratory column studies to investigate the effect of wastewater quality and vadose zone hydraulic conductivity were carried out in an effort to simulate the biogeochemical processes in soil-aquifer (SAT) treatment for selected parameters.

The study was conducted over four months (June-September 2006). Artificial sewages were made to pass through columns of two different hydraulic conductivities, and water samples of the effluent and influent were collected over time. Samples were analysed for pH, EC, alkalinity, PO₄, SO₄, Cl, F, NH₄, COD, TOC, TC, F and metals, Fe, Zn, Na, Ca, Mg, Cd, Cu, Ni and Pb.

pH was generally within the neutral range, with less than 10% of the observation in the alkaline range, and was usually lower in the influent than the effluent. EC ranged from 270-720 µS/cm and was generally lower in the influent than in the effluent. A similar trend was observed for alkalinity which varied between 99-307 mg/l.

Metals such as Pb, Cd, Cu and Ni were observed to be below the minimum detectable levels both in the influent and effluent.

Fe in the effluent ranged from 0.01 to 0.05, Zn ranged from 0.01 to 0.04. At neutral pH most metals exit in water in the solid phase.

As the pH is mostly in the neutral range, actual levels of trace metals could be higher than detected because at the observed pH most metals tend to be out of solution.

For the alkali and alkaline earth, Na, Mg and Ca, Na varied between 8.3 to 8.5 mg/l, Mg, 6.3 to 7.3 mg/l and Ca, 33 to 38 mg/l.

No significant differences were observed in the removal rates relating to the different sewage compositions as reflected in the comparison of the temporal variability of selected parameters. For most parameters the removal efficiency peaked at the beginning and tended to decline with time.

Water quality transformation did not appear to be affected by the difference in the bulk hydraulic conductivity of the columns.

Ellen Mangore, 2 January 2007



Dilzara Nadir Aghayeva
Iowa State University 2007



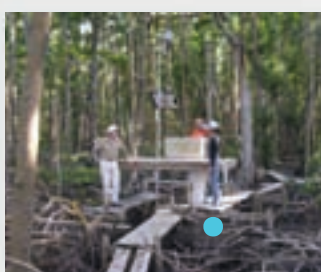
Bela Japoshvili
at the Paravani Lake



Elena Evgenievna Ten
"Institut Pasteur de Lille", France



Mzime Regina Ndebele
Along the old Zambezi River channel in the middle of Lake Kariba, in the Sengwa basin in July 2007, during routine sampling



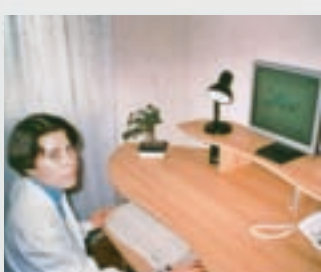
Su Yean Teh
At one of the USGS hydrologic monitoring stations at Shark River, Everglades



Vital Traore
Physical chemistry Laboratory Biomembrane
Moscow State University



Munther Salem
Faculty of Science, Ain Shams University, Egypt



Oana Nanmanona Frincu
Department of Chemistry
Laboratory of Bioelectrochemistry,
University of Florence, Italy



Crisanto Antonio Silva Aguilera
Universidad Autónoma de Baja California
Sur Mexico

Environment/What the fellows say

“The UNESCO/Keizo Obuchi Fellowship provided a good opportunity for conducting part of my doctoral diploma work. It also helped me to broaden my interactions at the laboratory of Professor Thomas C. Harrington. After the fellowship was over, Professor Harrington visited Azerbaijan and we discussed future plans for collaboration.”

Dilzara Agayeva

“The UNESCO/Keizo Obuchi Fellowship gave me a real chance to make progress in science, and to contact and work with highly qualified researchers and scientists, such as my supervisors from Finland (Professor J. Sarvala) and Russia (Dr N. Bogutskaya). It also helped me to improve my professional skills and acquire useful knowledge in my research field.”

Bela Japoshvili

“After this fellowship programme I have become more confident in my professional knowledge and experience and have increased international partnerships.”

Elena Evgenievna Ten

“The UNESCO/Keizo Obuchi Fellowship enabled me to begin my PhD research at a time when conditions for conducting research were austere in my study area; it gave me great motivation to work and attempt to answer pertinent research questions on climate change in my region.”

Mzime Regina Ndebele

“The fellowship has enabled me to develop knowledge, skills and a network that will be useful in my career in education. I will be able to share the knowledge and skills gained with my peers through research collaboration. Further, I hope to pass on the knowledge and skills to the younger generation for capacity-building.”

Su Yean Teh

“The UNESCO/Keizo Obuchi Fellowship gave me the opportunity to have a rich research experience in the field of water pollution.”

Vital Traore

“This fellowship increased my knowledge in the field of treatment of industrial and municipal wastewater, of importance because the lack of operational and efficient wastewater treatment plants makes wastewater the main source of pollution in the coastal zone and aquifer of the Gaza Strip. It also helped me in my job in the department of mentoring and information in EQA.”

Munther Salem

“This fellowship enabled me to use electrochemical techniques in the research I conducted at the Department of Chemistry, University of Florence, Italy.”

Oana Nanmanona Frincu

“I am very grateful to have had this fellowship, which has been an important incentive and has provided me with an interesting opportunity for my scientific research activities.”

Crisanto Antonio Silva Aguilera

Fellow

Dilzara Nadir Aghayeva

Beneficiary country

Azerbaijan

Country of study

United States of America



**Born on 5 June 1968
in Kuba, Republic of
Azerbaijan**

Last degree obtained

Institute of Botany,
Azerbaijan National
Academy of Sciences:
Candidate in biological
sciences (September 1997)

**Scholarly work
and publications**

*Mycobiota of Castanea sativa
Mill. in Azerbaijan. Forest
Snow Landscape Research.
(76, 3:405-408), 2001.*

*Two new Ophiostoma species
with Sporothrix anamorphs
from Austria and Azerbaijan.
Mycologia (96:865-877);
Wingfield, MJ, de Beer, Z.W.,
Kirisits, T., 2004.*

*Ophiostoma dentifundum
sp.nov. from oak in Europe,
characterized using molecular
phylogenetic data and mor-
phology. Mycological
Research (109:1127-1136);
Wingfield, M.J., Kirisits, T.,
Wingfield, B.D., 2005.*

Contact

a_dilzara@yahoo.com

Place of research

Department of Plant Pathology
Iowa State University of
Science and Technology.

Research undertaken

from 1 September 2006
to 5 April 2007

Current condition of *Ulmus* spp. div. affected by Dutch elm disease and *Castanea sativa* showing signs of chestnut blight in Azerbaijan

The aim of the project was to discover the fungi that cause diseases in sweet chestnuts (*Castanea sativa* Mill.) and elms (*Ulmus* spp.) in Azerbaijan. 150 fungal samples were collected and isolated from *C. sativa* and *Ulmus* spp. during field trips, 82 isolates mainly of *Cryphonectria parasitica* (Murill) M.E. Barr associated with *C. sativa* and 18 *Ophiostoma novo-ulmi* Brasier and a few other species associated with *Ulmus* minor were shipped to the United States, and 60 of them were deposited in the culture collection of the Plant Pathology Department at Iowa State University in Ames, Iowa.

The Asian fungus *C. parasitica* is known to produce cankers and dieback in *C. sativa* in Europe. During the last few years there have been reports of sweet chestnut mortality in several regions of Azerbaijan. Cankers were collected from the Gabala, Ismaili, Oghuz and Zagatala forestry sections along the Great Caucasus region. Cankers had orange to red stromata with embedded pycnidia, and cultures from cankers formed pycnidia with conidia 2.5-4 × 1.0-1.2 mm.

DNA extraction, PCR and sequencing were performed for the selected 15 isolates. Sequences of the internal transcribed spacer regions of rDNA (accession nos. EF545114, EF545115) were determined, and these sequences closely matched sequences of Chinese and Japanese isolates of *C. parasitica*.

The pathogenicity of isolates A475 and A480 (specimens MAH2821 and MAH2822) from Gabala were tested on 3-year-old chestnut seedlings in a greenhouse. After 2.5 months, cankers with stromata and pycnidia formed on the 20 inoculated seedlings, and all the seedlings died. Ten control plants similarly treated with sterile MEA discs did not display symptoms.

The Asian fungus *C. parasitica* is well-known on sweet chestnut in Europe. This is the first report of chestnut blight in Azerbaijan and apparently the easternmost location of the disease in Europe.

Three species of Dutch elm disease (DED) pathogen have been distinguished. *Ophiostoma ulmi* (Buism.) Nannf. was responsible for the first pandemic during the period 1910-1940. It was replaced by *O. novo-ulmi* Brasier, which is responsible for the current pandemic. *O. himal-ulmi* Brasier and Mehrotra is endemic in the western Himalaya. The geographical origin of *O. novo-ulmi* is unknown, but two Eurasian (EAN) and North American (NAN) races of fungus are recognized.

It was once believed that DED in Azerbaijan was caused by *O. ulmi*. Samples were collected from the wood of elm trees showing typical DED symptoms (mainly dead trees) in Baku, Ismaili and Lenkoran. Cultures were typical of *O. novo-ulmi*.

Sequences of the ITS regions of rDNA (accession nos. EF638890 and EF638891) were determined for 4 isolates. They were identical to the sequences of *O. novo-ulmi* from Russia, the United Kingdom and the United States. The DED fungus was earlier reported in countries including Georgia, Iran, Russia and Turkey. This is therefore the first report of DED in Azerbaijan.

Dilzara Nadir Aghayeva, 4 April 2008

Fellow

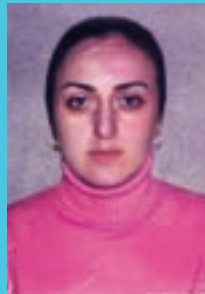
Bela Japoshvili

Beneficiary country

Georgia

Countries of study

Finland and Russian Federation



**Born on 13 November 1972
in Tbilisi, Georgia**

Last degree obtained

Institute of Zoology,
Georgian Academy of
Sciences, Georgia: Ph.D. in
Biology (November 2005).

**Scholarly work
and publications**

*The role and significance of
introduction and acclimatiza-
tion in the biological complex
of the fauna of Georgia (on
the example of Ichtyofauna),
with Kokosadze, T. and
Shonia, L., Proceedings of
the Institute of Zoology,
Vol. XX, pp. 219-222., 2000.*

*About the ecological-biologi-
cal peculiarities of some
representatives of the Family
Cyprinidae: Barbinae, with
Japoshvili, O. and Goletiani,
L., Prometheus, XI-XII,
pp.143-148, 2002.*

*Age, growth, condition factor
and some morphometric cha-
racters of a vendace
(Coregonus albula) in the
Lake Paravani. Proceedings
of the Georgian Academy of
Sciences, Biol.Ser.B.Vol. 2,
No. 1-2, pp. 97-100. 2004.*

Contact

bellaj99@yahoo.com

Place of research

- Department of Biology
University of Turku, Finland
- Zoological Institute of
Russian Academy of Sciences
St Petersburg, Russia

Research undertaken

from 1 March
to 1 December 2007

Monitoring on ichthyofauna in Paravani Lake

From 1990 to 1992, pressure on fish populations in Georgia was aggravated by increased illegal fishing. In addition, a rise in contamination is dangerous for fish and other organisms. At the same time, the economic breakdown of the 1990s had a negative impact on fish production. There was consequently an urgent need to discuss those problems, investigate aquatic ecosystems and monitor the condition of the ichthyofauna.

We began monitoring on Ichthyofauna in Paravani Lake in March 2007, when the Lake was ice-covered. The ice began to melt at the end of April. The lake began to freeze in mid-November. Combined with historical information, the present data show that owing to global warming the start of the Lake Paravani freezing process has shifted from the end of October to November-December.

According to the study, the major species of ichthyofauna in Lake Paravani are the introduced and acclimatized European vendace (*Coregonus albula*) (75% of total catch) and in crucian carp (*Carassius carassius*) (15-20% of total catch). Besides these two species, there are a number of native fish species, namely riffle minnow (*Alburnoides bipunctatus*), roach (*Rutilus rutilus*), khramulya (*Capoëta capoëta*), chub (*Squalius cephalus*), kura gudgeon (*Romanogobio macropterus*), murtsa (*Barbus murusa*) and, in very small numbers, brown trout (*Salmo trutta*) and the native carp (*Cyprinus carpio morpha hungaricus* Heck).

The fellowship programme included two visits abroad, to Russia and to Finland. At the Institute of Zoology of the Russian Academy of Science, we worked on fish collection and in the library, we discussed fish monitoring issues and had a practical course in using the Artedi Collection Management System software for the purposes of

monitoring aquatic ecosystems. Based on new systematic data an updated list of the species inhabiting Lake Paravani was prepared. Before this, the old nomenclature and systematic names were used in Georgia. An updated taxonomic methodology will help to develop systematic and taxonomic research in the future.

During my stay in the University of Turku, I became thoroughly acquainted with the aquatic research conducted by the Section of Ecology, with particular emphasis on the methodology used to monitor water (including the Finnish, CEN and ISO standards), the using the published and unpublished sources available, and extensive use of both the conventional and electronic library services of the University of Turku. I participated in two field research trips, to Lake Littoistenjärvi to obtain the regular water quality monitoring samples, and to Lake Pyhäjärvi to become familiar with the coregonid fish research methods used there. In addition to the University of Turku, I visited the Turku Unit and the Evo Unit of the Finnish Game and Fisheries and the Lammi Biological Station of Helsinki University. The short visit was used efficiently for obtaining as the broadest possible knowledge of wide experience as possible on the aquatic research and management system in Finland and to some extent in the European Union as a whole.

This knowledge will provide a good basis for conducting further successful research along these lines.

Bela Japoshvili, 8 April 2008

Fellow

Elena Evgenievna Ten

Beneficiary country

Kyrgyzstan

Country of study

France

Born on 8 May 1980
in Tomsk Province, Tomsk
Town, Russian Federation

Last degree obtained

Kyrgyz State Medical
Institute of Postgraduate
Training and Continuous
Education, postgraduate
training, Bishkek, Kyrgyz
Republic: Specialist in
Preventive Medicine
Certificate (1 September
2005)

Scholarly work and publications

Study of traffic-accident related injuries of children in the Kyrgyz Republic.

Proceedings of the international conference "CEHCA-2005 Children's Environmental Health in Central Asia", with O.T. Kasymov, A.A. Sharshenova, A.J. Sultashev, E.J. Majikova, K.S. Arsygulova. Almaty, pp. 201-202, April 2005.

Assessment of Polycyclic Aromatic Hydrocarbons in the atmospheric air of Bishkek City, with T.V. Vasilkova, O.T. Kasymov, A.A. Sharshenova.
In: *Gigiena I Sanitariia*, accepted for publication.

Contact

elena_spcpm@yahoo.com

Places of research

- Department of Water and Environment
Institut Pasteur de Lille, France
- Laboratory of Environmental Health and Toxicology
Ministry of Health of the Kyrgyz Republic

- Laboratory of Bacteriology
Bishkek Center for State Sanitary-Epidemiological Surveillance (BCSSES)

Research undertaken

from 5 September 2006
to 4 May 2007

ISO 17025 laboratory quality control practices and ISO microbiological analytical standard methods for testing drinking water

With the richest water resources in Central Asia, the Kyrgyz Republic is having difficulty in providing its population with quality water. Water quality analysis data show that national requirements for microbiological parameters are not met in 14.6% of cases. The standards currently in use were established in the 1970s in the Soviet Union and require revision and harmonization with international quality standards.

The research was conducted at the Department of Water and Environment of the Institut Pasteur de Lille (IPL), France.

The application of the results is being carried out in the Kyrgyz Republic, at the Scientific and Production Centre for Preventive Medicine and the Bishkek Centre for State Sanitary-Epidemiological Control (BCSSEC). The total duration of the study was eight months.

The study involved standards documents based on international approaches and standards, namely ISO; national documentation on quality control and quality assurance for microbiological testing of water; the use of ISO standards and analysis methods in practical work; and hands-on work on samples of water collected from different sources. During the study, 13 main manuals and standards were studied and used in practice on actual samples. Water samples were taken from different drinking water sources: artesian holes before and after decontamination, street water pumps and house taps, rivers, cooling towers and drinking coolers in Lille (France), Bishkek and Chui Oblast (Kyrgyz Republic). The research done at IPL consisted of taking 50 water samples from different sources. About 500 analyses were done. In the Kyrgyz Republic, 50 water samples were taken and tested. In accordance with standards, the following nutrient media were prepared and used for water analysis: TTC – for inoculation of *E.coli* and coliforms; Slanetz-

Bartley – for inoculation of intestinal enterococci; Pseudomonas Cetrimide – for inoculation of *Pseudomonas aeruginosa*; TSC Gelose – for inoculation of Sulfite reduce bacteria; Chapman Mannitol – for inoculation of *Staphylococcus aureus*, etc. I learned how to work with several modifications of a filtration device.

Drinking water samples in the Kyrgyz Republic were analysed according to ISO standards for three parameters: total coliforms and *E.coli*, intestinal enterococci, and *Pseudomonas aeruginosa*. Of the 50 samples taken in Bishkek and Chui Oblast, 18 samples of drinking water (36%) were positive for thermo-tolerant and total coliforms bacteria and one sample was positive for faecal enterococci. These results indicate recent faecal contamination. Of the positive results, 50% are officially negative.

On the basis of the data and knowledge obtained, lectures were prepared on the basics of ISO assurance standards for laboratory test performance and ISO standards on water quality analyses and their use for microbiological testing of water, for a target audience of physicians and students. The lectures included material on the use of ISO standards 9000, 14000, 17025 and drinking water quality standards. Two lectures were held for bacteriologists. Educational material has been prepared for advanced medical students.

I helped to prepare an application to the NATO Science for Peace Program for a collaborative research project. Under the project I would be the investigator responsible for the organization of practical training courses in the Kyrgyz Republic.

Elena Ten, 4 July 2007

Fellow

Mzime Regina Ndebele

Beneficiary country

Malawi

Country of study

Zimbabwe



**Born on 11 November 1979
in Zomba Town, Malawi**

Last degree obtained

University of Zimbabwe:
Master’s Degree (MSc.) in
Tropical resource ecology
(September 2003).

**Scholarly work
and publications**

*The occurrence of
Microcystin-LR in Lake
Chivero, Zimbabwe. Lakes
and Reservoirs: Research and
Management*, 11: 57-62,
available online at Blackwell
Synergy (www.blackwell-
synergy.com) Ndebele, M. R.,
and Magadza Christopher
H.D, 2006

*The phytoplankton commu-
nity of an inland lake,
Zimbabwe.* Proceedings of
the 11th World Lakes
Conference: Management of
lake basins for their sustain-
able use: global experi-
ences and African issues;
sustainable management of
African lake basins. Nairobi,
Kenya. 31 October-04
November 2005. Ndebele,
M. R., and Magadza
Christopher H.D, 2005

*The primary production of
an artificial lake, Harare,
Zimbabwe.* Management of
Lake Basins for their sustain-
able use: Global experi-
ences and African issues;
Sustainable management of
African lake basins’, Nairobi,
Kenya. 31 October- 04
November 2005. Ndebele,
M. R., and Magadza
Christopher H.D, 2005

Ndebele, M. R. (2004).
*Nutrient Limitation and
Grazing Experiments on
Phytoplankton in Lake
Kariba, Zimbabwe.*
Proceedings of the 12th
World Lakes Conference:
Conserving lakes and wet-
lands for the future, Jaipur,
India. 28 October- 02
November 2007.

Contact

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murisa.mzime@gmail.com

Place of research

Department of Biological
Sciences,
University of Zimbabwe,
Zimbabwe

Research undertaken

from January
to September 2007

A study of global climate change and production in Lake Kariba, Zimbabwe

Under the UNESCO/Keizo Obuchi Research Fellowships Programme (2006), I conducted research for a period of nine months at the University of Zimbabwe on “Global climate change and primary production in Lake Kariba, Zimbabwe”. During the research period, data were collected on the various components of the phytoplankton ecology and limnology of the lake. Secondary data were collected from past literature, workers and research institutes on the climate, plankton, and fish ecology of the lake.

In comparison with past studies, the data showed considerable change in the limnochemistry and thermal state of Lake Kariba as increases in the major nutrients (nitrogen and phosphorous) as well as physico-chemical parameters namely pH, temperature, conductivity, Total Dissolved Solids (TDS), suggesting that the lake is moving from an oligotrophic to a mesotrophic-eutrophic state. However, even though nutrients have increased, the results also showed that there has been a shift in the thermocline from 15 to 7 meters in the lake, which has reduced the optimal habitat for phytoplankton in space. This phenomenon was attributed to climate change, and in particular global warming as temperature changes in the Middle Zambezi, where Lake Kariba is located, are occurring at a faster rate than model predictions (comparison of MAGICC/SCENGEN simulated climate for comparable periods). It was also observed from past climatic data that the winter seasons (March to August) have a higher decadal mean warming rate (0.62) than the warmer months of September to February (0.45) while the minimum (night) temperatures for the winter season (June to August) have been warming faster than the seasonal maxima (0.65 against 0.47 respectively).

These recordings are consistent with the limnological data observed in my study, which show that there has been considerable warming of the waters of Lake Kariba, and it can be concluded that Lake Kariba has warmed up in response to the warming of the air temperature.

The temperature rise would have cascading effects on production in the lake as explained above and, in general, fish catch and production have been declining in the lake since the mid 1990s. Primary production was shown to be a good indicator of production in the lake and there is a possibility that the phytoplankton community may also be adversely affected by the warming of the lake. My study showed a dominance of diatoms (Brown algae) and cyanobacteria (Blue-greens) with a near-absence of chlorophytae (Green algae) in the lake. Laboratory experiments have shown that the optimum growth rate of chlorophytae is between 21° and 23°C (Sibanda, 2003), and this could explain the low biomass of this group of algae in Lake Kariba where 73% of the 5m temperature observations are above 24°C, which is a more favourable environment for cyanobacteria and diatoms. Such changes could be attributed to global warming but there is a need to qualify this through further and long-term studies taking account of anthropogenic factors that also have an impact on production in the lake. The study, although short-term, contributed to some understanding of possible impacts of climate change on Lake Kariba.

Mzime Regina Ndebele, 27 March 2008

Fellow

Su Yeon Teh

Beneficiary country

Malaysia

Country of study

United States of America



**Born on 6 November 1981
in Malaysia**

Last degree obtained

Universiti Sains Malaysia
(USM): Doctor of Philosophy,
(22 March 2008).

**Scholarly work
and publications**

*A Simulation Model for
Projecting Changes in
Salinity Concentrations and
Species Dominance in the
Coastal Margin Habitats of
the Everglades.*

Ecological Modelling 213
(2), 245-256. With DeAngelis
D.; Sternberg, L.; Miralles-
Wilhelm, F.R.; Smith, T.J. and
Koh, H.L.; 2008.

*A Competition between
Hardwood Hammocks and
Mangroves.* Ecosystems 10
(4), 648-660. With
Sternberg, L.; Ewe, S.;
Miralles-Wilhem, F.R. and
DeAngelis, D.; 2007.

*Tsunami Mitigation
Management.* Special feature:
Natural Disaster
Management Technologies.
The United Nations Asian
and Pacific Centre for
Transfer of Technology (UN-
APCTT) Nov.-Dec. 2007, Asia
Pacific Tech Monitor 24 (6),
47-54. With Koh, H.L. and
Izani, A.M.I.; 2007.

Contact

su_yean@hotmail.com
syteh@usm.mv

Place of research

Department of Biology
University of Miami,
United States of America

Research undertaken

from 17 November 2006
to April 2007

Management modelling of everglades wetlands hydrology and ecosystems

Sharp boundaries typically separate the salinity tolerant mangroves from the salinity intolerant hardwood hammock species, which occupy similar geographical areas of southern Florida. Previous studies indicate that there is a discontinuity in plant predawn water potentials, with woody plants either showing predawn water potentials reflecting exposure to saline water or exposure to fresh water.

This abrupt concurrent change in community type and plant water status suggests a feedback dynamic between vegetation and salinity. Based upon previous field studies and observations, a model examining the salinity of the vadose layer overlying a saline body of water as a function of precipitation, evaporation and plant water uptake was developed. The model predicts that mixtures of saline and freshwater vegetative species represent unstable states. Depending on the initial vegetation composition, subsequent vegetative change will lead either to patches of mangrove coverage having a high salinity vadose zone or to freshwater hammock coverage having a low salinity vadose zone. Complete or nearly complete coverage by either freshwater or saltwater vegetation represent two stable steady-state points.

This model can explain many of the previous observations of vegetation patterns in coastal South Florida as well as observations on the dynamics of vegetation shifts caused by sea level rise and climate change. Although the boundaries between the two vegetation types are relatively stable, due to the sensitivity of the hardwood hammocks to salinity, there may be circumstances where a perturbation in salinity may induce changes in the distribution of hardwood hammocks and mangroves, resulting in a shift from one vegetation type to the other.

Therefore, further investigation was conducted to take account of storm surge events in order to study the effects of this large-scale disturbance on the spatial pattern of hardwood hammocks and mangroves. Model simulation results indicate that a heavy storm surge which completely saturated the vadose zone at 30 ppt for one day could lead to the eventual domination by mangroves of areas previously dominated by hardwood hammocks. Lighter storm surges which saturated the vadose zone at less than 7 ppt did not cause vegetation shifts. Further investigations indicate that the thickness of the vadose zone, couple with precipitation, influence the residence time of high salinity in the vadose zone and therefore determine the rate of mangrove domination. The model developed can be used to simulate the dynamics of other types of coastal freshwater and saline ecosystems that exhibit a similar pattern.

Su Yean Teh, 10 June 2008

Fellow

Vital Traoré

Beneficiary country

Mali

Country of study

Russian Federation



**Born on 28 July 1967
in Ségou, Mali**

Last degree obtained

Moscow State University:
Ph.D. in General Ecology,
Ecotoxicology, Human
Ecology (29 June 2001)

**Scholarly work
and publications**

*Les études basées sur le bio-
monitoring de détoxification
enzymatique des membranes
des animaux aquatiques et
de l'influence des xénobio-
tiques sur l'activité photosyn-
thétique des phytoplanctons.*

Fonds d'écologie et de
conservation de la nature
de la Fédération d'Allemagne,
pp. 247-251. With Kotelevtsev,
S.V.; Matorin, D.V.; Féodorov,
V.M.; 2001.

Contact

vitaltraore@yahoo.fr

Place of research

Physical chemistry
Laboratory Biomembrane
Moscow State University

Research undertaken

from 23 October 2005
to January 2006

Evaluating pollution by carcinogenic and mutagenic xenobiotics of aquatic ecosystems in Bamako and its surroundings

Anthropic activities in nature are giving rise to an accumulation of carcinogenic xenobiotics, genotoxics, oncogenes, teratogens, endocrine disruptors (reproductive problems), and so forth.

In general, the concentration of anthropogenic disruptors increases from link to link. Special attention has been paid to the carcinogenic and mutagenic power of these chemical compounds in higher-level organisms, such as the fish and birds of the aquatic ecosystems of the Niger River in Bamako.

Our investigation focused on the impact of xenobiotics on the biotic elements of the aquatic ecosystems in Bamako and its surroundings.

We examined 157 samples from the liver and intestinal tissue of hydrobiotic organisms from the ecosystems under review.

The experiment (described by Ames, B.N. et al., 1975) made it possible to detect any special accumulation sites for organic pollutants, and their method of transfer, to conduct a comparative study of enzyme activity in biliary fraction; to identify sensitive animals and to evaluate the toxicity of the chemical compounds. The study yielded the index of lipophilic polluting agents responsible for a probable bioaccumulation in the final biological consumer, for example, human beings.

Among the 157 samples analysed we found a mutagenic effect or activity (shown in bold) in the tissues, intestine and liver of 121 of them, in 85% of the fish and 81% of the birds, or 77% in total. The fish showed mutagenic activity on at least one of the bacterial strains (TA-98, TA-100, TA-1535, TA-1637 and TA-97). In contrast, 15 tissue, liver and intestine samples and 10 fish tissue samples tested negative on the Ames test on all bacterial strains. The biotest demonstrated significant mutagenic activity in migratory birds compared to that found in native populations.

Chemical analyses of 15 samples demonstrated the presence of xenobiotics with concentrations ranging from 10 times (for biphenyl, fluorene, indol[1,2,3-cd+pyrene, ...], 200 times (for DDT, benz[ox]pyrene ...) to 1,000 times (for pyrene, phenol ...) higher than that authorized for water. We found 30 substances of which 45% were mutagens and 16% were carcinogens.

Biochemical analyses of cytochrome P450 enzyme activity in the birds revealed that it was higher than the activity recorded in the fish. Despite that advantage, the birds tested also demonstrated a significant accumulation of organic pollutants that can cause cancer or mutation in those animals.

Biological and chemical analyses indicated a high pollution level in the Niger River. This river needs special monitoring.

The proper implementation of the recommendations will make it possible to reduce the concentration of the chemical compounds in the tissues of aquatic animals in the Niger River in Bamako and the comparatively high death rate of species found in the ecosystems under consideration.

Vital Traoré, 4 February 2008
Translated from French by UNESCO

Fellow

Munther Fathi Mohammed Salem

Beneficiary territory

Palestinian Authority

Country of study

Egypt

**Born on 10 May 1977
in Gaza, Palestine**

Last degree obtained

Ain Shams University in Egypt and Al-Aqsa University Palestine: Master's degree in environmental chemistry (2003)

Scholarly work and publications

Treatment of municipal wastewater in Gaza strip in the presence of hydrogen peroxide.

Professor Samia M. Mokhtar, Dr Kaled M. El-Sousy, Dr Mohamed M. Isa. Al-Aqsa University journal, Volume 7- No.1, pp. 107-119 Shawwal 1423 H- January 2003.

Treatment of municipal wastewater in Gaza Strip in the presence of hydrogen peroxide. Paper presented at the

First International Conference for Science and Development, Islamic University of Gaza, 6-7 March 2005.

Removal of Cyanide from Polluted Wastewater from Metal Finishing Industry in the Gaza Strip. Paper presented at the

Second International Conference for Science and Development, Islamic University of Gaza, 6-7 March 2007.

Contact

monthersalem@yahoo.com

Places of research

- Ain Shams University, Faculty of Science, Egypt
- Chemistry Department, Al-Aqsa University, Palestinian Authority

Research undertaken

from 1 September 2006 to May 2007

Using TiO₂ with sunlight and H₂O₂ to eliminate some organic pollutants in water and wastewaters

The lack of operational and efficient wastewater treatment plants makes wastewater the main source of pollution in the Gaza Strip coastal zone and aquifer.

About 90% of all wastewater is discharged into the environment either untreated or inadequately treated. Thus, there is a great need for drastic improvement in collection and treatment in Palestine. Our system will study the treatment of organic pollutants, which are the main pollutants of wastewater, considered to be the most threatening problem in the Gaza Strip.

I recently introduced advanced oxidation method (AOM), which includes hydrogen peroxide with TiO₂ under sunlight, is suggested to treat a variety of industrial wastes containing a range of toxic organic compounds (phenols, formaldehydes, complex wastes derived from dyestuffs, pesticides, wood preservatives, plastics additives, and rubber chemicals). AOM may be applied to wastewater, sludge or contaminated soils. Our treatment in the laboratory was conducted under the supervision of Dr. Khaled El-Sousy in order to study the results of our system, which is considered to be the only solution for organic chemical pollutant. Organic pollutants cannot be treated in the biological system (bacteria) of municipal wastewater treatment, in which account is also taken of toxic chemicals that kill the bacteria so it reduces the efficacy of the treatment plant. Some of the chemical analysis was conducted at Al-Aqsa University. Other analyses that were not conducted at Al-Aqsa University, such as ESR, will be conducted at Ain Shams University (Egypt) under the supervision of Professor Samia Mokhtar.

A thermostated water bath was connected to a thermo-jacket for fixing temperatures. Locally computed apparatus, 600 ml pyrex-beaker surrounded by thermal jacket with

magnetic stirrer below, the whole system was installed in a dark wood box. A light source (300 watts, 82 volts APOFHS lamp) was installed and focused on the reaction bath. A photo-catalytic oxidation study was conducted for similar samples of different pollutants, which were treated identically under the same conditions, such as stirring power, working temperature (40.0 Co), [H₂O₂]₀, amount of TiO₂ per litre of the treated water, and the same light source in the same situation. Substrates concentrations were followed spectrophotometrically.

In this project, five substrates with various oxidation potentials were examined as model pollutants. A detailed kinetic study was conducted on one of them (picric acid). The oxidation kinetics were investigated; the influences of different parameters such as light intensity, pH, temperature, the amount of catalyst per litre of treated water, and the initial concentration of H₂O₂ were studied seeking the optimum conditions of the process. The spectrophotometer method was used for the kinetic study.

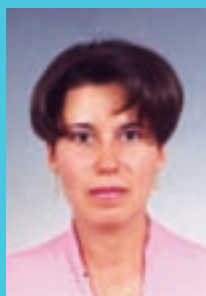
The results demonstrated that in the studied ranges the process is efficient and practical even for the most persisting pollutants. Oxidation is directly proportional to: light intensity, amount of catalyst per litre of treated water, and the initial concentration of H₂O₂. The process was found to be of the Arrhenius type. Increasing pH increased the process rate. Electron Spin Resonance (ESR) measurements were conducted concerning the presence of free radicals and the test was positive.

Munther Fathi Mohammed Salem, May 2007

Fellow **Oana Nanmanona Frincu**

Beneficiary country **Romania**

Country of study **Italy**



**Born on 28 May 1980
in Bucharest, Romania**

Last degree obtained

International Center for
Biodynamics, Master's
degree in Biodynamics
(June 2005).

**Scholarly work
and publications**

*Nucleic-Acid-Based
Biosensors for enviromental
assessment of toxic chemicals.*
Winner of "Global 100 Eco-
Tech Awards", in Japan,
2005. World Exposition,
with technology.

*DNA-Based Biosensors for
detection of Genetically-
Modified Organisms.* Faculty
of Chemistry, June 2005:
Master's Thesis.

*Studies referring to the effect
of some cations of heavy
metals over apoptosis in the
fish hepatocytes.* June 2003:
Thesis.

Contact

nanmanona@yahoo.com

Place of research

Department of Chemistry
Laboratory of
Bioelectrochemistry,
University of Florence, Italy

Research undertaken

from 28 September 2006
to May 2007

Nucleic-acid-based biosensors for environmental assessment of toxic chemicals

During my UNESCO/Keizo Obuchi research fellowships in 2006, at the Department of Chemistry, Laboratory of Electrochemistry (University of Florence), I used electrochemical techniques including cyclic voltammetry (CV), AC voltammetry, electrochemical impedance spectroscopy (EIS) to check the monolayers and bilayers on the surface of working electrodes (gold) and the combination of electrochemical techniques and surface plasmon resonance (SPR).

Cyclic Voltammetry is a powerful tool for the determination of formal redox potentials, detection of chemical reactions that precede or follow the electrochemical reaction, and evaluation of electron transfer kinetics.

AC Voltammetry typically involves the application of a sinusoidally oscillating voltage to an electrochemical cell. Fundamental AC voltammetry (current measured at the same frequency as the applied voltage) was applied for analysis and for the kinetic characterization of electrochemical reactions.

Electrochemical Impedance Spectroscopy (EIS) is a powerful tool for examining many chemical and physical processes in solutions. For solution phase electrochemistry, a complex sequence of coupled processes such as electron transfer, mass transport and chemical reaction can all control or influence the output from an electrochemical measurement. EIS characterizes, in a single potential scan, different interrelated processes (interfacial charge transfer, diffusion, adsorption, etc.) and interfacial structures (double electric layer, space charge layers, etc.) at non-stationary electrochemical interface. EIS has been proven to be a powerful and accurate method for measuring the resistance and capacitance of monolayers and bilayers. An important advantage of EIS over other laboratory techniques is the possibility of

using very small amplitude signals without significantly disturbing the properties being measured.

The **Surface Plasmon Resonance (SPR)** phenomenon has been known for a long time, although its application in biosensing is relatively new. A surface plasmon is an electromagnetic surface-bound wave (p-polarized) propagating along the interface between a metal and a dielectricum. The bonded wave has an evanescent field associated with it, decaying exponentially perpendicular to the surface.

The advantage of SPR is that it allows biomolecular interactions to be studied in real-time. There is also no need for labelling (with for example radioactivity or fluorescence), which, in addition to saving time, helps to preserve biomolecular nativity. By modifying the metal surface with organic thin films (SAMs) and subsequently biomolecules (proteins, ligands and DNA), one obtains a biosensor, able to monitor interactions with complementary biomolecules, since these interactions will result in a shift in the refractive index near the surface.

Oana Nanmanona Frinco, 21 March 2008

Fellow

Crisanto Antonio Silva Aguilera

Beneficiary country

Venezuela

Country of study

Mexico



**Born on 23 September 1969
in Jubibana, Venezuela**

Last degree obtained

University of Tübingen:
Master's Degree in
Groundwater (2003)

**Scholarly work
and publications**

*Mass movement in the
Central Wutach valley
(S. Black Forest), Germany.*
With Fecker, E., 2006.

*Risk and hazard assessment
using GIS in the Central
Wutach valley (S. Black
Forest), Germany.*
With Fecker, E., 2005.

*Inventario geotérmico de
Trujillo Septentrional y dis-
trito Moran del Estado Lara.*
UIT, Carrillo, E., Benitez, R.
Published in abstract book.
ASOVAC, Caracas, 1995.

Contact

crisantosilva@yahoo.com

Place of research

Departamento de Geología
Marina, Universidad Autónoma
de Baja California Sur, Mexico

Research undertaken

from 1 February
to 31 October 2007

Assessing water resources using sedimentation in present days and Maya water reservoirs in the Yucatán peninsula, Mexico

Aspects of the proposal

Water resources have been scarce in the last centuries. Sedimentation in reservoirs is one of the serious problems in semi-arid and tropical areas. Sedimentation in water reservoirs causes serious environmental problems and results in direct water storage reduction. Recent research indicates that gully erosion is an important source of sediments in these regions. Sedimentation in reservoirs has been used as a proxy for sediment yield and also provides information about land use and climate change.

The proposed research is based on the use of sediment records in ancient and present day water reservoirs with the aim of comparing present and past land use and climate change within selected catchments. The proposed research involves the development and application of a new approach for estimating the sediment yield variability of key ancient and existing reservoirs and gully erosion at Mexican sites. Sediment yield variability will be compared in the selected catchments and related to land use and climate change, based on the presence of intensive gully erosion processes and water reservoirs from Mayan times until the present day. The aims are to assess actual and future water resources, using GIS modelling and taking into consideration geology, soil type, vegetation, land use and climate, in order to predict erosion-sedimentation in the selected catchments. The suggested areas of study are located in the Yucatán Peninsula in Mexico. The methodology is based on geophysics, geochronology, sedimentology and climatology methods. The project uses experts from various disciplines, including archaeologists, palaeo-environmental specialists and geochronologists, to collect and analyse sediment samples taken from gully

incision, terraces, Mayan and present day water reservoirs that represent a wide range of conditions in the selected catchments. The proposed research will provide the first systematic approach to understanding sediment yield variability as an assessment for water reservoirs and its relation to land use and climate change from the Mayan era until the present day for selected catchments and will be correlated with records of environmental change at other sites in the Caribbean.

Research methodology

The project had a series of key objectives which together are designed to provide simultaneously a wide experience and training, to generate key sediment yield data from stratified ancient and present day water reservoirs, gullies and fluvial terrace sites from the Yucatán Peninsula in Mexico, to interpret the sites in the light of a new approach for assessing water reservoirs and relating them to land use and climate change, and, finally, to compare with results obtained under the fellowship and by other authors in different countries, and to consider the palaeoenvironmental implications for phases of human occupation.

Crisanto Antonio Silva Aguilera, 12 November 2008

“To give greater depth to political, philosophical and intercultural dialogue and to mutual understanding of shared memories and values, ambitions and joint projects admittedly requires an updated chart of lines of convergence and divergence, of the differences, silences, misunderstandings and deadlocks that are always possible.”

Koïchiro Matsuura
Director-General

[on the occasion of World Philosophy Day,
UNESCO, 15 November 2007]

“I believe that we should make the 21st century a human-centered century... In order to build such a future, that is to say such a ‘tomorrow’, the most important thing is for the intellectuals to gather by crossing national borders and sharing their confidence in the future based on common aspirations emerging from their intellectual dialogue.”

Keizo Obuchi
then Prime Minister

[From Opening Remarks at a meeting on
“Intellectual Dialogue on Building Asia’s
Tomorrow” Tokyo, 2 December 1998]

2005

- **Eloisa Blanca Mussat**
Argentina
- **Marcelo Bonilla**
Ecuador
- **Cutberto Hernandez Legorreta**
Mexico
- **Rafael Antonio Florez Paz**
Peru
- **Ana Koprivica**
Republic of Serbia

2006

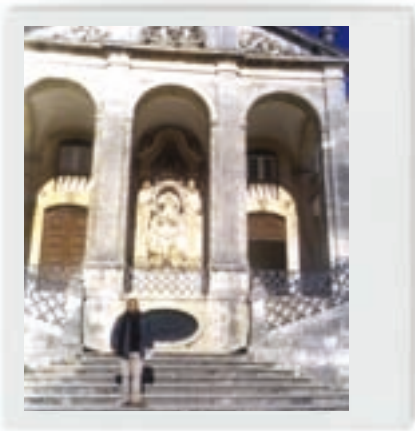
- **Ousmanou Adama**
Cameroon
- **Jairzinho F. Panqueba**
Colombia
- **Goran Sekulovski**
The former Republic
of Macedonia
- **Juan Javier Rivera Andia**
Peru
- **Nicole Dolowy**
Poland
- **Silvia Zászlós**
Slovakia



Eloisa Blanca Mussat
In Skurutpana with local family (community Wayuu)



Marcelo Bonilla Urvina
Together with undocumented persons for the construction of a new citizenship



Cutberto Hernández Legorreta
At the entrance of the Library at the University of Coimbra



From left to right: **Ana Koprivica, José Matos Arévalos and Miguel Barnet**



Rafael Antonio Flores Paz
In Paris, France



Rafael Antonio Flores Paz
In Beijing, China

Intercultural Dialogue

“The UNESCO/Keizo Obuchi Fellowship enabled me to finish my field research on the Venezuelan and Colombian border and gave me the opportunity to write the first part of my PhD dissertation, which I plan to finish this year.”
Eloisa Blanca Mussat

“Together with undocumented persons for the construction of a new citizenship.”
Marcelo Bonilla Urvina

“‘Alem do mar’: is something more than a set phrase, it is a lifestyle that enables people to enter the universe of different cultures and mental structures in a shared environment where time no longer exists.”
Cutberto Hernández Legorreta

“Intercultural dialogue can foster new experiences and encourage us to act in the interests of humanity and peaceful dialogue...”
Ana Koprivica

“The UNESCO/Keizo Obuchi Fellowship has provided me with essential support in my professional life as a philosopher in understanding that the dialogue of ideas between different cultures is basically an exchange of ways of living and feeling.”
Rafael Antonio Flores Paz

Fellow

Eloisa Blanca Mussat

Beneficiary country

Argentina

Countries of study

Venezuela and France

**Born on 21 June 1977
in Buenos Aires, Argentina**

Last degree obtained

Université Paris VIII, Paris, France: D.E.A. (Diplôme d'études approfondies) in anthropologie et sociologie critiques du développement et des échanges (8 June 2004).

Scholarly work and publications

« *Le commerce wayuu, la contrebande et la Coopérative Mixta Guajira dans la ville de Maracaibo et la Péninsule Guajira* ». Mémoire de Maîtrise en Ethnologie, Mention « très bien », Sous la direction de Mme. Olinda Celestino, Université Paris VIII 2001

« *Le peuple Wayuu: entre espace rural et espace urbain, économie pastorale et nouvelles activités de subsistance dans la région frontalière colombo-venezuelienne* ».

Mention « très bien ». Sous la direction de Mme. Olinda Celestino et Pierre-Philippe Rey. Université Paris VIII- Université Paris I- Sorbonne- Institut d'Etudes du Développement Economique et Social » (I.E.D.E.S), 2002

“ La iglesia CRAPE: un caso de pentecostalismo sincrético rural wayuu y su relación con la modernidad ” en Sociedad Urbana y Vida social”. Ediciones L.U.Z (under publication)

Contact

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Place of research

- Universidad de Zulia
Departamento de Ciencias Humanas, Unidad de Antropología, Laboratorio de Antropología Social y Cultural, Maracaibo, Venezuela

- Université de Caen,
Département de Sociologie
Laboratoire de Socio-Anthropologie du risque, UFR Sciences de l'Homme, Caen, France

Research undertaken

from 23 January
to 22 October 2006

Conversion to Pentecostalism in the Wayuu community on the border between Colombia and Venezuela

After research conducted abroad under the UNESCO/Keizo Obuchi Fellowship Programme, I pursued my examination of the data and analyses relating to the presence of Pentecostal churches on the ancestral territory of the Wayuu, an Amer-Indian community, on the border between Colombia and Venezuela, and the impact of those churches on that culture.

My study on the conversion to Pentecostalism of the Wayuu family, Gomez, and the establishment of their Pentecostal church CRAPE at the tip of the Guajira Peninsula in Columbia reflects these concerns. The initial results of my study demonstrate an identity which is modified and practices which change as the circumstances of the family and the CRAPE religious congregation evolve. Rules and prohibitions as well as constant changes in the liturgy and rituals demonstrate that this identity is not yet fixed but is flexible and capable of reconciling apparent contradictions. The new identity of these Wayuus who have converted to Pentecostalism thus provides them with an opportunity to adopt new behaviours and practices which give new meaning to their life.

Moreover, through tithes and offerings and the results of evangelization campaigns in the region, the CRAPE church has been responsible for a significant modification in the resources of the Gomez family. Their financial situation has improved substantially and their prestige and status have greatly increased within the Wayuu society of the region. The CRAPE congregation members' gift of healing is at the origin of this change in status and prestige.

The relationship to modernity is highly relevant in the case of the Gomez family's religious conversion: the rapid pace of technological innovations, means of communication and technological tools make them increasingly accessible, and they are present, directly or indirectly, in every region of the world. The relationship between Pentecostalism and modernity must be seen within the current context of globalization, which acts as a multiplier of modernity.

The accelerated and profound transformations we are experiencing are also having an impact on the Wayuu and it is not surprising that in the middle of the Guajira Peninsula, the Gomez family is incorporating non-Wayuu elements into its new identity: the new codes of behaviour and the contents of "prophesy" messages are strong indicators of this trend which combines several images of the modern western world – the city, western technological innovations, order, hygiene, the business world, rational organization and bureaucracy – with the Pentecostal identity of the CRAPE church.

Eloisa Blanca Mussat , 18 January 2007

fellow

Marcelo Bonilla Urvina

Beneficiary country

Ecuador

Country of study

Spain



**Born on 11 February 1965
in Quito, Ecuador**

Last degree obtained

Facultad de Ciencias de la Comunicación
Blanquerna, Universidad Ramón Llull, Barcelona, Spain: DEA (Diploma de Estudios Avanzados), Doctoral programme in Communication and Humanities (15 June 2006).

Scholarly work and publications

Internet and Society in Latin America and the Caribbean. International Development Research Centre, Ontario, Canada, 2004, Marcello Bonilla and Gilles Cliche.

La construcción de la imagen en el estatuto del inmigrante indocumentado en la España de la época de la globalización. In Daniel mato (coordinador), Política de Ciudadanía y sociedad civil, Caracas, Facultad de Ciencias Económicas y Sociales, Universidad Central de Venezuela, 2004.

Hacia una antropología de la representación de los sistemas globales. Quito, Revista ICORNOS, FLACSO – Sede Ecuador, No. 17, September 2003.

El efecto mitológico de la teoría de la cultura de la pobreza. Quito. Revista ICORNOS, FLACSO – Sede Ecuador, No. 7, April 1999.

Contact

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Place of research

Universidad Ramón Llull
Facultat de Ciencies de la Comunicació
Barcelona, Spain

Research undertaken

from 1 April
to 31 December 2006

The politics of intercultural dialogue and the deconstruction of citizenship: study of the “undocumented” movement in the city of Barcelona

This investigation studies the mechanisms of social inclusion and exclusion from citizenship. More specifically, it is an analysis of the process of construction of euro-citizenship and the construction of the status of the “undocumented” or “illegal” person. Through a detailed analysis of the links between national (Spanish), autonomous (Catalan) and community (European) standard-setting instruments, the study demonstrates how euro-citizenship, the new European institution of the globalized era, reproduces at a more sophisticated (systemic) level the centuries-old dynamics of the ethnic and social exclusion of the “Other”, characteristic of the modern nation-state.

The first part, entitled “The origin of citizenship, structural axis of the relations of force and domination: from a monocultural model to an intercultural model”, consists of an analysis of the origin of citizenship, as the central institution of the western nation-state, conceived as a mechanism of social inclusion and exclusion. A study is made of the keys which guided the historical process by which civil, political and social rights became part of the so-called social contract, through social struggles and victories. In addition, citizenship is examined as a symbolic and political mechanism which produced a historic fusion of the concepts of *ethnos* (membership based on identity) and *civitas* (membership based on politics), a process which gave rise to the identification and recognition of the institutions of citizenship and nationality. This theme requires an understanding of how the western state came into being as a result of two processes: the construction of the liberal state (characterized by the development of a system of rights and freedoms) and the construction of the nation

(characterized by the development of a system of cultural identity). At the end of this section, we discuss the importance of deconstructing the concept and mechanism of citizenship, as a part of a complex debate on the reform and transformation of social inclusion institutions.

The second part, entitled “Political/legal framework for the management of multiculturalism in a globalized Spain and Catalonia”, concerns the political and legal structure in which the construction of the new euro-citizenship and the construction of the new foreigner - the “legal or illegal” non-member of the community - converge, as part of a process of delimitation of political and identity-based frontiers (external and internal) of the European Union. An analysis is made of the mechanisms by which the status of the “Other” is constructed through key normative instruments including agreements and treaties at the European level, such as the Schengen Agreement (1985) and the Treaties establishing the European Communities (as amended by the Treaty of Amsterdam, 1997); at the national level the legal framework relating to foreigners in Spain is analysed through the reform of its Organic Law on Foreigners (LOEx 4/2000, LOEx 8/2000, LOEx 11/2003, LOEx 14/2003). The main purpose of this section is to understand the systematic logic behind the exclusion of non-citizens (new foreigners) and its reduction through functional work that is temporary or clandestine.

Marcelo Bonilla Urvina, 21 November 2007

Fellow

Cutberto Hernández Legorreta

Beneficiary country

Mexico

Country of study

Portugal

**Born on 20 March 1966
in Cuautitlán Edo. de
México, Mexico**

Last degree obtained

National University of
Mexico, Mexico City, Mexico:
Master's degree in Latin
American Studies
(22 March 2002)

Scholarly work and publications

*El impacto de la
Independencia de México
en Micronesia.* Universidad
Michoacana de San Nicolás
de Hidalgo-Instituto
tecnológico Autónomo de
México, Mexico, 2003

*1898, el fin de una era en
Micronesia.* Fondo de
Cultura Económico-UNESCO,
Mexico, 2001

*Las teorías Geopolíticas en el
Pacífico Latinoamericano
S.XIX.* Fondo de Cultura
Económico-UNESCO, Mexico,
1999

*En búsqueda de un
nacionalismo en Guam.*
Consejo Superior de
Investigación Científica,
Madrid, 2001

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Place of research

Universidade Nova de Lisboa
Faculdade de Ciências
Sócias e Humanas,
Centro de História de Além-Mar
Lisbon, Portugal

Research undertaken

from 2 January
to 1 October 2006

Intercultural process in South-East Asia: Intercultural dialogue between Annam and Portugal in the seventeenth and eighteenth centuries

My search for information allowed me to survey and review documents of great value for the current investigation that were previously unknown or had hardly been studied, in the Library of Ajuda, the National Library, and the Torre do Tombo National Archive, relating to the Jesuits in Asia. This documentation proved to be invaluable to the investigation “Intercultural Process in South-East Asia: Dialogue between Annam and Portugal”. I also found very interesting information on the topic in archives and libraries in other collections in Portugal, for instance in Évora and Coimbra.

In addition to visiting the collections mentioned above, I also searched the Ultramarine Archive and the Library of the Institute Camões, where no documents of relevance for the present investigation could be found.

The report reviews my activities during the period of investigation, and includes a presentation of the work as well as the development of the topic, which has been analysed by the supervisor of the investigation in Portugal, Dr João Paulo Oliveira e Costa, and the supervisor of the investigation in Mexico, Dr Elisabetta Corsi Ambrossetti.

Further, a number of papers were produced and were presented in different university fora both in Mexico and in Portugal. These papers are based on the information gathered during the investigation and indicate the current state of research. It is important to underline that these papers were all written and presented in Spanish.

The report also contains information about the documents that were found in the Library of Ajuda, which were reproduced for reading and evaluation during the work carried out in Mexico. During the project period, I worked on systematizing the data with the intention of creating a database of the information found in order to encourage interest in the study of the topic among the academic community in Mexico.

Dr João Paulo Oliveira e Costa (Portugal) and Dr Elisabetta Corsi Ambrossetti (Mexico) were continuously informed about the progress of the investigation during the entire process.

Cutberto Hernández Legorreta, 4 December 2006

Fellow

Rafael Flores Paz

Beneficiary country

Peru

Countries of study

France and China



**Born on 24 January 1970
in Arequipa, Peru**

Last degree obtained

Fudan University Graduate School, Shanghai, People's Republic of China: Master's degree, Philosophy (1 July 2002).

Scholarly work and publications

Political ideas in the Philosophy of Cheng Yi (in Chinese). Magazine from the University of Xin Zhou Shi Fan, volume 18, number 1. Tai Yuan, China, January 2002

Shangai la belle, *Etiqueta negra* numero 4. *Viajes*; Lima Peru, December 2002.

Tres pulgadas de lotos dorados *Etiqueta negra* numero 5. *Viajes*; Lima, Peru, February 2003

Contact

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Place of research

- Université Paris VII Denis Diderot, UFR Langues et civilisations de l'Asie Orientale (LCAO), Institut de la pensée contemporaine Paris, France

- Beijing University Institute of Foreign Philosophy Beijing, China

Research undertaken

from 1 September 2004 to 31 January 2005

Development of the process of introspection in Neo-Confucianism

Western thought about the practice of philosophy has recently adopted one of the fundamental insights of Chinese philosophy by discovering that philosophy is not only a purely theoretical activity but can also be an existential activity, based on concern with the self and aimed at transforming the subject through the ideal of wisdom. Such a transformation, to which Pierre Hadot, in the field of Greco-Roman philosophy, gives the term spiritual exercises (which the Greeks called *askēsis*), consists of exercises which, practised at the mental level, help to prepare the mind to understand theory, on the one hand, and help to protect it from the influence of the passions, on the other.

This conception of an existential philosophy has a striking parallel in the School of Principle in China. The School, founded by the Cheng brothers under the Northern Song dynasty (960-1127), may be regarded as the most representative school of Chinese neo-Confucianism, building its entire philosophy on the need for individuals to learn to live. For its followers, as for the practitioners of the ancient philosophy studied by Hadot, the exercises (collectively called *gongfu*) encompass all the techniques of meditation, self-reflection and self-nourishment and are the necessary condition for any transformation process, theoretical learning or ethical and political practices. The exercises help human beings to purify their mind, unify their will and sharpen their sensations by offering practical methods which must be practiced throughout life, the goal of which is to make our mind an instrument that seeks wisdom, an instrument for life, which is open to others and to the world. It is this mental preparation preceding theory and practice which enables us to engage without constraint in the first and devote ourselves effectively to the second. Understood in this manner, philosophy is a holistic experience which, to

be learned, requires, in addition to theoretical formulations, different practices which vary according to the objectives of each school. Thus, mystical experiences, physical exercises, artistic practices, political action and ritual performances must be regarded as essential components of the learning which takes place on the long path to wisdom.

This way of viewing philosophical experience as a vital and spiritual experience, a *paideia* which teaches us to live* and is not limited to theoretical speculation, also makes it possible to construct a new model for gaining a general understanding of philosophical experience in its various historical and cultural expressions. Philosophy, considered as an experience that endeavours to understand the world and people in order above all to help us to live, turns its attention to what touches us most closely (to use a typically neo-Confucian expression) at each moment of our life, and reminds us that “noli foras ire, in te redi, in interiore homine habitat veritas”.**

Rafael Antonio Flores Paz, 11 September 2006

* Pierre Hadot, “Exercices spirituels et philosophie antique”. Paris, Albin Michel, 2002, p. 61.

** St. Augustine, “De vera religione”, XXXIX, 72.

Fellow

Ana Koprivica

Beneficiary country

Serbia

Country of study

Cuba



Born on 1 April 1978
in Boulogne Billancourt,
France

Last degree obtained

Université Paris IV Sorbonne,
Paris, France: Master's
Degree, Histoire de la
musique et musicologie
(24 September 2004).

In preparation : Ph.D. in
History of music and
musicology : "Music and
ritual from Cuba"

Scholarly work and publications

*La slava, la fête du Saint
Patron*. Université Paris IV,
France, in press.

L'ethnographie du violon
dans le rituel à Cuba
(revue scientifique
Musicologie). Belgrade,
Serbia, in press.

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Place of research

Fundación Fernando Ortiz
Havana, Cuba

Research undertaken

from 1 November 2005
to 31 July 2006

Promotion of cultural and religious diversity in Cuba

This project, carried out in Cuba, is among the projects inspired by intercultural dialogue. More particularly, the purpose and goal of the project is to promote religions that are marginalized in Cuba. The project concerns Bantu religions and more specifically all cultural expressions of religious as well as scholarly origin, as all such expressions have a strong oral tradition. Transmission is usually effected through individual participation and very often in collective forms through music and dance. Transmission of traditions is also gender-based: the role and status of women and men are well defined during the demonstration of their traditional practices and skills.

The project received particular support from all the researchers at the Fundación Fernando Ortiz, a research centre run by Dr Miguel Barnet, and was carried out under the supervision of Dr José Matos Arévalos.

The research was conducted over a period of nine months in Havana as well as in different Cuban provinces on several occasions. Much data was collected in the course of the research, in both written and oral form. The data includes video and sound recordings of Afro-Cuban religious and musical traditions, which represent all the significant values of the cultural heritage.

In what are known as the two zones of the island of Cuba, the “East” and the “West”, traditions are the result of a long history of fusion between different cultural and ethnic influences. Current classification attributes approximately 110 languages to Bantu slaves exported from Africa. To this day, their culture is identified with the word “congo” which covers all expressions of Bantu origin.

With regard to the different Bantu expressions, well-known celebrations can be identified by the *yuka*, *makuta*, *kinfuiti*, *ngoma* and *cajones* drums. Most of these festivals and religious events are held within small communities of believers; however, they also have their place in musical festivals around the country. Some nevertheless remain closed to outsiders. Certain traditions are disappearing in rural areas owing to the migration of young people to the city. This process has at the same time given rise to the creation of new kinds of festivals and rituals in Cuba’s major cities, in particular in the capital.

Traditions of Bantu origin are marked by a phenomenon of diversity which can be seen during religious activities, in the ceremonies themselves: each religious institution has its own norms governing behaviour, the interpretation of myths and the use of ritual objects. The phenomenon of diversity is also evident with regard to musical instruments (the *cajon* was originally a wooden box used to transport food before being transformed into a musical instrument) and the use of the Bantu language, also known as the “Congo language”.

Ana Koprivica, 8 March 2007



Ousmanou Adama
Centre d'Études Africaines
Leiden University, Netherlands



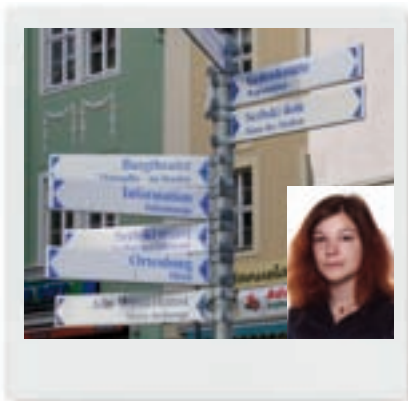
Jairzinho Francisco Panqueba Cifuentes
Photography taken in "house of the Pola" Muisca territory
before my departure to Ecuador



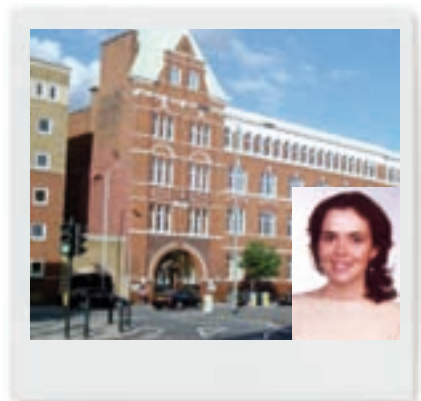
Goran Sekulovski
Geography Department, University of Paris-Panthéon,
Paris, France



Juan Javier Rivera Andía
Universidad Complutense de Madrid with my research supervisor



Nicole Dolowy
Bilingual signage in Bautzen, Germany



Silvia Zászlós
King's College, University of London, United Kingdom

Intercultural Dialogue

“My fellowship enabled a peace and conflict laboratory to be established in the History Department of the University of Ngaoundéré. A network of collaboration with the Universities of Maiduguri and N’Djamena instituted an exchange of data and mobility opportunities to junior researchers in the area of peace, cultural and religious studies.”
Ousmanou Adama

“The involvement of other people in the development of the research conducted under the UNESCO/Keizo Obuchi Research Fellowship reinforced research training among colleagues at the Corporación Ambiental y Empresarial Tingua in Colombia, with whom we conduct team projects. The research fortified academic processes involving colleagues at the Bogotá District School Board, where I work as a teacher-researcher.”
Jairzinho Francisco Panqueba
Cifuentes

“The UNESCO/Keizo Obuchi Research Fellowship marked a decisive step in the progress of my doctoral thesis. This project has led me to knowledge that will promote cultural pluralism and dialogue between religions and nations. Sharing knowledge remains the best way to strengthen ties between culture and development.”
Goran Sekulovski

“The postgraduate studies programme I completed thanks to the UNESCO/Keizo Obuchi Fellowship will help me to achieve three other goals that are linked to the main one. First, to improve ethnologic studies in Peru through the description and comparison of indigenous cultural expressions by regional areas; second, to create and publish an Andean and Amazonian oral tradition archive, non-existent in South-America; and third, to contribute to university courses with classes about Andean culture and its possibilities of development.”
Juan Javier Rivera Andía

“Thanks to the fellowship I was able to carry out field work required for my doctoral thesis on methods of preserving cultural diversity in Europe as seen in Sorbian and Breton culture.”
Nicole Dolowy

“The fellowship opened doors to new information and cultural experiences, which enabled me to understand that even though we encounter different cultures on a daily basis, it does not mean that we understand them.”
Silvia Zászlós

Fellow

Ousmanou Adama

Beneficiary country

Cameroon

Country of study

Netherlands

Scholarly work and publications

Islam, Ethnicité et pouvoir dans le bassin tchadien de 1596 à 1997. Doctoral thesis in History, University of Ngaoundéré, study under way. Under the supervision of Professor Thierno Mouctar Bah and Dr Saibou Issa.

Islam, Ethnicité et pouvoir dans le bassin tchadien de 1596 à 1997. DEA thesis in History, University of Ngaoundéré. Under the supervision of Professor Thierno Mouctar Bah and Dr Saibou Issa, 2005.

Islam, Ethnicité et Pouvoir au Nord-Cameroun entre le Lac Tchad et la plaine du Diamaré (1804-1999), Master's degree in History, University of Ngaoundéré. Under the supervision of Dr Saibou Issa, 2003.



Born on 9 August 1976 in Cameroon

Last degree obtained

University of Ngaoundéré: DEA (Diplôme d'Etudes Approfondies) in History (October 2005)

Contact

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Place of research

African Studies Centre
Leiden University,
Netherlands

Research undertaken

from January to March 2007

Interreligious dialogue and peaceful coexistence in the North Province of Cameroon

Northern Cameroon is a classic site of the meeting between Islam and Christianity on the southern shores of Lake Chad. The most important feature of northern Cameroon is the profound social change caused by Islam. A socio-political and historic analysis of the impact of islamization on the region provides insight into the dynamics of inter-ethnic and interreligious relations. For example, the newly “islamized” pagan populations of northern Cameroon maintain a religious syncretism that is tolerated by the Muslims. Ancestral inter-ethnic relations, shaped by the Peule conquest and the Islamo-Peule domination over the non-Muslim populations through colonization and the post-colonial State, had given rise to a desire for vengeance on the part of non-Muslim peoples which, with time, faded away and turned into fascination: adoption of the Islamo-Peule model (clothing, weapons, horses, royal titles, language and type of shelter).

The islamization of those populations resulted in their depersonalisation, acculturation and “foulbeization”. This process was and still is the result of a special historic dynamic that guarantees peace and peaceful coexistence. How, then, can we explain the explosion of inter-ethnic and interreligious violence in neighbouring Nigeria, the territory which served as a stepping stone for the islamization of the state of Adamawa? Political, economic and social claims are in fact motivated by religious and ethnic factors. The emergence of political parties between 1950 and 1960, and especially of the Northern Peoples Congress to which the Muslims pledged allegiance,

turned traditional political, economic and social claims into purely Islamic and ethnic claims. Islam made it possible for Muslim political leaders to create sectarian divisions and to present the Muslim religion as a mechanism capable of replacing the existing system adequately and practically by providing political solutions to the country’s social problems. The involvement of religious personnel in Nigeria’s political and social life thus becomes undeniable and religion becomes in this context an instrument for the violent appropriation of national resources. Yet religion can bring about a return to national unity through the establishment of a religious dialogue similar to that in fashion in northern Cameroon, or at least by the initiation of a genuine ecumenical rapprochement similar to Acadir (Cameroonian Association for Interreligious Dialogue).

Ousmanou Adama, 21 May 2007
Translated from French by UNESCO

Fellow

Jairzinho Francisco Panqueba Cifuentes

Beneficiary country

Colombia

Country of study

Ecuador



**Born on 28 January 1974
in Bogotá, Colombia**

Last degree obtained

Latin American Faculty of Social Sciences (FLACSO), Quito, Ecuador: Magister in Social Sciences, specialization in ethnic studies (2006)

Scholarly work and publications

Danza local de otro lado de Bogotá: reconstrucción cultural desde ritmos andinos colombianos en la comunidad indígena muisca de Bosa.
Instituto Distrital de Cultura y Turismo (IDCT) Bogotá D.C. Colombia, 2004.

De Indios a pobres: La Marginalidad desde una perspectiva de los habitantes indígenas del Territorio Muisca de Bosa en Bogotá,
Colombia. Facultad Latinoamericana de Ciencias Sociales (FLACSO) Quito, Ecuador, 2004.

Mi vida es una décima : registro oral de los indígenas zenúes. V.1. p.119; Fundación Universitaria los Libertadores, Ministerio de Cultura de Colombia, Bogotá 2000.

Contact

jpanqueba@yahoo.com

Place of research

Universidad Andina Simón Bolívar, Ecuador

Research undertaken

from December 2006 to August 2007

Western Economic Categories and Indigenous Identities in the Twenty-First Century – A Comparative Study of the Andean and Amazon Regions of Ecuador

Historically, there have been different ways of dealing in everyday life with the concept of “indigenous” peoples. Changes in the conceptions and identifications associated with the subject have given rise to historic consequences that, with the passage of time, instead of losing their impact, have become entrenched. Having first been regarded as unworthy of attention, “native” peoples then came to be seen as an exotic tourist attraction. However, the “indians” on display should preferably be in a museum, or something resembling one. A private museum in the city of Quito exhibits various everyday objects, displayed to evoke an already distant past. Female mannequins of the “universal” or “model” woman are dressed in the everyday garb worn by the Quichua women of the Andes. Meanwhile, in the streets nearby, women dressed in similar garments set out to peddle fruit, lottery tickets, articles they have handcrafted, or, in the worst case scenario, to beg.

The “native” with a productive everyday existence is not an acceptable idea in the marketplace. The twenty-first century psyche has difficulty accepting that men and women of different nationalities and from different ancestral tribes can engage in professions, trades and occupations that were hitherto barred to them. This is because the image of “indigenous” people has since the nineteenth century necessarily been associated with the land, farming and living day to day on the leftovers and scraps compassionately donated by “non-indigenous” people.

Moreover, in order to keep this Andean image alive, support for “ancestral practices” has been fostered. Non-governmental organizations promote cultural renewal and the recovery of ancestral rituals and other cultural expressions of “indigenous” peoples. Those who are supposed to be practising “ancestral” traditions are also discouraged from exercising other professions, even in their own territory. This is why, despite the individual efforts made by some of their members, “indigenous” populations remain virtually bound to conform to the models imposed by the market.

People who have pursued studies in various fields of knowledge must return to their homeland in order to host foreigners in search of “natives”. Others, as in the case of the timber industry, must exploit the most readily available resources and ensure that they reach the marketplace. Today, there is a narrow range of alternatives that involves either participating in the “eco-nativism” market or, on the contrary, benefiting from rural life through agricultural activities. As market forces come to the fore, life choices now mean choosing between and resigning oneself to limited options: ethnic ecotourism, survival by selling natural resources such as wood, or making products whose ethnic origin is only betrayed by the poverty of those who produce them.

Jairzinho Francisco Panqueba Cifuentes, 13 February 2008
Translated from French by UNESCO

Fellow

Goran Sekulovski

Beneficiary country

Former Yugoslav Republic of Macedonia

Country of study

France



**Born on 16 February 1978
in Pehcevo, Macedonia**

Last degree obtained

University of Paris–Sorbonne
(Paris IV): Master's degree in
Medieval Studies (October
2005)

**Scholarly work
and publications**

*L'identité balkanique entre
religions, nations, ideologies
et empires.* Doctoral thesis in
progress.

*The City of Skopje: a Border
or a Multicultural City?* In:
Janicki, W. (ed.), *European
multiculturalism as a chal-
lenge – policies, successes
and failures.* Lublin, Maria
Curie-Sklodowska University
and Polish Geographical
Society, pp. 237-249, 2007.

*The Social Aspects of
Fourteenth-Century
Hesychasm,* to be published
in *Studia Patristica.*

Contact

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Place of research

Geography Department
University of Paris–Panthéon
(Paris I), Paris, France

Research undertaken

from October 2006
to June 2007

Religion, nation, ideology and empire: Balkan identity through the prism of Kilkis 1859-1891

The geopolitical research I conducted, which also has some theological implications, can be regarded as a contribution to the more general question of Balkan identities. It focused on the crossroads region of Thessaloniki, particularly on the urban centres of Kilkis (Greece) and Monastir (Macedonia), in relation to Istanbul, capital of the Ottoman Empire, during the critical confrontation in the second half of the nineteenth century between the two major Uniate movements developed locally by the French Lazarist and Assumptionist missions. The models that can be constructed here from the relationships between different religious and national communities in this tormented part of the world, where the two Europes meet, are as politically important today as they were then.

By shedding light on a dark period of European history, the research project has made it possible to minimize the identity-based barriers between Balkan peoples, illustrate common cultural and religious origins and thus contribute to cooperation and exchange, which are vital to regional integration and economic development.

The results of this study can contribute to dialogue between Balkan nations and between religions and denominations by clarifying the causes of the divisions and conflicts of the nineteenth century, which still haunt the collective psyche. In particular, this research can help to reconcile Greeks, Bulgarians, Macedonians and Turks. It allows us to better understand the implications of the integration of the Balkans into the European Union, a fundamental issue for the coming years.

From a wider perspective, my research provides the most direct image of the notion of a common heritage in which multiple cultural identities are expressed. Can the Orthodox Church adapt to civilization's historical pluralism without losing its eschatological vision? Is it possible, in the Christian West, for the Church's eschatological vision to play a significant role in building the unity of both Europe and the modern world? In *The Origins of Latin Theology*, J. Daniélou underlines that while Western theology focused on history and ethics, it did not deny eschatology but nevertheless placed it in the context of a far-off future. Perhaps the shortcoming of the Orthodox religions is the fact that they do not take the course of history seriously enough, and that of the West in that it is taken too seriously. It is vital to find the middle ground.

Goran Sekulovski, 2 July 2007
Translated from French by UNESCO

Fellow

Juan Javier Rivera Andia

Beneficiary country

Peru

Country of study

Spain

**Born on 6 October 1977
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Last degree obtained

Universidad Complutense,
Madrid, Spain:
DEA in Anthropology (2006).

Scholarly work and publications

La fiesta del Ganado en el valle de Chancay (1962-2002). Religión y ritual en los Andes. Lima, Pontificia Universidad Católica del Perú. 650 pp. 2003.

Músicos en los Andes. Testimonios y textos nativos. Lima, Pontificia Universidad Católica del Perú. 182 pp. 2005.

La mitología de los Andes Contemporáneos. In: Ortiz Rescaniere, A. (ed.): *Mitologías amerindias.* Madrid, Trotta. 2006

Apuntes sobre la Alteridad constituyente en los Andes. Ambivalencias rituales y lingüísticas. In: *Revista de Antropología Americana.* UCM. 2008

Contact

rivera.jj@pucp.edu.pe

Place of research

Departamento de Historia de America II (Antropología de America), Facultad de Geografía e Historia Universidad Complutense de Madrid, Spain

Research undertaken

from 10 October 2006
to 9 July 2007

Toward a better understanding between cultures in Latin America: Andean values and perceptions of cultural diversity and modernization

This research project was entitled “Toward a better understanding between cultures in Latin America: Andean values and perceptions of cultural diversity and modernization”. It focused on the spiritual traditions of people who live in the Andes. One of the main innovative aspects of this research project was that I wanted to study Andean indigenous values, in particular the cultural values and perceptions of Andean people, in order to understand how they consider cultural diversity. I tried to do this through rituals.

I was particularly interested in rituals that continued to be performed, not in spite of migration and cultural changes, but rather because of them. I analyzed them as cultural sites where villagers grapple with key ideological dilemmas of Peruvian modernization. For instance, I examined ritual song lyrics for their discourses on modernity, folk views of troubled migration journeys, and problematic attempts at integration into national society.

I also explored the undeniably European Mediterranean heritage of Andean rituals. The methods I have used in my research over the past six years all belong to the field of ethnography.

The main goal of my research was to make a profound study of religion in the Andean countries. In this way, I hoped to improve on my previous research concerning the categories which Latin-American indigenous people use to build reality and the ideals that guide their religious expressions (rites, oral traditions, classificatory systems, mythology). I decided to continue this research in the doctoral programme of the Anthropology of the Americas department at the Universidad Complutense de Madrid. I had earlier obtained a DEA (*Diploma de Estudios*

Avanzados) from the Instituto Complutense de Ciencias de la Religión at the same university and I wanted to continue working with one of the most renowned specialists in American religion, Dr Gutiérrez Estévez, who became the supervisor of the project.

The main result of this research project was the completion of my doctoral dissertation, which I defended at the Universidad Complutense de Madrid on 28 June 2007. It was possible to accomplish that task in the time given because, as stated in the research project report, I had already done much of the necessary work: fieldwork, collection of field data, bibliographic research, preliminary reflections, and a draft of the thesis.

What I needed to do was simply to complete some Spanish archives data and draft my final conclusions. This last period of my research helped me to develop a theoretical framework closer to the sort of anthropological issues with which I worked during my earlier Ph.D. training. The second result of my research project was a group of systematic and coherent manuscripts that have already been submitted to various academic journals. These publications will help to develop and disseminate the research findings, while mentioning UNESCO's support. Another important result of the project will be my new book, which will be published by the *Pontificia Universidad Católica del Perú*.

Juan Javier Rivera Andía, 23 July 2007

Fellow

Nicole Dolowy

Beneficiary country

Poland

Countries of study

Germany and France



**Born on 30 June 1980
in Warsaw, Poland**

Last degree obtained

Institut de la Culture
Polonaise à l'Université
de Varsovie: Master's degree
in Cultural Anthropology
and Cultural Sciences

**Scholarly work
and publications**

*Literatura Ludowa (Polish
ethnological study)* PL ISSN
0024-4708, VII-X, 2005:
Les kachoubes de Poméranie,
Ameline Editions, France,
in print.

Contact

nicoled@poczta.onet.pl

Place of research

- Serbski Institut z.t./Sorbisches Institut e. V., Germany
- Laboratoire Bretagne et pays celtiques, Université de Rennes 2, France

Research undertaken

from October to December
2006 (Germany)
and
from April to June 2007
(France)

Protecting cultural diversity in different European countries: methods for preserving and maintaining minority cultural identity as seen in Breton culture in France and Sorbian culture in Germany

Under the 2006 UNESCO/Keizo Obuchi Fellowship, I conducted research on the protection of cultural diversity in Europe through two examples: the Sorbian culture in Germany (at the Institute of Sorbian Studies in Bautzen) and the Breton culture in France (at the Université de Rennes 2, Laboratoire Bretagne et pays celtiques). The purpose of my research was to observe how minority cultures and languages are protected specifically by which institutions and by which actions.

My research in Lusatia and in Brittany included a theoretical component: I carried out bibliographical research in order to be able to understand the state of these cultures, their history and language, the causes of linguistic modifications, and so forth.

My research also included a practical aspect: I met on several occasions with representatives of cultural institutions and associations, politicians and other individuals working actively to protect minority cultures and languages. I participated actively in the cultural life of these cultural minorities and I attached great importance to meeting with young representatives of the cultures.

The cultural life of non-State cultures depends primarily on association and institutions.

It is through projects and cultural activities that members of minority cultures have the opportunity to participate in cultural life, and it is owing to the creativity and resistance of activists that the specificity of the minority culture and language can be safeguarded.

This is the case for both the small Sorbian minority and the Breton culture.

A comparative perspective would appear to be very useful for examining the question of cultural minorities. One should not however lose sight of the fact that each culture and each minority language is different and that

safeguarding them depends on several factors (their history and degree of development, economic and social conditions, the legislation affecting them, the various government policies to which they are subject, the degree of development of their institutions and educational system, and so on). There are too many factors that shape the profile of a minority and its capacity to preserve its specific cultural features. The methods and actions that yield positive results in the framework of one culture may be useless or even insignificant in the framework of another. In contrast, dialogue and exchange between representatives of different cultural minorities in Europe, and their knowledge of the problems, methods and functioning of the organizations that work to protect endangered cultures and languages is fundamental for activists and often provides a source of inspiration. I believe therefore that the in-depth case study of these two cultural minorities and the methods used to protect them, which I am currently preparing on the basis of my research conducted under this fellowship programme, may be useful not only for representatives of the different cultural minorities in Europe but also for those persons wishing to deepen their knowledge of Europe as a continent with an enormous multicultural and multilingual wealth.

Nicole Dolowy, 17 July 2007
Translated from French by UNESCO

Fellow

Silvia Zászlós

Beneficiary country

Slovakia

Country of study

United Kingdom



**Born on 4 October 1977
in Bratislava, Slovakia**

Last degree obtained

University of Vienna: Master
of Philosophy (July 2004).

**Scholarly work
and publications**

Co-author: *The IPI Intifada
Report: Press Freedom
Violations in Israel and
Palestine from 29 September
2000 to 28 September 2004*,
IPI International Press
Institute, Vienna.

Contact

silvia.zaszlos@gmail.com

Place of research

King's College
University of London,
United Kingdom

Research undertaken

from September 2006
to May 2007

Intercultural dialogue in the European Union

The basic thesis of my research is that the moral-cultural system of a society plays a key role in its structure and functioning. It determines according to which values and norms individual and collective behavior will be structured and institutionalized within the areas of economics and politics. This system represents the basis on which the ability to establish social cooperation is built.

Modern economic globalization is not sufficiently balanced either by a corresponding globalization of political and legal systems, or by cultural and spiritual understanding. Huntington's vision of a *clash of civilizations* and conflict of cultures is therefore one of today's possible perspectives. Can it be prevented?

The European Union (EU), whose primary goal is to unite member states economically and politically, must also confront this problem. The reasons are, first, that owing to demographic development, the EU will not be able to cope without continuing immigration from different civilizational backgrounds and, second, that the EU itself is not culturally homogenous. The societies of the individual countries (including their minorities) have evolved uniquely and, according to the meme theory, they are therefore characterized by different coadapted meme complexes (memeplexes), which are the basic building modules of their moral-cultural systems. Furthermore, even though, within western civilization, the basic shape of the moral-cultural modules is on the whole compatible, there are still certain observable conflicting or even confrontational clashes of a global character. One of the means to achieve a peaceful solution of trans-cultural problems is undoubtedly intercultural dialogue.

The research focuses on mapping the value modules of the moral-cultural system of the societies in question that participate in the formation of individual and social identity. The purpose is to gain a better understanding of social intentionalities arising from the so-called theory of mind, namely from the assumption that people have certain views (theories) about the content of other people's minds, which means that individuals understand that other individuals have mental states that guide or influence their behavior, that the content of these mental states can be different from their own, and that it does not necessarily reflect reality. The multiple-degree reflexivity of social intentionalities is often determined by the introjection of value schemes within the framework of various memeplexes that relate to social identity.

Mapping can be carried out by a questionnaire in the form of a semi-structured interview, whose thematic areas will be socially relevant value modules (ethnicity and nationality, citizenship, etc.). Each module will be composed of several entries, which will be quantified on a seven-point scale. Evaluation using the methodology of multi-dimensional statistics should reveal latent variables which will lead to a more knowledge-based intercultural dialogue.

A general plan now exists for a questionnaire on "Value-based attitudes towards cultural understanding within the EU". Its pilot application to the problem of minorities would be suitable (e.g. Hungarian minority in the Slovak Republic).

Silvia Zászlió, 5 May 2008

“Press freedoms, freedom of information and access to information are the founding principles for good governance, development and peace. They can empower people by giving them the information that can help them gain control over their own lives.”

Koïchiro Matsuura
Director-General

[on the occasion of the celebration of World Press Freedom Day and award ceremony for the UNESCO World Press Freedom Prize, Maputo, Mozambique, 3 May 2008]

“One of the significant changes in the human environment in recent history is the information technology (IT) revolution and the process of globalisation in which IT plays a pivotal role. The so-called ‘digital divide’... is creating disparity among developed and developing countries, and disparities within our own society... I would like to engage in frank and unreserved discussion... on this wave of information technology that will bring great changes.”

Keizo Obuchi
then Prime Minister

[Statement at the Discussion Group on the Kyushu-Okinawa Summit, Tokyo, Japan, 28 February 2000]

Information & Communication Technologies

2005

- Svelta Nikolova Boytcheva
Bulgaria
- Ania Rosa Hernández
Quintana
Cuba
- Ezekiel Chidi Odiogo
Nigeria

2006

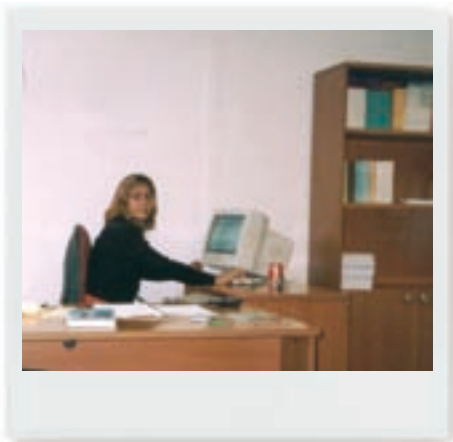
- Eugenia Petrova Kovatcheva
Bulgaria
- Armand Joseph Kabore
Burkina Faso
- Harinaina R.Ravelomanantsoa
Madagascar
- Peter Kintu
Rwanda

Fellows under the 2005 cycle

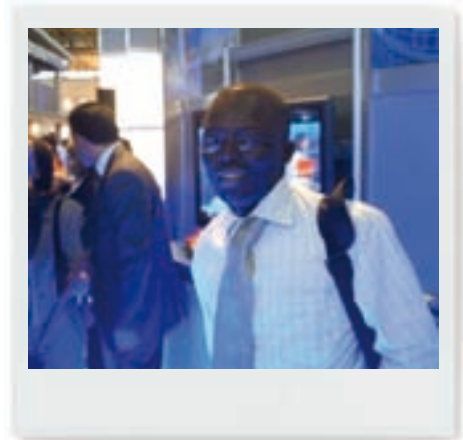
Fellows under the 2006 cycle



Svetla Nikolova Boytcheva
University of Hamburg, Germany



Ania Rosa Hernández Quintana
In the office at the University of Granada, Spain,
October 2005



Ezekiel Chidi Odiogo
In Tunis, at the World Summit of Information (WSIS), 2005

“This fellowship gave me the opportunity to be promoted to Associate Professor in Artificial Intelligence, to have more classes as a lecturer in MSc programmes, and to supervise MSc and PhD students’ research projects.”

**Svetla Nikolova
Boytcheva**

“The research enabled me to appreciate the holistic impact of ICTs in promoting sustainable socio-economic development.”

Ezekiel Chidi Odiogo

“Cyberspace is a meeting place of memory and dreams. It is time to represent many diverse ways of perceiving the world.”

**Ania Rosa Hernández
Quintana**

Fellow

Svetla Nikolova Boytcheva

Beneficiary country

Bulgaria

Country of study

Germany



**Born on 8 January 1971
in Bulgaria**

Last degree obtained

Sofia University,
Faculty of Mathematics
and Informatics: Ph.D.
in Computer Science
(24 February 2004).

**Scholarly work
and publications**

*Semantically Enhanced
Adaptive e-Learning System.*
In: Proc. of 5th International
Conference on Emerging
e-Learning Technologies and
Applications (ICETA -2007),
pp. 367-373, S. Slovakia, 6-8
September 2007, Boytcheva
and M. Nisheva.

*Towards deeper understanding
and personalization in eCALL.*
In: Proc. "eLearning for
Computational Linguistics and
Computational Linguistics for
e-Learning. Workshop at
COLING 2004, Geneva,
Switzerland 2004,
G. Angelova, A. Strupchanska,
O. Kalaydjiev, M. Yankova,
S. Boytcheva, and I. Vitanova.

*Terminological Grid and
Free Text Repositories in
Computer-Aided Teaching of
Foreign Language
Terminology.* In: Proc.

"Language Resources:
Integration & Development
in e-learning & in Teaching
Computational Linguistics",
Workshop at LREC 2004,
Lisbon, Portugal 2004 G.
Angelova, A. Strupchanska,
O. Kalaydjiev, S. Boytcheva,
and I. Vitanova

*Towards the assessment of
free learner's utterances in
CALL.* In: Proc. "NLP and
Speech Technologies in
Advanced Language
Learning Systems, In:
STIL/ICALL Symposium 2004,
Venice, Italy, 2004.
S. Boytcheva, , I. Vitanova,
A. Strupchanska, M.Yankova,
G. Angelova

Contact

svetla@fmi.uni-sofia.bg

Place of research

University of Hamburg,
Department of Computer
Science, Natural Language
Systems Division
Hamburg, Germany

Research undertaken

from 22 February
to 21 August 2006

Prototype and implementation of main modules of e-learning system with some intelligent and adaptive features on Human-computer interaction

The main research focus was on the design and implementation of an integrated system, IAeLS (Intelligent Adaptive eLearning System). In terms of results, IAeLS is expected to provide more flexible course delivery in different modes, provide and support personalized learning at different levels, to facilitate the process of knowledge base creation using tools for automatic knowledge extraction, support multilingual courses and apply automatic knowledge acquisition. The IAeLS system developed is domain and platform independent and thus can be used as a platform for delivering different courses.

IAeLS contains the following modules:

User interface - for channelling computer-user interactions

Student model - list of facts describing the history of user interaction and performance at every step. The Student model keeps record to describe learners' familiarity with the terminology, which is closely related to domain knowledge

Pedagogical module - navigates user through the learning process and contains two sub-modules – planning agent and curriculum. The main goal of pedagogical module is to support personalized learning by providing adaptive presentation, adaptive navigation support, curriculum sequencing, intelligent solution analysis, and problem solving support.

Expert module - contains static and dynamic resource banks. The Expert Module knowledge-base contains a repository of learning objects (LOs) encoded according to SCORM standards and ontologies following principles and standards. Every lesson is defined as a set of objectives (aims and knowledge); then using LOs, we can automatically compose learning materials and lessons. This approach allows us to develop

adaptive e-Learning courses based on LOs and on personal user knowledge according to learner model.

Expert interface - supports communication between the expert/teacher and the knowledge management system. It provides the following activities for a selected course: updating of knowledge base; statistics for students' knowledge based on student models of registered students for the selected course; reading users questionnaire; and usage of authoring tools for course management.

Knowledge management module - contains the tools to facilitate updating of the knowledge base, automatic question-answers generation, automatic LOs generation, automatic knowledge acquisition, ontology management and authoring tool.

The main modules of IAeLS are implemented in Java to make the system platform independent. Some parts of the system are implemented in Sicstus Prolog and Perl.

In the first stage of IAeLS implementation, the main language used in the IAeLS courses will be English. Following the evaluation period and tests, an attempt will be made in the next stages to support IAeLS in other languages. The first application of IAeLS is the course "Lexicon encodings and formats", - which is a course developed under the PROLIV Project at the University of Hamburg.

Svetla Nikolova Boytcheva, 9 January 2007

Fellow

Ania Rosa Hernández Quintana

Beneficiary country

Cuba

Country of study

Spain

Scholarly work and publications



Paradigmas procesales y visión digital: redimensionamiento de la Organización y la Representación de la Información en ambiente virtual. Actas del Congreso Internacional INFO. Havana, Cuba, 2004.

Apuntes sobre razones digitales y rupturas paradigmáticas en la organización y representación de la información y el conocimiento. Actas del V Coloquio Internacional de Ciencias de la Documentación. Sociedad de la Información e Información para la Sociedad, Salamanca, Spain, 2004.

Born on 3 January 1966 in Havana, Cuba

Last degree obtained

Universidad de la Habana, Havana, Cuba: Master's Degree in Library and Information Sciences (18 July 2002).

Contact

aniahdez@infomed.sld.cu

Place of research

Universidad de Salamanca
Departamento de Biblioteconomía y Documentación
Salamanca, Spain

Research undertaken

from 1 September to 30 November 2005

Evolution of paradigms that influence the organization and representation of knowledge in cyberspace

The paradigms that influence the organization and representation of knowledge in cyberspace are, firstly, the physical paradigm derived from the mathematical theory of communication, which was designed to maintain control of document registries and to ensure a rapid transfer of information. Because the methods of representation and analysis from this perspective were strictly quantitative, it was necessary to create a linguistic system that would give priority to the physical component of language and reduce its semantic or expressive capacity.

With the development of the cognitive paradigm and its three main variants – mentalism, connexionism and sociocognitivism – conceptual representation systems (indexing languages, abstracting and classifications) took greater interest in groups that share knowledge, which have in domain analysis theory their greatest expression of socio-cultural diversity and pluralism, and in the generation of epistemographic languages and of dynamic grapho-spatial systems of representation, their practical fulfillment.

Different paradigms and models meet in cyberspace. Yet an interesting duality is observed: an emphasis on systems that follow the tradition of the processing of registries as physical holders of information, and another vision that seeks to increase the capacity of social structures to comprehend registries, confirmed in research studies that attempt to develop an ontological platform.

The new forms of manipulating documentary reality in cyberspace tend to focus on subjectivity, expectations and intuition, either of the users or stemming from the internal discourse of the documentary sources.

The forms that information system analytical strategies for the visualization of contents must take will therefore require information professionals to acquire new competencies, particularly semantic, so that the systems' knowledge representation products can accurately simulate models of the world that are closer to those that information users certainly achieve through strategies actively integrated into interconnected communities.

Based on this trend, we can see that the vision that once gave priority to documents is being replaced with another, holonic vision, which reflects the new direction in library and information science.

Ania Rosa Hernández Quintana, 5 May 2006

Information & Communication Technologies

Fellow

Ezekiel Chidi Odiogo

Beneficiary country

Nigeria

Country of study

United Kingdom



Born on 13 January 1976
in Onitsha, Nigeria

Last degree obtained

The London School of Economics and Political Science (LSE), Department of Information Systems, London, U.K: MSc Analysis, Design and Management of Information Systems (December, 2005)

University of Bradford, Department of Electronic and Electrical Engineering, West Yorkshire, U.K: MSc (With Distinction) in Information Technology in E-Commerce (ITEC), (December 2003).

Scholarly work and publications

Fractal Salient Point Identification for Multiphase Signal Analysis. Working Paper, School of Engineering, Design, and Technology, University of Bradford., U.K. 2003

Signal Analysis of Manometric Data of Oil and Water mixture in oil wells. Dissertation thesis. School of Engineering, Design, and Technology, University of Bradford, U.K. 2003

Why it All Happened: An ethnographic study on social information systems: British – French border system, the French Consulate in London, and the UK immigration system. Dissertation thesis. Department of Information systems, The London School of Economics., U.K. , 2005.

Contact

codiogo@yahoo.com

Place of research

University of London
London School of Economics
LSE, London, United Kingdom

Research undertaken

from 1 September 2005
to 31 March 2006

Information and Communication Technology Policy and Strategy

The speed of technology driven change in today's economic era is surely not abating in either developed or developing economies. Information and Communication Technology (ICT) has become vital to the process of socio-economic development, offering extraordinary impacts with regard to building human capacity, influencing market structures, promoting economic competitiveness, facilitating trust and trustworthy relationships between citizens and their government, and among economic actors. It is widely believed that today's technological world is the start of a socio-economic change that has been likened to the industrial revolution (Orlikowski 2001). A global realization of a new kind of economic era has emerged where information, knowledge and capacity-building, rather than natural resources, play a vital role in sustainable socio-economic competitiveness. This is increasingly influencing the desire and commitment of national governments and development partners to use the benefits of ICT to leverage sustainable socio-economic development, such as the 2015 Millennium Development Goals (MDGs). Economic transformation into a knowledge intensive economy is greatly dependent on a society's vision and attitude towards promoting a learning economy with strong institutional linkages and promoting the physical and human infrastructure that facilitates trust and supports social participation in socio-economic development processes (Avgerou et al., 2005). Most African economies including Nigeria are plagued with poor human and physical infrastructural capacity, weak trust institutions, and inconsistent policies. African economies vitally need a critical mass of knowledgeable policy makers who can effectively anticipate, understand, adapt and manage the dynamics of socio-economic change processes. This requires the capacity to promote trust, a learning culture, and to ensure strong institutional linkages that facilitate improved synergy and positive

externalities for development. African economies must recognize and demonstrate strategic efforts and commitment in maximizing ICT to facilitate sustainable capacity-building and to strengthen institutional linkages from a holistic perspective. Also, trust building across societal and institutional structures is imperative to ensure the effectiveness of the market, attract and reinforce investor confidence, and encourage citizens' participation in the socio-economic development process.

This research study presents a conceptualized model for socio-economic development which developing economies, especially those in Africa, would find useful to consider in utilizing ICT to leverage socio-economic development and competitiveness. The model identifies the elements and conditions that support sustainable socio-economic development such as trust, capacity-building, effective policies and sustainable funding structure. The research, which focuses on the Nigerian economy as a case study, adopts a mix of both interpretative and empirical research components in exploring the theoretical underpinning of trust, capacity-building from a perspective of knowledge creation through national innovation systems, and knowledge transfer through knowledge transfer instruments such as FDI.

The research outcomes establish that effective ICT policy and strategy offer a holistic approach that can help address the fundamental challenges facing most African economies and Nigeria in particular. ICT offer great promise for promoting sustainable socio-economic development by facilitating a context of trust that significantly supports market effectiveness and citizens' participation in the socio-economic development process. ICT also strategically facilitates capacity-building which can help achieve sustainable socio-economic development.



Eugenia Petrova Kovatcheva
I am the lady in the red shawl (in the distance), addressing colleagues from the University of Electro-Communication in Tokyo



Armand Joseph Kabore
Radio Palabre's head Quarters in Koudougou (Burkina Faso)



Harinaïna Ramanambe Ravelomanantsoa
Laboratoire LaLIC (Langues, Logiques, Informatique, Cognition)
University of Paris-Sorbonne (Paris IV) CNRS, Paris, France



Peter Kintu
Culture day

“The fellowship was significant for me in various ways. First, I met a lot of people – experts in the field of e-learning – had time for research and achieved successful results. Second, I got to know Japanese culture – a very special feeling for me. I will remember it.”

**Eugenia Petrova
Kovatcheva**

“Thanks to this fellowship I discovered that community radio is a viable development tool.”

Armand Joseph Kabore

“This scholarship enabled me to conduct research in communications at the Université de Paris-Sorbonne and gave me an opportunity to become part of the LIMSI-CNRS research team.”

**Harinaina Ramanambe
Ravelomanantsoa**

“As a junior researcher, this fellowship has equipped me with the tools to undertake research in any field.”

Peter Kintu

Fellow

Eugenia Petrova Kovatcheva

Beneficiary country

Bulgaria

Countries of study

Netherlands and Japan



**Born on 15 November 1969
in Ruse, Bulgaria**

Last degree obtained

University of Twente,
Enschede, the Netherlands:
Master of Science
in Telematics Application
in Education and
Training (June 2003).

Scholarly work and publications

*The Framework and
Prospective Design for Web-
Based Intelligent Tutoring
System.* Proceedings of the
seventh IASTED International
Conference on Web-Based
Education, 17-19 March
2008, Innsbruck, Austria,
V. Uskov (ed.), pp. 82-86.
With Okamoto, T., 2008

*Tuning the ICT instruments
for Harmony in Mathematics
and Arts.* Working Joint IFIP
Conference: WG3.1
Secondary Education,
WG3.5 Primary Education
Informatics, Mathematics,
and ICT: a "golden triangle",
Boston, 27-29 June 2007.

*E-Learning for e-Learning:
Reflection on Teacher and
Student Experiences in an
e-learning Course.*

In: Proceedings, second
Balkan conference on
Informatics, 17-19 November
2005, Ohrid, Macedonia.
pp. 211-219. With Nikolova,
I.; Nikolov, R., 2005.

*Development of Adaptive
e-Learning System Based on
Learning Objects.*

International Conference
E-Learning, Berlin,
7-9 September 2005.
With Boytcheva, S., 2005.

*E-Learning for Enhancing
Management Skills.*

International Conference
E-Learning, Berlin,
7-9 September 2005.
With Nikolova, I., 2005.

Contact

epk@fmi.uni-sofia.bg

Place of research

- Fontys University of Applied Sciences, The Netherlands
- University of Electro-Communications, Japan

Research undertaken

from 25 November 2006
to May 2007

E-Learning : development of an hierarchical adaptive model for assessment of competence-based learning

My research topic is e-learning. During my stay in the Netherlands and Japan, my work was focused mainly on the development of a Hierarchical Adaptive Model for assessment in Learning Management Systems.

I reviewed existing e-learning environments. I used the computer Adaptive Tests based on Item Response Theory and intelligent agents for keeping track of users. I established the final tools for building the assessment process and delivering adaptive feedback to the users of an e-Learning system. The main tools are:

- Aggregation Method for constructing an e-learning course from Learning Objects (LO) based on e-learning standards for content;
- Computer Adaptive Tests based on Item Response Theory for “humanize”;
- Artificial Intelligent theory for flexible feedback between LO pool and Item bank, using intelligent agents to establish congruence between both sets.

The research findings are to be presented at three conferences (LASTED Conference, Web-raised Education, March 17-19, 2008, Innsbruck; International Conference on Interactive Mobile and Computer-Aided Learning, 16-18 April 2008, Amman; International Conference – VIASL 2008, Valuing individual and shared learning: the role of ICT, 23-27 June 2008, Charles University, Prague, Czech Republic, IFIP WG 3.5-Informatics & Elementary Education).

I presented my work first in the Netherlands, on the first occasion to colleagues at the Fontys Professional School and then at the Eindhoven Educational School in Eindhoven. During my stay in Japan I made similar presentations to members of the Laboratory for Knowledge Computing and Building System and at the University of Electro-Communications.

The discussions following the presentations were very useful for my research and helped me to achieve the results mentioned above.

I would like to thank my colleagues, Professor Piet Kommers at the Fontys Professional School, and Professor Okamoto and Professor Nanomiya at the University of Electro-Communications for providing a productive and friendly environment.

Eugenia Kovatcheva, 13 February 2008

Fellow **Armand Joseph Kabore**

Beneficiary country **Burkina Faso**

Country of study **France**



**Born on 12 March 1978
in Ouagadougou,
Burkina Faso**

Last degree obtained

University of Ouagadougou:
Master's degree in Technical
Sciences of Information and
Communication (2005).

Scholarly work and publications

Le pari de la nuit.
Ed. L'Harmattan, Paris, 2004
(novel).

*Local radio and Community
development in Burkina
Faso.* 2005, (Collective work,
unpublished).

*Local Knowledge and natu-
ral resources management:
The Bangr-Wéogo Park
experience.* University of
Ouagadougou, 2005.

Background of research
in information and
communication sciences
by the Information and
Communication
Department. University of
Ouagadougou, 2006.

*Sociocultural impediments to
research on local knowledge,*
2006, UACO/OIF Art. In:
Actes des UACO. In press.

*Book publishing in Burkina
Faso.* (Paper on the socio-
economy of the book).
L'Harmattan, 2007.

*Decentralization and local
development: discourse,
practices and perception
about public policy in two
rural areas in Burkina Faso*
(Thesis).

Contact

armandjoseph2000@yahoo.fr

Place of research

Faculté de Droit
Université de Cergy-
Pontoise, France

Research undertaken

from May
to September 2007

Technology transfers and community media ownership in Burkina Faso: A socio-anthropological approach to communication

The research reported here results from an analysis of the phenomenon of technology transfer through the observation of three community radio stations in Burkina Faso: the Palabre radio station in Koudougou, the Daandé Sahel radio station in Dori and the Vénégre radio station in Ziniaré.

The report presents two levels of practice and discourse. On the one hand, an attempt is made to demonstrate the mechanisms developed both by the holders of hard technology and by community radio promoters and moderators so that such media can be appropriated at the local level. On the other hand, by means of an opinion poll, an attempt is made to determine the broad outlines of the appropriation process within community radio audiences (knowledge of the media, audience and listening habits, level of interest and of appropriation).

From the analysis it emerges that, in order to be successful, the phenomenon of appropriation of community radio stations must start with a stage of expropriation, followed by (re)appropriation within vertical and horizontal paradigms. The vertical paradigm puts hard technology industries in contact with the consumer market. This relationship is characterized by both the dominance of technological power and the concomitant tendency to share knowledge. The horizontal paradigm brings together various holders in a negotiating situation at the local level.

The results regarding the practices and discourses of the audiences make it possible not only to produce a profile of the *typical community radio listener* but also to define the significant appropriation factors from the standpoint of the populations.

These factors are, in order of importance: the broadcasting language, the radio programme content, involvement in management of the radio station, the moderators' sociocultural background, and technical mastery.

Armand Joseph Kabore, 21 January 2008
Translated from French by UNESCO

Information & Communication Technologies

Fellow

Harinaina Ramanambe Ravelomanantsoa

Beneficiary country

Madagascar

Country of study

France



**Born on 15 June 1979
in Toulouse, France**

Last degree obtained

University of Paris–Sorbonne
(Paris IV): Master's degree,
Research, *Man-machine
words and communication.*

Contact

ramanambe@hotmail.com

Place of research

Laboratoire LaLIC
(Langues, Logiques,
Informatique, Cognition)
University of Paris–Sorbonne
(Paris IV) CNRS, Paris, France

Research undertaken

from September 2006
to May 2007

Speech recognition and processing

Our work is part of the development of the Ritel system and is principally directed towards detection of the presence of named entities in the output from automatic speech recognition.

The work already carried out in this field has shown that the results of the detection of named entities depends on various criteria such as the presence or absence of a capital letter in the entity in question or the correct recognition of words by the speech recognition system.

We therefore divided our work into three main tasks, each taking into account three distinct classifications which range from the very specific to the general: a system for the recognition of errors due to named entities; a system for the recognition of errors due to out-of-vocabulary words; and a system for the recognition of errors due to errors of recognition.

We carried out these three tasks on corpuses transcribed using lexicons of various sizes in order to determine the influence of the size on the classification scores obtained. We also generated several baselines to use as reference values against which we could compare the results we obtained. In addition, we compared the results obtained by using two classifiers – the Generalized Linear Model (GLM) and the Support Vector Machine (SVM) – to which we applied three classes of parameters: metrics obtained from confidence scores, metrics obtained from language models, and metrics obtained by the quantity of data provided by consensus networks.

Our findings showed that the data provided by consensus networks did not improve the results regarding the detection of the presence of named entities in an utterance.

They also confirmed that the detection of the presence of named entities in an utterance was dependent on detection of out-of-vocabulary words and detection of word-recognition errors.

Harinaina Ramanambe Ravelomanantsoa,
20 December 2007
Translated from French by UNESCO

Information & Communication Technologies

Fellow **Peter Kintu**

Beneficiary country **Rwanda**

Country of study **India**



**Born on 23 December 1970
in Dar-Es-Salaam, Tanzania**

Last degree obtained

Vellore Institute of Technology, Vellore, Tamil Nadul, India: Master of Computer Applications (2005).

Scholarly work and publications

Cryptography and Cryptanalysis – 128 BIT master's thesis, Vellore Institute of Technology, Vellore, Tamil Nadul, India, 2005.

Contact

kingpeters@yahoo.com

Place of research

Vellore Institute of Technology
School of Computing Sciences Vellore,
Tamil Nadul, India

Research undertaken

from September 2006
to February 2007

The contribution of ICTs towards the development of education, science, culture and the building of a knowledge society

Introduction

This research analyses the current state of education in Rwanda; it focuses on the difficulties facing the education sector, especially the lack of teaching staff in the country, as shown by the following tables.

Table 1: higher learning institutes teaching staff
Data collected March to May 2007
(Figures include PhD, MSc, BSc in different fields)

Institute	KIST	KIE	KHI	SFB
Local academic staff	171	139	79	47
Expatriate academic staff	43	36	11	21
Total number of academic staff	214	175	90	68

Abbreviations:

KIST – Kigali Institute of Science and Technology;

KIE – Kigali Institute of Education;

SFB – School of Finance and Banking

Table 2: Pupil – teacher ratio in primary schools
(secondary data – source; Ministry of Education)

Number of pupil per teacher (Qualified + non-qualified teachers)

Year	97/98	98/99	99/00	00/01	01/02	02/03	03/04
	57	55	54	51	58.9	65.8	66.9

Number of pupil per qualified teacher

Year	97/98	98/99	99/00	00/01	01/02	02/03	03/04
	121	112	102	82	72.6	70.3	75.8

Conclusions

The research findings indicate that there is inadequate local teaching staff in different fields of studies in higher learning institutes. Observations made in these institutes' libraries show that the libraries lack modern books and that they have either no access or reduced access to e-books and e-libraries. The research results also indicate that students who enter higher learning institutes have weak academic backgrounds owing to a shortage of teachers in the lower schools.

Recommendations

The e-learning grid is proposed as a solution which covers the broad area of the education, science and research development.

Three other recommendations to the stakeholders in this report, which will help to facilitate the building of knowledge societies, are as follows: to establish district library – tele-centres in each district/village; to establish television teaching programs/channels; to facilitate the distribution of inexpensive/subsidized television sets to all households in the country.

Peter Kintu, 3 March 2008

“UNESCO is working to promote a rights-based approach to quality education throughout the whole education system and in all learning environments to promote social cohesion and build respect for peace and non-violent conflict.”

Koïchiro Matsuura
Director-General

[On the occasion of the International Day of Peace, 21 September 2008 - DG/ME/ID/2008/015]

“In my travels I was most impressed at the way people were courageously pursuing their dreams despite suffering from war, poverty and illness, and I was made very much aware of the need for peoples to join hands, across borders to create a more secure and more comfortable world.”

Keizo Obuchi
then Prime Minister

[From a Statement on Japan and East Asia: outlook for the New Millennium, Singapore, 4 May 1998]

Peaceful Conflict Resolution

2005

- Charles Assamba Ongodo
Cameroon
- Hassatou Balde
Guinea
- Islam Yusufi
F. Y. Macedonia
- Mohammed Mustafa Abbas
Sudan

2006

- Mamadou Soumare
Senegal

Fellows under the 2005 cycle

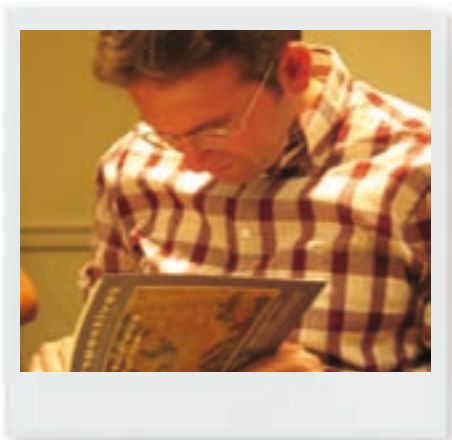
Fellow under the 2006 cycle



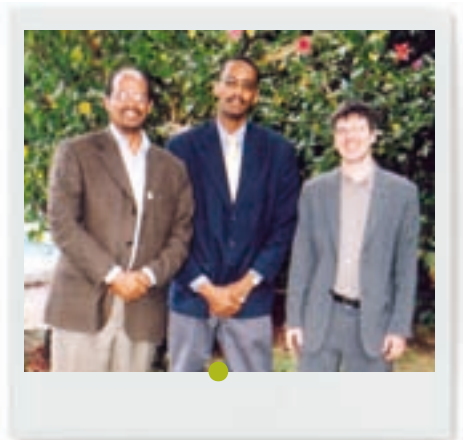
Charles Assamba Ongodo
Undertaking research in Niamey, Niger



Hassatou Balde
Eva Kouka and myself at an awareness day organized for deputies/the National Assembly Defence Committee on weapons



Islam Yusufi
Undertaking research in United Kingdom and Greece



Mohamed Mustafa Abbas
(From left: Prof. Yacob Arsano, Mohamed Mustafa Abbas, Dr. Simon A. Mason), during my field research studies at University of Addis Ababa, Ethiopia

Peaceful Conflict Resolution

“The UNESCO/Keizo Obuchi Fellowship has broadened my understanding of conflict resolution and, professionally speaking, improved my critical approach to issues on the subject. On an academic level, it has inspired me in my PhD work on conflict resolution in Africa.”

Charles Assamba Ongodo

“This fellowship has allowed me to consult and work one-on-one with government institutions and organizations, non-governmental organizations and academies that deal with the issue of light weapons and crime.

I am continuing research on the subject of weapons, including anti-personnel mines, unexploded objects and submunitions. In particular, my work focuses on anti-mine efforts like de-mining and mine clearing, and the assistance given to mine victims in Senegal, Burundi, Rwanda, Congo, Democratic Republic of the Congo and Chad.”

Hassatou Balde

“The fellowship provided me with an exceptional opportunity to meet my needs in analysis, public advocacy and organizational management.”

Islam Yusufi

“This research helped me to enhance my professional capacity in the field of water-conflict prevention, and enabled me to become a member of the Sudanese Engineering Council and the Institution of Civil Engineering (ICE) in the United Kingdom. It will, I hope, help me to pursue my PhD research.”

Mohamed Mustafa Abbas

Peaceful Conflict Resolution

Fellow

Charles Assamba Ongodo

Beneficiary country

Cameroon

Country of study

Niger



**Born on 20 July 1967
in Yaoundé, Cameroon**

Last degree obtained

University of Yaoundé II,
Doctorat de troisième cycle
in International Relations
(29 October 1993)

**Scholarly work
and publications**

*Les pays africains et les
normes juridiques protectrices
de l'environnement : le cas du
Cameroun.* Yaoundé,
Cameroon, January 1990.

*L'application du système de
sécurité collective de l'ONU
dans la crise Irak-Koweït.*
Yaoundé, Cameroon,
October 1993.

*Le Cameroun et la prépara-
tion de la 34^e session de la
Conférence générale de
l'UNESCO.* Yaoundé,
Cameroon, September 2007.

Contact

ongodo@voila.fr
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Place of research

Université Abdou Moumouni
Faculté des Lettres
et Sciences Humaines
Département de Philosophie,
Niamey, Niger

Research undertaken

from 23 May
to 22 August 2006

Development of a regional approach for conflict resolution in West and Central Africa in relation to human security conflict

The end of the cold war witnessed the emergence of new expectations and new challenges in international relations. To the traditional concept of security, in which account was taken essentially of the military aspect, was added a non-military threat. Moreover, the scope of security-related action was broadened, moving beyond the institutional and interstate level to the local, community and individual level.

Since the mid-1990s the international community has been endeavouring to include the concept of human security on its political agenda. Indeed, since the publication in 1994 by the United Nations Development Programme (UNDP) of the first Human Development Report, several organizations and institutions have analysed the report and based projects or programmes on it. UNESCO undertook various activities under the transdisciplinary project for the promotion of a culture of peace (1996-2001). The recent report by the Secretary-General of the United Nations on the "In larger freedom" reform and the debates at the Millennium Summit in New York in September 2005 placed human security at the heart of United Nations concerns.

Africa, a continent plagued both by unrest owing to various causes and by poverty, is the testing ground on which the concept of human security must be developed and applied, especially in West and Central Africa, the regions most affected by conflict in recent years.

The object of my study was to demonstrate that the concept of human security is an effective way of resolving conflicts definitively and globally in West and Central Africa and that it can also ensure peace and sustainable development in those regions.

The first part, entitled "The concept of human security and conflict resolution in West and Central Africa", consisted of a review of the different theories and approaches relating to the notion of human security, followed by an analysis of the causes and consequences of conflicts in the two regions where violence, complexity and seriousness called for an effective and appropriate response.

In the second part, entitled "Human security as an effective approach to conflict resolution in West and Central Africa", I analysed peace-prevention mechanisms and systems applicable to the two subregions and then described the tools needed to ensure the effectiveness of the human security approach in resolving conflicts in West and Central Africa. The pluridisciplinary method greatly contributed to this reasoning process.

Charles Assamba Ongodo, 12 March 2007

Peaceful Conflict Resolution

Fellow **Hassatou Balde**

Beneficiary country **Guinea**

Countries of study **Senegal and Mali**



**Born on 29 May 1970
in Conakry, Guinea**

Last degree obtained

Université Paris 1 Panthéon-Sorbonne, Paris, France:
Ph.D. in international law
(January 2005).

Scholarly work and publications

*L'union africaine et la
prévention des conflits.*
In: l'Union Africaine face
aux enjeux de paix, de
sécurité et de Défense,
under the supervision of
Ms Dominique Bangoura.
253 p, l'Harmattan, Paris,
2003.

*La diplomatie préventive de
l'Union Africaine à l'épreuve
de la crise malgache.*
In: l'Union Africaine face
aux enjeux de paix,
de sécurité et de Défense,
under the supervision of
Ms Dominique Bangoura,
253 p, l'Harmattan, Paris,
2003.

*Les mécanismes de prévention
et de la gestion des conflits des
organisations africaines.*
In: Actualité et Droit
International, August 2001.

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Place of research

Université Cheikh Anta Diop
Faculté des Sciences Juridiques
et politiques, Dakar, Senegal

Field research: Senegal, Mali
and Guinea

Research undertaken

from 2 October 2005
to 1 July 2006

Status of implementation of the 2001 United Nations Programme of Action on Small Arms and Light Weapons and the ECOWAS Moratorium on Light Weapons

October 1998, the Economic Community of West African States (ECOWAS) declared a moratorium on the importation, exportation and manufacture of light weapons, supplemented by a Code of Conduct and a Program for Coordination and Assistance for Security and Development in Africa (PCASED), under the leadership of the United Nations Development Programme (UNDP).

In the course of my post-doctoral research on Senegal, Guinea and Mali, I noted that those three States, like the other Member States of ECOWAS, had all adopted measures with a view to implementing the ECOWAS texts and the United Nations Programme of Action on Small Arms and Light Weapons, adopted in July 2001 in New York. These instruments provide a framework for combating criminality and conflict. After having established light weapons commissions responsible for drawing up combat strategies and centralizing information on such arms, these States are in the process of revising their laws to take account of international realities in order to exercise greater control over small arms and light weapons. Mali, which was the originator of the Moratorium, adopted Law no. 04-050 on 12 November 2004, revising its Law no. 60-4/ALRS of 7 June 1960. The Senegalese Law no. 66-03 of 18 January 1966 is currently being revised, on the basis mainly of the Malian law, which endeavours to harmonize the legislative measures recommended by the international texts mentioned above. Guinea has also reportedly requested assistance from PCASED in revising its Decree 96/008/PRG of 22 July 1996. In the course of my study, these reference texts underwent important changes. PCASED was replaced by another instrument, the ECOWAS Small Arms Programme (ECOSAP). A small arms unit was set up within the ECOWAS Executive Secretariat, which has now become the ECOWAS Commission.

In June 2006, ECOWAS adopted the Convention on Small Arms and Light Weapons, Their Ammunition and Other Related Materials, which replaced the Moratorium and the Code of Conduct. The new convention features concepts that are missing from the Moratorium such as brokering, marking and traceability. It was adopted less than one month before the Review Conference on the United Nations Programme of Action on Small Arms and Light Weapons, held in New York from 26 June to 7 July 2006. The conference, in which NGOs had great hopes with regard to achieving a more restrictive legal instrument, did not live up to expectations.

At a time when Member States are in the process of revising their legislation in conformity with the Moratorium, might not the setting aside of the Moratorium and its related instruments lessen States' willingness to apply the measures recommended? Such modifications must not hinder States in their progress. They must make the best use of the international organizations that enable them to have greater control over arms in circulation on their territory. They can benefit from the technical and logistic support of the United Nations Office on Drugs and Crime, which has drawn up a convention on firearms in which marking and tracing mechanisms are included. The Office also has the advantage of combating several aspects of organized crime such as drugs, firearms, human trafficking, crimes which are widespread in the three countries. States can also benefit from the support of the International Criminal Police Organization (Interpol), whose IwETS tracing system is used by the United Nations as a model for States.

Hassatou Balde, 15 February 2008
Translated from French by UNESCO

Peaceful Conflict Resolution

Fellow

Islam Yusufi

Beneficiary country

Former Yugoslav Republic of Macedonia

Countries of study

United Kingdom and Greece



**Born on 2 May 1975
in Gostivar, Macedonia**

Last degree obtained

Bilkent University, Ankara, Turkey: Master of Arts in International Relations (11 October 1999).

Scholarly work and publications

Multiculturalism and Security. In: *Multiculturalism in Macedonia: An Emerging Model*, ed. Ivan Dodovski, Skopje: FIOOM, 2005.

Understanding the process of security reform in southeast Europe. *Journal of Security Sector Management*, Vol.2, No. 2, June 2004.

Stability pact and its role in the development of regional cooperation in southeast Europe.

In: *Southeastern and Europe and EU Enlargement*, ed. David Phinnemore and Peter Siani-Davies, Belfast: Queen's University Belfast, 2001.

Contact

iyusufi@analyticamk.org
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Place of research

- University of Sheffield, Department of Politics Sheffield, United Kingdom
- South-East European Research Centre, University of Sheffield Thessaloniki, Greece

Research undertaken

from 1 July
to 31 October 2006

Peaceful conflict resolution on democratic processes in the Balkan countries

The UNESCO/Keizo Obuchi Fellowship was a great opportunity for me to structure my research and to further define and examine the democratization and political participation processes in the western Balkans. It allowed me to establish an event database on which my research is based and to gather materials for the research. It also gave me the opportunity to pull an enormous mass of material together into a draft manuscript form. The University of Sheffield and the Southeast European Research Centre, with its own resources and the possibility of direct access to the books and other materials of their libraries, have provided me with excellent resources that were needed to carry out my research and other tasks during my fellowship.

The research enabled me to understand the organizational structure and methods of work of various institutions (democratic and political) in the region and beyond. Moreover, I had an opportunity to refresh my communication skills in English and I developed a network that will be useful for future mutual cooperation. From the UNESCO/Obuchi Fellowship I gained new knowledge, experience and contacts that will bolster my future contribution to the development of Macedonia. I had the opportunity to acquire new knowledge and experience which I will apply later to my work and which will contribute to the overall organization, work and fulfilment of my professional obligations. At the same time, the research increased my own professional capabilities, which will in the long term help my career in the service of the development of an open society in Macedonia.

The Fellowship has provided me with an exceptional opportunity to meet my needs in the areas of analysis, public advocacy and organizational management by sharpening my knowledge of the processes of democratization and political participation, issues that are of the utmost importance to my country.

Democratization and political participation in post-conflict societies was the topic of my research under the UNESCO/Obuchi Fellowship. How to strengthen democratic processes in the western Balkan countries was the specific area of the research, which examined the shifting focus in the region from post-conflict reconstruction and security to establishing conditions for sustainable development and issues related to democratization.

The UNESCO/Obuchi Fellowship helped me to conduct my research according to the methodology established. This included both desktop research (reviewing and drawing upon existing studies on the topic) and extensive interviews. It also enabled me to focus on research experience, with particular attention to writing and analysis through the preparation of research papers and manuscripts, and on developing policy analyses, with a continuous search for new knowledge in the field of politics and public policy. Moreover, it offered me an opportunity to cooperate closely with the University/Centre faculty and other students and researchers throughout the fellowship period.

Islam Yusufi, 4 December 2006

Peaceful Conflict Resolution

Fellow

Mohamed Mustafa Abbas

Beneficiary country

Sudan

Country of study

Switzerland



**Born on 8 June 1968
in Omdurman, Sudan**

Last degree obtained

University of Khartoum, Khartoum, Sudan: Master of Science, Water Resources Engineering (27 December 2004).

Scholarly work and publications

Future Sustainability Challenge in the Water Sector. Paper submitted to the 7th Nile 2002 conference, March 15-19, 1999, awarded Best Poster Paper.

Environmental Aspects and Social Impacts of Water Resources (Case Study). Paper submitted to the 8th Nile 2002 conference, Addis Ababa, Ethiopia, June 26-30, 2000.

Consequences of Nile Flood in Sudan. Paper submitted and discussed at the International Workshop on Development of Flood Plain and Wetlands (IWFW 2000), Beijing, China. September 5-8, 2000.

The Role of Water Harvesting Techniques for Water Uses. Paper submitted to the 9th Nile 2002 conference, Nairobi, Kenya , October 7-9, 2002.

Operation of Automatic Irrigation System. Paper submitted to the Science and technology of the Water Resources Conferences, Supreme Council of Resources, Damascus, Syrian Arab Republic October 18-21, 2003.

Contact

moh_abb@hotmail.com

Place of research

Center for Security Studies
Swiss Federal Institute
of Technology
Zurich, Switzerland

Research undertaken

from 1 September 2005
to 31 January 2006

Towards Cooperation Instead of Conflict in the Nile Basin

Water conflict can be viewed as a competition for scarce freshwater resources that can lead to difficult political tensions. Conflict can emerge in many different settings at the local level, between sectors of one country, between upstream countries and downstream countries or between upstream and downstream users. It can be due to lack of water, increased demand or mismanagement. Water conflict is an important issue for people's survival and livelihood.

In this article we focus on the possibility of cooperation between Sudan and Ethiopia and the benefits and risks of integrated win-win projects for water resources management between the two countries. Interviews were conducted with researchers, academics, consultants and experts working for their governments on water issues.

The 15 Ethiopian and 15 Sudanese experts saw lack of funding as one of the key challenges, and better relations, trade and transport as the main benefits of joint water development projects between the two countries. Additional benefits could be gained through cooperation between the two countries for maximizing water resources, linking the issue of water to other resources, better use of technology, basin wide conservation, positive political relations, environmental protection, and combating drought.

One of the main conclusions from our research is that Sudan and Ethiopia can enhance cooperation through step-by-step projects shared between the two countries. Ethiopia can be regarded as the main provider for hydropower, and Sudan as the main provider for agriculture and marketing.

The research highlights the impact of large dams on ecosystems, biodiversity and downstream livelihoods, which can lead to various negative consequences, such as loss of forests and wildlife habitat, loss of species populations and degradation of upstream catchment areas, loss of aquatic biodiversity of upstream and downstream fishers, cumulative impacts on water quality, natural flooding, negative impacts on people living in areas flooded by dams.

On the institutional side, the Nile Basin Initiative is still a very "soft" institutional framework, allowing for project-by-project activities. Yet there are signs that it is clarifying framework questions (about 85% have been agreed on) and therefore slowly becoming more capable in coordinating water resource development in the Nile Basin.

The key lesson learned from this research is that there are great benefits from joint win-win projects that can be achieved through the Nile Basin Initiative. The Sudanese and Ethiopians we interviewed all agreed on the main benefits: trade, transportation and communication, hydropower development, and general confidence building and improved relations between Sudan and Ethiopia.

Finally, the research recommends key steps to enhance cooperation between the two countries, which focus on project-by-project, develop a legal and institutional framework, build strong political cooperation over the Blue Nile water between the two countries, and take account of the different stakeholder perspectives.

Mohamed Mustafa Abbas, 2 March 2006



Mamadou Soumaré
Centre National de la Recherche scientifique, UPR 76, Paris, France



In front of the statue of Victor Hugo, University of Sorbonne library, Paris

**“I have a deeper
understanding of the
subject of war in the
Dialogues of Plato
thanks to the UNESCO/
Keizo Obuchi.”
Mamadou Soumaré**

Peaceful Conflict Resolution

Fellow

Mamadou Soumare

Beneficiary country

Senegal

Country of study

France



**Born on 12 June 1966
in Gaboh, Senegal**

Last degree obtained

Université de Dakar, Fann,
Senegal, DEA in Philosophy
(1996).

**Scholarly work
and publications**

*“L’étude de la violence
dans les écoles”*. Scientific
paper in *Revue Sénégalaise
de sociologie*, N° 8,
2^e semestre, 2006.

Contact

sophiasoumare@voila.fr

Place of research

Centre National de la
Recherche scientifique
UPR 76, Paris, France

Research undertaken

from September
to November 2006

The problem of war in the Dialogues of Plato

Epigraph

“(…) if philosophy has been embraced by UNESCO, it is because there is no UNESCO without philosophy,” Patrice Vermeren in *La philosophie saisie par l’UNESCO*, Paris: UNESCO, 2003, p. 160.

I am a young Senegalese researcher preparing my doctoral thesis on the subject “The problem of war in the *Dialogues* of Plato.” My research topic is in keeping with one of the key concerns of philosophy, namely the search for peace, which is also one of UNESCO’s main objectives. Thanks to the UNESCO/Keizo Obuchi Research Fellowship (2006 cycle), I was able to carry out my research over three months (September, October, November 2006) at the Centre National de la Recherche Scientifique (CNRS, UPR 76) under the supervision of the eminent Platonist Professor Luc Brisson. During my stay in Paris, Professor Brisson devoted a good part of his time to me. He assessed my project and read my manuscript, and I took account of his very useful remarks and observations. He provided me with bibliographical references and unhesitatingly offered me valuable works as an encouragement. His colleague, Ms Marie Odile Goulet-Cazé, of CNRS (UPR 76), helped me to discover the cosmopolitan nature of the Stoics.

Thanks to the fellowship, I was able to buy books (general specialized works) and dictionaries. The fellowship enabled me to achieve substantial progress in my research, thereby considerably deepening my knowledge of the subject. I am very pleased with the fellowship programme and wish good luck to future beneficiaries. I should like to pay a warm tribute to the late Keizo Obuchi, former Prime Minister of Japan, to UNESCO, to its Director-General and to his colleagues in the Fellowships Programme Section, to Professor Luc Brisson and his colleague at CNRS, Ms Marie Odile Goulet-Cazé, and to the Secretaries-General of the French and Senegalese National Commissions for UNESCO. I am working tirelessly to finish my thesis, a copy of which will be sent to UNESCO.

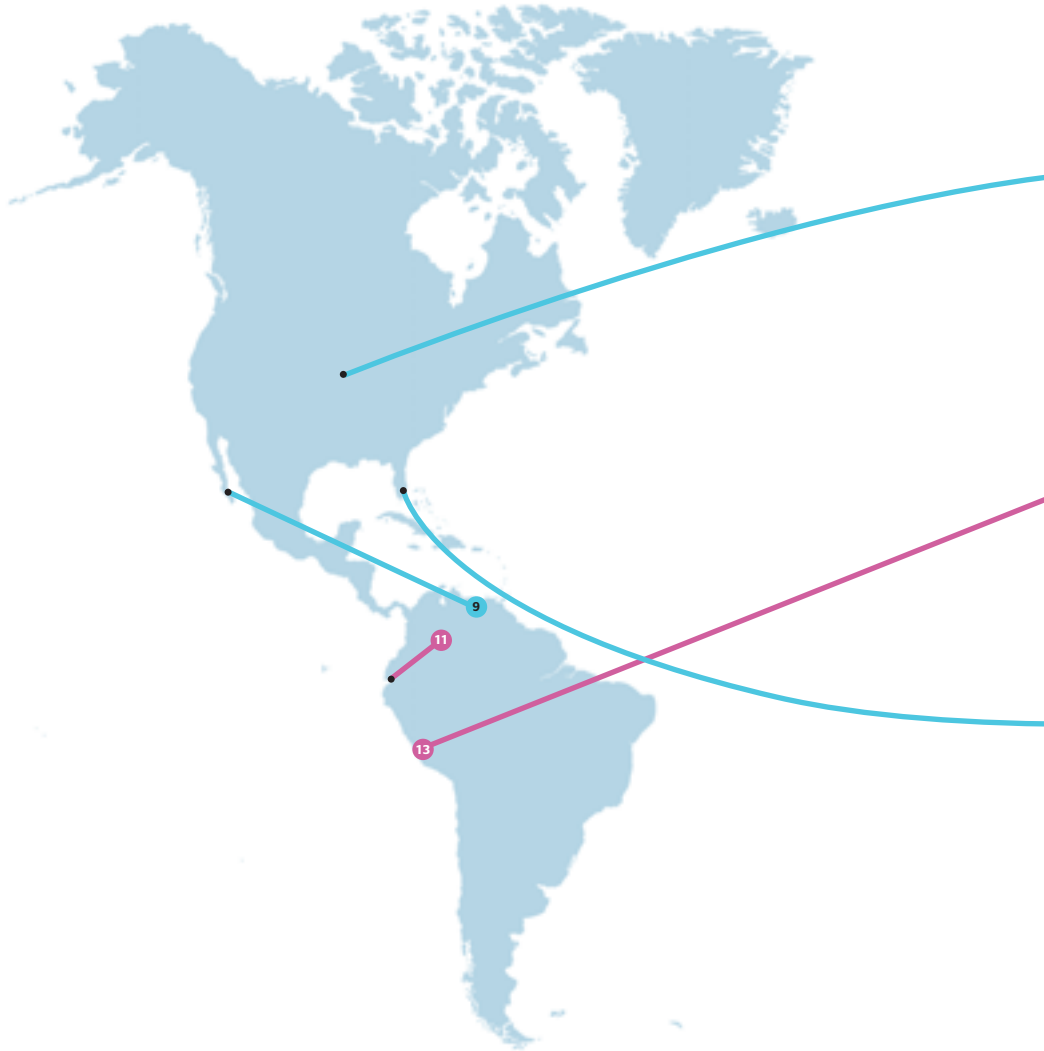
Long live UNESCO so that research in the Third World can thrive!

Mamadou Soumaré, 4 April 2007
Translated from French by UNESCO

UNESCO / Keizo Obuchi

Research Fellowships Programme:
annexes

The UNESCO / Keizo Obuchi Research Fellowships Programme 2006 Where did the fellows go?



Environment

Fellows' country / territory

- 1 Azerbaijan
- 2 Georgia
- 3 Kyrgyzstan
- 4 Malawi
- 5 Malaysia
- 6 Mali
- 7 The Palestinian Authority
- 8 Romania
- 9 Venezuela

Country / territory of study

- United States of America
- Finland and Russian Federation
- France
- Zimbabwe
- United States of America
- Russian Federation
- Egypt
- Italy
- Mexico

Intercultural Dialogue

Fellows' country / territory

- 10 Cameroon
- 11 Colombia
- 12 The Former Republic of Macedonia
- 13 Peru
- 14 Poland
- 15 Slovakia

Country / territory of study

- Netherlands
- Ecuador
- France
- Spain
- Germany and France
- United Kingdom



Information & Communication Technologies

Fellows' country/territory

Country/territory of study

- | | |
|-----------------|-------------------------|
| 16 Bulgaria | • Netherlands and Japan |
| 17 Burkina Faso | • France |
| 18 Madagascar | • France |
| 19 Rwanda | • India |

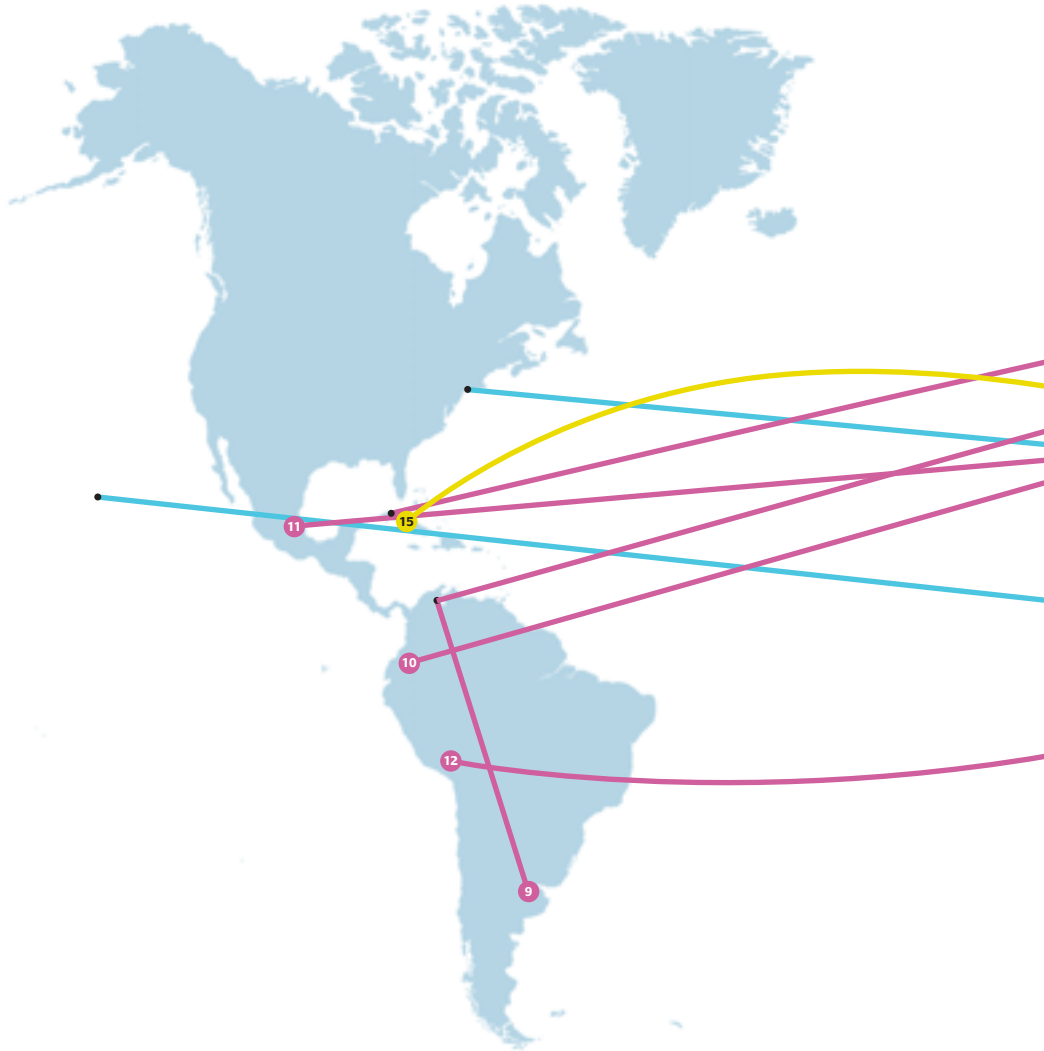
Peaceful Conflict Resolution

Fellows' country/territory

Country/territory of study

- | | |
|------------|----------|
| 20 Senegal | • France |
|------------|----------|

The UNESCO / Keizo Obuchi Research Fellowships Programme 2005 Where did the fellows go?



Environment

Fellows' country/territory

- 1 Armenia
- 2 Indonesia
- 3 Islamic Republic of Iran
- 4 Lebanon
- 5 Madagascar
- 6 Myanmar
- 7 The Palestinian Authority
- 8 Zimbabwe

Country/territory of study

- Belgium
- United States of America
- Germany
- Italy
- Switzerland
- India
- United States of America
- South Africa

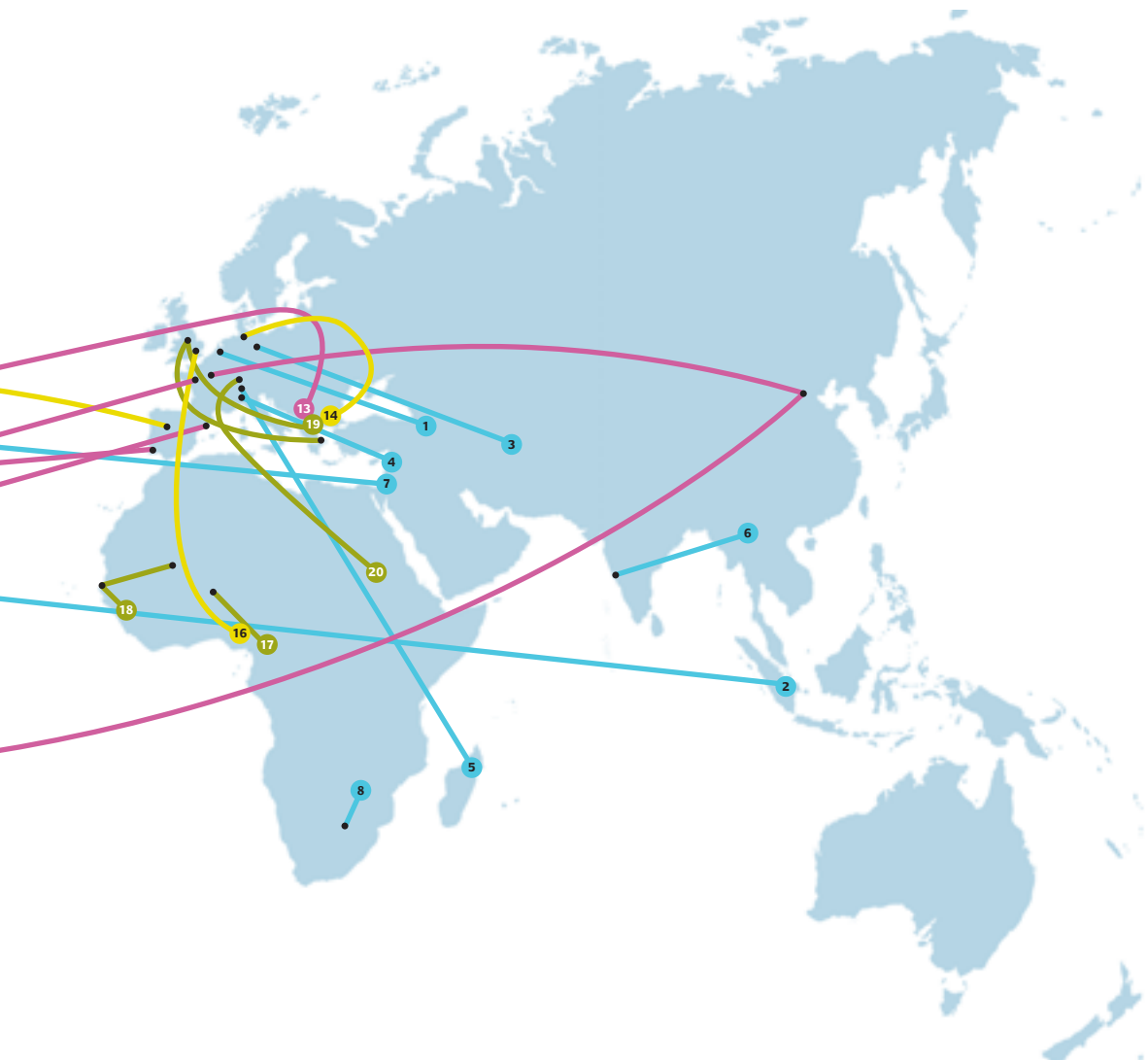
Intercultural Dialogue

Fellows' country/territory

- 9 Argentina
- 10 Ecuador
- 11 Mexico
- 12 Peru
- 13 Serbia

Country/territory of study

- Venezuela and France
- Spain
- Portugal
- France and China
- Cuba



Information & Communication Technologies

- | ● | Fellows' country/territory | ● | Country/territory of study |
|----|----------------------------|---|----------------------------|
| 14 | Bulgaria | ● | Germany |
| 15 | Cuba | ● | Spain |
| 16 | Nigeria | ● | United Kingdom |

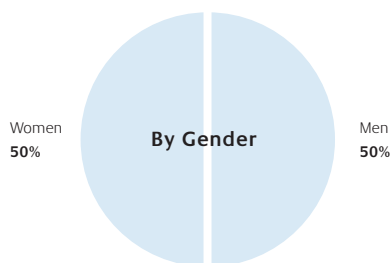
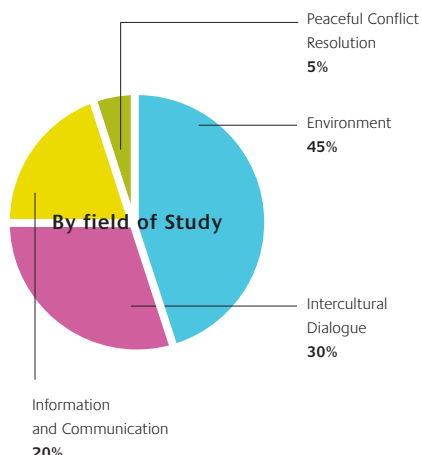
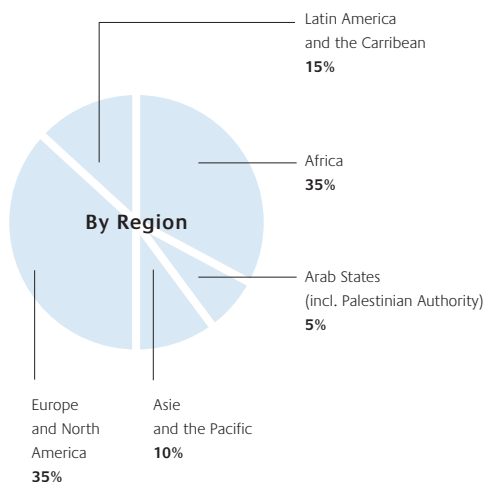
Peaceful Conflict Resolution

- | ● | Fellows' country/territory | ● | Country/territory of study |
|----|----------------------------|---|----------------------------|
| 17 | Cameroon | ● | Niger |
| 18 | Guinea | ● | Senegal and Mali |
| 19 | F.Y. Macedonia | ● | United Kingdom and Greece |
| 20 | Sudan | ● | Switzerland |

Selected candidates under the UNESCO / Keizo Obuchi Research Fellowships Programme

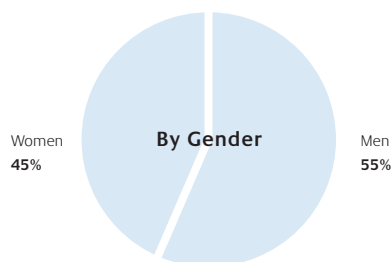
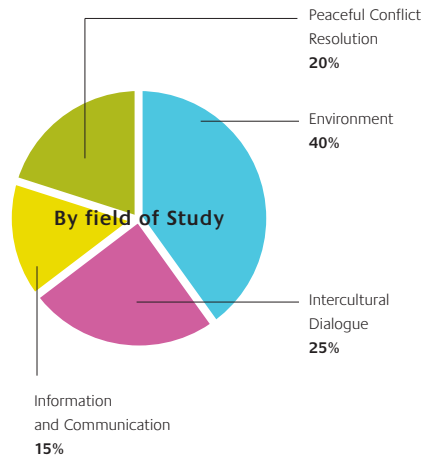
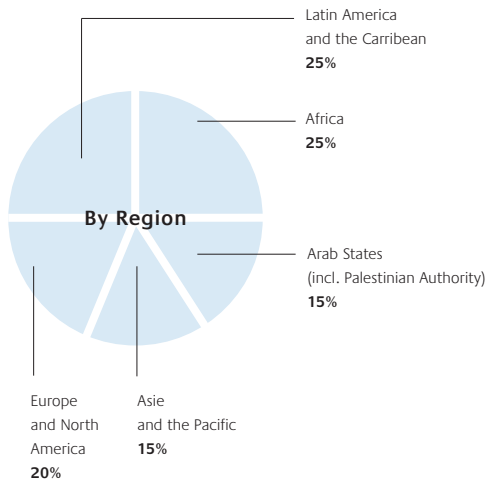
2006

	Environment	Intercultural Dialogue	Information & Communication	Peaceful Conflict Resolution	Men	Women	Total	\$ Value
Africa	2	1	3	1	5	2	7	67 500
Arab States (including Palestinian Authority)	1	-	-	-	1	-	1	10 000
Asia and Pacific	2	-	-	-	-	2	2	20 000
Europe and North America	3	3	1	-	1	6	7	70 000
Latin America and the Caribbean	1	2	-	-	3	-	3	30 000
Total	9	6	4	1	10	10	20	197 500



2005

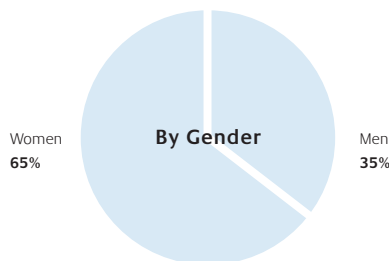
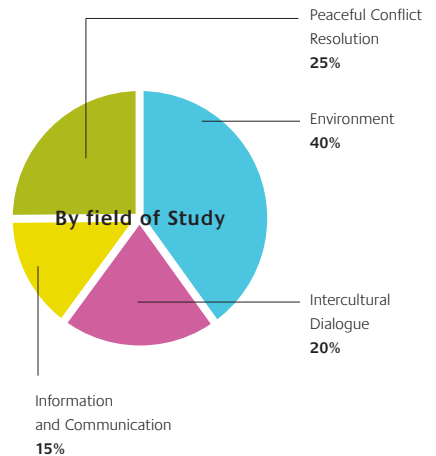
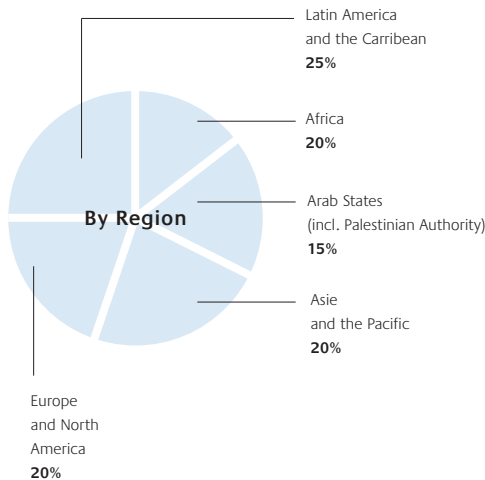
	Environment	Intercultural Dialogue	Information & Communication	Peaceful Conflict Resolution	Men	Women	Total	\$ Value
Africa	2	-	1	2	3	2	5	45 500
Arab States	2	-	-	1	2	1	3	28 200
Asia and Pacific	3	-	-	-	2	1	3	30 000
Europe and North America	1	1	1	1	1	3	4	38 500
Latin America and the Caribbean	-	4	1	-	3	2	5	47 000
Total	8	5	3	4	11	9	20	189 200



Selected candidates under the UNESCO / Keizo Obuchi Research Fellowships Programme

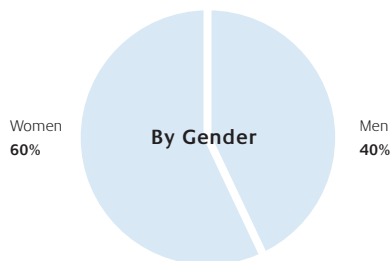
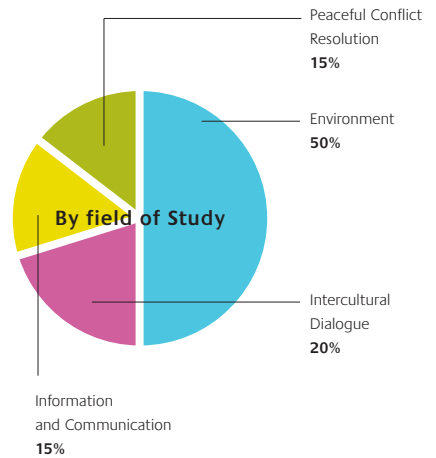
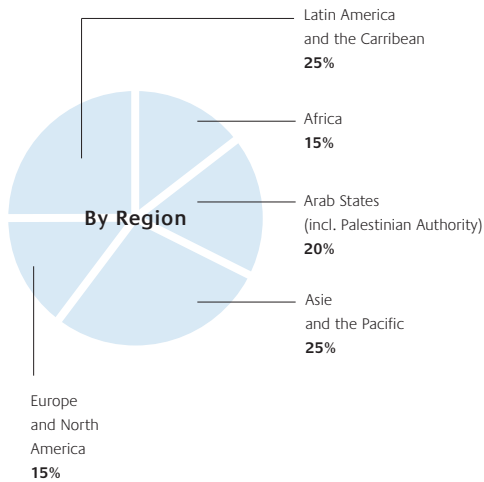
2004

	Environment	Intercultural Dialogue	Information & Communication	Peaceful Conflict Resolution	Men	Women	Total	\$ Value
Africa	3	-	-	1	3	1	4	30 000
Arab States	1	1	1	-	2	1	3	22 500
Asia and Pacific	2	2	-	-	0	4	4	30 000
Europe and North America	1	-	-	3	-	4	4	30 000
Latin America and the Caribbean	1	2	2	-	2	3	5	37 500
Total	8	5	3	4	7	13	20	150 000



2003

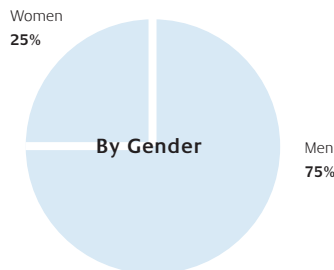
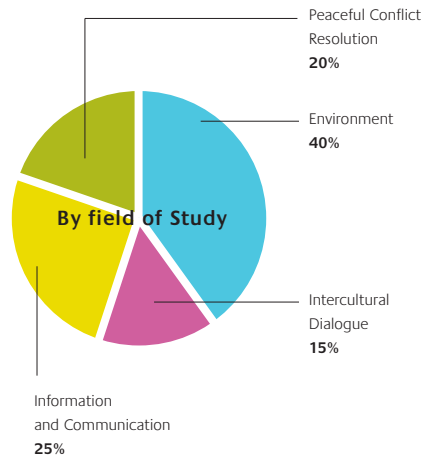
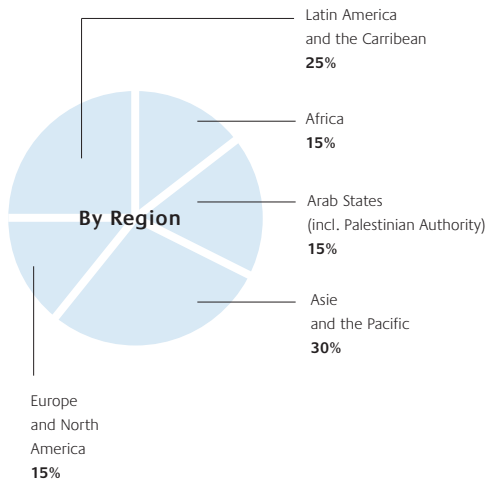
	Environment	Intercultural Dialogue	Information & Communication	Peaceful Conflict Resolution	Men	Women	Total	\$ Value
Africa	1	1	-	1	3	-	3	22 500
Arab States (including Palestinian Authority)	4	-	-	-	3	1	4	30 000
Asia and Pacific	2	2	1	-	1	4	5	37 500
Europe and North America	2	-	-	1	1	2	3	22 500
Latin America and the Caribbean	1	-	2	2	-	5	5	37 500
Total	10	3	3	4	8	12	20	150 000



Selected candidates under the UNESCO / Keizo Obuchi Research Fellowships Programme

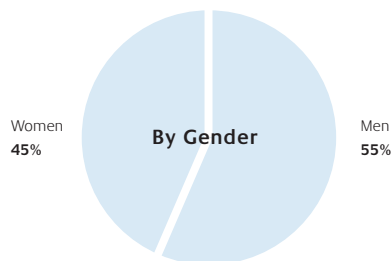
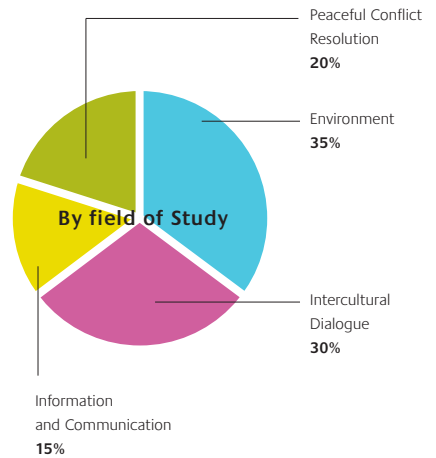
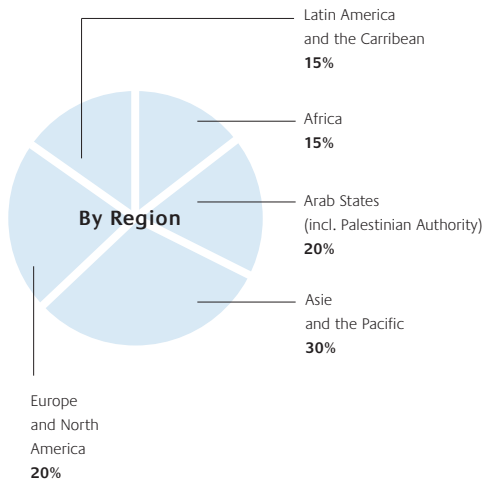
2002

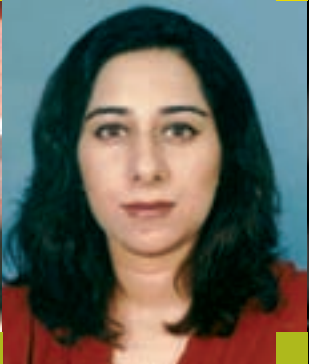
	Environment	Intercultural Dialogue	Information & Communication	Peaceful Conflict Resolution	Men	Women	Total	\$ Value
Africa	1	-	1	1	2	1	3	22 500
Arab States (including Palestinian Authority)	3	-	-	-	2	1	3	22 500
Asia and Pacific	3	1	-	2	5	1	6	45 000
Europe and North America	1	-	2	-	3	-	3	22 500
Latin America and the Caribbean	-	2	2	1	3	2	5	37 500
Total	8	3	5	4	15	5	20	150 000



2001

	Environment	Intercultural Dialogue	Information & Communication	Peaceful Conflict Resolution	Men	Women	Total	\$ Value
Africa	-	-	2	1	2	1	3	22 500
Arab States (including Palestinian Authority)	4	-	-	-	2	2	4	30 000
Asia and Pacific	1	2	1	2	5	1	6	45 000
Europe and North America	1	3	-	-	1	3	4	30 000
Latin America and the Caribbean	1	1	-	1	1	2	3	22 500
Total	7	6	3	4	11	9	20	150 000





The Twenty UNESCO / Keizo Obuchi Research Fellows 2004

Environnement

Bolivia	Carlos Alberto Ruiz Garvia	Forest production potential and ecosystem quality of forest margins recovered from agriculture
Cameroon	Chrétien Ngouanet	Tropical Mountain Land Use and Environmental Degradation: Case of the West Cameroon Highlands
Côte d'Ivoire	Kouadio Michel Yao	The Impact of land use on soil organic carbon and nitrogen dynamics in the Tene Tropical Forest
Indonesia	Putri Chairani Eyanoe	Management of Fresh Water Resources
Lao People's Democratic Republic	Virany Sengtianth	Wastewater management and buildings in Vientiane capital city
Nigeria	Taiye Remi Fasola	Rapid propagation of some endangered Nigerian medicinal plants by means of tissue culture
Palestinian Authority	Mohammed Ibrahim Abu Daya	Monitoring and assessment of coastal water quality remote sensing and conventional measurements along the coast of the Gaza Strip
Turkey	Azime Tezer Kemer	A research proposal for a potential Urban-MAB Site(s) in Istanbul

Intercultural Dialogue

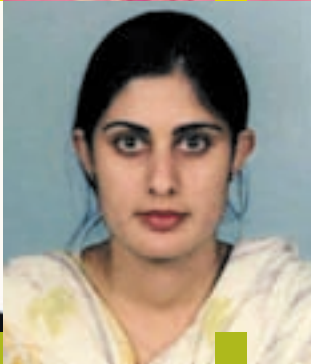
Chad	Abdrahman Togou	Dialogue among civilizations, cultures, religions and spiritual traditions: words and deeds of the ancient Toubou
lithuanie	Dainora Pociute Abukeviciene	The Literary Heterogeneity of Spiritual Movements in Early Modern Lithuania
Poland	Marzena Dorota Godzinska	Rituals of Alevi and Bektashi Religious Minorities – The Religious in a Sunni Majority Environment in Secular Turkey
Slovakia	Jaroslava Panakova- Bagdasarova	Ethnocultural Diversity and Beyond: Life Strategies and Discourse

Information and Communication Technologies

Chile	Juan Domingo Velásquez Silva	The Knowledge Discovery in Databases (KDD) process and its application in the development of intelligent websites
Dominican Republic	Melissa Yamilka Pérez Figueroa	The Promotion of Electronic Commerce within the Framework of International Trade Relations in Latin America and the Caribbean
Tunisia	Olfa Dridi	Design and realization of an automatic metadata generator from text corpora

Peaceful Conflict Resolution

Jordan	Ibrahim Mashhour Al-Jazy	Peaceful Settlement of Disputes
Kyrgyzstan	Ainura Akeeneva	Regional Conflict Prevention in Post-Soviet Central Asia
Mexico	María del Rayo Ventura Navarrete	Truth and Reconciliation Commission and its links with democratic transition in South Africa
Pakistan	Maria Kiani	Applying Comparative Models of Peaceful Conflict Resolution to the Kashmir Dispute
Peru	Ana Mayella Gutiérrez Rodríguez	The justice of the peace in Peru: a peaceful means of conflict resolution



The Twenty UNESCO / Keizo Obuchi Research Fellows 2003

Environnement

Bulgaria	Nikolay Nikolaev Valchev	Hindcasting of Wind Waves in the Black Sea
Chile	María Isabel du Monceau de Bergendal	The Political Ecology of Indigenous Movements and Tree Plantations in Chile
India	Shalini Akella	Quantification of Chromophoric Dissolved Organic Matter (CDOM) Absorbance Bleaching
Jordan	Qasem Saleh Alnewashi	Environmental Policy Options for Environmental Protection and Sustainable development in Jordan
Myanmar	Ohn Mar Ohn	Sea turtle Research and Conservation in Japan
Palestinian Authority	Taysir Salim Abu Hujair	Strategic Environmental Assessment of Water Sector in Gaza Strip
Palestinian Authority	Mohammed Sadi Eila	Integrated Approach for Sustainable Use of Water, Land and Biodiversity in Palestine
Sudan	Igbal Salah Mohammed Ali	The Application of Remote Sensing Techniques and Numerical Models Management of the River Nile Ecosystem
Togo	Lalle Yendouka Lare	Water and safety interactions
Ukraine	Halyna Hudz	The Risk-based Approach in the Concept of the Verification Times Underlying the Kyoto Protocol

Intercultural Dialogue

Burkina Faso	Mr Noël SANOU	Semiotic analysis of the mask as a symbol of identity and a mark of historicity among the Bobo
Estonia	Aune Valk	The Concept of identity, Separation of Cultures, Dialogue among Cultures, Identity Issues in Relation to Ethnic Attitudes
Mexico	Reyna Elizabeth Peña Velasco	Contemporary Construction of Islam and Western Images
Peru	Luisa Magaly Davalos Robles	Cultural Risk faces Challenges of Globalization: Collective identities and the Other in Andean countries

Information and Communication Technologies

Cuba	Mayra Marta Mena Mugica	Identify and analyse access to information in the public sector as it pertains to e-governance and the preservation of digital records
Sri Lanka	Wanigasekera Arachchige Dona Nayana Darshani Wijayasundara	A Comparative Study on the Role of University Libraries in Providing Electronic Library Services
Venezuela	Angela Adriana Valdivieso López	The Right to Information in Venezuela in the Framework of Globalization

Peaceful Conflict Resolution

Cameroon	Saibou Issa	Peaceful Coexistence in Cameroon
Kyrgyzstan	Mikhail Vladimirovich Ivanov	The Problem of New Security Challenges and Possibility of Conflict Resolution and Prevention in the Central Asia region
Pakistan	Sadia Nasir Butt	The Rise of Extremism in South Asia: a Comparative Analysis



The Twenty UNESCO / Keizo Obuchi Research Fellows 2002

Environnement

Azerbaijan	Ismail Mukhtar Zeynalov	The impact of natural and human factors on climate change in Azerbaijan and the Caspian Sea.
Democratic People's Republic of Korea	Ri Gwon Chol and Ri Ho Yong	Management and Rational Utilization of Water Resources and Establishment of Policies for Management, Utilization and Protection of Water Resources.
Egypt	Ahmed Moustafa Moussa	Environmental and Evaluation Monitoring for Lake Nasser.
Myanmar	Htun Ko	The Variation in the Drainage Basin Morphometry within Sittoung Valley.
Togo	Tchéngnon Abotchi	Demographic Pressure and Water Resource Management in the lower Ouémé Valley, Southern Benin.
Palestinian Authority	Mona Mohamad Hassan Mohsen	Assessment of Pesticides Usage in the Gaza Strip and Survey of the Residual Pesticides in the Groundwater.
Palestinian Authority	Khalid Ahmed Qahman	Three-dimensional Simulation of seawater intrusion in Heterogeneous Aquifer.

Intercultural Dialogue

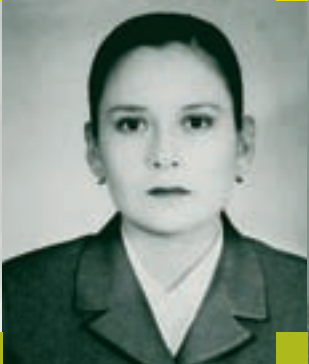
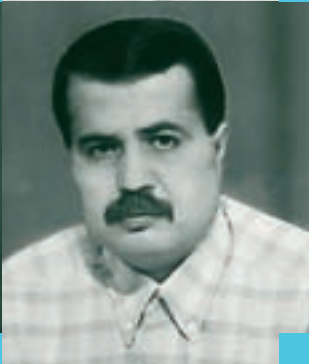
Chile	Manuel Alejandro Bilbao Zepeda	The Concept of Intercultural Dialogue from the Perspective of Contemporary Anthropology and Clinical Psychopathology.
Colombia	Carlos Arturo Salamanca Villamizar	The architectural practice in the local contexts.
Republic of Korea	Seong-Yong Park	Study on New Approaches of Cultural Tourism for the Promotion of Inter-Cultural Dialogue.

Information and Communication Technologies

Croatia	Jakov Kitarović	Internet Communications Over Powerlines.
Ecuador	Janio Lincon Jadán Guerrero	New Information Retrieval Techniques and New Multimedia Systems Generation.
Kenya	Florence Nzisa Nzwilli Muinde	The role of open access Journal systems in research capacity development.
Russian Federation	Alexei Moroz	Development of Dynamic Web Publishing Technology.
Venezuela	Luz Marina Pérez	The contribution of Information and Communication Technologies to the development of education, science and culture.

Peaceful Conflict Resolution

Bangladesh	A.H.M. Shamsul Muktadir	Conflict Management between Bangladesh and Pakistan.
Cuba	MaríaCarla Alzugaray Rodríguez	Establishing Community-Based Mediation Services in Cuba: Possibilities and Benefits
Kazakhstan	Venera Galyamova	The characteristics of the ethnic policy of the Government of the People's Republic of China.
Sierra Leone	Leslie Arthur Wilmot Shyllon	Religious Collaboration in Conflict Resolution: The Sierra Leone Experience



The First Twenty UNESCO / Keizo Obuchi Research Fellows-2001

Environment

Lithuania	Vilmantė Vyšniauskaitė	Biological Nitrogen Removal from Wastewater and Leachate.
Mauritania	Sidi Ould Salem	The Dynamic of the Sand under the Action of the Wind (Simulation of the Movement of Dunes).
Morocco	Farida Zaida	The Impact of Trace Elements on the Environment and on Human Health (ecotoxicology)
Nicaragua	Matilde Somarriba Chang	Potential Environmental Impacts of Tourism Activities in Protected Areas: A View from Nicaragua.
Palestinian Authority	Amal Hudhud	Management of Appropriate Olive Mill Wastewater Treatment in Palestine.
Palestinian Authority	Khamis Mohammed El-Mahallawi	Nitrogen Sources and Sinks in the Gaza Strip.
Papua New Guinea	Nick Araho	Study of the Mussau Archaeological Collection at Berkeley.

Intercultural Dialogue

Bosnia and Herzegovina	Jelena Drca	Looking for Universal Language: Verbal versus Visual.
Kyrgyzstan	Kubat Moldobaev	Kyrgyz-Russian Intercultural Dialogue.
Mexico	Andrés Del Castillo Sánchez	The Construction of the East Timorese National Identity, Intercultural Dialogue East Timor-Portugal.
Republic of Moldova	Elena Negru	Enhancing Understanding of the Experience of Intercultural Dialogue as a Basis for the Peaceful Settlement of Conflicts.
Romania	Alexandru Boureanu	The Sociology of Culture/Theatre: Art and Culture as Vehicles for Business Advertising.
Uzbekistan	Farruh Inogamov	The Djadids' Role in the Creation of Modern Theatres in Central Asia.

Information and Communication Technologies

Burkina Faso	Arouna Ouedraogo	The Architecture of the Distribution of Information Technology Systems: Tele-teaching Applications.
Gabon	Anasthasie Obono Mba	New Exclusion Challenges or New Opportunities for Education Systems in Sub-Saharan African Countries: the Case of Senegal and Gabon.
Mongolia	Nyamjav Davagdorj	Integrating Multimedia Technology into Training Systems.

Peaceful Conflict Resolution

Cambodia	Narin Souk	Perspectives on a Culture of Peace: A Way of Building it in Cambodia.
Democratic Republic of the Congo	Freddy Kalenga Bafwafwa	The Resolution of Conflict in Africa: The Example of the Region of the Great Lakes (Democratic Republic of the Congo, Uganda, Rwanda, Burundi).
Mexico	Atzimba Luna Becerril	Towards the Construction of a Peaceful and Lasting Solution to Conflict.
Uzbekistan	Timur Dadabaev	Intercultural Dialogue as an Integral Part of Peaceful Resolution Strategy in Multiethnic Societies: The Case of Central Asia.

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