



Defence for the environment - an answer for peace The environment at the core of societal structure



religion must be preserved. Respect for our cultural heritage is not a threat; it is the wealth of humanity. Can we imagine the earth with only one type of tree growing on it? Diversity in the forms of life and in human culture makes us all richer.

"Defence for life" must, therefore, become a priority in every facet of our lives. The conversion of war regimes to programmes for the preservation of the environment would guarantee a better future. If military aircraft, instead of dropping bombs, were used to drop seeds for trees, then the entire planet would benefit. If destroyers were used to clean the oceans and shorelines of pollution, this would be the best response to poverty and deprivation. No longer would there be a Third World; no longer would there be hatred. The environment, as a common point of reference, can bring all peoples of the world together, in harmony and coexistence.

In this time of terror, calls for retribution will open Pandora's box and lead to further attacks against poor and innocent victims. How many more civilians will die? And how many seeds of terror will retaliation sow? The

The magnitude of the tragedy of September 11 will not allow the government of the United States to be compromising in its pursuit of justice. Hate begets hate, and war, as the supreme expression of hate, only leads to the same dark outcome as that of terrorism. In today's world, void of noble goals and ideals, if one terrorist is killed, a hundred more will take his place. Every trace of civilisation, language and

real "terrorists" remain at large and continue to profit from their power and money.

In the crucial situation facing the world today, an international effort guided by diachronic values and ideals can help nations overcome the crisis. No grievance justifies the killing of innocent people. Let us seek an end to militarism and focus on a unifying vision for the future. A global endeavour to preserve the continuation of the chain of life on our planet - a chain that has survived for hundreds of millions of years - can lead humanity to join together in a battle against the forces which want to see us divided and unable to react. The Biopolitics International Organisation has promoted this

The biggest challenge for the 21st century will be the development of new ways to manage national defence programmes with a priority of protecting the environment.

unifying vision since its inception in 1985, by raising awareness of "bios" - life - and the environment as the vehicle for uplifting the spirit of the world.

In the quest for ways to overcome the current crisis in values and to achieve peace and global environmental harmony, we need to draw inspiration from the historical past. Olympic values and the ideals promoted by the Olympic spirit can help shape a new vision for humanity. The Olympic Games provide the opportunity for every citizen on the planet to make a positive contribution. Why should this opportunity be limited to athletics only? Every sector of society and every profession can benefit from the world's positively focused attention at the time of the Olympic Games and actively participate in environmental protection. In this effort, technology and the arts can join forces and raise awareness of the joy and beauty of bios. We have the potential to drive technology towards a direction that will benefit the entire planet. Let us use this potential to curb destruction



The subject of Bio-Diplomacy was discussed at length at the Biopolitics International Organisation's (BIO) conference entitled "Profit and Environment". Pictured above, from left, are **Istvan Pataki**, Ambassador of Hungary, **Tjaco van den Hout**, Secretary General of the Permanent Court of Arbitration, The Hague, **Mikhail Botcharnikov**, Ambassador of Russia, **Paul Brouwer**, Ambassador of The Netherlands, and **Dr. Agni Vliavianos-Arvanitis**, Founder and President of BIO.

and promote initiatives for a global appreciation of bios.

We cannot allow future generations to be burdened with our negligence. Life on our planet is threatened by the depletion of the ozone layer, by hunger and disease. The greatest challenge for the 21st century is to engage in a collective endeavour in defence of the environment. Existing defence equipment can be amended and used for reforestation, water resource clean-up, soil erosion recovery, protection of the ozone layer and the de-contamination of areas affected by nuclear radiation. To achieve peace, the aspirations of sovereign states and civil society should converge in pursuit of long-term international environmental policy and action. Human arrogance must give way to a conscious involvement in the race to save the environment.

A. Vliavianos-Arvanitis

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Re-defining the concept of profit

Untrammelled economic growth has led to a crisis of values which obscures our priorities for the future and hinders the development of proper perspectives. The participation of economic and business interests is necessary for the formulation of new values for the community. Since its inception, B.I.O. has attempted to sensitise the business community to the need to redefine the concept of profit into a vision which equates environmental protection with economic prosperity. Faced with the urgency of our everyday problems, more economic leaders are coming to understand that gains by business enterprises and the protection of the environment are mutually compatible goals.

B.I.O. at the Money Show

To promote these issues, B.I.O. has launched a fruitful co-operation with the Money Show, a business initiative held several times a year in major cities in Europe and the USA. The purpose of B.I.O.'s participation in this initiative is to link business profit with environmental protection and management. A "green" stock exchange, socially-conscious investing, ecological stock indices, and environmental technologies are among the topics discussed at the B.I.O. roundtables held during the Money Show (see pages 6-11). Bio-diplomacy - international co-operation in environmental protection - is also an underlying theme, with the participation of ambassadors from various countries.

Bio-Diplomacy

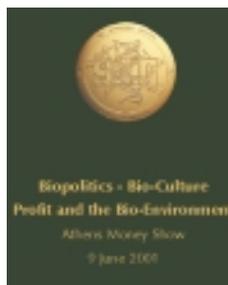
Bio-diplomacy is a concept pioneered by B.I.O. at a time when civic leaders, international organisations and the world com-

munity as whole had not fully realised the urgency of adopting common environmental policy as a priority. Since 1985, B.I.O. has convened numerous symposia and conferences on the theme of bio-diplomacy with the vigorous support of the diplomatic community. When the concept of bio-diplomacy was first articulated, many diplomats were drawn to B.I.O. and spoke out in their own countries and indeed in the whole world about the need for bio-diplomacy to work with the people of the world in the new millennium. At a recent meeting concerning the establishment of an International Court for the Environment which took place in Athens last January, ambassadors and diplomatic representatives from 25 countries were present.

Threats to the environment are problems of global dimensions. Since 1985, B.I.O. has urged that international co-operation lead us into a new era in diplomatic relations, an era of bio-diplomacy. Instead of engaging in various conflicts, the nations of the world should channel their efforts into the struggle to protect the environment. Under this concept, the foreign policy of a nation would be transformed from one of divisiveness to a vision of unity and interdependence.

The Olympic Spirit

These thoughts are in complete harmony with the Olympic spirit and Olympic ideals and comprise the principle course of action of bio-diplomacy. The ultimate goal is international cooperation in environmental issues and preservation of biodiversity. At the same time, bio-diplomacy is concerned with the improvement of human relations in the area of world peace, while constantly maintaining at its core an international and multi-



B.I.O. participation in Money Show events:

Athens, June 9, 2001
Athens, November 3, 2001
London, November 17, 2001
Salonica, December 15, 2001

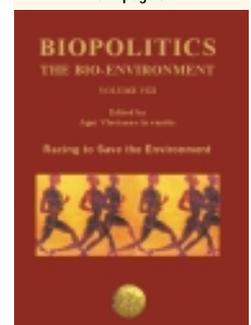
(see pages 6-11)

cultural perspective.

The true enemies of humankind are pollution, illiteracy, poverty, and disease. National defence systems should be reconfigured to be used for reforestation, cleaning of the oceans and beaches, protection of the soils from pollution, protection of the ozone layer, and restoration of areas contaminated by nuclear radiation. Bio-diplomacy can strengthen the vision of peace and reconciliation which lives in the Olympic Games so that the efforts toward peace and global environmental harmony will bear fruit.

A. Vliavianos-Arvanitis

New publication see page 5



BIO Goals

INTERNATIONAL CO-OPERATION FOR THE 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

These are two essential dimensions for building new societal values for the millennium.

PROMOTION OF BIO-EDUCATION

The International University for the Bio-Environment was launched to reform education world-wide by promoting a biocentric curriculum at every educational level.

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 the bio-environment, 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 willingness 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 should be given in every discipline and with the participation of every member of society to reward excellence in environmental protection.

CEASE-FIRE DURING THE OLYMPIC GAMES

Since 1985, 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 ACTIONS

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* instead of benefits for the unemployed, with the commitment to contribute to the protection of the environment

environmental action groups drawing both on the enthusiasm of the young and the experience of senior citizens, to tackle local issues

a *bios-supporting economic strategy* to replace destructive policies, and promote a world-wide interdisciplinary exchange of information on the appreciation of the environment

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

2001 SPONSORS

European Commission
Kitty P. Kyriacopoulos
The A.G. Leventis Foundation
Nicos J. Vardinoyannis Foundation
Pyrros N. Vardinoyannis
Greek Ministry of Culture
Prefecture of the Dodecanese
Alpha Bank
Mandylas S.A.
ELAIS S.A.
Phoenix General Insurance S.A.
Hotel Herodion
Action Link/Action Synergy S.A.
Hellas-On-Line
Xerox Hellas S.A.

BIO represented in 118 countries

Africa

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

The Americas

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

Asia

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

Europe

Albania, Austria, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, FYROM, Georgia, 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

Our survival on this planet depends on our ability to exit the present crisis in values brought on by a confusion in priorities and short-term planning. The absence of environmental ethics has resulted in serious environmental deterioration and is a threat to the continuation of the chain of life on Earth. We are out of balance with nature and this has placed our future in jeopardy.



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

Human history can be traced back to a few thousand years only. During this period, several political models have been developed. Tyranny and democracy are among the older ones; socialism, communism, capitalism, are added as alternative models of human society. The history of life, however, extends into several hundred million years. Life has been tested in unlimited varieties and the most viable species have survived through the powerful force of evolution and natural selection. It is for this reason that "bios" can become the model for attaining the desired dimensions and expanding strategies for future society.

Humanity's goal for the millennium should be to eliminate current inadequacies in financial trends and guarantee economic prosperity for every country in the world. Moreover, we have to work together to eradicate poverty and render the concept of a "Third World" obsolete. Within this framework, "profit" needs to be quantified on the basis of social and environmental inputs. Quality of life, education, health, human resources, biodiversity and culture are elements that constitute a "genuine" profit for society.

With the advent of globalisation, a major change in economic, social and educational priorities is shaping world views and ways of life and is creating new challenges. To meet these challenges, education requires a radical shift away from intra-disciplinary entrenchment and into creative and thoughtful action for the development of the highest potential of each individual for the benefit of the world and future generations. Increasingly, with information and communication technologies empowering individuals everywhere, we urgently need new models of thought, action, communication and participation. The inclusion of environmental dimensions and ethics in every academic and professional initiative - as promoted by bio-education - can provide these necessary models and contribute to the development of a responsible and involved citizenry.

Humanity cannot prosper from destruction. Guaranteeing a better quality of life for every citizen in the world holds the key to a harmonious and peaceful global society.



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The genome and human dignity Bioethics congress, Oporto University, Portugal



A great honour for Biopolitics: **Maria de Jesus Barroso Soares**, President of the Pro-Dignitate Foundation and former First Lady of Portugal, travelled to Porto specifically to meet with the B.I.O. President.



The II National Bioethics Congress themed "The Genome and Human Dignity" took place under the Chairmanship of Professors **Luis Archer, Daniel Serrao and Rui Nunes** on October 26-27, 2001 in Porto. The Congress was organised by the Department of Bioethics and Medical Ethics of Oporto University Medical School and featured many distinguished scholars as keynote speakers.

Major topics addressed included: Human Dignity and Genome Intervention; Genetics and Human Rights; Ethical Codes in Genetics; Personal Autonomy and Genetic Determinism; Psychology in Clinical Genetics; Legal Aspects of

Genetic Diagnosis; Ecology, Environment and Biodiversity; New Directions for the Millennium.

In her speech, titled "Biopolitics - the bio-environment - the new ethics for survival," the B.I.O. President stressed the need for bioethics to expand beyond the limits of medical issues and to include concern for the environment as a priority in every human endeavour. Bioethics and environmental preservation are intricately related, and a true appreciation of human life cannot evolve without a conscious effort to protect the environment and all other living beings on our planet.

International Court of the Environment Foundation Environmental Day in Rome, November 2001

The International Court of the Environment Foundation (ICEF) and the Italian National Agency for Environmental Protection, in cooperation with the Italian Ministry of Foreign Affairs, the Ministry of Justice and the Ministry of Environment, are sponsoring an "Environmental Day" at the Italian Supreme Court on Friday, November 16, 2001. The purpose of this event, which will be attended by many personalities of international acclaim, is to support the project of an International Court of the Environment before authorities of the Italian Parliament and Government. The B.I.O. President has been invited by ICEF Director and Founder, Judge Amedeo Postiglione, to participate as a main speaker.

B.I.O. pledges its full support for the efforts of the International Court of the Environment Foun-



datation in relation to the creation of an International Court of the Environment to settle environmental disputes. Environmental disasters and ongoing natural resource destruction and abuse

point to the urgency of speeding up the establishment of an International Court of the Environment, as promoted by the International Court of the Environment Foundation and by Members of the Permanent Court of Arbitration and other leaders, and endorsed world-wide. In today's dynamically expanding society, it is essential to have a globally acknowledged council as a means for resolving environmental disputes and ensuring global environmental responsibility for individuals, corporations and states. B.I.O. is proud to participate in this initiative and to be actively involved in furthering its implementation.

Issues of environmental justice are growing in importance. On an international scale there are marked and increasing disparities between those who have access to judicial and administrative proceedings and those who do not. Disparities of this nature may be the result of circumstance, economic and trade relations or simply inadequate or inappropriate governmental regulation. Whatever their source, it is clear that a new approach is needed both to understand and ameliorate these problems. Therefore, rather than functioning as just another punitive institution, the International Court of the Environment has the possibility to evolve as a model providing guidelines and a vision for the promotion of environmental justice. Under the auspices of the Permanent Court of Arbitration (PCA), it can function as a lighthouse of values and impart the leadership and insight necessary to curb environmental deterioration and place respect for bios - life on our planet - at the core of every human endeavour.

Health and the environment

A 'healthy' environment is a prerequisite for a healthy human population," emphasised the B.I.O. President at the **Eighth International Physical Therapy Symposium**, held in **Cephalonia, Greece**, in September 2001. She also pointed out that "we live in an age where the state of a nation's wealth is evaluated increasingly upon economic factors such as stockmarket performance and shrinking budget deficits. This unprecedented spurt of misguided economic growth is seriously jeopardising the environment and threat-

ening biodiversity and public health on a phenomenal scale. To prevent our children from inheriting a dying planet, it is essential for the concept of 'profit' to be re-defined and to include health and quality of life as primary parameters."

The Symposium was organised under the auspices of several major Greek hospitals with the participation of prominent physicians and scientists. The main focus was on preventative paediatrics with special emphasis on psychosomatic development.

Euro-Arab co-operation award

In recognition of her excellent contribution in the field of environmental protection, the B.I.O. President received the Euro-Arab Co-operation Centre's Environmental Award 2001.

The Award was presented by **Sami El Gindy**, Vice-President of the Euro-Arab Co-operation Centre, at the conference on "Profit and the Bio-Environment" held on 9 June 2001 within the framework of the Athens Money Show. This marks the first time that this prestigious award has been presented to a person outside the Arab world.



Urban green spaces Lviv, Ukraine, October 2001

An international conference on "Urban Green Spaces" convened in Lviv, Ukraine, from 3-5 October 2001. The conference was organised by the **Ukrainian State University of Forestry and Wood Technology** and the **Ministry of Education and Science of Ukraine**, with the co-operation of the **Biopolitics International Organisation**, the **National Botanical Gardens of Ukraine**, the **National Academy of Sciences of Ukraine** and the **Urboecological Centre of Lviv**. The conference was chaired by Professor **Constantine Sytnik**, Director of the National Academy of Sciences of Ukraine and the Institute of Botany. The B.I.O. President was one of the Co-Heads of the Conference, together with Professors **T. Cherewchenko** and **V. Kucheryavyi**.

The conference was attended by nearly 200 scientists, students, and official representatives of government from various countries including Belgium, Belarus, the Czech Republic, Italy, Ireland, Moldova, Poland, Russia, Tadjikistan, and Ukraine. A number of important topics were addressed and resolutions were passed in relation to urban green spaces. These resolutions, signed and distributed by the Scientific Board of the conference, consisted of proposals and recommendations for



future consideration by the Ministry Council of Ukraine and the municipal government.

In summary, the conference resolved to:

- enact and pass laws in Ukraine concerning green plantations in complex green spaces in cities
- renew the planning and realisation of long-term (10 years) programmes concerning the development of urban green spaces
- formulate a state programme for parks, botanical gardens, conservation, restoration and reconstruction

- change the specialised study "Landscape Architecture" from the field of "Architecture" to "Forestry, Garden and Park Management" and to give the study of "Landscape Architecture" the status of a specialty field
- implement the positions of landscape architect and engineer of garden and parks management in city and regional State Departments of Agriculture

- prepare an inventory of all green spaces in cities and towns of Ukraine
- create a government agency dealing with the issuing of licenses for the creation of green urban spaces
- consider the environmental aspects of city layout projects and other questions

Regional administration supports B.I.O. Nobel Nomination, Syros, Greece, October 2001

The Panhellenic Council of Women Elected to Regional Administration, which convened in Ermoupolis, Syros, from 5 to 7 October 2001 with the participation of many representatives from the local and regional administration, including a large number of Mayors, passed the following resolution:

"In recognition of the cultural and peace-keeping contribution of **Dr. Agni Vlavianos-Arvanitis**, we support her nomination for the 2001 Nobel Peace Prize. She has launched a pioneering and extremely important scientific campaign for peace, the bio-envi-



ronment and bio-culture, and she is the only personality world-wide to have made such a crucial and timely effort to combine environmental think-

ing with the future of humankind. We authorise the Council's organising committee to send the present resolution to the Norwegian Nobel Committee and to governmental authorities that need to be sensitised about these ideals."

The resolution was signed by the Mayor of Ermoupolis, **John Decavallas**, and by the President of the Council, **Anna Vafia-Validis**, and forwarded to government offices in Greece.

Bioethics in Gijon

The International Society of Bioethics' (SIBI) Scientific Committee met in Gijon last June, under the Presidency of Professor **Marcelo Palacios**, to prepare the ground for the Second International Bioethics Congress to convene in Gijon in 2002. The B.I.O. President, who is also Vice-President of SIBI's Scientific Committee, par-

ticipated in the meeting and stressed that the issue of bioethics should no longer be confined to medicine but expand to include all fields of human endeavour: "In this time of crisis in values, respect for bios can provide the necessary guidelines to build a stable society and to guarantee the rights of future generations."

Europe of tomorrow Women in action

The International Association for the Promotion of Women of Europe organised a conference themed "Tomorrow's Europe, Women in Action" from **May 31 to June 3, 2001, in Rhodes, Greece**. The conference, which took place with the moral and material support of the Greek Ministries of Foreign Affairs and Culture, brought together renowned European women from various countries and professional and social fields in order to discuss problems and formulate proposals concerning the future of Europe.

Many prominent international personalities took part, including **Rodi Kratsa**, President of the International Association for the Promotion of Women of Europe and member of the European Parliament; **Dr. Savvas Karagiannis**, Prefect of the Dodecanese; **Giorgos Giannopoulos**, Mayor of Rhodes; **Gordana Matkovic**, Minister of Social Policy, Serbia; and **Maria de Jesus Barroso Soares**, President of the Pro-Dignitate Foundation and former First Lady of Portugal.

In her presentation to the Working Group

on "Biotechnological Revolution - New Ecological and Ethical Conscience," the B.I.O. President stressed the need to infuse biotechnology with Olympic values:

"Biotechnology is opening new horizons and has the potential to contribute significantly to the difficult task of protecting the environment. However, progress in biotechnology must be based on ethical values which support the improvement of the quality of life for all humankind. The bio-assessment of technology, as proposed by B.I.O. since its inception, is a continuous process requiring the involvement of every field of human endeavour with the objective of preserving life on our planet. In a dialectic exchange of views, specialists could present a thesis and antithesis, with the goal of forming a synthesis of norms for the millennium. International co-operation in environmental protection and respect for life, in conjunction with the Olympic spirit, could be used as a catalyst for the creation of new societal values for the future."

BIO Progress

2001

HONOURS AND DISTINCTIONS

Re-nomination for the Nobel Peace Prize

Nomination for the J. William Fullbright Award for International Understanding

Environmental Award by the Euro-Arab Co-operation Centre. First non-Arab recipient.

B.I.O. INTERNATIONAL CONFERENCES

"Resolving the Environmental Crisis. The Need for an International Court of the Environment." International conference in Athens with the participation of the Secretary General of the Permanent Court of Arbitration, Supreme Court Justices and other eminent personalities

"Bio-Environment and New Millennium" environmental education workshop in the framework of the European Union Leonardo da Vinci Programme

"Profit and the Bio-environment" Biopolitics session at the Athens Money Show, June

"Bio-Environment - Quality of Life" international conference under the auspices of the Dodecanese Prefecture, Greece

6th Annual Youth Bios Olympiad, St. Petersburg, Russia

"Profit and Values - Bio-environment - Bio-Culture" Biopolitics session at the Athens Money Show, November

Biopolitics at the London Money Show

Biopolitics at the Thessaloniki Money Show

SEMINARS/CONFERENCES/SPECIAL EVENTS

Keynote presentation on globalisation and the environment, at the conference sponsored by the Canelopoulos Foundation. Athens Chamber of Commerce and Industry

Keynote presentation at the conference on "Environment and the Olympic Games" sponsored by the Hellenic Society of Environmental Law, Athens

Slovak participants from the TEMPUS Mobilities EU programme visit Greece to take part in a Biopolitics clean energy and environmental administration project in co-operation with the Regional Energy Centre of the Peloponnese and Action Link/Action Synergy SA

Presentation at the Annual General Assembly of the Pontifical Academy for Life

Keynote presentation as Member of the Board of the Euro-Arab Co-operation Centre at the conference on "Environmental Technology, Technology Transfer" University of Rostock, Germany

Keynote speech, plenary session, 7th European Roundtable on Cleaner Production, Lund, Sweden

Keynote speech, conference on "Olympic Values, Tourism and Culture," Ancient Olympia, Greece

Keynote presentation as Member of the Scientific Committee at the 11th International Conference on "Environmental Protection is a Must." Alexandria, Egypt

Keynote presentation at Panteion University, Athens

Keynote speaker at the conference on "Tomorrow's Europe - women in action" organised by the International Association for the Promotion of Women of Europe. Rhodes, Greece

Biopolitics session on "The Environment as a Symbol of the Crisis" at the Council of Europe Parliamentary Assembly conference themed "What Lifestyles for the Third Millennium"

Participation as Vice-President of the International Bioethics Society in the Society's Biannual Scientific Committee meeting, Gijon, Spain

Keynote presentation at the "Gaia and Culture Symposium," sponsored by the Forum 2001 Foundation. Tuscany, Italy

"Bio-Environment - Health and Olympic Values" keynote presentation at the Eighth International Physical Therapy Symposium, Cephalonia, Greece

Honorary Co-Chairmanship of the International Scientific Conference "Urban gardens and parks: past, modern and future" sponsored by the Ukrainian State University of Forestry and Wood Technology. Lviv, Ukraine

Keynote presentation at the conference on "Women and leadership," Syros, Greece

Keynote presentation at the Second National Congress on Bioethics, Oporto University, Portugal

"Legal frameworks for environmental progress" keynote presentation at the Enterprise Summit, organised by the Progressio Foundation and the Industrial Society, London

Keynote presentation at the International Court of the Environ-

ment Foundation conference, Rome

Keynote presentation at the International EMECS Conference in Kobe, Japan

Keynote presentation at the conference on Journalism, organised under the auspices of the French Institute, Patras, Greece

Keynote presentation on "Conflict resolution" at the XXIII Indian Geography Congress. Sagar, India

Keynote presentation at the Petroleum Institute conference, Cairo, Egypt

B.I.O. PUBLICATIONS

"Biopolitics - the bio-environment Vol. VIII - Racing to Save the Environment." Proceedings from B.I.O. Conferences 2000-2001 (English edition, 335 pp.)

"Biopolitics - the bio-environment - Bios Olympiad," proceedings from the B.I.O. conference held in 1999 in Ancient Olympia (Greek edition, 299 pp.)

"Bio-Syllabus for European Environmental Education" CD-ROM and printed education manuals (in prep.) sponsored by the European Commission

"Bio-policy - bio-culture: needed global priorities for environmental protection." Contribution to Our Fragile World, UNESCO Encyclopaedia of Life Support Systems, Eols Publishers, Oxford, UK

"Biopolitics - the bio-environment: social and environmental aspects of human existence." Opening article in the first issue of the Journal of Integrative Anthropology, published by Odessa State Medical University, Ukraine

"Bio-policy - a prerequisite for sustainable agriculture." Proceedings from the OECD workshop on "Innovative soil plant systems for sustainable agricultural systems," Izmir, Turkey

"Reviving urban green spaces: a bios vision for the millennium." Proceedings from the International Scientific Conference on "Urban gardens and parks: past, modern and future," sponsored by the Ukrainian State University of Forestry and Wood Technology, Lviv, Ukraine

"Biopolitics and Olympic values: health and the environment." Proceedings from the Eighth International Physical Therapy Symposium, Cephalonia, Greece

"Bio-policy in Cleaner Production - new societal structure, new thinking." Proceedings from the 7th European Roundtable on Cleaner Production, Lund, Sweden

MEDIA COVERAGE

Interviews on satellite television in several countries

Interview on Channel 3 European satellite TV

Press conference on the role of volunteering within the framework of the National Exhibit on Volunteer and Humanitarian Organisations, Athens

Weekly B.I.O. articles in the Athenian daily "Adesmeftos"

Bio-economics, bio-legislation, bio-diplomacy, and bio-philosophy featured extensively on the B.I.O. Internet web site (<http://www.hol.gr/bio>)

2000

HONOURS AND DISTINCTIONS

Re-nomination for the Nobel Peace Prize, by Nobel Laureate International Physicians for the Prevention of Nuclear War

Nomination for the J. William Fullbright Award for International Understanding

Member of the Board of the Euro-Arab Co-operation Centre

Founding Member of the Balkan Academy of Science, New Culture and Sustainable Development

Europe 500 New Century Award by Barons Who's Who USA

B.I.O. INTERNATIONAL CONFERENCES

"Bio-Environment - A New Renaissance in Business" B.I.O. conference with the participation of experts in legislation, marine protection, clean energy sources, finance and management, held within the framework of the Hellenic-Italian Chamber of Commerce's 5th Annual Conference. Holiday Inn Hotel, Athens, Greece

"Bio-Diplomacy: The Future of International Relations" B.I.O. luncheon event with keynote speeches by Ambassadors from several countries. The Athens Club, Athens, Greece

Round table discussion on "New Century - New Dimensions - Environment," at the World Conference on Bioethics organised by the International Bioethics Society (SIBI), Gijon, Spain
Fifth Youth Bios Olympiad in St. Petersburg

BIOS PRIZES

Bios Prize awarded to Ted Turner, Atlanta, USA

SEMINARS/CONFERENCES/SPECIAL EVENTS

"Bio-Culture - Bio-Environment - Millennium Values," keynote presentation at the millennium celebration on the island of Patmos, Greece

Biopolitics at the Pontifical Academy for Life's General Assembly, The Vatican

Participation in the seminar on "Environmental Obligations and Opportunities for Business," British Embassy, Athens

Presentation in the organisational meeting for the conference on "What Lifestyles for the Third Millennium?" Council of Europe, Paris

Biopolitics presentation in "Forum 2000" conference of the American Foundation for Greek Language and Culture, Tampa, Florida, USA

Biopolitics at the Wilton Park Conference on "Earth Summit 2002: Identifying the Agenda," Wiston House, UK

Keynote presentation at the International Centre for Bioethics Conference, International Institute for Human Rights Studies, Trieste, Italy

Opening lecture at the conference on "Environmental Protection is a Must," held by the Euro-Arab Co-operation Centre and the University of Alexandria, Egypt

B.I.O. participates as a partner in the Leonardo da Vinci European Union Project "Bio-environment and New Millennium"

Biopolitics keynote at the conference on "Tourism and Culture," Ancient Olympia, Greece

Participation in the Working Group for the establishment of an International Court for the Environment, Permanent Court of Arbitration, The Hague

Participation in the Earth Charter Launch in the presence of HM Queen Beatrix of the Netherlands, Peace Palace, The Hague

Ten-day B.I.O. lecture series on environmental management and legislation for university teachers and government employees from Eastern Europe, in the framework of the EU Tempus Programme. Academia Istitopolitana Nova, Bratislava, Slovakia

Opening lecture at the Fourth Annual Conference of Arcadians Abroad, Arcadia, Greece

Plenary Session presentation at the conference Praga 2000 Natura Megapolis, organised by the Czech IUCN, Prague, Czech Republic

Participation in the State of the World Forum, New York, USA

Participation in the Working Group of the International Court of the Environment Foundation, New York, USA

Visit to Romania, following an invitation for co-operation in the field of public administration and training, National Agency of Civil Servants, Romania. Plans to establish projects in bio-education, bio-legislation and bio-diplomacy.

Keynote lecture "Chemical Education and Sustainable Development" conference, Mendeleyev University, Moscow

"What is Globalisation's Impact on the Environment?" Keynote presentation at the Wilton Park conference on Human Rights and Global Economic Governance: How Can We Build Equity?, Wiston House, UK

Keynote presentation at the Petroleum Institute Conference, Cairo, Egypt

Keynote presentation at the Board Meeting of the Euro-Arab Co-operation Centre, Alexandria, Egypt

Keynote presentation at the conference for the establishment of an International Court of the Environment, Italian Supreme Court, Rome

Biopolitics seminars on environmental legislation and environmental management at Academia Istitopolitana Nova, in Bratislava, Slovakia within the framework of the European Union TEMPUS programme

Slovak participants from the above mentioned seminars visit Greece to take part in a Biopolitics clean energy and environmental administration project in co-operation with the Regional Energy Centre of the Peloponnese within the framework of the TEMPUS Mobilities EU programme

Keynote presentation and chairing of an event on Cultural Olympiads, with the participation of the Mayor of Athens and other personalities. The event was sponsored by the Global Federation of Ileians Abroad. Old Parliament Building, Athens, Greece

Participation in the European Union "What energy options for Europe in 2020" conference, Brussels

Keynote presentation at the Steering Committee meeting for the conference "What Lifestyles for the Third Millennium" of the Council of Europe's Parliamentary Assembly, Paris, France

BIO Progress

BIOPOLITICS - THE BIO-ENVIRONMENT - VOL. VIII

Racing to Save the Environment

Resolving the Environmental Crisis

Need for an International Court of the Environment

International Court of the Environment - need and structure

- *Biopolitics - bio-culture. A millennium vision for peace.* Dr. Agni Vlavianos-Arvanitis, B.I.O. President and Founder, Greece

- *Need for an International Court of the Environment.* Judge Amedeo Postiglione, Director International Court of the Environment Foundation, Italy

- *Project for an International Court of the Environment. Origins and development.* Deirdre Exell Pirro, International Court of the Environment Foundation, Italy

- *International Court of the Environment. Yes, but in which form?* Professor Giovanni Conso, President Emeritus, Constitutional Court, Italy

- *Environmental aspects of the Charter of the International Criminal Court.* Dr. Ivano Iai, Constitutional Court, Italy

Business and finance

- *Ethical framework for the protection of the bio-environment.* Kitty P. Kyriacopoulos, Honorary Chairman, Silver and Baryte Ores Mining Co., Greece

- *Contribution of an industry to environmental protection.* Anthony Gortzis, President, World Federation of Advertisers, Director of Corporate and Media Relations, Unilever, Greece

- *Financing and the environment.* Constantine Kanonis, Chairman, Hellenic-Russian Chamber of Commerce

- *Environmental responsibilities of business. International co-operation.* Panayotis Koutsikos, President, Koutsikos Group of Enterprises, Greece

International proposals

- *War in Yugoslavia. Environmental impact on south-east Europe.* John Hartland, Counsellor and Special Advisor to the Secretary General of the Parliamentary Assembly, Council of Europe

- *Protecting the environment. A challenge on three levels.* Maggi Mikaelsson, Member of Parliament and Member of the Council of Europe Parliamentary Assembly, Sweden

- *Institutional reform of international policy. Advancing the debate on a World Environment Organisation.* Professor Udo Simonis, Science Centre Berlin, Germany

- *Democratic procedures as a value system for the protection of the environment.* Dr. Harilaos Harakas, Attorney at Law, Legal Counsel for the Federation of Greek Industries, Greece

- *Responsibilities and penalties. The necessity for a world executive instrument for air and water.* Francine Cousteau, President, The Cousteau Society, France

Access to environmental justice

- *European perspectives on access to justice in environmental matters.* George Kremlis, Head, Judicial and Legislative Affairs, European Commission DG XI, Belgium

- *Peaceful settlement of transnational environmental conflicts. Why not by an International Court of the Environment?* Alfred Rest, Senior Academic Counsellor, Institute for International Public

Law and Comparative Public Law, University of Cologne, Germany

- *Global justice for the environment.* Dr. John Sarmas, Counsellor, National Court of Audits, Greece

- *Resolving environmental disputes. From negotiation to adjudication.* Tjaco T. van den Hout, Secretary General, Permanent Court of Arbitration, The Netherlands

Bio-Diplomacy

New Vision in International Relations

- *Bio-diplomacy in the new millennium.* Ambassador Irawan Abidin, Ambassador of Indonesia

- *Bio-diplomacy. Recognising and solving environmental problems.* Ambassador Manuel Jose Bonett, Ambassador of Colombia

- *Bio-diplomacy. Speeding up the environmental revolution.* Ambassador Milan Dubcek, Ambassador of the Slovak Republic

- *Bio-diplomacy. The future of international relations.* Ambassador David Jacobs, Ambassador of South Africa

- *The bio-environment and the threats of local conflicts.* Ambassador Yuriy Sergeev, Secretary of State, Ukraine

Profit and the Bio-Environment

Investing in environmental protection

- *Green finance and environmental investment.* Roland Werdel, Head of Institutional Asset Management, Banque et Caisse d'Epargne de l'Etat, Luxembourg

- *International co-operation and bio-diplomacy. World diplomacy and the environment.* Ambassador Mikhail Botcharnikov, Ambassador of the Russian Federation

- *Bio-diplomacy. The Hungarian experience.* Ambassador Istvan Pataki, Ambassador of Hungary

- *Bio-diplomacy. A road towards peace.* Ambassador Achilles Exarchos, The A.G. Leventis Foundation, Greece

- *Reconciling profit and the environment.* Ambassador Paul Brouwer, Ambassador of The Netherlands

Industry and technology

- *Waste water biotechnologies.* Joachim Paul Schaefer and George Kalos, Managing Directors and Founders, WWB Germany

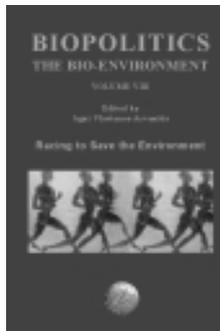
- *Environmental management.* George Diamantis and Andreas Nicolau, Action Link/Action Synergy S.A.

- *Technology towards sustainability.* Professor Nicholas Mousiopoulos, Head of the Laboratory of Heat Transfer and Environmental Engineering, University of Thessaloniki, Greece

- *Technological progress for the man of the third millennium.* Samy El Gindy, Vice President, Euro-Arab Co-operation Centre, Egypt

- *Global policy. Insuring the future. Integrated management of world coastal areas.* Francine Cousteau, President, The Cousteau Society, France

- *Legal framework. Towards an International Court of the Environment?* Tjaco T. van den Hout, Secretary General, Permanent Court of Arbitration, The Netherlands



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B.I.O. PUBLICATIONS

"Bio-Syllabus for European Environmental Education" CD-ROM and printed education manuals (in prep.) sponsored by the European Commission

"Bios Olympiad," Monograph by A. Vlavianos-Arvanitis (Greek edition, 111 pp.)

"Biopolitics - the bio-environment - Bios Olympiad," proceedings from the B.I.O. conference held in 1999 in Ancient Olympia (Greek edition, in press)

"Environmental Legislation, Energy and Environment, Industry and Environment" Open education manuals prepared within the framework of the European Union Leonardo da Vinci "Bio-Environment and New Millennium" project

Quarterly publication of BioNews, the official B.I.O. newspaper

"Bios Prizes in St. Petersburg - a Millennium of Bio-Culture," video release (English, Greek)

"The Kogi of Colombia - a Tradition of Safeguarding the Environment," video release (English, Greek)

"Biopolitics - the bio-environment - the biopolitical context of pluriculturalty," contribution to the volume of proceedings from the conference on "The Challenges of Pluriculturalty in Europe"

in co-operation with Europe House, Zagreb, Croatia

"Protecting water resources and the bio-environment: A priority policy for the millennium," contribution to the volume of proceedings of the MEDCOAST/EMECs Joint Conference on the Coastal Environment. International EMECS Center, Japan

"Biopolitics - the bio-environment - biopolis versus megapolis: a millennium vision," contribution to the volume of proceedings and CD-ROM from the conference "Praga 2000 Natura Megapolis" of the Czech IUCN

MEDIA COVERAGE

Keith Suter Comments on Biopolitics. Radio 2GB News Commentary, Australia. Broadcast on Friday 17th November on Radio 2GB's "Brian Wilshire Programme" at 9pm, and on the 19th November "Sunday Night Live" at 10:30pm

Interviews with ANT1 TV Satellite-Pacific, broadcast in Australia, Canada and USA

Weekly B.I.O. articles in the Athenian daily "Adesmeftos"

Extensive press coverage in Spain, Russia and Japan

Bio-economics, bio-legislation, bio-diplomacy, and bio-philosophy featured on the B.I.O. Internet web site (<http://www.hol.gr/bio>)

BIO 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. Kales, 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

▶ BIOPOLITICS - 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 1991-1993, 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

PERIODICALS

▶ BIONEWS Newspaper, English and Greek (1987, 1994 - 2001)

CD-ROMS

▶ BIOPOLITICS—THE BIO-ENVIRONMENT (English) 1999

▶ BIO-SYLLABUS FOR EUROPEAN ENVIRONMENTAL EDUCATION (English, in prep.)

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

Bio-diplomacy at the Athens Money Show

With globalisation defining new trends and needs in society, business is increasingly challenged to lead the world into a better future. The environmental crisis that threatens the very continuation of life - *bios* - on our planet is becoming a compelling issue of unprecedented proportions, while public expectations of what business can do to resolve this crisis remain high. The Biopolitics International Organisation (BIO) urges business leaders to welcome this crucial opportunity and responsibility and to place the environment as a priority in all their endeavours.

BIO has always stressed the environment as the "real" profit for society and the only vehicle for

achieving a better quality of life. The price of environmental abuse is high. It is not a matter of money in the bank. It is a matter of jeopardising the very continuation of life on our planet. Humanity cannot prosper from destruction. It is hoped that this roundtable discussion will prove that sound environmental protection is also sound economic policy and that, in today's expanding investment markets, long-term environmental strategies can maximise returns and increase profits in virtually every business venture.

The Athens Money Show, organised under the aegis of the German Hellenic Chamber of Commerce

and Industry, is a cutting-edge financial forum convening business and other leaders to analyse new investment strategies, products and services. It is a joy and privilege for BIO to be part of this initiative and to have the opportunity to address the increasing importance of environmental issues in the rapidly emerging global economy scheme.

I would like to take this opportunity to thank the Athens Money Show for their kind invitation and to express my deepest appreciation to all the BIO sponsors who made this event possible.

Dr. Agni Vlavianos-Arvanitis
BIO President and Founder



Paul Brouwer
Ambassador of the Netherlands

How do we reconcile two apparently diametrically opposed phenomena - profit, the age-old economic driving force, and environment, our historical bequest? Every day we are confronted with news items in the media that impress upon us the importance of the environment, and the crucial nature of a happy marriage between profit and environment. The Netherlands has been closely involved with the environment from time immemorial. Had it not been for the stubborn struggle with and the sometimes partial conquest of the environment, The Netherlands of today would not exist.

Profit in the economic sense has always been a very potent driving force in the economy, regardless of its stage of development. In classical economic theories, profit was viewed as being of such importance that other factors were virtually eclipsed by it, in the view of economists and policy makers.

The first confrontations in The Netherlands between private industry and environmentalists were quite heady. However, after the first skirmishes left both parties licking their wounds, it was very evident that we were all in the same boat, whether we liked it or not. We either had to "bail and pump" together, or we would sink together.

So, being pragmatic and practical, we decided to sit down and "talk business." How could we adapt our ideas, interests, beliefs, and policies to salvage the bulk of our programmes and interests, while compromising on relatively minor assets - the famed "Polder model" at work.

The days of confrontation have made way to co-operation. The Dutch private sector, multinationals and small and midsize enterprises alike, have discovered that environmental measures actually pay off and, therefore, make perfect economic and business sense. Not only in the immediate production process, leading to substantial cost cutting measures - which shore up a company's competitive position vis-a-vis others - but also in the public eye. In the past decade, The Netherlands government has also invested in a number of programmes meant to "lure" people and businesses into becoming environmentally conscious private and corporate citizens.

These programmes range from preferential tax treatment for investments in so-called "green funds" to subsidies to citizens and companies for environmentally beneficial installations, creating a critical mass of people who adhere to stricter environmental standards.

The government's aim is to promote sustainable development world-wide: enhancing economic growth, promoting human and social development, and protecting the environment. In this context, The Netherlands government feels that the OECD is best suited to play a leadership role for the benefit of both developed and developing countries.

The need to significantly reduce global greenhouse gas emissions is not only necessary, but also possible, financially as well as technically. The Intergovernmental Panel on Climate Change has shown convincingly that industrialised countries will only need to lay out between 0.5% and 2% of GDP (Gross Domestic Product) by the year 2010 to fulfil the Kyoto Protocol goals. Although more will be necessary to bring the growth of the concentration of greenhouse gases in the earth's atmosphere to a complete standstill - Kyoto represents approximately 25% of the ultimately needed reductions in greenhouse gas emissions - the safeguarding of the world's ecosystems, food production and sustainable economic development force us into action.

To achieve these goals, The Netherlands is pursuing three key objectives: credibility, fairness, and efficiency. Credibility will be achieved through active and substantial action to meet the

Kyoto goals.

Fairness, in the Dutch view, means that developing countries should be able to continue their growth, which is crucial in their fight against poverty, hunger and despair.

Assistance by the developed economies is called for with measures such as technology transfer, capacity-building, and adaptation to sea level rise, floods, hurricanes and extreme unstable weather conditions. Once a certain level of socio-economic development has been reached, these developing countries, however, should also contribute to the global goals for reduction of greenhouse gas emissions.

Economic/cost efficiency is the third aim pursued by my Government, to be implemented in close co-operation with the private sector. Business should take the lead in climate change mitigation policies, while the government conducts climate policies in such a way that world markets remain one level playing field, transparent, free and non-discriminatory.

Provided that all countries participate, private business worldwide can rest assured that there will be no undue competitive disadvantage in specific markets.

Building on earlier policies, The Netherlands government has started implementing domestic policies aimed at a 6% reduction of greenhouse gas emissions ahead of the ratification of the Kyoto Protocol, covering all sectors of the economy: industry, agriculture, energy producers, transportation, construction and private households.

To improve the market position of renewable energy, the tax on small scale energy consumption has been increased yearly since its introduction in 1996. Large energy consuming companies have entered into an official agreement with the government: the "Benchmarking Protocol," committing them to become the most energy efficient industries in the world by 2012. The benchmark will be developed by three parties: industry, government, and independent specialists, working according to agreed procedures.

There is a growing recognition that development of low-emission technologies makes excellent business sense. Also, the challenge of developing climate neutral energy carriers has been taken up, including renewables such as solar, wind and water power. Complementing these measures, the Government of The Netherlands will pursue the other half of the carbon dioxide reduction target with the help of the Kyoto mechanisms - Joint Implementation, joining them with business investments in Central and Eastern European Countries.

In The Netherlands, as in Greece, most companies are small or midsize enterprises. This comparative lack of size, however, does not automatically correspond to a lack of ambition or a lack of possibilities and opportunities for environmental responsibility. There are hundreds of examples of ways to earn money while

helping the environment. A few samples from different business sectors include the following:

- a hotel in Eindhoven installed compact fluorescence lamps in the hallways, resulting in an energy saving of 61%. In the meeting rooms, a saving of 50% resulted from automatic "daylight-related lighting." The investments were repaid within three years.
- Nationale Nederlanden, the Dutch banking and insurance conglomerate, installed metal-halogenide lamps in the main public areas of its new headquarters in Rotterdam, resulting in a saving of 66%.

- a Dutch metallurgical company introduced an oil registration system to monitor oil quality, resulting in 30% savings.

- a Dutch bicycle manufacturer introduced a new painting unit, resulting in efficiency gains regarding paints and heat-consumption, in certain parts of the process amounting to 99%.

- a furniture manufacturer in Groningen introduced a machine to keep and purify used solvents. Within a year, the investment was recouped leading to a more than 80% reduction in solvents.

The issue is how to harmonise business interests with the requirements of environmental protection in the context of globalisation.

Istvan Pataki



Istvan Pataki †
Ambassador of Hungary

On thinking back over my thirty years of activity in the diplomatic service and comparing some twenty-five years ago with today, it occurred to me that environmental issues simply were not on the agenda in the past. In my field of course, certain international organisations dealt with those issues at that time, but certainly it was not a part of everyday diplomatic activity, as it is today.

Diplomatic activity is basically carried out on three levels: the global level, the regional level and the bilateral level. There have been enormous developments in the last ten years and although the problems ahead of us are great, I am very hopeful that with a combined effort, we can solve most of these problems. There can be no doubt that economic development is strongly linked with environmental protection, and the real issue is how to harmonise business interests with the requirements of environmental protection in the context of globalisation.

First of all, what is very important is strategic thinking for the long-term in order to minimise future risks. There are problems which should be solved, not for the next ten or fifteen years, but for the next fifty or eventually one hundred years or more. The second point is regular dialogue between the interested parties - environmental organisations and business. With regular dialogue it would be possible to achieve greater success. The third point, which is a common feature of diplomacy, is prevention rather than conflict management. Therefore, success can be measured in the long term by the ways in which we try to prevent certain conflicts. If we have good examples in this area, it helps to popularise those good examples all over the world. And finally, it should be mentioned that we probably have to do more to involve politicians and decision-makers in this whole process, because that is one of the real ways in which we can have a greater influence on events.

Hungary is a relatively small central European country. Fifteen years ago, there was no mention made of the plight of the environment. The reason is there was no public awareness. We should not forget the impact of socialist industrialisation. Civil movements were discouraged and if they appeared, they were immediately politicised. Now, the situation has changed positively and we think that Hungary could accommodate recent international trends.

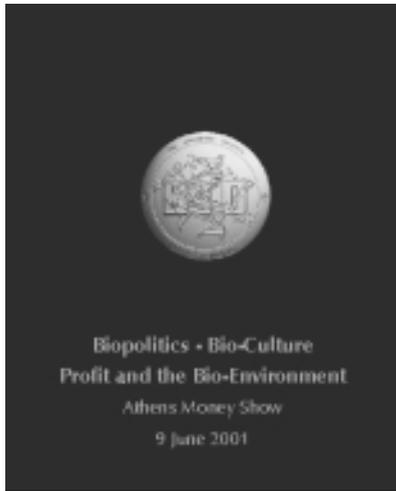
Civil society has been strengthened. We have been very successful in the last ten years in restructuring Hungarian academies and the Hungarian economy. In the last ten years, Hungary has received US 22 billion in foreign investments. And what is very important, is that from the outset, when there was investment in a privatised company, the environmental position was among the first five criteria which the shareholder had to satisfy. In addition, we recently managed to close a satisfactory chapter with the European Union concerning the environment which shows that many things have happened in Hungary and we are headed in the right direction. The environmental problems we are now facing mainly concern water and air pollution, wastewater management and the sewerage system.

In addition, Hungary will continue to be active in different international organisations in the future as well. On that note, I should mention the Kyoto Protocol. It is extremely important that all countries co-operate with each other in this respect, especially highly industrialised countries.

Hungary is a country with seven neighbours. Just to give one example, 95% of the water supply of the country comes from neighbouring countries. Therefore, we have many environmental issues on the table but we have very good relations with all of our neighbours in this respect. We have learned a lot about what we can do in the future, and we have realised that most of our problems can be solved through regional co-operation.

† Istvan Pataki passed away in August 2001.

Bio-diplomacy at the Athens Money Show



Programme
Athens Money Show
 Grande Bretagne Hotel
 9 JUNE 2001

Bo-environment and cultural Olympiads

Dr. Agni Vlavianos-Arvanitis
 President and Founder, Biopolitics International Organisation, Greece

Green finance and environmental investment

Roland Werdel
 Head of Institutional Asset Management, Banque et Caisse d'Epargne de l'Etat, Luxembourg

International co-operation and bio-diplomacy

H.E. Mikhail Botcharnikov
 Ambassador of the Russian Federation to Athens
H.E. Istvan Pataki
 Ambassador of Hungary to Athens
Achilles Exarchos, Ambassador
 The A.G. Leventis Foundation, Greece
H.E. Paul Brouwer
 Ambassador of The Netherlands to Athens

Environmental management

Dr. Natassa Balaska
 Director of Education and Training, Action Link/Action Synergy S.A., Greece
George Diamantis
 Managing Director, Action Link/Action Synergy S.A., Greece
Samy El Gindy
 Vice President, Euro-Arab Co-operation Centre, Alexandria, Egypt

Industry, technology and energy policy

Joachim Paul Schaefer
 Managing Director and Founder, WWB WasteWater Biotechnologies GmbH, Germany
George Kalos
 Managing Director and Founder, WWB WasteWater Biotechnologies GmbH, Germany
Professor Nicholas Moussiopoulos
 Head of the Laboratory for Heat Transfer and Environmental Engineering, University of Thessaloniki, Greece

Legal framework - International Court of the Environment?

Tjaco van den Hout
 Secretary General, Permanent Court of Arbitration The Hague, The Netherlands



Mikhail Botcharnikov
 Ambassador of the Russian Federation

On the threshold of the third millennium, humankind has started to face a new problem: that of preserving itself as a biological species. We have all seen large-scale negative changes to the environment brought about by the economic activity of man. Technogenic catastrophes touch all areas of our planet and are cause for joint international effort and co-operation.

In the context of "world diplomacy and the environment," what is highly important is the implementation of the philosophy of sustainable development which was declared at the United Nations conference in Rio de Janeiro in 1992. The plans made in Rio should become an international guide for international co-operation. Unfortunately, the results have not ensured a radical change in the global tendency for environmental degradation.

Problems that have been caused by globalisation show the necessity of ensuring a global balance, and this should be the ultimate aim of all economic activities. **Our global task is to ensure sustainable development and the preservation of the environment.** The Russian government would like to see Agenda 21 adopted as a practical guide for international co-operation by all nations. A forum titled "Rio + 10" will take place in Johannesburg in 2002 to sum up the results of the implementation of Agenda 21. We believe that this upcoming forum will make a significant contribution to the solution of such conflicts as the question of the maintenance of ecological security, assistance to sustainable development and environmental protection.

The Russian government is in favour of close multilateral co-operation within the framework presented by the Kyoto Protocol. For the practical realisation of the Kyoto Protocol, organisational and legal mechanisms must be worked out, including the so-called mechanism of cleaner production which presupposes the conveyance to developing countries of modern efficient energy technology and joint projects to cut down on greenhouse gas emissions. The second part of the sixth session of the Conference of the Parties to the Kyoto Protocol will take place a month from now in Bonn.

The UN Convention on Biological Diversity adopted in Rio de Janeiro in 1992 was a very important step forward for mankind as we see our general task for the future. The fifth meeting of the Convention's subsidiary body, which was held in Montreal in 2000, reinforced the need to ensure more effective international action to conserve and sustainably use the earth's natural resources which together constitute biological diversity.

Another important initiative held under the auspices of the United Nations - which together with climate change and biological diversity is one of the three Rio, or sustainable development, treaties - is the fight against desertification. A special amendment to the UN Convention to Combat Desertification has been adopted for Central and Eastern European countries. This is especially important for the region that I represent.

Samy El Gindy

Vice President
 Euro-Arab Co-operation Centre
 Egypt

Development cannot exist without technology, and development, for the majority of countries has become the measure of progress in fields such as industry, agriculture, and even the weapons race. Technological progress is needed to solve the world's problems, to improve communication between countries, and to contribute toward what we call "a better life." Since this is being done for the benefit of humanity, we should all work together for the sake of a better life by fighting poverty and protecting new development; we should strive for a safer, better world in the third millennium.

Let us consider the word "safe." The real safety of the inhabitants of this planet lies in technology, a major tool in the progress of economic, agricultural, and environmental growth; however, this safety is facing a real threat - the type of technology concerned with the weapons race in the field of nuclear, chemical and biological weapons. First and foremost, the new technology should be one which protects the environment and the human race, and achieves its goals without adversely affecting the safety of the environment and the whole planet.

New technology should be applied to agricultural progress, by aiming for the production of safe food for better nutrition. Today, many millions of people are facing food shortages and an equal number have no access to clean water, making it necessary

In Russia, much importance is given to the management of forest resources, and we take an active role in international processes forming new approaches to the sustainable management of forests.

It is necessary to spread agreements among members of the UN to format a new structural unit to be created within the UN system: a UN Forum on Forests. The sooner this forum starts its work, the better it will be for the world.



Ambassador Achilles Exarchos
 The A.G. Leventis Foundation
 Greece

The need to preserve the environment and the attainment of the necessary international co-operation were the two reasons for the founding, in 1985, with the initiative of Dr. Agni Vlavianos-Arvanitis, of the Biopolitics International Organisation (B.I.O.), of which I am a founding member. The A.G. Leventis Foundation that I represent in Greece stands alongside in strong belief that the B.I.O. ideals will be achieved and will become priorities in society.

The B.I.O. leadership in the area of international co-operation in environmental protection, and the tireless efforts and self-sacrifice that the organisation gives for the achievement of its ideals are well known.

A crucial issue facing us is the confrontation between the environment and industrial enterprises, which traditionally viewed the environment as irrelevant or counter to their interests and its preservation as a constraining element to their activities and the gaining of profit.

The struggle to bring about a new understanding was difficult, but it has led towards a congruence of business interests and the environment. **Many business leaders have stated that profit and the preservation of the environment have become inter-linked concepts, as is truly the case.**

International co-operation should evolve into a single collective struggle, where all the inhabitants of the Earth will be led to one unified vision of peace in the effort to combat the one common enemy of all humanity - the destruction of the environment.

Since the inception of "bio-diplomacy" in 1985, many diplomats have supported B.I.O. in this task and have spoken out in their own countries and the rest of the world on the need for bio-diplomacy to become the vehicle for co-operation for humanity in the new millennium. Hopeful wishes for the success of this initiative are being seen ever more often because every day, increasing numbers of people on our planet clearly call for the survival of the environment for themselves and for future generations. It is becoming obvious that, otherwise, there will be a complete destruction of bios on our planet, the blue planet which looks so beautiful from space.

It is always a pleasure to see so many Ambassadors and business leaders, as well as prominent scholars and educators from 120 countries to be registered as faithful supporters of Biopolitics, and I wholeheartedly wish that our efforts will save the Earth.



to protect our water resources for a healthier life. Based on the above, we conclude that the new major force in the world is technology.

We must also reconsider globalisation and its effect on development, the new technology and the environment. In the third millennium, major forces will both encourage and hinder the development of human ambitions and the fate of the world. The first force is the economic system which appeared at the end of the second millennium, now referred to as globalisation. It must be noted that, at least initially, there were benefits associated with globalisation: openness in various fields, such as communications, information gathering and transfer, and the exchange of services. Benefits were also evident in the financial sector, particularly concerning share trading. In addition, many economies developed towards the end of the last millennium. For example, the Chinese and Indian economies developed in the 1980s and in the early 1990s and benefited directly from the emergence of globalisation.

However, globalisation is not a panacea for the ills of the world and many people have been adversely affected by the damaging effects of globalisation. Regardless of direct and vocal opposition to globalisation, the American Foundation for Strategic Studies set a goal of decreasing the number of poor in the world by half by the year 2015. In actual fact, we are approaching this date without the slightest hope of achieving this target.

We must also recognise that without peace, no development at all would be possible. We should all focus on establishing peace around the world, especially in the Middle East, in order to develop the economy, information technology and the environment, to drastically reduce poverty and to accomplish our aims, which must work together to create clean technologies that are suitable for all countries in order to have a secure and better life.

International Court of the Environment

An International Court of the Environment to resolve environmental disputes is a priority for B.I.O., which is proud to actively participate in efforts to promote its implementation. B.I.O. emphasises that rather than functioning as just another punitive institution, the International Court of the Environment can provide guidelines and a vision for the promotion of environmental justice and values under the auspices of the Permanent Court of Arbitration (PCA).

The PCA Secretary General, **Tjaco van den Hout**, was one of the distinguished B.I.O. speakers at the **Athens Money Show on June 9, 2001**. He presented his views concerning the creation of an International Court of the Environment and announced the PCA Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment that were to be adopted by the Administrative Council on June 19.

Tjaco van den Hout
Secretary
General
Permanent Court
of Arbitration
The Hague
The Netherlands



Towards an International Court of the Environment?



Under the inspiring leadership of Dr. Agni Vlavianos-Arvanitis, the Biopolitics International Organisation (B.I.O.) has shown an unflinching commitment to impress upon the international community that, with regard to our environment, we have literally reached the "eleventh hour" and that concrete steps must be taken to adequately protect it. One such step is in the area of environmental conflicts. Many who are concerned with our environment have become disillusioned with the way in which the existing international legal system works to protect it. Dissatisfaction has been evidenced most clearly in a number of trade disputes, leading one pre-eminent scholar in the field to remark that "we cannot allow the international legal order to continue with... regimes that do not reach out to meld a set of broader societal interests."

Similar conflicts lie at the heart of conflicts between societal interests in protecting the environment and the interests of the investor. The need for balancing competing values has become a burning issue, since free trade and investment have to take into account environmental reali-

ties, just as environmental measures must be respectful of economic freedom. The need to treat developmental needs with respect to environmental needs is referred to as the principle of "sustainable development." The Rio Declaration on Environment and Development illustrates this. The International Court of Justice invoked that very principle not long ago in the case concerning the Gabčíkovo-Nagymaros Project.

Can a balance be achieved between environmental interests and developmental interests?

In the field of international trade, the discussion of this issue is robust. The World Trade Organisation is moving towards reconciling the societal demands of free trade with the need for environmental protection. In the OECD, similar difficulties arose in reconciling the principles of foreign investment and environmental principles. The collapse of the negotiations on the Multilateral Agreement on Investment in 1999 are attributed to a failure to reach a balance of those potentially competitive normative values.

Has the international legal order faced up to the challenges?

Some models rely on a consensual process that prefers agreement and common interests in the search for negotiation, instead of imposition. These models have emerged due to the limits of governmental authority to impose standards and apply sanctions, which has many times resulted

in ineffective implementation of standards. These consensus based models ensure, in the view of some, a broad application of environmental standards. In the view of others, this approach has produced limited and disappointing results.

Are the prospects offered by arrangements within international organisations and special conventions any brighter?

When two sets of norms are mutually supportive - for instance, when international environmental conventions have an impact on investment behaviour in a way that the objectives of environmental protection are achieved - that is obviously the case. It is not, however, when two sets of norms conflict with one another. Then the dilemma presents itself: should there be a hierarchy setting one set of norms over the other? What happens when domestic law interferes? And, conversely, what are the implications of international processes for domestic legal orders? Issues in this field are challenging national and international courts as well as arbitral tribunals.

Some contend that such challenges call for an international environmental court. Others argue against that point of view, warning that this argument is based on a misunderstanding of the nature of international environmental law and of its role in the international legal system. They contend that there are very few disputes that are solely environmental in nature; other issues are also at stake. The international system does not need a proliferation of international tribunals covering each area of international law. However, we can-

not leave the matter there; too many problems present themselves.

No unified forum for resolution of environmental controversies

It is clear that there has been no unified forum to which states, intergovernmental organisations, non-governmental organisations, multinational corporations, and private parties can have recourse when they have agreed to seek resolution of controversies concerning environmental protection and conservation of natural resources. This is a serious flaw. Recent case law indicates a willingness of states and other actors to have recourse to some international mechanism to resolve disputes relating to natural resources and the environment. Until the possible establishment of a separate international environmental court, provisions that provide adequate guarantees to all parties must be put into place at the earliest possible moment.

A growing number of scholars have foreseen a role here for the Permanent Court of Arbitration. For some, this choice is motivated, in part, by considerations of legal access beyond that of states, to include multi-nationals, NGOs and individuals. A study recently prepared in the context of Principle 26 of the 1992 Rio Declaration on Environment and Development, which called on states to resolve their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations, has proposed specific roles for the PCA in the prevention and settlement of environmental disputes.

Permanent Court of Arbitration Adopts Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment

A set of Optional Rules to be used in the arbitration of environmental disputes was adopted by consensus by the ninety-four member states of the Permanent Court of Arbitration (PCA) in an extraordinary meeting held on June 19, 2001. The rules seek to address the main gaps in environmental dispute resolution. Until the adoption of these rules, there had been no unified forum to which states, inter-governmental organizations, non-governmental organizations, multinational corporations and private parties could have recourse when they had agreed to seek resolution of controversies concerning environmental protection or conservation of natural resources.

In more than half of the instances this year in which the International Bureau of the PCA has provided information to states concerning arbitration, there has been a need for consideration of issues in these fields.

Moreover, recent case-law indicates a growing willingness of states and other actors to have recourse to international mechanisms for the resolution of disputes relating to natural resources and the environment.

The rules will be available for the use of all parties who have agreed to use them, thus permitting greater flexibility in the number and nature of the parties than currently exists elsewhere.

Panel of Experts

In order to rapidly provide both scientific and judicial resources to parties seeking resolution of a dispute, the rules provide for the optional use of a panel of arbitrators with experience and expertise in environmental or conservation of natural resources law, and, a panel of environmental scientists who can provide expert scientific assistance to parties seeking resolution and the arbitral tribunal.

Technical Issues

In cases where arbitrations deal with highly technical questions, provision is made for the submission to the arbitral tribunal of a document agreed to by parties, which summarizes and provides background to any scientific or technical issues which may be raised in memorials or at oral hearings.

Unless parties choose otherwise in their compromise, the arbitral tribunal is empowered to order any interim measures necessary to prevent serious harm to the environment. And, since time may be of the essence in disputes concerning natural resources and the environment, the rules provide for arbitration in a shorter period of time than under previous rules. The arbitral tribunal itself can be constituted rapidly because, if the parties involved cannot agree on arbitrators, the Secretary-General can appoint them rather than designate an appointing authority, as had been the case in the past.

Confidentiality

There are also specific measures to protect the confidentiality of information provided by parties. Whereas these powers were previously deemed to be inherent in the arbitral tribunal, the description in the rules of an optional mechanism for resolving confidentiality issues is intended to save the time required if the tribunal and/or parties were to design a system to insure accountability for confidentiality.

These rules have been elaborated for use in arbitrating disputes arising under treaties, agree-

ments or relationships between parties one or more of which is not a state. The rules are based on the UNCITRAL Arbitration Rules with changes in order to: reflect the public international law element which pertains to environmental disputes, and international practice appropriate to such disputes; reflect the particular characteristics of disputes having a natural resources conservation or environmental protection component; indicate the role of the Secretary-General and the International Bureau of the Permanent Court of Arbitration (PCA) at The Hague; and provide freedom for parties to choose to have an arbitral tribunal of one, three or five persons.

Arbitration (PCA) at The Hague; and provide freedom for parties to choose to have an arbitral tribunal of one, three or five persons.

Flexibility

The rules are optional and emphasise flexibility and party autonomy. For example: the rules, and the services of the Secretary-General and the International Bureau of the PCA, are available for private parties, other entities existing under national or international law, international organizations, and states; the rules may be used in relation to disputes between two or more states parties to a multilateral agreement relating to access to and utilization of natural resources concerning the interpretation or application of that agreement; parties are free to choose arbitrators from the PCA Panel of Arbitrators or arbitrators listed as members of the PCA; parties are free to choose expert witnesses from the PCA Panel of Experts; the choice of arbitrators or experts is not limited to the PCA panels; the parties have complete freedom to agree upon any individual or institution to be appointing author-

ity. In order to provide a failsafe mechanism to prevent frustration or delay of the arbitration, the rules provide that the Secretary-General will act as the appointing authority if parties do not agree upon the authority, or if the authority they choose does not act.

Mindful of the possibility of multiparty involvement in disputes having a conservation or environmental component, the rules provide specifically for multiparty choice of arbitrators and sharing of costs and, where appropriate, security for interim measures.

These new rules will be, for the immediate future, the PCA's contribution to the international community for dealing more effectively with the challenges to which the environment is currently being subjected.

To demonstrate their commitment to the broader societal interests of environmental protection, profit oriented companies should include a dispute resolution clause with specific reference to these rules in the contracts and agreements they conclude.

Arbitration is a very effective method for resolving disputes with an environmental component because the process is inherently consensual - parties must have agreed upon arbitration a priori - and because it lends itself to the co-operation necessary for the solution of environmental problems.

Similar proposals by financial institutions, such as those in banking and insurance, should be supported by some underlying legal framework.

This can be achieved by including the appropriate provisions discussed above in the contracts they conclude with their clients. It is this complementarity that might help protect future generations from the type of environmental degradation we have seen to date.





Roland Werdel
Head of
Institutional Asset
Management
Banque
et Caisse
d'Epargne
de l'Etat
Luxembourg

Green finance

With environmental deterioration becoming a compelling issue of unprecedented proportions, public expectations of what economic actors can do to resolve this crisis remain high. To encourage business leaders to welcome this critical opportunity and responsibility, B.I.O. held a panel discussion on **Profit and the Bio-Environment** within the framework of **Athens Money Show on June 9, 2001**. In view of the heightened contemporary understanding of the close relationship between environmental protection and development, the discussion aimed to prove that environmental protection makes sound economic sense.

Roland Werdel, Head of Institutional Asset Management for the Banque et Caisse d'Epargne de l'Etat in Luxembourg, spoke about "green" finance and environmentally and socially responsible stock options as a profitable solution in today's globally expanding investment markets.

During the last couple of years more "ethical, green, social" funds have been launched all around Europe. According to a report conducted by the research and sustainability consultancy centre Avanzi, there were 220 retail funds available in Europe by the end of year 2000, compared with 175 in 1999. With an annual growth rate of 30% for the last three years, the size of the Socially Responsible Investment market in Europe is today over 11 billion euros.

The countries with the largest retail socially responsible investment funds were the United Kingdom (54), Sweden (42) and Switzerland (22). Regarding the retail assets invested in these responsible investments, the UK leads the market with 4.6 billion euros followed by Italy and Sweden.

What are the main drivers which can explain this spectacular market growth?

Political and legal framework

The first driver has been political mandates and international agreements. In its "White Paper on Renewable Sources of Energy," (COM (97) 599, 26.11.97), the EU Commission proposed to increase the regenerative energy quota in the European Union from the current 5-6% to 12% by 2012.

At the third World Climate Conference held in Kyoto in December 1997, industrial nations agreed an average reduction of greenhouse emissions of 5% by the year 2012, based on 1990 levels. According to the European Environment Agency's projections, total emissions of greenhouse gases by the Union of 15 Member States are expected to increase by at least 5.2% between 1990 and 2010, if no action is taken.

After the Kyoto summit, the EU environmental ministers agreed to a reduction of greenhouse gas emissions in Europe by 8% over the period from 2008 to 2012 compared with the 1990 levels (Council Resolution 11th May 1998). Within the context of this Council Resolution, Germany decided to reduce greenhouse gas emissions by 21% over the period to 2012, the UK is committed to a 12.5% cut, while France and Finland must stabilise their emissions.

Public awareness

The second driver is public awareness. Climatic problems, such as the greenhouse effect, the increasing concern over the risks of nuclear energy, acidification warning and many other environmental issues, have led to wide social consensus on the introduction of alternative means of power generation from renewable clean energy, as well as other environment related topics. This social concern is reflected in the rising popularity and political influence of green parties all around Europe.

Public awareness increases the demand for "green" products and investment tools. It also has an effect through the regulation of investments. The UK government called for a responsible investment approach in last year's pension reform legislation. From July 2000, the pension fund "statement of investment principles" must include policies on how social, environmental and ethical considerations are taken into account in investment decisions, as well as policies on how rights, such as voting rights, attached to investments are exercised. Similar actions are taken in countries such as Switzerland, The Netherlands, Norway and Sweden.

While the main focus of green finance is on investments in public companies, ecological and social criteria are also gaining in importance as

far as the supply and demand for private equity and loan products are concerned. At the Banque et Caisse d'Epargne de l'Etat we realised that our clients were willing to support ecological and socially responsible initiatives. In co-operation with the non-profit association Alterfinanz asbl, BCEE launched an "Alternative Savings" account which is remunerated below the common savings rate. This funding permits the financing of ecological, social and international solidarity projects through lower interest rate loans.

Technology

Technological change is a third driver in the growing importance of ecological features in an investment context.

Renewable energy has the potential to provide a safe, clean and affordable energy supply using indigenous sources, without threat of a limited supply. However, technology has generally not reached a sufficiently mature stage in order to make renewable energy sources economically attractive. Therefore, financial incentives are still needed to promote them. Technological innovation increases their competitiveness and their economic viability; moreover, in those sectors where technology is advancing, e.g. wind power energy, costs have fallen dramatically over the previous decade and continue to fall.

In this context we have faced a real boom in the renewable energy sector. The annual installation rate of wind capacity has increased by more than 3% on average in recent years. The same spectacular evolution applies for other renewable energy alternatives.

The flood of Initial Public Offerings in recent years has stimulated investors' interest in the renewable energy sector. The performance of Vestas Wind Systems A/S since its IPO in April 1998 is a good example of the attractiveness of the wind power energy sector from an investor's point of view.

Therefore, there is an increasing interest in environmental and social issues among the general public. On the other hand, local and supranational authorities have developed policies responding to environmental issues. These factors, combined with the impact of new technology, have led to an "Eco-Industrial Revolution" creating investment opportunities in the financial markets for institutional and private investors

Green investments

The concept of ethical investment appeared in the USA in the 1980s, when investment managers began screening investments according to environmental and socio-political criteria.

Ethical investing was exclusively about excluding certain companies or industries on the basis of activities which were regarded as being unethical. The Socially Responsible Investments are heavily based on ethics and exclude companies that belong to certain sectors of the economy such as armament manufacturing, production of tobacco, genetic engineering, nuclear energy, manufacturing of ozone-destroying substances, and so on.

By the end of the 1980s, Socially Responsible Investments became global, and investors world-wide took ethical criteria into account to avoid investing in companies whose values conflicted with their own.

Although there is still no consensus regarding the best way to approach these socio-environmental investments, the socially responsible vision has evolved over the years into "eco-efficiency" or the wider term "sustainability."

Eco-efficiency, for instance, is defined as the capacity to create shareholder value with lower levels of environmental risk.

The sustainability approach differs sharply from the "ethical" approach as it uses the best-of-class theory. This means that investments are made in leading companies of all sectors. This approach focuses on finding those companies that are technologically, economically, but also environmentally well positioned for the future. The quality of corporate management is evaluated on the company's ability to combine economic, ecological and social performance in the long run.

The integration of sustainability variables in their corporate strategy has permitted companies to cut costs, differentiate their products from their competitors and hence charge higher prices, reduce the risk of accidents and avoid expensive lawsuits, as well as stakeholder boycotts.

Sustainability has become a parameter for financial analysis. Since sustainability is a catalyst for well managed and healthy companies, these companies have superior performance and favourable risk/return profiles, and should outdistance their peers in the long run.

The best proof of the increasing interest in sustainable investments is the growing number of equity indexes that are being established for both purposes of benchmarking socially responsible funds and stock-picking. The Dow Jones Sustainability Group Index is already widely used and FTSE is planning to launch its FTSE 4 Good Index this summer.

This is a clear sign that investment managers are aware of growing market opportunities. The Dow Jones Sustainability Group Index consists of more than 200 companies that represent the top 10% in a sustainability ranking of over 2000 companies in 64 industry groups in the 33 countries covered by the Dow Jones Global Index.

A corporate sustainability assessment developed by SAM Group is annually applied to the member companies of the Global Index. SAM evaluates the companies on three main axes. The industry axis includes the relevance of sustainability in the industry. The second axis is the opportunities axis which takes into account the company business strategy and its success in managing sustainability opportunities. Finally, the risks axis stands for the strategic sustainability risks, as well as the management of sustainability risks. It is a widely diversified index which includes small, medium and large companies from every industry, even industries which would have been excluded by the so-called "ethical" approach.

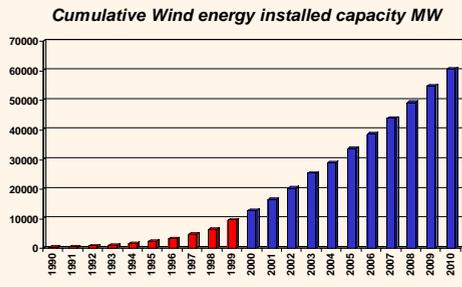
But, do "sustainable" companies outperform the broad stock market? The Social Investment Forum is a US non-profit association dedicated to promoting the concept, practice and growth of socially and environmentally responsible investing. Of the 16 funds with more than \$ 100 million in assets screened by the Social Investment Forum, 14 funds (or 88%) received top ratings from either Lipper or Morningstar, based on one and/or three-year total returns in their investment categories. In addition, Wiesenberger placed 11 of the 16 largest social funds in the top quartile of their investment categories based on three-year performance. Lipper, Morningstar and Wiesen-

berger are well known investment fund rating agencies. The five-year average return on equity, return on invest-

ment and return on assets of the 236 companies represented in the Dow Jones Sustainability Index were superior to those of the Dow Jones Global Index. Internal financial performance of those companies is good. However, the fact is that the Dow Jones Sustainability Index under-performed the broad market in the year 2000.

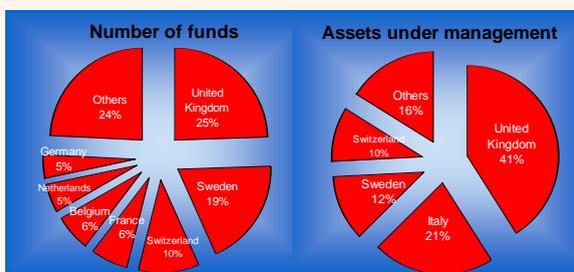
The higher volatility of the Dow Jones Sustainability Index compared with the Global Index, explains this trend in a difficult year 2000 for stock markets world-wide. The Sustainability Index is obviously less diversified than the Global Index. But there is another reason to explain the higher volatility: as the index composition is focused on sustainable companies, the stock selection tends to be biased towards large cap growth companies which are slightly more volatile than the average stock, and especially towards information technology oriented companies, many of which had a very difficult year in 2000.

The out-performance of sustainable indexes is likely over the long run, as the best managed companies are included. In the medium term, however, active management based on pure financial criteria within those indexes will be the key



Socially Responsible Funds in Europe

Annual growth rate over the last three years: 30%
Market size: + EUR 11 billion



to assure above average performance.

In summary, in the short term, investing in socially responsible companies offers neither shelter from stock market tempest nor guarantees of superior performance. However, in the long run, sustainable companies will receive the fruits of its present efforts.

The investment or the diversification through "sustainable" or "socially responsible" companies is financially consistent and rational for the investment manager, and, at the same time, it responds to a rapidly increasing demand from private and institutional investors.



Biopolitics - Bio-Culture

Profit and the Bio-Environment

Athens Money Show

9 June 2001

Waste Water Biotechnologies

Joachim Paul Schaefer and George Kalos

Founders and Managing Directors

WasteWater Biotechnologies, Germany

George Kalos and I founded Wastewater Biotechnologies in Dusseldorf, Germany in 1998. We decided to market our biological product in Germany first, since Germany is among the most advanced countries when it comes to wastewater cleaning. With over 90,070 households and industry connected to wastewater purification plants, large quantities of sewage sludge are the result of the current technology of biological cleaning systems. Taking care of this sludge is a very costly matter amounting to more than 2 billion DM per annum for Germany alone, and the amount is rising. Our mistake was to believe that a sophisticated country like Germany would be receptive to what we had to offer: the first biological method of avoiding or reducing sewage sludge in existing purification plants at a very competitive price. Municipalities preferred doing what they are used to doing instead of jumping at new, ecological innovations.

Many parts of the world are currently making major efforts to clean wastewater, mostly for the first time. They lack sufficient funds to build purification plants the way they have been built for the last 50 or 100 years. Our approach would allow decentralised modular plants for all wastewater, be it municipal or industrial. The technology has existed for over 15 years in some industries but was never built for municipalities.

The advantages of this technology, which we call HPWT for High Performance Wastewater Treatment, are manifold. Not only does it cost much less than conventional biological plants, but can be built in almost any size - and almost anywhere - needing very little space and short transport of wastewater to the plants. This should become the standard, especially for poor countries, which must make large investments to help their environment in the future. This technology can also be used on the Greek islands.

Only by generating profits can we finance projects which would otherwise not come to fruition. Many established industries are either not interested in changes or are not able to implement new ideas. But we feel that our common environment needs dramatic changes.

Environmental Management

George Diamantis, Andreas Nicolaou

Action Link/Action Synergy S.A., Greece

In the conflict between industry and the environment, it is becoming increasingly obvious that the environment is emerging as the winner, as more and more business leaders are acknowledging the necessity of running their business in an environmentally-friendly manner.

Various environmental management tools, such as ISO 14001, are available to businesses to encourage them to implement an environmental policy. Under ISO 14001, the term "environment" is defined as the surroundings in which an organisation operates and includes the air, water, land, natural resources, flora, fauna, humans and their interrelations. Surroundings in this context extend from within the organisation to the global system. Consequently, an environmental management system must include the infrastructure and processes necessary for the design, development and continual improvement of environmental policy.

Environmental policy is the driver for a business to maintain and potentially improve its environmental performance. Businesses must commit to protecting the environment and to continually improving measures for pollution prevention. Environmental impact analyses can help a business restructure its activities with the aim of preventing environmental accidents and abuse. Besides raising environmental awareness among employees - a most crucial task - an environmental management programme encompasses all elements involved in the improvement of environmental practices. Pertinent legal regulations are taken into account in the attempt to reduce pollution and prevent accidents.

An environmental management system is an ongoing process, and a business should continually try to raise awareness of the importance of environmental protection among employees, the local administration and other concerned parties.

How can such practices be funded? The Greek government, in co-operation with the European Commission, has provided incentives for businesses to develop an environmental profile and to make investments that can help them overcome possible financial difficulties. Any business wishing to implement an ISO system has the opportunity for a state subsidy covering 50 to 75% of the cost of developing such a system. Also, if a business wishes to invest in the installation of a biological treatment facility or special filtering device, state subsidies of 35-55% are available. A programme sponsored by the Greek Ministry of National Economy also encourages businesses in the Balkan countries to develop environmental practices and investments.



From left: the Founders and Managing Directors of WasteWater Biotechnologies, George Kalos and Joachim Paul Schaefer, the President of A.E.I., Andreas Nicolaou of Action Link/Action Synergy A.E., and the Managing Director of Action Link/Action Synergy George Diamantis.

Achieving Sustainability in Industry and Technology

Professor

Nicholas Moussiopoulos

Head of the Laboratory of Heat Transfer and Environmental Engineering
University of Thessaloniki, Greece



Technological progress and environmental protection are not mutually exclusive. In recent years the research and business communities have increasingly been focusing on emerging technological, procedural, organisational, institutional and political innovations based on the concept of sustainability. Moreover, the last decade has signalled a shift in environmental policy away from regulatory approaches toward the principle of pollution prevention. Industry voluntarily adopts the concepts of clean technology and cleaner production. An underlying factor in this policy change has been the growing demand by consumers for improvements in the environmental performance of industry.

However, progress has been constrained due to the following reasons:

- (1) Scientific and technological barriers need to be tackled before alternative clean techniques and cleaner production routes can be developed.
- (2) No adequate overall framework exists to drive scientific and technological innovation and to accelerate its integration with environmental and consumer policies.

Several international activities and policies were launched to address the latter problem. Among them are the National Cleaner Production Centres under the UNEP (United Nations Environmental Programme) and the new European approach known as the Integrated Product Policy (IPP), which aims to facilitate the production of environmentally friendly products and contribute to setting up a market for such products.

Integrated Product Policy

The objective of IPP is to reduce the environmental impact of products during their entire life cycle, from the extraction of raw materials, through production, packaging, distribution, use, and the management of waste. The approach is that environmental impacts should be considered during each stage of a product's life cycle and that these impacts should guide the decision-making process of all the parties involved. IPP attempts to integrate environmental parameters into the design of products, so that the protection of the environment evolves into a "business value," just like profit, product quality and safety.

IPP is supported by EU directives, regulations, procedures and certification requirements. Some of these are already being implemented while others are being reviewed with the prospect of applying them to a number of industrial processes. In February 2001 the European Commission adopted the Green Bible concerning IPP, which will form a discussion forum on the role and measures that should be taken at the European level. Combined with the close co-operation of all relevant stakeholders aimed at finding effective measures for the protection of the environment and the development of businesses, the IPP approach will constitute the main innovative element of the 6th Environmental Action Programme. Similarly, the strategy for sustainable development, included in the agenda of the Goteborg Council Summit in June 2001, aims to utilise the synergies that exist between environmental protection and the development of businesses.

EURO-SUSTAIN

Substantial progress with regard to the implementation of IPP is expected from the EURO-SUSTAIN action. Recently launched on the occasion of the Hellenic chairmanship of Eureka (the European network for industrial research and development), EURO-SUSTAIN primarily aims to strengthen the economic competitiveness of European industry by promoting technologies that will lead towards a more rational use of energy and a reduction in raw material needs. For this reason EURO-SUSTAIN is divided into the following four thematic units:

Clean technology and cleaner production

The concepts of clean technology and cleaner production are fundamental to the IPP. The effectiveness of the tools and approaches presented below depend on the ability to develop and implement clean technologies and clean production processes.

For this reason EURO-SUSTAIN will examine new opportunities and potential pathways to sustainability based on the combination of the clean technology/clean production and IPP concepts. Experiences from demonstration projects and case studies will be presented and strategies for promoting the concepts of clean technology and cleaner production through the IPP will be developed.

Eco-Design

Eco-Design provides strategies and techniques for designing and producing environmentally responsible products which can compete in the international marketplace. A priority in this area is the development and implementation of guidelines aimed at effectively promoting Eco-Design to businesses. Hence, EURO-SUSTAIN will focus on choosing and designing materials for recycling/reuse, recovery of materials, and monitoring and sensing technology to track materials and wastes.

Immaterialisation

Services will play a crucial role in partially or fully replacing products. Immaterialisation offers the opportunity for replacing the use of a product by information and telecommunication services. Typical examples include the substitution of physical products, such as technical devices or even paper, by virtual information devices. EURO-SUSTAIN will review the experiences of business and research centres while also examining the potential for applying immaterialisation in the realms of replacement of products by information intensive services, new ways of working, such as replacing physical work settings with virtual information spaces, and new ways of engineering that eliminate requests for physical products.

Tools for sustainability

Life Cycle Analysis (LCA), a fundamental tool of IPP, is a methodology for the systematic evaluation of environmental parameters during each stage of a product's life cycle. Originally LCA was adopted as a decision-making tool only by large industries, while being implemented differently in various countries. This is because a detailed LCA usually requires detailed and time-consuming analyses for solving problems. In order to cover this gap, IPP promotes the development of tools that will facilitate the rapid examination of the environmental impacts of products, particularly for small and medium sized companies that do not have the knowledge or resources to carry out LCAs alone. The e-LCA project was started at the beginning of 2001 with funding from the European Community to provide innovative services through the internet in order to facilitate the adoption of environmental management tools, and particularly LCA, by small and medium enterprises.

Greece is represented in this project by the Laboratory for Heat Transfer and Environmental Engineering (LHTEE), Aristotle University of Thessaloniki (<http://aix.meng.auth.gr>). LHTEE also co-ordinates HELCANET, the Greek Network for Life Cycle Analysis whose aim is to research, develop and promote the application of LCA in Greece.

EURO-SUSTAIN represents a framework in which enterprises, business associations, research centres, academic institutions and public administrations will be able to exchange information and points of view in order to launch collaborative projects in the framework of Eureka and the Sixth Framework Programme, promote sustainable economic development at the European level with minimum environmental impacts, and promote new and advanced technologies for a sustainable society. Ultimately, EURO-SUSTAIN will support the IPP through the promotion of innovative research and development leading to environmentally friendly products and services and an increased understanding of the procedures that lead to sustainability.

"Profit and Values - Bio-Environment - Bio-Culture"

Athens Money Show, Grande Bretagne Hotel, Saturday, November 3, 2001

Bio-Diplomacy

David Hutton

Ambassador of Canada to Greece

Let me express my appreciation and respect for Dr. Agni Vliavianos-Arvanitis, President and Founder of Biopolitics International Organisation for her leadership in this important area. She represents a special combination of intelligence, energy and humanness.

I am very privileged as Canada's Ambassador to Greece to represent a country that has been so richly endowed by nature.

Canada has the world's longest coastline bordering the Pacific, Arctic and Atlantic Oceans; Canada holds 9% of the world's fresh water, 20% of the world's natural areas and 25% of the world's wetlands. As stewards of these resources, Canadians take environmental questions very seriously.

Traditionally, Canadians were seen as hewers of wood and drawers of water. That international stereotype is no longer valid. Over 60% of Canada's gross national product derives from high technology and the manufacturing and service sectors. Nevertheless, our roots are very firmly in the land. The economic history of Canada in a very real sense, is based on the interplay between profit and the environment.

Through education and policy development, our stewardship responsibilities and the concept of sustainable development have become one of our basic national values. Respect for the environment is, more often than not, learned rather than natural behaviour. We place considerable importance on education, and environmental issues are very much a part of school curricula at every level. Equally, we are rigorous in the enforcement of environmental standards. The Canadian



concept of sustainable development rests on three pillars: economic prosperity, social development and environmental protection.

Sustainable development provides a framework for Canadians to integrate environmental policies and development strategies. It recognizes that development is essential to satisfy human needs and improve the quality of human life. Equally, it recognizes that development must be based on the efficient and environmentally responsible use of all of society's scarce resources: natural, human and economic. The report of the World Commission on Environment and Development, "Our Common Future", defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It continues, "humanity has the ability to make development sustainable. . . The concept of sustainable development does imply limits, not absolute limits, but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can be managed and improved to make way for a new era of economic growth. . . In the end, sustainable development is not a fixed state of harmony but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological developments

The Canadian concept of sustainable development rests on three pillars: economic prosperity, social development and environmental protection.

It is clearly a question of profit "and" the environment, not profit "or" the environment.

and institutional change are made consistent with future as well as present means." Surely, we all share that conclusion: there can be no real profit without a secure and healthy environment.

Let me cite two areas in which I have been personally involved as examples of this point. When I was a university student in British Columbia in the 1960s, I paid for my education by working in the sawmills and logging camps on the west coast of Canada. I remember with pleasure working in the virgin, old growth forests on Vancouver Island. Those were very happy times. Many of us working in that wilderness were only beginning to appreciate that these resources were limited. A few years later, these forests became an international focal point for highly polarised environmental debates over clear-cutting in British Columbia. While Canadian forestry techniques have always been based on reforestation and the principle of sustainable yield, there was considerable debate over the forestry practices being employed.

The Canadian forest industry was under attack internationally, and historical markets such as Germany and the UK were suffering; the bottom line of the industry became very vulnerable. While it took time, good will by all parties and the commitment of considerable resources, confrontation has moved to collaboration. A recent documentary on EuroNews described the current forestry practices being followed in that area which include very selective logging by helicopter.

A second example: in a prior assignment, I was involved with a number of negotiations with the EU Commission. Almost all of these had important environmental elements and one, related to trapping of wild fur, had a specific connection to Greece. There are very strong historical links between the city of Kastoria and the Greek fur industry with Montreal and Toronto. Indeed, wild fur remains an important export from Canada to Greece. The fur industry in Canada involves a large cross section of Canadians, but the harvesting of wild fur is particularly important for our aboriginal and northern communities. Indeed it is a fundamental aspect of their traditional way of life.

You may recall that wearing fur became a very controversial subject in the 80s and 90s with very emotional anti-fur protests in Europe and North America. For many, the fur industry was a classic case of exploitation of the environment for profit. Bowing to this movement, the European Union undertook to restrict the import of wild fur. These restrictions would have ended the wild fur trade of Canada, the United States and Russia with enormous negative social, economic and environmental consequences. The approach we adopted and which finally led to positive outcome serves as an interesting case study and clearly an environmental one. Drawing upon experts in animal welfare, wildlife management, and engineering, we established a scientific research and management programme which provided the technical basis for the development of an international trapping standard. This involved a considerable amount of time and the expenditure of a significant amount of money. Again, we saw a major shift from confrontation to collaboration. Stewardship and social issues were analysed and taken into account and, animal welfare was greatly improved by the introduction of better trapping techniques. It was a win-win-win solution for all the parties involved.

In closing, some very brief conclusions. As to the subject of this panel, it is clearly a question of profit and the environment, not profit or the environment. Industry as well as society in general must increase our investment in the environment if our companies and indeed our societies are to be assured of real profit. In the examples which I have cited this is clearly the case.

Research and education are clearly important. Also, strategies which shift the debate from confrontation to collaboration are essential. While my remarks have been of a personal nature, I hope they will stimulate some reflection and discussion on this very important subject.

Biopolitics - Bio-Culture
Profit and the Bio-Environment
Athens Money Show
3 November 2001



Form left to right: John Mangos, Ambassador David Hutton, Dr. Agni Vliavianos-Arvanitis and Dimitris Randopoulos.

To advance environmental thinking in international policy, business and communication technologies, the Biopolitics International Organisation (B.I.O.) held a roundtable discussion themed "Profit and Values - Bio-Environment - Bio-Culture" within the framework of the Athens Money Show, on Saturday, November 3, 2001, at the Grande Bretagne Hotel.

The discussion was chaired by B.I.O. President, Dr. Agni Vliavianos-Arvanitis, and addressed the increasing importance of environmental issues in the rapidly emerging global economy scheme. In view of the heightened contemporary understanding of the close relationship between the environment and development, the discussion aimed to prove that environmental protection makes sound economic sense and is a "genuine" profit for society.

Other eminent speakers included:

H.E. David Hutton, Ambassador of Canada to Greece. Ambassador Hutton has served as Ambassador to Greece for three and a half years. A career diplomat, he has held assignments as Trade Commissioner, UN Delegate, Food Aid Programme Administrator and Trade Policy negotiator in several countries. Ambassador Hutton's remarks dealt with stewardship issues in Canada's environmental policy, in such areas as fisheries and natural resource management.

Dimitris Randopoulos, Managing Director for Value Chain Consultants, is also President of the Hellenic-British Chamber of Commerce. An expert in agricultural issues, Mr. Randopoulos discussed environmental concerns in agriculture and rural development.

Joannis Mangos, Principal Technology Specialist, became the first Greek at Microsoft Corporation when he accepted the position of Software Design Engineer for the Microsoft Project Product Unit in 1990. Prior to returning to Greece, he moved to Microsoft Consulting Services where he accepted the position of Senior Consultant, working with British Telecom. He currently holds the position of Principal Technology Specialist, working closely with large enterprises and Public Sector accounts. Mr. Mangos discussed how technology is used to improve quality of life including areas such as telemedicine, access for people with disabilities, access from distant locations. He also discussed how technology affects issues such as personal privacy, info-glut and human interaction.

Biopolitics at the London Money Show

B.I.O. continues its fruitful co-operation with the Money Show by holding a panel discussion on Saturday, 17 November 2001, from 11:00 to 12:00, at the Hilton London Metropole. The event is sponsored by the Nicos J. Vardinoyannis Foundation and Pyllos N. Vardinoyannis.

The discussion will be moderated by the B.I.O. President and panellists will include: H.E. David Madden, Ambassador of Great Britain to Greece; Dimitris Randopoulos, Chairman, Hellenic-British Chamber of Commerce; Tom Spencer, former Member of the European Parliament and Globe International President.

Three-Dimensional Profit

To curb environmental deterioration and ensure the continuity of bios, mistakes of the past have to be replaced by new thinking and action. B.I.O. encourages institutions, decision-makers and all concerned citizens to adopt progressive innovations and to follow biocentric pathways in their activities. In today's dynamically expanding global society, environmental protection is a "genuine" profit for humanity and the only vehicle for achieving a better quality of life.

The world is experiencing a range of hurdles with regard to seeking a compromise between the legitimate needs of development and the fragile environmental balances. Environmentally-sound guidelines are discussed and arrogated at the negotiating table, but in real life directives all too often do not reach national decision making.

An approach, effectively combining the consensus and con-

sent of the people, as well as that of governments and international institutions, is essential in order to prevent economies from expanding without due concern for the environmental repercussions of uncontrolled growth.

Three-dimensional economics, as promoted by B.I.O. since 1985, emphasises the relevance of the environment to all economic activity. Once economics acknowledges the urgency of re-evaluating its role with reference to a long-term global environmental policy, it will be more efficient in answering to the challenges of the new millennium.

Working to sustain what already exists is not enough. A new vision, "beyond sustainable development," can lead to more just and safe global management and guarantee a balanced society for the future.

A. Vliavianos-Arvanitis



Biopolitics - Quality of Life - H



From left to right: Professor Nicholas Dontas, Dr. Agni Vlavianos-Arvanitis, Dr. Savvas Karagianni, George Kremlis and Rosa Oliva.

Dr. Savvas Karagianni

Prefect of the Dodecanese

In this meeting we have the opportunity to examine in depth an issue of global importance. We have understood that the steps forward are very difficult. For it is a very complicated phenomenon, which, under the banner of Biopolitics, combines human beings and their characteristics, their health, environmental and cultural issues, approaching them in various ways. We will focus on the legal side in order to avoid any discrepancies between our resolutions and international treaties, as well as to see how Biopolitics initiatives can bind everyone. I want to believe that at the end of this conference we will come up with concrete resolutions and proposals.

Dr. Agni Vlavianos-Arvanitis

B.I.O. President and Founder

At the center of every effort of the International University for the Bio-Environment is the protection of the environment and our joy in possessing bios.

We have bios, and we need to share it with plants and animals. We need to shift from an anthropocentric to a biocentric vision.

Our society resembles an inverted pyramid, because of a serious crisis in values. This imbalance could be changed if we "re-invert" the pyramid and place bios rights as the wide base of our society. Human rights will then occupy the stable tip of the structure.

If we come to respect all forms of life, we will reach a deeper understanding of our interdependency. A great opportunity to display and spread these values are the Olympics.

Cease fire should exist during the Olympic Games, and hopefully at all times. National defense should be for the protection of life, not its destruction. The dimensions of love and vision are needed in order to enrich society, inspire people, and bring about peace. Questions that arise are: how do we influence leaders, vaccinate people, make reforms in education, architecture and law? Technology provides solutions; it can guide us towards using our full potential. Technology and culture must unite; this is what is meant by bio-culture.

Environmental legislation - European perspectives

George Kremlis

*Head of Judicial and Legislative Affairs
European Commission DGXI*

About 80% of the environmental legislation passed by the member states originated with the EU, although some of the provisions of the codes have been altered in the internal legislative process. A number of these environmental laws and regulations are gradually being adopted by the twelve candidate nations as well, sometimes at great cost since the passage of this legislation must be accompanied by projects for water quality and for landfills. Article 174 of the European Union Treaty is concerned not only with the maintenance of the environment in its present state, but with its improvement for future generations.

The global environment is not being kept in a steady state, but is constantly being bombarded, resulting in impacts such as global warming, depletion of the ozone layer, etc. Perhaps the most important issue for the next generation is the need for potable water. I hope that the predictions of certain futurists about water wars in the future will not be realised. For many areas, it is

not possible to assure adequate water supplies within reasonable cost.

The Kyoto Protocol, which will be ratified by the European Union this year, set goals for the reduction of the emissions which cause the greenhouse effect and apportions the reductions among the 15 member states. The goal is to reduce emissions by 8 to 12 % by the year 2012. Let us hope that these goals will be met by the EU.

We must complete the environmental infrastructure of each nation including air pollution control, improvement of drinking water quality and solid waste management systems. In our own country, over 5000 unexamined dumps continue to operate, threatening health and polluting the environment.

Education of children and cultivation of a sensitivity to the environment is essential. Today all the necessary tools regarding the laws and regulations which must be enacted are available at the EU. What is important is that these codes be adopted in their entirety and not selectively. Along with environmental education and technological know-how, this should lead to an improved environment for all.

From left to right: Domenico Oliva, Dimitris Papathanasiou and Dimitris Randopoulos.



Cevdet Akcali

Chairman of the Committee on Environment and Agriculture, Parliamentary Assembly of the Council of Europe, Turkey

The damage to the environment has been one of the important items discussed both by the Council of Europe and by other international organisations. Those who pollute the environment are condemned and authorities are called upon to take measures. However, these requests remained only on paper until now. Unless a mechanism is established for the implementation of the decisions of international organisations, such decisions will be of no de facto value. It is encouraging that some member states of the Council of Europe have adopted new laws in their domestic system.

Environmental protection is not only related to domestic law; on the contrary, it also has an international perspective. For this reason, legal measures to prevent actions damaging to the environment should be incorporated into international agreements. Following accidents in Turkey, France, Canada and several other places in the world, and the resulting pollution of the sea, reports were prepared and discussed at the Parliamentary Assembly. The most important aspect raised during these discussions was who was to blame. The

ones who export oil, the ones who transport it, or the insurers of sea vessels carrying oil and similar hazardous materials? If no answer to these questions is found, catastrophes will continue.

First and foremost, we should accept that the right to live in a healthy environment is one of the most important human rights. Moreover, this right is both individual and collective. The protective measures and mechanisms concerning these rights must be of a transboundary character. Conventions on human rights have already been addressed by the UN, the European Parliament and the Council of Europe, and mechanisms have been established for the protection of these rights. However the right to live in a healthy environment has not been discussed and secured. We should establish the criteria to determine those responsible for damaging the environment. We should decide on the penalty to be imposed on those responsible. Furthermore, there should be an instrument or a court to implement the penalty, and individuals, NGOs and political groups should have the right to apply to this instrument. The European Convention on Human Rights could also be extended so as to cover the right to live in a healthy environment. And a new court could be established to protect this right. In conclusion, the issue is of utmost importance and urgency. It is high time that it were addressed at the international level.



From left to right: Cevdet Akcali, Professor Seong Chee Tham and Richard Hines

Domenico Oliva

*Vice President Operations Europe
MIC Industries, Inc., Italy*

Keeping humanity in harmony with the environment is a basic concept of Biopolitics. Complex regulations are valid and important for society. But we must not forget that there are also basic rules, which apply regionally in all geographic environments and in all economic and social conditions, so that humanity may not only survive, but also live in peace. This should be the

objective of all people involved in technology, health, and government.

Lack of food, shelter and water are the main problems plaguing world populations today. Studies have shown that we have the technology, the resources and the capabilities to find a solution to these problems. Modern technology can build a roof with minimal resources, and advanced plants can produce food in large quantities. The technologies are there; we need to use them to help instead of hinder.

Environmental challenges - hope and inspiration

Professor Seong Chee Tham

President, UNA Singapore

In the contemporary world, in the present global conditions, there are many challenges and many contradictions. We see a dichotomy between the rich and poor. When we talk about quality of life, there is a very large section of the population that can only dream about quality of life, and we should try to help them to achieve this aspiration. In the context of globalisation and immigration, the gap between the wealthy and the poorer countries is widening. Moreover, the process of destruction of the environment continues in many areas unabated. It is not always our choice, but the result of desperation, of the lack of options for many countries and many communities. We need to try to reach out to these communities that need help.

Advances in information technology offer tremendous new prospects for the improvement of quality of life. Yet this is not something which is available to the majority of the world's population. Most societies are not wired up, unless they are rich or advanced societies, and the rich societies, because of their ability to use information technology, are able to capitalise on this technology and enjoy its benefits. We need to help the poorer countries, the communities that are exploited. A powerful point that has been made

is that quality of life rests a lot on the quality of health. Health in the mental, physical, and spiritual sense. And this quality of health correlates, directly, with the way we manage our environment. We cannot dissociate health from the environment. We have to see it in a holistic, integrated manner. Only then can we hope to see improvements in quality of life.

There is a great need to strengthen international co-operation - individual responsibility and community responsibility. This has been lacking. There are a lot of good intentions, but these good intentions have not been expressed in either local or national action. It is time to remind ourselves that human behaviour must be guided by law. We must bring credibility and liability to the things we do and say and to the positions we take. This must be a commitment for all concerned - individuals, committees and nations.

Another important aspect is education. How do we develop an awareness of bios? How can we make people committed to the defence of the environment? How do we make them understand that the environment is vital to our sense of well-being? A society which can utilise information technology to meet environmental challenges and opportunities can provide hope and inspiration. These are key elements. The hope is to achieve greater co-operation and involvement and greater inspiration in the cause of the environment.

Health - Environment - Culture

**Biopolitics - A Vision for the Millennium
Health - Environment - Culture
Rhodes, 12-14 October 2001**



Conference hosted at the Rodos Palace Hotel Convention Centre and the Medieval Knights' Palace

Opening Session

Dr. **Agni Vliavianos-Arvanitis**, B.I.O. President and Founder
Vana Triantafyllou, President, Hellenic Cancer Society, Rhodes Chapter
Professor **Nicholas Dontas**, President, Hellenic Cancer Society
Dr. **Savvas Karagiannis**, Prefect of the Dodecanese

Culture and Quality of Life - Roundtable Discussion

Domenico Oliva, Vice President Operations Europe, MIC Industries, Inc., Italy
The Hon. **Cevdet Akcali**, f. Chairman of the Committee on Environment and Agriculture, Parliamentary Assembly of the Council of Europe, Turkey
H.A. **Iljan Dubcek**, Ambassador of the Slovak Republic to Greece
Professor **Alexander Shishkin**, Head, Ecological Standardisation Laboratory, St. Petersburg State Technological University for Plant Polymers, Russia
Dr. **Houchi Etezad**, Architect, Director Partenaires & Marches, France
Professor **Seong Chee Tham**, President, United Nations Association of Singapore
Richard Hines, President, RTH Consulting, Inc., USA

Environmental Legislation - European Perspectives

George Kremlis, Head of Judicial and Legislative Affairs, European Commission DG XI

Health and the Environment

Professor **Nicholas Dontas**, President, Hellenic Cancer Society
Dimitris Papathanasiou, Director of Human Resources, Commercial Bank of Greece, and f. Chairman of the Board, "Ippokrateion" General Hospital
Rosa Oliva, Vice President, Forum SA.FE., Italy

Environmental Management, Water Resources and Agriculture

Dimitris Randopoulos, Managing Director, Value Chain Consultants, and Chairman, Hellenic-British Chamber of Commerce, Greece
George Kalos, Managing Director and Founder, WasteWater Biotechnologies, Germany
Joachim Schaefer, Managing Director and Founder, WasteWater Biotechnologies, Germany
Evagoras Nicolaou, Chemist, Departmental Head, National Chemical Laboratory, Greece

New Technologies

John Mangos, Principle Technology Specialist, Greece

Bio-Culture - Conference Resolutions and Recommendations

Professor **Seong Chee Tham**, President, United Nations Association of Singapore
Dr. **Agni Vliavianos-Arvanitis**, President and Founder Biopolitics International Organisation

I believe that our decision to convene here in Rhodes was a wise one and that, under the Biopolitics umbrella, we will arrive at concrete resolutions and proposals in accordance with binding international treaties.

Savvas Karagiannis

Health-care is a personal responsibility. The level of health-care of the individual indicates the degree of development of his/her personality.

Dimitris Papathanasiou

All of us - governments, community groups, diplomats, and individuals - must put protection of public health and the environment on the top of the government's agenda.

Milan Dubcek

Our culture can no longer justify, with the sophisticated technology and resources available to us, allowing other human beings to die because they have no shelter, food or water.

Domenico Oliva

The right to live in a healthy environment is one of the most important human rights; this right is both individual and collective.

Cevdet Akcali

With technology we can reach more people, in more places, more effectively. Let's use this tool to instill in ourselves the need to preserve our environment.

John Mangos

It is not a question of technology; we have the products, we just need the support and funding.

Joachim Schaefer

We must eliminate the pollution of violence and the pollution of the mind. Let us use creativity from science and from culture to move into a new millennium and hopefully have bios a thousand years from now.

Agni Vliavianos-Arvanitis

The acceptance and promotion of technology can solve our problems in food, in water and in pollution.

Richard Hines

Today we do not speak about increasing the production of food, but of improving its quality.

Dimitris Randopoulos

At a minimum, let us confirm the notion that the environment encompasses and protects both man and nature.

Nicholas Dontas

Islands must become water-independent with desalination plants which will need strict supervision to ensure that the quality of the water produced is acceptable.

Evagoras Nicolaou

The ethical considerations of stem cell research are of crucial importance in medicine today. The Biopolitics International Organisation can play a precious role in raising awareness of these considerations and in creating a global network to provide the necessary guidelines.

Rosa Oliva

An effective approach to environmental issues makes use of environmental rules and regulations, and capitalises on national social funds and environmental awareness.

George Kremlis

We must rediscover and reinstate those cultural ways of thinking that are life-enhancing, unique and authentic. Man must remain the master of science and technology, subjecting both to the enhancement of life in all its variety.

Seong Chee Tham

Rhodes Resolutions

The vision of bios is global. All countries whether rich or poor need to be engaged in this vision. The Conference participants pledged their full support for the B.I.O. goals, and took note of the following global realities:

- **Globalisation** and the intensifying pursuit of material wealth have resulted in a widening disparity between the developed and developing countries
- Evidence, showing unrestrained **destruction** and despoliation of bios and the environment continues to mount
- **Natural resource depletion** (fish stocks, forests, ozone, coral reefs, water resources) remains unheeded or locked in political-legal wrangling
- **Access to information technology** continues to be limited, its adoption and use currently benefiting mostly developed societies
- As a result of environmental **pollution** coupled with growing pressures (stress), the physical as well as mental health of human beings have deteriorated, with new emergent abnormalities
- **Large populations remain marginalised** from the benefits and advances of science and technology
- Countries have yet to demonstrate political will in co-operation with each other to **pursue the common good**
- Many developing poor countries have yet to practice good governance to achieve **life-sustaining objectives** in managing natural resources and in distributive justice.

The Conference accordingly resolved that:

- Environmental or issues of bios should be addressed collectively and holistically.
- "**Bio-peace**" and defence for the environment should be viewed as a priority in diplomacy and international policy.
- **International responsibility** must be strengthened and political will realised to achieve environmental objectives for the common good. In this effort, the role of bio-diplomacy is crucial.
- Appropriate national and international **legal measures** (agreements, conventions and treaties) to entrench environmental rights vis-a-vis environmental resources such as water and fuel must be enacted.
- **Education** in appreciating, caring for and protecting bios must be made obligatory at the foundational level (primary, elementary, even pre-school level) to be upgraded gradually to the secondary and tertiary levels. Indeed, education in bios should be made a life-long process so that the sense of oneness and harmony with nature be maintained. In this, the International University for the Bio-Environment (I.U.B.E.) could be a useful model.
- This conference regards the issue of **health and the environment** with great concern. Health is fundamental to any conceptualisation of "quality of life". As prevention is, in most cases, more vital than treatment, modern medicine should focus on the problems of water pollution and conservation, soil erosion and air pollution to ensure physical well-being. In securing good mental health, attitudes and values to life need to be positive and balanced. In this, medical practices need to be reviewed to make them sensitive to the inter-connection between the environment and health.
- **Water supply** and access to it need to be calmly and rationally discussed among contending countries as they have a direct impact on environmental well-being, and by extension, on the quality of life of affected societies.
- **Agricultural methods** that support the environment, as well as agrotourism, are viable options for environmentally-compatible economic development, especially in Third World countries.
- **To eradicate poverty and promote peace** and global environmental harmony technology is of the essence. Technologies that support the environment must be researched and applied with imagination and innovation. The "**bio-assessment of technology**," as promoted by B.I.O. since its inception in 1985, can help prevent further destruction by promoting technological development that respects bios.
- Current and existing legislation, including **treaties** pertaining to the protection of the environment and the **improvement of quality of life** such as water resources, land-fills, treatment of wastes and industrial discharges, etc. should be reviewed and expanded periodically to ensure that they are relevant and effective. In this, the EU experience could be a useful reference.
- Environmental protection efforts must be guided by a spirit of **individual and social responsibility**. There is a need for a **new system of ethics**, one whose comprehensiveness should include the ethical issues relating to stem cell research, cloning and euthanasia.
- Existing assumptions vis-a-vis **economic development** need to be re-examined so as to ensure that **material and non-material** (spiritual) aspects are in harmony. The aspects of human behaviour that are life-sustaining and environmentally-friendly should be strengthened and encouraged.
- To resolve the present crisis in values, there is an urgent need to use the diachronic ideals of the past and motivate every member of society to get involved in environmental protection. **The Olympic Spirit** can play a leading role in uniting the forces of culture and technology to instill the appreciation of the aesthetic value of life on our planet.
- **Quality of life is indelibly linked to the quality of the environment**. To that end, there is a need to create a knowledge-based society anchored in the values of bios. This must be the vision and spirit of bio-culture.

Biopolitics - Quality of Life - H

Environment and quality of life

Professor Nicolas Dontas

President of the Hellenic Cancer Society

The overriding question today is not the impact of nature on man, but rather the duty that each of us has toward the environment. For millennia, all creation existed in a state of order and harmony. Gradually, however, man began to separate himself from nature. He set himself up as conqueror and ruler of the environment. The words of Pythagoras "every excess in nature is damaging" were forgotten.

Every action that harms the environment affects the entire planet. Environmental damage is cumulative, becoming evident in the longer term. Numerous research reports by the Hellenic Cancer Society on the effects of smoking, malnutrition, air pollution, the Chernobyl disaster and others, have documented the extent of illness and premature deaths that are related to these activities.

During the Byzantine period, St. Gregory of Nyssa stated that the law of the body is opposed to the law of the mind. In other words, thoughtless actions have bad outcomes. In our own era, Darwin established that survival belongs to the strongest and most versatile. In the animal world, instinct guides creatures in their survival, but man unnecessarily intrudes into their way of life. Thirty years ago, Herbert Marcuse wrote a strong cri-

tique about the excesses of the industrial community and its destructiveness to nature. He sought a reorientation that would lead to a true revolution in the capitalistic world. However, the predominant thought at the time was that the disruption of the environment was insignificant. Over time, those with technological and economic knowledge continued to exploit nature and came into conflict with the community. Rapid environmental changes brought to humankind problems in reproduction, raising children, and diseases. Some even promoted the abnormal idea of premature termination of life, or the so-called euthanasia.

However, the progress which has occurred in our era has also diminished many environmental dangers and has brought control of childhood and adolescent diseases to the developed countries. Life expectancy has increased dramatically, resulting in explosive growth of the human race. These trends resulted in the establishment of the new world view of the biopolitics philosophy with a reorientation toward the protection of all life and the environment. The bioethical and biopolitical philosophy provides the basis for the formation and implementation of a better quality of life for all. The new philosophy of biopolitics will promote the correct thinking about the place of man within the ecosystem.

Health and the environment

Dimitris Papatnasiou

*Director of Human Resources,
Commercial Bank of Greece and
f. Chairman, "Ippokratelion" Hospital, Athens*

I will start with a question which was posed by Plato, Aristotle and many others. What does your happiness depend on? Some might say that they would like more money in order to acquire more goods or more property. More material goods, for some people, may include a meal. Some might want a more interesting job or better family and social relations.

Some would like less traffic congestion and less pollution. The common elements in these responses are health and the environment. Health and the environment provide the backbone for any happy life. As we all know, health is a condition of complete physical, spiritual and social well being which does not depend only on the absence of disease. How do we measure it?

Greece uses several indices for measuring health. These include life expectancy, percentage of the population that is hospitalised, and the average number of days of hospitalisation. In Greece, these indices are very positive. Com-

pared to other countries, life expectancy is rather high in Greece. About 13% of the Greek population goes to hospitals, while in other European countries, the number is around 20%. Greek patients stay in hospitals an average of one and a half days, while in other countries patients stay up to three days. These are very positive indicators. However, strokes and cancer remain serious health problems. In addition, Greeks tend to suffer from stress, which is responsible for various psychological as well as physical problems.

We must be aware of our health in the way in which we live our everyday lives by exercising and maintaining a healthy diet. There is a dialectical relation between humans and the natural environment, and between technology and the environment.

We come into conflict with the environment when we try to take even more from it. I believe that education and the use of environmentally-friendly technology will be the decisive factors for the new generations. We are not isolated from the rest of the natural environment. We must always consider the whole. I fully support the idea of biopolitics and its practical value in educating future generations.

Water purification technology



Joachim Schaefer

George Kalos

*Managing Directors and Founders
WasteWater Biotechnologies, Germany*

We are very happy to attend this discussion and are grateful to Dr. Agni Vlavianos-Arvanitis for inviting us and whom we first met at an environmental conference in Alexandria, Egypt. We hope that our acquaintance with Dr. Vlavianos-Arvanitis will be the beginning of a very fruitful co-operation in the bio-environment

and in water purification technology, the area our company specialises in.

The importance of water for this planet and its future is incontestable, and there are several innovations in water management available around the world.

The aim of this meeting is to contribute towards the building of a new ethics. This new ethics has to focus on personal responsibility and also has to have central rules as well as a way to monitor the implementation of these rules. At this point I would also like to pose a question. In the past, we have learnt that central politics set the conditions of our lives. We expect central politics to give us centralised solutions for our lives. Is that the reality we want? Or do we have to ask ourselves whether, in actual fact, reality is the exact opposite.

Education, about which we have talked earlier, contributes to the development of individual responsibility and also directly influences the central politics which react to individual responsibility and gives centralised solutions. I pose that question for all of us who want to contribute to the building of a new ethics.

Sustainability in agriculture and the food industry

Dimitris Randopoulos

Chairman, Hellenic-British Chamber of Commerce

After the Second World War, the developed countries tried to raise productivity in agriculture. Called the green revolution, this model was based on the increased use of pesticides and fertilisers. This approach was not limited to agriculture but also included the breeding of livestock. The recent incidence of mad cow disease demonstrates the limitations of nature. We cannot abuse nature beyond a certain point. Therefore, today we do not speak about increasing production but of improving the quality of food. To this end, projects have been started in America and Europe. A Greek project of the Ministry of Agriculture, approved by the EU, is directed at sustainable development in agriculture.

Priorities for specific projects are: improv-

ing agricultural business and its products; improving the competitiveness, environmental indices, and quality of the products of the Greek food industry; keeping more young people on the farms; providing more access to information such as developing a specialized television channel for agriculture; improving products through integrated management systems; and decentralising urban development.

In Europe and America, we speak more about quality while the Third World countries are concerned with the introduction of new technology. Management of water resources is another problem. Desertification is occurring in some areas. Without water there cannot be agricultural development. We are responsible for the balanced development of our planet; we cannot speak about our quality of life while others are starving to death.

Water resources in the Dodecanese

Evagoras Nicolau

Chemist, National Chemical Laboratory

Providing a safe and adequate water supply to the islands of the Prefecture of the Dodecanese presents special problems. There are three categories of islands: those with no water, those with insufficient water, and those with adequate water supplies. The solution for each is different.

The waterless islands formerly collected rainwater into cisterns. However, rainfall has declined in recent years, while demand by both inhabitants and tourists has increased. In addition, the storage of water in cisterns is not always safe. Water is therefore imported from Rhodes. This is an interim solution, however, because the excess water of Rhodes is limited. To assure the quality of drinking water for the waterless islands, we

must chlorinate the water every time we fill the cisterns; in addition taps of potable water should be provided in residential areas. These islands must ultimately become water-independent with the construction of desalination plants.

For islands with insufficient or poor water quality, proper management is needed to ensure that the clean water is not contaminated. The construction of dual networks for potable and non-potable water would be the ideal solution. Due to the expense of this solution, the best alternative is the provision of potable water taps to be fed from the highest reservoir which will be systematically chlorinated. Those islands will also require desalination plants. For the islands with sufficient water supplies, primarily Rhodes and Kos, construction of the planned dams must proceed. In addition, protection of surface water must also be the top priority.

Bios Olympiads in St. Petersburg

Professor Alexander Shishkin

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

The International Ecological Club of the Baltic-Ladoga Region, an independent, non-commercial NGO, promotes the model of bio-education created by Dr. Agni Vlavianos-Arvanitis. The main objective is bio-education, based on the principles of biopolitics, and also to attract young students to practical sociological research and environmental studies.

Our main point of interest is the evaluation and understanding of bios. Special attention is

given to the professional orientation of youth and to different specialities in the bio-environmental area. Lectures and practical research work in organised "bios-schools" combine environmental issues with population studies and various cultural programmes.

Each year, the results of the work in this area are discussed in international youth conferences and during the Bios Olympiads, which take place every September in St. Petersburg under the auspices and guidance of the Biopolitics International Organisation. The VIth Youth Bios Olympiad convened with great success on September 12-16, 2001 (see page 15).

Information and the environment

Houchi Eteazad

*Architect, Director,
Partenaires & Marches, France*

Information implies the interpretation of an event by an observer. As such, it has no inherent value. The value of information lies in the possibilities offered to the potential user. For information to be useful, it has to correspond either to an existent need or to one soon to be created.

The environment is a key player in the modern era, affecting all nations and regions of the world and every human endeavour. National and international rules and regulations, therefore, require decision-makers with alertness and determination. Because of increased citizen awareness and mobilisation, decision-makers now often see their actions contested before courts of justice. This crucial citizen participation also applies new pressure to information and communication. The environment must come out of its "ghetto" and become the number one priority and concern of all citizens.

The environment is an issue touching us all, however, it has been monopolised and "held hostage" by certain groups and political parties. Environmental information is either too techni-

cal and professional or too political and militant. How can we solve this problem? We can bring the environment to the level of the citizen so that it can be accessible to all. We can also provide information so that citizens cease to be "spectators" and become "actors."



John Stamboulpoulos and Houchi Eteazad

In this effort it is essential for elected authorities and decision-makers to take on the responsibility of actively involving citizens in policy development. Interactive communication is a necessity in a democratic society. Communication has a cost, but it also has a great return - social cohesion.

Health - Environment - Culture

Bio-diplomacy in establishing partnerships

Milan Dubcek

Ambassador of the Slovak Republic to Greece

Environmental protection is all about partnerships between governments at all levels, between business and industry and most importantly, involving community groups. We are now experiencing a change in attitudes and a major shift in our values. I personally expect that there will be, in the near future, more focused action by various kinds of community groups regarding environmental issues. Of course there are offences against the environment by small or large corporations as well, which are not as easy for individuals to solve; in such cases, community groups in regions or localities should fight and should bring pressure upon municipalities and local governments to increase penalties, taxation, or even to adopt special regulations, such as stopping the operations of offending companies.

Our economic prosperity is tied to our environmental health. When one considers medical expenses, loss of tourism, loss of productivity, or environmentally friendly businesses that choose to make their headquarters in other cleaner cities, then one begins to understand how serious the problem of environmental pollution may be.

Youth Bios Olympiads in St. Petersburg

In the spirit of bio-culture and to promote the connection between the Olympic Games and every field of human endeavour, B.I.O. has sponsored a wealth of initiatives to advance excellence in environmental protection. In 1994, the International Sakharov Festival was held in Athens, with the participation of leading scholars and musicians, as a tribute to culture and the bio-environment.

In 1996, the first Bios Prize was awarded to Jacques Cousteau during an elegant ceremony at the Naval Museum in Paris. In 1999, the Bios Prize Award Ceremony took place at the Hermitage Museum in St. Petersburg, under the auspices of Academician Michael Piatrovsky. Bios Prizes were awarded to world renowned musician and humanitarian Mstislav Rostropovich, industrialists Kitty P. Kyriacopoulos and Anton Rupert, and thinker Jakob von Uexkull, emphasising the interdisciplinary nature of environmental appreciation.

A new society needs the involvement of community groups in decision making. A corner stone of sustainable development is public participation. The governments, for their part, have to make the protection of public health the most crucial objective for policy making. In this way, policy decisions on sectors such as transport, industry or agriculture, would ensure that the effects of those decisions work for, rather than against, environmental and health policies. It is up to all of us - local governments, community groups, diplomats, and individuals - to put protection of public health and the environment on the top of the government's agenda. I welcome the Biopolitics International Organisation's efforts in trying to establish partnerships between local authorities, citizens, corporations and environmental NGOs around the world. I am sure that with these partnerships, we will be able to contribute to sustainable development, which would result in solving global and local environmental issues.



The future belongs to the young, and their achievements are no less noteworthy. Every year in St. Petersburg, with the invaluable co-operation of Professor Alexander Shishkin, the Youth Bios Olympiad celebrates the environmental achievements of children and young adults and promotes the environment as a priority in education.



John Mangos

Principle Technology Specialist, Greece

We are in the middle of a technological revolution: we are in the middle of what we call a new information revolution, which started in the last few years, less than fifty actually. In the last fifty years we have made more progress in this area than in the last 50,000 years. We owe all to inventors, to visionaries, to people like Dr. Agni Vliavianos-Arvanitis, who work against all odds to bring about results.

Technology is neutral, but we must be careful not to end up with a technological elite and a technological lower class. People both with and without means should be able to have access to the information and the technology that they need. This is an exciting time for medicine. With telemedicine, specialists can participate from their own hospitals in the treatment of patients in remote parts of the world. In the vision of tele-surgery, a specialist can perform an operation with the virtual assistance of other specialists. However, medicine is not the only field that benefits from the new information technology. In tele-learning, we have the ability to learn from afar. This technology is available for companies and universities. Also, tele-commuting allows mothers to become productive members of society. This is so important to some companies that they will cover some of the costs, like faxes and printers, or telecommunications costs. People who are handicapped should not be treated like second class citizens. Technology makes it possible for computers to speak to people, and people to speak to computers. Technology allows

Richard Hines

President, RTH Consulting, Inc., USA

I would like to comment on the American dissent to the Kyoto proposals, as I feel that President George W. Bush has been misjudged on the environmental problem. I know very directly that he has taken a personal interest in the technology of greenhouse emissions, specifically the heat-retaining element of these polluting gases.

The American approach is different than the Kyoto approach. We feel that it is necessary to have a more radical approach to the environment. Meaning that we have to devote massive resources to solving these environmental problems.

Technology and quality of life

companies to meet governmental requirements about accessibility. Technology helps in many areas, not just marketing, but in the ability to recycle, to replace the water we are using. High profile people like Bill Gates are becoming more vocal about the need to protect the environment.

All is not well, however. We have massive amounts of information, what we call an information glut, but we cannot process all of it. We have to work in this area, to improve the ability to get at the information that we need. We have to be careful, though, not to get the wrong information to the wrong people. Technology is a tool. Use it right, it serves us right.

A most disturbing aspect of information technology is the effect it has on interpersonal relations. Some parents have a tendency to use computers and televisions as a substitute for parenting. This is wrong. People used to visit with each other and to write

to each other. Now technology has replaced personal relations. In business, and in the rest of the world, we use e-mail as the preferred form of communications. This is taking every last shred of feeling out of communications. The more technological we become, the less human we become. We have to be careful with this.

Let me be clear. I believe in technology and the things it is capable of doing for us. It is all about how we use it, how we use this great tool. With technology, we can reach more people, in more places and more effectively. Let us use this tool to instill in ourselves the need to preserve our environment, to leave a legacy to our children. It's simple, let's get out there and get the B.I.O. message across.

A greater role for technology

It is not sufficient to roll back pollutant levels to 1990 levels. Just consider the mathematics. Today the populations of the third world countries of India and China are seven times greater than the European Union nations, and they are growing rapidly.

These parties are almost excluded from the Kyoto proposals. Certainly, a co-operative effort is needed, a scientific effort. Sometimes I feel that we participate too much in self-congratulatory statements. No. These are scientific problems; they need scientific solutions. All of the solutions may not lie in edicts by government, in fines, in governmental regulations. The issue of technology is very important. We talk about conservation. Why can't we talk about new technology for cheaper energy?

Europe's Enterprise Strategy Summit

The Industrial Society, London, November 4-5, 2001

European enterprise leaders agree new agenda for business

Held on November 4 and 5, 2001, at the main headquarters of The Industrial Society in Pall Mall, central London, the European Enterprise Strategy Summit was designed to cluster and

integrate the range of actors and initiatives at the leading edge of change in European enterprise. The initiative was chaired by **Will Hutton**, Chief Executive of The Industrial Society, United Kingdom, and **Marcello Palazzi**, President of the Progression Foundation, The Netherlands.

In many different domains of the European economy and society, progressive innovations and new pathways have been successfully introduced and tested during the last decade, from socially-responsible investment, fair trade, corporate social/environmental reporting, venture philanthropy, social enterprise, sustainable business models, local enterprise development, ethical codes for business conduct, life-long learning, tax-credits for sustainable investments, corporate reputation investment, joint-stakeholders' economic policy-making and many others.

The Summit aimed at finding connections and synergies among these innovations, as well as propagating them more widely across the new Europe. Following the Summit, the committed participants will continue their efforts to scale up and implement policy innovations, good practices and new strategies.

The distinguished speakers who convened at the Summit on the basis of their pioneering track records over the years addressed the following issues:

- Ethics, integrity, leadership, accountability, innovation, creativity, "caredness" and good governance.
- Governments no longer the sole actors - involvement of other key decision-makers essential: civil society, enterprise, academia, as well as governments at European, national, regional and local levels.
- No minimum common denominator policies or watered-down recommendations, but best-of-Europe solutions.
- Integrative approach (top-down as well as bottom-up), reflecting the needs and interests of the wider society.

-Balance between thought and practice, long-term policy goals and short-term enterprise needs.

-Partnership spirit and strategies to maximize the distinctive contributions and interdependence of different sectors.

Participants included: Chief Secretary to the Treasury, Rt Hon. **David Smith MP**, **Juan Somavia**, Director General of the International Labour Organisation, **Maria Cattai Livanos**, Director General of the International Chambers of Commerce, **Wendy Alexander**, Minister for Enterprise and Lifelong Learning, Scottish Executive, **Geoff Mulgan**, Director of the Prime Minister's Forward Strategy Unit and PIU, **Alfred Guzenbauer**, Head of Austria's Social Democratic Party, **Tom Bentley**, Demos, **Georges Berthoin**, European Chairman, Trilateral Commission, **Laurence Cockroft**, Transparency International, **Kaj Embren**, Respect Europe, **James Garrison**, State of the World Forum, **Hazel Haenderson**, The Global Commission to Fund the United Nations, **Peter Johnston** from the European Commission, **Marc Luyckx**, Vision 2020, **Jane Nelson** and **Susan Simpson**, International Business Leaders Forum, **Tom Spencer**, Counterpart International Europe, **Claudia von Mombart**, The World Bank, **Nick Isles**, The Industrial Society, and B.I.O. President **Dr. Agni Vliavianos-Arvanitis**.

Involving leaders of integrity, competence, vision and civic commitment in European policy-making

Bio-Tourism

Tourism is the most highly developed industry in the world today and is related to a variety of economic sectors including transportation, accommodation, catering, communications, banking and information technology. Furthermore, fields such as agriculture, the construction business, and the arts are heavily dependent on tourism. Therefore, tourism is an asset to many economies, but it also exerts dramatic pressures on the environment and natural resources. Due to the large number and diversity of stakeholders involved, wise forward planning to incorporate tourism with environmental protection is essential.

Bio-tourism, as promoted by the Biopolitics International Organisation (B.I.O.) since its inception in 1985, is an ideal vehicle for peace and international co-operation. It is an intention to explore the world's natural and cultural heritage and to facilitate a new emphasis on "bio-culture," born as it is out of a positive mutual respect that is not confined to political and national divides.



The future of tourism lies in more than beautiful hotels, cruises and fancy resorts. Its success lies in the celebration of the richness of natural diversity, both of the environment and of cultural life including the gems of history and myth. This is the real meaning of bio-tourism. Those working in the world tourist industry have an important role - that of protecting the world's rich cultural and biological diversity. Tourism can become the diplomacy of the future uniting all peoples of the world, and its workers are invited to serve as diplomats of the third millennium.

Ethics

Environmental concerns are rapidly creating new requirements in society. To meet the challenges ahead, biocentric ethics are urgently needed in every human endeavour. Tourism is no exception.

The ethics promoted in bio-tourism focus on the protection of the natural environment and local culture. Bio-tourism is mutually beneficial to both the visitor and the local population and it preserves the attractions of the area for future visitors. The "bio-tourist" meets and lives among the local population, learns about its culture and experiences the local way of life hands-on. He/she also encounters the natural features of the area in a direct and educational manner.

It is encouraging to see that a number of organisations have adopted codes of ethics for tourists, recognising the importance that the principles of bio-tourism have in protecting the natural environment and cultural riches that attract tourists and ensuring the future viability of tourism. Among these organisations are the World Travel and Tourism Council, the National Audubon Society, the Ecotourism Association of Australia, and



the Ecumenical Coalition on Third World Tourism. Two of these codes are of particular interest: the National Audubon Society's Travel Ethic, which emphasises appropriate behaviour in natural environments, and the Ecu-

Bio-tourism has come to the tourism industry. Today, many environmentally conscious consumers are demanding - and the tourism industry is providing - travel that respects the natural and cultural environments of the areas being visited. At the same time, many new areas are being opened to tourism. With the rapid growth of the tourism industry, specialised, or niche, tours are being marketed under a variety of names, such as adventure travel, culinary travel, nature tourism, wilderness tourism, sustainable tourism, and socially-responsible tourism. All of these are forms of bio-tourism.

menical Coalition's Code of Ethics for Tourists, which focuses on the cultural environment.

These codes of ethics urge tour operators involved with wilderness areas to adopt appropriate behaviour when viewing or photographing animal habitats and disposing of wastes, and to avoid products that threaten wildlife and plant populations, such as sea turtle products, reptile skins and coral. These codes also emphasise the importance of respecting the local population and culture of the area being visited. One should travel in a spirit of humility and genuine interest in the host country, with sensitivity to the people of the country. One should become aware of local customs and try to avoid offensive behaviour.

History and mythology

Cultural diversity, tradition, history and "myths" are the cornerstones of bio-tourism. The trail of the heroes and the gods, the trail of history and civilisation from Europe to Africa and from Asia to the Americas, can pave the way for the exploration of the world's natural and cultural heritage and place our perception of our place in history in perspective.

Every nation and region of the world offers its own unique cultural and historical attributes. Sites and artefacts of ancient and pre-historic civilisations can be found in many parts of the world. Each historical era offers its own particular contribution in crafts, folklore, art, architecture, and all the other elements that comprise a culture. Bio-tourism promotes the celebration of the richness of natural diversity, both of the environment and of cultural life including the gems of history and myth. This is the real meaning of bio-tourism.

Biodiversity and culture

Bio-tourism may entail learning to cook local dishes, or to weave traditional clothes, or to make pottery. Bio-tourism not only includes visits to museums and ancient temples, but may also involve walking in indigenous neighbourhoods or villages and meeting the local population. Bio-tourism may be structured along a trail or route of historical significance. It includes close encounters with plant, animal and insect species through carefully guided hikes in natural areas. A well-known form of bio-tourism in Africa is the safari, originally a hunting expedition, but today an excursion to observe and photograph wildlife. By gaining knowledge of local natural and cultural conditions, the visitor also gains understanding and appreciation of a culture. This, in turn, leads to greater friendship and peace based on co-operation and mutual understanding. Thus, bio-tourism is not a self-centred approach to recreation, but a biocentric interaction with the surrounding world.

Conservation and environmental management

A holistic environmental approach to tourism emphasises that hotels and other facilities should not be constructed in environmentally sensitive areas such as beachfronts, wetlands or mountain tops. They should be designed using environmentally friendly strategies, in order to achieve the minimisation of energy waste and pollution. Tourism could also have positive environmental effects. Hotels can improve their environmental management practices by treating their own wastewater. Demands for a quality environment, especially for clean bathing water in coastal areas, are

a powerful lever for improving water purification facilities and solid waste disposal in popular destinations.

Bio-tourism in Estonia

Despite its small size and state of development, Estonia has well preserved wilderness areas and an abundance of national parks. About 40% of the country is forested. Lahemaa National Park, 50 kilometres east of Tallinn, offers 1000 square kilometres of bays, peninsulas, forests and old manors, some of which have been converted to hotels. An abundance of wildlife is found here including brown bears, moose, boars, lynx, otters, deer and grey wolves. Opportunities for fishing are plentiful. In short, Estonia presents the bio-tourist excellent opportunities in both the natural and cultural categories.

Culinary adventures in Italy

A specialised form of bio-tourism in Italy is known as "culinary tourism." It offers the trav-

eller the opportunity to stay with a small group in a rural villa and to learn to press olives, make wine or cook Italian dishes. The most popular destination for this type of tourism is Tuscany in central Italy, although Umbria and Apulia are also attracting culinary tourists. The Italian government facilitated culinary tourism in the 1990's when it allowed the licensing of "agriturismi," or tourist farms. The farms were required to provide training to their guests and to actually produce a product. The most common products are wine, olive oil and confections, which are usually sold to visitors. Cooking instruction in Italian cuisine is provided to small groups in the kitchens of country homes. Many of the tours include visits to local attractions such as cheese factories, monasteries and, of course, restaurants. They may also include bicycling tours, horseback riding and free time for the tourists to visit other attractions on their own.

The Costa Rican experience

Costa Rican tour operators and government guides practice bio-tourism, by providing the tourist with information about the areas being visited and stressing conservation of the natural wonders. Many of the principle attractions are a short distance from Costa Rica's capital, San Jose, allowing the visitor to lodge in the city and take day trips to visit the sights. Nature guides are available to explain the delicate interactions of the plant, animal and insect species. Visitors may watch sea turtles lay their eggs or see the tiny hatched turtles scramble to the sea. Canopy tours take the traveller to the upper levels of the forest to see an entirely different ecosystem. Bicycle tours, balloon rides, nature flights, horseback tours and white water rafting are all part of the potpourri available to the adventure-minded tourist. Tour sizes and support facilities continue to be relatively small scale, with 77% of hotels having less than 40 rooms. Tourism provides 74,000 jobs and generates significant revenues for the local population. Costa Rica's challenge in the future is to ensure that as the number of tourists grows, it continues to provide services on a scale and in a manner that protects the coun-

try's natural wonders, educates the visitor and benefits local residents.

Small-scale bio-tourism in rural India

An example of bio-tourism on a very small scale can be found in Kanda, in the state of Uttaranchal in northern India, an area situated in the foothills of the Himalayas. A non-governmental organisation known as the Rural Organisation for Social Elevation (ROSE) was formed in 1983 to provide assistance to the poor residents of the area through programmes focusing on education and social awareness. More than half the residents of the area live below the poverty line. Continuous subdivision of land over the years has resulted in over 80% of the parcels being less than a hectare in size, a situation which does not allow for profitable cultivation. Water and sanitation facilities are generally lacking. Environmental problems abound in the area and include deforestation and soil erosion.

In this poverty-stricken setting, ROSE was formed to educate local residents about sanitation, organic farming, recycling, and emergency relief. ROSE also provides free primary education to poor children in the area, and it assists in the development of cottage industries to generate some income. An example is the production of greeting cards using recycled paper and pressed flowers grown in local gardens. ROSE also hosts up to 10 bio-tourists at a time, who are offered hospitality at the founder's house and who are given the opportunity to teach basic English to local students, learn Hindi and Kumgong, participate in local activities and organic farming, make greeting cards, make footpaths, and trek in the mountains. In essence, ROSE offers the visitor a unique opportunity to experience the life and culture in rural northern India while at the same time, contributing directly to improving local conditions.

Antarctica - the new frontier

Perhaps the ultimate challenge for the adventure-seeking bio-tourist is a visit to Antarctica - a land like no other. Giant icebergs, magnificent mountains, glaciers, whales and other marine mammals, emperor and king penguins, fish and birds are among the principal attractions.

Expeditions to the southernmost continent are offered by cruise ship from Argentina or Chile, ice-breaker from Australia or New Zealand, or a one-day flight from Australia. For the truly adventurous traveller, scuba diving, kayaking, mountain climbing and South Pole treks are available. Cruises that circumnavigate the continent are also available. Tours vary in length and may include helicopter flights and trips ashore by boat. Guides are present to ensure that impacts to wildlife, fragile habitats, and natural or historic areas are minimised. Itineraries are normally flexible and may change due to weather or ice conditions. A diversion may be made in order to take advantage of a fortuitous sighting of wildlife.

Antarctica may be considered to be the final "new frontier" for the world traveller - at least until travel to outer space becomes commercialised. Interest in travel to Antarctica is growing as more tour operators enter the market. Antarctica offers a unique and particularly fragile environment. Here, observance of the princi-



ples of bio-tourism - responsible travel, environmental protection, an educational experience, and small scale tourism - are vitally important. Tour operators, guides and the traveller must all remain cognizant of and practice these principles diligently in this area.

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