

Bio News



No. 40 - OCTOBER 2004

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

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Assessing Past and Present – Inspiring a New Future



Expanding bioethics and building a civil society



Paralympic Games

New B.I.O. publications on people with a disability, in cooperation with the Paralympic Games Division of the Athens 2004 Olympic Games Organising Committee and the support of Coca-Cola.



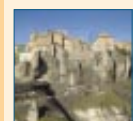
B.I.O. Portugal

The new B.I.O. branch in Portugal was launched in Oporto on October 2, 2004. Academics and other personalities participate in inaugural meeting (see page 15).



Youth Bios Olympiads

The IXth Youth Bios Olympiad was held with great success in St. Petersburg, Russia, in September 2004 (see page 15).



World Bioethics Conference

Issues of water and bioethics are discussed by experts during the III World Conference on Bioethics of the International Bioethics Society in Cuenca, Spain (see page 15).

Yesterday

Science and technology alone cannot cope with growing environmental challenges. To be effective in reversing destructive trends, we need to seek wisdom in the time-spanning ideals that have defined human culture and have shaped our civilisation. "Mythos" and the ancient traditions of the world can help us to restore the vital equilibrium between nature and society that we seem

to have lost (p. 7, 8-10). In its extensive work world-wide, the Biopolitics International Organisation (B.I.O.) emphasises the importance of drawing from the deeply rooted past in order to enrich the present and inspire the future with new "bios promoting" values.

The evolution of life on our planet shows how fragile and precious the gift of bios is. Mass extinctions destroyed species that had existed for millions of years, such as the dinosaurs, which disappeared because environmental pressures became too severe. Do we wish to have the same fate? Do we wish our arrogance and short-term planning to lead us to destruction?

Today

By combining the wisdom of the past with the technology of the present, society can seek to overcome patterns of over-consumerism and environmental destruction. The technology to protect the environment exists and offers countless opportunities for progress in the environmental field. Science and technology, coupled with culture and the arts, can encourage every individual to contribute to the harnessing of pollution and to a concerted effort to safeguard the continuity of bios.

Bioethics - the ethics of bios - must exit the confines of the medical sciences and apply to every human endeavour. The Olympic spirit and the diachronic ideals it represents can become the cornerstones of

The wisdom of the past is crucial in order to enrich the present and inspire the future.

a society that respects all its citizens, be they young, old, weak or handicapped. The Paralympic Games are an example of how we can reach beyond any physical disability to acquire the spiritual strength necessary to compete at the highest level (p. 7, 12-14). The same spiritual strength can guide humanity towards a new vision of global environmental harmony, hope and peace.

Tomorrow

Education is the key to a brighter future. In the digital age, the new options offered by technology are making possible what once seemed like science fiction. e-Learning is placing a wealth of educational material and resources online, making knowledge accessible to virtually every citizen on the planet. This valuable educational tool is being put to use by B.I.O. with a plethora of e-learning courses addressing environmental concerns soon to be launched (p. 5).

The wisdom of every individual is a treasure we need to appreciate. 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. Moreover, a "World Referendum" (p. 5) where every citizen can cast

a vote electronically to affirm their willingness to save the environment, can contribute to the building of an e-democracy, for people everywhere to actively raise their voices against any form of environmental or societal harm.

A stronger environmental governance is important in preventing conflict, restoring peace, and building a society that can resist destructive tendencies. With the tools made available by communication technologies and with the expanded use of the internet and computer resources, governments everywhere can better focus on the true needs of their citizens. In their attempts to deliver better services and information, the emerging e-governments in many countries should use the resources at hand to change the way government works. By providing faster and more flexible services, e-government can give priority to environmental issues and elicit the cooperation and personal involvement of every individual in the race to save the environment.

Yesterday, today, tomorrow

*What if the earth is turning
what if time has passed
faster than the flash of lightning
the waves of thought
crossed rocks and towering mountains
crystal waters
have run everywhere
in matter, in infinity
yesterday, today, tomorrow*

Agni Vlavianos Arvanitis
Oscillations, A collection of poems, 1983

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Biopolicy, ethics and quality of life



Biopolicy Award

The Royal Swedish Academy of Sciences, the Royal Swedish Academy of Engineering Sciences and the BioFocus Foundation honoured the B.I.O. President with their prestigious 2004 Biopolicy Award, in



Stockholm, on the 27th of October 2004. The award ceremony and acceptance speech were held at the Royal Swedish Academy of Sciences in the presence of eminent academicians, scientists and decision-makers of international acclaim (for details see page 3).



Bioethics for the protection of precious water resources

In the global effort to protect the environment and save dwindling natural resources, technology provides uncountable new choices which, with the proper assessment - the bio-assessment - can help us to increase our knowledge, and to reach a common understanding in order to establish a platform for immediate action.

Within this framework, a deeper understanding of the "ethics of bios" is essential. Guidelines for environmental ethics in every human endeavour can inspire all citizens to protect precious natural resources and to be actively engaged in environmental preservation.

After many years of B.I.O. efforts to raise awareness of our ethical responsibilities towards bios, it is encouraging to see that bioethics is gradually leaving the strict confines

of the medical sciences and embracing other issues vital for the future of humanity, such as the protection of water resources. The recent III

World Conference on Bioethics, held by the International Bioethics Society in Cuenca, Spain, placed particular emphasis on water issues and focused on our important ethical

responsibility to ensure the availability of safe water resources for the generations to come (see page 15).

Ethical guidelines in international policy and legislation are crucial if we are to reverse destructive trends and safeguard marine and freshwater reserves from poor management and pollution. The protection of water resources for the future is our ultimate bioethical responsibility.

Continued on pages 10-11

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

Local Genetic Banks to save the biodiversity of endemic plant and animal species and to 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 2004

Hellenic Ministry of Foreign Affairs
Hellenic Aid Department

European Commission
Leonardo da Vinci Programme

Kitty P. Kyriacopoulos

Coca-Cola

OTE

OTEnet

National Bank of Greece

DHL International

Hotel Herodion

Irene Vassilopoulou

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

Every second, billions of cells in the human body compose the most beautiful of symphonies, testifying to the gift of bios, the most valuable possession on our planet. To protect this gift and to ensure a healthy and clean environment for the future, every individual must contribute a small speck of dust to the building of a new "biocentric" society. A society that respects the environment and the rights of bios, all forms of life.



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

To succeed in this endeavour, we need to mobilise the forces of both culture and technology and to involve every profession and every group in society: scientists, artists, business professionals, students, the retired, the unemployed. A "green salary" in place of unemployment benefits and in exchange for active engagement in the environmental protection field has been one of the many B.I.O. proposals geared towards improving quality of life for every citizen. Ethics for the protection of bios need not only be restricted to the medical sciences. Every profession and every academic discipline must be guided by codes of ethics that emphasise the importance of respecting the environment.

Education is the key to broadening our horizons and to expanding our vision. Limiting the potential of education by placing artificial barriers between disciplines limits human potential and restricts us to the pursuit of short-term goals. Instead of measuring profit based on money, let us measure profit with biodiversity, culture, peace, and health, the genuine dimensions of "wealth" in society. In no way should a country be called a Third-World country if it has a richness of culture or of biodiversity, which represent timeless values.

Currently, technology is being used to develop methods to allow us to quickly destroy each other. These priorities need to be changed. We all have the potential to create destruction for no reason, when instead we should be protecting the environment and all of its creatures. The technology to make this world a better and safer place exists. Let us develop the right priorities which will help us best fulfil our hopes for society, for understanding between peoples, and for finding a balance between our actions and nature, in order to preserve the irreplaceable diversity and richness of bios.



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Royal Swedish Academy of Sciences and BioFocus Foundation honour B.I.O. President



The Royal Swedish Academy of Sciences, the Royal Swedish Academy of Engineering Sciences and the BioFocus Foundation honoured the B.I.O. President with their prestigious 2004 Biopolicy Award on October 27, 2004 in Stockholm, Sweden.

The Biopolicy Award recognises a distinguished individual, well known

for dedicatedly supporting the global developmental process by means of the creation and transfer of scientific knowledge in biology, and is conferred during a special ceremony at the Auditorium of the Royal Swedish Academy of Sciences.

Previous Biopolicy Award recipients include Professor Rita Colwell, Head of the USA National Science Foundation, and Dr. Edgar da Silva, Director of the Division of Life Sciences at UNESCO.

This year, the award was presented during a conference on "Social Innovations for Development - a Case for Biopolicy." The Organising Committee was chaired by Professor Carl-Göran Heden and by Ambassador

Anders Wijkman, Member of the European Parliament and Chairman of the BioFocus Foundation. The conference focused on various challenges to personal integrity and privacy that can

There is a need for farsighted decision-makers versed in technology assessment and in the strategic management of natural resources and human capital.

be anticipated as a consequence of expected advances in the fields of biology and information technology. It also pointed at the need for farsighted decision-making by leaders who are versed in technology assessment and in the strategic management of both natural resources and human capital. With a

starting point in a few interdisciplinary concepts, the biopolicy conferences have continuously tried to explore how developments in biology and information technology have opened up

new opportunities for worldwide interdisciplinary cooperation.

The B.I.O. President delivered a keynote lecture themed

"Biopolicy and environmental values - a new vision for social innovation."

Other speakers included: Professor Lennart Ljung, Chairman of the Engineering Sciences Division of the Acade-

my; Professor Gunnar Oquist, Secretary General of the Royal Swedish Academy of Sciences; Goran Genmvi, Founder of the Nature Academy; Burke Zimmerman, President of the Finnish Biotech Company; Sam Nilsson, Head of the Innovation Institute; Bengt-Arne Vedin, Professor at Malar Valley University; Maria Stromme, Professor at Uppsala University; Dr. Olof Tandberg, from the International Council of Scientific Unions; and Dr. Walter Truett Anderson, President of the World Academy of Arts and Sciences.

More information can be found at the *BioFocus Foundation's website* <http://www.biofocus.org/inpipeframe.html>

Education for the knowledge-based society European Association of Distance Teaching Universities

21-23 October, Open University of the Netherlands, Heerlen

A conference focusing on the importance of open and distance learning in the knowledge-based society was held at the Open University of the Netherlands in Heerlen, on October 21-23, 2004. The main theme of the conference, which has been acknowledged as an event of the Dutch Presidency of the European Union, was mass-individualisation and using e-learning as a tool to individualise education.

e-Learning has emerged during the last decade as a promising new approach to education, training and personal development, capable of embracing all forms of learning. Using a mixture of digital content mediums, enabled by information and communication technologies, and supported by open industry standards together with appropriate coaching/mentoring there is the real potential to create a knowledge society for everyone. e-

Learning provides a basis for personalised professional development necessary for innovation, economic devel-

As promoted by B.I.O. since 1985, distance learning and satellite education can enhance international environmental awareness and contribute to responsible leadership.

opment and wealth creation in society. It also provides more geographic consistency to the learning environment within schools, colleges and universities, thus enabling further and higher education to be more effective. The ability to cope with major organisational changes within the education sector and industry in general is also improved. Within a community, the ability to enrich the sharing of e-learning resources between local schools, col-

leges, universities, libraries, public services and local industry can lead to overall cultural and economic progress.

A series of plenary and parallel sessions addressed the various aspects of mass-individualisation and the knowledge-based society. Major themes at the conference included:

- ▶ accessibility and widening participation
- ▶ improving access to higher education in a life long learning context
- ▶ international joint development of educational e-learning programmes
- ▶ collaboration with industry
- ▶ quality assurance and accreditation
- ▶ educational and professional profiles
- ▶ learning communities
- ▶ decade education for sustainable development

Conference speakers included: Fred Mulder, Rector, Open University of the Netherlands; Viviane Redding, European Commissioner for Education and Culture; Mark Rutte, State



Secretary of the Dutch Ministry of Education, Culture and Science; Carl Lindberg, Deputy State Secretary of the Swedish Ministry of Education and Science; Jorgen Bang, President of the European Association of Distance Teaching Universities; Steven Lovink, Vice Chair of the Institute for Environmental Security; and Dr. Agni Vlavianos-Arvanitis, B.I.O. President.

The B.I.O. President was invited to address the topic of "Bio-education for global environmental leadership." The issues of open and distance education have been on the forefront of the B.I.O. agenda since its inception. Proposals for environmental education through the use of satellites and computer networks have been addressed

and developed extensively by the International University for the Bio-Environment (I.U.B.E.), an open learning initiative launched by B.I.O. in 1990. As education is expanding into the information age, the tools provided by technology can contribute to a more efficient teaching and learning environment. Within this framework, B.I.O. has prepared 14 e-learning courses on several environmental themes (health, agriculture, technology, waste management, ethics, history, diplomacy, tourism, economics, etc.) with the aim of providing students, and teaching and training professionals around the world with a wealth of educational material on current environmental issues and know-how (see page 5).

B.I.O. in the media

A press conference launching the new B.I.O. publication "People with a disability in modern society" took place with great success at the Office of the European Parliament in Athens, on Friday, September 17, 2004. It was attended by several members of the EU parliament, journalists, scholars and business professionals, and received wide press coverage. For more information see pages 12-14.

The work of B.I.O. also received extensive media coverage during the III World Bioethics Congress in Cuenca, Spain. Major local and national newspapers covered the events and interviewed the B.I.O. President, who was also invited to speak on an hour-long television programme hosted by a local news channel.

To promote the goals of B.I.O. and the efforts toward minimising environmental impacts and enhancing sustainability, the B.I.O. President hosted a series of hour-long television programmes aired by a major television network in Athens. Several guest speakers were invited to join the B.I.O. President in discussing crucial social and environmental issues such as environmental trade policy, the protection of our natural and cultural heritage, waste management and pollution abatement strategies, and matters of accessibility and quality of life.

Accessible beaches

On June 17, 2004, the B.I.O. President addressed a large audience at the Young Women's Christian Association (YWCA) of Glyfada, in the region of Athens, Greece. Her presentation provided an introduction to B.I.O. and its many projects and goals.

With the opportunity of the Paralympic Games in Athens, she also put an emphasis on people with a disability as equal citizens. She focused on how an organisation such as the YWCA, with its known strong commitment to volunteer work, could contribute towards a better quality of life for people with a disability by improving the accessibility of beaches. "Facilities are needed to allow people with a disability to enter the water and

urgent action must be taken to allow handicapped persons to swim in the waters of Greece. This year in particular, lack of access to the water for the handicapped, especially the wheelchair bound, is a glaring omission which must be addressed," she noted.

Some specific suggestions she presented included:

- ▶ construction of ramps to provide wheelchair access to beaches
- ▶ signage and other publicity to inform the public that the beach provides handicapped access (including parking, restrooms, and other facilities)
- ▶ construction of special elevating devices that allow wheelchair users to enter and exit the water.

Bios and environment network

B.I.O. e-learning course launched

Within the framework of the activities of the "Bios and Environment Transnational Network," project the B.I.O. e-learning course on "Health and the Environment: Scientific Advances and Environmental Ethics" was launched as a pilot project. Students from several countries took the course and completed a final assessment exam on September 30. The purpose of the course was to stress the importance of environmental parameters in the protection of human health and to raise awareness of the problems and risks that pollution poses to the public health and the environment. The Bios and Environment network is an international project supported by the Leonardo da Vinci EU Programme.



Environmental technology for a modern society

Norwegian Business Delegation to the Hellenic Republic on the occasion of the State Visit of Their Majesties King Harald V and Queen Sonja June 2004

At the invitation of the Ambassador of Norway and the President of Innovation Norway, the B.I.O. President attended a symposium on "Environmental Technology for a Modern Society" at the Hotel Grande Bretagne in Athens on Wednesday 9 June, 2004.

The symposium was held in connection with the state visit of Their Majesties King Harald V and Queen Sonja of Norway to the Hellenic Republic, and was held in co-operation with the Norwegian and Hellenic Ministries of the Environment.

The first workshop, entitled Technological Solutions for Water and Wastewater Issues in Practice discussed membrane filtration techniques and desalination of drinking water, new technologies for biological wastewater treatment based on biofilms, and small-scale wastewater treatment. The second workshop on Technological Solutions for Wastes in Practice covered recycling agreements and implementation, and low emission incineration. Speakers included: Her Majesty Queen Sonja of Norway; Mr. Stavros Kaloyiannis, Deputy Minister of the Environment, Physical Planning, and Pub-

lic Works, Hellenic Republic; Mr. Borge Brende, Minister of the Environment, Norway; and many other distinguished guests.

During the symposium, five agreements were signed on environmental projects in Greece supported by the European Fair Trade Association (EFTA), of which Norway is a member. These projects include: management, restoration, and upgrading of the Amvrakikos wetlands; restoration and integrated environmental management of the Messolonghi - Etoliko - Iniadon lagoon complex; research and study of the molecular early detection of breast, cervical, and colon cancer and supportive infrastructures; monitoring and forecasting in the Eastern Mediterranean; and restoration and environmental interpretation of the Riparian forest of Nestos Delta. Mr. Christos Foliass, Deputy Minister for the Economy and Finance, Hellenic Republic, and Mr. Sigurd Klakeg, Chairman of EFTA's Financial Committee, presided over the event.



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
- ▶ BIOPOLITIQUE - LE BIOENVIRONNEMENT A. Vlavianos-Arvanitis (French, 48 pp.) 1998
- ▶ BIOPOLITICA - EL BIO-AMBIENTE A. Vlavianos-Arvanitis (Spanish, 48 pp.) 1998
- ▶ BIOPOLITICS - BIOS OLYMPIAD A. Vlavianos-Arvanitis (Greek, 111 pp.) 2000
- ▶ BIO-SYLLABUS FOR EUROPEAN ENVIRONMENTAL EDUCATION (English, 880 pp.) 2003

PERIODICALS

- ▶ BIONEWS Newspaper, English and Greek (1987, 1994-2003)

CD-ROMS

- ▶ BIOPOLITICS - THE BIO-ENVIRONMENT (English) 1999
- ▶ BIO-SYLLABUS FOR EUROPEAN ENVIRONMENTAL EDUCATION (English) 2002
- ▶ PATMOS - BIO-ENVIRONMENT - BIO-CULTURE (2002)

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



INTERNATIONAL UNIVERSITY FOR THE BIO-ENVIRONMENT



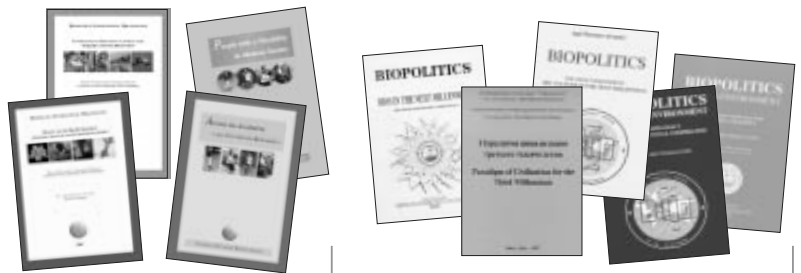
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Bio-Syllabus for Environmental Education



Business Strategy



Social Issues

Diplomacy



Seminars - Events



Culture and the environment - CD-Roms

THE BIO-ENVIRONMENT



Bio-education online



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- Recent events, programmes, proceedings
- International media coverage
- Environmental values and cease fire during the Olympics
- Paralympic games - accessibility, social justice
- Bio-culture, myths, past, present, future
- New publications, periodicals, CD-Roms
- Bio-Syllabus for European Environmental Education
- Youth Bios Olympiads, Bios Schools
- Information in Spanish for our friends worldwide
- International support for the work of B.I.O.
- World Referendum to save the environment

World Referendum
Participate Here

Name: _____

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Comments: _____

Submit Clear

Affirm your willingness to save the environment and bios - life - on our planet. Cast your vote electronically by visiting the B.I.O. website and participating in the World Referendum. Join millions of citizens around the world in the race to save the environment.

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Send your request form by checking the boxes below

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- Bio-Ethics**
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- Bio-Health**
Environmental quality and public health, pollution threats to health, risks and benefits of biotechnology, quality of life.
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- Bio-Assessment of Technology**
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- Bio-Tourism**
Environmentally friendly tourism industry, suggestions for cultural tourism, environmental hotel management.
- Common Agricultural Policy**
A simplified text for non-experts who wish to become acquainted with the EU's CAP.
- Food and Agriculture**
Agriculture and the environment, pollution loads, GMOs, water and soils, chemicals and biotechnology, environmental policy.
- People with a Disability in Modern Society**
Improving equity and quality of life for the disabled, accessibility, information, assistive technology, sports, Paralympic Games.

If you or your institution are interested in participating in B.I.O.'s new e-learning programmes, please indicate your preference(s) on the list shown above and mail it back to us, along with your complete contact details, at 10 Tim. Vassou Street, Athens 11521, Greece.

Young farmers and the EU's Common Agricultural Policy

Common Agricultural Policy A guide for young farmers

Many people consider the Common Agricultural Policy to be the most important common policy of the European Union. It is part of the political and economic glue which binds the community together.

The Common Agricultural Policy (CAP) evolved soon after World War II and consists of rules and regulations that govern agricultural activities in the European Union. The principle feature of the CAP is a system of subsidies that are paid to farmers. The subsidies are intended to ensure minimum levels of production, so that Europeans have enough food to eat and a fair standard of living is guaranteed for those whose livelihood depends on farming.

The CAP has been enormously successful in terms of food production, initially enabling the EU countries to overcome the food shortages of the 1950s and to achieve self-sufficiency. Later, surplus quantities were produced. The concern about food scarcity was therefore replaced by other issues. Meanwhile, technological advances in agriculture resulted in a reduction in the number of farm workers from about 20% of the population to about 4%. Public concerns about the quality of the environment and food safety increased due to evidence of declining wildlife species, air and water pollution, degradation of soils and incidents of animal epidemics such as Mad Cow disease. In a recent European opinion poll, 91% of EU respondents said that they wanted agricultural policy to provide safe food and ensure environmental protection. All these factors have influenced the revisions of the CAP. The CAP of today is moving increasingly towards direct payments to farmers in order to

Rural economic development became the second pillar of the EU's agricultural policy alongside farming.

The CAP rules are common to all the member states of the EU and cover a wide range of topics, including granting financial support to farmers, production methods, marketing and the overall quantities of food that can be produced by different agricultural sectors. The CAP rests on the following four principles:

- ▶ a single agricultural market, which allows products to move freely between member states, and a common frontier for goods imported into the EU
- ▶ uniform prices for agricultural products in the entire EU
- ▶ a common preference for European products over imported ones;
- ▶ financial solidarity, wherein all member states share alike in the costs and benefits of the CAP

Recently, the European Union has emphasised sustainable development, or development which meets

Youth Farm

To promote the intricate link between environmental protection and agriculture, as well as the importance of bio-education, B.I.O. is participating in the "Youth-Farm" project, a partnership formed within the framework of the Leonardo da Vinci European Union Vocational Training Programme. The project aims at enhancing competitiveness in agriculture and entrepreneurship among young farmers, in order to contribute to the restoration and enhancement of the competitiveness of rural areas and to the creation of new employment opportunities in those areas.

"Youth-Farm" is held at the initiative of Intercollege's Research and Development Center, one of the leading educational institutions in Cyprus. The project has brought together ten organisations in Cyprus, Greece, the UK, Italy, Poland, Czechia, and Slovenia, with the goal to provide young farmers with critical knowledge and information on areas that, despite their important role in the survival and modernisation of agriculture, have not been addressed before in such a holistic approach. One such area is the European Union's Common Agricultural Policy.

the needs of the present without compromising the ability of future generations to meet their needs. When applied to agriculture, sustainability refers to the management of land, soils, and water in a way which ensures that the benefits of farming will also be available for



future generations. In a broader sense, sustainability extends to the protection of landscapes, habitats, and biodiversity, and to the protection of the quality of water and air.

The main mechanisms that implement the CAP are the Common Market Organisations (CMOs) and the European Agricultural Guidance and Guarantee Fund (EAGGF). The CMOs are the regulations that cover the different agricultural products and provide support to the markets through mechanisms that vary according to the product covered. The EAGGF is the agricultural budget financed by the overall budget of the EU, that is used to finance the expenses of the CAP as well as certain expenses for rural development.

Proposals to reform the CAP were made in the 70s and the 80s in order to make agriculture more efficient and to bring supply and demand for products into better balance. The first major reform of the CAP occurred in 1992 under Agriculture Commissioner Ray MacSharry. Agricultural prices were reduced in order to render them more competitive in the internal and world market; farmers were compensated for loss of income resulting from the new price structure; new market mechanisms were adopted; and measures to protect the environment were added.

In 2003, the CAP was reformed in what are considered to be far-reaching changes. EU agricultural policy shifted away from price supports to direct payments, and supply control measures were modified. Production sub-

sidies were curtailed in favour of direct payments to farmers, and the eligibility for those payments was linked to compliance with rules on environmental protection, animal welfare, hygiene standards and preservation of the countryside. Rural economic development became the second pillar of the EU's agricultural policy alongside farming. The policy included a number of measures to make agriculture more efficient, while strengthening environmental protection and phasing out less productive areas.

Although the CAP has been very successful in increasing agricultural production in the European Union, it has had a number of problems including the economic costs of the program and its effects on the environment, public health, third world countries, and world trade.

CAP expenditures amounted to an estimated 40 billion Euros in 2000 and account for 40% of the EU budget. In effect, the CAP transfers money from the taxpayers and consumers of Europe to its farmers in order to support the agricultural sector. The CAP has resulted in higher food prices for EU consumers. Citizens of the EU pay an estimated 53 billion Euros a year in higher prices for food due to price supports and tariffs on imported products.

The CAP has also had negative impacts on the environment. This is the reason for some of the CAP reforms of 1992 and 2003. Increased agricultural production requires the extraction of more water for irrigation, lowering the level of ground water and surface water. This in turn, impacts wetlands, reduces oxygen in rivers, and increases inflow of salt water into the ground water in coastal areas. When water becomes polluted, it disrupts the wildlife living in the area. Modern agriculture has cleared many natural areas in order to maximise production. Natural vegetation and wildlife species have been displaced by

these practices. Agricultural activity also degrades the soil, as a result of erosion, depletion of nutrients in the soil, and contamination due to the misapplication of fertilisers and pesticides.

In recent years, the public has expressed concerns about food safety resulting from episodes of mad cow disease, dioxins, and foot and mouth disease. In addition, the widespread use of fertilisers and pesticides, increased use of additives in foods and the introduction of genetically modified foods have also heightened public awareness of the potential hazards of consuming some food products. The intro-

EU agricultural subsidies and import tariffs provide an advantage to the farmers and exporters of the EU.

duction of large-scale agricultural operations under the CAP is seen to be related to these issues.

The CAP has had a negative impact on agriculture in third world countries. Surplus products have been produced, which are sold cheaply to third world countries. The EU subsidised the exports and imposed tariffs on the import of products from other countries. These policies undercut farmers in under-developed countries, who cannot compete with the heavily subsidised products from the EU countries. The decline of agriculture in

Modern agriculture has cleared many natural areas in order to maximise production.

third world countries, due partly to the policies of the developed countries, has accelerated the spread of poverty, the growth of cities and widespread hunger in these countries.

EU agricultural subsidies and import tariffs provide an advantage to the farmers and exporters of the EU while negatively affecting the trading partners of that country or region. Such policies are especially harmful to under-developed nations which do not have an advanced agricultural sector. This issue has been addressed in a series of international conferences and meetings under the

CAP expenditures amounted to an estimated 40 billion Euros in 2000 and account for 40% of the EU budget.

World Trade Organisation.

On May 1, 2004, ten countries in central and eastern Europe joined the European Union, bringing to 25 the total number of member states. Enlargement added 74 million new consumers, 4 million farmers and 38 million hectares of farmland to the EU. This enlargement of the EU presents great challenges to the CAP.

Agriculture accounts for about 7% of the gross domestic production of the new countries. Since western Europe was the most important agricultural trade partner in products for many of the new member countries, enlargement offers them opportunities to use their agricultural sectors production more efficiently.



United Kingdom



Sweden



Spain



Slovenia



Slovakia



Portugal



Poland



Netherlands



Malta



Austria



Belgium



Cyprus



Czech Republic



Denmark



Estonia



Finland



France



Germany



Greece



Hungary



Ireland



Italy



Latvia



Lithuania



Luxembourg

New B.I.O. Publications

HEALTH AND THE BIO-ENVIRONMENT SCIENTIFIC ADVANCES AND ENVIRONMENTAL ETHICS

Bios & Environment Transnational Network Leonardo de Vinci Community Action Programme

Technology and the growth of urbanisation are outpacing our efforts to contain the threat of pollution to human health and the environment. Environmental health problems are especially pronounced in the developing countries, which often lack the resources

The incorporation of health dimensions into regional and global policies affecting the environment is crucial.

and infrastructure needed to contain them. The World Health Organisation (WHO) has estimated that 25% of all preventable ill health in the world is due to poor environmental quality, and as much as two thirds of ill health

due to environmental conditions occurs among children.

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 and the 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 fertilisers and pesticides. In addition to posing health

concerns to the consumer, residues of these chemicals remain in the envi-

A healthy environment is a prerequisite for a healthy human population.

ronment and continue to threaten health. One of the most important challenges to consider is that the environment directly affects gene expression and, ultimately, life itself. The further we extend our knowledge out into the environment, the closer we are going to

get to molecular events inside our cells. The macroenvironment - sea, sky, land, plants and animals - directly controls the microenvironment of the cell. Substances that enter our body through food and respiration directly influence the behaviour and metabolism of our cells, which are called upon to use and excrete the substances we provide them with. The more we think about the environment as a factor which can regulate the processes inside our body, the healthier we are all going to be. A healthy environment is a prerequisite for a healthy human population. These and other issues concern-

ing the intricate relationship between the environment and human health are addressed in B.I.O.'s new publication themed "Health and the Bio-Environment - Scientific Advances and Environmental Ethics." The publication is also available as an e-learning course aimed at people of various backgrounds and interests.

The material was developed within the framework of the "Bios & Environment" Leonardo da Vinci Community Action Programme with the aim of investigating and promoting awareness of the human health consequences of global environmental change.



ENVIRONMENTAL DIMENSIONS IN AGRICULTURE FORESTRY AND FOOD PRODUCTION

Bios & Environment Transnational Network Leonardo de Vinci Community Action Programme

The influence of agricultural production methods on the environment, soil, water and air quality, the use of energy, agricultural management and the protection of biodiversity, the effect of pollutants on agriculture, farming practices, pesticides, chemicals, biotechnology, sustainable forestry and crop protection, as well as the European Union's Common Agricultural Policy, food distribution and hunger, and the eradication of poverty, are presented and analysed in B.I.O.'s new publication "Environmental Dimensions in Agriculture Forestry and Food Production." The purpose of the publication is to raise awareness of issues of agriculture and the environment from a biological, physical, economic, and socio-cultural standpoint, and to motivate further research and study in the field. The material is also available as an e-learning course for students and professionals.

Issues of concern
Technological developments, consolidation of farms and the industrialisation of agriculture have played a large part in the growth in production. 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. Many consumers and governments in the developing world distrust genetically modified foods. Some nations have refused to accept imports of genetically modified foods, fearing their affect on consumers. Concerns also exist over the accidental transfer of modified genes to other species, result-

ing, for example, in insecticide-resistant insects or herbicide-resistant weeds. In addition to the use of chemical pesticides and fertilisers, certain chemical substances are routinely added to foods as they are prepared for the marketplace. These include colours, preservatives, antioxidants, emulsifiers, flavourings and stabilizers. While most of these substances are harmless to humans, some may pose significant health hazards. Concerns about chemicals in food production have stimulated interest in organic foods - those produced without chemicals or genetically modified ingredients. At the end of 2000, more than 3.7 million hectares or about 3% of the total agricultural land in Europe was devoted to organic farming. However, recently the food industry has begun to use the term "organic" as a marketing

device, resulting in controversy over what is truly organic. **Sustainable agriculture**
Sustainable agriculture refers to farming practice that meets the needs of present generations without compromising the ability of future generations to also meet their own needs. The term sustainability has come into widespread use since the United Nations Conference on Environment and Development in Rio de Janeiro in January 1992, which was also known as the Earth Summit and was attended by representatives of 172 nations. The principle outcome of the conference was the adoption of Agenda 21, the Rio Declaration on Environment and Development, a comprehensive plan of action to be taken at every level by organisations of the

United Nations, governments, and major groups in every area in which human activity impacts the environment. The plan is centered on the concept of sustainability, or the meeting of human needs in a way that does not exhaust natural resources or overtax the capacity of the environment. Sustainable agriculture entails the management of the natural resources that are critical to farming - soil, water, and energy - in a way, which ensures that the benefits of farming are also available in the future. Sustainability also extends to the protection of landscapes, habitats, and biodiversity, and to broader objectives such as the quality of drinking water and air.

Sustainable agriculture entails the management of natural resources critical to farming.

Concerns about chemicals in food have stimulated interest in organic produce.



PEOPLE WITH A DISABILITY IN MODERN SOCIETY

The Olympic Games returned to Greece this year, and, along with the Paralympic Games, they provided a unique opportunity to reflect upon achievements and omissions in addressing the needs of disabled people in our society. Environmental values and

bioethics must be directed towards the enhancement of the quality of life for all citizens. A society that is open and accessible to all should become the primary goal. To promote this vision B.I.O. published "People with a Disability in

Modern Society," a handbook addressing the problems of the disabled in society and identifying measures to improve their lives. The book was prepared in cooperation with the Paralympic Games Division of the Athens 2004 Olympic Games Organising Com-

mittee and raises awareness of the needs of disabled people urging individuals and organisations everywhere to respond to these needs. It is hoped that "People with a Disability in Modern Society" will stimulate actions to improve accessibility

and quality of life for the disabled and inspire people with a disability to participate as equal citizens in society. **Continued on page 14**

NEW CD-ROM – MYTHOS: RIVERS AND MOUNTAINS OF GREECE



B.I.O. has prepared a new CD-Rom on Greek mythology, based on the ancient origins of the names of mountains and rivers in Greece. The myths related to these natural wonders explore the origins of ancient lore and illustrate the intricate linkages between gods, men, and nature. The CD-Rom features information on more than seventy mountains and fifty rivers in Greece. Over ninety percent of the rivers and mountains in Greece draw their names from Greek mythology. Recalling these myths will

help to inspire a renewed appreciation of nature and a desire to live in harmony with the natural environment. The purpose of this work is to link concern for the environment with the appreciation for culture and history, using Greece as an international model. We hope that the CD-Rom will serve as a source of inspiration to expand creativity in many fields, including environmental protection,

but also the arts, media, and especially tourism. We also hope to inspire a new life supporting assessment of technology, bioethics, a responsibility to save the environment, and mobilise new policies for environmental stewardship. Studies of nature need not be restricted to scientific research; they are a major part of all fields of human endeavour. Relating the environment to our history can be the start

to relating the environment to all aspects of bios - life. It is the purpose of "Mythos" to expand the imagination of our society by placing importance on creativity, joy, and peace and by helping us to learn to appreciate our cultural heritage and biological diversity, thereby promoting the harmonious co-existence of all forms of life.

Mythos links concern for the environment with an appreciation of culture and history.





In August 2004, the Olympic Games returned to their birthplace. Although the Games originated in ancient Olympia in 776 B.C., Athens was the city that hosted the first modern Olympics in 1896. The 2004 Olympic Games in Athens were an opportunity to revive the

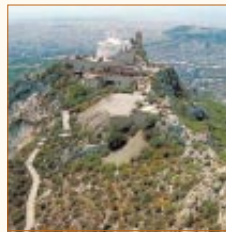
ancient Olympic spirit and to emphasise the importance of embracing the values of peace, kinsmanship and hope which were championed by the Games in antiquity.

The rivers, mountains and hills of Athens are rich in history and mythology. The new B.I.O. CD-Rom (see page 5) "Mythos - Rivers & Mountains of Greece" explores the myths and legends associated with the rivers and hills of Athens. Myths convey beliefs, superstition, ritual, social ideas, philosophy and ethical values. They speak of the origin 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.

LYCABETTUS

Lycabettus is a hill in the centre of Athens, directly opposite the **Acropolis**. **Lycabettus** is connected in mythology with the birth of **Erechtheus**, the mythological king of Athens who was conceived in an unusual manner. Once, the goddess **Athena** came to the house of **Hephaestus** and requested that he fashion some new weapons for her. **Hephaestus**, disconsolate at the time over his betrayal by **Aphrodite**, found **Athena** desirable and tried to approach her. The goddess avoided him, however, as she wished to remain a virgin. As she ran quickly from his house, **Hephaestus**, lame as he was, pursued her. When he finally managed to catch her, he embraced her, and as he attempted to make love to her, **Athena** struck him with her lance. His seed fell to the earth, and in this way, **Erechtheus** was conceived.

Athena made the baby immortal by dripping blood from the **Medusa** in his eyes. She also provided him with two snakes to protect him. She sealed the baby and the two snakes in a chest and gave it to the daughters of **Cecrops**, with instructions that it was not to be opened. She then left for **Pellini** with the intention of moving a mountain from there to serve as an outer fortress for the **Acropolis**. In the meantime, two of the three daughters of **Cecrops** disregarded the instructions of the



goddess and opened the chest. When they saw the baby entangled among the snakes, they were overcome with madness and they fell from the walls of the **Acropolis**. It has been said that this was punishment from **Athena** to the women for opening the chest.

A short distance from **Athena**, a crow approached **Athena** as she was returning from **Pellini** and reported to her what the daughters of **Cecrops** had done. Outraged, the goddess threw down the mountain she was carrying, which later became known as **Lycabettus**, at the spot that it is found today, and she cursed the crow that it should never again approach the **Acropolis**. Since then, it has been said that no crow can be found between the **Acropolis** and **Lycabettus**. **Athena** then took the baby in her arms and carried it to the temple **Erechthion** on the **Acropolis**, from which the baby took its name. There, the goddess raised the child by herself.



Mythos – Rivers Mountain

Bio-Environment Bio-Culture

Racing to

ACROPOLIS

The **Acropolis**, the landmark of the city of **Athena**, is a rocky hill, 156m in height. It symbolises the glory of **Greek** culture and civilization, and features some of the ancient world's most magnificent monuments, including the **Temple of Athena Nike**, the **Erechthion**, and the **Parthenon**. The **Temple of Athena Nike** was built to celebrate the peace with Persia, *nike* meaning "victory."

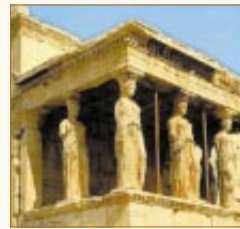
On the **Acropolis**, **Athena** and **Poseidon**, god of the sea, held a contest to see who would name the city of **Athena**. **Poseidon** created a salt-water spring by throwing down his trident, and **Athena** created an olive tree. The olive tree proved to be far more useful than a salt-water spring and **Athena** was proclaimed the winner, giving the city her name. The two gods quickly reconciled and were both worshipped at the spot.

According to **Homer**, the first temple built on the **Acropolis** was the **Erechthion**, which was dedicated to **Erechtheus**, a benevolent ruler and the first king of **Athena**. Thought to be the son of **Gaia**, **Erechtheus**, the "earth-born king of **Athena**,"

was raised by **Athena** as her own child. **Erechtheus** was worshipped, together with **Athena** on the **Acropolis** after he gained divine honours during his life. According to legend, **Erechtheus** resided atop the **Acropolis** in his palace. Some myths state that **Poseidon** killed **Erechtheus** with his trident, whereas in other versions, it was **Zeus** who killed **Erechtheus** with his thunderbolt. After his death the palace was refashioned and used as a temple.

Cecropia

Cecrops was the first king of **Attica**, described as autochthonous - meaning born from the soil - with



a human upper body and the lower body of a serpent.

It is believed that **Cecrops** civilised the state of **Attica** by issuing the earliest laws and by teaching the inhabitants to bury the dead, get married and how to read and write.

It was during his reign that **Poseidon** and **Athena** contended for the lordship of **Attica**, and **Cecrops** decided in the favor of **Athena**. **Poseidon** was greatly bitter from his loss and punished **Cecrops'** people by sending a disastrous flood. The people recovered, and the new city of **Athena** was built around the citadel, or **Acropolis**, on which a spot near the **Erechthion** is identified as **Cecrops'** tomb. The **Acropolis** of **Athena** was named **Cecropia** in his honour.

HYMETTUS

Mount Hymettus, a lofty range which circles the city of **Athena**, is famous for the tragic love story of **Cephalus** and **Procris**.

Cephalus, the son of **King Deioneus** of **Phocis** and **Diomedes**, was distinguished for his beauty and bravery. He left his country and moved to **Athena** where he fell in love with **Procris**, one of the daughters of **King Erechtheus**. **Cephalus** married **Procris** and they lived happily together.

Cephalus and Procris

Cephalus and **Procris** both loved hunting and hunted daily on the slopes of **Mount Hymettus**. One day, **Eos**, the goddess of dawn, saw him and fell in love with him. She tried to convince him to leave with her, but when **Cephalus** refused, **Eos** urged him to test his wife's loyalty without betraying his own promise. If he were to find that **Procris** had been unfaithful, he could then make love with another woman. To test his wife's faith he assumed the appearance of a stranger named

Pteleon and he appeared to **Procris**, offering golden gifts. He asked her to sleep with him, but she immediately refused. **Pteleon** insisted, offering her twice the gold and a golden garland. In the end, **Procris** succumbed to **Pteleon** and agreed to make love with him. In the bedroom, **Cephalus** revealed his true identity and accused **Procris** of breaking her vow. Needing no further proof, he set off to find **Eos**, freed from the restraints of his promise to his wife.

Meanwhile, **Procris** was so overwhelmed with shame that she left the country and went to **Crete**, where **King Minos**, who was afflicted by a rare ailment, reigned with his wife **Pasiphae**. **Procris** gave **King Minos** a magic potion to drink, which she had made out of a root. **Minos** was cured

of his ailment and gave **Procris** two gifts in gratitude: an unerring spear

and a hound, **Laelaps**, who never missed his prey.

Fearing **Pasiphae's** jealousy **Procris** left **Crete** and returned to **Thoricion**. Now she wanted to test **Cephalus**. She put on men's clothing, cut her hair short, transformed herself into an adolescent boy and set out for **Mount Hymettus** to hunt. With her unerring spear and hound, she missed neither bird nor animal.

When **Cephalus** saw the hound and the spear, he approached the adolescent boy and asked him what he would exchange for them. The boy answered that he could have the dog if he agreed to sleep with him. After some hesitation, **Cephalus** agreed. As they were ready to lie down, **Procris** revealed herself and told him that what he was about to do was far worse than what she had done and that he ought to feel ashamed of himself. Nevertheless, **Procris** gave him the spear and the hound and the couple reunited.

Cephalus kills Procris

After the reunion, **Cephalus** continued to go for his daily hunt. This



Mountains and the Hills of Athens

The Olympic Values for the New Millennium

Save the Environment



made **Procris** suspicious, as she thought that he might be meeting a lover. When she asked one of his servants, he replied that **Cephalus** had been heard to call out the name **Nephele**, which means cloud but is also a woman's name. **Procris** decided to find out for herself.



She followed him one day and, when she heard him calling, rushed through the bushes to see what was happening. Hearing the

rustling, **Cephalus** thought that it was an animal and threw the spear, which struck **Procris**. When he went to collect his prey he saw, to his horror, what had happened. **Cephalus** then went to **Athens** to **Procris'** father, **Erechtheus**, and the two of them buried her body with honours. **Cephalus** was put on trial at the High Court, on **Ares'** Hill, was found guilty, and condemned to permanent exile from **Attica**.

CEPHISSUS

The **Cephalus** is a river in **Attica**. Today, it is located farther to the west than its ancient bed and it is lined with concrete through **Athens** and its environs. Its flow is seasonal. The **Cephalus** originates on the northwestern slopes of **Pendeli** mountain, and its mouth is at **Phaleron Bay**. In ancient times, the **Cephalus** joined the **Ilissus** before it reached the sea. As it carried a large quantity of water, it was considered an important river and was deified.

ocritus and **Pindar**, the worship of the **Charites** was believed to have been introduced into **Boeotia** by **Eteocles**, a son of **Cephalus**.

The **Cephalus** is also connected with the story of **Argynnus** a beautiful youth with whom King **Agamemnon** of **Myceneae** fell in love when he saw him swimming in the river. **Argynnus** later drowned but **Agamemnon** found his body, buried it and founded a temple by the river.

talidae were happy to oblige and purified **Theseus** at the altar of **Meilichius Zeus**, protector of those who honoured him with propitiatory sacrifices.

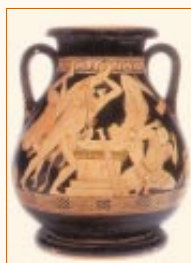
Plutarch, **Pausanias**, and **Ovid**



ERIDANUS

According to **Pausanias**, the **Eridanus** river that flowed through ancient **Athens** was a tributary to the **Ilissus**. Its origin was near the **Diochares** gates on the southwestern slopes of **Lycabettus Hill**, where, according to **Strabo**, a spring with clear water once existed. The **Eridanus** crossed **Athens** from east to west, flowing through the area that is modern day **Syntagma Square**. Near its banks, ancient **Athenians** would bury their dead, a practice followed since the **Mesohellenic Era**. In the 5th century, when **Themistocles** started building the city walls on the plain that the **Eridanus** flowed through, special arrangements were made so that the flow of the river would not be disrupted.

to the myth of the **Argonauts'** expedition. According to one narrative, on their return the **Argonauts** travelled across the **Eridanus**. When they arrived at its banks they noticed a pungent smell which came from



The **Eridanus** was also a mythological river with varying locations referred to by many ancient writers. **Herodotus** mentions that its mouth was in the **North Sea**, that it carried amber and that its name was probably **Greek** and not **Barbarian**. **Strabo** mentions that in one of the myths it was connected with the river **Po** of **Italy**, where it was believed the **Electrides Isles** existed. According to

the burnt body of **Phaethon**, who had fallen from the flaming chariot of his father, **Helios**, into a nearby lake. While they were crying for him, his sisters, the **Eliades**, turned into mountain goats and their tears into amber. The **Argonauts** sailed along the **Eridanus** and reached the river **Rhone**, which then branched out into three. One of these rivers was a tributary to the **Eridanus**, the second emptied into the **North Sea**, and the third into the **Tyrrhenian Sea**, as is mentioned by **Lycophron** and **Apollonius Rhodius**.

The **Eridanus** is mentioned in connection with the **Labours of Hercules**. In this myth, the river is located in **Illyria**. When **Hercules** reached the **Eridanus** on his way to the **Garden of the Hesperides**, he found the river **nymphs**, daughters of **Zeus** and **Thetis**, in a cave by the river. **Hercules** asked them the way to the **Garden of the Hesperides**, but they did not know. They suggested that he ask **Nereus**, the old man of the sea, who would be able to guide him, but warned him that he would have to use force, since **Nereus** would not provide this information willingly.



another tradition, a hot water lake was located near the banks of the river into which no living creature could enter. Later writers confused the **Eridanus** with either the **Rhone**, the **Po**, the **Nile** or the **Rhine**.

The **Eridanus** is also connected

The Cephalus in mythology

The river god **Cephalus** was said to be the son of **Pontus** and **Thalassa**, and the father of **Narcissus** and **Diogeneia**, whose daughter **Praxithea** became the wife of the mythical king of **Athens**, **Erechtheus**. The famous ancient Greek traveller and geographer **Pausanias** mentions that **Cephalus** shared an altar with **Pan**, the nymphs, and the river **Achelous**, in the temple of **Amphiaraus** near **Oropus**.



It was believed in parts of **Attica** and **Boeotia** that the first man was **Alakomeneus** and that he had arisen from the waters of the **Cephalus**. Within **Athens**, however, people believed that the first man was **Cecrops**, who founded the first settlement around the area of the **Acropolis**.

According to **Pausanias**, **The-**

Academeus

Academeus was a hero of **Attica**. When the twins **Castor** and **Polydeuces** invaded **Attica** to liberate their sister **Helen**, **Academeus** revealed to them that she was concealed at

Aphidna. For this reason the **Tyndarids** showed him much gratitude, and whenever the **Lacedaemonians** invaded **Attica**, they always spared the lands belonging to **Academeus**, which lay on the **Cephalus**. **Pliny**

mentions that this land was subsequently turned over to the cultivation of olives and was called **Academia** after its original owner.

Theseus

Upon reaching **Athens** after his sixth labour, **Theseus** is said to have met some of the **Phylalidae**, the descendants of King **Phyitalus** of **Eleusis** by the banks of the river. He asked them to purify him from the killing he had done. The **Phy-**

ASOPUS

The river god **Asopus** was the son of **Oceanus** and **Tethys**, and king of **Plateaea**. **Asopus'** daughter **Arpine** had a son by **Ares** named **Oenomaus** who became the king of **Elis** and **Pisa**. He married **Eurythoe** and had one daughter, **Hippodameia**.



Asopus is also linked to a story about **Hera** and **Zeus**. Once, when **Hera** was very angry with **Zeus** over his endless infidelities, she decided to divorce him, and ran away to **Euboea**. When **Zeus** realised that he could not convince her to return, he went to see **Cithairon**, the king of **Plateaea**, who was known for his wisdom. The king advised **Zeus** to dress a scarecrow as a bride, put it in a carriage drawn by two oxen, and spread the rumour that he was going to marry **Plateaea**, the daughter of **Asopus**. **Zeus** followed **Cithairon's** advice. When **Hera** heard the news, she ran up to the carriage and tore apart the scarecrow. Upon discovering the deception, she laughed heartily and reconciled with **Zeus**.

Several other rivers with this name existed in ancient times includ-

Hera

In another narrative, when **Hera** and **Poseidon** quarrelled over who was going to be the ruler of **Argus**, the matter was placed before three judges: the deified rivers of **Phoroneus**, **Cephalus**, and **Asterion**. They gave the victory to **Hera** and, thus, initiated her worship at **Argus**. A temple dedicated to **Cephalus** was built in **Argus**.

Pausanias describes the land surrounding **Cephalus** as perfect in every way. A representation of **Cephalus** can be seen at the National Archaeological Museum in **Athens**. It is a relief which shows **Cephalus** embracing **Ilissus**.



ing a river in the **Peloponnese**, a river on the island of **Paros**, and a river on **Aegina** now called **The Dark Woman's Torrent**. There is also a river which runs between **Mount Oite** and **Mount Callidromio**. In ancient times, a narrow gorge called **Anapea** started from this river. This was the route through which the traitor **Ephialtes** promised to lead the **Persians** to the rear of the **Greek Troops** during the **Battle of Thermopylae**.



ILISSUS

Also known as the **Eilissus**, the **Ilissus** River is completely covered today and only has seasonal flows. It was once a torrent in **Attica** in **Roman** times. It originated on the slopes of Mount **Hymettus** and flowed southwardly past the Temple of **Olympian Zeus**, collecting water from all the streams in the Southeastern side of **Athens**. The **Ilissus** was overflowing during ancient times but dried up during the summer. Its banks were covered with plants and trees, such as elms and maples.

On the banks of the **Ilissus**, the **Dorians** killed **Codrus**, the son of **Melanthus**, king of **Athens** during the 5th century BC. **Melanthus** was not an **Athenian** himself but had come from **Pylos**. When **Melanthus** died and **Codrus** succeeded him as king, the **Dorians** decided to invade **Attica**. Prior to that, they had inquired of the

Oracle of Delphi who told them that they would be rulers of the city only if the **Athenian** king did not die. When **Codrus** learned of this, he disguised himself, left the city, and entered enemy camp. When he saw a group of **Dorian** soldiers, he attacked them and was killed in the ensuing fight. When it became known that **Codrus** was dead, the **Dorians** realized that they could not fulfil their aim and left **Attica**. **Athens** remained free due to the king's self-sacrifice. When **Athens** later became a



democracy, many would say that it would be very difficult to find a king so devoted to his country that he would be prepared to die for it.

Athena, daughter of **Zeus** and **Metis**, and goddess of wisdom, returned to **Athens** after the expedition of the Seven Against **Thebes**. The **Argives**, despite having seven heroes on their side, were unable to beat the **Thebans**. During this expedition, **Athena** witnessed her favourite hero, **Tydeus**, suck the brains from the head of a dead warrior. She became so overwhelmed by feelings of disgust that she had to bathe in the **Ilissus** in order to feel clean again. This may have led to the establishment of the **Minor Eleusinian** Mysteries.

The **Minor Eleusinian** Mysteries took place at a temple to the god **Ilissus** that existed near the banks of the river. It is thought to have dated from the 4th or 3rd century BC. Although little is actually known about the Mysteries due to a lack of written sources, they are thought to have originated in pre-Hellenic times and to have been based on an old agricultural worship. The initiation ceremony was undertaken by a group of high ranking priests and includ-

ed the purification of the body and the spirit in order for humans to become one with the gods.

Pausanias tells us that the worship of **Boreas** centred around this area. **Boreas**, son of **Astaeus**, was a descendant of the **Titans**, and **Eos**, goddess of the dawn. A temple was built where **Boreas** abducted **Oreithya**, daughter of the mythological king **Erechtheus**, and **Praxithea**. **Pausanias** narrated that **Oreithya** was one of the **Ilissiad** **Muses**, a name acquired from having an altar on the **Ilissus**.

One day, **Oreithya** and her friends were near the banks of the **Ilissus**, collecting flowers when **Boreas**, who was at the time blowing towards **Attica**, saw them. He distinguished **Oreithya** for her charm and aristocratic disposition. His interest soon became the wish to make her his wife. He thought it wise to approach gently, so he changed the rough and cold look on his face and asked her father for her hand in marriage. **Erechtheus** rejected him because he did not like the idea of his daughter living in cold, remote lands of **Thrace**.

Boreas was offended by **Erechtheus'** rejection and became very angry. Wearing his most sullen and cruel face with the hair on his head standing on end, he enveloped **Oreithya** with his wings and carried her air-borne to his home of **Thrace**. There **Oreithya** gave birth



to two sons, the winged **Boreades**, **Zetes** and **Calais**, and two daughters, **Cleopatra** and **Chione**. The sons later took part in the quest for the **Golden Fleece** and pursued the **Hapries**, the winged monsters of the skies who had human faces but the feet and claws of birds. The story of the abduction of **Oreithya** was reported by **Plato**, **Apollodoros** and **Pausanias**.

In another story, **Tereus**, son of **Ares** and ruler of **Thrace**, was called to **Athens** by **Pandion**, **Erechtheus'** father, to help win a war against **Thebes**. With **Tereus'** help, **Pandion** won the war and, as a reward, gave him his daughter **Procne** in marriage. **Tereus** took **Procne** to his home in **Thrace** and they had one son **Itys** or **Itylus**. Sometime later, while visiting his father-in-law **Pandion**, **Tereus** saw **Philomela**, **Procne's** sister, and fell in love with her. He told **Pandion** that **Procne** had died and took **Philomela** away with him. On the way, he raped her and cut out her tongue so that she would never be able to betray his secret. **Philomela** managed to inform her sister of the whole story by embroidering it on a cloth. In revenge, the sisters killed **Itys**, cooked him, and offered him to **Tereus** for dinner. When he had finished, **Procne** placed **Itys'** head on the table so that **Tereus** would know what he had just eaten. The two sisters then ran away to **Athens**. **Tereus** tried to catch them, but just before he reached them, the gods transformed them into birds. **Procne**



became a nightingale so that she would always cry for her son, and **Philomela** became a sparrow, since she could only stammer the name of her rapist.

In antiquity, the main judiciary body of the city-state of **Athens** was called **Eliaea**. Every citizen over 30, who had not been convicted, had the right to vote. Following their election, the judges took an oath on **Ardettus** Hill on the bank of the **Ilissus**. **Socrates** and other philosophers are known to have debated by the banks of **Ilissus** with their students.



Water in culture and mythos

Water, perhaps more than any other natural resource, has touched all aspects of human civilisation and has set the cultural and religious values that define our societies. 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 origin 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. References to water also abound in all religions, starting from the biblical deluge and moving onto the symbolism of baptism and catharsis in the Christian and Moslem traditions.

Greek philosophy and mythos

The great ancient Greek philosopher **Thales** of **Miletus** proclaimed that water is the nature, the "arche," the originating principle. For **Thales**, all things came to be from water; the Earth itself floated on an infinite ocean, and

he tried to explain earthquakes from the fact that the Earth floats on water.

Greek mythology also provides a bountifulness of references to water: water gods and river gods; nymphs and nereids; the great **Oceanus**, the unending stream of water encircling the world; **Poseidon**, god of the sea; and, **Hercules** the hero associated with the first elements of water management.

Oceanus and his wife **Tethys** produced all the rivers and the three thousand ocean nymphs, the **Oceanids**. All the rivers were gods and famous for their feats. **Achelous**, a river in Central Greece lost a wrestling match with **Hercules** for the hand in marriage of the princess **Dianaira**. **Alpheus**, a major river in the **Peloponnese**, fell in love with the nymph **Arethousa** and pursued her all the way to the island of **Sicily**. This is why it is believed that the **Alpheus** river follows an undersea passage and springs up again in **Sicily**.

Poseidon is one of the most powerful gods in Greek mythology. Brother of **Zeus** and ruler of the sea, **Poseidon** was relied upon by sailors for a safe voyage. He is also referred to as the god of earthquakes and the god of horses. He married the nereid (sea nymph), **Amphitrite**, daughter of the sea-god **Nereus**, and produced **Triton**, who was half-human and half-fish. He also impregnated the Gorgon **Medusa** to conceive **Chrysaor** and **Pegasus**, the flying horse.

Heracles is the major hero of Greek mythology and can be studied under numerous different aspects. But his close relationship with early waterworks and the domination of the natural environment has been systematically pointed out. He has been called

the "supreme hydraulic engineer" and can be considered the personification of major technical enterprises in early Greek history.

Scandinavian mythology

The very heart of Scandinavian mythology is based on ideas and images of water. The centre of the world was a great ash tree called **Yggdrasil** with branches so large that they could reach anywhere in heaven and earth. Three roots supported the tree: one leading to the world of the **Aesir**, the chief race of gods; one to the land of the frost-giants; and, the other to the kingdom of the dead. Beneath the root leading to the giants was the **Spring of Mimir**, whose waters contained wisdom and understanding. **Odin**, ruler of the **Aesir**, was willing to give up one of his eyes to drink a single sip of that precious water and in return receive the gift of wisdom. Below the tree in the Kingdom of the **Aesir** was the sacred spring of fate, called the **Well of Urd**. Every day the gods assembled at the well to settle disputes and discuss common problems. Near the spring of fate dwelt three maidens called the **Norns**, who ruled the destinies of men. They were called **Fate (Urd)**, **Being (Verdandi)**, and **Necessity (Skuld)**. They watered the tree each day with pure water and whitened it with clay from the spring, and in this way preserved its life, while the water fell down to Earth as dew.

Eastern and South-eastern Europe

The ancient Slavs had a deep sense of reverence for the four elements, particularly water. Water was referred to in mythology as the water of life and death. Rivers were treated with respect

or they would drown you. Water was also seen as purifying and healing, and it gave strength and immortality. The souls of ancient Slavs could only pass into the world of the dead by crossing certain mythical waters. There are records of human sacrifices being made to rivers such as the **Dneiper** and the **Volga**. Although many bodies of water had their own deities, most bodies of water were ruled by spirits known as **Rusalki**, or **Vodanoi**. **Mati Syra Zemlja** or **Mother Moist Earth**, however, seems to have been given the greatest amount of respect.



Wales

In Welsh mythology and related customs, water is a central character. Certain rivers were considered sacred and water was viewed as a purifying and calming element that brought good luck in health and love. It was customary to bathe nine mornings in a row in the sea to treat various ailments, including snake bites and nervousness.

Single men and women would draw water from springs to bring them luck for the year.

Chinese mythology

Some Chinese myths, such as the creation myth, are similar to those of other countries and regions, while others are very unique. In the beginning of the world there was a formless mass that slowly separated into two parts. The lighter matter rose to form **Heaven**, producing the yang force, and the heavier matter solidified to form **Earth**, creating the yin force. The interaction between yin and yang resulted in the seasons, the sun and the moon, fire, water, and the elements, and as well as countless creatures.

A more popular later version of creation has **Heaven** and **Earth** formed like an egg with **Pan Gu** born in the middle. One day, tired of the darkness, he broke out of the egg with an axe, after which **Heaven** and **Earth** separated and **Pan Gu** grew between them, holding up the sky. After 18,000 years, he grew exhausted of this position and died. The rest of the universe was formed from the parts of his dying body. His breath became the wind, his eyes the sun and moon, his blood the rivers, his muscles the soil, his skin and hair the plants and trees, and his teeth and bones the rocks and stones.

Gong Gong is a Chinese water god who is responsible for the great floods. **Gong Gong** was ashamed that he had lost the fight to claim the throne of **Heaven** and in a fit of anger smashed his head against **Mount Buzhou**, a pillar holding up the sky. The pillar suffered extensive damage, causing the sky to lean towards the northwest and

The ethics of "green" diplomacy and water sharing

Water is the most precious natural resource, essential for the presence of life on our planet. Pollution and poor management of freshwater and marine

reserves has placed this precious resource at great risk. In ensuring the availability, conservation and protection of the world's water resources and improving water con-

ditions to contribute to the health and well-being of every citizen on the planet, international cooperation is crucial. These dimensions, with an emphasis

on bioethics, were presented by the B.I.O. President at the recent III World Bioethics Congress in Cuenca, Spain (see page 15). Some highlights are included below.

Water and the ethics of bios

Technology expands our vision and leads to a revelation of the truth. The "macrocosmos" and "microcosmos" are opened before us, and it has become possible to witness the greatness of our world in every dimension imaginable, from the vastness of the universe to the subatomic level. It is this revelation that has shown that water is essential to life; without water, life on earth would not exist.

Water's unique properties make it perhaps the most biologically important substance on the planet. No other substance shares similar properties to water and in the way that one single molecule can possess such varied and essential characteristics. Water is a major component of cells, typically forming between 70% and 95% of the mass of the cell. All cell functions depend on water. Water's properties as a solvent are vital to life, as most biochemical reactions, such as respiration, occur in solution.



logical progress but we have the possibility to guide it in the right direction. The Hippocratic Oath in medicine sets guidelines for the medical practice and has been serving as a code of conduct for physicians since the 5th century BC. Codes of ethics such as the Hippocratic Oath, defining our obligations towards the environment

and all forms of life, need to be developed in every profession in order to set the pillars of a new society of hope. In this endeavour, it is essential to raise awareness of the urgency of protecting precious water resources and to recognise the pivotal importance of water to the planet's future.

Cooperation to save the planet's water sources

Recent UN statistics show that approximately one-sixth of the world's population lack access to safe water resources. At least 1.5 billion people rely on groundwater as their only source of drinking water, however, over-pumping groundwater for drinking and irrigation has caused water levels to decline dangerously in many parts of the world, forcing people to use low-quality water for drinking. Furthermore, unsafe water and sanitation cause an estimated 80% of all diseases in the developing world. Joint efforts to protect the environment can boost international relations and act as a bridge between global impetus and decision-making at the national and local levels.

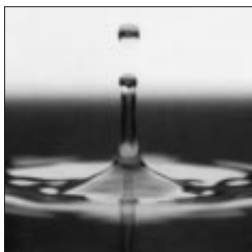
Ethical guidelines for the protection of water resources

The ethics of water and water sharing is of pivotal concern to bio-diplomacy. For all nations and all peoples to enjoy a safer and more prosperous future, it is essential to overcome the

challenges of poor water management, pollution and conflict over shared water sources. Water is a precious common resource, and ethical guidelines in international policy are crucial in reversing destructive trends and in ensuring the availability and safety of all marine and freshwater resources.

Oceans cover 70% of the planet's surface and more than 90% of the planet's living biomass is found in the oceans. The impact of increasing urbanisation and coastal development, as well as pollution from industry, agriculture and marine transports, are seriously threatening this most precious resource. Moreover, death and disease caused by polluted coastal waters costs the global economy US\$ 12.8 billion a year.

Freshwater resources are also at risk. With accelerated urbanisation rates, the provision of clean water and safe disposal of wastewater and storm water, especially in the developing world, has become increasingly more complex and serious. If current consumption patterns persist, at least 60 countries will face severe water stress within the next 25 years. In addition,



20% of all surface water in the European Union is threatened with pollution, making the need to revise water management practices more urgent.

Bio-diplomacy and the ethics of water sharing

Bio-diplomacy - international cooperation in environmental protection - is a concept pioneered by B.I.O. at a time when civic leaders, international organisations and the world community as a whole had not fully realised the urgency of adopting common environmental policy as a priority. It focuses on the interdependence of all forms of life and calls upon diplomats and people of influence to engage in a col-

lective endeavour in defence of the environment. Joint efforts to protect the environment can boost international relations and act as a bridge between global impetus and decision-making at the national and local levels. At the same time, bio-diplomacy actively supports efforts to maintain biological and cultural diversity and seeks to improve human relations and to attain the goal

Water's unique properties make it perhaps the most biologically important substance on the planet.

of world peace by replacing current diplomatic attitudes with a complete international and intercultural perspective. Within this framework, respect for human rights and the existence of multi-ethnic and multi-cultural societies is an undeniable principle. International cooperation in environmental protection enhances quality of life and strengthens efforts for peace.

The ethics of water and water sharing is of pivotal concern to bio-diplomacy. For all nations and all peoples to enjoy a safer and more prosperous future, it is essential to overcome the challenges of poor water management, pollution and conflict over shared water sources. Water is a precious common resource, and ethical guidelines in international policy are crucial in reversing destructive trends and in ensuring the availability and safety of all marine and freshwater resources.

In ensuring the availability, conservation and protection of the world's water resources and improving water conditions to contribute to the health and well-being of every citizen on the planet, international cooperation is crucial. Bio-diplomacy encourages cross border cooperation between all countries and all involved parties, and seeks to empower people everywhere to become active agents of change.

Meeting international challenges

Local, regional and international conflicts regularly arise over water resources and are mostly relevant to the issue of national sovereignty. For billions of people, however, the daily source of drinking water is an international watercourse. The livelihoods of these people and the health of the environment they rely upon should be the prime consideration in any debate concerning sovereignty over such waters.

This matter goes well beyond inter-

national law to considerations of human rights, political and public will, social values, culture and the environment, and calls for a change in the way we value and treat water. Bio-diplomacy and bioethics can help to develop a new set of principles on how to share this precious resource and how to secure enough clean and safe water for all the stake-holders involved. The need to



anticipate conflicts over shared water resources and to find international, legal and political mechanisms to assist in resolving them is becoming urgent. There has also been a growing recognition that security and environmental justice cannot be achieved without effective institutional support and coordination. An International Court of

One-sixth of the world's population lack access to safe water resources.

the Environment could play an important role by helping to work out agreements on protecting and fairly apportioning common watercourses and

jointly developing ways to use shared water resources more efficiently in order to prevent crises.

Bio-diplomacy is an opportunity for the aspirations of sovereign states and civil society to converge, enhancing a spirit of solidarity among nations sharing common watercourses. The

The evolution of "bios," life as we presently know it, began in the water. Is our arrogance jeopardising the continuity of bios?

promotion of environmental ethics and international cooperation to solve water challenges is a basis for wiser actions in the future. A concerted international effort to ensure global environmental stewardship is the B.I.O. vision and mission.

Continued from page 10

the earth to shift to the southeast. This brought great floods and suffering to the people.

Nuwa, an important and compassionate goddess, cut off the legs of a giant tortoise and used them to replace the fallen pillar, but she was unable to completely straighten the tilted sky. This explains why the sun, the moon, and the stars move towards the northwest, and that the rivers in China flow southeast into the Pacific Ocean.

Two legendary emperors are remembered for their contributions to water management and agriculture. Yu was a legendary Emperor of the Xia Dynasty remembered for teaching the people flood control techniques to tame the

ivers and lakes. Shennong, whose name means "Heavenly Farmer," is a legendary emperor and culture hero of Chinese mythology, believed to have lived some 5,000 years ago, who taught the ancient peoples of Xia the practices of agriculture. He is also credited with identifying hundreds of medicinal plants, which were crucial towards the development of traditional Chinese medicine.

Egypt

For the ancient Egyptians, in the beginning of the creation of the world, there was only water, a chaos of churning, bubbling water, called Nu, or Nun. As with the yearly inundations of the Nile that caused turmoil to all crea-

tures living on land, Nu would also flood yearly. Eventually, as each flood would recede, out of the chaos of water would emerge more and more dry land and the beginning of Earth.

India

Water is generally thought of as pure, the essence of life and more precious to us than any other substance. Water was so pure that it could be a stand in for other offerings to the Buddhas. The Indian master Atisha once said that by simply appreciating its excellent qualities it could be mentally offered joyfully to the Buddhas.

Many Indian deities are associated with water, a connection establishing their role in dispensing fertility and

prosperity. Water, particularly the ocean, is also a symbol of profound and extensive wisdom. In Hinduism water has always been recognised as an ancient spiritual symbol. Water is seen as an instrument to determine the strict quality of purity and pollution of the human body. These notions are used in local culture in determining and reinforcing an inequitable access to, control over, and distribution of water and water use rights.

Native American myths

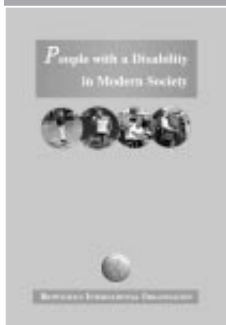
According to Malecite Native American mythology and folklore, a wicked monster named Aglabem kept back all the water in the world, so that rivers stopped flowing, and the lakes dried

up, and people everywhere in the land began dying of thirst.

A messenger was sent to him to ask him to give the people water. But Aglabem refused, and gave the messenger only a drink from the water in which he washed, which was not enough to satisfy even the thirst of one.

At last a great man was sent to Aglabem to beg him to release the water for the people. Aglabem refused, saying that he needed it himself to live in. Then the great man cut down a tree so that it fell on top of the monster and killed it. The body of this tree became a main river, and the branches became the tributary branches of the river, while the leaves became the ponds at the heads of these streams.

People with a Disability



A new book entitled "People with a Disability in Modern Society" has been published in Greek and English by B.I.O. in cooperation with the Paralympic Games Division of the ATHENS 2004 Olympic Games Organising Committee and Coca-Cola. The aim of this initiative is to raise awareness of the needs

and rights of people with a disability as related to issues of the environment, accessibility, and quality of life.

The lives of people with disabilities can only change if all stakeholders, including government, NGOs, private enterprise and local authorities, work together and individually on the equal-

People with a Disability in Modern Society

Office of the European Parliament in Greece
Friday, 17 September 2004

Speakers

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

Costis Hatzidakis, New Democracy Representative for the European Parliament

Evangelia Tzabazi, PASOK Representative for the European Parliament

Rodi Kratsas, New Democracy Representative for the European Parliament

George Papastamkos, New Democracy Representative for the European Parliament

Mary Cassiotou-Panayotopoulos, New Democracy Representative for the European Parliament

John Kokkalas, Office of the European Parliament in Greece

Paul Brouwer, Ambassador of the Netherlands

Lourdes Morales, Ambassador of the Philippines

Lydia Mouzakas, Representative of the Mayor of Athens

Petros Karachalios, General Manager, Coca-Cola ATHENS 2004 Olympic Group

Marily Christofi, Head, Paralympic Facilities Project

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

People with a disability are often excluded from society and face many barriers. In addition to the physical obstacles, they have limited access to information services, economic activity, and job availability. B.I.O. has prepared this publication with the hope of changing the mentality of society. A new vision for humanity, one based on accessibility and social justice, is a prerequisite for improving the quality of life for people with a disability.

A legal and policy framework at every level of government - local, regional, national and international - is essential if we are to protect the rights of people with a disability in all aspects of everyday life. Access to all facilities and services of society is a fundamental right and a critical goal of the disability movement. People commonly associate barriers to access with physical impediments as in the case of the wheelchair user who cannot enter a building due to flights of steps. In fact, the concept of accessibility is much broader. It encompasses the availability of information services, economic activity, culture, religion, and language, in addition to the physical environment. Environmental accessibility is an essential prerequisite for the advancement of all. Its emergence as a major concern reflects the shift from medical

models of disability, and an emphasis on care, protection and assisting persons with disabilities in adapting to "normal" social structures, to social models with their focus on empowerment, participation and modifications of environments to promote equal opportunities for all.

Employment plays a crucial role in assuring that people with a disability avoid poverty and social exclusion. It is very significant, however, to emphasize that this is not solely about the financial security which having a job implies. Having a job also provides the disabled person with participation, independence, status, and a sense of community, all of which contribute to an individual's social inclusion, rather than exclusion.

The success of the Paralympic Games of 2004 seals the success of the Olympic Games in Athens.

The Greek word "athlos" means achievement, both physical and mental. May the 2004 Athens Olympic and Paralympic Games be more than just major sporting events and represent the essence of the Olympic spirit.

The Paralympic athletes embody the spirit of "athlos," as they have reached beyond their disability to acquire the physical and mental strength and skill necessary to compete at the highest level. They can inspire the world to celebrate this great event, leaving a legacy for the generations to come. The success of the Paralympic Games of 2004 seals the success of the Olympic Games in Athens.

Dr. Lydia Mouzaka
Municipal Counsellor

I am here in my capacity as municipal councillor and, on behalf of the Mayor of Athens, Mrs. Dora Bakoyianni, I would like to congratulate you for this important book that has been published today and could serve as a model for many other occasions.



Petros Karachalios
General Manager, Coca-Cola ATHENS 2004 Olympic Group

It was with great pleasure that Coca-Cola accepted Biopolitics International Organization's call for supporting this book, recognising its great social contribution.

The book's content and concept was an equally significant motivation for Coca-Cola. The active participation of people with a disability as equal members of society is a very sensitive issue that every developed country that respects its citizens should take into consideration.

Coca-Cola, as an official Sponsor of the ATHENS 2004 Paralympic Games contributes in a great effort

that aims at securing a better future for all people.

Through its Sponsorship of the Paralympic Games, Coca-Cola underscores the understanding, the respect and sensitivity towards people with a disability, not only in Greece but also worldwide. This support is more than a natural extension of Coca-Cola's involvement with the Olympic Movement and proof of its contribution to the greatest sporting event in the world, part of which are the Paralympic Games.

On behalf of Coca-Cola, I would like to congratulate Dr. Agni Vlavianos-Arvanitis and her colleagues for their great effort and I wish that this book becomes a means of inspiration and strength for many people.



Evangelia Tzabazi
PASOK Representative for the European Parliament

In eighteen years of involvement in organisations for people with a disability, it has been apparent that the publication of such books always makes a difference. It is crucial that we all get involved in the education and awareness of the public. This is a responsibility of individuals, but also of agents and the government. It is important to note some of the unique events which are taking place for the first time in the history of the Olympic Games.

These Paralympic Games set very high standards, almost equal with those of the Olympics. For the first time in history, Greece has kept the same organizational committee for both the Olympics and the Paralympics, meaning that the proper design and stan-

dards of accessibility for all have been maintained from the very beginning. Thus, buildings and other infrastructure was constructed properly from the start, making them available to both athletes and spectators, with no need for demolishing and reconstruction between the two Games, as was done in Atlanta. Also, for the first time, participating athletes do not have to pay to compete. This is a great achievement, since

often in the past countries were unable to pay the nearly 55,8 million Euros to support their participation in the Games. In this Olympiad, these expenses were covered through the

Olympics budget, by cutting certain unnecessary expenses and not by burdening the Greek economy. These are also the first Paralympics where there is satisfactory equality between the Olympics and Paralympics in economic as well as training services.



The sightless and visually impaired

Problems encountered:

- Orientation
- Identifying obstructions within the path of travel
- Crossing roads
- Manoeuvring in elevators
- Recognising emergency situations
- Locating exit doors and stairs

Solutions:

- Guide strips within the pathway surface or bright coloured markings
- Large lettering
- Raised curbs and other detectable guiding elements
- Tactile marking strips to indicate changes in direction and the location of stairs and ramps
- Textured paving or tactile marking

strips around obstructions

- Audible traffic and elevator signals and call buttons with tactile text
- Audible alarm signals
- Tactile marking around the knobs of exit doors and the handrails of exit

People with limited walking abilities

Problems encountered:

- Differences in level
- Manoeuvring in situations requiring speed
- Climbing stairs and ramps
- Manoeuvring in rest rooms
- Passing through narrow door openings and over high thresholds

Solutions:

- Curb ramps, ramps, elevators or

platform lifts

- Increased pedestrian crossing time intervals and opening intervals of elevators and automatic doors
- Handrails for gripping
- Sufficiently wide rest rooms with grab bars, bath-tub and shower seats
- Sufficiently wide door openings with low bevelled thresholds or none at all

Wheelchair users

Problems encountered:

- Overcoming differences in level between road and pavement
- Presence of stairs
- Manoeuvring in tight spaces
- Passing through narrow door openings and over high thresholds
- Reaching high-mounted controls

and objects

- Manoeuvring in rest rooms

Solutions:

- Installation of curb ramps
- Wide elevator cabs or platform lifts
- Wide routes and spaces
- Sufficiently wide door openings with low bevelled thresholds or none at all
- Low-mounted controls
- Grab bars, bath-tub and shower seats

The hearing impaired

Problems encountered:

- Crossing roads
- Managing in situations involving the use of speech messages, verbal transmission and interaction
- Not hearing door, elevator and

emergency signals

Solutions:

- Clearly visible coloured signs and traffic signals
- Clearly written messages, especially in emergency situations
- Induction loops in assembly halls and in public telephones
- Flashing light signals

People with limited hand or arm use

Problems encountered:

- Opening heavy doors
- Gripping door knobs
- Gripping faucets

Solutions:

- Automatic or easy-to-open doors
- Lever-type door handles
- Lever-type or push-button faucets

ity in Modern Society

isation of opportunities for a barrier-free society.

The book was introduced during a press conference at the Office of the European Parliament in Greece, on September 17, 2004, the day of the opening of the Paralympic Games. The press conference was attended by journalists and many distinguished

personalities of international status, including members of the European Parliament, local authorities, business leaders, academics, and ambassadors and dignitaries from The Netherlands, the Philippines, Moldova, the UK, Lebanon, Syria, Ukraine, Serbia-Montenegro, Turkey, Slovenia, Iran and Egypt.



This publication has been made possible with the cooperation of the Paralympic Games Division of the ATHENS 2004 Olympic Games Organising Committee thanks to the support of Coca Cola.



Marili Christoff

Head, Paralympic Facilities Project

All the programmes we developed in the framework of the organisation of the Paralympic Games aimed at the improvement of infrastructure to ensure that people with a disability receive the same level of services as everyone else, without discrimination, and also to raise public awareness of disability and accessibility issues. By promoting the positive image of athletes with a disability, whose performance matches that of Olympic champions, our goal is to demonstrate that people with a disability are capable of participating equally in all social activities, including the most demanding and challenging task of competitive sports.

The long contribution of the Biopolitics International Organisation to the protection of the environment and the improvement of quality of life is well-known. We gladly accepted the proposal to cooperate in the publication of this book by contributing some guidelines for the development of accessible facilities that we developed in view of the Olympic and Paralympic Games. We hope that this book will become a useful tool for the improvement of quality of life for all, without discrimination and wish this initiative every success.



John Kokkalis

Office of the European Parliament in Greece

I would like to make known that the Office of the European Parliament in Greece is open to all organisations which promote actions similar to those of the European Union, especially

I am particularly pleased that this Office is associated with B.I.O.

when these actions involve the participation of members of the European Parliament. I am particularly pleased that our Office is associated with the Biopolitics International Organisation and wish you every success in your efforts.

Paul Brouwer

Ambassador of the Netherlands

This event comes at a very good moment in time, and I would like to congratulate the Biopolitics International Organisation and all the work it is doing. I have been witnessing for quite some years now the activities of this organisation and I am deeply impressed by all that has been achieved by the President and Founder. In fact I have been involved in several of these activities. The former Dutch Prime Minister had the honour of being awarded the Bios Prize in Athens. Today's meeting on the occasion of the publication of the book "People with a Disability in Modern Society" focuses on issues for which also the Paralympics are seeking attention. It is indeed a very important subject, and I think that we all realise that society owes it to people



with a disability to integrate them fully and to let them participate as every other member of society.

The Paralympics are a witness to this and the reception of such ideas worldwide is very positive. The motivation and will of people with a disability, and the contribution they want to make to society are truly heart-warming. Today's meeting comes at a very good moment, and I do not only congratulate you on your initiative, I also assure you of the assistance and cooperation of the Dutch Government as acting Presidency of the European Union.

M. Cassiotou- Panagiotopoulou

New Democracy Representative for the European Parliament

I am touched by this event and I was first exposed to these issues when I had come in contact with representatives of organisations of people with a disability both on the European level but also on the local level. These issues must concern everyone. It is important to note that each citizen should consider the participation in and solution to problems faced by people with disabilities as a personal matter. If this does not occur, then all the European programmes will only be beneficial to a certain extent, and problems will not be solved completely.

The Olympic and Paralympic messages that I have enjoyed the most is the following "Impossible is Nothing." I believe this is clearly expressed by the present initiative.



Rodi Kratsas

New Democracy Representative for the European Parliament

This event is not focused on the problems and limitations of people with disabilities, but rather the recognition of their strength. This year, Athens will host nearly 4000 athletes, half of which are women. Many of these are participating in the Paralympic Games. The message that is made clear in these Games is the positive ascertainment and attitude toward life that is created by the participants of the Paralympics. We should guarantee their participation in all aspects of life.

The year 2003 was dedicated by the European Union to people with a disability. The European Parliament, based on article 13 of the Amsterdam Treaty, emphasises the non-discrimination of people with a disability in all sectors of society.

Costis Hatzidakis

New Democracy Representative for the European Parliament

Democracy can be judged by the degree to which the rights of minorities are respected. Society can be judged by the degree to which the rights of people with a disability are protected. As a result, this initiative of the Biopolitics International Organisation is commendable and should be supported.

It is important that people with a disability are given equity in society. The European Parliament has taken action in the past years to promote awareness of and education on issues concerning people with a disability. At the initiative of the European Parliament, for instance, it is clearly indicated in European legislation that there should be no discrimination against people with a disability.

A group of concerned Euro-Parliamentarians has as its mission to motivate the European Commission to take action towards the proper direction and to implement initiatives that can improve the quality of life of people with a disability.

Lourdes Morales

Ambassador of the Philippines

We realise that there are many people in society who need more attention and it is important that this be given to them. The Philippines have a very small Paralympic delegation but it is a significant presence. If we can make people in the Philippines aware of this effort it will be very important for people with a disability because not too much information is available. This

book will certainly be passed on to our officials in the Philippines and will be very useful, so I would like to congratulate Dr. Vlavianos-Arvanitis and thank her for inviting me to this conference.



George Papastamkos

New Democracy Representative for the European Parliament

Concerning Greece's role in the European Union, it seems that we are mostly concerned with markets and not with communication. We speak of the economic expansion of Europe and the need to create a unified policy, but we do not concern ourselves enough with a unification in communication.

In the Olympic Games, the goal is victory. In the Paralympic Games, the goal is participation. People with a disability do not seek our tolerance, they seek equality in society.



Accessibility, employment and information

Assistive technology

Assistive technology is redefining what is possible for people with a wide range of cognitive and physical disabilities. In the home, classroom, workplace, and community, assistive technology is enabling individuals with a disability to become more independent, self-confident, productive, and better integrated into society. Beginning early in life, technology is making it possible for children with disabilities to do more for themselves. Children who cannot use their hands can now operate a computer with a switch and an on-screen keyboard. Those with speech problems can communicate using a portable electronic device that "speaks," while those who are unable to get in and out of the bathtub can be safely and easily lifted using a mechanical elevating device. These are just a

few examples of the wide variety of equipment, called assistive technology, that is available today.

Assistive technology is commonly associated with computers, but it also refers to a wide range of accommodations and adaptations which enable individuals with disabilities to function more independently. Computers are certainly an important type of assistive technology because they open up so many

exciting possibilities for writing, speaking, finding information, communicating or controlling an individual's environment.

But computers are not the only avenues to solving problems through technology. There are many low-tech and low-cost solutions for problems that disabilities pose.

Assistive technology is redefining what is possible for people with disabilities.

Access to the information society

Modern communications technologies have made all sorts of information widely available on an unprecedented scale. Access to new reports, information on election campaigns or one's rights as a citizen, for example, is so basic that many people cannot imagine being denied it. Rapid changes in

information technologies are changing how our society functions. Distances are shrinking as the entire world has become virtually available from the keyboard of a computer. These advances in information technology have also meant empowerment for people with a disability. Information technology can have a pivotal role in promoting, training and

Employment is crucial in assuring that people with a disability avoid exclusion.

identifying employment opportunities for people with a disability.

Employment trends

The obstacles people with a disability face regarding work and employment affect all age groups. People with a disability will often work longer hours than non-disabled people, whereas their take-home pay reflects lower rates of pay rather than fewer hours worked.

Moreover, when people with a disability are employed, there is a greater tendency for them to be under-employed relative to their skills and level of training. Therefore, access to equal employment opportunities is crucial and must be guaranteed by governments and by effective national, as well as international, legislation.

People with a Disability in Modern Society

People with a Disability in Modern Society

Contents

People with a disability are equal citizens

How people with a disability are excluded from society

- What is social exclusion?
- Poverty and disability
- Education for people with a disability
- Family income
- People with a disability in institutions
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- Defining accessibility
- For a barrier-free Europe
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Employment opportunities

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- What is assistive technology?
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- Policy of the United Nations
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- Sports and people with a disability
- Paralympic Games
- Enhancing self-confidence and rehabilitation through sports

Athens 2004 Paralympic Games Organising Committee

- Guidelines for the Design of Accessible Olympic and Paralympic Facilities
- Guidelines for the Design of Accessible Training Facilities
- Olympic Urban Design : Accessibility Guidelines
- Proposals for Direct Action for the Improvement of Accessibility for People of Restricted Mobility in Public Areas
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Appendices

- Appendix 1: World Health Organisation Classification of Impairments, Disabilities and Handicaps
- Appendix 2: UN Declaration of the Rights of Disabled Persons
- Appendix 3: Design Manual for a Barrier-Free Environment
- Appendix 4: Legislation and Provisions Concerning People with Disabilities in Greece

The environment belongs to all. It is a fundamental human right. Although major stakeholders in society, people with a disability are often excluded from this right. We cannot envisage a future of hope without access to meaningful citizenship for all. A new vision for humanity, one based on accessibility and social justice, is a prerequisite for a better quality of life.

Barriers to access are not only related to physical obstacles. The concept of accessibility is much more pervasive, encompassing information services, economic activity, job availability, education, culture, religion, and language. 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 civil society. To promote this vision, B.I.O. published "People with a Disability in Modern Society," which aims at raising awareness of the needs and rights of people with a disability as related to the environment and quality of life.

The goal of B.I.O. is to ensure the continuity of bios, life on our planet. Bios is the most precious gift and a source of joy and inspiration. To safeguard this gift in the true spirit of Olympic values, every individual must be involved in the race to save the environment.



People with a disability are equal citizens

According to the United Nations, more than half a billion people in the world are disabled due to a physical, mental or sensory impairment, and regardless of where they live, their lives are often constrained by physical and/or social barriers. People with a disability have the same rights as other people. People with a disability are workers, consumers, tax payers, politicians, students, neighbours, family members and friends. Unfortunately, people with a disability are not always treated as equal members of society.

In the EU 37 million people - over 7 times the population of Denmark - are disabled.

A recent European survey found that there is a serious lack of understanding of what disability means and how many people it affects. People with a disability are not a homogeneous group. They may include the mentally retarded, those with visual, hearing and speech impairments, those with restricted mobility and those with medical disabilities. Moreover, the disability may be permanent or temporary. Each of these groups has different needs and encounter different barriers.

B.I.O. was established to promote awareness about the threats to "bios," life, in all its forms and to encourage understanding and educational programmes that redirect humanity away from destructive patterns of behaviour towards an enduring respect and love for life. Bios is the link that unites all peoples of the planet. In building a society of joy and hope, we must assure that all people have an opportunity to lead satisfying and productive lives; this means that people living with physical or mental disabilities must also share as fully as possible in the benefits that modern society offers.

People with a disability should be treated as equal citizens who have the power to speak for themselves, not as objects of pity and charity. Unfortunately, however, they are often excluded from society through poor education and unemployment which may lead to poverty. Almost two-thirds of people with disabilities do not complete their secondary education and less than 10% of people with severe disabilities gain access to higher education. A survey on

the attitudes of Europeans towards people with disabilities indicates a very positive attitude toward improving the plight of people with a disability.

People with a disability in modern society

The recently released B.I.O. publication reviews a number of topics that relate to the everyday lives of people with a disability, including social exclusion and poverty, accessibility, the opportunities for employment, assistive technologies, legislative and policy issues, and participation in sports. The objective is to give the reader a greater insight into the obstacles - attitudinal, societal, and physical - that people with a disability must overcome in order to approach leading normal lives and to encourage individuals, businesses, and governmental agencies at all levels to take steps that help people with a disability overcome these obstacles.

Improving accessibility for people with a disability - Proposals for direct action

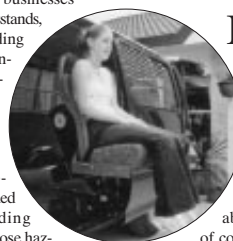
The elimination of obstacles in the movement and transportation of disabled persons and generally of those of restricted mobility is crucial. If pedestrian zones, sidewalks and other public routes and services are improved, this will allow for the creation of an accessible network of infrastructure which can accommodate all citizens, without exception, with equal ease and safety. The enforcement of measures of low or negligible cost, which usually have astounding results in the improvement of access for people with a disability, also markedly improve the quality of life of all citizens. Some measures include:

Improving accessibility for people with a disability - Proposals for direct action

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- ▶ Clearing sidewalks of unnecessary objects and obstructions
- ▶ Removal of excess signage. All signs should be placed on specially designated sign posts at a minimum height of 2.20m.
- ▶ Collection of urban equipment and furniture (such as dumpsters, benches, mailboxes, kiosks, etc.) to designated areas, where they do not interfere with sidewalk traffic
- ▶ Restricting small businesses (coffee shops, newsstands, etc.) from spreading tables or merchandise on the sidewalk unless they can allow for 0.90m of free passage for wheelchair users.
- ▶ Trees and shrubbery should be pruned so that protruding branches do not pose hazards to the visually impaired.
- ▶ Open dug outs around tree trunks should be replaced by dense grating.
- ▶ All sidewalk ramps must lead to and from the street in a smooth and even manner, with no abrupt changes in grade. All drainage must be tightly enclosed in dense grating.
- ▶ Sidewalk ramps should be cleared of all obstacles (lamp posts, street furniture, etc.)
- ▶ Public telephones should be placed at a lower height so that they may be accessible to wheelchair users.
- ▶ Citizens must be notified of these measures (through local printed literature, meetings, etc.) so that everyone is informed about and willing to respect these actions. The local authorities must become more active on enforcing these measures so that people with a disability may always be accommodated (e.g. prohibiting parking on sidewalk ramps).

Enhancing self-confidence and rehabilitation through sports



Rehabilitation professionals recognise the importance of sports and recreation in the successful rehabilitation of individuals with disabilities. When first faced with the reality of a disability, many people with a disability experience a loss of confidence, and depression. They often become alienated from family and friends because there are no shared positive experiences. Sports and recreation offers the opportunity to achieve success and to build self-confidence. The ability to participate in a sport, such as cycling, skiing, and sailing, provides the opportunity to reunite with family and friends in a shared activity.

World records have been broken at the Paralympics, which are comparable with those of Olympic events.

Apart from the Paralympic Games, the greatest sports event for elite athletes with a disability, many opportunities exist for people with a disability who wish to participate in athletic events at a local level or individually. A large number of organisations throughout the world assist people with a disability to participate in sports and to sponsor organised events. In this way, people with a disability participate as equal citizens in society.

The philosophy of the Paralympics is to follow the rules of the Olympic Games

Paralympic Sports

- Archery
- Boccia
- Equestrian
- Football 7-a-side
- Judo
- Sailing
- Swimming
- Volleyball (Sitting)
- Wheelchair Fencing
- Wheelchair Tennis
- Athletics
- Cycling
- Football 5-a-side
- Goalball
- Powerlifting
- Shooting
- Table Tennis
- Wheelchair Basketball
- Wheelchair Rugby

Inaugural meeting of the B.I.O. Division in Portugal

The new B.I.O. Division in Portugal was launched by the B.I.O. President in Porto, on October 2, 2004. Created at the initiative of Professors Daniel Serrao and Rui Nunes of the Department of Bioethics, University of Oporto, the B.I.O. Division will promote the goals and projects of B.I.O. in Portugal and world-wide. The Division comprises a General Council, which includes Dr. Maria Barroso as President of the Division, Professor Daniel Serrao, and Professor Rui Nunes, and also an Executive Committee, composed of Professor Cristina Nunes, Dr. Jose Belmiro Costa and Dr. Sandra Aparicio. All members attended the inauguration.

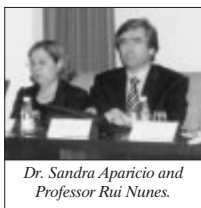
The first official meeting of the Division, which included various planning sessions, was held in June 2004, and the members have already begun to collect materials for a reference library. The B.I.O. Portuguese Division is affiliated with the University of Oporto and will be headquartered at the Department of Bioethics of the University.

The inaugural meeting featured speeches and presentations by the B.I.O. President and by all the distinguished members of the Portuguese Division.

Professor Rui Nunes

It is an honour to have a person like Dr. Arvanitis among us on the occasion of the establishment of the

BIO Division in Portugal. The Medical School of Oporto University is the ideal place for this initiative to be launched. We must make bioethics a part of daily life. Laws need to be re-structured to address bioethics, not only as ethics for human life, but as ethics for life in all of its forms that appear in nature. The implementation of bioethics is the obligation of every citizen. B.I.O. exemplifies this. B.I.O. aims to protect fundamental human rights and to demonstrate that there must be an obligation, and sub-



Dr. Sandra Aparicio and Professor Rui Nunes.

stantial and essential responsibility, to the environment. In Dr. Arvanitis' words, biopolitics is the base for future societies. I hope that bioethics will be our bridge to a better future.

Dr. Maria Barroso

Dr. Arvanitis is well-known internationally and in her country, Greece, among those who take the subject of the transformation of the world seriously.

In an extraordinary book, Dr. Arvanitis calls us all to the task to prepare ourselves practically and mentally for the transformations. A robotised and mechanised society needs to be re-born. There is a need for new concepts to face the current value crisis. Scientists and philosophers are urged to defend nature. The application of these values, compatible with the environment and sustainable development, are already in discussion by the UN and the WHO. Sustainable development should not aim only for the creation of wealth, but specifically the creation of wealth for all individuals. Even though initiatives have been taken, such as in



Dr. Agni Vlavianos-Arvanitis, Dr. Maria Barroso and Professor Daniel Serrao.

Geneva with 30 thousand participants from 178 countries, sustainable development still needs to be addressed.

The contamination of water, acid rain, and desertification are all themes known to all that may be used to create the link from the need for the sustainable development to the concepts to be applied. There must be responsible action by all citizens. We must construct a new consciousness, mainly for the future generations, for an ethical behaviour towards the environment.

Dr. Jose Belmiro

There is a need in modern democracies to use the concepts of B.I.O. A consensus can be obtained in all disciplines, such as those that rely on bioethics. Environmental disasters such as the green house effect, acid rain, desertification, destruction of the ozone layer, species extinction, and decreasing water resources are mentioned daily and remind us of the importance of the environment in our lives. We must also keep in mind the lack of respect for human rights.

The B.I.O. representation in Portugal comes in good time. In the history of humanity, there is a tendency for people to appear at a time when they are most needed. Dr. Arvanitis is one of these personalities. Dr. Arvanitis is an intellectual whose authorships cover not only science but also poetry. The representation of B.I.O. in Portugal will undoubtedly be a tool for the ideal dispersion of the bios way of thinking to Portuguese society.

Professor Daniel Serrao

We have here today a noble Greek woman who shares with Aristotle, Socrates and Plato their universal style of thinking. One day in the future, among discussions of the survival of humankind on Earth, the name of Dr. Arvanitis will certainly be mentioned among the great environmental thinkers and soldiers of this century.

All living beings are dependant on their environment; the non-living matter that provides raw materials needed for growth, nutrition, reproduction, and survival. The relationship between living beings and non-living matter assures the continuity of life. Because of this relationship, living beings need to adapt to changes in their environment. Those that cannot adapt perish.

The capacity of adapting to changes in the environment is limited and time-dependent. Adaptation can be risky in the medium and long term. Not to adapt is to risk mass extinction. This should be taken into account in the long-term sustainable development of modern human society.

Mankind, so proud of its intelligence and power on life, acts childishly towards its surroundings. The incorrect assertion that man is the owner of nature, that he can create and transform, at his will, water, air and other living things, will lead to the supreme form of violence: death of man by man. To prevent this from occurring we must awake the common consciousness of society. The Biopolitics Organisation, which Dr. Arvanitis has brought to Portugal, is the prophetic voice that calls out to us to do so. The representation of B.I.O. in Portugal will be the guarantee for those who believe that this is the only solution. And we believe it. The alternative is the extinction of the human species.



Professor Cristina Nunes and Dr. Jose Belmiro.

Professor Cristina Nunes

B.I.O. is value system that adds a new dimension of respect for the environment, and an attempt to educate society and inspire respect for biodiversity. B.I.O. is essential. There is a need to intervene with clear and transparent rules, to generate trans-national concepts, multilateral agreements, and to insert deeply in society the concept of biopolitics.

In a world without geographical and biological frontiers there must be an international commitment to quality of life. Biopolitics must be incorporated into education and culture at the global level, aimed at the devel-

opment of mankind and the environment, the agreement to live together harmoniously with all forms of life, and to create a new structure for society, like the bioeconomy.

The B.I.O. Division in Portugal is very important. It represents a transformation of the consciousness of the Portuguese community. This is a time of increased awareness in civil society of the damage to nature and the ways to correct it.

We must aim for better education and bio-education on the internet and through other means of communication. We must increase the awareness of the importance of bios for all society. We must re-orientate

our actions. Examples of environmental damage, such as global warming and acid rain are well known and of interest to all and should be used to draw attention to this cause. Change is possible.

We need a bio-evaluation of technology, aimed at developmental and social advancement. We also need a Declaration of Bios Rights, a declaration about the duties of mankind towards the environment, aimed at protecting and improving quality of life. This will include values that should be accepted by all, and environmental policy to be obeyed. It will include the tools needed to promote and protect those rules, even against personal or group interests. Here the concepts of ethics and rights will coincide.

IXth Youth Bios Olympiad

The IXth Annual Youth Bios Olympiad was held in St. Petersburg, Russia, under the inspired leadership of Professor Alexander Shishkin with the support of B.I.O. The events took place at the Academy of Sciences, on September 23-26, 2004. More than 450 participants travelled from several foreign countries, as well as from 38 cities in Russia to take part.

Diplomas for 1st, 2nd, and 3rd place awards were given in three areas: environmental research works, creative environmental works, and nominations of encouragement.

Environmental research works were presented in 8 areas: Assessment of the state of the environment; Problems of flora protection; Problems of fauna protection; Hydrobiological and hydrochemical research; Medical and social aspects of environment; Research on the state of ecosystems; Solid and industrial wastes; International cooperation in bio-environment.

Creative environmental works were evaluated to the best representation according to the following nominations: Awareness and awakening of the value of life; Theme of the Bios Olympiad; Proposal of a solution to an ecological problem; Most original concept; Brightest and most remembered image; Most expressive colour; Most original composition; Maximal use of artistic expression (image, colour,



and composition); Most educational work; Most original use of natural materials; Preservation of traditions in bio-culture; Concern for the future of the Earth; Most sincere interest in the Bios Olympiad; Humour to explain an ecological problem; Most clever interpretation of nature; Best performance skills; Best environmental essays; Best research in the field of bio-culture and bio-environment; Best posters in the field of environmental protection; Most inspiring input from teachers in the field of bio-culture and bio-environment; Most original; pedagogical method of education in bio-culture.

Nominations of encouragement were awarded in six areas: Best performance; Youngest participant; Possibility for practical use of research results; Most current ecological topic; Most original work; Best illustrative design.

Thanks to the extensive efforts of Professor Shishkin, there are currently thirty six bio schools in Russia.

III World Conference on Bioethics

The III World Conference on Bioethics, organised by the International Society of Bioethics (SIBI), was held from September 27th to October 1st, 2004 in **Cuenca, Spain**. The conference focused on issues of water shortage and contamination, as well as on the use of stem cells in research.

The B.I.O. President was a keynote speaker at the event, and addressed the ethics of green diplomacy and water sharing (p. 11). Other speakers included: Dr. Kati Myllymaki, f. President of the World Medical Association; Dr. Volnei Garrafa, President of the Brazilian Society of Bioethics; Dr. Fermin Roland Schramm, Main Researcher, National Institute of Public Health; Dr. Jayapal Azariah, Founder and President, All India Bioethics Association; Dr. Salvador Dario Bergel, Law Professor and UNESCO Chair Director, Buenos Aires; Dr. Georges Kutukdjian, Director of the UNESCO Office in Lebanon; Dr. Jose Cantu Garza, Coordinator of the Genetic Centre in Mexico; Dr. Einar Oddsson, President of the Bioethics Committee and the Iceland Medicine Association; and Professor Hector Gros Espiell.

SIBI was founded in 1996 at the proposal of Dr. Marcelo Palacios, former member of the Spanish Parliament (1982-1996) and member of the Parliamentary Assembly of the Council

of Europe (1986-1996). The society aims to promote reflection, analysis, and open discussion on bioethical



issues. Dr. Agni Vlavianos-Arvanitis served as SIBI Vice President from 1998 to 2002.

Resolutions

The participants of the III World Conference on Bioethics unanimously resolved to:

- Reaffirm the message made public by the Scientific Committee of the International Society for Bioethics (SIBI) and presented at the Palace of the Council of Europe, in Strasbourg, the 28th and 29th of January of 2003, that states: "Human intelligence must use all possible means to prevent war, and must use scientific and technological knowledge in support of peace and freedom."
- Support and reaffirm the Declara-

tions of the I and II World Conferences of SIBI proposed in Gijon in 2000 and 2002.

► Affirm that access to water of good quality is a basic human right. Therefore, indicate the social and bioethical responsibilities in regards to the promotion of the means to ensure clean water and health as a basic prerequisite to the protection of human dignity, stressing the respect for all forms of life and recognising biological and cultural diversity as the riches that are necessary to continue in the effort to build peace and common understanding.

► Support the use of information technology, and the means of communication and education for the divulgation and promulgation of bioethics in the search for a better understanding of the handling of the issue. The media must make use of accurate knowledge in order to publish all information correctly and with neutrality. In this way, scientific information must be current, truthful, and based on the concerns for the possibilities and expectations of the application of the proceedings.

► Develop the debate regarding stem cells from different sources, taking into account the indispensability to reach adequate norms and the necessary funds for research and possible therapeutic use.

Ancient Olympia

The first ancient Olympic Games can be traced back to 776 B.C. They were dedicated to the Olympian gods and were staged on the ancient plains of Olympia, in the western part of the Peloponnese. They continued for nearly 12 centuries, before being terminated in 393 A.D.

Olympia, the site of the ancient Olympic Games, functioned as a meeting place for worship and other religious and political practices as early as the 10th century B.C. The ancient stadium in Olympia could accommodate more than 40,000 spectators, while in the surrounding area there were auxiliary buildings which developed gradually up until the 4th century B.C. and were used as training sites for the athletes or to house the judges of the Games.

The myth which concerns the beginning of the Olympic Games involves the famous demi-god Heracles. Heracles is mentioned to have staged games in Olympia in honour of Zeus, because the latter had helped him conquer Elis when he went to war against Augheias.

HERACLES AND THE OLYMPIC GAMES

Heracles took on the task of clearing the province of Elis from the manure which had been accumulating in the area for 30 years owing to the extensive breeding of cattle. Heracles changed the direction of the waters of the Alpheius river, a major river flowing through the region, and accomplished the task.

When Augheias refused to give Heracles part of his kingdom, which was the agreed upon payment for his services, Heracles, with the help of the Argives and the Arcadians, went to war against Elis killing King Augheias. The myth is symbolic, since, at some point, the river bed had indeed changed. Even today, traces of the old river bed can be seen near the villages of Volakas, Heraclea and Skillountas. The river has changed its course frequently over time.

After defeating Augheias in battle and killing him, Heracles took over the province of Elis. He went to the banks of the Alpheius and established the Olympic Games in memory of his



victory, having first built six altars, one for each pair of Olympian gods.

TYPAEON

Mount Typaeon is a steep mountain located on the way from Skillountas to the Alpheius. Women who had disobeyed the rules and attended the Olympic Games, or even simply crossed the Alpheius during the days that it was forbidden to do so, were hurled from the peak of this mountain.

CLADEUS

The Cladeus is a river flowing west of the valley of Olympia. It flows from north to south along the west side of the Altis, the sacred grove, and merges into the Alpheius. It rises near the village of Lalas on Mount Pholoe.

The Altis

The Altis was the sacred grove of Zeus and the sacred precinct in Olympia. It was an irregular quadrangular area, more than 183m on each side, and walled, except to the north, where it was bounded by the Kronion, the hill of Cronus. In it were the temples of Zeus and of Hera. According to the poet Pindar, the space of the Altis was measured out by Heracles, who surrounded it with a wall.

Oenomaus

Oenomaus, the son of the war god Ares and the nymph Harpina (a daughter of the river-god Asopus), was the king of the city of Pisa, in the province of Elis. He was married to the Pleiad Sterope, by whom he became the father of the beautiful Hippodameia, or "horse tamer." He vowed not to surrender his daughter to any suitor, unless the suitor could defeat him in a chariot race. Oenomaus invariably won each contest and thereupon killed the suitor. However, Pelops used bribery and deceit to win the race, and the loser, Oenomaus, was thrown into the river Cladeus, as related by the famous ancient greek traveller and geographer, Pausanias.

Pelops

Pelops had suffered a terrible fate in the hands of his own father, Tantalus, the mythological king of Asia Minor. In an act of impiety and cruelty, Tantalus slaughtered his son, boiled, and offered him as a meal to the gods. Having discovered this disgusting circumstance, the gods brought Pelops back to life again. Pelops was said to have lived during the dawn of pre-historic times and gave his name to the Peloponnese after seizing the kingdom of Oenomaus. According to Pausanias and the poets Apollodorus and Lycophron, the Olympic Games were established in memory of Pelops, who was buried on the banks of the Alpheius.

ALPHEIUS

The Alpheius is the longest river of the Peloponnese. It flows for 111km and with its many tributaries has always



had an ample flow of water as well as many fish. Its source is not easy to identify; it appears to be found at the southern entrance of the Megalopolis plain, as great quantities of water spring out there, but the real source of the Alpheius is believed to be much further away on the northwestern slopes of Mount Parion.

The Alpheius flows through Megalopolis, skips Mount Lycaeon and continues in a northwestern direction for some distance, providing a natural border between the provinces of Arcadia and Elis. Further on, it joins the river Ladon, which, according to local tradition, is the point where the Alpheius stops and the river that continues is the natural extension of the Ladon. The Alpheius is also joined by the river Erymanthus, which has its source on Mount Erymanthus. After following a route with many twists and turns, which divides the province of Elis in two, the Alpheius runs by ancient Olympia, reaching the gulf of Cyparissia, 6km south of the capital city of Pyrgos.



The river was praised by amongst others, Homer, Hesiod, Pindar, Euripides and Virgil. In ancient times, the name Alpheius changed according to the places it ran through. For example in Asea it was called the Aseates. Pausanias mentions that 5 stadia (3000 feet) away from Asea was the origin of the Alpheius, and that the temple of the mother of gods can be found there. Pindar also mentions that for a distance of 6000 paces from Olympia to the mouth of the Alpheius, the river could be navigated by small boats and that it was used for carrying supplies during the Olympic Games.

Alpheius the river god

The Alpheius was worshipped as a river god in all the places that the river flowed through, but more so in the provinces of Arcadia, Messenia and, especially, in Elis. On occasion, and

in areas where the river was important for people's livelihood, the Alpheius would assume even greater importance than some of the Olympian gods.

The lineage of Alpheius

Alpheius was a son of Tethys, by either the sun-god Helios or Oceanus. He fathered Phegeus, who was to become king of Psophis in Arcadia, and Orsilogus, whose son, Diocles, became the king of Pharon in the province of Messenia.



Alpheius and Arethusa

Alpheius was described as a good looking young man and a hunter, who roamed the forests of Arcadia. He fell in love with the nymph Arethusa, who was in the company of Artemis, goddess of the hunt. But Artemis and her maidens were committed virgins, and therefore, Arethusa would not marry him. To escape his advances, Artemis changed her into a spring and, through underground channels, she reached Ortygia, a small island outside Syracuse, where she sprang up again. Alpheius, however, was madly in love with her, so he became a river and, after crossing the sea, finally reached her. In other legends, Arethusa is referred to as Alpheius' wife.

Alpheius and Artemis

Close to the mouth of the Alpheius there was a sacred grove dedicated to Artemis Alpheiaea or Alpheionia. Artemis got this name due to the love that Alpheius felt for her. Because he could not persuade her to be with him, Alpheius thought of using the Letrinians to catch her by force. He accompanied them to an all-night celebration where Artemis and her nymphs were playing. Suspicious that she might be spied upon, Artemis smeared her face with clay and told her nymphs to do the same. This way Alpheius could not recognize her.

At Olympia there is one common altar for Alpheius and Artemis. The name Artemis Alpheiaea gradually became Elaphaea, due to common ceremonies that were associated with Elaphaea Artemis, the doe-bearing goddess.



Melampus

Melampus was the first human with the gift of predicting the future. The son of Amythaon and Idomene, Melampus was placed under a group of trees by his mother when he was born. But the shadow of the trees could only protect his body and not his feet, which were consequently tanned by the sun. This is why he was named Melampus, "the one with the black feet."

As an adult, Melampus became a seer after meeting Apollo, the god of prophecy, at the banks of the Alpheius. Melampus was said to have been well educated and well read. He is also said to have cured the daughters of king Proetus from their madness.

Zeus

Every year, the priests at Olympia would knead the ash from the animals that were sacrificed to Zeus with water



from the river Alpheius, thus forming a type of clay, which they would then smear onto the great altar of Zeus. Because the ash could not become clay with the water from any other river, they considered the Alpheius as Zeus' favourite river.

Alpheius in art

Representations of the Alpheius can be found on sculptures offered by the Cnecians at Olympia, consisting of a statue of Zeus surrounded by statues of Alpheius and Pelops. Another representation can be found on



the eastern pediment of the temple of Zeus at Olympia which shows the chariot race between Pelops and Oenomaus at the moment when the contestants are ready to fight. Alpheius is reclining on the narrow left side of the pediment and on the other side there is a personification of the river Cladeus.

At the mouth of the Alpheius, there were also temples with wall paintings by Cleanthes and Aregon from Corinth, representing Aphrodite on a griffin, the fall of Troy, and the birth of Athena.

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