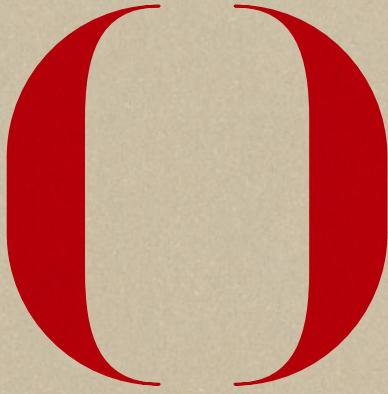
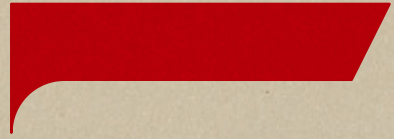




United Nations  
Educational, Scientific and  
Cultural Organization

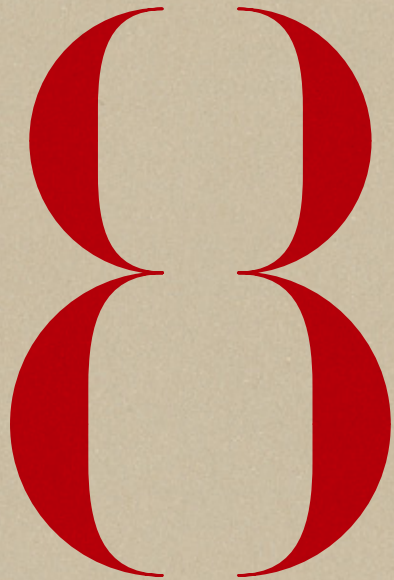


Supported by  
Japanese UNESCO-Institut  
to UNESCO



# UNESCO / KEIZO OBUCHI Research Fellowships Programme

UNESCO / Japan Young Researchers'  
Fellowship Programme





The Cover is printed on an uncoated paper, certified FSC (Forest Stewardship Council for Well Managed Forests), and ECF (Elemental Chlorine Free).





Keizo Obuchi,  
then Prime Minister  
of Japan



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BY IRINA BOKOVA

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SELECTED CANDIDATES  
FROM 2001 TO 2008

## PREFACE

BY IRINA BOKOVA



Keizo Obuchi was an inspired thinker and a strong leader, whose passion for the world made him true humanist. He worked tirelessly to take forward the solidarity that binds all people together. The UNESCO/Keizo Obuchi Research Fellowships Programme exemplifies his vision.


Fellowships are vital for UNESCO's mission. They are a way to develop and share knowledge, to nurture new resources and skills, and to build capacity. The UNESCO/Keizo Obuchi Research Fellowships Programme (UNESCO/Japan Young Researchers' Fellowship Programme) reaches all of these goals.

This booklet is the fifth in a series that feature the results of the Programme. Since 2001, two hundred fellows have benefitted from fellowships, coming from 87 Member States.

One hundred former fellows were surveyed in an effort to evaluate the Programme. The results are excellent. Eighty one percent said that they had received a promotion after the fellowship. Ninety two percent declared the fellowship to have had a substantial impact on their career. Sixty four percent of these former fellows are now professors at universities. Forty eight percent obtained their PhDs after the fellowship.

This fellowship programme has fostered research and shared knowledge between people across the world. It has strengthened ties and it has changed many individual lives. In the words of our Constitutions, this is a great example of UNESCO's goal to foster "intellectual and moral solidarity" as the basis for lasting peace.

I express my gratitude to the Government of Japan for its generous financial assistance, without which this initiative would not have been possible. I hope this will continue for many years to come.



**IRINA BOKOVA**  
DIRECTOR-GENERAL OF UNESCO

# THE UNESCO / KEIZO OBUCHI RESEARCH FELLOWSHIPS PROGRAMME

## UNESCO / JAPAN YOUNG RESEARCHERS' FELLOWSHIP PROGRAMME

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### Who was Keizo Obuchi?

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.

### Why this programme?

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 postgraduate 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.



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### 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 40 fellowship beneficiaries selected for the 2007 and 2008 cycles:

- Who are they?
- What research did they do?
- What did they achieve?



# CELEBRATING FIVE SUCCESSFUL CYCLES OF UNESCO/KEIZO OBUCHI RESEARCH FELLOWSHIPS PROGRAMME



From left to right: Ms Takako Matsuura, Ms Chizuko Obuchi, Mr Koïchiro Matsuura and His Exc. Mr Tadamichi Yamamoto

On 8 June 2009, the former Director-General of UNESCO, Koïchiro Matsuura, paid tribute to the former Prime Minister of Japan, the late Keizo Obuchi, at a special ceremony organized at UNESCO Headquarters to celebrate five successful cycles of the UNESCO/Keizo Obuchi Research Fellowships Programme, which has been supported by the Government of Japan. He was joined at the ceremony by Mr Obuchi’s widow, Ms Chizuko Obuchi, His Excellency Mr Tadamichi Yamamoto, Ambassador, Permanent Delegate of Japan to UNESCO and 16 fellows of this programme.



Mr Koïchiro Matsuura

During the ceremony, Mr Matsuura shared his personal memory of Mr Obuchi, “the great statesman and humanist” who died in May 2000 “at the height of his distinguished

career”. He added: “As a public figure, Keizo Obuchi will always be remembered for his faith in the power of people to shape the world and forge a better future... He believed that the key to success in every country was to consolidate the capacity-building of the nation’s human resources, especially by investing resources in the younger generation. Nine years after his death, Keizo Obuchi’s beliefs are more important today than ever. His priorities remain ours: reforming education systems with a view to developing what he called the “education of the heart”: achieving gender equality, safeguarding the global environment; preventing disaster by enhancing human capacity for crisis management and making the twenty-first century “a century of peace through dialogue and peaceful conflict resolution”.



Ms Chizuko Obuchi

In her remarks, Ms Obuchi recalled that the development of human capacities had constituted a key element in her husband’s vision of the world. She was thus very happy to see the seeds of that vision flourish through the UNESCO/Keizo Obuchi Programme and extended her best wishes to the fellows.

Following a brief presentation by each of the 16 beneficiaries – two for each year from 2001 to 2008 inclusive – Ms Florence Nzisa Nswilli

Muinde of Kenya and Mr Timur Dadabaev of Uzbekistan took the floor on behalf of all the recipients, in English and Japanese, respectively, to thank the Japanese Government for its financial support for this programme, which facilitates the professional development of a new generation of research leaders in developing countries and countries in transition. They expressed the hope that the programme would continue so that others

could benefit from a similar expression of confidence in their capacities and pledged to uphold the legacy of the programme through their research by always “thinking and building peace”.

At the end of the ceremony, the former Director-General and Ms Obuchi offered to each of the participating fellows the UNESCO sixtieth anniversary medal, which bears the motto “thinking and building peace”.



Petya Stefanova Orozova  
Bulgaria (2007)



Noel Sanou,  
Burkina Faso (2003)



Eloisa Blanca Mussat,  
Argentina (2005)



Phal Des,  
Cambodia (2007)



Aune Valk,  
Estonia (2003)



Juan D. Velásquez Silva,  
Chile (2004)



Liz Azzi,  
Lebanon (2005)



Raúl Loayza-Muro,  
Peru (2008)



Florence N.N. Muinde,  
Kenya (2002)



Ahmad Moustafa Moussa,  
Egypt (2002)



Mamadou Soumaré,  
Senegal (2006)



Azime Tezer Kemer,  
Turkey (2004)



Timur Dadabaev,  
Uzbekistan (2001)



Amal Hudhud,  
Auton. Palest. Territ. (2001)



Mohammed A. Al-Ghobar,  
Yemen (2008)



Elena Evgenievna Ten,  
Kyrgyzstan (2006)

## CELEBRATING FIVE SUCCESSFUL CYCLES FELLOWS' SPEECH



Florence Nzisa Nswilli Muinde,  
Kenya (English Speech)



Timur Dadabaev,  
Uzbekistan (Japanese Speech)

“It is a great honour and privilege for us, UNESCO/Keizo Obuchi research fellows, to participate in this ceremony that celebrates five successful cycles of the research fellowships programme – in memory of Keizo Obuchi, the Former Prime Minister of Japan.

Indeed, the programme has been a great contribution to human capacity development in different areas and regions of the developing world and countries in transition. Since its inception in 2001, the programme has every year awarded 20 fellowships according to merit and priority, while at the same time ensuring gender parity. We thank the Government of Japan and the Director-General of UNESCO for facilitating the implementation of the programme. The UNESCO/Keizo Obuchi Research Fellowships have enabled fellows from disadvantaged countries to undertake research in areas related to the challenges

of our times: environment, intercultural dialogue, information and communication technologies and peaceful conflict resolution. This has enabled fellows to be active voices in the global debate regarding these critical concerns of modern times. The various projects undertaken by fellows from different cultures and regions bring out the distinctive features of the social, cultural, political, economic and organizational characteristics of their environment. As experienced by people in their localities, any meaningful human development initiatives and innovations need to be grounded in the aspirations and needs of the people.

Keizo Obuchi and UNESCO thus calls on the fellows gathered here today and other beneficiaries elsewhere in the world to think globally while acting locally to improve the lives of local people. We believe that is what Mr Keizo Obuchi wanted us to do and to be, for the greater well-being of humanity.

Adding diversity to research in various areas to which Keizo Obuchi devoted his life – which are also areas of interest to UNESCO – the Programme has given rise to a new generation of researchers in all concerned research areas and across developing countries and countries in transition. It has helped fellows to complete their research projects, obtain Ph.D. degrees or undertake post-doctoral research programmes. This has also enriched their professional lives and at the same time promotes the legacy of Keizo Obuchi, who emphasized the importance of research and studying across borders and cultures. We hope that these groups may establish a network to share experiences as they work to address these real challenges of our times. Finally, we, UNESCO/Keizo Obuchi fellows,

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believe strongly in Mr Obuchi's motto "thinking and building peace" across the world and promise to do our best to meet the expectations of UNESCO and Keizo Obuchi, who invest in us to provide leadership in specific research fields. Nevertheless, we would like to emphasize sustainability of the fellowships even as we move into the last phase of the programme. Nothing illustrates this necessity better than the Japanese saying "keizoku wa chikara nari" – strength is in

continuing. The journey towards the realization of Keizo Obuchi's dream is just starting. One UNESCO programme coordinator said that this was the best programme they had ever facilitated. Let's think of strategies to keep the dream alive. Thank you very much from all of us, from across the world and its cultures! Long live the spirit of Keizo Obuchi!"

**FLORENCE NZISA NSWILLI MUINDE  
AND TIMUR DADABAEV**



Sixteen fellows in the presence of Mr Tadamichi Yamamoto, Ambassador, Permanent Delegate of Japan to UNESCO; Mr Obuchi's widow, Ms Chizuko Obuchi; and Koichiro Matsuura, former Director-General







07

**THE TWENTY FELLOWS 2007**  
WHERE DID THEY GO?

# WHERE DID THE FELLOWS GO? 2007

● ..... ●  
FELLOWS' COUNTRY / TERRITORY      COUNTRY / TERRITORY OF STUDY

## ENVIRONMENT

- 1. Bangladesh ..... Malaysia
- 2. Bulgaria ..... United Kingdom
- 3. Côte d'Ivoire ..... Morocco
- 4. Cuba ..... Belgium
- 5. El Salvador ..... Mexico
- 6. Morocco ..... France
- 7. Niger ..... France
- 8. Palestinian Autonomous Territories ..... United Kingdom
- 9. Sudan ..... United Kingdom

## INTERCULTURAL DIALOGUE

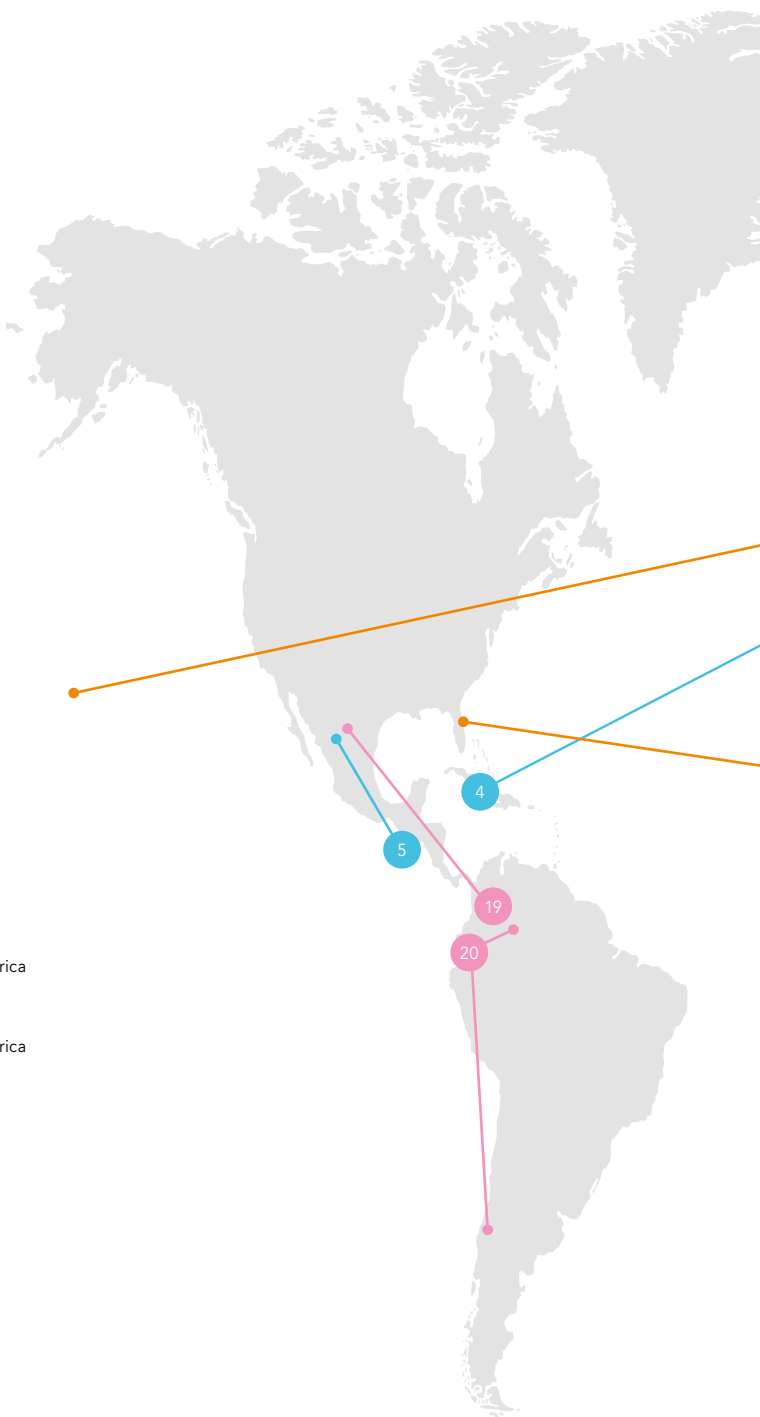
- 10. Benin ..... Togo
- 11. India ..... United States of America
- 12. Lebanon ..... France
- 13. Lithuania ..... United States of America

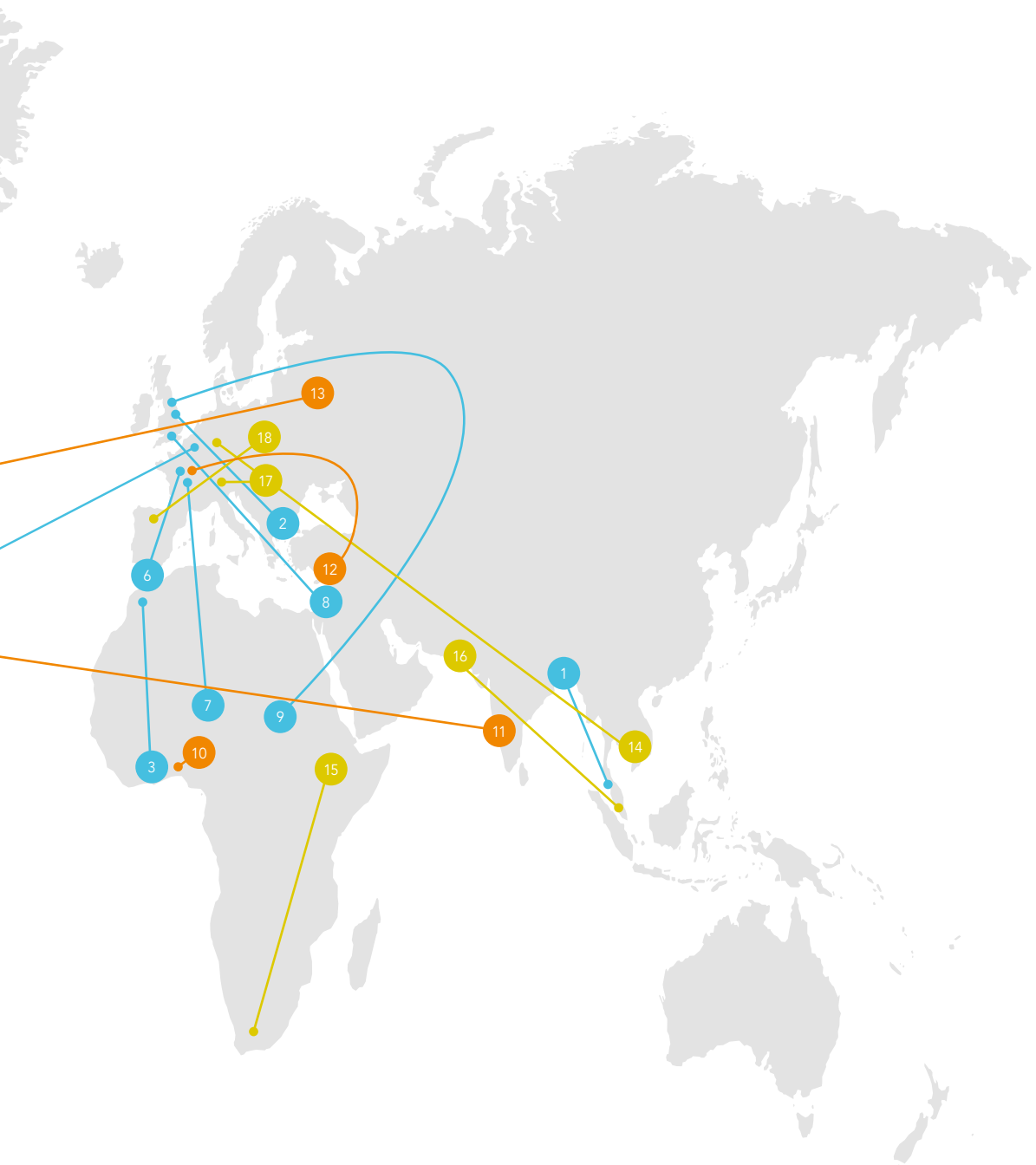
## INFORMATION & COMMUNICATION TECHNOLOGIES

- 14. Cambodia ..... Germany
- 15. Ethiopia ..... South Africa
- 16. Pakistan ..... Malaysia
- 17. Serbia ..... Switzerland
- 18. Slovakia ..... Spain

## PEACEFUL CONFLICT RESOLUTION

- 19. Colombia ..... Mexico
- 20. Ecuador ..... Chile and Colombia









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**AMINUL HAQUE**  
BANGLADESH

Improving the environmental management of a rice irrigation scheme under limited water supply



P.34

**KOUASSI JOSEPH KOUAKOU**  
CÔTE D'IVOIRE

Study of trace metals (Cd, Pb, Zn, Cu, Ni) in the soil, water and crops of urban agricultural sites in Côte d'Ivoire: the city of Abidjan



P.36

**ANAR JANET RODRÍGUEZ CHEANG**  
CUBA

Assessment of heavy metal pollution and bioaccumulation in fresh water ecosystems in Havana City, Cuba



P.32

**PETYA STEFANOVA OROZOVA**  
BULGARIA

Ecology, molecular epidemiology and pathogenic features of aeromonads



P.38

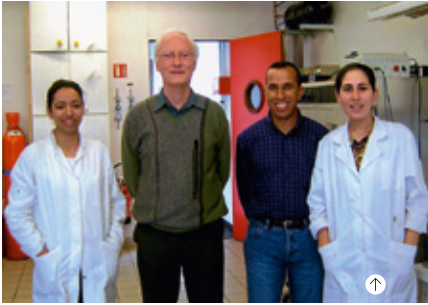
**CATALINA EVELYN GARDELLA GARCÍA**  
EL SALVADOR

Detection of *Entamoeba histolytica* and *Flavivirus* Vectors in Irrigation and Recreational Waters



FIELD OF STUDY

## INTERCULTURAL DIALOGUE



P.40

**HAAD BESBOUSSE**  
MOROCCO

Preparation and characterization of the complexing membranes of metal ions



P.66

**KOFFI JULIEN GBAGUIDI**  
BENIN

Vodun Culture- Interculturality and Globalization: some suggestions for UNESCO and escholars



P.42

**CHECK AHMED SOULEYMANE**  
NIGER

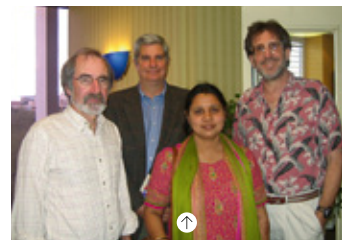
Assessment of biological diversity and hydrological and environmental processes in the Middle Niger: a case study of the Dargol, Sirba and Goroubi watersheds



P.44

**AHMED IBRAHIM ABU ISMAIEL**  
PALESTINIAN AUTONOMOUS TERRITORIES

Preparation and Characterization of Ion-selective Electrodes for the Determination of Some Water Pollutants in Groundwater



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**CHINMAYEE SATPATHY**  
INDIA

Santal & Seminole: A Colmparative Cross Cultural Study



P.46

**EIMAN MOHAMED FADUL BASHIR**  
SUDAN

Water Supply for Low-Income Rural Communities



FIELD OF STUDY

## INTERCULTURAL DIALOGUE



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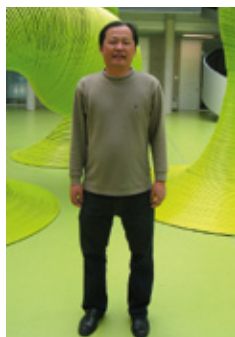
**PAULINE MOUHANNA**  
LEBANON

Lebanese migration to France: a factor of cultural integration or an obstacle to pluralism? Franco-Lebanese cultural associations in Île-de-France (Greater Paris)



FIELD OF STUDY

## INFORMATION & COMMUNICATION TECHNOLOGIES



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**PHAL DES**  
CAMBODIA

System Support for Mobile and Distributed Multimedia Computing



P.88

**DAWIT TIBEBU TIRUNEH**  
ETHIOPIA

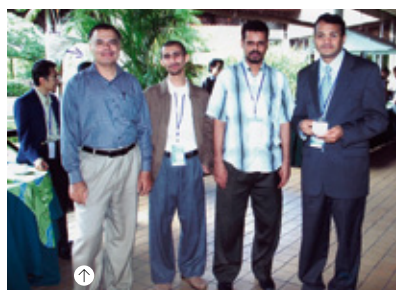
Integration of Information and Communication Technology into the Teaching and learning process at Bahir Dar University



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**AIVARAS STEPUKONIS**  
LITHUANIA

One World – One Philosophy? Global Perspectives in the Contemporary Humanities.



P.90

**AMJAD REHMAN KHAN**  
PAKISTAN

Intelligent Knowledge Acquisition and Extraction Techniques for Neural Expert Systems Based on Machine Learning Techniques



FIELD OF STUDY

**PEACEFUL CONFLICT  
RESOLUTION**



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**MILICA  
KALADJURDJEVIC**  
SERBIA

E-Governance  
E-Health



P.108

**DORAH YANETH  
ORTIZ PARRADO**  
COLOMBIA

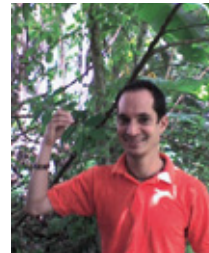
Violence against Women  
in Mexico



P.94

**KATARÍNA BRATKOVÁ**  
SLOVAKIA

Influence of Television  
on Children and Youth



P.110

**HERNÁN ANTONIO  
MOREANO URIGÜEN**  
ECUADOR

Borders: vulnerabilities,  
conflicts and human  
security







A high-angle photograph of a mountain valley. The foreground is a lush green meadow with yellow and purple flowers. The middle ground shows a valley floor with scattered rocks and patches of green. The background features steep, rocky mountain slopes with some snow patches and a dark, overcast sky. A large, white, stylized '08' is superimposed over the upper half of the image.

08

**THE TWENTY FELLOWS 2008**  
WHERE DID THEY GO?

# WHERE DID THE FELLOWS GO? 2008

●	.....	●
<u>FELLOWS'</u>		<u>COUNTRY / TERRITORY</u>
<u>COUNTRY / TERRITORY</u>		<u>OF STUDY</u>

## ENVIRONMENT

1. Burkina Faso ..... France
2. Côte d'Ivoire ..... France
3. Lao People's ..... People's Republic of China  
Democratic Republic
4. Peru ..... The Netherlands
5. Sri Lanka ..... Australia and Indonesia
6. Uruguay ..... The Netherlands
7. Yemen ..... United States of America

## INTERCULTURAL DIALOGUE

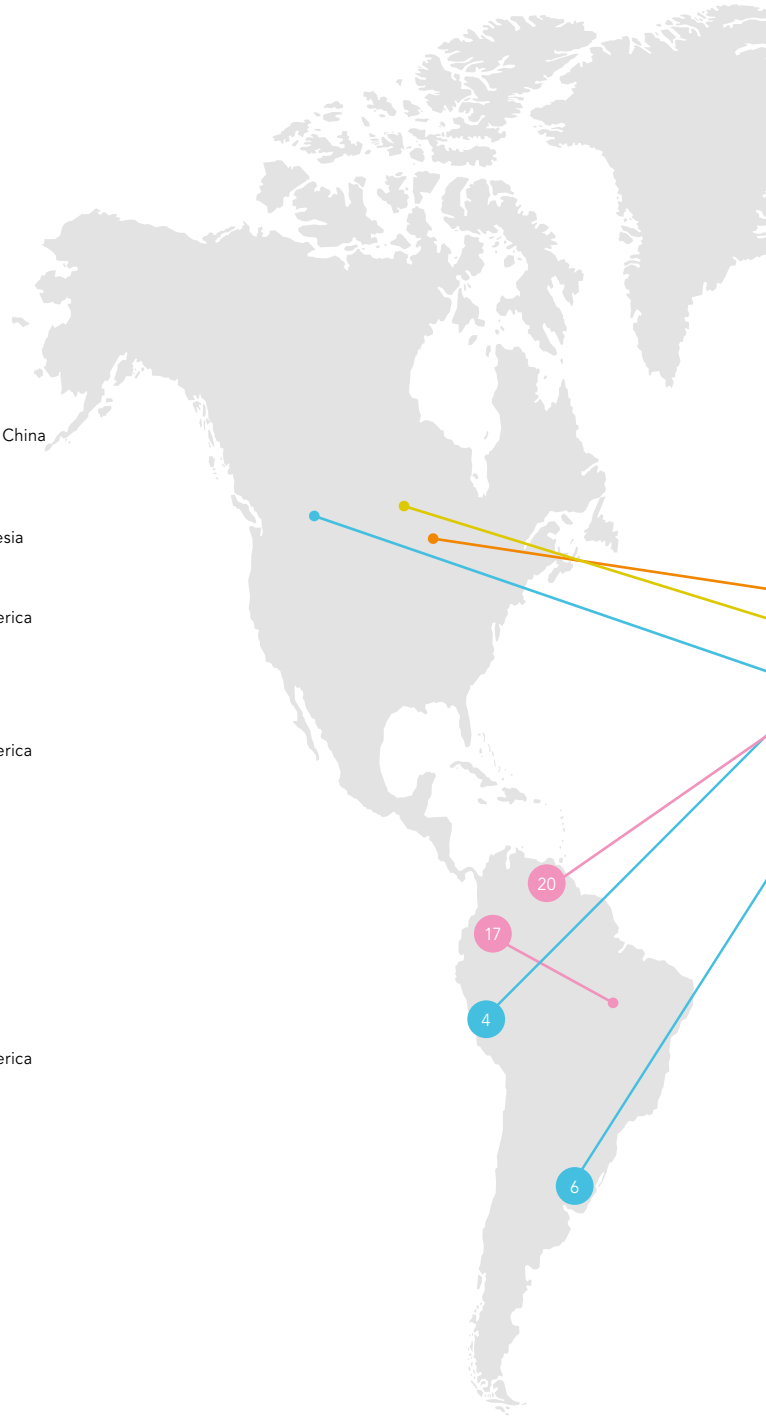
8. People's Republic ..... United States of America  
of China
9. Hungary ..... Russian Federation
10. Senegal ..... France
11. Tunisia ..... France

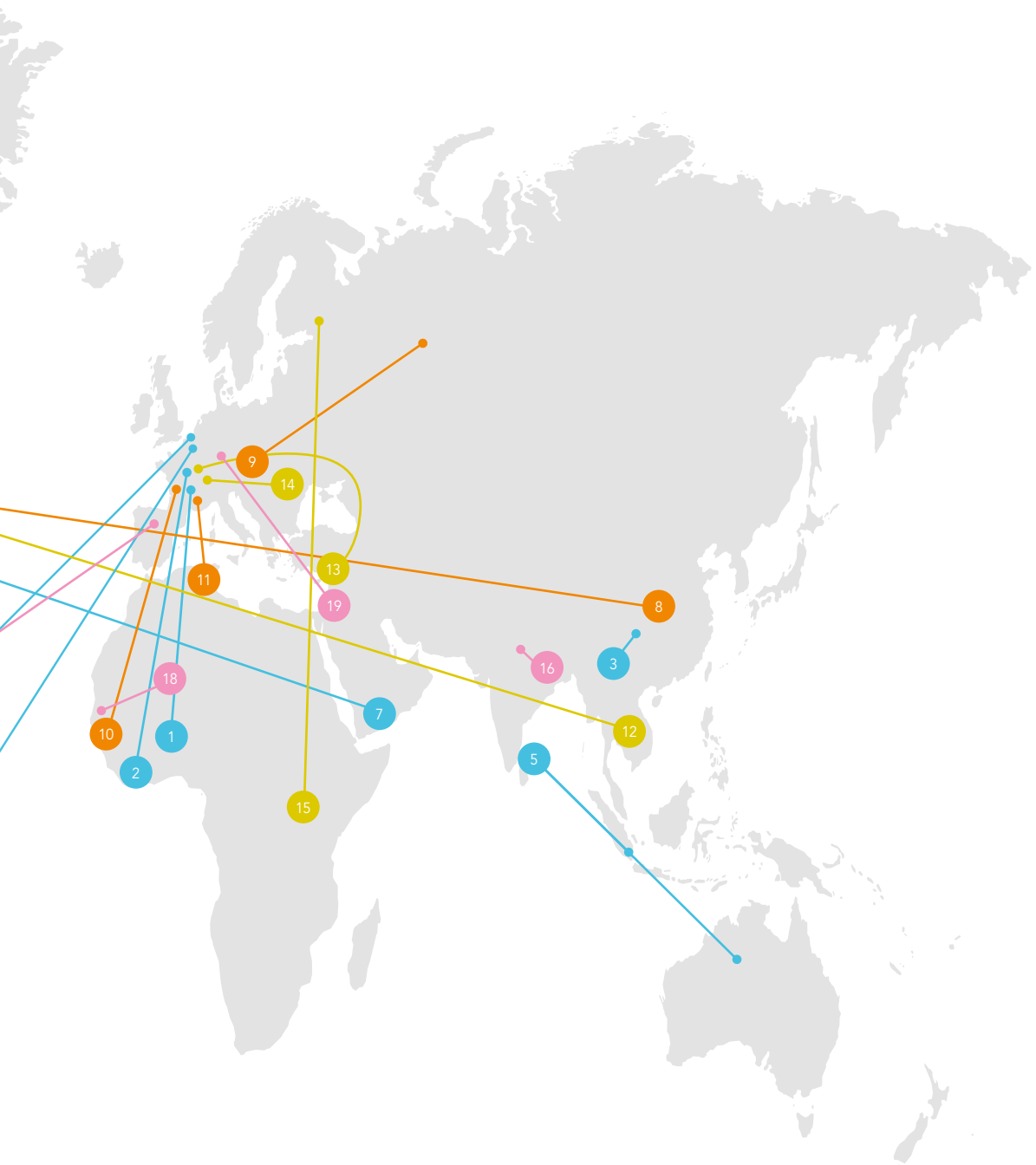
## INFORMATION & COMMUNICATION TECHNOLOGIES

12. Cambodia ..... United States of America
13. Lebanon ..... France
14. Romania ..... France
15. Uganda ..... Finland

## PEACEFUL CONFLICT RESOLUTION

16. Bangladesh ..... Nepal
17. Colombia ..... Brazil
18. Mali ..... Senegal
19. Palestinian ..... Austria  
Autonomous  
Territories
20. Venezuela ..... Spain









FIELD OF STUDY

**ENVIRONMENT**



P.50

**OLIVIER GNANKINE**  
BURKINA FASO

Molecular characterization of Bemisia Tabaci (Homoptera: aleyrodidae) for a durable management



P.52

**VINCENT TCHIMOU ASSOMA**  
CÔTE D'IVOIRE

The contribution of radar remote sensing (ENVISAT) and Geographic Information Systems (GIS) to the mapping of hydrogeological and mining potentialities. Implication in the management of water resources in the southern coastal region of Côte d'Ivoire"



P.54

**CHANHDA HEMMAVANH**  
LAO PEOPLE'S DEMOCRATIC REPUBLIC

Study on driving forces and Land conservation strategy in Laos



P.56

**RAÚL AUGUSTO LOAYZA MURO**  
PERU

Analysis of field data for applying a novel biotic index based on native macroinvertebrates to evaluate water quality and environmental changes in Peruvian high-altitude streams



P.58

**DONA HEMALI NANDANA MUNASINGHE**  
SRI LANKA

Comparative phylogenic study of Genus Macrobrachium in Sri Lanka, South and Southeast Asian region: Hints for biodiversity conservation



FIELD OF STUDY

## INTERCULTURAL DIALOGUE



P.60

**CECILIA TAMARA  
AVELLÁN HAMPE**  
URUGUAY

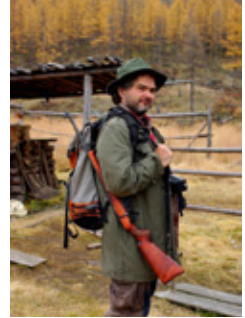
Constructed wetlands  
for use in Uruguayan  
dairy waste waters using  
endogenous plants



P.76

**JIANPING YANG**  
PEOPLE'S REPUBLIC  
OF CHINA

A comparative study  
of Chinese intellectuals'  
understanding of  
Christianity and Americans'  
view of Chinese religious  
belief



P.78

**ISTVÁN SANTHA**  
HUNGARY

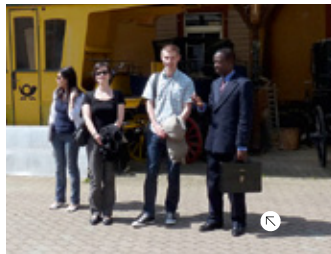
Loosing Culture:  
the Evenkis in Russia



P.62

**MOHAMMED  
ABDULLAH AL-GHOBAR**  
YEMEN

Evaluation of Water Quality  
in Nebraska Using Watershed  
Modeling a case of study  
proposal in Nebraska State,  
USA. Nitrate and ammonia  
concentrations in Ground-  
water from Shallow Wells



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**IBRAHIMA DIOUF**  
SENEGAL

Traditional magico-religious  
and cultural practices in  
Rome and Serer society:  
a comparative study



P.82

**HEND JABBES**  
TUNISIA

Promoting interreligious  
and intercultural dialogue  
through education: heuristic  
aspects of reconciliation  
mechanisms



FIELD OF STUDY

**INFORMATION  
& COMMUNICATION  
TECHNOLOGIES**



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**IM SOTHEARITH**  
CAMBODIA

A public service  
broadcasting Model for  
Developing Countries:  
the case of Cambodia



P.102

**NICOLETA  
CRISTEA-BRUNEL**  
ROMANIA

The Region of Provence-  
Alpes-Côte d'Azur:  
a dynamic player in  
the strategies and uses  
of information and  
communication technologies



P.100

**RIMA MALEK**  
LEBANON

The pedagogical electronic  
devices conceived  
for the online tutoring of  
face-to-face academic  
courses: the case of Lebanon



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**JOSEPH KIZITO BADA**  
UGANDA

Design and evaluation of  
Web-based HIV/AIDS  
education and counseling  
support system in Uganda



FIELD OF STUDY

## PEACEFUL CONFLICT RESOLUTION



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**MOHAMMAD TANZIMUDDIN KHAN**  
BANGLADESH

Post-conflict peace-building in Nepal: the Role of the civil society



P.116

**RENATA MORENO QUINTERO**  
COLOMBIA

The peasant organization in Colombia, difficulties and possibilities of democratic participation, from a comparative perspective with the MST (movement of Landless workers) in Brazil



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**BAKARY CAMARA**  
MALI

Changes in property systems in Mali: Case of the south Mali cotton basin: Office of the Niger zone and CMDT region of Koutiala



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**MUAYAD YAHYA**  
PALESTINIAN  
AUTONOMOUS  
TERRITORIES

The role of the European Union (EU) in enhancing democracy and development in Palestine since the Oslo accords: form, objectives, impacts



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**ALICIA FERLINDA NUÑEZ PAREDES**  
VENEZUELA

Descriptive study of how social agents perceive unaccompanied immigrant minors



FIELD OF STUDY 2007-2008

# ENVIRONMENT

“The growing network of water-related centres under the auspices of UNESCO is a clear sign that Member States have heard our message – that human and institutional capacity-building for improved management of water resources must be a major priority, especially in the broader context of the environment and climate change.”

**IRINA BOKOVA**  
DIRECTOR-GENERAL OF UNESCO

General debate on Item 4, 184th session of the Executive Board,  
(UNESCO, 8 April 2010).

YEAR  
**2007**

FELLOWS

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**AMINUL HAQUE**  
BANGLADESH
- P.32  
**PETYA STEFANOVA OROZOVA**  
BULGARIA
- P.34  
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CÔTE D'IVOIRE
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**ANAR JANET RODRÍGUEZ CHEANG**  
CUBA
- P.38  
**CATALINA EVELYN GARDELLA GARCÍA**  
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**2008**

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YEMEN



FIELD OF STUDY

## ENVIRONMENT

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YEAR

**2007**

FELLOW

**AMINUL HAQUE**

BENEFICIARY COUNTRY

**BANGLADESH**

COUNTRY OF STUDY

**MALAYSIA**

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PLACE OF RESEARCH

Universiti Putra Malaysia  
(Putra University, Malaysia)  
Faculty of Engineering,  
Serdang Darul Ehsan, Malaysia.

RESEARCH UNDERTAKEN

From 8 January  
to 7 September 2008.

---

ABOUT FELLOW

Born on 1 January 1967  
in Kishoreganj, Bangladesh.

LAST DEGREE OBTAINED

Universiti Putra Malaysia  
(Putra University, Malaysia):  
PhD in Water Resources  
Engineering (9 December 2004).

SCHOLARLY WORK  
AND PUBLICATIONS

*Water Distribution  
and Water Use Assessment  
in Rice Cropping Systems,*  
Songklanakarin Journal  
of Science and Technology,  
Thailand (2006).

*Improved Integrated Water  
Management for Agriculture  
of the Upper East region  
of Ghana,* Ghana Journal  
of Agricultural Science,  
Ghana (2006).

*Modeling Water Balance  
Components for Rice  
Cultivation Under Gravity  
Irrigation in Malaysia,* Journal  
of the Institution of Engineers,  
Malaysia (2006).

*In-time rice Water Management  
Under Limited Water Supply,*  
Pertanika Journal of Science  
and Technology, Malaysia  
(2006).



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# Improving the environmental management of a rice irrigation scheme with a limited water supply

The rivers in Malaysia play an important role in many aspects of life, including economic, cultural and religious dimensions. Rivers are the main sources of water for agricultural purposes. The Seberang Perai Rice Irrigation Scheme in the state of Penang is one of the eight main rice-growing areas in Malaysia. This study was carried out to improve the environmental management plan in order to ensure that environmental concerns are built into the operation and monitoring activities of the rice irrigation scheme. Rainfall and weather data for 20 years were analysed to identify periods of excess water or water shortages throughout the rice-growing season. The long-term rainfall records indicate that maximum rainfall occurs in August, September, October and November, with monthly mean rainfall values of 205 mm, 344 mm, 348 mm and 228 mm, respectively. This period accounts for 48% of the total annual rainfall. Irrigation water supply could be reduced in the main season (September-February) because of higher rainfall. On the other hand, the crops' water requirement was found to be 5.00 mm/day in the off-season crop and 4.90 mm/day in the main season crop. Crops' water requirements were higher in the off season than in the main season, mainly as a result of prevailing weather conditions. The average seasonal water consumption of rice was 862 mm, of which 616 mm (71%) represented evapotranspiration (ET) and 246 mm (29%) percolation. The average seasonal water supply was 1,210 mm, of which 871 mm (72%) was supplied by irrigation and 339 mm (28%) by rainfall. Agricultural fertilization entails significant economic and environmental costs. Among the fertilizers, nitrogen (N) is the most commonly applied nutrient in crop

production. However, excess N inputs, pesticides, and herbicides not only raise the cost of rice crop production but can also be environmentally damaging to the plant. The water quality index (WQI) was calculated on the basis of the following six parameters: biochemical oxygen demand (BOD), chemical oxygen demand (COD), ammoniacal nitrogen (NH<sub>3</sub>N), pH, dissolved oxygen (DO) and suspended solids (SS). There is an upward trend in DO concentration, while BOD and COD are observed in low concentrations. The WQI calculated in this study ranged from 69.9% to 82.2%. Two rivers (the Kerian and the Jarak) were considered slightly polluted in comparison with the general rating scale of the water quality index. The data also showed that the Muda and the Kulim are relatively clean. However, there is not much difference in the water quality index of the four rivers, between upstream and downstream sections. On the basis of the results of this study, the water quality of the rivers can be classified into Class III and Class IV by an overall river classification based on the DOE-WQI. This study also revealed that the most practical and effective methods of reducing the use of chemicals on rice fields is through integrated pest management (IPM). This is a unique and environmentally safe approach in which biological agents such as catfish and owls are used to control weeds and pests. Lastly, a conceptual model of the environmental management plan (EMP) was formulated to incorporate water quality, biological diversity and the sustainable use of natural resources for the scheme. The results of this study can be used as a basis for future studies on irrigation water quality in other projects.

17 SEPTEMBER 2008





FIELD OF STUDY

## ENVIRONMENT

YEAR

**2007**

FELLOW

**PETYA STEFANOVA  
OROZOVA**

BENEFICIARY COUNTRY

**BULGARIA**

COUNTRY OF STUDY

**UNITED KINGDOM**

PLACE OF RESEARCH

Heriot-Watt University  
School of Life Sciences  
Centre for Marine Biodiversity  
and Biotechnology (CMBB),  
Edinburgh, United Kingdom.

RESEARCH UNDERTAKEN

From 1 February  
to 31 July 2008.

ABOUT FELLOW

Born on 14 March 1971  
in Vraca, Bulgaria.

LAST DEGREE OBTAINED

Institute of Microbiology,  
Sofia, Bulgaria: Doctoral  
Degree in Microbiology  
(26 February 2002).

SCHOLARLY WORK  
AND PUBLICATIONS

*Properties of Yersinia  
enterocolitica and Yersinia  
pseudotuberculosis in red  
blood cell concentrate of  
different ABO groups during  
long keeping at 4°C. Clinical  
Microbiology and Infection,*  
P. Orozova, N. Markova,  
T. Radoucheva (2001).

*Mucins in natural mud as  
inductor of neuraminidase  
secretion of some Aeromonas  
strains, I. Abrashev, P. Orozova,  
Probl. Inf.Parasit. Dis. (2004).*

*Influence of mucins in natural  
mud from Pomorie salt lake on  
the growth and neuraminidase  
secretion of some Vibrio  
cholerae non O-1 strains,  
I. Abrashev, P. Orozova,  
Journal of the Bulgarian  
Academy of Science,  
Volume 58,10, Bulgaria (2005).*

*E. Rhusiopathiae neuraminidase  
and its role in pathogenicity.  
Naturforschung, 61c,  
I. Abrashev, P. Orozova (2006).*



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# Ecology, molecular epidemiology and pathogenic features of aeromonads

During the past six months of the fellowship “**Ecology, molecular epidemiology and pathogenic features of aeromonads**” I have taken a significant step forward. I gained experience of fish pathology. Heriot-Watt University in Edinburgh, Scotland and the laboratory of Professor Brian Austin in the School of Life Sciences provided an excellent scientific and research atmosphere. Our work was supported by good technical services, and we used contemporary methods. All the colleagues in the laboratory and in the School of Life Sciences were friendly and supportive. The great experience and authority of Professor Brian Austin as well as his charismatic personality make him a perfect supervisor. I learnt much from him.

In our research, we used a culture collection of fish- and water-borne aeromonads isolated from Denmark, England, France, Italy, Scotland, Spain and Sweden. We focused on the taxonomy and pathogenicity of fish pathogenic isolates with a view to clarifying the role of the group in fish diseases. Extraction of the DNA and 16S rDNA gene sequencing, determination and characterization of some virulence markers, determination of fish pathogenicity were the main steps in our research. RAPD-PCR was used to characterize, and trace, the phylogeny of diverse aeromonads isolated from different countries.

We found that a culture recovered from human diarrhoeal disease (*A. hydrophila* subsp. *dhakensis*) causes disease and death in rainbow trout. The pathogenicity of *A. hydrophila* subsp. *dhakensis* to rainbow trout was a novel observation, and extends the range of aeromonads associated with diseases in aquatic animals.

The results were summarized and the manuscript “**Identification and pathogenicity to rainbow trout (*Oncorhynchus mykiss* Walbaum) of some aeromonads**” by **P Orozova\*, M Barker, DA Austin and B Austin** was submitted in the Journal of Fish Diseases (JFD-2008-175).

I am very grateful to my supervisor Professor Brian Austin and all his colleagues for their support. Working together was not only effective but also a pleasure and a source of joy.

I appreciate the great opportunity that UNESCO gave me in supporting my professional development and scientific and research experience.

**30 SEPTEMBER 2008**



FIELD OF STUDY

## ENVIRONMENT

YEAR

**2007**

FELLOW

**KOUASSI JOSEPH  
KOUAKOU**

BENEFICIARY COUNTRY

**CÔTE D'IVOIRE**

COUNTRY OF STUDY

**MOROCCO**

PLACE OF RESEARCH

National Centre for Nuclear Energy, Sciences and Technology (Centre National de l'Energie, des Sciences et des Techniques Nucléaires) CNESCTEN, Rabat, Morocco.

RESEARCH UNDERTAKEN

From 26 November 2007 to 18 March 2008.

ABOUT FELLOW

Born on 5 December 1975 in Kinkua, Côte d'Ivoire.

LAST DEGREE OBTAINED

University of Abobo-Adjamé, Abidjan, Côte d'Ivoire. PhD in Natural Sciences, specialization: Biogeochemistry (Biodiversity and Sustainable Development of Ecosystems) (4 July 2009).

SCHOLARLY WORK  
AND PUBLICATIONS

*Teneurs pseudototales et phytodisponibles des éléments traces métalliques dans les sols maraîchers de la ville d'Abidjan* [Pseudo-total content and phytoavailability of trace metal elements in market-garden soils in the city of Abidjan] (Côte d'Ivoire). Ninth National Soil Study Seminar, Angers (France), 3 to 5 April 2007. French Soil Study Association (AFES), France. Proceedings, 63-64 Kouakou, K. J., Bekro, Y. A., Sika, A. E., Baize, D., Dogbo, D. O. (2007).

*Diagnostic d'une contamination par les éléments traces métalliques de l'épinard (Spinacia oleracea) cultivé sur des sols maraîchers de la ville d'Abidjan (Côte d'Ivoire) amendés avec de la fiente de volaille* [Diagnosis of trace metal contamination of spinach (*Spinacia oleracea*) cultivated on market-garden soils amended with poultry manure in the city of Abidjan (Côte d'Ivoire)]. European Journal of Sciences Research, Vol. 21, No. 3, 471-487 Kouakou, K. J., Bekro, Y. A., Baize, D., Sika, A. E., Dogbo, D. O., Bounakhla, M., Zahry, F., Macaigne, P. (2008).



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# Study of trace metals (Cd, Pb, Zn, Cu, Ni) in the soil, water and crops of urban agricultural sites in Côte d'Ivoire: the city of Abidjan

As in other cities in developing countries, market gardening is flourishing in the city of Abidjan. It helps to supply the markets in the city's 10 districts with fresh produce and provides financial resources for the unemployed. Market-garden soils are amended with poultry manure, a source of trace metal elements. The purpose of this study was therefore to assess the level of Cd, Cu, Pb and Ni contamination in the soil, water and crops of market-garden sites. To this end, samples of poultry manure, irrigation water, soil (surface and subsoil horizons) and of the main crops – amaranth, lettuce and spinach – were collected from the market-garden sites of Marcory and Cocody.

A control plot was selected on the experimental farm of the University of Abobo-Adjamé. Sample analysis showed that supplementation with poultry manure increased the pH and the organic-matter content in market-garden soils.

Zn and Ni levels in poultry manure collected from the two market-garden sites were higher than the values set by the French Association for Standardization (AFNOR) for fertilizers. With the exception of Cd at Cocody, Cu, Pb, Zn and Ni levels in irrigation water samples collected from Cocody were above the concentrations recommended by the Food and Agriculture Organization of the United Nations (FAO).

At Marcory, the surface and subsoil horizons were contaminated with Cu and Zn, while only the 20-40 cm horizon had a high Cd content. At Cocody, the Cd, Pb and Zn levels in the horizons were above or close to the recommended limits. In the control sample,

Pb, Zn and Ni levels in the surface and subsoil horizons were also above the recommended levels. Atmospheric inputs also contributed to soil contamination, which accounted for the high levels of some trace metals in the surface horizons of the control soil sample. Pb and Ni levels in the unconfined groundwater of the two market-garden sites and the Cd content in the Marcory waters were above the recommended values for drinking water. At the three sites, Pb, Zn and Ni concentrations in amaranth leaves, lettuce and spinach were above the recommended standards and reportedly posed a danger to consumers.

**Keywords:** market gardening, Abidjan, trace metal elements, contamination, Cd, Cu, Pb, Zn, Ni, poultry manure, irrigation water, unconfined groundwater, amaranth, lettuce, danger, consumers.

18 MARCH 2008

TRANSLATED FROM FRENCH BY UNESCO





FIELD OF STUDY

## ENVIRONMENT

YEAR

**2007**

FELLOW

**ANAR JANET  
RODRÍGUEZ CHEANG**

BENEFICIARY COUNTRY

**CUBA**

COUNTRY OF STUDY

**BELGIUM**

PLACE OF RESEARCH

Université Libre de Bruxelles  
Océanographie Chimique  
et Géochimie des eaux  
Département des Sciences de  
la terre et de l'environnement,  
Brussels, Belgium.

RESEARCH UNDERTAKEN

From 10 September 2007  
to 10 January 2008.

ABOUT FELLOW

Born on 30 April 1973  
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LAST DEGREE OBTAINED

Havana University, Biology  
Faculty, Havana, Cuba:  
Master's Degree in  
Microbiology, Microbial  
Ecology (27 April 2004).

SCHOLARLY WORK  
AND PUBLICATIONS

*Environmental monitoring of  
chemical pollution in the  
Almendares River, Cuba.*

*Workshop on Treatment and  
Management of Solid Waste  
and Wastewater. Volume 7.*  
ISBN 959-7136-43-0,  
Yunier Arpajón, Zoila Castaño,  
Raúl Masán, Denis Desgain,  
Nathalie Roevros, Daysi Lugo,  
Josué Prats, Lei Chou, Nidia  
Rojas and Mayra Heydrich  
(2006).

*Potential risk due to microbial  
pollution in the Almendares  
River. Workshop on Treatment  
and Management of Solid  
Waste and Wastewater.*

Volume 7. ISBN 959-7136-43-0,  
Prats, J., Larrea, J., García-  
Armisen, T., Lugo, D.,  
Rodríguez, A., Servazis, P.,  
Rojas, N. and Heydrich, M.  
(2006).

*Caracterización fisiológica  
de la comunidad microbiana  
neófito de la caña de azúcar*  
[Physiological Characteristics  
of the Neophytic Microbial  
Community in Sugarcane],  
Revista colombiana de  
biotecnología, VII, No.1,  
Rodríguez, A. J., Trujillo, I. D.,  
Felipe, Y., Rojas, M. M.,  
Manzano, J., Heydrich, M.  
(2005).



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# Assessment of heavy metal pollution and bioaccumulation in fresh water ecosystems in Havana City, Cuba

Increasing urban environmental pollution and human impact have led to a deterioration in water quality. Heavy metals are a particular group of contaminants in water reservoirs. They are highly significant ecologically, since they are not removed from water through self-purification, but rather accumulate in reservoirs and enter the food chain through bioaccumulation and biosorption processes. The Almendares and Quibú rivers are the most important freshwater systems in the Cuban capital, and they receive wastewater from industry and domestic sewage. The Metropolitan Park of Havana (PMH) has been developed along the last 7 km of the Almendares River. As an urban project, the PMH has several attraction sites spread over 700 hectares of land in the centre of the city. The pollution of the river could affect the health of the people who enjoy the Park.

The objective of this work was to determine metal concentrations in biological samples collected from the following polluted Cuban rivers: Almendares and Quibú. For the study, sediments and biological samples such as fish, crabs, molluscs, plant leaves and plant roots were analysed. For large fish, the muscle, digestive system and liver were processed separately. For large molluscs, only the soft internal material was taken. For small fish, crabs and small molluscs, the whole mass of these organisms from the same sample station was processed together. Plants were processed individually. All samples were dried at 80°C for 72 hours, then macerated and stored in plastic bags at room temperature. Acid digestion in closed vessels and microwave heating were performed to

release metals from the samples.

Multi-elemental metal analysis of Al, Co, Cr, Cu, Ni and Zn was carried out by means of inductively coupled plasma atomic emission spectrometry (ICP-OES). The concentrations of the toxic heavy metals Cd and Pb were analysed through graphite furnace atomic absorption spectrometry (GFAAS).

The results obtained indicate that each organism tends to retain one or more metallic elements, and the plants roots are able to concentrate a large spectrum of metals, including toxic metals. Not all metallic pollutants present in the aquatic system are able to affect the biota, and the bioaccumulation process does not depend directly on metal concentration.

There are other factors that seem to influence this phenomenon. Significant correlations were determined for Al-Zn, Al-Pb, Al-Cd, Cr-Cu, Cr-Ni, Cu-Ni, Cu-Zn, Cu-Pb, Cu-Cd, Ni-Zn, Zn-Pb, Zn-Cd and Pb-Cd. Taking into account the correlations found, some metals, such as: Al, Zn, Cd and Pb; Cr, Cu and Ni; Cu, Zn, Cd and Pb, seem to be related by synergic and/or antagonist mechanisms in the bioaccumulation process. In general, the concentrations of Cd and Pb found in fish exceeded the maximum limits for human consumption, which is 0.5 µg cadmium g<sup>-1</sup> dry weight and 2 µg lead g<sup>-1</sup> dry weight. The present work contributes to the assessment of metal pollution in significant waterways in the Cuban capital, as well as to knowledge about availability, bioavailability and metal interactions.

30 APRIL 2008



FIELD OF STUDY

## ENVIRONMENT

YEAR

**2007**

FELLOW

**CATALINA EVELYN  
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BENEFICIARY COUNTRY

**EL SALVADOR**

COUNTRY OF STUDY

**MEXICO**

PLACE OF RESEARCH

Centro de Investigaciones y de Estudios Avanzados del Instituto Politécnico Nacional (CINVESTAV-IPN) [Research and Advanced Studies Center of the National Polytechnic Institute of Mexico]. Departamento de Genética y Biología Molecular [Department of Genetics and Molecular Biology] Mexico City, Mexico.

RESEARCH UNDERTAKEN

From 1 September 2007 to 31 May 2008.

ABOUT FELLOW

Born on 8 July 1969 in Valparaiso, Chile.

LAST DEGREE OBTAINED

Centro de Investigaciones y de Estudios avanzados del Instituto Politécnico Nacional (CINEVESTAV-IPN) [Research and Advanced Studies Centre of the National Polytechnic Institute of Mexico], Departamento de Biología Celular [Department of Cellular Biology], Mexico City, Mexico: Doctorate in Cellular Biology (18 July 2008).

SCHOLARLY WORK  
AND PUBLICATIONS

*Purificación y Caracterización de una Proteína de Bacillus thuringiensis tóxica contra larvas de Rhyaciona buoliana (Polilla del brote del pino)* [purification and characterization of a protein of Bacillus thuringiensis that is toxic to the larvae of Rhyaciona buoliana (pine shoot moth)]. Catalina Evelyn Gardella García. Tesis de Maestría en Bioquímica [Biochemistry Masters Dissertation]. Santiago de Chile. 105 pp. 1999. Chile.

*Determination and Elucidation of new dengue genotype markers virus through the study of the non-structural NS5.* Catalina E. Gardella Garcia, Gerardo Perez-Ramirez, Joel Navarrete-Espinosa, Alejandro Cisneros, Fabiola Jimenez Rojas, Luis R. Ramirez-Palacios, Rocio Rosado-Leon, Minerva Camacho-Nuez and María de L. Muñoz. *ASTMH Journal, Abstract book.* 2007 Vol. 77(1) pg 31. Philadelphia, Pennsylvania.

*Specific genetic markers for detecting subtypes of dengue virus serotype-2 in isolates from the states of Oaxaca and Veracruz, Mexico.* Gardella-García, C. E., Perez-Ramirez, G., Navarrete-Espinosa, J., Cisneros, A., Jimenez-Rojas, F., Ramirez-Palacios, L. R., Rosado-Leon, R., Camacho-Nuez, M., Munoz, M. D. *BMC Microbiol.* 2008, 15;8(1):117.

*The use of microarrays for the detection of water contamination by dengue virus and entamoeba histolytica,* Final Report, Mexico City, June 2008.



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## Detection of *Entamoeba histolytica* and *Flavivirus* Vectors in Irrigation and Recreational Waters

Contamination of drinking and recreational water by pathogenic microorganisms associated with faecal waste has a significant impact on public health. Rivers are exposed to a wide spectrum of potential contaminants as a result of many recreational uses and close proximity to the agricultural industry.

These increase the risk of accidental release and raise concern about agents of disease entering the rivers, making them an excellent testing ground for pathogens and vectors that transmit viral diseases. We are developing a method to determine contaminants in such recreational and drinking water. To begin this study, we determined the specific biomarkers in a microarray design through a proteomic analysis of water samples collected in Mexico City and the surrounding areas.

To investigate the most frequent contaminants, these samples were analysed in 3200 QTrap proteomic equipment with an HPLC Agilent 1200. The results showed that the water contained *Aedes aegypti*, *Culex pipiens* and *Entamoeba histolytica* peptides.

*Aedes aegypti* and *Culex pipiens* are very significant in the transmission of dengue and West Nile viruses, respectively.

Interestingly, we also detected the following major pathogens – *E. coli*, *Proteus mirabilis*, *Salmonella*, *Shigella*, *Vibrios* including *Vibrio cholerae*, *Pseudomonadales* and *Plasmodium*.

On the basis of these results, the DNA of six samples of the collected water was obtained and tested using fluorochrome-labelled specific primers. *Ae. aegypti*, *C. pipiens* and *E. histolytica* DNA from laboratory cultures were used as positive controls in our tests.

In addition, RT-PCR fragments of NS3 and NS5 c-DNA from DEN 2 were also obtained to test the specificity of two labelled primers to

identify dengue. The DNA in DMSO 50% was spotted in amino-silane slides to bind it covalently using the Robot GeneTAC™ G3. All DNA spots were detected with SYBR green. All specific primers used to detect the DNA from the different samples (*C. pipiens*, *E. histolytica* and the genes for NS3 and NS5 of the dengue virus) were designed previously. The specific primer for *E. histolytica* and *C. pipiens* were labelled with P1-Texas red and R22-Cy5 respectively. DNA that was covalently bound to the slides was hybridized with the labelled primers. The primers recognized the spots that contained the DNA for *E. histolytica* or *C. pipiens* in the microarray. The primer labelled with F-HEX specific for NS5 had high specificity for the NS5 RT-PCR product in the microarray compared to the NS3 primer (DSP2) labelled with 6-FAM. The primer (*Ae. aegypti* specific) ITS1A labelled with 6-FAM did not recognize the mosquito DNA, although the DNA binding was detected with SYBR green.

18 SEPTEMBER 2008





FIELD OF STUDY

## ENVIRONMENT

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YEAR

**2007**

FELLOW

**HAAD BESBOUSSE**

BENEFICIARY COUNTRY

**MOROCCO**

COUNTRY OF STUDY

**FRANCE**

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PLACE OF RESEARCH

University of Rouen  
UMR 6522 of the French  
National Centre for Scientific  
Research (CNRS)  
Mont-Saint-Aignan, Rouen,  
France.

RESEARCH UNDERTAKEN

From 5 September 2007  
to 4 June 2008.

---

ABOUT FELLOW

Born on 14 June 1977  
in Aquermoud-Essaouira,  
Morocco.

LAST DEGREE OBTAINED

Hassan II University Ain Chock,  
Ecole Nationale Supérieure  
d'Electricité et Mécanique  
(ENSEM), Casablanca,  
Morocco. Post-graduate  
diploma (DESS) in the  
Technology of Plastic and  
Composites (2003).



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# Preparation and characterization of the complexing membranes of metal ions

This research aims to determine the capacity of the membrane containing polyethyleneimine (PEI) to filter solutions containing variable quantities of water-polluting heavy metal ions. The membranes are prepared with semi-interpenetrating polymer networks (SIPNs), by mixing polyvinyl alcohol (PVA) and polyethyleneimine (PEI).

The PVA/PEI membranes prepared in the proportion of 60/40 are homogeneous and are stabilized through reticulation by 1,2-dibromoethane gas at 140°C for four hours. The effectiveness of the reticulation was monitored by infrared spectroscopy and by measuring the inflation of the membranes in the water.

The efficiency of the membrane in chelating metal cations (Hg(II), Pb(II), Cd(II) and Cu(II)) and the optimal conditions were determined by absorption experiments in static mode. Filtration experiments were conducted to assess the efficiency of the membrane in real-life water treatment conditions.

The possibility of regenerating and reusing the membrane was also studied.

In the static experiments, the effectiveness of the complexing of the four metal ions by the PVA/PEI membrane depended on the metal ion in the initial concentration, pH, contact time, membrane mass, temperature and water hardness. The results showed significant selectivity in descending order: Hg(II):  $q$  [quantity in mg.g of the ion absorbed per unit of mass of the membrane] = 217 > Pb(II): 151 > Cd(II): 62 > Cu(II): 44 mg.g, which demonstrated the membrane's high retention capacity for mercury and lead and its moderate affinity for copper and cadmium.

Models of experimental results were quite consistent with the Langmuir model.

Dynamic experiments, involving frontal filtration of a metal ion (Pb(II), Cd(II) and Cu(II)) solution and a mixture of the three ions, were conducted on the PVA/PEI membrane with pH = 5. When each ion was filtered singly, the best result was observed for Pb(II), the retention rates  $R$  (quantity of fixed ions/quantity of ions in the initial solution) being 77.5% for Cu(II), 82.5% for Cd(II) and up to 100% for Pb(II). When the mixture was filtered, the membrane showed greater affinity for Cu(II) (the elimination percentage [(quantity of ions in the initial solution – quantity of ions in the filtrate)/ quantity of ions in the initial solution]  $E$  = 94-87%) and Cd(II) ( $E$  = 99-82%) than for Pb(II) ( $E$  = 80-68%). To raise membrane efficiency, the concentration of the feed solution must remain stable during the frontal filtration.

The PVA/PEI membrane regenerated by 0.05 M HCl may be used for several filtration cycles before total deterioration, with retention that is halved in relation to when it was first used.

**31 DECEMBER 2008**

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

**ENVIRONMENT**

---

YEAR

**2007**

FELLOW

**CHECK AHMED  
SOULEYMANE**

BENEFICIARY COUNTRY

**NIGER**

COUNTRY OF STUDY

**FRANCE**

---

ABOUT FELLOW

Born on 1 January 1970  
in Tafadek, Niger.

LAST DEGREE OBTAINED

University of Dschang, Faculty  
of Agronomy and Agricultural  
Sciences, Dschang, Cameroon:  
Postgraduate degree (DESS)  
in Participatory Planning  
and Management of Forest  
Resources.

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PLACE OF RESEARCH

University of Toulouse-  
Le Mirail, Science, Space  
and Society Unit, Department  
of Geography and Planning  
Daniel Faucher Institute,  
Toulouse, France.

RESEARCH UNDERTAKEN

From 10 September 2007  
to 9 June 2008.



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# Assessment of biological diversity and hydrological and environmental processes in the Middle Niger: a case study of the Dargol, Sirba and Goroubi watersheds

The Middle Niger region has significant biodiversity and hydrological and environmental processes. It extends from Tossaye (Mali) to Malanville (Benin) over a distance of 850 km and covers an area of 9,000,000 km<sup>2</sup>.

The river Niger receives inflow from its right-bank tributary watersheds. Our work consisted in identifying the characteristics of three of the right-bank watersheds as part of an assessment of biodiversity and the mechanisms underlying hydrological and environmental phenomena.

The purpose of this study was to assess knowledge of existing species in the three right-bank tributaries and to examine hydrological and environmental processes. This Master's level research involved laying the foundations for the feasibility of the study and determining the conditions under which it could be conducted.

Biodiversity assessment is a long-term undertaking that requires a number of skills and substantial resources. Accordingly, the study was carried out within the limits of our capacity. In the context of our research, I compiled an inventory of the animal and plant species that we could encounter. To that end, a field study was performed and I drew on the results of studies by research facilities and organizations involved in that part of Niger.

Erosion has had a significant impact on the river Niger and, using the empirical method, I was able to determine the potential sediment discharge from the watersheds into the river.

The Goroubi basin carries more sediment because it has a steeper slope gradient than the two other basins.

Climate change and anthropogenic pressure have had a negative impact on biological resources, leading to the extinction of some species and to changes in hydrological and environmental processes. The regions in which the study was conducted nonetheless had abundant fish, birds and other vertebrates and invertebrates, and also significant shrub and herbaceous vegetation.

A study in this area on the tributary watersheds in the Middle Niger region was essential in order to fill the existing gap, although the lack of available literature made it difficult.

Thus, in the light of current knowledge of the watersheds, there was an urgent need for more in-depth thesis-oriented research to be undertaken in order to give insights into biodiversity and hydrological and environmental processes.

This study is scientifically innovative and enhances knowledge of environmental processes along the river Niger.

**5 MARCH 2009**

TRANSLATED FROM FRENCH BY UNESCO





FIELD OF STUDY

## ENVIRONMENT

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YEAR

**2007**

FELLOW

**AHMED IBRAHIM  
ABU ISMAIEL**

BENEFICIARY COUNTRY

**PALESTINIAN  
AUTONOMOUS  
TERRITORIES**

COUNTRY OF STUDY

**UNITED KINGDOM**

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PLACES OF RESEARCH

Cairo University,  
Chemistry Department  
Faculty of Science,  
Giza, Egypt.

Field research studies:

Al-Aqsa University  
Chemistry Department  
Gaza, Palestinian Autonomous  
Territories.

RESEARCH UNDERTAKEN

From 1 October 2007  
to 31 May 2008.

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ABOUT FELLOW

Born on 11 April 1976  
in Abasan Al-Kabira,  
Palestinian Authority.

LAST DEGREE OBTAINED

Al-Azhar University of Gaza,  
Palestinian Autonomous  
Territories, Master of Science  
in Chemistry (31 January 2001).

SCHOLARLY WORK

AND PUBLICATIONS

*Template Synthesis  
and Characterization of Mono  
and Homobi-Nucleating  
Mixed Dithiatetraaza-  
Macrocyclic Complexes*  
Polyhedron 20/2001,  
pages 455-459.



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# Preparation and Characterization of Ion-selective Electrodes for the Determination of Some Water Pollutants in Groundwater

In this work we prepared new ion selective electrodes to determine copper (II) and mercury (II) pollutants in groundwater samples.

Determination of trace amounts of copper(II) in water samples by means of a new chemically modified carbon paste electrode based on 2,3,13,14-dibenzo-4,12-dioxo-1,15-dithia-5,8,11-triazacyclopentadecane (DDTP). In this work, a new chemically modified carbon paste electrode (CMCPE) based on 2,3,13,14-dibenzo-4,12-dioxo-1,15-dithia-5,8,11-triazacyclopentadecane (DDTP) has been developed to determine  $\text{Cu}^{2+}$  in water samples. The performance of this electrode was investigated using potentiometric measurements. The sensor developed shows a good linear response of  $30.2 \pm 0.8$  mV per decade over the concentration range of  $2.1 \times 10^{-7}$ – $1.0 \times 10^{-2}$  M. It has a very low limit of detection,  $3.5 \times 10^{-8}$  M (2.21 ppb), with a response time of less than 10 s.

The proposed electrode revealed very good selectivities with respect to alkali, alkaline earth and some transition metal ions.

The results obtained from this study reveal that a potentiometric Cu-CMCPE based on 2,3,13,14-dibenzo-4,12-dioxo-1,15-dithia-5,8,11-triazacyclopentadecane (DDTP) is an excellent  $\text{Cu}^{2+}$  selective sensor and can be used to determine this ion in the presence of considerable concentrations of common interfering ions. Applicable pH range, lower detection limit and potentiometric selectivity coefficients of the proposed sensor make it superior to other methods used for this purpose.

Potentiometric determination of low levels of Hg (II) in water samples by means of a new sensor based on salophen.

A synthesized N,N-bis(salicylidene)-o-phenylenediamine (salophen) was used as an ionophore for the preparation of a new mercury ion-selective electrode.

The electrode exhibits a Nernstian response over the concentration range of  $1.0 \times 10^{-7}$ – $5.0 \times 10^{-4}$  M, with a slope of  $57.3 \pm 0.5$  mV per decade of concentration. The limit of detection, as determined by the intersection of the extrapolated linear segments of the calibration plot, is  $7.6 \times 10^{-8}$  M. The electrode shows good selectivity towards Hg (II) with respect to many common anions.

The response time of the sensor is extremely fast ( $\leq 2$  min) and can be used in the pH range of 3.0–7.8. The electrode was used to determine mercury in tap, mineral and groundwater samples.

In this work, we have discussed the application of salophen as a new ionophore for the detection of Hg (II) ions. The sensor responds to Hg (II) ions. The recognition of small molecules in binding with heavy metals has gained importance in the field of research. The newly synthesised diamine with two donating nitrogen atoms, low molecular weight and flexible structure was expected to act as a suitable ionophore in the preparation of carbon paste sensors for mercury ions of proper size and charge.

To evaluate the analytical applicability of the proposed method, the sensor was used to determine mercury (II) in tap, mineral and groundwater samples.

28 MAY 2008



FIELD OF STUDY

## ENVIRONMENT

YEAR

**2007**

FELLOW

**EIMAN MOHAMED  
FADUL BASHIR**

BENEFICIARY COUNTRY

**SUDAN**

COUNTRY OF STUDY

**UNITED KINGDOM**

PLACE OF RESEARCH

Loughborough University,  
Institute of Development  
Water, Engineering and  
Development Centre (WEDC)  
Leicestershire,  
United Kingdom.

RESEARCH UNDERTAKEN

From 23 February  
to 22 July 2008.

ABOUT FELLOW

Born on 28 June 1973  
in Medani, Sudan.

LAST DEGREE OBTAINED

National University of Ireland,  
Ireland: Master of Science in  
Hydrology (20 December 1999).

SCHOLARLY WORK  
AND PUBLICATIONS

*Design of Stable Irrigation  
Canals in Gezira Irrigation  
Scheme*, Eiman Fadul,  
Scientific paper presented  
at a workshop on the Role  
of Scientific Research in the  
Maintenance of Irrigation  
Operations, Hydraulic  
Research Station, Medani,  
Sudan (April 2002).

*Design and remodelling of  
stable canals in Sudan*, Eiman  
Fadul and Younis Gismalla,  
International Conference for  
Sediment Initiative, Khartoum  
(2006).

*Developing Procedure for  
design stable alluvial channels  
in Sudan*, Eiman Fadul, HRS  
technical report, Medani,  
Sudan (2007).

*Sustainability of Pressure Filters  
in Managil Sub-Divisions*.  
Eiman Fadul, scientific paper  
presented at a workshop  
on Sediment Management  
in Irrigation and Operations,  
Medani, Sudan (April 2008).



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# Water Supply for Low-Income Rural Communities

The Gezira Scheme in Sudan is one of the largest irrigated schemes in Africa, and it is managed as one unit (2.2 million ha). In the Gezira scheme, there are more than 1,200 unregistered villages inhabited by agricultural workers who immigrated from western Sudan or neighbouring countries. The majority of them have no adequate source of water supply. These villages have high rates of schistosomiasis infection (more than 50%), due to the use of polluted water from irrigation canals for domestic water supply and daily activities. There is a need to find an appropriate alternative water supply which fits the local circumstances, and this report discusses the possible water supply options for one typical community within the scheme.

The main objective of this study is to suggest options for safe, reliable drinking water through the use of appropriate technology that could easily be operated and maintained by the village community within the Gezira Irrigation Scheme.

Water resources in the scheme are irrigation water, groundwater and rain water. There are no springs or natural surface water resources. The different water sources in the Gezira scheme are hand pumps, house taps or neighbourhood taps connected to small distribution systems, haffir and irrigation canals.

There are considerable interruptions to water supplies for the following reasons:

**1/** the water supply institutions have been unable to meet the commitments necessary to maintain functioning of the facilities installed; examples include shortages of fuel, spare parts, technicians and funds needed

to maintain and run the services; lack of coordination between the various parties involved in rural water supply;

**2/** lack of understanding of the social and economic realities of life at the local level on the part of planners;

**3/** the top-down, purely government-initiated approach;

**4/** the limited community involvement in the operating and management of the water services.

This report presents different options for water supply. However, other combinations of these options are also possible.

**Option 1/** Pipe connection from a nearby borehole.

**Option 2/** Improving water quality in the irrigation canal in the village.

**Option 3/** Infiltration Gallery (IFG) on the main irrigation canal.

In designing and building domestic water services, affordability, acceptability and technical appropriateness should also be considered. These different options were analysed in the light of factors such as the initial cost, the operating and management cost, and the yearly costs for each household were compared. The next step is to present the range of water supply options to the village community and the stakeholders.

**6 OCTOBER 2008**



**ENVIRONMENT**  
**WHAT THE FELLOWS SAY**



**PETYA STEFANOVA OROZOVA**  
BULGARIA, 2007

“I am very grateful to my supervisor Professor Brian Austin and all his colleagues for their support. Working together was not only effective but also a pleasure and a joy. I appreciate the great opportunity that UNESCO gave me by supporting my professional development and scientific and research experience”.



**CATALINA EVELYN GARDELLA GARCÍA**  
EL SALVADOR, 2007

“Thanks to this fellowship, I have been able to analyse the molecular quality of water using advanced molecular biology technology and to obtain my Ph.D. in science. I have explained my studies in DNA microarrays in theoretical and practical sessions with professors and students of the University of El Salvador”.



**OLIVIER GNANKINE**  
BURKINA FASO, 2008

“I used the fellowship to complete my training in molecular biology (DNA extraction, PCR and sequencing)”.



**DONA HEMALI NANDANA MUNASINGHE**  
SRI LANKA 2008

“As an academic, research is one of my main duties, in addition to teaching and community service. Therefore, I was fortunate to receive the UNESCO/Keizo Obuchi post-doctoral fellowship, which gave me an excellent opportunity to visit laboratories with high-tech facilities and to work with experts in the field. The experience and knowledge that I have gained will serve as a platform for my future research work”.



**CHECK AHMED SOULEYMANE**  
NIGER, 2007

“The contribution of my fellowship will be enormous to my country in my capacity as a specialist in the environment to fight against desertification”.



**AHMED IBRAHIM ABU ISMAIEL**  
PALESTINIAN AUTONOMOUS TERRITORIES, 2007

“This fellowship encouraged me to complete my Ph.D. studies, as I registered in the Ph.D. programme through the joint cooperation programme between the University of Palestine and Cairo University.”.



FIELD OF STUDY

## ENVIRONMENT

YEAR

**2008**

FELLOW

**OLIVIER GNANKINE**

BENEFICIARY COUNTRY

**BURKINA FASO**

COUNTRY OF STUDY

**FRANCE**

PLACE OF RESEARCH

Claude Bernard University  
of Lyon I, Biometry and  
Evolutionary Biology  
Laboratory,  
UMR C.N.R.S. 5558.  
Lyon, France

RESEARCH UNDERTAKEN

From 3 September 2008  
to 3 January 2009.

ABOUT FELLOW

Born on 4 March 1974  
in Abidjan-Marcory,  
Côte d'Ivoire.

LAST DEGREE OBTAINED

Claude University  
of Ouagadougou:  
Ph.D. (6 October 2006).

SCHOLARLY WORK  
AND PUBLICATIONS

Contribution to the evaluation  
of the potential of *Encarsia* sp.  
(Hymenoptera:Aphelinidae) as  
biological agent control of the  
cotton whitefly, *Bemisia tabaci*  
Gennadius (Homoptera:  
Aleyrodidae) in Burkina Faso.  
Gnankine O., Traore D., Sanon  
A., Dabire R. and Ouedraogo  
P. Albert, 2005 International  
Journal of Tropical Insect  
Science, 25(4): 266-273 (2005).

Traitements insecticides Impact  
et dynamique des populations  
de *Bemisia tabaci* au Burkina  
Faso. Cahiers d'Agricultures  
Vol., 16(2) : 101-109 Gnankine  
O., Traore D., Sanon A., nafoni  
Seydou Traore & Ouedraogo  
A.P. (2007).

Gnankine O., Traore D.,  
Sanon A., Ouedraogo A.P.  
Cahier agricultures,  
Vol., 16(2):101-109 (2007).



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# Molecular characterization of *Bemisia tabaci* (Homoptera: aleyrodidae) for a durable management

The *Bemisia tabaci* (Gennadius) whitefly is a major pest in cotton and vegetable crops in Burkina Faso, in Africa and throughout the world. The complexity of controlling *B. tabaci* is linked to the biodiversity of this polyphagous pest and its capacity to pullulate rapidly and transmit viruses. If an effective *Bemisia tabaci* control method is to be put in place, knowledge of its bioecology must be improved. Little information is available to date on the biotypes found on crops in Burkina Faso and in West Africa generally. It is still not known whether the cotton whitefly is the same as the tomato whitefly.

This study aimed, firstly, to conduct mitochondrial gene amplification to characterize 13 *B. tabaci* populations and PCR (absence/presence) tests to find the various symbiotes associated with the various populations. The various PCR tests and the search for the various symbiotes required some 600 DNA extractions.

To conduct our study, as a first step, the mitochondrial gene coding for Cytochrome Oxidase I was sequenced in order to characterize *B. tabaci* populations by host plant and by geographical site. The findings point to biotype variability depending on the geographical region. In Burkina Faso, the presence of the Q1 biotype was recorded on cotton in Farako-Ba and Lena and on aubergine in Kuinima. Two sympatric biotypes, Q1 and ASL (Sub-Saharan Africa Silver Leafing), were found on tomato and courgette plants. Only the Q1 biotype was found in the centre and in the east, on tomato and cotton respectively.

The new Q3 biotype was found on tobacco in the west and on *Lantana camara*. In Benin and Togo, the presence of ASL was recorded on cotton and on tomato plants.

Secondly, the study dealt with interaction among biotypes and the frequency of association with *B. tabaci* secondary symbiotes (SS) by geographical site and by host plant. *Hamiltonella* and *Wolbachia* were spotted only with populations of the Q1 genetic group, while *Arsenophonus* (750 pb) were found with the Q biotype ASL genetic group and with the Sub-Saharan non Africa Silver Leafing (AnSL) biotype.

The new genetic group harboured *Rickettsia* and *Aersenophonus* (750 pb). *Cardinium* and *Fritschea* were not found in the tested populations. The results for this part of the study shows strong correlation between symbiotic status and biotype, but populations were less infected than European populations. This study has increased knowledge of *B. tabaci* bioecology in West Africa, which should doubtless contribute to the introduction of a strategy to control this major agricultural pest.

**Keywords:** *Bemisia tabaci*, biotypes, characterization, CO1 gene sequencing, secondary symbiotes, sustainable management.

22 APRIL 2009

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

## ENVIRONMENT

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YEAR

**2008**

FELLOW

### **VINCENT TCHIMOU ASSOMA**

BENEFICIARY COUNTRY

**CÔTE D'IVOIRE**

COUNTRY OF STUDY

**FRANCE**

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PLACE OF RESEARCH

Université Paris-Est  
de Marne-la-Vallée,  
Institut Francilien des  
Laboratoire Géomatériaux  
et Géologie de l'Ingenieur,  
Marne-la-Vallée, France.

RESEARCH UNDERTAKEN

From 3 November 2008  
to 2 June 2009.

---

ABOUT FELLOW

Born on 30 December 1975  
in Agboville, Côte d'Ivoire.

LAST DEGREE OBTAINED

University of Cocody-Abidjan:  
Master of Advanced Studies  
in Ash, Hydrom, PEES, Remote  
sensing, GIS, EENV, MG  
(28 December 2005).

SCHOLARLY WORK  
AND PUBLICATIONS

Use of ERS-2 radar images  
and mathematical models  
to characterize fractured  
bedrock aquifers in western  
Côte d'Ivoire.

Fusion d'images RSO ERS-2  
et ETM+ de Landsat-7 pour la  
cartographie hydrostructurale  
du bassin versant du Koué  
(Ouest de la Côte d'Ivoire).  
*BIOTERRE, Rev. Int. Sci.  
de la vie et de la Terre,*  
Côte d'Ivoire (2006).

Hydrogeological mapping  
by optical fusion and radar  
of the Koué Drainage Basin,  
western Côte d'Ivoire (2007).



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# The contribution of radar remote sensing (ENVISAT) and Geographic Information Systems (GIS) to the mapping of hydrogeological and mining potentialities. Implication in the management of water resources in the southern coastal region of Côte d'Ivoire

This study aimed to evaluate the water resources in the southern coastal region of Côte d'Ivoire using geospatial techniques such as remote sensing, geographic information science and mathematical modelling tools (spatial hydrology and hydrogeology). The objective was to explore new techniques for the evaluation of potential water resources and hydrostructural mapping in water science, in the pursuit of rational water management for sustainable development.

For this research we had access to a hydro-climatic database from the Climate Research Unit (CRU) and Advanced Synthetic Aperture Radar (ASAR) imaging from the environmental satellite ENVISAT provided by the European Space Agency (ESA).

The Agnéby Coastal Basin, used here as a test area, recorded a rainfall deficit of between 14% and 28% during the period 1951-2002, with a localized divergence in 1968. Analysis of the chronological series (1951-2002) of the hydro-climatic data enabled the ETPpen and the real evapotranspiration to be calculated, the water reserves (WR) and the usable water reserves (UWR) in groundwater for agriculture to be evaluated using the Instat-Plus model, and lastly the trend in the rainfall-runoff relationship to be identified using the GR2M model. On the basis of the latter, we evaluated the water resources that could be mobilized in the Agnéby Basin during the period 1994-2002, for which the annual trend was estimated at 329 million m<sup>3</sup> for water reserves of 132mm and real evapotranspiration of 1018mm.

Average usable water reserves fluctuated between 60mm and 120mm over the period 1951-2002.

ENVISAT ASAR remote sensing geospatial techniques (IMP and WSM) were used to evaluate the algorithms (Lee, Frost and Gamma-MAP), with the Frost filter presenting the best compromise, efficiently reducing the speckle in the ASAR images.

The ASAR WSM images, given their wide field of view (pixel size of 75m), were used in synergy with the MNA SRTM data (resolution of 92m) obtained from NASA to produce a hill shaded relief image of the southern coast of Côte d'Ivoire, from which structural discontinuities were removed.

Thus, the filtered and enhanced ASAR images were used to interpret the hydro-structural discontinuities, providing a database of a network of fractures that could be useful for prospecting and establishing high-flow-rate wells. This data will also be useful for modelling the fractured bedrock aquifer system in order to locate potential underground water resources and evaluate them. Knowledge of all water resources (surface and subsurface) in relation to the population's water needs will help the water authorities to ensure better planning for sustainable development.

**7 APRIL 2010**

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

## ENVIRONMENT

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YEAR

**2008**

FELLOW

**CHANHDA  
HEMMAVANH**

BENEFICIARY COUNTRY

**LAO PEOPLE'S  
DEMOCRATIC  
REPUBLIC**

COUNTRY OF STUDY

**PEOPLE'S REPUBLIC  
OF CHINA**

---

ABOUT FELLOW

Born on 24 June 1970 in Laos.

LAST DEGREE OBTAINED

Master of Science at  
the Asian Institute of  
Technology (22 August 1996).

SCHOLARLY WORK

AND PUBLICATIONS

Agro-Forestry Policy  
Guidelines using a  
Participatory Approach,  
Lao People's Democratic  
Republic (2006).

---

PLACE OF RESEARCH

Zhejiang University, China  
School of Public Administration  
Department of Land Resource  
Management,  
Hangzhou, China.

RESEARCH UNDERTAKEN

From 3 September 2008  
to 2 June 2009.



chanhda2006@hotmail.com



# Study on driving forces and land-conservation strategy in Lao PDR

Under the UNESCO/Keizo Obuchi Research Fellowships Programme – 2008, I went to Hangzhou, Zhejiang Province, China, to attend the long training course at the Department of Land Resource Management, School of Public Administration, Zhejiang University. I arrived in Hangzhou on 3 September 2008 and, on 5 September, registered at the Department of Land Resource Management, School of Public Administration, Zhejiang University. I then went to meet my professor and he provided me with the research schedule as follows:

**Part I/** Learning theory on land use planning from 6 September to 31 December 2008. The main objective of part 1 is to gain an understanding of land resource and land use planning for the sake of sustainable use of the land and natural resources.

The professor lectured only in the mornings and I reviewed the lecture each afternoon.

**Part II/** Practising with the Geographic Information System for Environment from 1 January 2009 to 10 June 2009.

I selected Luang Namtha Province, Lao PDR, as a research area. Geographic Information System Data of the study area for 1992 and 2002 were collected from the Ministry of Agriculture and Forestry, Lao PDR.

I practised GIS by using ArcGIS software each morning and afternoon, while in the evening I read some research papers written by many scholars, all of which concerned forest and land use change.

Finally I wrote the research paper on forest and land use change in the Lao PDR, summarized as follows: Forest Cover and Land Use Change directly impacts biological diversity worldwide, contributes to climate change, and affects the ability of biological

systems to support human needs by altering ecosystem services. In this paper, according to the Lao PDR's forest land use characteristic and ecosystem type, the forest cover and land cover category of the Lao PDR was divided into six classes, including Current Forest CF, Potential Forest PF, Other Wooded Areas OW, Permanent Agricultural Land PA, Other Non-Forest Areas NF and Water W. Firstly, the former geographic information data (GIS data) of forest cover and land use for 1992 and 2002 were collected from the Ministry of Agriculture and Forestry (MAF), Lao PDR.

Two steps of forest land use change assessment were conducted by MAF including plot sampling on Satellite Images Maps (SIMs) to detect changes in forest cover and land use between 1992 and 2002 for the whole country and field verification in order to identify causes of the changes. Secondly, the dynamic information of the forest land cover change during the 10 years was calculated by the map algebra in ArcGIS 9.2. Thirdly, based on the theory of ecosystem service function and the service function value of global different ecosystem provided by Costanza et al., the value of the six forest cover and land use categories in the Lao PDR was worked out. Finally, the ecological environment effect that the regional land cover change produced in the study period was calculated.

I defended the above research summary at the Department of Land Resource Management, School of Public Administration, Zhejiang University, on 20 June 2009. I feel that I acquired extensive knowledge while conducting research in China such as: GIS, research methods, research analysis, report writing methods, and so on.

29 JULY 2009



FIELD OF STUDY

**ENVIRONMENT**

YEAR

**2008**

FELLOW

**RAÚL AUGUSTO  
LOAYZA MURO**

BENEFICIARY COUNTRY

**PERU**

COUNTRY OF STUDY

**THE NETHERLANDS**

PLACE OF RESEARCH

Department of Aquatic Ecology and Ecotoxicology  
Institute for Biodiversity and Ecosystem Dynamics (IBED)  
University of Amsterdam,  
Amsterdam, The Netherlands.

RESEARCH UNDERTAKEN

From 3 March  
to 3 August 2009.

ABOUT FELLOW

Born on 7 March 1975  
in Lima, Peru.

LAST DEGREE OBTAINED

Cayetano Heredia Peruvian  
University: Licentiate in Biology  
(2001).

SCHOLARLY WORK  
AND PUBLICATIONS

*Metal-induced shifts in benthic macroinvertebrate community composition in Andean high altitude streams.* Environmental Toxicology and Chemistry 29(12), 2761–2768. R. Loayza-Muro, R. Elías-Letts, J. Marticorena-Ruiz, J. Palomino, J.F. Duivenvoorden, M.H.S. Kraak and W. Admiraal (2010).

*Ecotoxicidad de metales en el bivalvo dulceacuícola Anodontites trapesialis y su potencial uso en el biomonitorio de ambientes acuáticos en la Amazonía peruana.* In: Herkovits, J. (ed.) Química y Toxicología Ambiental en América Latina. Society of Environmental Toxicology and Chemistry – SETAC, Buenos Aires, Argentina. Loayza-Muro, R., y Elías-Letts, R. (2009).

*Responses of the mussel Anodontites trapesialis (Unionidae) to environmental stressors: effect of pH, temperature and metals on filtration rate.* Environmental Pollution, 149:209-215. Loayza Muro, R and Elias-Letts. (2007).

*Influence of Leishmania (Viannia) Species on the Response to Antimonial Treatment in Patients with American Tegumentary Leishmaniasis.* The Journal of Infectious Diseases, 195: 1846-1851. / acids. Bulletin of Entomological Research 921: 25-33. J. Arevalo, L. Ramirez, V. Adauí, M.Zimic, G. Tuolliano, C. Miranda-Verastegui, M. Lazo, R. Loayza Muro, S. De Doncker, A. Maurer, F. Chappuis, J-C. Dujardin and A. Llanos – Cuentas (2007).



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# Analysis of field data for applying a biotic index based on benthic macroinvertebrates to evaluate water quality and environmental changes in Peruvian high-altitude streams

The high-altitude Peruvian Andes encompass a large number of pristine freshwater sources. However, their quality and sustainability are constantly at risk owing to critical levels of acid drainage, metals, pesticides and domestic effluents. At present, the environmental impact of these toxicants is determined by means of water chemical analysis, although it fails to estimate appropriately water biological quality and long-term contamination effects. In contrast, biotic indices based on aquatic invertebrates displaying variable sensitivity to pollution provide a reliable, cost- and time-effective method for evaluating the biological status and environmental history of water bodies. Despite these advantages, they are seldom applied in Peru and research on adapting biotic indices to local conditions is scarce. Standardizing such biomonitoring tools may thus be significant for local people urgently needing to take decisions on the best use of water and for institutions working on the recovery of aquatic ecosystems. To attain this goal I studied the role of metals on structuring macroinvertebrate communities in clean and heavily polluted streams between 3,500 and 4,500 m.a.s.l. in the Cordillera Blanca and Cordillera Negra, in the north-central Andes of Peru, and how the biotic indices BMWP (Biological Monitoring Working Party) and ASPT (Average Score per Taxon) performed in determining water quality. Clear differences in the physical chemical conditions of clean and polluted streams were observed, with a strong component of metals ("tox factor") for the polluted sites. Metals such as arsenic, cadmium, copper, lead and zinc showed an increase of up to 3,500 times the concentration at clean sites, which indicated highly toxic and risk conditions.

Totals of 47 families of insects and 10 groups of non-insects were found, with the main patterns in faunal composition being determined by crustaceans, mayflies, stoneflies and caddis flies in the clean streams, and by chironomids and beetles in the polluted ones. A canonical correspondence analysis indicated a strong influence of the tox factor (all highly correlated metals) on invertebrate assemblages, and that the Cecidomyiidae, Scatophagidae, Phoridae, Dixidae (Diptera), Isotomidae, Sensiphorura (Collembola), Ptiliidae (Coleoptera) and Gonyleptidae (Arachnida) families had an optimum at high metal concentrations, which revealed an exceptional tolerance given the harsh habitat conditions posed by pollution and high altitude. On the other hand, families belonging to Ephemeroptera, Plecoptera and Trichoptera appeared to be highly sensitive to pollution and may be regarded as potential bioindicators of stream quality for this region. The BMWP and ASPT indices were higher at the clean sites, but only the ASPT was able significantly to differentiate water quality among clean (good quality) and polluted (very poor quality) streams. The ASPT index was correlated with conductivity, pH and almost all metals indicating its suitability for determining the biological quality of metal-polluted streams. This is the first study describing the stream macroinvertebrate fauna in this Andean region and the relevance of metals on driving its composition under high-altitude conditions. It is also the first attempt to apply the BMWP and ASPT indices for determining stream water quality in this sensitive ecoregion.

25 AUGUST 2009





FIELD OF STUDY

## ENVIRONMENT

YEAR

**2008**

FELLOW

**DONA HEMALI  
NANDANA  
MUNASINGHE**

BENEFICIARY COUNTRY

**SRI LANKA**

COUNTRIES OF STUDY

**AUSTRALIA  
AND INDONESIA**

PLACES OF RESEARCH

**AUSTRALIA**

Charles Darwin University  
School of Science and  
Primary Industries,  
Faculty of Education,  
Health and Science,  
Alice Springs NT

**INDONESIA**

Indonesian Institute  
of Sciences Research  
Centre for Biology,  
Zoological Division,  
Cibinong.

RESEARCH UNDERTAKEN

From 10 October 2008  
to 30 June 2009.



dhnm@zoo.ruh.ac.lk

ABOUT FELLOW

Born on 17 April 1968 in  
Aluthgamweediya, Sri Lanka.

LAST DEGREE OBTAINED

Deakin University Australia:  
Ph.D in Molecular Systematics,  
(29 February 2004).

SCHOLARLY WORK  
AND PUBLICATIONS

*A phylogenetic study of the  
freshwater crayfish genus  
Cherax Erichson and related  
genera using sequences from  
mitochondrial and nuclear  
genes*, Sri Lanka Association  
for the Advancement of Science,  
Proceedings of the 60th Annual  
session. P. 163, Sri Lanka (2004).

*An examination of the utility  
of sequences from two  
mitochondrial protein coding  
genes for phylogeographic  
studies of marron (Cherax  
cainii) from the southwest of  
Western Australia* Proceedings  
of the second science  
symposium, University of  
Ruhuna, pp. 37-48 (2004).

*The systematics of freshwater  
crayfish of the genus Cherax  
Erichson (Decapoda:  
Parastacidae) in eastern  
Australia re-examined using  
nucleotide sequences from  
12S rRNA genes*. Invertebrate  
Systematics 18: 215-225 (2004).



# Comparative phylogenetic study of Genus *Macrobrachium* in Sri Lanka, South and Southeast Asian region: Hints for biodiversity conservation

Freshwater prawns *Macrobrachium* are a conspicuous and important component of freshwater and estuarine systems throughout tropical and warm temperature areas of the world. So far more than 200 species have been described around the world and there are more to be described. Jayachandran (2001) listed 86 *Macrobrachium* species that are economically important and among them at least 11 species have gained great commercial value in different countries. *Macrobrachium* species are an economically important group in Sri Lanka too. *M. rosenbergii* is one of the major commercially important species while many other species are consumed in regional areas. Many species are recognized by their local names and many synonyms can be found for one species. Therefore, identification of species boundaries within this genus is important to obtain reliable information for fields such as aquaculture and environmental management.

In addition to the traditional morphometric characteristics such as rostrum and 2nd pereopod, hard characters which are more consistent within the species and that are not variable with the sex and age of the individual were used to identify species during this study. Sequences for the recorded species that are related to the Sri Lankan species were obtained from the genebank. Partial sequences from mitochondrial 16S rRNA gene were used to determine the phylogenetic relationships among the species.

Seven *Macrobrachium* species were identified from the southern part of Sri Lanka during this study. Approximately 471bp sequences were used to determine their phylogenetic relationships with the species that are recorded within the region. The analysis formed five clades and three out of them produced monophyletic lineages (*M. australe* group, *M. latimanus* group, *M. latidactylus* group). *M. malcolmsonii* made a sister clade to *M. rosenbergii* while *M. scabriculum* joined with *M. idea*. The estimated intraspecific nucleotide divergence level varied from 0-6.07% while it is varied from 5.21%-10.84% for the interspecific level. However, the phylogenetic trees generated did not resolve the deeper level phylogenetic relationships. Therefore, more taxon sampling throughout the country and analysis of additional gene regions are required for the better understanding of phylogenetic relationships among Sri Lankan *Macrobrachium* species.

15 JULY 2009



FIELD OF STUDY

## ENVIRONMENT

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YEAR

**2008**

FELLOW

**CECILIA TAMARA  
AVELLÁN HAMPE**

BENEFICIARY COUNTRY

**URUGUAY**

COUNTRY OF STUDY

**THE NETHERLANDS**

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PLACE OF RESEARCH

UNESCO-IHE

Institute for Water Education  
Department of Environmental  
Resources,  
Delft, The Netherlands.

RESEARCH UNDERTAKEN

From 27 April 2009  
to 26 July 2009.

---

ABOUT FELLOW

Born on 25 September 1980  
in Buenos Aires, Argentina.

LAST DEGREE OBTAINED

Wayne State University,  
Detroit, USA: Master of  
Sciences Biology  
(28 August 2004).

SCHOLARLY WORK

AND PUBLICATIONS

*Integrated River Basin  
Management as a mean to  
prevent aquifer contamination,*  
4th World Water Workshop for  
Young Environmental Scientists  
(WWW-YES), Belo Horizonte,  
Brazil (2009).

*Development instability  
in Polygonum punctatum and  
Sagittaria montevidensis in  
a sewage impacted stream.*  
Biological Sciences, Detroit  
Wayne State University (2004).

*Pollution reduction through  
native Uruguayan helophytes  
and associated morphological  
changes in leaf symmetry,*  
8th INTECOL, International  
Wetlands Conference, Avellán,  
C.T.; Hough, R.A, Cuiabá, Brasil  
(July 20-25 2008).



tamara.avellan@gmail.com



# Constructed wetlands for use in Uruguayan dairy waste waters using endogenous plants

This fellowship gave me the extraordinary opportunity to spend three exhilarating months at one of the most important institutions worldwide that deal with water-related problems with special emphasis on developing countries and those in transition, the UNESCO-IHE Institute for Water Education. In my home country, Uruguay, I am developing the use of alternative sewage treatment facilities, in particular constructed wetlands, but little to nothing is known about the abilities and performance of native plants for such uses, which is why I directed myself towards the IHE for guidance and support two years ago.

In Delft, I was given the possibility of conducting topic specific research where we compared the root oxygen loss of four different wetland species, three of them native to Uruguay, and the changes in nutrient composition which showed that plants respond differently to sewage water. It was particularly interesting to see the high efficiency of water quality enhancement of two previously untested plants. This is very promising since it points to the ability of some endogenous plants to be highly successful for use in constructed wetlands in Uruguay.

Further, I undertook an experiment about the physical oxygen transfer rates in a gravel bed wetland mesocosm, which represents a clue element in the understanding of the functioning of these systems. This study was part of a series of studies that had been performed at the IHE and confirmed the previous findings. We were able to quantify the amount of oxygen that was exchanged with the atmosphere by using the innovative technique of propane as a tracer gas.

Nevertheless, the IHE is, in the first place, an educational facility and I therefore also had the chance to participate in the three-week short course “Water quality modelling” where I was introduced to some of the modelling tools for river and water quality management, such as SWAT. Through this class I have identified the necessary data to build a successful model for a small watershed in south western Uruguay and have contacted institutions and agencies in order to obtain this information to complete the model. This will be the first time that SWAT will be applied in Uruguay and I am confident that it will be used for other projects, such as the large River Santa Lucia Basin.

Lastly, one of the purposes of the stay in Delft was the interaction with my supervisors, professors and fellow students to exchange ideas and points of views on the thematic of sustainable sewage treatment facilities, the challenges of their realization and the success stories. This has certainly taken place and I was given ample opportunity to take part in several seminars, Ph.D defences and talks by guest speakers from all over the world. I also had the opportunity to further narrow down and clarify my research topic and Ph.D proposal which I will now proceed to write in the forthcoming months.

**17 SEPTEMBER 2009**



FIELD OF STUDY

**ENVIRONMENT**

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YEAR

**2008**

FELLOW

**MOHAMMED  
ABDULLAH  
AL-GHOBAR**

BENEFICIARY COUNTRY

**YEMEN**

COUNTRY OF STUDY

**UNITED STATES  
OF AMERICA**

---

ABOUT FELLOW

Born on 13 December 1976  
in Damar, Yemen.

LAST DEGREE OBTAINED

Sana'a University, Faculty  
of Agriculture: MSC in Water  
Science Major in Soil and  
Water (27 May 2006).

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PLACE OF RESEARCH

University of Nebraska-Lincoln,  
Institute of Agriculture  
and Natural Resources,  
Department of Agronomy  
and Horticulture,  
Ithaca, United States of  
America.

RESEARCH UNDERTAKEN

From 15 September 2008  
to 14 March 2009.



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alghobar@maktoob.com





# Evaluation of Water Quality in Nebraska Using Watershed Modeling a case of study proposal in Nebraska State, USA. Nitrate and Ammonia Concentrations in Groundwater from Shallow Wells

Excess application of either commercial fertilizer or livestock waste to row crops, pastures, and even urban areas has been linked to high levels of nitrate in groundwater. Nitrate in the subsoil is then gradually leached downward as water percolates from the surface and recharges the underlying groundwater. Activities that have been shown to contribute to nitrate contamination in groundwater include excessive application of nitrogen fertilizer and leakage from wastewater impoundments.

This study was conducted in Nebraska State, USA, at a site located four miles north and two miles east of Central City, Nebraska. Lagoon characteristics earthen lined lagoon dimensions = 150 ft x 50 ft x 10 ft. Receives runoff from nine cattle pens each containing approximately 50 head. Site monitoring current Nebraska Department Environmental Quality (NDEQ) monitoring wells. Water samples were collected from shallow monitoring wells, medium monitoring wells and deep monitoring wells and the samples were analyzed at the Nebraska Department of Environmental Quality. Chemical and physical analysis was performed on the samples. Total and volatile solids, chemical oxygen demand, pH, EC, nitrate, ammonia concentrations, chloride, sulphate, acetate, methane (Microseens), dissolved methane, dissolved hydrogen, dissolved oxygen and iron (Fe).

The results of the research showed that nitrate-nitrogen concentrations exceed the 10 part per million maximum contaminant level (MCL) in groundwater beneath several

areas of Nebraska. The concentrations exceeded the MCL in more than 20% of the wells sampled. Thus, nitrate is by far Nebraska's most frequently encountered groundwater contaminant. Poor well siting near barnyards and poor well concentration in these glacial till areas cause many of the nitrate-nitrogen levels to exceed the MCL; 51% of the elevated nitrate-nitrogen concentrations detections were in areas where the groundwater is highly vulnerable to contamination. Comparisons between previous surveys and this assessment indicate that the concentrations of nitrate in the irrigated corn-producing areas are increasing.

In areas highly vulnerable to contamination both concentrations and areal extent of the contamination are increasing.

The most important challenges that confront ground water quality are the ability to reverse the increases in nonpoint contaminant concentrations and evaluate the effectiveness of best management practices. Careful management of livestock lots and use of the proper rate of nitrogen are the most important factors, but other management practices also are important. Recommended practices that minimize the risk of contamination should be given careful and immediate attention.

**14 APRIL 2009**

FIELD OF STUDY 2007-2008

# INTERCULTURAL DIALOGUE

“Partnerships for intercultural dialogue must be as wide as possible – with youth, with civil society, with the private sector. Academia is vital here. UNESCO has created some 30 Chairs in universities from Australia to Uzbekistan on topics related to intercultural dialogue, interfaith studies and interreligious understanding.”

**IRINA BOKOVA**  
DIRECTOR-GENERAL OF UNESCO

The Alliance of Civilizations Istanbul Conferences  
“Building Bridges to the Future”, (Istanbul, 19 January 2011).

YEAR  
**2007**

FELLOWS

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**KOFFI JULIEN GBAGUIDI**  
BENIN

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**CHINMAYEE SATPATHY**  
INDIA

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**PAULINE MOUHANNA**  
LEBANON

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**AIVARAS STEPUKONIS**  
LITHUANIA

YEAR  
**2008**

FELLOWS

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**JIANPING YANG**  
PEOPLE'S REPUBLIC OF CHINA

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**ISTVÀN SANTHA**  
HUNGARY

P.80  
**IBRAHIMA DIOUF**  
SENEGAL

P.82  
**HEND JABBES**  
TUNISIA



FIELD OF STUDY

## INTERCULTURAL DIALOGUE

YEAR

**2007**

FELLOW

**KOFFI JULIEN  
GBAGUIDI**

BENEFICIARY COUNTRY

**BENIN**

COUNTRY OF STUDY

**TOGO**

PLACE OF RESEARCH

University of Lomé  
Faculty of Arts and  
Human Sciences (FLESH),  
Lomé, Togo.

RESEARCH UNDERTAKEN

From 3 September 2007  
to 3 March 2008.

ABOUT FELLOW

Born on 4 April 1973  
in Yakassó, Côte d'Ivoire

LAST DEGREE OBTAINED

Université d'Abomey-Calavi,  
Faculty of Arts and Human  
Sciences –FLASH - EDP,  
Linguistics Department, Benin:  
Postgraduate diploma  
(Diplôme d'études  
approfondies, D.E.A)  
(28 July 2005).

SCHOLARLY WORK  
AND PUBLICATIONS

*Cognition et perspectives  
didactiques du Fa pour  
le développement humain*  
[*Cognition and educational  
prospects of Fa for human  
development*], Proceedings  
of the 26th West African  
Linguistics Congress, Winneba,  
Ghana (2008).

*Aspects sémiotiques de  
l'hymne national en langues  
fon* [*Semiotic aspects of the  
national anthem in Fon  
languages*], *Perspectives et  
Sociétés*, CAREDE (African  
Crossroads of Research and  
Exchanges for Development),  
Benin (2009).

*Fa et le développement humain  
durable* [Fa and sustainable  
human development],  
Proceedings of the International  
Seminar on the granting of  
heritage status to local  
knowledge for innovation in  
Africa, University of Lomé  
(October 2009).



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## Vodun Culture – Interculturality and Globalization: some suggestions for UNESCO and Scholars

The study was conducted as part of the UNESCO/Keizo Obuchi Research Fellowships Programme and the philosophical framework of the contribution to intercultural dialogue. Carried out in Togo and Benin, it focused on the role of Vodunism in the construction of a common spiritual ideal (ISC) and on the attitude of intellectuals towards this traditional religion of Black Africa, particularly in Benin and Togo.

The purpose of the study was to show that Vodun, a primitive religion whose precepts have been subsumed in other religions, was therefore a cross-cutting religion that was crucial to world peace. It also aimed to show that the Vodun deities Sakpata (Earth), Tohossou (Water), Dan (Air), Hebiosso (Fire) and the four mother signs of Fa (Gbe-meji (Light), Yeku-meji (Dark), Woli-meji (Rest) and Di-meji (Activity)) were one with God, who used them for His many creations.

The study was conducted according to the Louis-Vincent Thomas convergence method (1966), in which culture is approached from the threefold perspective of linguistics, anthropology and theology. The sample subjects were 134 scholars, including students and teachers.

The respondents ranked world religions by order of preference as follows: (1) Christianity, (2) Islam, (3) Vodun, (4) Judaism, (5) Buddhism, (6) Hinduism, (7) Rosicrucianism, and (8) Eckankar. Furthermore, it is worth noting that out of the 109 Christians, 15 Muslims, 5 Vodunists and 5 followers of other faiths questioned, 67 acknowledged that Vodun was beneficial to human development and 42 were partial to Fa divination.

The findings are indicative of syncretistic practices among respondents. In any case, the crucial point is the maintenance of peace through convergence among the religions of the world.

Thus, through its future conventions, UNESCO may propose that “spirituality” be introduced as a discipline in education curricula in order to increase learners’ knowledge of the world’s religions. Lastly, the study invites scholars from Benin, Togo and other countries to understand that Vodun and Fa can be influential in the awakening and elevation of the human person through their pharmacopeia, music, gastronomy, literature and politics. The contribution of Vodun and Fa to globalization can therefore be said to positive to all humankind.

**17 APRIL 2008**

TRANSLATED FROM FRENCH BY UNESCO





FIELD OF STUDY

## INTERCULTURAL DIALOGUE

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YEAR

**2007**

FELLOW

**CHINMAYEE SATPATHY**

BENEFICIARY COUNTRY

**INDIA**

COUNTRY OF STUDY

**UNITED STATES  
OF AMERICA**

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PLACE OF RESEARCH

University of South Florida,  
Department of Communication,  
Tampa, Florida,  
United States of America.

RESEARCH UNDERTAKEN

From 17 November  
to 16 July 2008.

---

ABOUT FELLOW

Born on 8 July 1972  
in Orissa, India.

LAST DEGREE OBTAINED

Utkal University, Vanivihar,  
Bhubaneswar Orissa, India:  
PhD in Sociology  
(16 November 2006).

SCHOLARLY WORK

AND PUBLICATIONS

Research project undertaken  
relating to the topic "situation  
of women informal workers in  
the district of Mayurbhanj,  
Orissa", India, under the  
sponsorship of the National  
Commission for Women,  
New Delhi, India.

"Discrimination and atrocity  
against women in Orissa",  
PhD thesis, India 2006.



chinusatpathy@rediffmail.com



# Santal & Seminole: A Comparative Cross-Cultural Study

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The present research study is quite interesting and fascinating. It deals with the comparative cross-cultural analysis of the two tribes Seminole and Santal living in two different geographical and socio-cultural settings. Seminole is one of the indigenous Amerind (Indian) tribes of the state of Florida in the United States whereas Santal is one of the largest (population-wise) tribes in India. The researcher tried to make a comparison between the two on the basis of certain similar as well as dissimilar characteristic features relating to their origin, growth and development, economic features, cultural tradition, socio-political organization, etc.

It has been observed that the two tribal communities, Santal and Seminole, are civilized tribes in India and the United States. During the research study, the researcher found that though the two tribal communities live in two different countries, most of the tradition, customs and rituals cherished by them are more similar than dissimilar in nature. In both the cases the clan and kinship bonds derived from the natural clan objects, between which the marital relationship is strictly prohibited. Similarly, the rituals relating to death of the person and to the name-giving ceremony are observed in both the tribal communities. Agriculture is a way of life for both the tribes since most of the ceremonial observations centered around sowing, harvesting, etc.

The tribes fought against the British at different times to uphold their rights over land and control other resources. Over the years the process of development has been so rapid that the younger generations are gradually assimilated with the mainstream and have adopted a new way of life, to a significant extent leaving behind their tradition, customs and ethnicity.

**20 JULY 2009**



FIELD OF STUDY

## INTERCULTURAL DIALOGUE

YEAR

**2007**

FELLOW

**PAULINE MOUHANNA**

BENEFICIARY COUNTRY

**LEBANON**

COUNTRY OF STUDY

**FRANCE**

PLACE OF RESEARCH

University of Paris II  
Panthéon-Assas  
Institut Français de Presse,  
Paris, France.

RESEARCH UNDERTAKEN

From 3 October 2007  
to 6 April 2008.

ABOUT FELLOW

Born on 11 September 1980  
in Lebanon.

LAST DEGREE OBTAINED

University of Paris II –  
Panthéon-Assas:  
Master 2, Information and  
communication (2007).

SCHOLARLY WORK  
AND PUBLICATIONS

*Les Libanais fuient leur passé  
en croyant l'oublier [The  
Lebanese are running away  
from their past by thinking it is  
forgotten], L'Hebdo magazine  
(24 December 2004).*

*La société coupable du  
dilemma [Society is to blame  
for the dilemma], L'Hebdo  
magazine (23 December 2004).*

*Le Liban au centre de l'Union  
pour la Méditerranée: Une  
place à reconquérir [Lebanon  
– reclaiming its place at the  
centre of the Union for the  
Mediterranean], L'Hebdo  
magazine, Lebanon (6 February  
2009).*

*Île-de-France, la région où les  
associations sont les plus  
actives pour le Liban [Île-de-  
France (Greater Paris), where  
pro-Lebanon associations are  
most active], L'Orient le Jour,  
"Lebanese around the world"  
column, Lebanon (3 November  
2010).*

*Les juifs libanais installés  
en France: Cher pays de mon  
enfance... [Lebanese Jews  
in France – beloved country  
of my childhood], L'Hebdo  
magazine, Lebanon (1 May  
2009).*



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# Lebanese migration to France: a factor of cultural integration or an obstacle to pluralism? Franco-Lebanese cultural associations in Île-de-France (Greater Paris)

This research project focuses on “Lebanese immigration in France and its repercussions on intercultural dialogue in Lebanon”. In our research in France, we examined Franco-Lebanese associations and their impact on intercultural dialogue in Lebanon.

Associations under the French law of 1901 have long been a preferred medium for action by the Lebanese diaspora in France.

Historically, ever since the first waves of Lebanese immigrants came to France, they formed associations.

Today, there is a quite a large number of Franco-Lebanese associations in all regions of France, with a high concentration in Île-de-France (Greater Paris). We selected the associations on the basis of a number of criteria, namely constant ties with Lebanon, a website as an indispensable tool for maintaining relations with their country of origin, involvement in culture, an apolitical vocation and genuine activism, which was not always the case. In all, nine cultural associations fell within the scope of our study, including two humanitarian associations known as Lebanus and Cèdre sur Seine [Cedar upon Seine], two student associations – the Association of Lebanese University Students in France and the Union of Lebanese Students in Paris, the Anta Aki France charity, the Leb Touch social association, an intercultural association known as the Association for intercultural interfaith and dialogue, a political association known as the Union of Lebanese Citizens and Friends of Lebanon and, lastly, in the media, the Franco-Lebanese Inter-professional Group.

We examined the reasons for which each association was established, its operation and its interaction with Lebanon.

We also observed the difficulties encountered, in particular in working between Lebanon and France. Our findings have shown that these associations are not considered to be equally important within the Lebanese Diaspora in France, nor do they promote Lebanon in the same manner. Some sorely lack funding while others can obtain grants and organize activities for Lebanon. We also found that some make optimum use of their websites as a meeting place for Lebanese immigrants and those still living in Lebanon. We also noted that the associations experienced difficulties in cooperating both with Lebanese public institutions and with each other.

In conclusion, the main contribution of this study is its compilation of a list of these associations, particularly those based in Île-de-France (Greater Paris) – an unprecedented undertaking that is of prime importance for Lebanese institutions wishing to work with immigrant associations in France. The research also reveals how difficult it is for an apolitical cultural association to be a stakeholder within the Diaspora, especially in comparison with party-affiliated associations, which have no lack of human, financial, and technological resources.

**15 SEPTEMBER 2008**

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

## INTERCULTURAL DIALOGUE

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YEAR

**2007**

FELLOW

**AIVARAS STEPUKONIS**

BENEFICIARY COUNTRY

**LITHUANIA**

COUNTRY OF STUDY

**UNITED STATES  
OF AMERICA**

---

PLACE OF RESEARCH

University of Hawaii  
College of Arts and  
Humanities, Department  
of Philosophy  
Honolulu, Hawaii,  
United States of America.

RESEARCH UNDERTAKEN

From 28 September  
to 27 December 2007.

ABOUT FELLOW

Born on 28 September 1972  
in Kauno, Kacergine, Lithuania.

LAST DEGREE OBTAINED

“Kultūros, filosofijos ir meno  
institutas” (The institute of  
Culture, Philosophy and Art),  
Vytautas Magnus University  
Vilnius, Lithuania: PhD in  
Philosophy (22 April 2005.).

SCHOLARLY WORK  
AND PUBLICATIONS

*A critique of the Ideas of a World  
Philosophy: Philosophical and  
Historiographical Projects in  
the Comparative Movement  
of Honolulu*, PhD Dissertation,  
The Institute of Culture,  
Philosophy and Art, Vytautas  
Magnus University, Lithuania  
(2005)

*Pavergto mąstymo problema:  
Maxas Scheleris ir žinojimo  
sociologijos ištakos*, Vilnius:  
Kultūros, filosofijos ir meno  
institutas, 2005, p.300, ISBN  
9986-638-65-8, Lithuania  
(2005).

*The idea of a World Philosophy  
in the East-West Philosophical  
Context. Dialogue and  
Universalism*. Vol. XIII., No.162/  
2003, PL ISSN 1234-5792,  
Lithuania (2003).

*Marxo ir Engelso visuomeninės  
pažinimo teorijos link ir aplink.  
I dalis*. – Logos, Nr.37, 2004,  
p.79-91, ISSN 0868-7962,  
Lithuania (2004).



astepukonis@gmail.com



# One World – One Philosophy? Global Perspectives in the Contemporary Humanities

My research was carried out at the Department of Philosophy, University of Hawaii, between 28 September 2007 and 27 December 2007. The purpose of the research was to collect the materials needed for the completion of my forthcoming monograph *One World – One Philosophy? Global Perspectives in the Contemporary Humanities*.

During the three months that I spent at the University of Hawaii, I met Professor Roger Ames, Eliot Deutsch, Tamara Albertini and others. We pursued a series of interesting discussions on diverse issues of comparative philosophy, as these have been raised and developed by the Honolulu movement of comparative philosophy.

The University of Hawaii granted me a staff-faculty ID card that allowed me to use the rich resources at Sinclair and Hamilton libraries. The many hours that I spent in those facilities of learning were very rewarding. I scanned and/or photocopied a number of books and articles that bore directly upon my research. I also used the opportunity, every now and then, to digress and look into literature that might constitute a development of my present intellectual endeavours.

The staff-faculty ID card also gave me access to online databases available only to the students, faculty and staff of the University of Hawaii. This helped me to concentrate on the newly emerging and expanding pool of electronic publications. Some of the databases had not been known to me previously. It was a very positive exposure indeed.

I was also given permission to use the resources at the East-West Center, the main catalyst and promoter of the East-West Philosophers' Conferences, although the

Center itself is not part of the University of Hawaii. That came as a pleasant surprise and a bonus to my research programme.

Of course, it was impossible for me to read all of the materials that I gathered for the completion of my research. The best part of the collected literature had to be shipped to Lithuania for perusal there until the monograph is finished. Doubtless, I will share those resources with my colleagues at Kultūros, filosofijos ir meno institutas (Institute of Culture, Philosophy, and Art), as well.

I cannot thank you enough for granting me the fellowship. It has served its purpose entirely. My visit to the University of Hawaii was rich not only in terms of academic results, but also as a fresh and illuminating cross-cultural experience. Thank you one more time!

**18 FEBRUARY 2008**





**INTERCULTURAL DIALOGUE  
WHAT THE FELLOWS SAY**



**IBRAHIMA DIOUF**  
SENEGAL, 2008

“My fellowship has had a very positive impact, in that it would otherwise have been impossible for me to carry out my research properly, especially in France, where I found the most documents on Ancient Rome. It has enabled me to write up my thesis”.



**KOFFI JULIEN GBAGUIDI**  
BENIN, 2007

“Owing to the UNESCO/Keizo Obuchi Fellowship, I am now a craftsman committed to world peace, through the lessons, drawing on intercultural dialogue, that I teach in universities”.



**HEND JABBES**  
TUNISIA, 2008

“Owing to the UNESCO/Keizo Obuchi Fellowship funds, I have completed my field research on promotion through education of interfaith and intercultural dialogue”.



**PAULINE MOUHANNA**  
LEBANON, 2007

“I have published in *Orient le Jour* an article on Franco-Lebanese associations and their impact on Lebanon. That article has been used by several sites.

The article published as a result of my study has had an impact on Lebanon because it has made associations working in Lebanon’s interest aware of their difficulties, and above all helped them communicate with each other”.



**AIVARAS STEPUKONIS**  
LITHUANIA, 2007

“The Keizo Obuchi Research Fellowship, administered by UNESCO, made it possible for me to visit the University of Hawaii, that academic hub of comparative philosophy which not only provided me with a cherished wealth of information but also challenged and enriched me with fresh and illuminating cross-cultural experiences”.



FIELD OF STUDY

## INTERCULTURAL DIALOGUE

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YEAR

**2008**

FELLOW

**JIANPING YANG**

BENEFICIARY COUNTRY

**PEOPLE'S REPUBLIC  
OF CHINA**

COUNTRY OF STUDY

**UNITED STATES  
OF AMERICA**

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PLACE OF RESEARCH

Harding University,  
American Studies Institute  
Arkansas, Searcy,  
United States of America.

RESEARCH UNDERTAKEN

From 30 January  
to 29 September 2009.

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ABOUT FELLOW

Born on 24 May 1973  
in Shanxi, China.

LAST DEGREE OBTAINED

Zhejiang University: Master  
of Arts; Graduate Diploma  
in linguistics and applied  
linguistics (3 March 1999).

SCHOLARLY WORK

AND PUBLICATIONS

Thesis Master's degree:  
A Comparative Study of  
Overseas Chinese Students  
view of Christianity and  
American Christian's view  
of Christianity in China.



yjp\_lxj@163.com



# A comparative study of Chinese intellectuals' understanding of Christianity and Americans' view of Chinese religious belief

This study sought to gain an idea of overseas Chinese students' view of Christianity and how it differs from American Christians' understanding. A survey was conducted of 100 Chinese overseas students and 67 responses were received. The study among American Christians was carried out mainly by means of formal and informal interviews. Some were face to face and others via the Internet. That part of the study failed to produce many responses because of people's reluctance to participate. But it may still point to some tendency in American Christians' understanding of Christianity in China.

Questions in the survey among Chinese students focused mainly on four topics: experience with Christianity; expectations of the development of Christianity in China; their values and their understanding of Christian values; and their interpretation of some doctrines. A parallel survey was conducted among American Christians.

The study showed that 90% of the respondents had taken part in Bible studies since coming to America. The reason for doing so was mostly to "understand the native culture", to "know more about Christianity" and to "improve proficiency in English".

Half of the students claimed that what impressed them most about Christianity was Christian values. Values like "Personal accomplishment is not an accumulation of how much one achieves, but justice, fairness and joy in the Holy Spirit" and "Work is a tribute to life and is the source of happiness" were those showing the highest percentage of identification.

Of the Chinese respondents, 81% stated that there was a demand for faith in contemporary

China. Only 27% of the students felt that Christianity should be assimilated into Chinese culture. The survey among American missionaries showed that 7 out of 10 believed that Christianity should be assimilated by and become part of Chinese culture. The Chinese students seemed to be more open to a diversified culture than Westerners think.

Questions about the Chinese students' values showed a strong tendency towards individualism. What they considered to be the most unacceptable teaching of Christianity was that "Christians should live for the Lord." Even Chinese Christians found it difficult to accept that idea.

Three Chinese theological interpretations were given to gauge their acceptability among Chinese students and American Christians. Most Chinese respondents identified with the statements, but responses varied among American Christians. The Chinese view of Christianity takes more of a humanistic approach; their feeling towards holiness and eternal life is not as deep as that of American Christians.

Despite differences in beliefs, there is also common ground on which Chinese people's beliefs and Christian values concur. I hope that my effort in carrying out this research can contribute in some measure to the enhancement of understanding between Chinese and American culture.

18 JANUARY 2010



FIELD OF STUDY

## INTERCULTURAL DIALOGUE

YEAR

**2008**

FELLOW

**ISTVÁN SANTHA**

BENEFICIARY COUNTRY

**HUNGARY**

COUNTRY OF STUDY

**RUSSIAN FEDERATION**

PLACE OF RESEARCH

Centre for Independent  
Social Research,  
St. Petersburg,  
Russian Federation.

RESEARCH UNDERTAKEN

From 1 September 2008  
to 31 May 2009.

ABOUT FELLOW

Born on 28 February 1968  
in Szmobathely, Hungary.

LAST DEGREE OBTAINED

Elte University, Budapest,  
Hungary: PhD in Mongolian  
Linguistics (1 July 2004).

SCHOLARLY WORK

AND PUBLICATIONS

*Ethos of Evenki People in  
Eastern Buryatia: Companion-  
ship and Pokazukha.* Working  
paper MPI for Social  
Anthropology, Halle/Saale,  
Germany (2007).

*Bright future: living without  
electricity as a new experience  
of Evenki village youth in  
South Siberia.* Generation P  
in the Tundra (2008).

*Intergenerational relations  
in an Evenki community,*  
Max Planck Institute for Social  
Anthropology, Report  
2004-2005, pp. 273-275,  
Halle (2006).



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## Loosing Culture: the Evenkis in Russia

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The first field site was the Evenki village. In 1940s it was the place of the resettlement of the local nomadic Evenkis. Here we can also find Buryats and Russians. The main economic activities here are cattle breeding and hunting. Some individuals move as seasonal workers to other parts of the district.

The first generation of Evenki intelligentsia had never made any decision about their own career. They recognized the things relating to their life or career as facts which they should not change. They did not need to find the balance between being Evenki and being a stranger. They simply needed to accept the strangers' values. They did not perceive and resolve the problem that being Evenki and serving strangers' interests was contradictory. Representatives of the second generation already needed to recognize troubles and had to manage their lives, which already did not always match the strangers' expectations. They often needed to be flexible, which was previously a crucial skill for the Evenkis.

In the taiga, a certain rhythm of Evenki being could be recognized. In one period so much food is available; in another starvation is the norm. The question is how long one or the other period lasts in a certain season of the actual year. But changing from one to another period is necessary and the Evenkis make themselves comfortable with this. In the periods of plenty they do not save rationally; they rather run down food stocks as quick as possible. Saving is not an Evenki strategy; necessity is much more natural for them. And the Evenkis become active and begin to choose strategies not to be seen in another period. These unexpected and unpredictable actions are extremely effective.

Each relation is based on personal autonomy. They do not expect anything from anybody. And it is not contrary to Evenki being that an Evenki could not live without long-term relations with a stranger. I think that these relations are necessary not from rational but from social considerations. They sometimes simply need to meet a stranger. These meetings also lend rhythm to their lives. As a consequence of the recent global economic crises, the taiga became empty. The stores run out and nobody takes the risk of opening new mines, new enterprises. There is nobody with whom the Evenkis could trade or meet in the taiga; only the competing poachers, of whom the Evenkis are very suspicious, go to the forest. The Evenkis do not believe them, but they have no choice because there is no other chance to enter into relations with strangers.

Nomads cannot be sure that their children or relatives will really continue their taiga life. A still hardly understandable background institution can be seen which supports individuals who at some time are potentially able to start to live in the taiga. Taiga people in one period of their life live in the village, later returning to the forest. Some individuals from the village visit their taiga relatives more and more often, which is a sign that they may also at some point begin to live in the taiga.

**15 FEBRUARY 2010**





FIELD OF STUDY

## INTERCULTURAL DIALOGUE

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YEAR

**2008**

FELLOW

**IBRAHIMA DIOUF**

BENEFICIARY COUNTRY

**SENEGAL**

COUNTRY OF STUDY

**FRANCE**

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ABOUT FELLOW

Born on 25 February 1968  
in Keur-Gane, Senegal.

LAST DEGREE OBTAINED

Cheikh Anta Diop University.  
Master's degree in sociology  
(7 January 2004).

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PLACE OF RESEARCH

Université Marc Bloch  
UFR des Lettres  
Centre d'analyse des  
Rhétoriques Religieuses  
de l'Antiquité (C.A.R.R.A.)  
Strasbourg, France.

RESEARCH UNDERTAKEN

From 7 April 2009  
to 6 January 2010.



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# Traditional magico-religious and cultural practices in Rome and Serer society: a comparative study

Investigations carried out in Serer society and the documents consulted both in Senegal and France enabled us to group information on the traditional magico-religious beliefs and practices of Romans and Serers into four main parts.

The first part is a general presentation of Ancient Rome and Serer society. It outlines the methodology used, the definition of key concepts (holiness, religion, worship, rite, sacrifice, prayer), the geographical location of both environments, the topography and hydrography, and the social, administrative and economic organization of both peoples. The concepts of holiness and prayer evolved with time and the prevailing ideas among the peoples, but these concepts had almost the same meanings for the Romans as for the Serers. In physical terms, there are notable differences between Ancient Rome and traditional Serer society, but with regard to social, administrative and economic organization, marked similarities have been observed. Both peoples were farmers with distinct socio-professional structures. This physical organization accounted for the agrarian and highly ritualistic nature of their traditional religions.

The second part refers to gods of the sky (Jupiter, Juno, Diana), gods of the earth (Janus, Mars, Quirinus, Saturn, Vesta, Ceres), gods of water and deified abstractions, triads (association of three gods) and places of worship (inaugurated, not inaugurated, public, private).

Taken separately, Roman gods had no counterparts in Serer society, but comparisons may be made with regard to triads. Roman gods each had a specific

domain whereas the scope of intervention of Serer pangools (spirits) was unlimited. Triads fulfilled the three functions of justice, protection and production.

The third part covers the foundations of beliefs, the meaning of death and cleansing, interdictions and taboos, communication between gods and humans (oracles, omens, prodigies), divination, dream interpretation, the categories of priests (major, minor), the criteria and method for recruiting them and their mission.

There was also a parallel between Romans' and Serers' conception of death, cleansing practices, the respect of interdictions and taboos and relationships with gods. Death was considered a stain that had to be removed; the violation of interdictions and taboos was an offense for which atonement had to be made.

The fourth part is devoted to the different rites (magical and religious), the types of sacrifice (blood or bloodless), the selection of victims, the performance of the act, the functions of these practices (expiatory or propitiatory), prayers and victory celebrations. The layout of holy places, worship, the form and significance of sacrifices and prayers were identical for Romans and Serers in the past. There were major similarities in their victory celebrations. Both in Rome and in Serer society, any occasion was an opportunity to offer sacrifices and recite prayers, which were ceremonies led by specific priests.

7 JANUARY 2010



FIELD OF STUDY

## INTERCULTURAL DIALOGUE

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YEAR

**2008**

FELLOW

**HEND JABBES**

BENEFICIARY COUNTRY

**TUNISIA**

COUNTRY OF STUDY

**FRANCE**

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ABOUT FELLOW

Born on 22 February 1976  
in Tunis, Tunisia.

LAST DEGREE OBTAINED

University Paris-Sud XI, Orsay,  
France: Postgraduate diploma  
(diplôme d'études  
approfondies DEA)  
in Educational Sciences  
(11 October 2004).

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SCHOLARLY WORK  
AND PUBLICATIONS

*Le choc culturel, l'une des  
principales causes du stress  
humanitaire*, Paris, France.  
(16 March 2006).

*Le stress cumulatif et post-  
traumatique du personnel  
humanitaire sur le terrain  
et les stratégies d'y faire face:  
les stratégies de 'coping'*,  
Doctoral thesis. University  
Paris X, Paris, France.

Participation in the elaboration  
of a Log Book for humanitarian  
field workers: *Stress  
management in insecure  
environments* with the Centre  
of Humanitarian Psychology.  
Geneva (July 2006).

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PLACE OF RESEARCH

University Paris X – Nanterre  
Laboratoire du Centre  
de recherches éducation  
et formation (CREF)  
Laboratoire secteur Crise  
Département de sciences  
de l'éducation,  
Paris, France.

RESEARCH UNDERTAKEN

From 2 September 2008  
to 1 June 2009.



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# Promoting interreligious and intercultural dialogue through education: heuristic aspects of reconciliation mechanisms

Cultural diversity is now an integral part of every society. Behind the promotion of “intercultural dialogue” is a drive to make this diversity a source of mutual enrichment, understanding, reconciliation and tolerance. This research project focused on the role of education in promoting an open approach to others. The work of educational staff, particularly in post-conflict countries, is key to understanding contemporary forms of violence and to educating young generations to be more open to the cultural diversity that will structure their country. Teachers and instructors are in an ideal position to promote the benefits of cultural diversity and interreligious dialogue by teaching new generations about tolerance and accepting others.

The following methodology was used. Research was carried out in two countries which, though diametrically opposed in many ways, demonstrate, as intended by our study, that most conflicts in the world today are caused by a complete breakdown in dialogue between religious and ethnic communities – according to UNESCO’s 2000 World Culture Report, 86 out of 92 of the world’s current conflicts stem from internal causes. In this context, diversity is a tool to meet the challenges of globalization, not a source of dispute.

We began the first part of our study in Thailand, where we actively observed interaction within Buddhist, Muslim and Christian communities in the city of Ayutthaya over a two-month period.

Working in close collaboration with teachers and instructors from different religious schools, we were able to obtain very encouraging results which may help us better understand why this country has not experienced inter-community strife the same way other countries in the region have over several generations (India or Sri Lanka, for example).

The second part of our study was carried out in Lebanon. Examining the case of Lebanon is of paramount importance: the country is a unique example and an essential component of research into intercommunity and interreligious dialogue.

Work in Lebanon began in close collaboration with Offre Joie, one of the few Lebanese non-governmental organizations which operates locally with the country’s different communities. Offre Joie is a non-political association which for 20 years has worked for unity and civil participation by bringing together Lebanese youths of all faiths and origins to share and work together on social projects. Following this initial groundwork with Offre Joie, we then conducted one-on-one interviews with academics, political figures and teachers whose area of work is intercommunity dialogue in post-civil war Lebanon. Our goal was to highlight their longstanding and ongoing efforts to change attitudes by re-establishing dialogue between communities and encouraging mutual forgiveness.

**18 FEBRUARY 2010**  
TRANSLATED FROM FRENCH BY UNESCO

FIELD OF STUDY 2007-2008

# INFORMATION & COMMUNICATION TECHNOLOGIES

“New information and communication technologies (ICTs) and broadband, in particular, have indeed revolutionized the way in which people acquire and share information. This has an impact on all UNESCO’s fields of competence – education, science, culture and communication and information.”

**IRINA BOKOVA**  
DIRECTOR-GENERAL OF UNESCO

Broadband Commission for Digital Development’s presentation of the Final Report and Declaration to the UN Secretary-General (New York, 19 September 2010).

YEAR  
**2007**

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**DAWIT TIBEBU TIRUNEH**  
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**KHAN**  
PAKISTAN

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**KALADJURDJEVIC**  
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**KATARÍNA BRATKOVÁ**  
SLOVAKIA

YEAR  
**2008**

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**RIMA MALEK**  
LEBANON

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ROMANIA

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**JOSEPH KIZITO BADA**  
UGANDA





FIELD OF STUDY

## INFORMATION & COMMUNICATION TECHNOLOGIES

YEAR

**2007**

FELLOW

**PHAL DES**

BENEFICIARY COUNTRY

**CAMBODIA**

COUNTRY OF STUDY

**GERMANY**

ABOUT FELLOW

Born on 5 July 1970 in  
Battambang, Cambodia.

LAST DEGREE OBTAINED

Université Libre de Bruxelles  
[Free University of Brussels]:  
Diplôme d'Etudes Spéciales  
en Informatique Appliquée aux  
Sciences de l'Education  
[degree in computer science  
applied to education sciences]  
(26 october 1998).

PLACE OF RESEARCH

Dresden University  
of Technology,  
Faculty of Computer Science,  
Institute of Systems  
Architecture,  
Dresden, Germany.

RESEARCH UNDERTAKEN

From 30 September 2007  
to 29 March 2008.

SCHOLARLY WORK

AND PUBLICATIONS

*Conception et test d'un  
prototype de dictionnaire  
multimédia français-khmer*  
[*Design and Testing of a  
Prototype French-Khmer  
Multimedia Dictionary*],  
Mémoire de fin d'études  
spécialisés [Dissertation],  
Université Libre de Bruxelles  
[Free University of Brussels],  
Belgium (1998).

*Learning Software MyClass*  
<http://www.khmermyclass.org>  
(*Software designed by  
a team under the supervision  
of Phal Des*).

Articles about IT in Cambodia  
available at:  
<http://www.itcommittee.org>



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# System Support for Mobile and Distributed Multimedia Computing

The research is composed of three phases. The first phase was from 30 September 2007 to 30 November 2007. It focused on transferring existing teaching material to distributed systems, mobile computing and software prototyping developed at the University of Technology of Dresden. That material was to be used and assessed at the Royal University of Phnom Penh (RUPP). Even though our research had not yet completed all phases, we assumed that we would have some course materials such as slide script and video on-demand relating to mobile communication, embedded and distributed systems and Internet and Web applications as new courses to be developed, integrated and taught at RUPP, with the assistance of special lectures by Professor Dr Alexander Schill in June or December 2008 after the final phase.

In the second phase, we set up and tested software with two ISPs and different gateways. One was Internet Broadband with a connection speed of 128Kb, and the other was IPstar, with a speed of 512Kb. We also taught the course to the Master's students on the topic of Advanced Network Programming based on JAVA language technology.

At the end of that phase, we set up a new wireless network infrastructure with the latest wireless LAN system using OFDM technology, which provides speeds of up to 54Mbps for local networks.

The final phase of our research focused on experimenting with Java 2 Micro Edition (J2ME) and open source software such as the Sun Wireless Toolkit and the EclipseMe plugin of the Eclipse Integrated Development Environment (IDE). MIDlets and Java-based multimedia applications for devices were

developed by using the Mobile Multimedia API (MMAPI).

Working with audio and video files was the most exciting part of our research. We learned how to play simple single tone and to create and distribute more complex tones and tone sequences. This required prior knowledge of music theory to understand the concepts behind tone generation. We also learned how MIDI worked and looked into an overview of its message structure.

This work enabled us to see all the capabilities provided by the MMAPI to support audio capture or live radio streaming, video capture to video playback, synchronized audio and video, or simple snapshots.

Various devices support different formats and protocols, but the basics of using these varied formats and protocols remain the same. We covered all of the various media types that were supported by MMAPI by focusing on the two main types: audio and video. We learned to query, display, control, record, save and stream these two types of media by using a variety of examples.

## Results and future work

To sustain this project, we are developing a Mobile Health Care System by collaborating with the Computer Networks Department at Dresden University of Technology, Germany, and the IT Centre at the Royal University of Phnom Penh, Cambodia. It was one of 20 out of 70 to be invited to Brussels to make a presentation at the 2008 Euro-South East Asia Cooperation Forum on ICT Research on 6 and 7 October 2008.

21 AUGUST 2008



FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

YEAR

**2007**

FELLOW

**DAWIT TIBEBU  
TIRUNEH**

BENEFICIARY COUNTRY

**ETHIOPIA**

COUNTRY OF STUDY

**SOUTH AFRICA**

PLACE OF RESEARCH

Cape Peninsula University  
of Technology,  
Faculty of Informatics  
and Design,  
Bellville, South Africa.

RESEARCH UNDERTAKEN

From 22 October 2007  
to 21 May 2008.

ABOUT FELLOW

Born on 22 February 1982  
in Bahir Dar, Ethiopia.

LAST DEGREE OBTAINED

Addis Ababa University:  
M. Ed in Information and  
Communication Technology  
(10 August 2006).

SCHOLARLY WORK

AND PUBLICATIONS

*Relationship between  
Teachers' Sense of Efficacy  
and their Classroom behavior,  
Bahir Dar University Research  
and Publication Office,  
Ethiopia (2004).*

*Challenges to Integration  
of ICT into teaching and  
Learning: The case of Addis  
Ababa University, (Final  
research work for Master's  
degree).*



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# Integration of Information and Communication Technology into the Teaching and Learning Process at Bahir Dar University

Recognizing the need for participation in the knowledge society and as a response to some of the challenges being faced, Bahir Dar University (BDU) has been taking steps to introduce information and communication technology (ICT) in the education system. BDU has now begun to spend more on ICT, despite resource constraints. However, there was almost no evidence to show how the investment in ICT was supporting the teaching and learning process in the University. The purpose of this study was therefore to examine the current status of ICT use and to point out possible strategies for effective use of ICT in the teaching and learning process in BDU. The 4-E Model of ICT implementation, which was developed by Collis and Moonen (2001), is used as a theoretical framework throughout the study. As indicated in the 4-E Model, there are four factors, environment, educational effectiveness, ease of use, and (personal) engagement, that predict an individual's likelihood of making use of a technological innovation for a learning-related purpose. In relation to these four factors, four research questions were formulated:

- 1/ To what extent are the institutional conditions suitable for ICT use in teaching and learning?
- 2/ How does the University perceive itself in terms of using ICT in the education system?
- 3/ What are the ICT tools available for using ICT in teaching and learning?
- 4/ What is the instructors' attitude towards using ICT tools for teaching and learning purposes?

All of the research questions related to one of the Es and the framework served as a basis for collecting relevant data that helped to answer the research questions. Appropriate data were collected from instructors, officers and management at different levels. Questionnaires, interviews and document analysis were used as

data gathering instruments. The findings of the study revealed the current status of ICT use in teaching and learning at BDU, the readiness and support of the management, perception of the management, assessment of the ICT infrastructure, the attitude of instructors towards ICT use, and factors that hinder ICT use by instructors in the teaching-learning process. In terms of the environment (institutional context), the findings showed that many of the sub-factors were not in place: the University had not yet developed a clear policy on how ICT could help to achieve BDU's vision, the management was not providing all of the necessary support for integrating ICT into the education system and current ICT use in the University was below average. This shows that the environment in BDU was not suitable for proper ICT use. The ease of use factor was not adequately addressed in BDU. The findings showed that the existing network infrastructure did not adequately support instructors in effectively using ICT in the teaching and learning process. The majority of the instructors do not have adequate access to the Internet (both on campus and at home), appropriate software and hardware or a computer at home. However, the other two Es, educational effectiveness and engagement, seemed to exist adequately in BDU. The findings showed that the management strongly believed that ICT could have a long- and short-term effect in supporting BDU's education system. Regarding the engagement factor, instructors' attitude towards ICT was found to be significantly positive. On the basis of the findings, conclusions and recommendations were formulated with a view to improving the use of ICT in the teaching and learning process at BDU.



FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

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YEAR

**2007**

FELLOW

**AMJAD REHMAN  
KHAN**

BENEFICIARY COUNTRY

**PAKISTAN**

COUNTRY OF STUDY

**MALAYSIA**

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ABOUT FELLOW

Born on 26 February 1970  
in D. I. Khan, Pakistan.

LAST DEGREE OBTAINED

Gomal University, Dera Ismail  
Khan, N.W.F.P., Pakistan:  
Master of Science in Computer  
Science (4 January 1993).

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PLACE OF RESEARCH

*Universiti Teknologi Malaysia*  
(University of Technology,  
Malaysia), Department  
of Computer Science and  
Information System,  
Negeri Johor Darulzta'Zim,  
Malaysia.

RESEARCH UNDERTAKEN

From 1 September 2007  
to 31 May 2008.



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# Intelligent Knowledge Acquisition and Extraction Techniques for Neural Expert Systems Based on Machine Learning Techniques

Off-line unconstrained cursive handwriting has been a popular field of research for many decades. After forty years of intensive research, it still remains an open problem. The challenging nature of handwriting recognition has attracted researchers from industry and academia. The commercial sector has shown significant interest in handwriting recognition research, owing to the large number of applications such as bank cheque processing, tax form processing, admission form processing, and so on.

In recent years, techniques for recognizing handwriting have become more sophisticated in order to deal with real-world situations and to increase recognition rates.

Preprocessing techniques play a vital role in increasing the recognition rate of unconstrained off-line cursive handwriting. This research reviewed all aspects of preprocessing techniques, including line removal, slant correction, skew correction and core-zone detection. Segmentation of cursive handwriting is also a crucial step in the entire process, which is the focus of this research and which is examined thoroughly. Two novel techniques for segmenting off-line unconstrained cursive handwriting are being proposed and research papers are being produced, submitted and accepted in local and international conferences. Furthermore, one paper has also been submitted and accepted in the International journal of image processing. In addition to research, experiments are under way into skew removal, slant removal and line removal. Another research goal is to propose more preprocessing techniques in terms of feature extraction for recognizing segmented characters.

The following research papers were produced during the fellowship:

- 1/ Amjad Rehman and Dzulkifli Mohammad (2008). A Simple Segmentation Approach for Unconstrained Cursive Handwritten Words in Conjunction with the Neural Network. International Journal of Image Processing. Vol. 2, Issue 3, 29-35;
- 2/ Amjad Rehman and Dzulkifli Mohammad (2008). Off-line Cursive Handwriting Word Recognition: A Survey of Methods and Performances. Journal of Institute of Mathematics and Computer Science (Computer Science Series), Kolkata, India (Accepted);
- 3/ Amjad Rehman, Fajri Kurniawan and Dzulkifli Mohammad (2008). Off-line Cursive Handwriting Segmentation, A Heuristic Rule-based Approach. Journal of Institute of Mathematics and Computer Science (Computer Science Series) Kolkata, India. Vol. 19 (2), pp. 135-139;
- 4/ Dzulkifli Mohammad, Amjad Rehman Khan and Fajri Kurniawan (2008). A New Approach for Segmenting Difficult Cursive Handwritten Words from Benchmark Database. Proceedings of 4th International Conference on Information and Communication Technology and Systems (ICTS) Vol.1, pp.17-21;
- 5/ Dzulkifli Mohamad, Amjad Rehman (2008). Off-line Cursive Handwritten Word Segmentation, a New Approach. Proceedings of 4th Postgraduate Annual Research Seminar (PARS' 08), UTM Skudai, Johor, Malaysia, pp.260-262.

JANUARY 2009





FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

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YEAR

**2007**

FELLOW

**MILICA  
KALADJURDJEVIC**

BENEFICIARY COUNTRY

**SERBIA**

COUNTRY OF STUDY

**SWITZERLAND**

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PLACE OF RESEARCH

EPFL University,  
École Polytechnique Fédérale  
de Lausanne,  
Lausanne, Switzerland.

RESEARCH UNDERTAKEN

From 21 September 2007  
to 20 January 2008.

ABOUT FELLOW

Born on 23 August 1972  
in Belgrade, Serbia.

LAST DEGREE OBTAINED

Università Commerciale Luigi  
Bocconi, Milano, Italy:  
Master of International Health  
Care Management, Economy  
and Policy (15 December 2001).

SCHOLARLY WORK  
AND PUBLICATIONS

Master's dissertation: EPR  
(electronic patient records).  
Quality and policy issues  
(in press).



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## E-Governance, E-Health

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In the face of increasing globalization and the rising use of ICT, skill competencies call for the medical workforce to have the skills to use information and communication technologies to support patient care as the future basis of social infrastructure. The average person in Africa is not literate, lives in rural areas, cannot access telecommunications, fixed line, mobile connectivity or Internet networks, has a low income and high risk of morbidity from communicable disease owing to the underdeveloped sanitation and water supply infrastructure. There is an obvious need for public-private partnership (PPP) to develop the necessary infrastructure and to foster ICT infrastructure for more efficient and effective health care service delivery.

Progressively, the roles of government, the private sector and civil society organizations (CSO) have become more clearly defined and public-private partnership (PPP) schemes have become more popular. Citizens, through civil society organizations, are now present on decision-making boards and their role has become more participatory. Applications of ICTs in health (telemedicine or e-health) are evolving fast in raising awareness and basic knowledge of health and hygiene, improving preventive care and improving the efficiency of health management information systems. This is because long-distance diagnosis, investigation, online consultation and even operations over the Internet are possible today with ICT. A common platform for e-health governance has been already recognized by the European Commission, which has adopted an action plan to develop telemedicine by 2010. Global partnerships are already achieving mutually beneficial results in terms of tariff decreases and rises in ICT affordability for citizens.

2015 is expected to be the year when the world population will achieve universal access. The problems that Africa has faced for decades (such as low levels of literacy and health capital) can be addressed and resolved through ICT. This is already being proven by many ICT and e-health projects in Africa. Health is an essential source of life, and we need commitment at every level if we are to increase and protect life and meet the unmet demand for health in rural and developing countries. The research conducted supports public-private partnerships as an efficient solution to ICT implementation in Africa.

The best way to decrease the cost of health care, increase life expectancy and fight morbidity is to prevent the events that have an impact on health. This can be achieved by disseminating knowledge, increasing skills and integrating different resources for the deployment of best practices. Participation by human beings in creation is important for economic, social and technological aspects, but even more so in terms of health knowledge. Africa is suffering from governmental incapacity to achieve economic prosperity. The reason is the lack of a social structure and services for citizen empowerment. Without an education system and health care service, it is not possible to enable citizens to participate in social and economic growth. ICTs can help the knowledge and education platform in Africa to empower every child to be educated and to participate in modern African society.

**22 OCTOBER 2008**



FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

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YEAR

**2007**

FELLOW

**KATARÍNA BRATKOVÁ**

BENEFICIARY COUNTRY

**SLOVAKIA**

COUNTRY OF STUDY

**SPAIN**

---

ABOUT FELLOW

Born on 8 February 1978  
in Komárno, Slovakia.

LAST DEGREE OBTAINED

Comenius University,  
Bratislava, Slovakia:  
Master of Arts in Journalism  
(May 2003).

PLACES OF RESEARCH

Complutense University,  
Faculty of Information  
Sciences, Madrid, Spain.

Field research study:  
Youth Council of Galicia  
University of Santiago  
de Compostela, Spain.

RESEARCH UNDERTAKEN

From 1 September 2007  
to 31 May 2008.



kbratkova@yahoo.com



# Influence of Television on Children and Youth

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The purpose of my research was to determine whether television in Spain has any influence on the behaviour of children. For this purpose, I chose three State channels that cover the entire country. The three channels – TVE 1 and 2 (public channels), Telecinco and Antena 3 (private channels) – have the highest audiences. I chose the children’s schedule, namely the television time slot most viewed by children – from 5 p.m. (when they come home from school) to 9 p.m. This time slot is subject to child protection, and all television companies have signed an agreement to that effect. Throughout my research I observed that, despite that agreement, the companies often do not abide by its terms. It is peak viewing time and they are competing for viewers. In defending their stance, the channels argue that they broadcast to meet the viewers’ demand and that the question was merely one of supply and demand. On all the channels in that time slot news items feature prominently, with a great deal of information on violence, robberies, homicides, etc., on the one hand and, on the other, utterly scandalous news about the private lives of people in the public eye. I interviewed well-known news presenters and directors, Telecinco, TVE 1 and Antena 3. The three journalists agree that Spanish television is undergoing a transformation with the advent of private television companies.

They also acknowledge that politicians still wield influence and that television companies invest very little in producing educational programmes for children and young people because it does not pay. As a result, the companies behave as all other private enterprises bent on making money do. The main purpose of my work was to ascertain the assumption of much previous research on whether violence on television directly influences children’s behaviour and can

cause aggressive or even violent behaviour. My interview with a child psychologist working daily with children confirmed that human behaviour is influenced by several factors. The environment in which children grow up, that is the family environment, school, and their social environment and friends, is of the utmost importance to their development. The psychologist convinced me that television is only one, very small, factor in triggering violent behaviour by a child. In such cases, there have doubtlessly been previous problems that have gone undetected. I can thus confirm that, although television does influence children in that it sets an example to emulate (presenters, actors, cartoons, and so on), I rule out the likelihood that it can cause violent behaviour. The most important factor in a child’s behaviour is the environment in which he/she lives. Television is but one more factor. This was confirmed by another two psychologists who work with aggressive children and their parents. Direct surveys of children aged 7 to 11 years, too, yield no evidence that children imitate violent behaviour seen on television. Surveys of their parents have confirmed that the latter try to control content that their children see on television.

**30 JUNE 2008**



**INFORMATION & COMMUNICATION  
TECHNOLOGIES  
WHAT THE FELLOWS SAY**



**RIMA MALEK**  
LEBANON, 2008

“Owing to the UNESCO/Keizo Obuchi Fellowship, I have completed my research and finished drafting the thesis. I have therefore been awarded the degree of Doctor of Education Science, with specialization in educational informatics, with distinction. I am now teaching and conducting research”.



**AMJAD REHMAN KHAN**  
PAKISTAN, 2007

“After my fellowship was finished, I gained in motivation for Ph.D. research”.



**NICOLETA CRISTEA-BRUNEL**  
ROMANIA, 2008

“My experience under the research fellowship has been most enriching. I have amassed genuinely useful theoretical and practical knowledge for use in my professional career. ”.



**MILICA KALADJURDJEVIC**  
SERBIA, 2007

“The UNESCO fellowship has supported me in my research, and my long-held wish to conduct research on e-health and e-health governance has been realized with this fellowship. The opportunity to be at EPFL University and to conduct research in a prestigious academic environment has enriched my experience with a new network of the people who are dedicated to the e-governance and information society development building”.



**DAWIT TIBEBU TIRUNEH**  
ETHIOPIA, 2007

“The fellowship enabled me to gain enlightening experiences through working with well-known researchers in the area of ICTs in Education”.



**JOSEPH KIZITO BADA**  
UGANDA, 2008

“The fellowship contributed to the implementation of Social Networking and Computer Games for HIV Prevention Education at St. Mary’s College, Kisubi, Gayaza High School and Kyambogo College”.



FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

YEAR

**2008**

FELLOW

**IM SOTHEARITH**

BENEFICIARY COUNTRY

**CAMBODIA**

COUNTRY OF STUDY

**UNITED STATES  
OF AMERICA**

PLACE OF RESEARCH

Ohio University,  
Scripps College  
of Communication,  
Ohio, Athens,  
United States of America.

RESEARCH UNDERTAKEN

From 1 September 2008  
to 28 February 2009.

ABOUT FELLOW

Born on 5 June 1970  
in Prey Veng province,  
Cambodia.

LAST DEGREE OBTAINED

Ohio University, Ohio,  
United States of America:  
Master of Public  
Administration (MPA)  
(22 November 2006).

SCHOLARLY WORK  
AND PUBLICATIONS

*Cambodian Public Admin  
Reform*, paper, Khmer Study  
Forum at Ohio University  
(2009).

News articles: *Natural  
Resource Management  
in Developing Countries  
and Cambodia*.

[http://www.voanews.com/  
khmer-english/news/special-reports/  
science-and-technology/Natural-  
resources-90101157.html](http://www.voanews.com/khmer-english/news/special-reports/science-and-technology/Natural-resources-90101157.html).



imthegreat@gmail.com





# A Public Service Broadcasting Model for Developing Countries: the Case of Cambodia

The study explores the potential for establishing a Public Service Broadcasting (PSB) system in Cambodia. Four main factors – political circumstances, economic conditions, civil society and potential donors, and sociocultural compatibility were examined to determine their impact on prospects for a future PSB system.

Those four factors were chosen on the basis of previous studies. A second objective of the study was to develop an organizational structure for a future PSB system that would make it independent of political and corporate influences and enable it to serve the best interests of the public. A third objective was to develop a funding scheme for a future PSB system that would make it financially sustainable in the long run.

In order to achieve those three objectives, a qualitative method was used to conduct field research in Cambodia. In-depth interviews were undertaken with 68 individuals, including policy-makers, media executives, media practitioners, civil society activists and representatives of donor organizations well as with ordinary citizens from different regions. The areas sampled were Phnom Penh, the capital; Siem Riem, a provincial town in the northwest of the country; the port of Sihanoukville in the southwest; and Stung Treng, a provincial town in the northeast. Research data were also collected from primary materials, including reports, meeting minutes, newsletters, press releases and pamphlets, and from secondary materials such as books and magazines.

The study shows that politics, the economy, civil society and potential donors, and sociocultural compatibility help to determine the prerequisites for a PSB system.

The findings also indicate that these prerequisites do not exist in Cambodia at the present time. The ruling party dominates the political scene and strictly controls the existing media system, from which it derives important political benefits. Cambodia's weak economic conditions and low standard of living severely limit prospects for sustainable funding of a PSB system; civil society and donors have no interest in exerting pressure on the government to reform the existing media system and to place the establishment of a PSB system on its agenda, nor are they sufficiently strong to do so. In addition, Cambodian society lacks a participatory culture, which is one of the crucial requirements for the establishment of a PSB system as well as for democracy in general.

The study reaches two key conclusions. The first is that media dependency is created by the interactions of a dominant political party, a weak economy and civil society, and the absence of a participatory culture. The second is that an independent media system can emerge only when political life is no longer controlled by a single political party.

**24 SEPTEMBER 2009**



FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

YEAR

**2008**

FELLOW

**RIMA MALEK**

BENEFICIARY COUNTRY

**LEBANON**

COUNTRY OF STUDY

**FRANCE**

PLACE OF RESEARCH

Université de Rouen,  
Laboratoire CIVIIC,  
Rouen, France.

RESEARCH UNDERTAKEN

From 1 February  
to 31 October 2009.

ABOUT FELLOW

Born on 25 October 1969  
in Ajaltoun, Lebanon.

LAST DEGREE OBTAINED

Notre Dame University  
Louaize, Faculty of Natural  
and Applied Sciences,  
Lebanon: Master of Science  
in Computer Science  
(19 June 1997).

SCHOLARLY WORK  
AND PUBLICATIONS

*Dynamique de la mise en ligne  
des cours académiques: le cas  
du Liban.* Poster, the third  
conference on Intelligent  
Tutoring Systems, Lausanne,  
Switzerland, 27-29 June 2007.

*Cours en ligne: entre produc-  
tion locale et importation.  
Le cas du Liban.* Journées  
scientifiques Réseau de  
chercheurs en technologies  
de l'information et de  
la communication pour  
l'enseignement (RES@TICE),  
Rabat, Morocco (13-14 December  
2007).

<http://www.resatice.org/jour2007/>

*L'intégration des TICE dans  
une université libanaise:  
une étude de cas.* European  
Distance and E-learning  
Network (EDEN), UNESCO –  
Paris, France (20-22 October  
2008).

*Universités libanaises:  
virages technologiques!  
Virage pédagogiques?*  
7th symposium of the  
international Mediterranean  
association TiceMed, Baabda,  
Lebanon (11-12 May 2010).



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## The pedagogical electronic devices conceived for the online tutoring of face-to-face academic courses: the case of Lebanon

The UNESCO/Keizo Obuchi Research Fellowship enabled me to concentrate on and defend my thesis which was under a co-supervision agreement between the Université Saint-Esprit de Kaslik (USEK) in Lebanon and the Université de Rouen in France. The first part of my research was conducted in Lebanon (Prof. N. Zakaria, Thesis Director) and the second part in France (Prof. J. Wallet, Thesis Co-Director).

Field work was carried out in Lebanon. Several interviews were conducted in addition to bibliographical research in university libraries and empirical research at USEK. The following persons, among others, were interviewed: F. Baroud; A. Balian; W. Mrad, N. Khalik, IT (NDU); N. Wakim, VR; P. Bou Zaidan, SG (USEK); M. Chamoun (USJ); UL (B. Wakim); UPA (P. Gédéon); AUB (R. Souto-Silva, A. Geara); the Ministry of Education and Higher Education (A. Jamal, N. Kamil,) etc. The aim of these interviews was to understand the dynamic of online academic tutoring in Lebanon. At the same time, academic websites were thoroughly studied throughout the research and drafting period in order to analyse any modifications.

Theoretical research was conducted in Paris and Rouen in France. In Paris, I was able to conduct interviews and carry out bibliographical research at the François Mitterrand Library (from 1 to 9 March 2009).

The following people were interviewed: Prof. M. Miloudi, Coordinator of the Avicenna project at UNESCO; Prof. D. Oillo, Director of Innovation; Prof. J.P. Régnier, Deputy Secretary-General of the French National Commission for UNESCO; C. Souyri-Desrosier, Communication Advisor to the French National Commission for UNESCO. In Rouen, I completed my outline at the CIVIIC Laboratory of the Université de Rouen and developed my bibliographical research at the Université de Rouen, from 9 to 18 March 2009.

Upon returning to Lebanon, I finalized the 350 pages of the Ph.D thesis and took the viva voce examination on Saturday, 18 September 2010 at USEK, after which I obtained a Ph.D (Hons) in Education Sciences, option: educational computing.

It is the UNESCO/Keizo Obuchi Fellowship that enabled me to complete my thesis within the timeframe mentioned above.

**4 FEBRUARY 2011**

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

**INFORMATION & COMMUNICATION  
TECHNOLOGIES**

YEAR

**2008**

FELLOW

**NICOLETA  
CRISTEA-BRUNEL**

BENEFICIARY COUNTRY

**ROMANIA**

COUNTRY OF STUDY

**FRANCE**

PLACE OF RESEARCH

University of Avignon,  
Culture and Communication  
Laboratory,  
Avignon, France.

RESEARCH UNDERTAKEN

From 30 September 2008  
to 28 February 2009.

ABOUT FELLOW

Born on 12 June 1977  
in Gaesti, Romania.

LAST DEGREE OBTAINED

Geneva University, European  
Institute: M.A. in European  
Studies (September 2008).

SCHOLARLY WORK

AND PUBLICATIONS

*The Swiss Issue: why isn't  
Switzerland a member of  
The European Union?*

Journal of Political Analysis  
and Theory EuroPolis, No.  
4/2008, pp. 385-388, Cluj-  
Napoca, Romania (2008).

*La politique de communication  
de la Commission européenne:  
entre ambitions et réalité,*  
Master's Thesis, European  
Institute of the Geneva  
University, Geneva, Switzerland  
(2008).

*L'influence de nouveaux  
médias sur la sphère politique  
et sur la démocratie  
représentative en Europe,*  
Master of Advanced Studies  
Thesis, Paris X University,  
Department of Research and  
Training in Philosophy, Social  
and Human Sciences and  
Modelling, Paris, France (2004).

*Perspective asupra politicii*

*guvernamentale romanesti  
de informare publica si de*

*constructie a imaginii, Master's  
Thesis, University of Bucharest,  
Faculty of Journalism,  
Bucharest, Romania (2002).*

*Aspecte socio-morale  
in comediile lui I.L. Caragiale,*  
B.A. Thesis, University  
of Bucharest, Faculty of  
Humanities, Bucharest,  
Romania (2000).



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## The Region of Provence-Alpes-Côte d’Azur: a dynamic player in the strategies and uses of information and communication technologies

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The information society has now become a reality that is difficult to avoid. Romania is making efforts in this field, but there are clearly a number of problems posed by the development of new technologies. Romania has just joined the European Union and receives significant structural funds from the Community budget. How should projects be developed to access these funds and how should the opportunities offered by European funding be explored to develop Romania’s policies with regard to the information society? The example given by the French Region of Provence-Alpes-Côte d’Azur (PACA) is a success story, because in 2001, it was one of the first European regions to benefit from the regional programmes of innovative measures, co-financed by the European Regional Development Fund (ERDF). The regional programmes of innovative measures were devised to enable the regions to innovate in fields such as technology, sustainable development and the information society. The innovative measures in the PACA region helped, in addition to and in association with other project initiatives (“Leader +” programmes, for example) to initiate new dynamics for ICT projects at a regional level.

Since the 2000s, the PACA region has initiated and carried out various actions to reduce “dead zones”, in order to facilitate information technology access and training, accompany universities in the introduction of online services for students, facilitate research access to broadband, and help associations and businesses in the digital sector. The Provence-Alpes-Côte d’Azur region uses information technology for its management

and the services that it provides within the territory, and acts strategically through its expertise in matters of economic development, education, training and regional planning. Recently, the PACA region drew up a strategic document on the development of the information society, focusing on the dissemination and appropriation of understanding and knowledge and the building of new cultural practices through training, sharing and exchanging information, as well as providing the necessary infrastructure. These objectives – with their suitability for and adaptation to local specificities – could also be applied to Romania and its regions.

In practical terms, the aim of my research was to study the good institutional practices of the PACA region and prepare a summary paper that could be used both as a theoretical, informative resource and as a potential model in the development of Romanian governmental policies in the field of the new information and communication technologies.

**29 MARCH 2009**

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

## INFORMATION & COMMUNICATION TECHNOLOGIES

YEAR

**2008**

FELLOW

**JOSEPH KIZITO BADA**

BENEFICIARY COUNTRY

**UGANDA**

COUNTRY OF STUDY

**FINLAND**

PLACE OF RESEARCH

University of Eastern Finland,  
Joensuu Campus,  
The School of Computing,  
Department of Computer  
Science and Statistics,  
Joensuu, Finland.

RESEARCH UNDERTAKEN

from 28 July 2008  
to 30 November 2009.

ABOUT FELLOW

Born on 9 October 1969  
in Maracha, Uganda.

LAST DEGREE OBTAINED

Hohai University, Nanjing,  
People's Republic of China:  
Master of Science in  
Computer Application  
Technology (9 April 2002).

SCHOLARLY WORK  
AND PUBLICATIONS

*An empirical study on  
education strategy to the  
e-learning*, IEEE, ISBN  
13:978-0-7695-2633-1 (2006).

*Management Information  
System*, ISBN 9970-706-047.  
First published in 2005 by  
Uganda Institute of Bankers,  
Uganda.

*Practices of adopting e-skills  
for teaching and learning  
in Ugandan schools*, ISBN  
978-972-8924-58-4, IADIS,  
Amsterdam, The Netherlands  
(2008).

*Towards viable technology  
for HIV/AIDS education*: ISBN  
978-1-905824-11-3, IST Africa,  
Kampala, Uganda (2009).

*A framework for designing  
web-based HIV/AIDS  
preventive education and  
counseling services to youth:  
a Ugandan perspective*,  
ISBN 978-972-8924-83-6,  
Algarve, Portugal (2009).

*Pedagogical and conceptual  
design of an e-learning  
environment for HIV/AIDS  
education*, ISBN 978-9970-02-  
738-5, Makerere University,  
Kampala, Uganda (2009).

*Design and development  
of computer games: a  
pedagogical perspective for  
HIV/AIDS prevention in  
schools*, ISBN 1-880094-76-2,  
Vancouver, Canada (2009).



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# Design and Evaluation of Web-based HIV/AIDS Education and Counseling Support Systems in Uganda

**Fellowship overview:** I was awarded a lump sum of US \$10,000 by UNESCO to analyse, design and evaluate computer games and virtual classrooms for HIV/AIDS preventive education and counselling services support for teenage students in Ugandan secondary schools.

**Research direction:** Designing, developing and evaluating computer games for HIV/AIDS preventive intervention in schools; bringing together creative students and teachers in a virtual classroom with web 2.0 technology features for collaboration, chatting, knowledge-sharing and collective intelligence generation.

**Methodology:** Design online lessons and computer games; develop a digital learning environment (DLE); evaluate games and DLE using a formative evaluation approach; perform a content analysis to establish the contribution of online discussions to behavioural change.

**Evaluation:** Fifty per cent of students preferred games and fifty per cent preferred discussion forums for conveying HIV/AIDS preventive education. The content analysis indicated that students preferred abstinence and identified peer pressure, alcohol consumption, idleness and emotions as risk factors for HIV infection.

**Achievements:** Creation of a virtual classroom for HIV preventive education; development of two computer games; training teachers and students to use games and virtual classrooms for HIV education; development of GASONEL (Games, Social Networks and Lessons) pedagogy and methodology for web-based HIV educational content design, development and evaluation.

**Major lessons learned:** Use online lessons and computer games for HIV/AIDS preventive education; bring together students, teachers and HIV counsellors to discuss HIV prevention using web 2.0 social network tools; involve students in building educational drama games based on local cultures.

**Recommendations and follow-up action:** Involve teachers and HIV counsellors in contextualized game design. Transform the collective intelligence gathered online from students, teachers and HIV counsellors into books for use in schools.

**4 FEBRUARY 2010**



# PEACEFUL CONFLICT RESOLUTION

“Peace is more than the absence of war. It is living together with our differences – of sex, race, language, religion or culture – while furthering universal respect for justice and human rights on which such coexistence depends. The culture of peace – a concept pioneered by UNESCO – involves fostering those values essential to peace, such as non-violence, tolerance, solidarity and mutual understanding. Its tasks include conflict prevention and resolution, reconciliation, education for nonviolence and the promotion of dialogue.

The culture of peace is strongly linked to the concept of a new humanism that puts human beings at the centre of all development processes. Every day brings confirmation that the road to a culture of peace will be a long one but equally compelling reasons for renewing our efforts in pursuit of this ultimate goal.”

**IRINA BOKOVA**  
DIRECTOR-GENERAL OF UNESCO

Introduction of the 185th Session of the Executive Board Thematic Debate Intercultural Dialogue in the 2010s:  
Revisiting policies within the context of culture of peace (UNESCO, 11 October 2010).

YEAR  
**2007**

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FELLOWS

P.108  
**DORAH YANETH ORTIZ  
PARRADO**  
COLOMBIA

P.110  
**HERNÁN ANTONIO  
MOREANO URIGÜEN**  
ECUADOR

YEAR  
**2008**

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FELLOWS

P.114  
**MOHAMMAD  
TANZIMUDDIN KHAN**  
BANGLADESH

P.116  
**RENATA MORENO  
QUINTERO**  
COLOMBIA

P.118  
**BAKARY CAMARA**  
MALI

P.1202  
**MUAYAD YAHYA**  
PALESTINIAN AUTONOMOUS  
TERRITORIES

P.122  
**ALICIA FERLINDA  
NUÑEZ PAREDES**  
VENEZUELA



FIELD OF STUDY

**PEACEFUL CONFLICT  
RESOLUTION**

YEAR

**2007**

FELLOW

**DORAH YANETH  
ORTIZ PARRADO**

BENEFICIARY COUNTRY

**COLOMBIA**

COUNTRY OF STUDY

**MEXICO**

PLACE OF RESEARCH

Autonomous University  
of Yucatán (UADY),  
Social Sciences Unit,  
Yucatán, Mexico.

RESEARCH UNDERTAKEN

From 17 September 2007  
to 16 June 2008.

ABOUT FELLOW

Born on 12 January 1975  
in Bogotá, Colombia.

LAST DEGREE OBTAINED

National University of  
Colombia, Faculty of Human  
Sciences, School of Gender  
Studies: Master's degree  
in gender studies – women  
and development  
(14 September 2007).

SCHOLARLY WORK  
AND PUBLICATIONS

*Studies for diploma: Gender,  
Women and Development  
Processes, Successful Women  
Foundation, National  
University, Bogotá, Colombia  
(January 2006).*

*Trabajo, Género, Identidad.  
Significados, prácticas y  
condiciones laborales en la  
construcción de identidades  
femeninas y masculinas, en  
dos grupos diferenciados de  
la ciudad de Bogotá [Work,  
Gender, Identity. Meanings,  
working practices and  
conditions in the construction  
of female and male identities,  
in two differentiated groups  
of the city of Bogotá], Eighth  
National Days of History of  
Women and Third Ibero-  
American Congress of Gender  
Studies, held in the city of Villa  
Giardino, Córdoba, Argentina  
(October 2006).*

*Panel: Género, trabajo,  
identidad y movimiento  
obrero. Propuesta titulada,  
Trabajo, género e identidad  
femenina para el IX Congreso  
Nacional de Sociología y  
Estudios de Género [Panel  
on Gender, work, identity and  
workers' movement. Proposal:  
Work, gender and female  
identity for the Ninth National  
Congress of Sociology  
and Gender Studies], held at  
the National University of  
Colombia, Bogotá, Colombia  
(November-December 2006).*



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## Violence against Women in Mexico

Society, which comprises individuals and structural entities, tends to generate violence through aggressive and violent acts, overtly and at times covertly. This being so, the presence of physical or psychological violence hardly needs demonstrating, but its manifestation (latent, and not intentional or deliberate) is perceived – and accepted – as a natural circumstance in all societies, since culturally speaking we are subject to codes of behaviour laid down over the generations.

Violence in the workplace is a common problem, with instances observed in the various departments, buildings and sections of the two institutions under consideration. The violence takes many forms, and these vary in accordance with the individual aspects of the workers (personality, training and seniority) and aspects relating to the working atmosphere itself (organizational strategy, human and material resources, levels of communication). In addition, there are aspects relating to the public served and the social and political mechanisms in place.

Research points to some contemporary forms of workplace violence towards the nursing staff at two hospitals run by the health secretariat of the state of Yucatán.

The violence is perpetrated through two structural/institutional and symbolic/cultural channels and can be broken down into three types of violence: structural (excessive physical and mental workloads imposed on workers); direct (shown in the denial of workers' rights and an insecure working atmosphere); and symbolic (meanings constructed around working activity and social and institutional recognition of competent professional practice in specialist establishments).

Furthermore, the specific working conditions of the health sector put nursing staff in danger of violence, owing to deficient recruitment measures, physical insecurity, deterioration of facilities, care entailing close physical contact with patients, shift working and the conduct of work in hostile, tense, antagonistic and distrustful environments. These instances of violence trigger and perpetuate “small-scale violence” in the form of professional practices that produce inter alia traumas, omissions, negligence, incompetence, divided attention, withholding or provision of incomplete information, indifference to suffering and pain, low self-esteem, depressive symptoms and irreparable physical lesions. These are all practices that support and reinforce the major types of structural, symbolic and institutional violence in this work setting.

The data obtained show that, in the environment studied, the workers – women and men – have experienced and endure situations of violence daily, besides being exposed to various occupational risk factors for which many of them are not prepared. A preventive approach must therefore be adopted and various aspects dealt with from within, while also acknowledging the external and internal causes, in order to improve conditions and requirements for nursing professionals – both women and men – in each institution.

*María del Carmen Farfán García. **Violencia Estructural y Readaptación Social: Algunas Implicaciones [Structural violence and social readaptation: some implications]** – Enrique Navarrete Sánchez. *First International Congress on Peace, Democracy and Development. Panel 2. [Mexico City] 2006.**

**7 NOVEMBER 2008**

TRANSLATED FROM SPANISH BY UNESCO



FIELD OF STUDY

## PEACEFUL CONFLICT RESOLUTION

YEAR

**2007**

FELLOW

**HERNÁN ANTONIO  
MOREANO URIGÜEN**

BENEFICIARY COUNTRY

**ECUADOR**

COUNTRIES OF STUDY

**CHILE  
AND COLOMBIA**

PLACES OF RESEARCH

**COLOMBIA**

University of Rosario  
Faculty of Economics  
Bogotá.

**CHILE**

Latin American Faculty  
of Social Sciences  
FLACSO – Chile  
Santiago.

RESEARCH UNDERTAKEN

From 1 November 2007  
to 30 April 2008.

ABOUT FELLOW

Born on 28 March 1976  
in Southampton, United  
Kingdom.

LAST DEGREE OBTAINED

Latin American Faculty of  
Social Sciences (FLACSO  
headquarters, Ecuador) Quito,  
Ecuador: Master's degree in  
Social Sciences with  
specialization in International  
Relations (28 August 2006).

SCHOLARLY WORK

AND PUBLICATIONS

*Nuevo rol de las Fuerzas  
Armadas en el siglo XXI*  
[New role of the armed forces  
in the twenty-first century],  
article for the Revista del  
Ejército Nacional [national  
army review], Ecuador  
(February 2006).

*Política Exterior del Ecuador.  
Primeros dos meses de  
Alfredo Palacio* [Foreign policy  
of Ecuador. First two months  
of Alfredo Palacio], daily  
*El Espectador* (12 June 2005).

Article *Democracia, Seguridad  
y Sociedad en la region  
andinas*" [Democracy, security  
and society in the Andean  
region]. *Coordinadora  
Regional de Investigaciones  
Sociales* [Regional Coordinator  
of Economic and Social  
Research]. *CRIES – Venezuela*.  
Review Pensamiento Propio  
No. 20 (April 2005). Hernán  
Moreano, Adrián Bonilla  
[http://www.cries.org/4.2\\_pp.php](http://www.cries.org/4.2_pp.php)

*Congreso Nacional y Fuerzas  
Armadas*" [National Congress  
and Armed Forces], virtual review  
*En la Mira*, Institute of Legal  
Defence and Military Reform,  
Lima, Peru (February 2006).  
[http://www.defensaidl.org.pe/  
boletin/2006/boletin32.pdf](http://www.defensaidl.org.pe/boletin/2006/boletin32.pdf).



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## Borders: vulnerabilities, conflicts and human security

When I was told that I had obtained the UNESCO/Keizo Obuchi fellowship, I began to inform my contacts at the Research and Monitoring Centre on Drugs and Crime (CEODD) of the University of Rosario in Bogotá and the Latin American Faculty of Social Sciences (FLACSO – Chile).

I travelled to Bogotá in November 2007 for a CEODD internship under the tutorship of Dr Francisco Thoumi, Director of the institution. With the assistance of the Centre's research staff, I planned my research activities in Putumayo Department, in order to arrange interviews with various social actors involved in the areas of drug trafficking and alternative development. At the same time, I contacted public- and private-sector decision-makers involved in the fight against drugs in Bogotá.

In Putumayo, I travelled to the border settlements to tackle the list of interviews. As a result, coca growers, peasant farmers, indigenous people, police officers, military personnel, local government authorities and members of foundations involved in local development and human rights projects gave me all kinds of information to help me to understand the effects of the anti-drug policy in Colombia's southern department. Both public- and private-sector interviewees confirmed that the Colombian State had failed in its alternative development policy because of the high profitability of illicit activities.

The Government of President Álvaro Uribe had used several repressive mechanisms to reduce the cultivation of coca leaves and, at the same time, combat the violence-generating groups who live in the area,

such as Fronts 32 and 48 of the Revolutionary Armed Forces of Colombia (FARC) and paramilitary groups known as Águilas Negras (black eagles), Rastrojos (weeds) and Organization New Generation (ONG), which are part of the drug-trafficking circuit in the area studied.

Before the end of my stay in Bogotá, I had the opportunity to give an account of my research to the Security and Defence Working Group of the Friedrich Ebert Stiftung of Colombia (FESCOL), composed of academics, diplomats and military personnel. What I set out to do was make a comparative analysis of the security agendas of the Governments of Colombia and Ecuador. Then, in March 2008, I wrote my research article at FLACSO, Chile, with the assistance of Dr Lucia Dammert, Coordinator of the Security and Citizenship Programme. In that institution, I described my research findings to the teaching staff, who showed considerable interest in learning about the drug-trafficking routes on the border between Colombia and Ecuador and, at the same time, each government's position on the Colombian armed conflict. I also had the opportunity to give an account of my study to the cabinet of advisers to the Chilean Armed Forces.

I am sure that, as a result of this experience, my final article will contribute to the formulation of public peace and development policies in the bi-national border area.

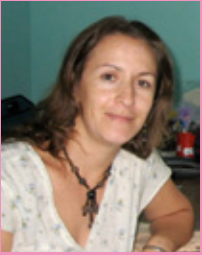
**28 MAY 2008**

TRANSLATED FROM SPANISH BY UNESCO



**PEACEFUL CONFLICT  
RESOLUTION**

**WHAT THE FELLOWS SAY**



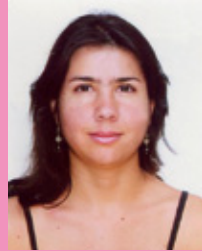
**DORAH YANETH ORTIZ PARRADO**  
COLOMBIA, 2007

“Dreams and nightmares are made of the same substance, but the only dream to which we may aspire is a nightmare – a development model based on contempt for life and the love of material things (Eduardo Galeano, 1992)”.



**BAKARY CAMARA**  
MALI, 2008

“The UNESCO/Keizo Obuchi Fellowship has enabled me to finance a part of my doctoral studies and has strengthened my ability to conduct research on local conflicts and on conflict management methods. Lastly, it has boosted my career as a research teacher and my talents as a negotiator”.



**RENATA MORENO QUINTERO**  
COLOMBIA, 2008

“The fellowship made it possible for me to compare and contrast the situation in rural areas in Colombia with those in Brazil, thus strengthening my knowledge of comparative research and enabling me to identify options for the democratic enhancement of peasant organizations in my country”.



**HERNÁN ANTONIO MOREANO URIGÜEN**  
ECUADOR, 2007

“I am confident that this experience will be wholly beneficial so that my article, once completed, may contribute to the development of public policies for peace and development in the cross-border region”.





FIELD OF STUDY

## PEACEFUL CONFLICT RESOLUTION

YEAR

**2008**

FELLOW

**MOHAMMAD  
TANZIMUDDIN KHAN**

BENEFICIARY COUNTRY

**BANGLADESH**

COUNTRY OF STUDY

**NEPAL**

PLACE OF RESEARCH

Asian Study Center for Peace  
and Conflict Transformation  
(ASPECT),  
Kathmandu, Nepal.

RESEARCH UNDERTAKEN

From 14 September 2008  
to 13 June 2009.

ABOUT FELLOW

Born on 15 January 1974  
in Dhaka, Bangladesh.

LAST DEGREE OBTAINED

University of Warwick, United  
Kingdom: MA in International  
Political Economy  
(17 November 2003).

SCHOLARLY WORK  
AND PUBLICATIONS

*The Evolving Relationship  
between the WTO and NGOs:  
An Assessment, Social  
Science Review, Vol. 21, N°2  
(December 2004).*

*Politics Electoral Reforms  
and Governance: Bangladesh  
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Development: regional  
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of Development Studies,  
University of Dhaka,  
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*Combating Food Crimes:  
Need for Ombudsman,  
The Daily Star (21 December  
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*Youth Development in  
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The Jahangirnagar Economic  
Review, Vol. 14-15, N°1, June  
2004 (joint publication with  
Baktiar Rana, Assistant  
Professor, Department of  
Business Administration,  
Jahangirnagar University).*



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# Post-Conflict Peace-Building in Nepal: the Role of Civil Society

The pro-democracy movement jointly launched by the Seven Party Alliance (SPA) and the Communist Party of Nepal (Maoist) witnessed a shift in the political landscape of Nepal, bringing an end to the decade-old Maoist insurgency as King Gyanendra stepped down on 24 April 2006.

This transformation was accompanied by the formation of an eight-party interim government which now includes the Communist Party of Nepal (Maoist), and the adoption of an interim constitution to pave the way for the Constituent Assembly (CA) election scheduled to be held in November 2007. Nevertheless, this peace-building process is already showing its fragility and its potential to make Nepalese politics volatile again, which might lead to delay in holding the Constituent Assembly election and to violence.

In fact, peace-building is not an easy task when a society is marked by severe impoverishment, deep cleavages and political mistrust. Success in peace-building depends on the commitment and motivation of the parties concerned, mechanisms to resolve differences, and institutional transformation (Jeong, 2006:12). Peace-building needs to enhance public safety, promote general economic recovery and create scope for public debate (Causens, 2001). In this regard, what strategy the parties concerned will follow and which actors will be pivotal in building peace is very much context-specific and determined by the political reality of the country.

In the case of Nepal, the causes of the Maoist insurgency that began in 1996 are manifold and can be classified broadly into two categories: failure of governance and political economic perspectives. A political economic

explanation of the causes of insurgency concentrates on the class dimension of the conflict and the Spatial-Horizontal Inequality<sup>1</sup> in Nepal (Pahari, 2003; Morshed and Gates, 2005). The peace-building process in Nepal requires not only improvement in communal relationships but also psychological transformation to correct the damage and loss inflicted upon the victims of oppression and violence (Jeong, 2006:10). The danger remains that peace-building might become fragmented and power might again become concentrated among political parties that failed to deliver positive outcomes in the past. In this regard, civil society can fill the vacuum and play a vital role in smoothing out the process of reconstruction and reconciliation, two pillars of the peace-building approach. Since partisan politics is devoid of such capacity, it will be very difficult to give affected peoples trust and confidence in peace and progress without nurturing and ensuring the role of civil society.

## Methodology

A questionnaire was used to interview officials of the NGOs concerned and victims of the Maoist insurgency and government atrocities, and to examine the role civil society organizations will play in future peace-building. On the basis of the interviews, relevant strategies were proposed in that regard. This research makes an original contribution to the literature on peace-building since not much progress has been made so far in the study of civil society's role in peace-building in Nepal.

<sup>1</sup> Indicator of discrimination against well-defined groups based on ethnicity or religion living in a particular region of the country.



FIELD OF STUDY

## PEACEFUL CONFLICT RESOLUTION

YEAR

**2008**

FELLOW

**RENATA MORENO  
QUINTERO**

BENEFICIARY COUNTRY

**COLOMBIA**

COUNTRY OF STUDY

**BRAZIL**

PLACE OF RESEARCH

Research and Graduate  
Centre on the Americas  
CEPPAC,  
Brasilia, Brazil.

RESEARCH UNDERTAKEN

From 10 September 2008  
to 9 June 2009.

ABOUT FELLOW

Born on 9 April 1980 in Cali,  
Colombia.

LAST DEGREE OBTAINED

University of Brasilia (CEPPAC),  
Master in Social Sciences  
(December 2007).

SCHOLARLY WORK  
AND PUBLICATIONS

*Paramilitary, drug trafficking  
and state behavior in Valle del  
Cauca*, in ROMERO, Mauricio  
and VALENCIA, León (eds).

*Parapolitics: The route for  
paramilitary expansion and  
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Alvaro Guzmán, and Moreno,  
Renata. Corporación Nuevo  
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ISBN:978-958-441705-3,  
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*Indigenous and peasant  
organizations address the  
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in Sociedad y Economía.  
Revista de la Facultad de  
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Económicas. Vol. 15,  
pp. 145-168 (December 2008)

*Resisting from the speech and  
culture: Indians in the midst  
of armed conflict, another  
perspective on peace and war  
in the country*, Moreno, Renata,  
and Ranincheski, Sonia, in *Latin  
American Research Review*,  
Vol. 45 # 2 (2010).



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# The peasant organization in Colombia, difficulties and possibilities of democratic participation, from a comparative perspective with the MST (Movement of Landless Workers) in Brazil

During my stay in Brasilia I contacted Rita Zanotto, coordinator of the Via Campesina, who undertook the link-up with the MST secretariat in Brasília and with the MST secretariats in the places where I was going to do my field work. I was thus able to interview several national MST leaders in Brasilia and I was made welcome in the regional bodies. Then I went to Pernambuco, where I visited the MST state directorate in Caruarú, two hours from Recife. There I was able to witness the elections of mayors and town councillors of the municipality, in which the MST took an active part. I likewise attended the meeting of the state coordinating entity during the days I was there, taking the opportunity to interview quite a number of people. From Pernambuco I went to the state of Rio de Janeiro, where I also conducted interviews and visited some settlements. From there I went to the state of Paraná, where I initially met an MST adviser who provided me with very important written material on the movement and organized my visit of the state. In Curitiba I visited the MST state secretariat, where I interviewed state leaders and obtained written material on the movement. I went to Cascavel, a region of historic importance where the movement was founded in 1985. In Cascavel I visited several settlements and encampments, including the Tierra Libre camp on land expropriated by the state from the multinational Syngenta Seeds, which in a historic dispute the MST succeeded in having expelled from the state and then established an encampment on its former grounds.

There I interviewed MST grassroots activists and leaders, attended a number of meetings in the area and accompanied the secretariat leaders during several activities. In Paraná I also visited the Copavi cooperative in the Victoria settlement, in the municipality of Paranacity and interviewed many of the cooperative workers during the days of my stay. From Paraná I went to the state of de Sao Paulo, where I lodged at the local MST training and research centre. Some training courses were under way there, which enabled me to conduct some interviews and gather MST documentation. I also visited the urban communes. They are located near the main towns and are made up mainly of persons from the favelas of Sao Paulo, hence of urban origin. In Colombia I interviewed national leaders of the CNA coordinated my visits to organizations in the regions. I did field work in the Catatumbo region of North-East Colombia, interviewing several of its members. I also did field work in Cauca department and paid some visits to the peasant farming zones. The experience was very valuable and full of lessons.

**11 JUNE 2009**

TRANSLATED FROM SPANISH BY UNESCO



FIELD OF STUDY

## PEACEFUL CONFLICT RESOLUTION

YEAR

**2008**

FELLOW

**BAKARY CAMARA**

BENEFICIARY COUNTRY

**MALI**

COUNTRY OF STUDY

**SENEGAL**

PLACE OF RESEARCH

Saint Louis University  
UFR (training and research  
unit) Legal and Political  
Sciences,  
Saint Louis, Senegal.

RESEARCH UNDERTAKEN

From 20 October 2008  
to 19 July 2009.

ABOUT FELLOW

Born on 31 December 1968  
in Komana, Mali.

LAST DEGREE OBTAINED

Gaston Berger University,  
Saint Louis (Senegal): Doctorate  
(Ph.D.) (19 December 2009).

SCHOLARLY WORK  
AND PUBLICATIONS

*La dynamique des conflits  
dans deux circonscriptions  
administratives de Mali sud  
entre 2002 et 2006*, in *Local  
Experiences of Conflict  
Management*, Special Issue,  
December 2008, SORONDA,  
Bissau: INEP; Bayreuth  
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*Le processus démocratique  
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fragmentation de l'espace  
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sont les impacts de la  
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*Le Président Jiang Ze Ming  
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*Naissance et évolution  
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University*. Shanghai,  
pp. 49-55, ISSN 1004-8634,  
China (1995),

Bachelor of Law dissertation:  
*Relations Mali-Chine –  
1960-1993* (1993).



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# Changes in property systems in Mali: Case of the south Mali cotton basin: Office of the Niger zone and CMDT region of Koutiala

This thesis explores changes in land-holding systems in Mali's Niger Basin. It examines the foundations of land tenure among the Malinke Bamanan and the various deep-seated cultural changes to the property systems in the region since the ninth century.

For centuries, despite the various conquests, land-holding matters had been handled by peasant farmers in accordance with their own traditions.

During the French colonial period, despite attempts to change the habits of the Sudanese peasants, most of them managed to resist the cultural domination which was imposed on them or offered them. That has been perceptible in the Office of the Niger zone, where most colonial and even post-colonial agricultural policies have failed. In spite of their failures, although the effect of those policies on the behaviour of the rural populations was not perceptible at the time, their influences remain far-reaching since they have contributed to societal divisions.

After independence in 1960, the new rulers maintained long-standing policies inherited from the colonial past, but age-old peasant practices, under the weight of the development process, are still very much alive. The peasant farmers seem to withstand change and are thus instrumental in prolonging the period of transition between the traditional and the modern.

Despite the resistance of peasant logics, the process of individualizing land ownership that began in the colonial period continues and, in the past 20 years, has begun to gather speed owing to the State's new development policies. This is apparent from the growing

number and complexity of the various land-tenure stakeholders.

Furthermore, the leading families, known as Kabila (clan), are breaking up as a result of conflicts over the sharing of cash-crop earnings. Property disputes, which used to be handled through traditional arrangements, are increasingly referred to the courts, which have their limitations for their judgments cannot in most cases be applied in situ.

In addition to the traditional farmers and pastoralists, the stakeholders now include national and international non-governmental organizations, associations, local authorities, and large and small private farmers.

The advent of these actors and the State's institutional reform policy, the latter amounting to little more than decentralization and to tidying up and producing legal texts, have inexorably contributed to the promotion of concerted action and to the development of democracy based on economic liberalism and individualism. This situation fosters not only the breakdown of the customary ownership system but also the partial or full recognition of some customary land-tenure rules.

The thesis thus highlights the gradual change in the status of land and in land relations in Mali in general and in the Niger Basin in particular. It is suggested that, despite these inevitable transformations, institutional reforms must be tempered. They must be conducted prudently and methodically with both patience and resolve, account being taken of certain realities in order to cushion their impact on rural populations.

**29 OCTOBER 2009**

TRANSLATED FROM FRENCH BY UNESCO



FIELD OF STUDY

**PEACEFUL CONFLICT  
RESOLUTION**

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YEAR

**2008**

FELLOW

**MUAYAD YAHYA**

BENEFICIARY COUNTRY

**PALESTINIAN  
AUTONOMOUS  
TERRITORIES**

COUNTRY OF STUDY

**AUSTRIA**

---

PLACE OF RESEARCH

Austrian Institute for  
International Affairs, Vienna,  
Austria.

RESEARCH UNDERTAKEN

From 1 September 2008  
to 30 April 2009.

---

ABOUT FELLOW

Born on 27 January 1971  
in Beit Rima, Palestine.

LAST DEGREE OBTAINED

Vienna and Wroclaw University,  
Austria and Poland, Joint  
Master's Degree in Global  
Studies (22 October 2007).

SCHOLARLY WORK  
AND PUBLICATIONS

Humanitarian Intervention  
*Legality, effectiveness,  
neutrality*, Wroclaw University  
(2007).

*The Role of the United Nations  
in Peace-Making in the Middle  
East*, Malta University (2003).

*The Role of Civil Society  
in Palestine*, Malta University  
(2002).



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# The role of the European Union (EU) in enhancing democracy and development in Palestine since the Oslo Accords: forms, objectives, impacts

Considerable research was conducted on the EU's role in Palestine, specifically with respect to the enhancement of democracy and development and the contribution to peacemaking and peaceful coexistence. Democracy and peace are inseparable and interdependent. The research looked into the importance of the Palestinian question for the EU.

It also addressed Europe's security and instability concerns specifically in regard to the Middle East since stability is a prerequisite for development and prosperity in the region.

The project demonstrated the following:

The EU's support for democracy and development in Palestine on account of its economic interest in building a stable region allowing development of free markets, investments and trade.

The political and security concerns prompting the EU to curtail the flow of illegal immigrants aspiring to improve their living conditions and to avoid political disorder.

As to development, the EU is the biggest contributor to the Palestinian Authority and its financial assistance funds the public sector employees, the police and security forces, development projects for local authorities (municipalities and village councils), hospitals and medical equipment, etc.

The EU supports citizen participation to strengthen civil society and promote democratic norms, inter alia by providing technical assistance and support for free and independent elections, and civic awareness

programmes, including those with special emphasis on women and strengthening parliamentary exchanges and independent media. As a rule, democracy, freedom, the rule of law, economic development, security and political reforms, empowerment of women, and social justice have been on the agenda of the EU's foreign policy towards Palestinians since the signing of the Oslo Accords.

It is suspected that the EU's financial support of the Palestinian Authority and in some measure Palestinian non-governmental organizations is administered corruptly, involving favouritism and a lack of transparency and accountability.

This suspicion has dented the credibility of the Palestinian Authority and the NGOs concerned in the eyes of ordinary citizens. Accordingly, the impact of the EU's financial support on ordinary Palestinian people, not on the elite, in terms of any democratic transformation of society is still limited since it is not based on sound governmental and civil society institutions able to persuade ordinary citizens to accept the idea of democracy without accountability and social justice.

**16 FEBRUARY 2011**





FIELD OF STUDY

**PEACEFUL CONFLICT  
RESOLUTION**

---

YEAR

**2008**

FELLOW

**ALICIA FERLINDA  
NUÑEZ PAREDES**

BENEFICIARY COUNTRY

**VENEZUELA**

COUNTRY OF STUDY

**SPAIN**

---

ABOUT FELLOW

Born on 8 June 1971  
in Caracas, Venezuela.

LAST DEGREE OBTAINED

University of Alicante,  
Master's Degree in Children  
and Young People at Social  
Risk (19 June 2006).

---

PLACE OF RESEARCH

University of Alicante  
Department of Sociology II  
University Institute of Social  
Development and Peace  
Alicante, Valencia, Spain.

RESEARCH UNDERTAKEN

From 2 January to 1 July 2009.



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# Descriptive study of how social agents perceive unaccompanied immigrant minors

The research sought to describe how social agents, such as educators, enterprise networks, volunteers and possible collaborators, perceive unaccompanied immigrant minors. The phenomenon of unaccompanied immigrant minors is increasing in Spain. Manuel Capedevilla and Ferrer (2003) affirm that, in Catalonia, they took care of 316 minors in 1997, 1,493 minors in 1998 and 2,437 minors in 1999.

The authors maintain that young people go to Spain to improve their living conditions and help relatives living in their country of origin. Garatto (2001 C.P. Jiménez 2003) indicates three sets of circumstances in which these minors are brought to Spain:

- (a)** Trafficking of people in situations of semi-slavery and sexual exploitation and abuse.
- (b)** Youngsters who were street children, committing thefts and criminal acts.
- (c)** Minors who are catered for in childhood protection systems allowing them to make immigration plans and to regularize their situations.

It is important to remember that integration depends not only on the unaccompanied immigrant minors but also on all members of the recipient society and the social networks used to resolve integration difficulties. However, no serious obstacles to coexistence such as racism or paternalism are found. The results match Jiménez's conclusions (2003): Minors and street children are perceived as dangerous and problematic when experienced for the first time in Europe; one may think that these children are poor and lacking in culture and that they must learn Spanish customs if they want to integrate into

Spanish society. However, ignorance of the culture from which they came and the emphasis on acculturation rather than integration suggests that the attention of social services was focused on the sheer mass of children. This may account for institutional mistreatment. The services may suspect the children of concealing their identity but fail to realize that they are afraid of being returned to their country on such grounds as drug dealing and prostitution, while overlooking different circumstances of life.

This research followed a qualitative methodology. Educators, volunteers and collaborating industrialists were interviewed, advantage being taken of the development of relationships based on confidence allowing interviewed agents freely to voice their perception of young children. This research was done in the Province of Alicante, where there are centres catering for children and accompanied immigrants, under the supervision of a senior lecturer, Daniel La Parra, from the Department of Sociology II, University of Alicante, Spain.

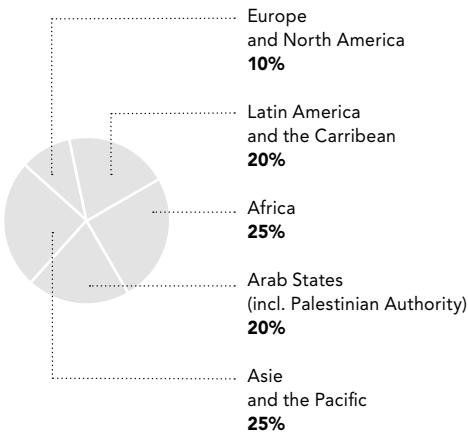
**ANNEXES**  
SELECTED CANDIDATES  
FROM 2001 TO 2008

# SELECTED CANDIDATES

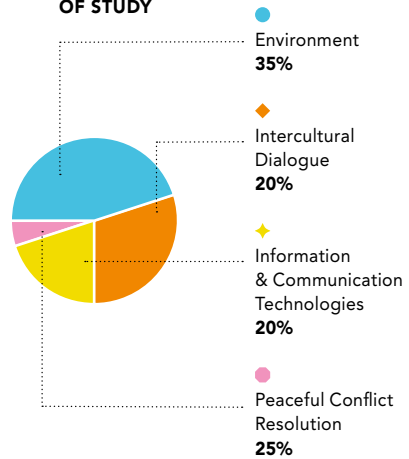
UNDER THE UNESCO / KEIZO OBUCHI RESEARCH FELLOWSHIPS PROGRAMME

2008	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	2	1	1	1	5	-	5	50 000
Arab States (incl. Palestinian Autonom Territories)	1	1	1	1	2	2	4	40 000
Asia and Pacific	2	1	1	1	3	2	5	50 000
Europe and North America	-	1	1	-	1	1	2	20 000
Latin America and the Caribbean	2	-	-	2	1	3	4	40 000
<b>Total</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>200 000</b>

BY REGION



BY FIELD OF STUDY

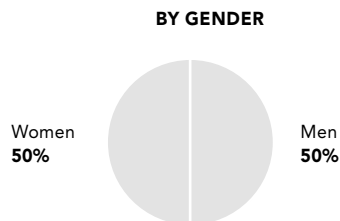
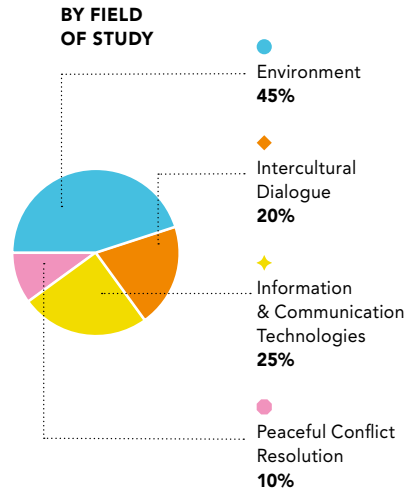
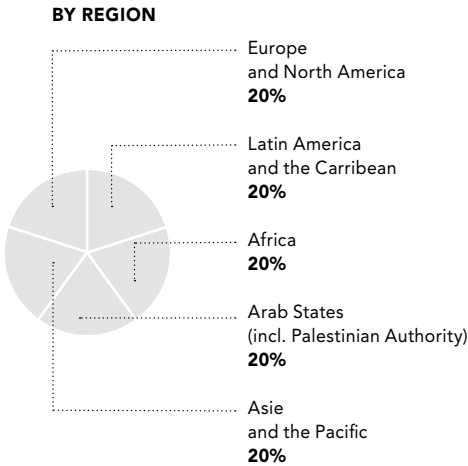


BY GENDER



**2007**

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	2	1	1	-	4	0	4	37 500
Arab States (incl. Palestinian Autoumous Territories)	3	1	-	-	1	3	4	40 000
Asia and Pacific	1	1	2	-	3	1	4	30 000
Europe and North America	1	1	2	-	1	3	4	39 000
Latin America and the Caribbean	2	-	-	2	1	3	4	40 000
<b>Total</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>186 500</b>



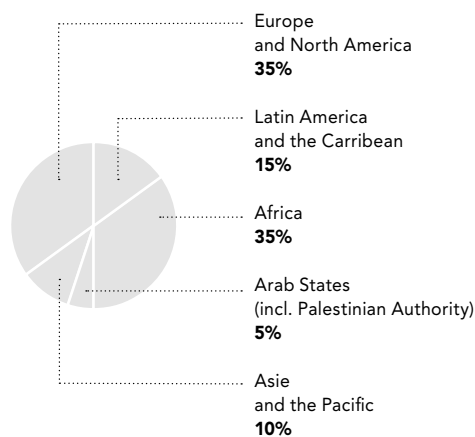
## SELECTED CANDIDATES

UNDER THE UNESCO / KEIZO OBUCHI RESEARCH FELLOWSHIPS PROGRAMME

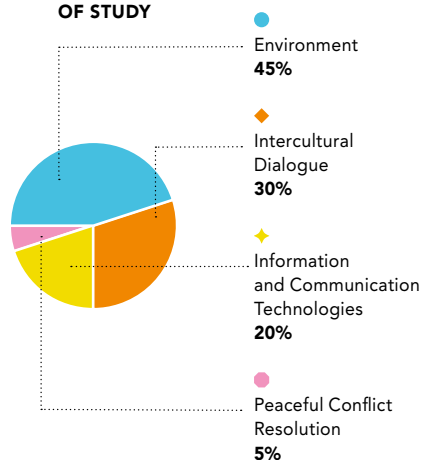
### 2006

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	2	1	3	1	5	2	7	67 500
Arab States (incl. Palestinian Autonom Territories)	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
<b>Total</b>	<b>9</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>197 500</b>

#### BY REGION



#### BY FIELD OF STUDY



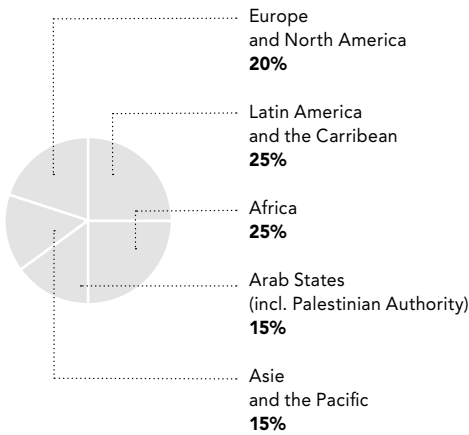
#### BY GENDER



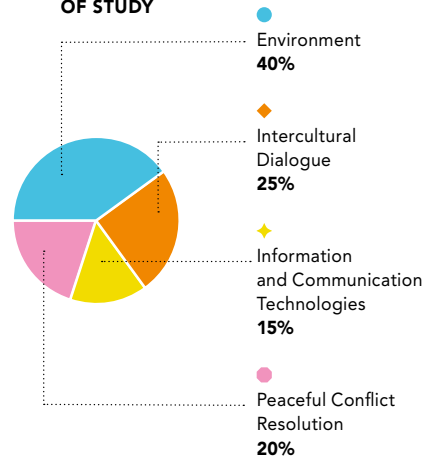
## 2005

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	2	-	1	2	3	2	5	45 500
Arab States (incl. Palestinian Autoumous Territories)	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
<b>Total</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>11</b>	<b>9</b>	<b>20</b>	<b>189 200</b>

### BY REGION



### BY FIELD OF STUDY



### BY GENDER



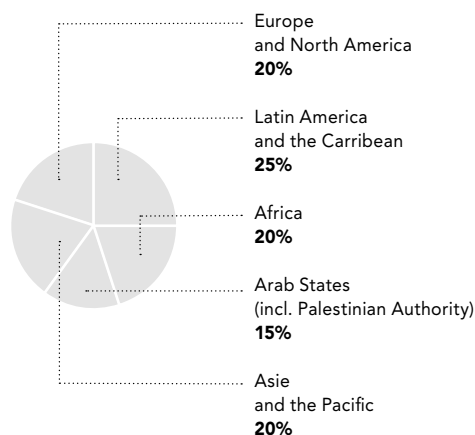
## SELECTED CANDIDATES

UNDER THE UNESCO / KEIZO OBUCHI RESEARCH FELLOWSHIPS PROGRAMME

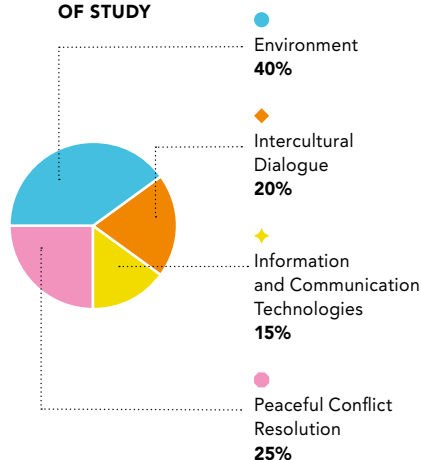
### 2004

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	3	-	-	1	3	1	4	30 000
Arab States (incl. Palestinian Autonom Territories)	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
<b>Total</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>13</b>	<b>20</b>	<b>150 000</b>

#### BY REGION



#### BY FIELD OF STUDY



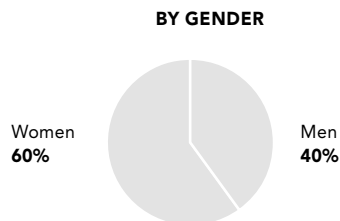
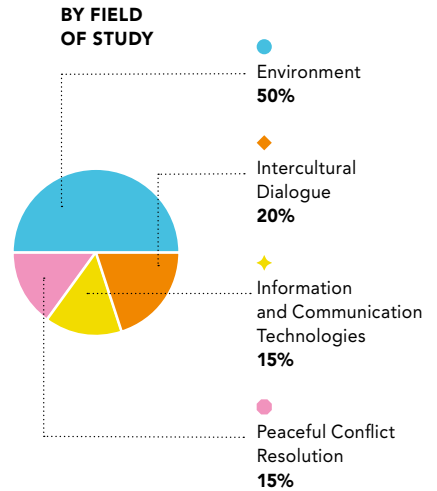
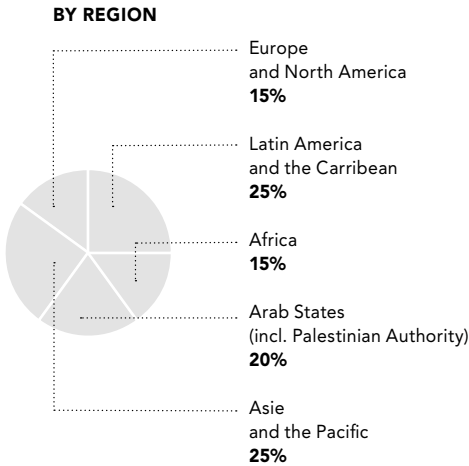
#### BY GENDER





**2003**

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	1	1	-	1	3	-	3	22 500
Arab States (incl. Palestinian Automous Territories)	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
<b>Total</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>20</b>	<b>150 000</b>



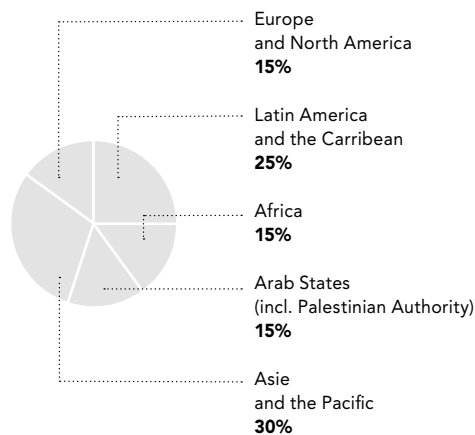
## SELECTED CANDIDATES

UNDER THE UNESCO / KEIZO OBUCHI RESEARCH FELLOWSHIPS PROGRAMME

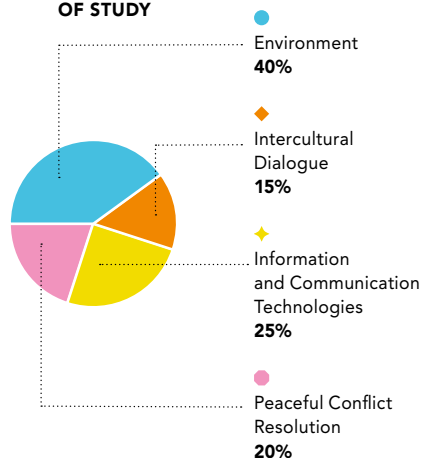
**2002**

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	1	-	1	1	2	1	3	22 500
Arab States (incl. Palestinian Autoumous Territories)	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
<b>Total</b>	<b>8</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>15</b>	<b>5</b>	<b>20</b>	<b>150 000</b>

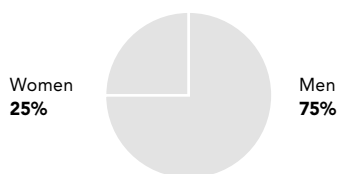
### BY REGION



### BY FIELD OF STUDY



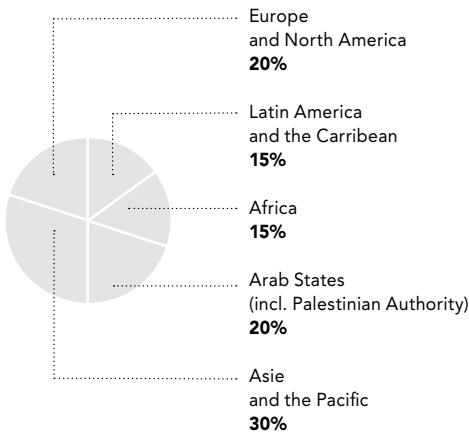
### BY GENDER



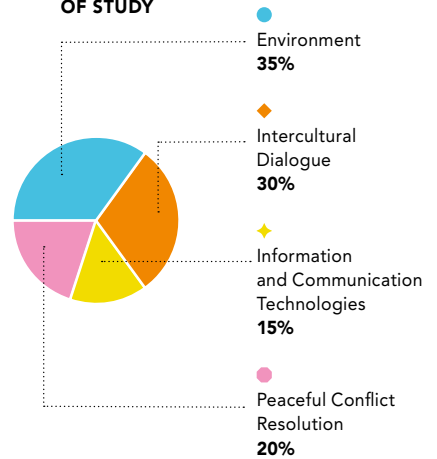
## 2001

	●	◆	✦	●	Men	Women	Total	\$ Value
Africa	1	-	1	1	2	1	3	22 500
Arab States (incl. Palestinian Autonomus Territories)	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
<b>Total</b>	<b>8</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>15</b>	<b>5</b>	<b>20</b>	<b>150 000</b>

### BY REGION



### BY FIELD OF STUDY



### BY GENDER



# THE TWENTY UNESCO /KEIZO OBUCHI RESEARCH FELLOWS

## ENVIRONMENT

### 2006

**DILZARA NADIR AGHAYEVA**  
AZERBAIJAN → UNITED STATES  
OF AMERICA

**BELA JAPOSHVILI**  
GEORGIA → FINLAND  
AND RUSSIAN FEDERATION

**ELENA EVGENIEVNA TEN**  
KYRGYZSTAN → FRANCE

**MZIME REGINA NDEBELE**  
MALAWI → ZIMBABWE

**SU YEAN TEH**  
MALAYSIA → UNITED STATES OF AMERICA

**VITAL TRAORÉ**  
MALI → RUSSIAN FEDERATION

**MUNTHER FATHI MOHAMMED SALEM**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → EGYPT

**OAANA NANMANONA FRINCU**  
ROMANIA → ITALY

**CRISANTO ANTONIO SILVA AGUILERA**  
VENEZUELA → MEXICO

### 2005

**LILIT GRIGORYAN**  
ARMENIA → BELGIUM

**BAMBANG HARIYADI**  
INDONESIA →  
UNITED STATES OF AMERICA

**HAMID TAHERI SHAHRINI**  
ISLAMIC REPUBLIC OF IRAN  
→ GERMANY

**LIZ AZZI**  
LEBANON → ITALY

**MICHEL OMER LAIVAO**  
MADAGASCAR → SWITZERLAND

**CHERRY AUNG**  
MYANMAR → INDIA

**AYMAN W. DARDONA**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → UNITED STATES  
OF AMERICA

**ELLEN MANGORE**  
ZIMBABWE → SOUTH AFRICA

### 2004

**CARLOS ALBERTO RUIZ GARVIA**  
BOLIVIA → GERMANY

**CHRÉTIEN NGOUANET**  
CAMEROON → GABON

**KOUADIO MICHEL YAO**  
CÔTE D'IVOIRE → FRANCE

**PUTRI CHAIRANI EYANOER**  
INDONESIA → THAILAND

**VIRANY SENGTHANTH**  
LAO PEOPLE'S DEMOCRATIC REPUBLIC  
→ THAILAND

**TAIYE REMI FASOLA**  
NIGERIA → INDIA

**MOHAMMED IBRAHIM**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → UNITED KINGDOM

**AZIME TEZER KEMER**  
TURKEY → UNITED STATES OF AMERICA

### 2003

**NIKOLAY NIKOLAEV VALCHEV**  
BULGARIA → PORTUGAL

**MARÍA ISABEL DU MONCEAU  
DE BERGENDAL**  
CHILE → CANADA

**SHALINI AKELLA**  
INDIA → UNITED KINGDOM

**QASEM SALEH ALNEWASHI**  
JORDAN → SWEDEN AND GERMANY

**OHN MAR OHN**  
MYANMAR → JAPAN

**TAYSIR SALIM ABU HUJAIR**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → FRANCE

**MOHAMMED SADI EILA**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → FRANCE

**IGBAL SALAH MOHAMMED ALI**  
SUDAN → GERMANY

**LALLE YENDOUKA LARE**  
TOGO → BURKINA FASO

**HALYNA HUDZ**  
UKRAINE → POLAND

### 2002

**ISMAIL MUKHTAR ZEYNALOV**  
AZERBAIJAN → RUSSIAN FEDERATION

**RI GWON CHOL AND RI HO YONG**  
DEMOCRATIC PEOPLE'S REPUBLIC  
OF KOREA → THE PEOPLE'S REPUBLIC  
OF CHINA

**AHMED MOUSTAFA MOUSSA**  
EGYPT → UNITED STATES OF AMERICA

**HTUN KO**  
MYANMAR → JAPAN

**TCHÉNGNON ABOTCHI**  
TOGO → BENIN

**MONA MOHAMAD HASSAN MOHSEN**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → UNITED KINGDOM AND  
NORTHERN IRELAND AND GAZA STRIP

**KHALID AHMED QAHHAN**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → MOROCCO

### 2001

**VILMANTĖ VYSNIAUSKAITĖ**  
LITHUANIA → SWEDEN

**SIDI OULD SALEM**  
MAURITANIA → GERMANY

**FARIDA ZAIDA**  
MOROCCO → FRANCE

**MATILDE SOMARRIBA CHANG**  
NICARAGUA → CHILE

**AMAL HUDHUD**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → TUNISIA  
AND UNITED KINGDOM

**KHAMIS MOHAMMED EL-MAHALLAWI**  
PALESTINIAN AUTONOMOUS  
TERRITORIES → GAZA STRIP

**NICK ARAHO**  
PAPUA NEW GUINEA → UNITED STATES  
OF AMERICA

## INTERCULTURAL DIALOGUE

### 2006

**OUSMANOU ADAMA**  
CAMEROON → THE NETHERLANDS

**JAIRZINHO FRANCISCO PANQUEBA  
CIFUENTES**  
COLOMBIA → ECUADOR

**GORAN SEKULOVSKI**  
THE F.Y. REPUBLIC OF MACEDONIA  
→ FRANCE

**JUAN JAVIER RIVERA ANDIA**  
PERU → SPAIN

**NICOLE DOLOWY**  
POLAND → GERMANY AND FRANCE

**SILVIA ZÁSZLÓS**  
SLOVAKIA → UNITED KINGDOM

## 2005

**ELOISA BLANCA MUSSAT**  
ARGENTINA → VENEZUELA AND FRANCE

**MARCELO BONILLA URVINA**  
ECUADOR → SPAIN

**CUTBERTO HERNANDEZ LEGORRETA**  
MEXICO → PORTUGAL

**RAFAEL ANTONIO FLOREZ PAZ**  
PERU → FRANCE AND CHINA

**ANA KOPRIVICA**  
SERBIA → CUBA

## 2004

**ABDRAHMAN TOGOU**  
CHAD → NIGER

**DAINORA POCIUTE ABUKEVICIENE**  
LITHUANIE → ITALY

**MARZENA DOROTA GODZINSKA**  
POLAND → TURKEY

**JAROSLAVA PANAKOVA- BAGDASAROVA**  
SLOVAKIA → RUSSIAN FEDERATION

## 2003

**NOËL SANOU**  
BURKINA FASO → CANADA AND FRANCE

**AUNE VALK**  
ESTONIA → UNITED STATES OF AMERICA  
AND UNITED KINGDOM

**REYNA ELIZABETH PEÑA VELASCO**  
MEXICO → FRANCE AND EGYPT

**LUISA MAGALY DAVALOS ROBLES**  
PERU → FRANCE

## 2002

**MANUEL ALEJANDRO BILBOA ZEPEDA**  
CHILE → FRANCE

**CARLOS ARTURO SALAMANCA VILLAMIZAR**  
COLOMBIA → FRANCE

**SEONG-YONG PARK**  
REPUBLIC OF KOREA → AUSTRIA

## 2001

**JELENA DRCA**  
BOSNIA AND HERZEGOVINA → AUSTRIA

**KUBAT MOLDOBAEV**  
KYRGYZSTAN → RUSSIAN FEDERATION

**ANDRÉS DEL CASTILLO SÁNCHEZ**  
MEXICO → PORTUGAL AND TIMOR - LESTE

**ELENA NEGRU**  
REPUBLIC OF MOLDOVA → ROMANIA

**ALEXANDRU BOUREANU**  
ROMANIA → SWITZERLAND

**FARRUH INOGAMOV**  
UZBEKISTAN → GERMANY  
AND RUSSIAN FEDERATION

## INFORMATION AND COMMUNICATION TECHNOLOGIES

### 2006

**EUGENIA PETROVA KOVATCHEVA**  
BULGARIA → THE NETHERLANDS  
AND JAPAN

**ARMAND JOSEPH KABORE**  
BURKINA FASO → FRANCE

**HARINAINA RAMANAMBE  
RAVELOMANANTSOA**  
MADAGASCAR → FRANCE

**PETER KINTU**  
RWANDA → INDIA

### 2005

**SVELTA NIKOLOVA BOYTCHIEVA**  
BULGARIA → GERMANY

**ANIA ROSA HERNANDEZ QUINTANA**  
CUBA → SPAIN

**EZEKIEL CHIDI ODIOGO**  
NIGERIA → UNITED KINGDOM

### 2004

**JUAN DOMINGO VELÁSQUEZ SILVA**  
CHILE → UNITED KINGDOM

**MELISSA YAMILKA PÉREZ FIGUEROA**  
DOMINICAN REPUBLIC → SPAIN

**OLFA DRIDI**  
TUNISIA → FRANCE

### 2003

**MAYRA MARTA MENA MUGICA**  
CUBA → ITALY AND SPAIN

**WANIGASEKERA ARACHCHIGE DONA  
NAYANA DARSHANI WIJAYASUNDARA**  
SRI LANKA → MALAYSIA

**ANGELA ADRIANA VALDIVIESO LÓPEZ**  
VENEZUELA → CHILE

### 2002

**JAKOV KITAROVIC**  
CROATIA → UNITED STATES OF AMERICA

**JANIO LINCON JADÁN GUERRERO**  
ECUADOR → COSTA RICA

**FLORENCE NZISA NZWILLI MUINDE**  
KENYA → CANADA

**ALEXEI MOROZ**  
RUSSIAN FEDERATION →  
UNITED KINGDOM

**LUZ MARINA PÉREZ**  
VENEZUELA → SPAIN

### 2001

**AROUNA OUEDRAOGO**  
BURKINA FASO → FRANCE

**ANASTHASIE OBOÑO MBA**  
GABON → FRANCE

**NYAMJAV DAVAGDORJ**  
MONGOLIA → THE PEOPLE'S REPUBLIC  
OF CHINA

## PEACEFUL CONFLICT RESOLUTION

### 2006

**MAMADOU SOUMARE**  
SENEGAL → FRANCE

### 2005

**CHARLES ASSAMBA ONGODO**  
CAMEROON → NIGER

**HASSATOU BALDE**  
GUINEA → SENEGAL AND MALI

**ISLAM YUSUFI**  
THE F.Y. REPUBLIC OF MACEDONIA  
→ UNITED KINGDOM AND GREECE

**MOHAMED MUSTAFA ABBAS**  
SUDAN → SWITZERLAND

### 2004

**IBRAHIM MASHHOUR AL-JAZY**  
JORDAN → UNITED KINGDOM

**AINURA AKEENEVA**  
KYRGYZSTAN → UNITED STATES  
OF AMERICA

**MARÍA DEL RAYO VENTURA  
NAVARRETE**  
MEXICO → SOUTH AFRICA

**MARIA KIANI**  
PAKISTAN → UNITED STATES OF AMERICA

**ANA MAYELLA GUTIÉRREZ RODRÍGUEZ**  
PERU → FRANCE

### 2003

**SAIBOU ISSA**  
CAMEROON → NORWAY

**MIKHAIL VLADIMIROVICH IVANOV**  
KYRGYZSTAN → GERMANY

**SADIA NASIR BUTT**  
PAKISTAN → GERMANY

### 2002

**A.H.M. SHAMSUL MUKTADIR**  
BANGLADESH → PAKISTAN

**MARÍACARLA ALZUGARAY RODRÍGUEZ**  
CUBA → CANADA

**VENERA GALYAMOVA**  
KAZAKHSTAN → THE PEOPLE'S REPUBLIC  
OF CHINA

**LESLIE ARTHUR WILMOT SHYLLON**  
SIERRA LEONE → LIBERIA

### 2001

**NARIN SOUK**  
CAMBODIA → AUSTRIA

**FREDDY KALENGA BAFWAFWA**  
DEMOCRATIC REPUBLIC OF THE CONGO  
→ CONGO

**ATZIMBA LUNA BECERRIL**  
MEXICO → SINGAPORE

**TIMUR DADABAEV**  
UZBEKISTAN → JAPAN

This booklet was prepared by **Ali Zaid**, Chief, and **Leila Zas Friz**, coordinator, UNESCO Fellowships Programme.

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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).

The aim of the fellowships is to support innovative and imaginative postgraduate research in the areas of development in four areas of interest to UNESCO:  
**Environment / Intercultural Dialogue /  
Information and Communication Technologies /  
Peaceful Conflict Resolution.**

**UNESCO**

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DIVISION OF NATIONAL COMMISSIONS  
& CIVIL SOCIETY /  
FELLOWSHIPS PROGRAMME

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