

# Bio News



No. 36 - OCTOBER 2003

Bios may serve as a lever to lift the spirit of the world

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## Bio-education is only a click away

### B.I.O. launches broad range of e-learning programmes

#### Challenges for bio-education

Education is evolving. More than ever, educators and trainers are seeking innovative ways to achieve quality teaching and motivate students.



In the digital age, the tools provided by technology can promote the higher order thinking and make knowledge accessible to virtually every citizen on the planet. The Biopolitics International Organisation (B.I.O.) is working harder than ever to place a wealth of educational material and resources online and to

prepare a broad range of e-learning courses promoting pioneering dimensions in bio-education.

Bio-education raises awareness of our responsibility to appreciate life and to protect the environment as a duty to future generations. The International University for the Bio-Environment (I.U.B.E.) was founded by B.I.O. in 1990 as a vehicle to promote bio-education and to infuse existing educational institutions with environmental thinking. Today, the I.U.B.E. has a strong presence in 124 countries with the support and co-operation of scholars and decision-makers who impart the urgency of an all-encompassing environmental education. Through its numerous publications, conferences, seminars and other events, the I.U.B.E. encourages the incorporation of environmental concepts in

every academic and professional field.

The recently released "Bio-Syllabus for European Environmental Education," an 880-page textbook reflecting 18 years of B.I.O. achievement in the environmental field, com-

prises 11 different volumes on environmental subjects and raises awareness of past, present

and future directions in research and education. This leading publication is one of the primary tools used by the I.U.B.E. and has received enthusiastic comments by friends and supporters around the world (see pages 4-6). In the very near future, "Bio-Syllabus for European Environmental Education" will be available as a set of e-learning courses, placing a uniquely rich source of information and training material at the fingertips of teachers, students and professionals around the world.

#### Knowledge society and global governance

Humanity will never again be able to disregard the close relationship between its actions and the environment. Technology has induced the expansion of every field of human endeavour. Like a new Prometheus, with sensitivity and prophecy, it has provided light and fire and has made possible the advent of a new era - the era of knowledge. Knowledge may be viewed as the revelation of the truth

and a pathway leading to a better future. A future presently at stake due to the absence of universal values in policy and governance.

Global governance with sensitivity and vision toward bios can inspire

*B.I.O. places environmental education at the fingertips of every concerned citizen.*

action-oriented programmes between governments, business and civil society. Existing structures

are weak, and there is a pressing need to create stronger links between environment and development policies in view of the new realities of world politics.

We are choosing pathways of destruction instead of embarking on a coordinated effort for peace. The environment touches every aspect of our lives, and concerns every profession and every initiative. To improve our response to worldwide environmental harms, it is essential to have institutional support and coordination to implement international environmental agreements and enhance national environmental policy making. Allowing for cultural differences to emerge as the beauty and wealth of our planet, can inspire society with new values and lead to responsible and committed leadership.

#### Bio-culture and Olympic values

The Olympic Spirit can play a leading role in uniting the forces of culture and technology to instil the appreciation of the aesthetic value of

life on our planet. An "Olympiad of Values" and not merely of physical prowess must evolve. Environmental Olympics and Bios Prizes for each speciality, with the participation of every individual and profession, is one of the major B.I.O. goals for the new millennium. A street cleaner from New York, a shepherd from Tibet, or an executive from Cairo can all be winners in the race to save the environment

Technological knowledge and expertise in environmental protection can create a rich cultural resource. The co-



operation of technology and the arts is vital if our planet is to be saved. Cultural creativity and technological advances can inspire global co-operation for bios. In this respect, environmental protection must be seen as an integral part of human culture.

Furthermore, cultural differentiation, diversity in languages and religions, reflects the beauty and true wealth of humanity and needs to be maintained, along with the infinite biodiversity of nature. We are all part of the body of bios, and respect for the environment is our undeniable responsibility to future generations.

### Biopolicy Award 2004 to B.I.O. President

The BioFocus Foundation, the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Engineering Sciences honour the B.I.O. President with their prestigious 2004 Biopolicy Award. The award ceremony will take place in Stockholm, on October 27, 2004.

"I add my satisfaction that the nominating committees have selected another remarkable role model."

Ambassador Anders Wijkman, Member of the European Parliament and Chairman of the BioFocus Foundation

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## Olympic Games and the Environment

Your ideas were a source of inspiration for the 1994 Lillehammer winter Olympics and also had a significant impact in rendering the Sydney Olympics the first "green Olympics" of the century.

To the B.I.O. President:

With great interest, I have been witnessing an increased awareness of your proposal for a cease-fire during the Olympic games, as well as an overall maturing of your initiative to enrich the Olympics with environmental values.

I always admired the efforts you launched in 1992 in order to mobilise UN officials, members of the IOC, civic leaders and decision-makers world-wide to endorse your proposal for a cease-fire. As I recall, your proposal for a cease-fire was also adopted as a resolution by 75 countries at the UN General Assembly in 1993.

Personally, I was inspired by your initiative and vision and urged the organisers of the 1994 Lillehammer winter Olympics to include the ideals of bios and the environment in the opening ceremony. As an advisor to the Sydney Olympics, I am also aware that environmental considerations were a crucial

element in their bid. Your ideas and ideals were, once again, a source of inspiration and had a significant impact in rendering the Sydney Olympics the first "green Olympics" of the century.

Since you have made such a major contribution in this field and have raised global awareness of the need for the Olympics to become a very significant vehicle for the expansion of the concept of peaceful sustainable development, I believe that the upcoming games in Athens will be an excellent opportunity to help catalyse the implementation of your vision for environmentally sound Olympics that will transcend the days of the actual Olympic events. If the environmentally sound dimensions are also integrated with the emphasis upon an integrated cease-fire, that concept and the actuality thereof, will also go far beyond the few days of the Olympics. If so, then we will make real progress toward the goal of truly sustainable societies.

I hope that the organisers of the games in Athens will seriously consider your suggestions and chose to follow your proposals, which I am sure will guarantee the success of the games in the short-run and hopefully will have much further and long-lasting impacts beyond the Olympic games.

After all, holding the games in the cradle region of democracy and of the original Olympic games is a beautiful challenge and opportunity to integrate them while promoting the concept of sustainable societies in which economics, bios and ecology as well as trans-generational equity are ensured. As a consequence, future generations will look back and say, yes, there was a fundamental turning point when the Greeks hosted the Olympics in Athens in 2004. For this we are delighted and for this we thank visionaries such as Dr. Agni Vlavianos-Arvanitis for her tireless dedication to helping us to envision and to implement sustainable societies.

Thank you for your consideration of her suggestions and of her willingness to assist in the final planning and implementation of these concepts within your Olympics. If you have any further questions, please feel free to contact me.

Sincerely,  
**Professor Donald Huisinh**  
Senior Scientist in Sustainable Development, The Center for Clean Products and Clean Technologies, University of Tennessee, U.S.A.



## BIO Goals

### INTERNATIONAL CO-OPERATION FOR BETTER UNDERSTANDING AND APPRECIATION OF BIOS (LIFE) AND THE BIO-ENVIRONMENT

The environment recognises no ideological or geographical boundaries, no East-West, North-South or developed-developing countries. Bios provides the unifying force for the harmonious co-existence of all forms of life, leading to a new era of bio-diplomacy.

### BIO-CULTURE - BIO-ENVIRONMENT

Two essential dimensions for building new societal values for the millennium.

### PROMOTION OF BIO-EDUCATION

The International University for the Bio-Environment (I.U.B.E.) was launched to reform education worldwide by promoting biocentric curricula and satellite education.

### BIO-ASSESSMENT OF TECHNOLOGY

A diachronic search for new societal values will channel technological progress in a direction that leads to a better quality of life through environmental appreciation.

### INTERNATIONAL LEGISLATION ON BIOS RIGHTS

It is important to protect all forms of life by enacting rules that prevent the deterioration of bios and ensure the fundamental right to a clean environment and to a better quality of life.

### A WORLD REFERENDUM

This would allow people throughout the world to express their commitment to preserve bios on our planet.

### RAISING AWARENESS OF THE RAMIFICATIONS OF THE BIOLOGICAL SCIENCES

More people would realise that progress in the biological sciences relates to their own field of interest. This acknowledgement may lead to new fields of human endeavour, such as bio-legislation, bio-medicine, bio-ethics, bio-arts, bio-linguistics, bio-economics, bio-athletics, bio-communication, bio-history, bio-education and bio-diplomacy.

### ENVIRONMENTAL OLYMPICS - BIOS PRIZES

Bios Prizes for every discipline with the participation of every member of society to reward excellence in environmental protection.

### CEASE-FIRE DURING THE OLYMPIC GAMES

Since the 1980's, B.I.O. has promoted the introduction of a cease-fire during the Olympic Games, a proposal which has been adopted as a Resolution by the UN General Assembly.

### PROPOSED ACTION

a **Bio-Syllabus** and new curricula for every level of education, as well as electronic and audio-visual materials on issues related to bios and the environment

a **Green Salary** in place of benefits for the unemployed, with the commitment to contribute to the protection of the environment

**Environmental Action Groups** drawing both on the enthusiasm of the young and the experience of senior citizens to tackle local issues

a **Bios-Supporting Economic Strategy** to replace destructive policies and promote a world-wide interdisciplinary exchange of information on the appreciation of the environment

an electronic **Bank of Ideas** to create a rich repository of information and reflections on bios.

## SPONSORS 2003

European Commission

Hellenic Ministry of Foreign Affairs  
International Development Co-operation  
Department - Hellenic Aid

Hellenic Ministry of Environment  
Physical Planning and Public Works

National Bank of Greece

Kitty P. Kyriacopoulos

Hellenic Ministry of Culture

DHL International

The Michael Marks Charitable Trust

Ioannis Vassiliou

Irene Vassilopoulou

Action Link/Action Synergy S.A.

Maramenos & Pateras

Hellas-on-Line

Xerox Hellas S.A.

## BIO represented in 124 countries

### Africa

Algeria, Benin, Botswana, Burkina Faso, Chad, Congo, Egypt, Ethiopia, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Nigeria, Senegal, Seychelles, South Africa, Sudan, Tanzania, Togo, Uganda, Zimbabwe

### The Americas

Argentina, Bahamas, Barbados, Bermuda, Bolivia, Brazil, Canada, Chile, Colombia, Cuba, Dominican Republic, Ecuador, Guyana, Honduras, Jamaica, Mexico, Panama, Peru, USA, Uruguay, Venezuela

### Asia

Armenia, Bahrain, Bangladesh, Cambodia, China and Hong Kong, Georgia, India, Indonesia, Iran, Israel, Japan, Jordan, Korea, Kuwait, Lebanon, Malaysia, Nepal, Pakistan, The Philippines, Saudi Arabia, Singapore, Sri Lanka, Syria, Thailand, United Arab Emirates, Uzbekistan

### Europe

Albania, Austria, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, FYROM, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, The Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, UK, Vatican, Yugoslavia

### Oceania

Australia, New Zealand, Papua New Guinea, Samoa, Solomon Islands

## Editorial

### Do we wish to become dinosaurs?

Our planet's health and survival is our fundamental responsibility to future generations. To succeed in this endeavour we need to influence decision-makers to avoid mistakes of the past and to build a new society of hope. The challenge is to use technology to protect and appreciate bios - life - the most precious possession on our planet and the bond that connects all living beings.

Dinosaurs, one of the greatest success stories in the evolution of our planet, went extinct because environmental pressures were too severe. We are now placing our own survival in danger because of our arrogance and oversight. Where will all this over-consumerism lead us? Why are we allowing nearsighted attitudes to prevail? How can we replace destructive behaviour with a time-spanning vision of global environmental harmony and peace?

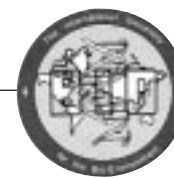
Bios is a gift shared by all living beings. It is a message of joy and hope, a source of inspiration and encouragement. The joy of possessing bios should infuse every aspect of our lives and lead to creativity and vision. Bios has evolved for billions of years. If we were to compare this evolution to a 24-hour day, human presence would have only occurred during the last fraction of a second.

A stronger global environmental governance can play an important role in preventing conflict, restoring peace, and building a society that can resist destructive tendencies. Policies with no consideration for human rights, social welfare, economic equity or environmental damage cannot be accepted. Bioethics - the ethics of bios - must exit the confines of medical science and apply to every human endeavour. The Olympic spirit and the diachronic ideals it represents can become the cornerstones of a society that respects all its citizens, be they young, old, weak or handicapped. This society, if realised in the future, could allow for the continuation of bios.

It is not enough to have ears; we also have to be able to listen to the whispers of nature. It is not enough to have eyes; we also need to be able to see the harmony of bios and the endless gifts that have been offered to us. Do we want to destroy all this beauty by believing we are the masters of the universe? Do we want to let our arrogance lead us to the fate of the dinosaurs?



Dr. Agni Vlavianos-Arvanitis  
B.I.O. President and Founder



### Bio News

is published by the  
Biopolitics International Organisation

**Publisher and Editor** — Agni Vlavianos-Arvanitis

**Deputy editor** — Helen Papadimitriou

**Production design** — Thanasis Kontogiannis, Dimitris Moschos

**Editorial consultants** — Ernest Vovakis

ISSN 1106 - 5117

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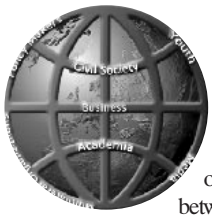
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## Turning Ideas into Action

### European Academic Action Network for Development



World Bank, Paris, 14 May 2003

Recognising the urgent need to turn ideas into action it is crucial to raise the level of cross-fertilisation between European researchers and the global development community. As an increasing number of academics, economists, political scientists, international affairs experts, anthropologists and other social scientists are taking an active part in the global intellectual debate on development co-operation and globalisation, the World Bank is seeking new ways to mobilise European thinking on international development.

One such way is through the creation of the European Academic Action Network for Development, or E2AND, a network of academics and experts which was officially launched at World Bank meeting in Paris, on May 14, 2003. The purpose of the network is to encourage interaction between "thinkers" and "practitioners," between researchers, policy makers, civil society, the media, the business community, multilateral organisations, etc., in order to develop joint initiatives and innovative responses to the challenges of international development

and education. The purpose is also to strengthen cooperation between the World Bank and researchers from different backgrounds (economics, political science, sociology, environment, business) working on international development, and thereby

to increase the level of interaction and debate on issues of development and education between researchers from different disciplines.

The B.I.O. President was invited to join the network as an academic liaison and to contribute to E2AND's mission in advancing the international debate on the education and development.

The main aims of E2AND are to:

- ▶ Strengthen the voice of the European academic and research community within the World Bank and the wider development world



- ▶ Disseminate European research broadly within the Bank, amongst policy makers and the rest of the global development community
- ▶ Increase the mutual flow of ideas between academics and policy makers
- ▶ Form a critical mass of interlocutors who could engage in substantive dialogue with the World Bank as well as other actors in development

▶ Build a strong working relationship between the World Bank and the European academic community

▶ Serve as a bridge between the research bodies, regional offices, networks and other affiliates of the World Bank.

It is anticipated that the members of the network will provide invaluable assessment of the World Bank's interaction with, and the needs and concerns of, the European academic and research community in educational projects.

The World Bank is also seeking the expertise of the network's members in order to raise the voice of European thinking on development issues within the World Bank and the rest of the development community. The network's members will also keep the Bank informed of their research programmes and projects they are working on in order to explore potential partnerships.

*The European Academic Action Network for Development mobilises European thinking in order to develop innovative responses to the challenges of development and education.*

## Environmental Protection is a Must

### Leaders debate pressing environmental issues

Alexandria, Egypt, 9-12 May 2003

Following an invitation by **Samy El-Gindy**, Member of the Egyptian Parliament and Vice-President of the Euro-Arab Co-operation Center, the B.I.O. President participated as keynote speaker in the opening session of the 13th conference on "Environmental Protection is a Must," which convened in Alexandria on May 9-12, 2003. The conference brought together leaders from politics, academia and industry to discuss pressing environmental issues and to raise awareness of the importance of the environment as a vehicle for peace.

The conference was attended by many personalities and people of influence, including: the Egyptian Minister of Petroleum, **Sameh Fahmy**; the President

of Ain Shams University, Professor **Saleh Hashem**; the General Secretary of the Governorate of Alexandria, **Mohamad Basyouni**; the President of the Egyptian Authority for Energy Planning, **Dr. Hany El-Nakeeb**; Professor **Mourad Abdel Kader**, Vice President of Environmental Affairs at Ain Shams University; **Dr. Selim Kabol**, Governor of Hasaka, Syria; **Subhi Hamida**, Governor of Homes, Syria; **Professor Mohamed Abdella**, Vice President

of Alexandria University; **Professor Suzan El Kelliny**, Director of the Middle East Research Center at Ain Shams University, and other leaders.

Discussions focused on industry and the environment, environmental management and legislation, environmental impact assessment, health and the environment, the marine and fresh water environment, air pollution, soil, and agriculture. Discussions also focused on the development of long-term international environmental policy to surpass conflict and guarantee world security and peace.

In her opening speech, the B.I.O. President explained that "in order to halt further environmental deteri-

oration and promote international co-operation and peace, environmental values need to be placed at the heart of societal structure. These times of global crises the world needs leadership with a vision. A vision that transcends hatred and division and replaces divide-and-rule strategies with a global effort in defence of the environment. A society based on environmental ethics and values can be a lighthouse of hope, so desperately needed by humanity."

*Environmental threats are a sobering assessment of a planet in peril. A society based on environmental ethics can be a lighthouse of hope, so desperately needed by humanity.*

## The "Quiet Superpower" – Europe Reborn

### Cultural creatives and change agents explore new challenges

European Parliament, Brussels, 19 June 2003

A think-tank meeting of "cultural creatives" and change agents took place with great success at the European Parliament in Brussels, on June 19, 2003. The purpose of the meeting, which convened at the initiative of "Renaissance Europe," an alliance of individuals active in political, business and civil society organisations, was to seek and conceive of innovative solutions deriving from the specific cultures and experiences of the European continent.

The B.I.O. President was invited by **Bart Jan Krouwel**, President of European Partners for the Environment and Managing Director of Rabobank Nederland Division Sustainability and Social Innovation, and by **Marcello Palazzi**, President of the Netherlands based Progressio Foundation, to participate in the meeting.

The meeting was hosted by **Pat Cox**, President of the European Parliament, and Swedish MEP **Anders Wijkman**, and featured many distinguished speakers, including, among others: **Marta Bonifert**, Executive Director of The Regional Environmental Centre for Central and Eastern Europe, Hungary; **Fiona Mathews**, CEO of the Athena Foundation; **James Cusumano**, Executive Director of the Chateau Mcelly Foundation; **Tom Garvey**, Member of the Board of Directors of The Regional Environmental Centre; **Professor Marc Luyckx**, Director of "Vision 2020," Belgium; and **Professor Karl van Wolferen** of the University of Amsterdam.

**Anders Wijkman**, enthusiastically endorsed the Renaissance Europe group's expanding influence in all present EU and accession countries. He also emphasised the need to change the old dysfunctional paradigms of GDP/GNP-measured economic growth, which has led to greater poverty

gaps and environmental, social and cultural disruption, toward broader, multi-disciplinary indicators of quality of life.

**Marcello Palazzi** was co-chair of the meeting, along with **Marta Bonifert**. He announced that a high-powered electronic platform would provide networking, communication and barter exchange facilities for all the groups represented

to continue the conference and collaboration in cyberspace.

All participants eloquently represented their desire to be more involved in shaping a sustainable equitable and innovative Europe. They agreed that models of co-operation and strategic alignment of collective values, goals and projects could lead to a greatly enhanced effectiveness and new coalitions to address wider social and environmental

challenges. Competitive profit-making corporations in the old money-systems can lead to monopolies and economic stagnation. Social enterprises and civic groups can use the same network effects by co-operating and sharing, thus creating

new levels of abundance using information, rather than money as the new medium of exchange.

The EU accession process is a powerful policy instrument for peace, security and the development of fresh European competence, acquired by striving not just for the well-being of Europe but for a global well-being society. The

enlarged European Union will be strong because it will be admired; its reputation around the world will grow because the actions of its institutions, its businesses and its civil society will be seen to serve the aspirations of all peoples for freedom, justice, equality and self-determination, participatory democracy and respect of cultural heritage. Europe will become the "quiet superpower."



*The enlarged EU will be strong because it will be admired; its civil society will serve freedom, justice, equality and self-determination, participatory democracy and respect of cultural heritage. It will become the "quiet superpower."*

## Serbian Academy of Sciences and Arts

### Belgrade, 7-9 October 2003

Following an invitation by **Professor Dusan Kanazir**, former President of the Serbian Academy of Sciences and Arts, the B.I.O. President visited Belgrade in order to give a lecture at the Academy and meet with academicians, scientists and state officials to discuss possibilities for co-operation in the promotion of environmental policy and education.

### Co-operation with the Ministry of the Environment

The Republican Minister for the Protection of Natural Resources and Human Environment, **Dr. Andjelka Mihajlov**, received the B.I.O. President at her offices and expressed interest in co-operating with B.I.O. in the implementation of e-learning programmes in environmental legislation, management, technology and policy. She also invited the B.I.O. President to visit Belgrade again in the near future and lecture at the University of Belgrade and other educational institutions.

### Sinisa Savic Institute of Biological Sciences

**Dr. Selma Kanazir** of the Department of Neurobiology at the Sinisa Savic Institute of Biological Sciences invited the B.I.O. President to visit the Institute which represents the largest and most complete biological research centre in the Republic of Serbia. Research at the Institute involves all areas of biology, biochemistry, genetics, cytology, neurology, physiology, molecular biology and immunology, and promotes a multidisciplinary

approach to scientific problems. The Institute is also concerned with education and offers theoretical teaching and training of researchers, undergraduate and graduate courses, specialised projects and other initiatives.

### Vinca Institute of Nuclear Sciences

The Vinca Institute of Nuclear Sciences is a multidisciplinary scientific institute founded in 1948. It is concerned with the peaceful use of nuclear energy and specialises in advanced physics, chemistry, biology, power engineering, environmental protection, electronics and material sciences.

The Institute has an extensive number of research labs and employs many distinguished scientists. The B.I.O. President visited the Institute during her stay in Belgrade and spoke with Assistant Director **Dr. Miroslav Dramicanin** about the development of future projects and activities.



## B.I.O. PUBLICATIONS

### PROCEEDINGS

- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME I, A. Vlavianos-Arvanitis, Ed. First BIO International Conference, May 1987 (English, 400 pp.) 1988
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME II, A. Vlavianos-Arvanitis, Ed. Second BIO International Conference, Oct. 1988 (English, 543pp.) 1989
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME III, A. Vlavianos-Arvanitis, Ed. Fourth BIO International Conference, Jan. 1991 (English, 683 pp.) 1991
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME IV, A. Vlavianos-Arvanitis, R. Keles, Eds. Fifth BIO International Conference, Istanbul, May 1992 (English, 303 pp.) 1993
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME V, A. Vlavianos-Arvanitis, Ed. Sixth BIO International Conference - International Sakharov Festival, Athens, July 1994 (English, 671 pp.) 1996
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME VI, A. Vlavianos-Arvanitis, J. Morovic, Eds. Seventh BIO International Conference, Bratislava, June 1997 (English, 527 pp.) 1998
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME VII, A. Vlavianos-Arvanitis, L. Kapolyi, Eds. Eighth BIO International Conference, Budapest, September 1998 (English, 271 pp.) 1999
- ▶ BIOPOLITICS - BIO-CULTURE - BIOS OLYMPIAD, A. Vlavianos-Arvanitis, Ed. BIO International Conference, Ancient Olympia, August 1999 (Greek, 299 pp.) 2001
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME VIII, A. Vlavianos-Arvanitis, Ed. BIO International Conferences, 2000-2001 (English, 335 pp.) 2001

### BUSINESS

- ▶ BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT I (Greek), A. Vlavianos-Arvanitis, Editor. First Conference on Business Strategy for the Bio-Environment, Athens, Nov. 1992, 132 pp., 1994
- ▶ BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT II (Greek), A. Vlavianos-Arvanitis, Editor. Second Conference on Business Strategy for the Bio-Environment, Athens, Dec. 1993, 180 pp., 1994
- ▶ BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT III (Greek), A. Vlavianos-Arvanitis, Editor. International Conference on Profit and the Bio-Environment, Athens Chamber of Commerce and Industry, Oct. 1995, 271 pp., 1996
- ▶ BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT I (English), A. Vlavianos-Arvanitis, Editor. Proceedings from the Second Symposium on Business Strategy for the Bio-Environment, Athens, Dec. 1993, 168 pp., 1995
- ▶ BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT II (English), A. Vlavianos-Arvanitis, Editor. Proceedings from a Corporate Symposium, Harvard Club of New York City, Feb. 1995, 105 pp., 1996
- ▶ BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT III (English), A. Vlavianos-Arvanitis, Editor. International Conference on Profit and the Bio-Environment, Athens Chamber of Commerce and Industry, Oct. 1995, 239 pp., 1996

### DIPLOMACY

- ▶ BIOS IN THE NEXT MILLENNIUM, A. Vlavianos-Arvanitis, Editor. Proceedings from a Francophone Symposium, October 1987
- ▶ BIOS IN THE NEXT MILLENNIUM, Lecture by the Right Honourable Lord Ennals sponsored by the British Council and BIO, May 1988
- ▶ BIOPOLITICS - PROTECTING THE BIO-ENVIRONMENT, Lecture by His Excellency The Ambassador of Israel, Mr. Moshe Gilboa, at the Third BIO International Conference, June 1989
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT, Presentation at the General Assembly of the Academy of Athens by Academician Professor C. Bonis (Greek), March 1990
- ▶ THE BIO-ENVIRONMENT AND INTERNATIONAL CO-OPERATION, A. Vlavianos-Arvanitis, Editor. A Hellenic-Turkish Symposium, Athens City Hall, May 1990 (English, 79 pp.) 1990
- ▶ BIO-DIPLOMACY AND INTERNATIONAL CO-OPERATION, A. Vlavianos-Arvanitis, Editor. Proceedings from a Hellenic-Russian Symposium, Athens, December 1991 (English 74 pp.) 1993
- ▶ POPULATION GROWTH, FOOD SECURITY AND EQUITY, A. Vlavianos-Arvanitis, Editor. Proceedings from a Hellenic-Indian Symposium, Athens, April 1993 (English, 47 pp.) 1993
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT - BIO-CULTURE IN THE NEXT MILLENNIUM, A. Vlavianos-Arvanitis, Editor. Proceedings from a Hellenic-Czech Cultural Symposium, Athens Chamber of Commerce and Industry, April 3, 1995 (English, 104 pp.) 1995
- ▶ BIOPOLITICS - BIO-CULTURE, A. Vlavianos-Arvanitis, Editor. Hellenic-Ukrainian Symposium, Ministry of Foreign Affairs, Athens, October 20, 1998 (Greek, available electronically)

### TEXTBOOKS

- ▶ BIOPOLITICS - DIMENSIONS OF BIOLOGY A. Vlavianos-Arvanitis (Greek, English, French) 1985
- ▶ BIOPOLITICS - METHODS OF IMPLEMENTATION A. Vlavianos-Arvanitis (Greek, English) 1985
- ▶ BIOPOLITICS - BIO-SYLLABUS OUTLINE A. Vlavianos-Arvanitis (Greek, English) 1989, 1990
- ▶ BIOPOLITICS - THE BIOS THEORY A. Vlavianos-Arvanitis (Greek, English) 1990, 1991
- ▶ THE INTERNATIONAL UNIVERSITY FOR THE BIO-ENVIRONMENT A. Vlavianos-Arvanitis (English 1991, Greek 1991-1992)
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT: BIO-SYLLABUS A. Vlavianos-Arvanitis and A. Oleskin (English 1992, Russian 1993)
- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT- BIO-CULTURE A. Vlavianos-Arvanitis (Greek, 192 pp.) 1994
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### VIDEOS

- ▶ ENVIRONMENTAL OLYMPICS - BIOS PRIZES, St. Petersburg, Russia, September 1999 (English, Greek) 1999
- ▶ ENVIRONMENTAL OLYMPICS - BIOS PRIZE, The Kogi, Santa Marta, Colombia, October 1999 (English, Greek) 1999
- ▶ ENVIRONMENTAL OLYMPICS - BIOS PRIZE, R. Lubbers, UNHCR, March 2003 (English) 2003



## "Bio-Syllabus for European Environmental Education"

### Comments and feedback

*Thank you for your kind consideration in sending me Bio-Syllabus for European Environmental Education. I wish you every success in the continuation of your work.*

**Constantine Simitis, Prime Minister of Greece**

*I would like to thank you for the beautiful and interesting publication you were kind enough to send me.*

**Constantine Stephanopoulos, President of the Republic, Greece**

*Please accept my congratulations for your efforts and initiatives aiming at the promotion of international co-operation and education for the environment and sustainable development. I also congratulate the Organisation for its 18-year unwavering efforts and activities in the field of environmental protection, a field most crucial to the existence of humanity, and wish all its members every success in this most difficult task.*

**Apostolos Kaklamani, President of Parliament, Greece**

*Thank you for having sent the wonderful, impressive book.*

**Jean-Francois Rischard, Vice President for Europe, The World Bank**

*The high quality and broad variety of issues raised in the book gives us not only the opportunity to develop some basic knowledge acquired in environmental matters but also provides us with in-depth novel analyses. Especially the volumes on bio-diplomacy and bio-tourism entail very innovative views which provide us with a different and very interesting argumentation. On behalf of the Federal Ministry of Foreign Affairs, we want to express our sincere congratulations for this very valuable work. We do hope and think that your book will receive the deserved success with policy makers in environmental matters.*

**Martin Krebs, Political Division III, International Environmental Affairs, Federal Ministry of Foreign Affairs, Switzerland**

*I found your remarkable book Bio-Syllabus for European Environmental Education extremely interesting and look forward to reading it in detail.*

**Bernard Snoy, Director, Economic Reconstruction, Development and Co-operation, Stability Pact for South Eastern Europe, Belgium**

*Thank you for your impressive publication.*

**Brendan Gillespie, Head, Non-Member Countries Division, OECD Environment Directorate**

*Looking at your book, I became impressed, once again, by your erudition, determination and spirit of service. You are remarkable and I am honoured to know you.*

**Jim Garrison, President, State of the World Forum, USA**

*I am very, very, impressed, to say the least by the Bio-Syllabus. I will gladly dedicate time to read it. What an invaluable source of information and inspiration!*

**Dr. Ivan Moura Campos, Director, Akwan Information Technologies, Brazil**

*I found your book exceptionally comprehensive and thoughtful.*

**Dr. Kristalina Georgieva, Director, Environment Department, The World Bank**

*"Bio-Syllabus for European Environmental Education" will be a welcome addition to the collection of books at the Commission's library. Thank you for your valuable contribution to our common effort to protect the environment.*

**Margot Wallstrom, Environment Commissioner, European Commission**

*Please accept my congratulations for your impressive work. It can be described as a piece of art, a treasury of information, a testament in defence of life (bios) in all its varied forms and manifestations, an invaluable guide and companion and not the least, a comprehensive documentation of the efforts put in since 1985 to promote the philosophy and goals of B.I.O. under your leadership. I have no doubt that the book will be a perennial reference for students, teachers, lecturers, professors and scholars. In producing the publication you have brought credit to both B.I.O. and all those associated with the organisation.*

**Professor Tham Seong Chee, President, United Nations Organisation of Singapore**

*Thank you very much for the Bio-Syllabus. It is an excellent work. You are showing, in a fantastic way, how every topic is supplemented when we see man in the middle of our interest. It was a pleasure to receive your monumental work, which I am sure has been appreciated by the Ecumenical Patriarch and by all who care about the restoration of our environment. It is a work worthy of the consider-*

*ation of the Nobel Committee.*

**His Eminence Archbishop Iakovos, Greek Archdiocese of North and South America**

*I hope your wonderful work will, someday, find reciprocation in the size of a Nobel Prize. I think your book is giving an extremely good example of how we can create a world where life will find true sustainability.*

**Professor Felix Unger, President, European Academy of Sciences and Arts, Austria**

*I find the Bio-Syllabus a monumental work that deserves great attention because of its contribution to mankind. If the leaders of the world would only listen to the messages represented by Biopolitics, maybe there would be no war today and only peace would prevail. I believe, strongly, that world leaders will one day really understand the importance of Biopolitics.*

**Professor Irawan Abidin, Indonesia**

*Many thanks for your remarkable Bio-Syllabus, which represents a considerable work on issues that are essential for the future of humanity and demonstrates your great sensibility concerning nature, animals, urbanism, ethics and aesthetics. It is good that you have accentuated the importance of education. I also share your opinion regarding the necessity to sensitise every citizen on the planet on the need to be personally involved in efforts to respect nature and to avoid scandalous waste and pollution.*

**Olivier Giscard d'Estaing, France**

*The volume is a tremendous resource of material for our office.*

**Lyn Heppner, Personal Assistant to HRH Prince El Hassan bin Talal of Jordan**

*We thank you for giving us an opportunity to comment and provide you with feedback on this very worthwhile publication of B.I.O. which integrates the essence of world wealth of knowledge on nature and environment in key development fields. This is an interesting reading with a vision promoting creative and thoughtful attitude to environmental matters in our world and in it is our view that it represents a useful educational tool directed towards enhancing environmental awareness of our society and beyond.*

**Adriana J. Damianova, Programme Team Leader, Environment and Socially Sustainable Development Unit, Europe and Central Asia Region, The World Bank**

*Thank you so much for sending me your book entitled Bio-Syllabus for European Environmental Education. I recognise and applaud the contribution of your organisation in the fight to halt the rapid deterioration of our earth's environment and to safeguard life on our planet. I want to congratulate you on your excellent work.*

**Ambassador Thomas Miller, United States of America**

*Very many thanks for sending me a copy of Bio-Syllabus for European Environmental Education. As you requested, I am forwarding it to the Ministry of the Environment. Please accept my congratulations for this excellent work.*

**Sir David Madden, Ambassador of Great Britain**

*I would like to congratulate you for the excellent edition of Bio-Syllabus for European Environmental Education. It will certainly constitute a very useful and practical tool for the office of the Ombudsman, and for all who are concerned with the resolution of environmental problems through the better understanding of environmental legislation, and the development of environmental strategy, thinking and ethics. I hope this work stimulates further research and study, making environmental protection an integral part of education and decision-making on a global level.*

**John Michael, Assistant Ombudsman, Greece**

*I would like to thank you for the book you sent me and wish you all the best in the continuation of the important work you have undertaken.*

**Constantine Vrettos, Vice President of Parliament, Greece**

*I have just received your valuable present. Thank you so much. Allow me some time for its careful and enjoyable study.*

**Andrei Piontkovsky, Director, Strategic Studies Centre, Moscow, Russia**

*I have browsed through your exceptional publication with admiration and appreciation, and would like to congratulate you warmly for this monumental work. It is a reflection of your intensive and groundbreaking contribution to environmental protection, and I believe it will prove invaluable to all who deal with environmental issues and to everyone of us, as the protection of bios is a universal concern.*

**Anna Psarouda Benaki, Vice President of Parliament, Greece**

# European Environmental Education” back from friends around the world



## B.I.O. Electronic Library



*Bio-Syllabus for European Environmental Education is a very extensive work and a hefty tome covering different areas from architecture to tourism. It is a great reference book. To make it available to many interested people, I am going to place this great work in our company's library.*

**Temiz Ustun, ENKA Group of Companies, Turkey**

*Allow me to congratulate you for the wonderful job you have accomplished. It actually shows not only because of your eighteen years of dedication but, because, above all, of your true commitment to nature. It is a work that will undoubtedly become part of such an important reference bibliography about sustainable development, which, only ten years ago, was an unknown subject. In 1996, when I started the first Ministry of Environment in Spain there was very little sensitivity on those subjects, so fundamental to our quality of life. A lot has been done since then, and works like this are an enormous responsibility. I sincerely appreciate that you have sent me this book, which I am forwarding to the Ministry of Environment.*

**Dr. Isabel Tocino Biscarolasaga, Member of Parliament, President, Siebel Systems, Spain**

*This book is a tribute to the ongoing cause that it represents and to the tireless person behind it all, inspiring all those around her who over the years have joined this long and endless journey. We are proud to be associated with her as we have been since it started in 1985.*

**Kumaran Fernando, Secretary General of the United Nations Association in Sri Lanka**

*Thank you for your wonderful publication, a most interesting and useful work. I look forward to finding ways to collaborate on issues of mutual interest.*

**J. Steven Lovink, Vice Chair, Institute for Environmental Security, The Netherlands**

*The ICEF Foundation, which I am honoured to direct under the Honorary Presidency of Justice Giovanni Conso, has received your wonderful book titled Bio-Syllabus for European Environmental Education and really wants to congratulate you for the great scientific value of this initiative. Life, in its deep meaning, is put in relationship with the main human activities: architecture, diplomacy, economics, energy, ethics, health, history, legislation, assessment of technology, tourism and international organisations. The philosophy of this book is agreed by ICEF Foundation. I want to thank you for the rule given to the project of the establishment of an International Court of the Environment.*

**Justice Amedeo Postiglione, Italian Supreme Court, Director and Founder, International Court of the Environment Foundation (ICEF), Italy**

*I am writing to thank you for the fantastic publication Bio-Syllabus for European Environmental Education.*

**Marina The Lady Marks, Great Britain**

*Please accept my sincere congratulations concerning Bio-Syllabus for European Environmental Education. I consider it the best fundament for all engaged in promoting new values for the harmonious co-existence of all forms of life. We would like to note your outstanding work and contribution for preparing such a comprehensive edition.*

**Dr. Vitalie Gulca, Forestry Research and Management Institute, Republic of Moldova**

*I do appreciate all your hard work and efforts in creating such a remarkable book. We do know how heroic the editing of such a valuable book should be. Congratulations to B.I.O., under the excellent coordination of its president and founder, Dr. Agni Vlavianos-Arvanitis, for establishing wide international co-operation with experts in various fields and for compiling ideas and knowledge in such an excellent and successful way. This is not only a valuable book for students, teachers, lecturers, professors and scholars, it is, at the same time, of great value for all people around the world who take action in the field of environmental protection for saving Planet Earth. Because of such great work, Dr. Vlavianos-Arvanitis should be awarded the Nobel Prize for her persistent fight for humanity and peace. She*

*and B.I.O. are remarkable and I am really honoured to know and co-operate with her.*

**Professor Azra Jaganjac, Department of Sciences, University of Sarajevo, Bosnia-Herzegovina**

*I am honored to receive your valuable book Bio-Syllabus for European Environmental Education. The Royal Commission, being a controlling authority for the industrial city of Yanbu, is very keen to protect the environment from ever increasing industrial development. The timely availability of the Bio-Syllabus to the Royal Commission is very helpful, not only as an environmental reference but for devising our public awareness programme for the protection of the environment. You have covered almost every environmental issue in your book. It can be regarded as a reference on environmental issues which will not only work as a guide for environmental researchers and stakeholders, but also for an ordinary man.*

**Mohammed Bin Abdulaziz Al-Juwaisir, Director General for the Royal Commission at Yanbu, Saudi Arabia**

*The Bio-Syllabus is an impressive volume. I have it with our key references for students interested in conservation and education. I found it contains useful information and many insightful perspectives.*

**Professor Phillip Lobel, Boston University Marine Programme, USA**

*I have appreciated very much the Bio-Syllabus. Many thanks for this precious gift.*

**Dr. Marc Luyckx Ghisi, Director, "Vision 2020," Belgium**

*Thank you for Bio-Syllabus for European Environmental Education, a most interesting and important book that will remain as a very special reference in my library.*

**Ambassador Alfredo Toro Hardy, Venezuela**

*H.S.H Prince Albert thanks you very much for the very interesting book you have kindly sent him. Thanking you again for your thoughtfulness.*

**Mireille Viale, Personal Secretary to H.S.H. Prince Albert of Monaco**

*I wish to congratulate you on this monumental piece of work. I have been kept from commenting on the book only because of its very comprehensive scope. I am glad your work is progressing well, as is well reflected in the achievement of the Bio-Syllabus.*

**Shakeel Bhatti, Senior Program Officer, Global Intellectual Property Issues Division, World Intellectual Property Organization (WIPO), Switzerland**

*I deeply admire the tireless and unwavering B.I.O. efforts to halt environmental deterioration and to inspire all of us with an appreciation of the value of life on our planet. This publication is amazing, a true treasury of environmental information and thinking, and I am absolutely sure it will be highly praised.*

**Evangelos Chronis, J.S. Latsis Group of Enterprises, Athens, Greece**

*I have received the publication you were kind enough to send me. I leafed through it with great interest and would like to congratulate you for your comprehensive work and for the stylish edition you have produced.*

**Professor Michael Dermitzakis, Deputy Rector, University of Athens, Greece**

*I thank you for the Bio-Syllabus and congratulate you for your beautiful work which reinforces the most essential task of developing an environmental awareness on the planet.*

**Constantine Geitonas, Vice President of Parliament, Greece**

*I found the Bio-Syllabus very interesting. Bio-diplomacy, aiming at environmental protection, is so inspiring. I strongly agree with the encouragement of everyone to welcome environmental ethics and act together in influencing governmental regulations, business leaders, scholars and educators. I wish to congratulate your excellent effort to educate people on the significant issue of the environment.*

**Ambassador F.X. Lopez da Cruz, Indonesia**

*Thank you very much for sending the very impressive Bio-Syllabus to me. I wish to congratulate you of the enormous achievement.*

**Paula Kokkonen, f. Member of Parliament, Director General, National Authority for Medicolegal Affairs, Finland**

*Thanks for your great new book.*

**Professor Bradley Smith, Huxley College of the Environment, Western Washington University, USA**

*I have read with great interest the Bio-Syllabus you have sent me. We will keep it and use the ideas. Thank you for sending it and keeping me always informed.*

**Stef Wertheimer, Chairman of the Board of Directors, ISCAR Group Ltd., Israel**

*Thank you very much for sending this wonderful book to me. In the days of virtual communication I often feel the need to come back to a tangible reading experience with a book on the lap. At the annual UN Day celebration here in Bonn, I will take the liberty to spread information about your work.*

**Dr. Gunter Klein, Director, WHO European Centre for Environment and Health, Germany**

*I have received your splendid book which is a 'Summa' on the subject. Best wishes.*

**Professor Daniel Serrao, University of Porto Medical School, Portugal**

*I am really enjoying reading the Bio-Syllabus book and will share it with few of my colleagues. For sure I will share some thoughts of mine with you when I finish with the book.*

**Dr. Roko Andricevic, Assistant Minister, Environmental Protection Division, Ministry of Environmental Protection and Physical Planning, Croatia**

*I would like to express my deep thanks to you for your very nice book. I will circulate your book among the right people in our Institute.*

**Professor Pavel Petrovic, Water Research Institute Bratislava, Slovakia**

*I have just received your marvellous book, Bio-Syllabus for European Environmental Education, and would like to offer my wholehearted congratulations. This is an impressive accomplishment. It was a pleasure to leaf through it and I found it extremely interesting. Knowing that you have invested years of intensive work in the field, this is, without doubt your most important publication to date. It is a tribute to your commitment to the environment and a testimony of the idealism with which you approach your noble cause.*

**Ambassador Fernand Kartheiser, Luxembourg**

*The interesting and educational publication has been forwarded to the Brazilian Ministry of Environment, where I am sure it will be of great use. I seize this opportunity to congratulate you on your initiative and commitment to halt environmental deterioration and safeguard bios on our planet.*

**Ambassador Roberto de Abreu Cruz, Brazil**

*It is a pleasure for me to inform you that the publication has been forwarded to the Centro Nacional de Educacion Ambiental to be kept in its library. The Chief of the Cabinet of the Minister of Environment thanks you very much for this interesting publication.*

**Ambassador Eduardo Junco, Spain**

*Thank you so much for kindly offering me a copy of the Bio-Syllabus. The texts in the sections on Bio-Diplomacy and Bio-History were most remarkable and granted me many hours of interesting reading and reflection.*

**Ambassador Vassilios Vitsaxis, Greece**

*The book is magnificent, I shall treasure it, though I will also consult former Council of Europe colleagues on where its best location might be to make it optimally accessible.*

**John Hartland, International Policy Consultant, f. Adviser to the President of the Council of Europe, France**

*I am impressed with the quality of the publication. I am also grateful that there are people like yourself who dedicated themselves to saving our fragile environment. I intend to keep this copy in my office, but will appreciate to have two more copies to forward to our Minister of Environmental Affairs and to the Chair of the Parliamentary Portfolio Committee on Environmental Affairs. Congratulations for the publication.*

**Ambassador Jannie Momberg, South Africa**

*We very much appreciate your kindness in presenting us with Bio-Syllabus for European Environmental Education."*

**Hanna Kesicka, Head, Acquisitions Department, National Library of Poland**

*With thanks, I wish to acknowledge receipt of Bio-Syllabus for European Environmental Education. This publication covers a wide range of highly timely issues and I am sure will be appreciated by students and academics in the field. I wish you the best of success.*

**Ambassador Evarist Saliba, Malta**

*Thank you for the complimentary copies of Bio-Syllabus for European Environmental Education. I was indeed impressed by the work and quality. Your devotion and dedication to your dream, and the sensitivity with which you approach the serious problems of our age, are truly an example to us all.*

**Dr. John S. Bailey, President, The American College of Greece**

*Thank you very much for sending Bio-Syllabus for European Environmental Education. It was very instructive, and both I and my partners have mentioned it at a national level.*

**Rui Nunes, President Portuguese Bioethics Association, Portugal**

*I congratulate you on this extremely good and useful book, which you have spent a lot of time and energy to produce. We are going to recommend the book to students.*

**Professor Rusen Keles, B.I.O. Trustee, f. Director of Environmental Studies, Ankara University, Turkey**

*Thanks great for the book and best wishes.*

**Professor Marta Salona Bordas, Basque University, Spain**

*I have received Bio-Syllabus for European Environmental Education which "shocked" me with its uniqueness. This is an enormous work and I consider it very useful for the University's programmes as well as for the International Youth Bios Schools. I am very thankful to you for this book.*

**Professor Alexander Shishkin, St. Petersburg State Technological University for Plant Polymers, Russia**

*Thank you for sending us your impressive publication.*

**Dr. Mario Vielgrader, External Affairs, German Desk, Vice Presidency for Europe, The World Bank**

*I would like to express my deep gratitude for the publications that you kindly sent to our Embassy. They have been posted to the Ministry of Foreign Affairs and will shortly be received by the Minister of Environment, H.E. Mr. Victor Lichtinguer.*

**Luis A. Barrero, Minister, Embassy of Mexico**

*With great pleasure we received Bio-Syllabus for European Environmental Education. Please accept our sincere congratulations on this occasion. We consider it the best encyclopaedia for all engaged in promoting new values for the harmonious co-existence of all forms of life. We would like to note the outstanding work and contribution of your team while preparing such a comprehensive edition. Above all we highly appreciate your leadership in issuing the Bio-Syllabus.*

**Dr. Stanislav Sokolenko, Chairman of the Board, Ukrimpex, Ukraine**

*I acknowledge receipt of the Bio-Syllabus and thank you very much for having sent it to me. Following a quick review, I found it very valuable.*

**Professor Boubakar Barry, Director, Center of Informatics, Cheikh Anta Diop University, Senegal**

*Bravo! I have already showed off your latest publication at work and declared that I was once working for B.I.O. with great pride. I cannot think of anyone who has such vision, determination and foresight for the future of BIOS. I looked forward to hearing more from your endless and wonderful pen.*

**Dr. Iman Khodaei, MD, Great Britain**

*I am very impressed by the work that you have done and the foundation that it offers in order to ensure environmental sustainability via education.*

**Florence Cattin, International Development and Special Projects Director, Interdisciplinary University of Paris, France**

*Thank you so much for the Bio-Syllabus, which looks great. I will go through it soon and, without doubt, use the material in various studies and presentations.*

**Professor İlhami Unver, School of Agriculture, Ankara University, Turkey**

*I continue to read and consider your work monumental. One is always grateful for it.*

**Professor Alexander Tsoucatos, Boulder, Colorado, USA**

*I would like to express my conviction that this book in which you have made a significant and impressive effort will contribute to the further development of the important concept of environmental protection.*

**Ambassador Blagoj Handziski, FYROM**

*Thank you for sending us your book which will be held here at the library of the Pontifical Academy for Life. The book explores the highly complex issues involved in the ecological debate surrounding economic and social development and bioethics, and constitutes an invaluable source of information.*

**Msgr. Elio Sgreccia, Vice President, Pontifical Academy for Life, The Vatican**

*We are impressed by Bio-Syllabus for European Environmental Education and by your intensive work in the environmental field. We hope that the publication will contribute to further the understanding of the concept and the importance of environmental protection and sustainable development. The book has been sent to the Ministry of the Environment and we would like to ask for two additional copies. Sharing your vision of joy, peace and harmony.*

**Maja Apostolova Balaburska, Minister Counsellor, Embassy of FYROM**

*I wish to congratulate you for such a marvellous study in the field of the bio-environment, which mankind quite rightly pays an ever-increasing attention to. Contributions in this area, such as your book, serve to enlighten people about a more environmentally sound lifestyle and build up public awareness of the importance of environmental protection.*

**Ambassador Yigit Alpogan, Turkey**

*It is a pleasure to write to you to thank you for sending the Bio-Syllabus for European Environmental Education publication in which I have read very interesting chapters on ways of safeguarding life on our planet. The book will be sent to the Ministry of the Environment in Venezuela, and I would appreciate a copy for my personal use.*

**Ambassador Lisan Stredel Balliache, Venezuela**

*Thank you for the copy of the publication Bio-Syllabus for European Environmental Education. The publication is especially timely in the wake of recent ecological disasters such as the sinking of the "MS Prestige" off the Spanish Atlantic coast. The Embassy has forwarded the publication to the Philippine Department of Environment and Natural Resources. Should you be able to spare additional copies we would appreciate being able to furnish the Department of Foreign Affairs with a copy and to keep one for our own library.*

**Ambassador Lourdes Morales, The Philippines**

*I would like to ask for four more copies of this publication to send to the Pontifical Council for Health and Pastoral Care, the Pontifical Council for the Family, the Pontifical Council for Justice and Peace and the Pontifical Academy for Life, since I believe that they will find this work very useful. Please accept my congratulations for your valid contribution to the concept of sustainable development, so necessary for the future of the human family.*

**Archbishop Paul Fouad Tabet, Apostolic Nuncio**

*Thank you very much for the book Bio-Syllabus for European Environmental Education. I am sending this publication to the Deputy Minister of Environment in Paris who will, no doubt, find it very interesting and useful.*

**Ambassador Jean-Maurice Ripert, France**

*Let me express my sincere admiration for the impressive bio-accomplishments you have achieved in the last 18 years. As a professor in the fields of ecology and forestry with the University of Banja Luka in Bosnia-Herzegovina, I would be very honoured to co-operate with your esteemed organisation.*

**Ambassador Srdjan Ljubojevic, Bosnia-Herzegovina**

*I would like to thank you for your exquisite publication Bio-Syllabus for European Environmental Education. I am very impressed by this wonderful book in the field of protection and appreciation of the environment. I give you my congratulations on this major achievement.*

**Professor Ivica Radovic, Dean of Biology, University of Belgrade, Yugoslavia**

*Thank you for sending your publication Bio-Syllabus for European Environmental Education to Ambassador Javed Hafiz. The book is very informative and educational. Since the book is very useful, it has been forwarded to the library of the Ministry of Foreign Affairs, and I would like to request five more copies to be distributed to the Ministry of Environment and to Departments of the Ministry of Environment in four Provinces in Pakistan.*

**Aamir Shouket, Head of Chancery, Embassy of Pakistan**

*On behalf of Ambassador Zhenqi Tang, I would like to express our many thanks for sending Bio-Syllabus, the selected culmination of 18 years of intensive work in the environmental field. We will consider sending this publication to the State Environment Protection Administration.*

**Haihua Zhang, First Secretary, Embassy of China**

*It gives me much pleasure to thank you for your donation of Bio-Syllabus for European Environmental Education to the University*

*Library. It is much appreciated by the Library Syndicate and the Library staff and I write on their behalf thanking you warmly for your kindness.*

**P.K. Fox, Librarian, Cambridge University Library, Great Britain**

*Please be sure that Bio-Syllabus for European Environmental Education will enrich the collections of the National Library and so we want to thank you very much for this gift.*

**Alain Wagner, Acquisitions Department, National Library of Luxembourg**

*We acknowledge receipt of Bio-Syllabus for European Environmental Education and hope to continue to receive more of your prestigious publications.*

**Roberto Baschetti, Acquisitions Department, National Library, Argentina**

*We acknowledge with many thanks receipt of Bio-Syllabus for European Environmental Education. Your amiability in having entrusted this book to our library is highly appreciated.*

**Dr. Vojtech Balik, Director, National Library of the Czech Republic**

*Many thanks for Bio-Syllabus for European Environmental Education. It will certainly prove to be a valuable addition to the collections of the National Diet Library. Your generosity in augmenting the collections of this library is highly appreciated.*

**International Exchange Section, Foreign Materials Acquisition Division, The National Diet Library, Japan**

*Thank you for the valuable contribution of the Bio-Syllabus for European Environmental Education textbook to the Bibliotheca Alexandrina's collections.*

**Laila Dowidar, External Relations, Bibliotheca Alexandrina, Egypt**

*We would like to express our deepest gratitude for the publications on Biopolitics kindly donated to the St. Cyril and Methodius National Library. We are sure that your publications will make a valuable addition to the collections of the library and will be of great interest to our readers.*

**St. Cyril and Methodius National Library, Bulgaria**

*Thank you for thinking of the National Library of New Zealand and sending Bio-Syllabus for European Environmental Education. It was a very generous gift.*

**Claire Sonntag, Collection Development Librarian, National Library of New Zealand**

*We would like to thank you for Bio-Syllabus for European Environmental Education" and are pleased to inform you that the publication will be included in our library collection and made available to our users.*

**Lenart Setinc, Director, Acquisitions Department, National and University Library, Slovenia**

*Thank you very much for your kind donation of Bio-Syllabus for European Environmental Education.*

**Richard Bell, Head of Reader Services and Collection Development, Bodleian Library, University of Oxford, Great Britain**

*We acknowledge receipt of the Bio-Syllabus, which you have kindly presented to our National Library, with appreciation. It is of great value to our collection and useful to the public at large as well.*

**Siripom Chiruppapa, Director, National Library of Thailand**

*Your gift of Bio-Syllabus for European Environmental Education to The University of Chicago Library is acknowledged with deepest appreciation.*

**Martin Runkle, Director, The University of Chicago Library, USA**

*With pleasure we received Bio-Syllabus for European Environmental Education. The book is highly comprehensive and offering a great number of incentives.*

**Dr. Dagmar Kudelova, Institute of Forest Ecology Library, Slovak Academy of Sciences**

*The Bio-Syllabus is an outstanding and valuable edition with its informative content. This publication is an excellent present for the readers at our library and we assure you that this edition will be held at the open stocks of our library and at the same time it will be available to both scholars and everyone interested in the subject.*

**Vytautas Gocontas, Head, Acquisitions Department, National Library of Lithuania**

*Thank you very much for sending me Bio-Syllabus for European Environmental Education. The combination of the very attractive teaching modules in an interdisciplinary perspective is a very worthy contribution to the great effort to further life on the planet.*

**Professor Juan de Dios Vial Correa, Pontifical Catholic University of Chile**

*Thank you for sending Bio-Syllabus for European Environmental Education. It is beautiful work. It completely illustrates your B.I.O. philosophy. It is quite inspiring for us.*

**Professor Saku Machino, Sophia University, Tokyo, Japan**

## Global Environmental Governance The Post-Johannesburg Agenda

**Professor Daniel C. Esty**, Director of the Yale Centre for Environmental Law and Policy, and **Professor Maria H. Ivanova**, Director of the Global Environmental Governance Project, invited the B.I.O. President to participate as a main speaker in a two-day international workshop on "Global Environmental Governance: the Post-Johannesburg Agenda" convened by the **Yale Centre for Environmental Law and Policy**, in collaboration with the **Yale Centre for the Study of Globalisation and the Yale Centre for International and Area Studies**. The meeting took place on 23-25 October 2003 at Yale University, USA.

The 2002 World Summit on Sustainable Development held in Johannesburg highlighted - both through action and inaction - the need for greater focus on global environmental governance. The WSSD intergovernmental process failed to produce either a vision or the need-

ed structure for ongoing international environmental co-operation. The official follow-up has showed little promise of coming forth with the innovative and groundbreaking proposals necessary to address issues such as climate change, drinking water shortages, fisheries depletion, and biodiversity loss. Therefore, there is great need for policy dialogue in the context of a critical need for alternative global environmental governance initiatives based on rigorous analysis, careful attention to political realities, and innovative ways to manage ecological interdependence.

The Yale Centre for Environmental Law and Policy has been active in the debate around options for revitalising global environmental governance for a number of years. The Global Environmental Governance Project at the Centre has sought to define an analytically grounded agenda for global environmental governance reform, address North-South tensions, build a constituency for reform, expand understanding of the issues,

**Yale University**

**23-25 October 2003**

*It is essential to address the obstacles to reform of the global environmental governance system, the concerns voiced, and the creation of political momentum to further an action agenda for reform.*

and work toward the reinvigoration of the global environmental regime.

The purpose of the workshop was to review global environmental governance reform proposals, assess their political viability, and chart opportunities for influencing the political process. The debate addressed the obstacles to reform of the global environmental governance system, ways of addressing the concerns voiced, and the creation of political momentum to further an action agenda for reform. Learning from other global regimes will offer renewed focus and energy to advance global environmental governance innovations. The workshop will therefore focus on the following themes:

Current state of play - post-Johannesburg progress assessment and linkages among global governance regimes; Overview of global environmental governance project progress; Why do we have the current global environmental system? Learning from history; The reasons behind institutional fragmentation; Lessons from other global regimes; Obstacles to global environmental governance reform; Fear of a global bureaucracy; Concerns about global environmental rules and standards; South-North tensions; Sovereignty concerns; Turning obstacles into opportunities.



## ECOSAN International Ecology and Health Fund Protection of the Aral Sea region, Uzbekistan

**Professor Yusuf Shadimetov**, President of the ECOSAN International Ecology and Health Fund in Uzbekistan appointed the B.I.O. President Director General of the Fund's Greek branch. In accepting the appointment, the B.I.O. President declared her commitment to promote ECOSAN's goals for a healthy and clean environment.

ECOSAN is now operating in 25 countries and its primary role in Uzbekistan is to advance sustainable development in the Aral Sea region,

especially reductions in the use of chemical pesticides and other changes in agricultural procedures, and to provide urgent immediate assistance at the local level in order to improve living conditions and prevent further deterioration of human health and quality of life in the region.

In this endeavour, ECOSAN works jointly with UNICEF, UNEP and other international organisations and NGOs through which mobile medical assistance is provided.

*ECOSAN seeks to improve living conditions and to prevent further deterioration of health and quality of life.*

B.I.O. has recently launched co-operation with the Eastern University of Science and Technology in Shandong, China, in the development of biopolitics curricula and the teaching of biopolitics. **Dr. Efstratios Soubassakis**, Co-Founder and Chairman of the University, invited the B.I.O. President to serve on the Univer-

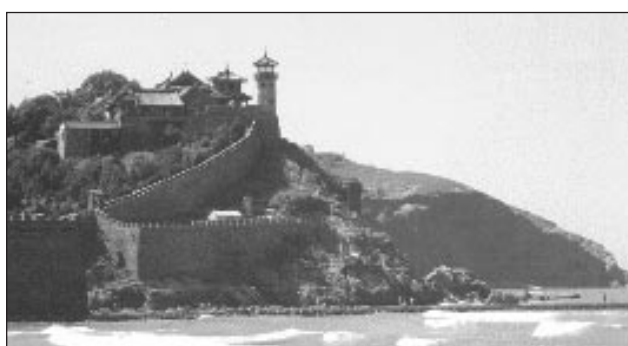
### Shandong, China

sity's Council and to assist in the preparation of teaching material and courses to be offered at the University.

Within the framework of this co-operation, B.I.O. is currently developing an extensive e-learning programme covering topics in biopolitics, environmental management, and bioethics

among others (see p.1).

The Eastern University of Science and Technology (EUST) is the first university funded and administered in China by international investors, scientists and educators. It is located in the province of Shandong, a significant coastal province in East China. The purpose of EUST is to train leadership for Chinese and regional industry, commerce and finance with the aim of helping the Chinese social and economic system to be integrated into the global economy and adapt to international standards. EUST offers under-



## Promoting the Knowledge Economy German World Bank Forum, May 2003



Knowledge is becoming a primary factor of production, in addition to capital, labour, and land. In fact, many economists now argue that it has become the most important component of production and can play a crucial role in the global fight against poverty.

This emerging potential of the knowledge economy was the main focus of the 6th German World Bank Forum, a meeting of distinguished leaders from the worlds of business, science and academia, who convened in **Petersberg, Bonn, on May 20, 2003**. The 6th German World Bank Forum was organised by the World Bank, the State of North Rhine-Westphalia (NRW), and Deutsche Telekom AG.

### Fighting poverty through the transfer of knowledge

The result of a knowledge economy is improved quality, reduced costs, better adaptation to consumer needs, as well as new, innovative products. Conversely, there is an increasing digital, scientific and technological divide between developed countries that are exploiting knowledge, science, and technology for economic well being compared to those less developed countries, and less developed regions within countries, that are not adequately participating in this revolution. Fighting poverty requires a global strategy to share knowledge effectively and to ensure that people who need that knowledge can get it on time.

### Focus on sustainable development

Knowledge as a crucial resource for shaping the future on a sustainable basis. The goal should be to find ways and means by which knowledge - as a "productive factor" - can be used more effectively in the global context. Innovative technologies can facilitate access to global know-how in the developing countries as well. At the same time, evenly spread internet usage throughout the world, for example, is simply not a viable

proposition: at present approximately 90% of the world's more than 665 million users live in the industrialised countries.

As **Claudia von Monbart**, Senior Counsellor of the World Bank in Paris, explained "the absolute prerequisite for access to knowledge is modern communication technology. It enables the individual to participate, activates entrepreneurial potential, and is consequently indispensable for powerful sustainable development." The knowledge gap between poor and rich must be bridged - knowledge can give poor people the opportunity to seize chances and possibilities.

"The Internet does not automatically give the opportunity to access global knowledge," said **Miriam Meckel**, North-Rhine Westphalia's Secretary of State for Europe. She notes three basic conditions. One must have access to the Internet, something that is not evident in all parts of

the world. Information also depends on the type of content that is available on the net, and one must know how to use it. "In addition, there is also the language barrier - the Internet uses predominantly the English language," she said.

### Knowledge and world peace

World Bank President, **James D. Wolfensohn**, was satisfied with the global brainstorming session on knowledge societies. The fight against poverty, he warned, is about winning the "other war" through which inequalities must be fought, and in which politicians, entrepreneurs and shareholders have to take part. "The digital gap cannot be quickly overcome, but knowledge transfer and its fair distribution is a basic condition for world peace."



*EUST is a school for people seeking knowledge, excellence and integration and is dedicated to enriching the future of students, to meeting the needs of our society and to being responsive to the trend of technological innovation in the world.*

graduate and graduate programmes in engineering sciences, management and finance, liberal arts and continuing education. All courses are conducted in English.

The EUST mission is to enhance students' professional skills in an environment integrating western with oriental culture, science, technology and management methodologies. The primary founders of EUST are **Dr. Yulin Shao**, **Dr. Efstratios Soubassakis** and **Dr. Giuseppe Angelo Busca**, who launched their initiative in 2000. EUST is committed to offering equal opportunity in education, regardless of gender, economic background and political or social status, and encourages talented students to engage in opportunities in research, community work and social activities.

EUST is comprised of a Graduate School and five colleges: College of Engineering; College of Sciences; College of Management; College of Liberal Arts; College of Technology.

# Building Bio-Envi

**W**e are interdependent with the whole natural environment, with all forms of bios. If bios is destroyed in the name of progress there can be no gain. It is our unquestionable ethical

responsibility to assess progress in the context of partnership, equity, and balance among all forms of life on our planet.

Technology is a powerful tool. It can serve as a rev-

elation of the truth and bring light and hope to humanity. But it can also unleash chaos, sorrow and disaster just like Pandora's mythic box. In the ancient myth of Pandora's Box, the contents of the box are

## Environmental Olympics and cease-fire

**G**reed and short-term planning have resulted in a serious crisis in values. The diachronic ideals of the Olympic spirit and cease-fire during the Olympic Games, as proposed by B.I.O. since 1992, can help society to exit this crisis and move into a new renaissance of values.

The Olympiads should once again become periods of world peace and occasions for all citizens to celebrate the unifying concepts brought forth by the Olympic spirit. At the same time, the global community can be sensitised to the value of a harmonious co-existence as a vehicle for achieving freedom,

opportunity, and a better quality of life.

To succeed in eradicating poverty, development policy must work for the cause of peace and fundamental freedoms. Peace cannot be achieved in a world ravaged by pollution, starvation and disease. A bios-promoting policy, one that deals directly with the mutually reinforcing problems of poverty and environmental degradation, can

provide the necessary framework to end wars and civil strife and to achieve a world in which large scale poverty has been eliminated. This is the B.I.O. vision for the millennium.

*A bios vision can help to end wars and civil strife and to achieve a world where poverty has been eliminated.*

## Harmony

*With wings of the soul*

*I touch the golden waves of infinity around, heavenly beauty like light sparkles rays with colours of flowers whispers the soil, awakens the earth not like a mother, just like a daughter of the cycle of wear and the infinite of the eternal the melody of the universe is surrounded by the rhythm of harmony*

*A. Vlavianos-Arvanitis, 1984*



## Health, the environment and modern bioethics

**T**he health of the environment is becoming an increasingly urgent priority, and the globalisation of our society is bringing in new challenges. Environmental quality is perhaps the most important determinant of human health. Deteriorating environmental conditions are a major contributory factor to poor health and poor quality of life, hindering economic and social development. Poor environmental quality is directly responsible for more than 25% of all preventable ill-health in the world today.

The principle contributory environmental factors to ill health are lack of sanitation, unsafe drinking water supplies, poor food safety, indoor and outdoor air pollution, poor housing and global climate change. Deforestation, expansion of agriculture and urbanisation are principle culprits in the spread of infectious diseases. Producing food for the world's peoples has become increasingly dependent on the use of chemicals for fer-

tilisers and pesticides. In addition to posing health concerns to the consumer, residues of these chemicals remain in the environment and continue to threaten health

Social and ethical issues abound in the attempt to effectively address these problems.



Environmental health problems are especially pronounced in the developing countries, which often lack the resources and infrastructure needed to contain them. On the other hand, ailments such as cancer and leukaemia are much more prominent in Europe than in Africa, and there is much evidence that most incidents are food and lifestyle related.

Emphasis has been given on treating the symptoms rather than eliminating the causes. A concerted effort to eliminate the sources of pollution, harness biotechnology and establish a "healthy" and clean environment for the generations to come should become the focal point of modern bioethics.

## Bio-Assessment of Technology

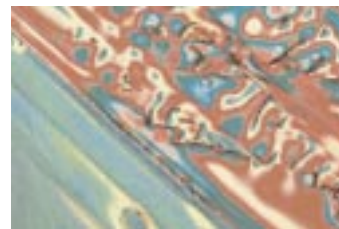
### Achieving viable peace

**T**he world seems to be witness to an endless stream of conflicts, wars, hostilities, civil disturbances and violence. Many of these conflicts stem from the differences of peoples in religion, ethnicity and culture. The placement of international borders often seems arbitrary, separating groups that share a sense of community and creating minorities within countries that are subjected to discrimination and abuse.

Some countries have managed to adapt to cultural diversity and allow a variety of ethnic, cultural and religious communities to thrive in harmony. In other countries, however, internecine violence seems to be the rule rather than the exception. On occasion, the violence and hatred in these

areas reach such extremes that physical separation of the opposing groups seems to be the only answer. However, separation is not always possible or desirable.

We believe the world must find new approaches to achieving peace. The differences that often separate peoples - culture, ethnicity, language and religion - are the wealth of humanity and should be cherished and protected. Just as the world's biology displays infinite variety, so too, our human communities are invaluable repositories of culture and diversity. When we view differing cultures with respect and tolerance, rather than hatred and mistrust, then the continuous state of conflict which ravages the world can be brought to an end.



### World Referendum and Bank of Ideas

#### World Referendum

**A**ccess to knowledge with modern communication technology enables global participation in the race to save the environment, activates entrepreneurial potential, and empowers sustainable development. As first proposed by B.I.O. in 1992, communication technology provides humanity with the unprecedented opportunity to dynamically voice its concern over environmental deterioration.

A World Referendum for every citizen on the planet to simultaneously cast a vote for the environment, would result in a global mobilisation for the reversal of destructive trends and would guarantee a brighter future.

#### Bank of Ideas

**T**o be effective in responding to environmental challenges, it is essential to stop reinventing the wheel. Owing to poorly coordinated efforts, valuable time and resources are wasted while damage to the environment persists. The knowledge and technology to prevent further destruction are available, but they have to be disseminated more efficiently. An electronic "Bank of Ideas," where any interested party may contribute information or thoughts concerning the environment, can promote an expedient transfer of know-how that will help to harness pollution and environmental deterioration and put an end to wasteful and damaging practices.

### Culture and mythos

**S**cience and technology alone cannot cope with growing environmental challenges. To be effective in reversing destructive trends, we need to draw inspiration from the deeply rooted past and seek wisdom in the time-spanning ideals that have defined human culture and tradition. "Mythos" and the ancient traditions of the world could help us to restore the vital equilibrium between nature and society that we seem to have lost.

In all human cultures, the origins of myth pre-date written records. They relate to all aspects of human life and experience, blending the divine with the mortal, man with nature, heaven with earth. Myths convey beliefs, superstition, ritual, social ideas, philosophy and ethical values. They speak of the ori-

gin of the universe and of man, of the deluge, of epic battles among the gods, and of men who knowingly and unknowingly interact with the gods. The wonders of nature come alive, and our interdependence with all living beings acquires more tangible dimensions.

We cannot envisage a future of hope without access to culture, active and full participation, meaningful citizenship. Meeting these challenges requires new ways of stimulating creativity in politics and policy-making, in technology, industry and commerce, in education and the arts, and in social and community development. Culture, tradition and mythos can inspire this creativity and help us to build a society of hope.



### Can you see?

*The magnificence of the lion  
The grace of the leaping tiger  
The blinding beauty of the flower  
The dance of the swan  
The rainbow  
Dolphins at play*

### Can you hear?

*Leaves whispering in the breeze  
The butterfly breaking its cocoon  
The song of the whales  
The cry of the birds  
The flutter of wings  
The melody of life*

### Can you feel?

*The sunlight setting electrons in motion  
The synthesis of energy  
The silence of growing plants  
The sonar of flying bats  
Bacteria fixing nitrogen*

### Cell membranes folding in eternal patterns

*The symmetry of DNA  
The twisting of proteins  
ATP as the universal currency  
The beauty of bios  
The beat of your heart  
embracing us all with love*

*Peace – New Values – Hope – Progress – Joy – Harmony – Quality of Life – Bios Vision*





# Environmental Ethics

unexpected. Today, we have the option of controlling unintended consequences if we place respect for and appreciation of bios at the core of society. For this endeavour to succeed, it is essential to pro-

mote the bio-assessment of technology, as proposed by B.I.O. since its inception in 1985. Through creative dialogue of a thesis, antithesis and synthesis of new values, technology can be assessed with a view to a

global appreciation and protection of the environment. The positive elements of progress can help to protect bios and can give a millennium vision to every academic and professional initiative.

## Thesis – Antithesis – Synthesis

### Knowledge and bios

Have we the wisdom to control progress or is it leading us to destruction? Phaethon, son of the sun god Helios, failed to control his father's celestial chariot because he lacked the wisdom to assume such a responsibility. Technology is a revelation of the truth, but also a tremendous responsibility. It can lead to light, it can also lead to destruction. We have to use the knowledge gained from science and technology to improve quality of life and create a better world

for the generations to come. We can be inspired by the beauty and wealth of cultural and historical diversity and build a society of hope, one that fully respects the environment and bios. Waves of energy and light, waves of communication, can bring us together as a global community to decide on a joint pathway for the future. New ethics have to govern our action and thought, in order to make full use of the benefits of progress and eliminate destructive trends.



### Green Salary

It is in everyone's long-term interest to build a society that enhances the potential of every citizen, based on initiatives for environmental appreciation and protection. Industrialisation and growth without concern for the environment will further marginalise disadvantaged groups in society and also seriously limit regional aspirations to prosperity, thus hindering efforts to fight poverty. Moreover, many young people are entering the labour market with few skills and even fewer opportunities for productive work.

tude and urgency of addressing the global problems of unemployment and environmental degradation suggest that a mutual solution may be available.

*A "green salary" in place of benefits can serve as an incentive in the development of policy to curb unemployment.*

The creation of new jobs, particularly for youth, is an imperative for relieving hunger and poverty and regenerating the world's economies. Rather than providing conventional benefit payments to the unemployed, they could be offered the

opportunity to work in some area related to the protection or restoration of the environment and earn a "green salary" for their contribution. The opportunities abound, as many environmental problems exist today that can be ameliorated by human intervention. If we are to succeed in reversing global environmental degradation and limit poverty, people everywhere must be imbued with a love and respect for the environment.

This points to the urgency of developing a knowledge base to create opportunities for sustainable livelihoods. Sustainable employment in the environmental field opens the possibilities for disadvantaged groups and youth to develop their employment potential and also creates new jobs and work opportunities. Moreover, the magni-

### International Court of the Environment

In view of continuing threats to the environment and peace, there has been a growing recognition that security and environmental justice cannot be achieved without effective institutional support and coordination.

ronment to solve environmental disputes and ensure global environmental stewardship. B.I.O.

*Guidelines for environmental responsibility can become a symbol of hope for the future.*

has been associated with these efforts since 1998, and has repeatedly emphasised that an International Court of the Environment, which has as its primary responsibility to provide guidelines

Distinguished scholars and legislators worldwide have committed themselves to promoting the creation of an International Court of the Envi-

for environmental responsibility, can become a symbol of hope and vision for the future.

### Accessibility and social justice

Environmental values and ethics must be directed towards the enhancement of quality of life as defined by all the stakeholders in society. A society that is open and accessible to all should be our goal for the millennium. Barriers to the disabled need to be identified and removed. Poverty and social exclusion can be tolerated no longer. Changing attitudes towards people with disabilities in the area of employment is a key issue, along with accessibility and social justice. The environment belongs to all. It is a precious gift, a fundamental human right. Accessibility to all elements

of society and the environment is a critical responsibility we have towards the present and the future. Barriers to access are not only related to physical obstacles. The concept of access is much more pervasive, encompassing information services, economic activity, job availability, education, culture, religion, and language, as well as the physical environment.



In addressing the need for universal access, we must take into account conceptual, political and practical perspectives, and encourage the involvement of every citizen in the development of a truly civil society.

### Bio-Agriculture



The bio-assessment of technology promotes ethical decision making and assesses the ethical impacts on agriculture and food production. Industries, citizens, and the ecosystem are key areas of agriculture which would benefit from an ethical approach, including organic farming, sustainable land management, integrated farm management and biopolicy with a view to the future.

Applications of plant biotechnology have been transferred to developing countries in order to address the critical need for a more sustainable agriculture that could provide sufficient food and a safer environment. However, genetically modified organisms (GMOs) are a major source of controversy and debate. The negative aspects seem to override possible options for the development of new drugs to treat disease. In the right bioethical context, defined by a true respect for and appreciation of bios, technology can seek to transcend negative paradigms and help to improve quality of life on a global level.

### Bio-Architecture

Bio-architecture seeks to create an environment which satisfies both human needs and environmental criteria with the goal of working towards increased environmental harmony in the built environment. Every living organism on Earth represents a perfectly functioning system, well adapted to the environment as a result of the millions of years of evolution. The structures of biological systems - be they beehives, termite nests, the cell membrane or other organelles - are available to humankind. The unravelling of the "microcosmos" and "macrocosmos" can provide new dimensions in architectural models and city planning. We may avail ourselves of nature as both an inspirational model as well as a view of the progress of bio-materials and a means to break away from stagnant patterns and realise the expanded possibilities afforded by technology and biocentric thinking.



### Bio-Business

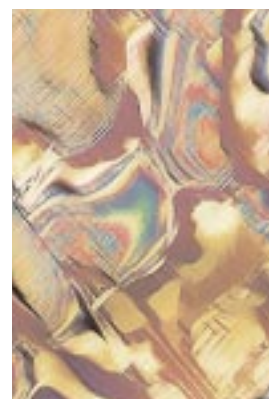


In the new millennium, corporate environments are changing. Managing the environmental programme in an industrial or commercial facility has become an increasingly complex and challenging assignment owing to the expanding maze of environmental laws and regulations and the growing public expectations regarding environmental protection. To be effective, programmes and policies promoting greener products, the use of fewer natural resources, and lower impacts and risks to the environment, must be based on an overall framework of environmental ethics, which will help to focus every activity on the consequential task of saving the environment and life on our planet. Businesses recognise that a good profile within the community can be strengthened by displaying a strong environmental ethic, with responsible energy policies playing a major part in this.

### Bio-Energy

The production and use of energy poses some important challenges to the development of environmental policy worldwide. Among the issues of greatest interest are the increasing role of renewable energy resources, the reduction of energy consumption and greenhouse gas emissions, as well as the changes in lifestyle necessary to ensure an environmentally sound and sustainable use of energy.

The aim of the bio-assessment of technology is to sensitise experts in the field of energy who in turn will look for alternatives, thereby removing the dependency on non-renewable resources in order to achieve a viable world economy. In the years to come, investments in energy, both to replace existing resources and to meet increasing energy requirements, will oblige economies to arbitrate among energy options taking into account environmental concerns. The opportunity should be seized to promote an environmentally sound energy policy on a global level.



### Bio-Tourism



Every sector of society needs to be involved in the race to save the environment. Tourism, an industry which generates over 10% of global gross domestic product and directly employs 200 million people, is no exception. Bio-tourism can lead to environmental sustainability and reduce poverty. It is an approach to travel and recreation in which the tourist comes into intimate contact with the environment and culture of the area being visited in a manner that is not destructive, but constructive. The tourism industry and the products constructed and promoted affect both the natural and cultural environment in irreversible ways. It is therefore crucial to develop effective ethical guidelines in tourism to prevent harmful activities to the environment and to ensure the future viability of the industry.



# Future Direction

## Desertification and biodiversity

Agriculture and the environment co-existed in relative harmony for centuries. The micro-organisms, plants and animals found in an agro ecosystem perform valuable ecological services which sustain the agricultural operation, such as recycling nutrients, decomposing organic matter, controlling pests, providing pollination, regulating water quality and controlling erosion. The organisms in an agro-ecosystem help the agricultural system recover from environmental stress, such as drought or infestation of pests, and resist disease. Natural features such as trees, woodlands, wetlands, ponds, and hedgerows situated in and adjacent to farming activities provide habitats for insects and small animals that protect biodiversity.

Modern agricultural practices have contributed to the loss of habitats and species, the reduction in soil organisms and the nutrient content of soils, and the erosion of biodiversity within agriculture. The number of crop varieties produced in the world has been drastically reduced. As genetic diversity in agriculture decreases, food security is placed at greater risk. Large quanti-

ties of chemical inputs are substituted for the lost biodiversity. Agriculture should return to practice of conserving habitat areas and working with biodiversity because it ultimately benefits the farmer as well as the environment. Ultimately, future food security will depend on conserving crop plant diversity and agricultural biodiversity.

Desertification results mostly from human agricultural activity. Excessive cultivation of land exhausts and depletes the soil, deforestation removes trees that hold the soil to the land, and overgrazing of livestock removes the grass cover of the land, making it vulnerable to erosion. Grazing livestock in arid areas compact the soil, increasing the amount of fine material that can be carried by wind or water and reducing the soil's ability to absorb water. Desertification causes the loss of agricultural lands, the spread of wildfires, and the proliferation of dust. Desertification is



closely linked to global warming and loss of biodiversity. Coordinated international programmes that protect ecological communities in desert areas and limit destructive human practices must be continued and expanded.

## Small scale farming in the developing world

Traditional societies were able to feed their people through small-scale, labour intensive farming. However, in many countries, current global social and economic trends are forcing the small farmer from his land.

Driven by economic gain, tribal elders and developers are converting lands around the city of Kumasi, Ghana to urban development, forcing small tenant farmers to leave the land and seek other employment. In Guatemala, the lure of urban growth and the cash economy are threatening an

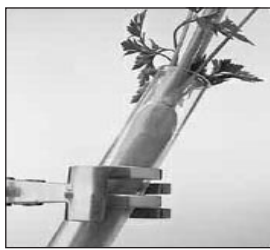
ancient Mayan tradition of maintaining the genetic diversity of maize. Behind these examples and behind many others in developing countries where farming is being abandoned are the industrialisation of agriculture in developed countries and world trade policies.

Policies must be adopted to reverse these trends and keep the small farmers in operation. These may include development of infrastructure, protection of agricultural lands, technical assistance, and credit and financial assistance.

## Biotechnology

The role that biotechnology can play in meeting the food requirements of the future is presently uncertain. Applications of plant biotechnology have been transferred to developing countries in order to address the critical need for a more sustainable agriculture that could provide sufficient food and a safer environment. Transgenic crops may have a significant role to play, but even the scientific community is divided on this point.

Clearly, public confidence in genetically modified foods must be won before these crops can become a major part of the solution to the world food crisis. Greater governmental support of biotechno-



logical research is needed to balance private efforts.

Governments also have a major part to play in winning public trust and steering research efforts into applications that will help the developing world. Furthermore, international standards of testing and safety of genetically modified foods need to be developed and widely accepted. The issue of intellectual property rights of biotechnological developments must also be addressed in a way that strikes a balance between the need for private investment and the needs of the public. Productive

new varieties must be developed for use in the developing countries where hunger is pervasive.

## Land for agriculture

Today, forests and other lands in a natural state in developing nations are being rapidly converted to agricultural use. At the same time, the explosive growth of cities in both developed and developing countries has taken over lands that were formerly in agricultural production.

In 1992, developing countries had about 0.2 hectares of arable land per capita, down from about 0.5 hectare per capita in 1961. Urban development on agricultural lands is especially pronounced in Africa, Europe and the USA. At a time when agricultural production must be greatly expanded to keep up with population growth, the world cannot afford to continue losing agricultural lands. National governments must adopt policies that restrict urban growth on agricultural lands to pre-

vent further loss of agricultural lands to urban development.



National and international programmes for food safety must be continued, expanded and, where needed, upgraded.

The European Union's recent White Paper on Food Safety sets a course for the application of the best scientific methodology to ensure food safety from

## Protecting natural resources

If the world is to achieve sustainability in agricultural production, it must reverse current trends of degrading its land, forest, soil and water resources. To better identify the specific actions that need to be taken, improved information is needed on existing conditions and trends.

### Water management

As the largest consumer of water, the agricultural sector must greatly improve its management of this vital resource. Practices must be adopted on a wide scale that prevent soil erosion and water pollution by fertilisers and pesticides. Advanced, water-saving irrigation technologies such as drip irrigation and irrigation scheduling have the potential to relieve the global water crisis; their widespread implementation must become a major priority throughout the world. At the national and regional levels, water resources must be better managed for entire river basins and ground water basins, which often straddle national boundaries, in order to provide sufficient water supplies for all users and prevent conflicts over water.

### Soil quality

A comprehensive approach to soil quality, such as that promoted by John Doran of the U.S. Agricultural Research Service, should be practiced on a broad scale to protect the world's soils from further degradation. In order to achieve sustainability in soil resources, a unified strategy is needed that incorporates all of the following elements: (1) conserving the organic matter of soil through reduced tilling, recycling plant and animal manures, and increasing plant diversity; (2) minimising soil erosion through conservation tillage and protective cover on the soil; (3) balancing agricultural production and the environment through conservation and integrated management systems; and (4) making better use of renewable resources by relying less on fossil fuels and petrochemicals, and more on renewable resources and biodiversity.

### Renewable energy sources

Renewal energy sources are available that can be used to generate energy directly on the farm. The technology has been developed for wind, solar and biomass energy and is becoming economically attractive. Farmers can not only meet their own



needs, but they can also generate additional energy for sale. Since commercial energy production is a major source of environmental pollution, release of greenhouse gases, and consumption of fossil fuels, the increased use of renewable energy would serve to lessen these adverse impacts. Governments, educational institutions and other organisations should actively promote these alternative energy sources and provide incentives for the implementation of renewable energy sources in agriculture.

### Data resources collection and analysis

Effective management of the world's land, soil and water resources requires the development of improved data resources, using aerial photography, earth satellite imagery and other advanced monitoring technologies. These technologies can provide a broad range of information on such diverse topics as climatic change, evapotranspiration rates, geographic patterns of agricultural production, status of water resources, soil moisture content, patterns of land use and vegetation, desertification, deforestation and others. Along with the data, technical analytical expertise is required to interpret the data and to develop recommended actions. Finally, those recommendations need to be considered by decision-makers and applied in the field, again with technical assistance. The use of improved agricultural practices that are developed through the analysis of natural resources data would result in the conservation of natural resources and protection of the environment. Much current earth science data collection is fragmented and used for a single purpose. Improved coordination and collaboration among international organisations and national governments would serve to make this data useful for a broad range of natural resource protection programmes.

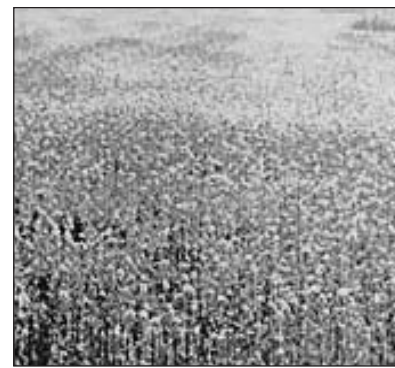
## A second Green Revolution

To provide food for the growing world population, the agricultural community along with supporting national programmes and research activities need to accelerate efforts to develop higher yield varieties, rediscover and apply traditional methods of agriculture, greatly expand assistance programmes, and resolve current uncertainties surrounding genetically modified foods.

It is clear that the world must continue to increase its agricultural output in order to feed future populations. This can be accomplished through a variety of methods that do not further degrade the environment. Recently developed strains of rice, corn and potatoes hold the promise of higher yields for these crops. At the same time, more marginal lands must be brought into cultivation and better farming practices need to be widely practiced. Traditional grain foods that have fallen into disuse need to be rediscovered and brought back into use. Urban agricultural operations need to be protected and maintained. Mariculture and aquaculture, or fish farming, both in salt-water and fresh water environments, are growing

fields, mainly in developing countries, that can supply an increasing amount of food. Fish products currently provide an estimated 17% of the world's animal protein for human consumption. Farming within forests is another method that can be used in certain areas to increase food production.

Agricultural development in many parts of the world desperately needs international assistance to



develop infrastructure, including water supply for irrigation and roads to carry products to markets. Farmers need technical and economic help in developing water-saving irrigation systems. They also need assistance in the proper application of fertilisers and pesticides, using neither excessive amounts which degrade soil and water, nor inadequate amounts which prevent optimal yields. Although some programmes of technical assistance are currently in place, such as the International Programme for Technology and Research in Irrigation and Drainage (IPTRID) and the African Conservation and Tillage Network (ACT), they are not of sufficient scale to fully address the needs.

# ns in Agriculture

the farm to the table. A rapid alert system will quickly spread information about any developing food safety problems. It is important that consumers

be kept informed about food safety issues. Labelling of food products is an important component of providing consumer information.

## Bio-agriculture and world food security

In view of growing environmental concerns agriculture and world food production have been challenged in unprecedented ways to reconsider their basic tenets. Irradiation, use of additives and pesticides, sustainable farming, deforestation, and genetically modified foods are rapidly becoming issues of global importance.

The world today is undergoing dangerous trends that are leading in the direction of major crises in poverty and hunger, environmental quality and the availability of natural resources. The global population is on track to increase by 50% by the year 2050 to nine billion. The ability of world agriculture to provide food for this many people is not presently clear.

Persistent poverty and hunger in the developing nations are stifling human productive capac-

ity. The world's biodiversity. Global warming and the spread of deserts are threatening to disrupt global patterns of agriculture.

*Existing agricultural practices which rely on chemical inputs and large-scale monocultural crop production have harmed the world's biodiversity.*

In order to reverse these trends of growing populations, widespread poverty and hunger, degraded environmental quality, and depletion of natural resources, new directions must be found. Decision-makers in international agencies, governments at the regional, national, and local levels, as well as educational institutions and non-governmental organisations must take steps to move agriculture away from the wasteful and unsustainable practices commonly used today to more sustainable and environmentally compatible methods of growing food. The principles of bio-agriculture must be widely applied in the production of food.

**Bio-agriculture** is a sustainable form of agriculture that combines elements of both traditional and modern methods. It produces food for all the people of the world without irreparably harming the environment or jeopardizing the ability to feed tomorrow's people. It incorporates many, if not all, of the following elements:

- ▶ promotes food security for everyone
- ▶ emphasises local production for local consumption
- ▶ provides agricultural employment in poverty-stricken areas
- ▶ is not driven solely by the profit motive
- ▶ minimises use of chemical inputs
- ▶ promotes and protects soil quality
- ▶ conserves water and energy resources
- ▶ does not contribute to the greenhouse effect and global warming
- ▶ protects biological biodiversity
- ▶ applies genetic diversity in crop types
- ▶ emphasises integrated pest management



ity. The availability of new land for agriculture is limited to marginal lands and forests. Soils have been degraded in many areas, and water resources are very limited. Existing agricultural practices which rely on chemical inputs and large-scale monocultural crop production have harmed

## Sustainable agriculture and organic farming

Agricultural activities are a major contributor to environmental devastation. Plant and animal species are being lost, virgin forests are being destroyed, wetlands are being filled, biodiversity is declining, and the world's heritage is suffering. Environmental problems such as deforestation, desertification, global warming and loss of biodiversity are closely linked. Efforts to address one problem area could have beneficial impacts on another. It is essential that environmental protection be factored into all governmental programmes concerning agriculture, water development and urban expansion in order to retard further global environmental degradation. In addition, agricultural production must become more sustainable both in developed and less developed countries. Virgin forests and other wildlife habitat areas must be protected, and the decline in the world's biodiversity must be reversed. In addition, steps must be taken to reverse the expansion of deserts.

Sustainable agricultural practices are vital in order to restore harmony and balance with the environment. Governments and private interests should disseminate information to farmers on the methods and benefits of organic farming, integrated pest management and the positive effects of biodiversity on agriculture. Organic agriculture is dependent on maintaining ecological balances and utilizing biological processes. It respects the natural capacity of plants, animals and the landscape in an effort to optimise the

quality of its product. Chemical inputs are reduced or eliminated and emphasis is placed on maintaining soil fertility through management practices such as producing compost from crop residue, tree litter and other organic residues; use of inter-

cropping and cover crops, particularly legumes, which add nutrients, stabilize the nitrogen and bring nutrients to the surface; use of mulch and green manures (crop residues, plant litter, and organic materials); integration of earthworms and other beneficial organisms into the

soil to enhance fertility, organic matter and nutrient recycling. Such practices maintain soil quality and help to control pests. The widespread adoption of farming methods that promote biodiversity rather than harm it is vital to the restoration of sustainability to agriculture and the production of the world's food supply for the future.



## Common Agricultural Policy in Europe

The Common Agricultural Policy (CAP) has been the biggest, the most contentious and the one with the largest budget of all the European Union's policy areas. The CAP is intended to ensure a fair standard of living for all those engaged in agriculture, to increase production in



order to provide an adequate supply of food for the population, and to encourage the modernisation of agriculture. Although not without controversy, the Common Agricultural Policy seeks the transfer of agricultural productivity gains to the rest of the economy and the release of manpower to other sectors within an environmentally friendly framework.

The EU has more power in agricultural policy than it has in any other policy area and it has passed more legislation on agriculture than in any other single policy area. The future prosperity of the EU's agricultural sector depends on its ability to profit from the domestic and international opportunities that have emerged in recent years. The Common Agricultural Policy has already gone a long way and has now the great potential to become a truly European model of agriculture for the 21st century.

On 10 July 2002, the European Commission



## Virgin forests

Tropical forests are important custodians of the world's biodiversity. Although they cover only 7% of the earth's surface, tropical forests are the home of about half of all the species on the earth including 70% of all the world's animals. Tropical forests contain about 70% of the world's vascular plants, 30% of all bird species and 90% of invertebrates.

Tropical rain forests are extremely diverse in tree species, with as many as 200 species per hectare. In addition to their habitat value, forests perform many other vital ecological functions. They help to regulate the climate, absorb atmospheric carbon and replenish the oxygen supply, absorb atmospheric moisture and store water for later use, regulate soil erosion and water quality. The world's 150 million indigenous peoples obtain all their material needs from the forest while living in harmony with it.

Conversely to their ecological value, forests are not very productive for agriculture. Their soils are not generally suitable for the annual planting of crops. Most of the nutrients are found in the plants and tree, and the soils quickly degrade. Further cultivation requires the application of chemical fertilisers or additional deforestation.

The destruction of virgin forests has profound

adopted a communication on the mid-term review of the Common Agricultural Policy (CAP), in accordance with the conclusions of the Berlin Council in March 1999.

At its meeting in Brussels in October 2002, the European Council took a budget decision on the financing of the CAP for the 2007-2013 period: there will be an annual ceiling for expenditure concerning direct market subsidies equivalent to the level of expenditure reached in 2006. The expenditure of the new Member States will be included in this levelled-off budget. On the other hand, no decision was made concerning finances for rural development.

On 21 January 2003, the European Commission published legislative proposals on the rules for implementing the CAP, drawing on the principles of the July 2002 mid-term review and adapting them to the budget framework agreed by the Council.

These proposals provoked intense debate, both in the European Parliament, where several resolutions were voted, notably one on horizontal aspects following the Cunha Report, and in the Committee of the Regions (the Savy Report). Under the Greek Presidency of the Union, the Agriculture Council met regularly and under several different circumstances, before concluding an agreement in Luxembourg on 26 June 2003.

The terms of this agreement take up the principles defended by the Commission, but major changes were introduced, notably concerning the decoupling of the amount farmers receive in direct subsidies and the quantities produced. Member States can now ultimately decide that if they do not want to have decoupling in their countries, they can instead introduce partial decoupling with a proportion of subsidies therefore remaining dependant on quantities produced.

The real review of community agricultural and rural development policy will take place during the 2007-2013 period. This review is already being looked at by European Commission departments. In this regard, the Commission has set up an internal "inter-commission" working group reflecting its member regions' geographical diversity (Mediterranean, Atlantic, Nordic, Islands). This group has met five times since April 2002. At the EU Summit meeting in Thessaloniki, Greece on 16 and 17 May 2003, it was declared that the thematic priorities of post-2006 regional policies should primarily take rural development into account.



## Bio-History – Facing the challenges of a new era and helping

Under the influence of our developing civilisation the environment has been drastically changed. These changes have given rise to a new milieu to which humanity itself, which has caused these changes, has not adapted. However, in order to survive and to protect the environment, we must now find a way not only to adjust to the changes in the environment, but also to compensate for the deleterious effects of our activities. By establishing close links between biological evolution and human history, we can face the challenges of a new era and create harmonious relations with the environment in order to overcome the serious environmental problems of our times.



### Asymmetric oscillations

*Oscillations of time  
come and go  
in a dimension  
bigger or smaller than space  
asymmetric but beautiful  
new discoveries  
of decaying brilliance*

A. Vlavianos-Arvanitis, 1983

*Oscillations, A Collection of Poems*

### Understanding bio-history – new perspectives

Ever since life appeared on Earth, living organisms have engaged themselves in a perpetual process of adaptation to their natural environment, as life comes from and depends on nature. Through this struggle, species have been developing and creating their identities. But the only species that developed extensively enough to become conscious of its bio-environment and provoke alterations through interventions is the human species.

All of human development during the last few thousand years could be interpreted as the result of the struggle for adaptation to the bio-environment. From the most

basic needs of survival (water, food, shelter, energy) towards the absolute domination of nature, the human being has been observing, deifying, thinking, understanding, controlling and dominating the world into which he was born. Out of this bilateral exchange, behavioural patterns, culture, experience, knowledge and science have resulted.

The consequences of this millennium-long development have had such a great and sometimes devastating impact on the environment that the conservation and protection of bios has grown into one of the most acute needs at the dawn of the third millennium.

We have to learn from the past,

and have to realise that most of the fields of bio-environmental interaction between man and nature have already occupied the conscious thought or unconscious knowledge in previous times and other cultures.

Protection of nature, the urge to dominate it and to have the choice of decision upon natural phenomena, is to be observed in every human society or culture, independently from its geographical location or chronological appearance. These matters become of an important didactic interest in our times.

The understanding of changing environmental circumstances

and of the fluidity of the concept of environmental protection requires the development of a critical appreciation of the numerous influences affecting the interactions between humanity and the environment. Bio-history can be seen as a new promising research direction, of interest both to the scientific community and to the general public. Its aim is to bring history and the sciences closer together, with the intention of constructing long and well-founded perspectives on environmental issues, past and present. As part of an integrated bio-centric education, the main ideas of bio-history need to be promoted worldwide.

### Water and the development of civilisation

Water is one of the crucial components regulating human life and survival. Regions with either complete absence or threatening abundance of water have obliged men to adapt to this challenging environment and fight systematically and intelligently against aridity or flood. Regions with no rain are very hostile towards human installation. This absence of rainwater can be replaced by the use of irrigation from rivers.

Thus, it is no coincidence that exactly in the cradles of the big rivers, such as the Tigris and Euphrates, the Hindus, the Yellow River (Huang He), the Nile or the Niger, the Amazon and others, human beings proceeded first towards the systematic organisation and technical controlling of natural forces. Out of this challenging, difficult but, sometimes, very rich environment grew the first large agricultural civilisations. The combination

of need and opportunity led to high technological and political achievements. People were dependent on the river waters to survive, so they invested huge amounts of human effort into the construction of canals, dams and dikes.

Failure to control natural forces led to immediate disasters or gradual degradation of the environment, including floods, changing river courses, meagre harvests and famine as a result of excess salt concentration in the soil.

The human need for water is universal, independent from the geographical region or the chronological period in cause. Myths concerned with this basic need are widespread in various cultures, testifying this major reality of human life.

Rivers are indispensable, life-ensuring natural elements. On riverbanks human settlements experienced the slow development from Palaeolithic

to Neolithic agrarian societies. The river provides food, essential quantities of water and the possibility to travel.

In the Balkan region, some of the oldest human settlements are sys-

*The human need for water is universal, independent from geographical regions or chronological periods.*

tematically identified near rivers. The oldest Neolithic settlement ever excavated and the oldest conserved wooden boat are dated back to the 4th millennium B.C.

In Central Europe, the Danube has always been a cultural liaison between distant nations, and the wealth pro-

duced by the river is not negligible. One of the most ancient Stone Age figurines representing an obese woman, the so-called Venus from Willendorf in Austria, has been found on the northern banks of the Danube, in the environs of Vienna. This is only one example of the fertility cults developed near the life-giving rivers. Similar evidence comes from the east, showing how widespread between the Middle East and Europe this Stone-Age fertility cult was.

Rivers have been deified, connected with myths, stories about mermaids or ghosts. The river is something man has to traverse; it is a passage of some kind. The very ancient feeling of respect man experiences for this vital natural element has led to the development of superstitions and beliefs.

One of the most famous is the Homeric description of Odysseus' visit to the underworld, where he navigated the underworld Acheron River in Epirus. The ancient Greeks believed that the passage to the world of the dead leads through this river, controlled by the boat pilot. The dead had to be equipped with the so-called *danake*, often put in the mouth of the dead, in order to pay for transport across the river.



### Food and nutrition – defining cultural identity and social structure

Without any doubt, people were always preoccupied with the quality of food consumed. This is an essential prerequisite for health, and



dietary attention is not restricted to our modern over-consuming societies. Whether we consider the staple crops common in each continent, or the transition from foraging to farming, or

religious restrictions concerning food preparation or consumption, we realise that a bio-historical investigation of human culture is very intensely connected to nutritional matters. Nutrition is a basic element of cultural identity, and it influences the way of living, social structure (large-scale agriculture engenders centralised urban societies as opposed to nomadic hunters), and health.

In 1999, a very original exhibit was organised at the National Archaeological Museum in Athens, Greece, as a result of an exemplary international and interdisciplinary collaboration. Through bioarchaeological, zoological, anthropological, and archaeological analyses, the nutritional backgrounds of two major cultures which flourished in Greece during the second millennium BCE were examined: the Minoans in Crete and the

Myceneans, who inhabited many regions in continental Greece.

The study began with the examination of ceramic artefacts, the clay vessels used for the preparation and consumption of food. Organic remains on the clay sherds were analysed. The results of the analysis were astonish-

*Whether we consider the staple crops common in each continent or the transition from foraging to farming, nutrition is a basic element of cultural identity, influencing the way of living, social structure and health.*

ing, proving that every single examined sherd revealed some kind of information about the products it had once contained. Thus, through chemical analysis, long speculated theories about the nutritional habits of early societies would be checked and re-examined upon a purely scientific basis. In addi-

tion, skeletal remains from 227 tombs and various sites were examined, in search of the protein content of diet (stable isotope analysis). As a result, a generally held theory about Bronze Age diet, that meat was reserved for high days and holidays, has been disproved. All Bronze Age results indicate that Minoans and Myceneans had diets rich in animal protein. This has been shown for poor as for rich populations. Another surprise was that the population buried in the cemetery of Armenoi in Central Crete was not eating fish. A Neolithic bowl from Cave Gerani in Rethymnon contained vegetable stew.

Honey was used as a sweetener for drinks. Wine was resinated, sometimes with pine resin, proving that the

Greek *retsina* is more than 3,500 years old. Mixed fermented beverages (wine, beer and mead) have been attested for both Crete and the Mainland. Perfume industries have been traced, using oil of iris, an extremely valuable product even today.

The production of olive oil in Crete, the consumption of meat, leafy vegetables, fruit, olive oil, stew, lentils in various palatial settlements of Crete and of pork, cereals, pulses and honey at Mycenaean Thebes, are revealed by the analysis of the sherds. This information can be compared to iconographic representations or references in later texts - like Homer - and contribute towards a lively bioarchaeological examination of the organic past of these major European civilisations.



## to establish harmonious relations with the bio-environment

**L**ife has been tested in unlimited varieties for millions of years, and the most viable species have survived through the powerful selection of evolution. A major direction for bio-history concerns the interactions between the biosphere and humankind in different historical eras. It also concerns the ways that the environment has influenced the evolution of human civilisation and has shaped our societies, present and past. Environmental consciousness in the course of human history can be distinguished by a direct focus on action, the progress of mythology, the philosophical interpretation of the natural world and an integrated conception of the environment. These and other important concepts are featured in the volume on bio-history, recently published in "Bio-Syllabus for European Environmental Education" (see p. 4-6). Some excerpts are included below.

### Cultural evolution and bios

Concerns about human cultural evolution were first expressed through literary studies, as most of the sciences searched for their scientific fore-runners and "godfathers" in the literary treasures of the distant classical or more recent past.

During the 19th century, out of the movements of neoclassicism and romanticism and in combination with the military expeditions of European countries into the regions of ancient civilisations of the Mediterranean and the Middle East, new branches of humanitarian sciences were born, such as Classical Archaeology, Egyptology, Oriental and Eastern Asian Studies or, later, Amerindian studies.

In the first decades of the 20th century dynamic concern was invested in migration studies, race distinction and definition, often using so-called "objective history" as an argument for resolving actual geopolitical crises or political theories.

After the Second World War, humanitarian studies again intensively reflected the preoccupations of post-war societies. Social, economic and political studies, sexuality and gender studies, women's studies, and studies of common everyday life in Greek, Roman or Byzantine antiquity or medieval Europe attracted as much attention as some decades ago the highest artistic expression of the various cultural elites, or classical Greek philosophy. Archaeologists no longer reserved their attention to intact, precious, illustrated vases or marble statues, but began to systematically col-

lect and observe with the same attention common clay dishes, traces of human waste or the accidental impressions of leaves or hand-woven baskets on scattered prehistoric utilitarian pottery. History textbooks were rewritten, examining not only the big events but also the histories of the simple anonymous people and their natural and material environments.

As the modern world we are living in, with its dangers and challenges, has awakened an increased awareness of our natural environment, humanitarian research also started expanding into that direction. During the second half of the 20th century, interest in various aspects of the natural environment in relation to human history has systematically intensified. Today, major reference works on all thinkable subjects are abundant, representing various

directions of research and scientific specialisation. Aspects and points of view, analysis systems and methods vary of course considerably, but one common truth does not seem to be contested: the importance of the natural environment for the development of human culture in its various forms cannot be over-stressed. New methods and technologies allow us today to read, observe, collect and extract information about environmental history, which gives us equally pertinent and exact knowledge as ancient texts, inscriptions, iconography or sheer tradition of cultural behaviour, all of which used to monopolise for a long period of time the interest of researchers.

*By enabling the study of the past through bio-history we can help in shaping the future.*

*Interest in various aspects of the natural environment in relation to human history has systematically intensified.*

### Deification of nature

Since the oldest ages, nature has inspired the feeling of divine presence, and Greek mythology is a very good example of this fact. All the natural phenomena were attributed to some divine intervention. Man was confronted with dangers, such as fire, lightning, floods, earthquakes, and aridity, and depended on the fertility of the earth, on the purity of water, on rain, on weather conditions and winds for survival.

According to legend, fire belonged to the gods and was stolen from them by the Titan Prometheus and given to men. Hephaistos, the ironsmith, handled fire. Zeus was responsible for thunder, lightning and rain. The very rare sanctuaries of Zeus are often devoted to Zeus Ombrios, the rain god. Poseidon was the master of the oceans, provoking the severe storms of the sea, but he was also responsible for earthquakes and volcanic activity. Rivers were also deified. In Egypt,

the Nile was venerated as the god *Hapy*, later to become *Apis*, the Hellenistic god of fertility. In Greek mythology we have male personifications, such as the river Acheloos, or the rivers Alpheios and Kladeos depicted on the

*Bios can become the model for attaining the desired dimensions and expanding strategies for future society based on a vision of hope.*

eastern pediment of the temple of Zeus in Olympia. Springs were inhabited by female nymphs, like the famous nymph Arethousa who became the object of Acheloos' desperate love. In order to avoid him, she traversed the Ionian sea to Sicily, but the river Acheloos followed her through the sea. The personification of rivers can

be followed into the Christian era. The most frequent example is the iconography of Christ's baptism in the river Jordan, where Byzantine artists often depict Jordan in the form of an old bearded man. Soil fertility and crop yield quality were the domain of the goddess Demeter, goddess of agriculture, also known as Ceres in Roman mythology. Years of aridity and poor crops are mentioned in the creation myth of the Eleusinian Mysteries of Demeter and remind us of a similar phenomenon reported in the Old Testament, regarding the plague of the seven slim years in Egypt.



### Industrialisation and population growth



Industrialisation and intense population growth have fundamentally altered the relationship between humans and their natural environment. Tradi-

tionally nature was seen as a hostile force. It could bring about floods, cold winters, or poor harvests, making life miserable, causing much suffering and even leading to numerous deaths.

Today, it seems that the situation has changed completely. Nature and the environment seem to be at the mercy of our actions and their protection seems to be necessary for future generations.

For the greatest portion of human history, mankind relied on hunting, fishing and gathering of naturally grown fruits and vegetables for its food supply. Only in the last 10,000 years has humanity begun to produce its own food through the planting of crops and the domestication of animals. These developments resulted in a more stat-

ic population and the emergence of towns and cities. For defensive and later for commercial purposes, people chose to live in close proximity to one another. The emergence of agriculture also coincided with a period of widespread climatic and ecological change.

Scientists do not agree on whether the development of agriculture resulted from the growth in population and a declining resource base or from environmental causes. In any event, the development of agriculture, along with the eventual development of a transportation infrastructure and distribution networks, set the stage for the growth and urbanisation of the world's population, a condition resulting in numerous effects on culture and health.

### Health and disease – discoveries from bio-archaeology

The recent scientific branch of bio-archaeology provides information about health in a very distant past. Skeletons can be examined under modern aspects. Bones, teeth and even DNA contribute to the better understanding of the health or diseases common in bygone cultures.

The thorough examination of numerous skeletons of Native Americans from the south-eastern part of the Central American continent, from the Great Basin to the Atlantic coast, has led to the explicit observation that the transition from hunting-gathering to farming has engendered an intense deterioration of human health. The change which human society underwent in order to progress from food collection to food production is the basis of everything we associate today with modern life. Bioarchaeology reveals that there was a health cost associated with this change, more illness, a poorer quality of life and more work.

The shift from foraging to farming was one of the most comprehensive adaptive shifts to take place in the evolution of man. As opposed to the widely assumed theory that hunter-gath-

*A health cost was associated with the change from food collection to production - more illness, poorer quality of life and more work.*

erers had a very simple existence whereas farmers practicing agriculture had advanced in civilisation, things prove to have been different. The examination of skeletal remains from St. Catherine's Island revealed very early material, some of the bones dating to the 1st millennium BCE, and generally antedating the 12th century AD, the time at which corn was adopted by

prehistoric native populations of the island, known as the "Guale." Corn is deficient in calcium and is deficient in or entirely lacking the three of the nine essential amino acids. It also contains the chemical phytate, which prohibits iron absorption, and it has a high sugar content.

These negative attributes would affect the health and well-being of people whose dietary base includes large amounts of corn. In addition, the kind of physical labour invested into corn farming is very different from the one invested into foraging and collecting. These changes should be revealed by changes in the prevalence of osteoarthritis and bone structure.

The examination of teeth revealed important deterioration concerning dental hypoplasias (enamel defects) for prehistoric farmers as opposed to foragers. This can be observed when comparing earlier Georgia coastal foragers with the later farmers, suggest-

ing that the environmental component may be much more important than the genetic component in explaining these changes.

Prehistoric Georgia farmers have



much more caries lesions than their foraging predecessors. Caries are a result of the kind of food consumed and also the way this food is prepared. Carbohydrates, especially simple sugars, are mostly responsible for dietary factors that cause tooth decay. Also, populations that boil their food, especially

carbohydrates, into soft mush are more susceptible to tooth decay. Comparison between males and females reveals that women have a higher caries percentage than men, as their lifestyle exposed them more to food inducing caries. Males involved in hunting must also have received more meat than women.

The incidence of bone infections also seems to increase. Various diseases, like venereal syphilis, can provoke swelling of the limb bones such as the tibia. Probably, this indicates a general decline in community health, as the Georgia coastal population became larger and more sedentary and more aggregated in permanent or semi-permanent communities.

Interpersonal contacts increased, and infectious pathogens spread more easily from one person to another. The accumulation of human waste could have contributed to the spreading of infections and other diseases.

## Bioethics in education – Building bridges for co-operation Russia, India, Colombia

### Youth Bios Olympiads

With the support and unfailing commitment of Professor Alexander Shishkin, the Youth Bios Olympiads are held annually in St. Petersburg, with the participation of children, students and young adults from all parts of Russia and other countries.

The Youth Bios Olympiads are a manifestation of creativity and vision - a celebration of science, culture and the environment. Through educational projects, song, dance, music and athletic competitions, the Youth Bios Olympiads impart a message of environmental appreciation as a vision of hope for the future. This year's VIIIth Youth Bios Olympiad was held on September 19-23 with the contribution of hundreds of talented and charismatic young participants.

Overall, the Youth Bios Olympiads have as their mission to promote: new approaches and

methods of solving environmental problems; promising environmental youth projects; environmental development and the furtherance of biocentric values in society; bio-environmental, bio-cultural and bio-athletic values.

Bios Schools, a project complementary to the Youth Bios Olympiads, are also organised annually in the St. Petersburg region. The 30th Bios School will be held in November 2003. The purpose of this initiative is to encourage school children and students to develop a greater awareness of nature and the environment.

### Bioethics and international dialogue

Dr. Jayapaul Azariah, President of the All India Bioethics Association, invited the B.I.O. President to participate as keynote speaker in the Conference on "Nature, Science, Technology & Religion: Our New Bioethical Issues -

An International Dialogue," to be held on 25-29 November 2003, in Chennai, India.

### Youth Bios Olympiads

An international celebration of culture, science and education for bios.

The aim of the conference is to provide a common ground for diverse people from different backgrounds to face the challenges of the ethical, legal and social implications that arise due to scientific and technological advances, besides identifying common areas for fruitful co-operation in these areas of common interest.

Due to the rapid strides of science and technology, humanity is facing new challenges. Dia-

logue is an effective method of communication that builds bridges among people and can thus help us comprehend the intrinsic vital value in nature, which is the web of human survival in the biosphere.

### Co-operation in bioethics and biopolitics

The President of the General Assembly of Iberoamericana University in Bogota, Colombia, Professor Miguel Patino Posse, invited the Biopolitics International Organisation and the International University for the Bio-Environment (I.U.B.E.) to offer their co-operation in the development of programmes and studies in bioethics and biopolitics. The aim of these studies will be to promote bioethics in every academic discipline. It is time for bioethics to exit the strict confines of the medical sciences and apply to every human endeavour.

## Environment and peace – Profit for society Bio-education in business

International co-operation in environmental protection and peace, as well as the role of business as a powerful driver for sustainability, were the focal points of a B.I.O. roundtable discussion themed "Environment and peace - profit for society," which convened within the framework of the Athens Money Show on May 31, 2003.

The discussion was chaired by the B.I.O. President, Dr. Agni Vlavianos-Arvanitis, who stressed the importance of "green" diplomacy as a vehicle for

peace. "For the past 18 years, B.I.O. has promoted bio-diplomacy as an international effort in defence of the environment. This effort concerns every individual on the planet and requires a strong commitment to protect bios. Diplomats, civic leaders, business executives, scholars, scientists and all concerned citizens need to actively engage in the race to save the environment."

Panayotis Koutsikos, Chairman of the Greek Representative Committee in the BSEC Business Council, discussed some of the important steps taken by BSEC (Black Sea Economic Co-operation) member countries in the field of environmental protection. He also mentioned that BSEC and the United Nations Industrial Development Organisation have recently launched a joint initiative for the promotion of a network on cleaner production and the protection of areas of high recreational value. These initiatives strengthen international co-operation and serve as models

for business development. "We cannot allow further squandering of natural resources. Governments and people must realise that the problem of atmospheric, ground and water pollution affects us all."

Anastasios Balafoutas, Chairman of the Hellenic-German Chamber of Industry and Commerce, explained that one of the most important functions of the Chamber is to promote co-operation between Greek and German companies in the application of modern environmental

technologies and in the transfer of know-how. He also emphasised that major German manufacturers, such as Daimler Chrysler and AEG, place environmental protection above profits and reward employees who demonstrate environmental initiative. "The Hellenic-German Chamber of Industry and Commerce is ready to meet new challenges and to take on initiatives that will contribute to the improvement of business co-operation and to the promotion of sustainable development."

Panayotis Karafotias, Professor of International Relations at the University of Indianapolis Athens, focused on the need for a revised role for the United Nations in view of escalating global crises. "Catharsis in the global tragedy of war and environmental destruction will only come when humanity transcends moral sepsis and starts pursuing a future of hope, freedom, democracy, justice and environmental harmony. This is the



Profit and values for peace were issues extensively discussed at the Athens Money Show. From left to right: Professor Panayotis Karafotias; Anastasios Balafoutas, Chairman of the Hellenic-German Chamber of Industry and Commerce; Dr. Agni Vlavianos-Arvanitis, B.I.O. President and Founder; Panayotis Koutsikos, Chairman of the Greek Representative Committee in the BSEC Business Council; Professor Mary Zilemenou, Chairman of the Ioannis Capodistrias Centre for European Studies; and Anastasios Varelas, Chairman of the Cultural Horizons Organisation.

true meaning of profit."

The harmony of nature as a paradigm in ancient Greek culture was discussed by Professor Mary Zilemenou, Chairman of the Ioannis Capodistrias Centre for European Studies. "Modern environmental thinking focuses on the interdependence of man and the environment," she explained. "In ancient Greek culture this interdependence is not only limited to the rational use of natural resources. Rather, it reflects a socio-political system that, without ignoring the close relationship between man and nature, seeks to promote human development through cul-

ture, the arts and education."

In conclusion, Anastasios Varelas, Chairman of the Cultural Horizons Organisation, saluted B.I.O.'s longstanding efforts to promote the environment through the Olympic Games and added that "the Olympic Games and the Olympic Spirit should symbolise the epitome of sportsmanship. The genuine value of the Olympic Games lies in their inherent philosophy of peace and quality of life."

To escape the prevalent illusions of 'freedom' citizens must become responsible and active, and resist the pressures of destruction."

## Agriculture and health – New bio-educational modules

### Agriculture and the environment

Great imbalances exist at national, regional and local levels between the need for food and its availability. Each day, about 800 million people in the developing world - that is 18% of the population - do not have enough to eat. Malnutrition plays a role in the deaths of about 6 million children in these countries annually.

Agriculture has made great strides in increasing food production in recent years through more intensive use of fertilisers, application of pesticides, increased use of irrigation, improved crop varieties, and to a lesser extent, the conversion of additional lands to agricultural use. These strides have resulted in intense environmental pressures, however, making agriculture a major agent of environmental change.

Agricultural activ-



ity worldwide is estimated to be responsible for 9% of total greenhouse gas emissions. Farming also contributes to pollution of the air and water. The development of biotechnology holds the promise of greater yields through development of pest resistant species, more diversity, cheaper production and reduced environmental impacts. However, this development has not been without controversy.

The world must find ways to feed its people without irreparably damaging the natural environment. Global and regional agricultural management will require the proper tools, including improved data collection and analysis. Policy-makers also need to take into account the issues of food safety, ethics and equity.

These issues are extensively addressed in the teaching mod-

ule on "Environmental Dimensions in Agriculture, Forestry and Food Production," developed and written by B.I.O. for the "Bios & Environment Transnational Network" project of the Leonardo da Vinci Community Action Programme. B.I.O. participates as a core partner in the project, along with organisations and institutions from 16 European countries. The project is coordinated by Action Link/Action Synergy S.A.

### Implications for health

The second teaching module prepared by B.I.O. for the project is themed "Health and the Bio-Environment - Scientific Advances and Environmental Ethics" and provides knowledge and information on a range of health impacts and their links to the environment and pollution. The aim is to stimulate thinking and further study and to urge the reader to gain an appreciation of the need for environmental ethics to apply to every human endeavour.

The protection of human health should be foremost among our efforts. Yet it seems that the pursuit of wealth and desire for material comforts receive top priority, and it is these activities that are hastening the degradation of the global environment. No amount of material gain can out-

weigh a person's need for health. Individual choices in location of habitation, means of transport, choice of foods, style of recreation, when multiplied millions of times over, result in a polluted planet.

### Leonardo da Vinci European Union Programme

The decision-makers of the world must understand the consequences of their choices and make less destructive decisions. Lifestyle choices in areas such as energy conservation, use of non-polluting transportation technologies, consumption of organically-grown foods, and construction with natural materials, could go far in alleviating the problems of environmental pollution.

We are witnessing rapid and unprecedented advances in science, medicine, technology and biotechnology that affect all aspects of the natural and human environments. Many of these advances have profound ethical and moral implications. Progress cannot be halted but with the right ethical framework technology can be guided on a course that will benefit humanity and the environment.

## National Sovereignty and Universal Challenges – Choices for the World after Iraq Foundation in Support of the Commission on Globalisation & State of the World Forum

What are the prospects for peace in the aftermath of war? Does the effective management of the global system require reworking the national state system? How does the international community, under current conditions, actually solve the problems at hand? How do we use national sovereignty effectively to address common world challenges? These questions and other pressing global problems were debated by leading figures in international politics and representatives of international organisations, the private sector, civil society, academia and the press, at a meeting organised by the Foundation in Support of the Commission on Globalisation and by the State of the World Forum, in Brussels, on 18-20 June 2003.

The B.I.O. President was invited by **James Garrison**, President of the State of the World Forum, to participate in the meeting. The discussions were moderated by **Gordon Smith**, Director of the Centre for Global Studies at the University of Victoria and f. Deputy Minister of Foreign Affairs, Canada, and by **Tom Spencer**, Executive Director of the European Centre for Public Affairs, UK, and were attended by

many distinguished speakers, including, among others: **Pat Cox**, President, the European Parliament; **Georges Berthoin**, Honorary Chairman, Jean Monnet Association and European Chairman of the Trilateral Commission (1975-1992); **Jean-Francois Rischard**, Vice-President for Europe, World Bank-Paris; **His Royal Highness Prince El Hassan Bin Talal of Jordan**; **Anders Wijkman**, MEP, Vice-President GLOBE International and Deputy Secretary General UN (1995-1997); **Pierre Defraigne**, Deputy Director General, DG Trade, European Commission; **Lloyd Axworthy**, Minister of Foreign Affairs, Canada (1996-2000); **Peter Goldmark**, CEO, International Herald Tribune; **Alpesh Chokshi**, Senior

Vice-President, American Express Corporation; **Thorhjoern Jagland**, Prime Minister of Norway (1996-1997); **Helle Dale**, Deputy Director, Heritage Foundation Davis Institute for International Policy Studies; **Gareth Evans**, President, International Crisis Group; **Jeremy Kinsman**, Canadian Ambassador to the EU; **Maria Livanos Cattau**, Secretary General, International Chamber of Commerce; **Pascal Lamy**, European Union Commissioner for Trade; **James Woolsey**, Director, Central Intelligence Agency (1993-1995); **Olivier Giscard d'Estaing**, Chairman of the Action Committee for a World Parliament.

**What are universal challenges?**  
Many speakers agreed on the need for broader agreement on exactly which global challenges are most urgent.

Among the list were climate change, unsustainable resource consumption and depletion, weapons of mass destruction, terrorism, the North-South divide, human rights, labour rights, international financial reform, global public health challenges such as SARS or HIV, low intensity conflict, failed

or failing states, migration, technological innovations such as GM crops, biotechnology and nanotechnology, and the generalised decline in trust in institutions of all shapes and sizes. Several participants placed particular emphasis on Africa as crucial, for reasons of security as well as morality: what would be the long term implications of up to forty million AIDS orphans and a workforce eviscerated by the effects of the illness?

**Where next for the EU?**  
The war on Iraq had evidently provoked a considerable degree of soul-searching among European attendees. For some attendees, Iraq exemplified in stark terms the failure of the

principle of human relationships throughout history, but as yet, has not been applied very successfully to international relations. Former Canadian Foreign Minister **Lloyd Axworthy** argued that security has now transcended the nation-state and become an individual concern: innocent civilians can be targeted precisely because they are innocent. As a result, sovereignty could now be re-interpreted as the ability of a state to protect its citizens; when a state will not or cannot do so, then intervention or abrogation of sovereignty is justified. This is particularly acute in the case of failed states, which can all too easily become breeding grounds for terrorism.

with the arrival of the new entrant countries to the East.

**Whither the state? Sovereignty in the 21st Century**  
The question of national sovereignty sat at the heart of most, if not all, conversations at the conference. Of particular importance, according to both **Gareth Evans** and **Georges Berthoin**, was the need to reconceptualise the idea of "the national interest." As Evans observed, co-operation tends to breed more co-operation; this principle of reciprocity has been a basic

*There is general agreement that the UN system needs to become less bureaucratic, and more responsive and transparent.*

Some contributors expressed their belief in the need for either reform of the UN system or new global governance frameworks that could complement existing institutions and processes. There was general agreement that the UN system needs to become less bureaucratic and more meritocratic, responsive and transparent. One idea that found support was the "e-Parliament" to draw together national elected representatives through

a global databases and virtual ad-hoc issue groups. Others suggested the need for the UN to include a formal Parliamentary Assembly. Some participants noted a possible trade-off between democracy and participation on the one hand, and effectiveness and speed of response on the other. **Jean Francois Rischard**, European VP for the World Bank, suggested that new institutions were the last thing the world needed in order to address global challenges; and whilst a world government might be an appealing idea, it was politically unfeasible. Instead, he suggested new "Global

Social Development observed, perhaps there are global values after all: the Koran and the Old and New Testament are 95% syncretic. One might take this allusion further and note that all of the world's major religions are based in large part on the same core, which Leibniz termed the philosophia perennis.

**Juan de Costa** offered a view that all ethical values - whether capitalist, anarchist or something else again - had something of value to offer. If Israelis could admire Palestinians for the integrity of their values, and vice versa, then perhaps we could really lay claim to having made a significant degree of moral progress.

**UN reform - global governance**  
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Issue Networks": ad hoc groupings convened by international organisations to address a specific concern, which would first produce norms on the issue, and then implement these norms through increasing the breadth of participation in the Networks over time.

**Paradigms and values**

One of the most interesting features of the conference was that conversation was by no means limited to institutions, processes, policies and risks. Attitudes to global governance may also be dictated largely by values. As **Mervat Badawi**, the Director of Kuwait's Arab Fund for Economic and



## Hellenism and Universality – AHEPA Symposium held in Athens, May 2003

The role of Hellenism in the world amid ongoing globalisation based on the Olympic ideals was the focus of an American Hellenic Educational Progressive Association (AHEPA) symposium convened by the District #25 AHEPA Family in Athens, on May 23-25, 2003. The Symposium was held at the historic Old Parliament Building and at the Grande Bretagne Hotel.

The Symposium's opening ceremony at the Old Parliament Building honoured over 30 distinguished individuals, who, through their life's work and professional and voluntary endeavours, have significantly contributed to humanity and Hellenism. Those honoured include members of the Greek Orthodox clergy, the General Secretary of the Archons of the Ecumenical Patriarchate, members of the scientific community, philanthropists, diplomats, civic leaders, artists and journalists.

**Science brings the world together**

On May 24, at the Grande Bretagne Hotel Ballroom, more than 150 symposium attendees had a unique opportunity to listen to a roundtable discussion on "The Role of Science in Euro-American Relations." The discussion was chaired by the B.I.O. President and featured noted Greek-American scientists, **Dr. Aris Patrinos**, **Dr. Dimitris Nanopoulos** and **Dr. Stamatis Krimizis**, as keynote speakers.

The intricate links among the macrocosmos, the cosmos and the microcosmos were the main focus of the discussion, which aimed at placing our role as human beings on this planet into perspective. The B.I.O. President emphasised the interdependence among all forms of life and underpinned our responsibility to protect and cherish this interdependence. She then asked each of the other three speakers to present their thoughts and to assess



Discussion participants, from left to right: **Dr. Stamatis Krimizis**, Space Programmes Director at Johns Hopkins University; **Dr. Agni Vlavianos-Arvanitis**, B.I.O. President and Founder; **Dr. Aris Patrinos**, Director of the US Department of Energy's Genome Programme; and **Dr. Dimitris Nanopoulos**, holder of the Mitchell/Heep Chair in High Energy Physics at Texas A&M University and Director of the Houston Advanced Research Centre Astroparticle Physics Group.

the future of our planet.

**Dr. Stamatis Krimizis**, distinguished NASA scientist and Space Programmes Director at Johns Hopkins University, appeared quite optimistic,

stressing the great importance of progress in space technology and DNA decoding as key to the successful treatment of disease.

**Dr. Dimitris Nanopoulos**, holder

of the Mitchell/Heep Chair in High Energy Physics at Texas A&M University and Director of the Houston Advanced Research Centre Astroparticle Physics Group, was also optimistic about the future and explained that: "We have learned a lot concerning the universe and its cosmology, but we need to change our attitudes."

The more we know about the world we live in, the better we will become at comprehending our own attitudes. We have wasted enough time and we need to proceed with a diffusion of this knowledge."

In conclusion, **Dr. Aris Patrinos**, Director of the US Department of Energy's Genome Programme, declared that: "Humanity will grow-up prematurely and quickly. I believe the problem of environmental deterioration will be successfully resolved, because, once again, scientists have taken initiative in this field."



# INTERNATIONAL UNIVERSITY FOR THE BIO-ENVIRONMENT

## Biocentric Environmental Education Conferences – Publications – e-Learning



### ▲ Youth Bios Olympiads



Children and young adults meet once a year in St. Petersburg to take part in the Youth Bios Olympiads, an international initiative promoting talent and creativity in environmental protection.

### ▲ Cease fire and the Olympic Games

Cease fire and the Olympic spirit can inspire every citizen in the world to actively engage in the race to save the environment.



### ▲ Bio-Culture

Bio-culture encourages the co-operation of technology and the arts in environmental protection with a view to creating a “biocentric” society. Every human endeavour can contribute to the reversal of destructive trends and to the promotion of bios.

### ▲ International Court of the Environment



An international court of the environment can provide the necessary guidance and vision to halt environmental deterioration and promote respect for the environment and bios. A global effort in defence of the environment can lead to a society of hope and help to secure the rights of future generations.

### ▲ Bio-Tourism

Mythos, history, biodiversity and culture are the cornerstones of bio-tourism. The natural and cultural heritage of the world is the true wealth of humanity. Bio-tourism is an attempt to safeguard this wealth through responsible and educated travel.

## Biopolitics International Organisation

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