

## PROCEEDINGS

### BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME I

*Proceedings from the First B.I.O. International Conference*

*Athens, May 1987*

#### ***Philosophy***

**Greece:** Dimensions of Biopolitics, Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

**U.K.:** Philosophical Problems of Biopolitics, Professor *Rom Harre*, University of Oxford; Ways of Thinking About the Bio-Environment, Professor *Andrew A. Brennan*, University of Stirling; Biopolitics and the Philosophy of Evolution, Dr. *Thomas S. Kemp*, Zoological University Museum, Oxford

**Yugoslavia:** Philosophical Aspects of the Bio-Environment, Professor *Adreja Miletic*, Faculty of Political Sciences, Belgrade University

**Sri Lanka:** Man as an Evolutionary Phenomenon, *Henry D.A.H.P. Karunaratne*, Chairman, Executive Committee, UNA

#### ***Management Models***

**Canada:** Explorers of Transition - Organisations, *Dolores Schell*, Consultant, Department of External Affairs, Ottawa

**Greece:** Public Policy Engineering - Operations Research in Decision Making, Dr. *Achilles C. Kanellopoulos*, Dean and Director of Studies, Southeastern College

#### ***Social Implications***

**Greece:** The Tragedy of the Commons, Professor *Michael Dearing*, Deree College

**Finland:** The Creative Impact of Feminism on Biopolitics, *Hilkka Pietila*, Secretary General UNA Finland, Vice-President, WFUNA

**U.S.A.:** Biopolitics and Youth, *James Muldoon Jr.*, Assistant Field Director, UNA

#### ***International Cooperation***

**U.K.:** The Bio-Environment - Policy Recommendations, The Right Honourable *Lord Ennals*, Member, House of Lords, former Cabinet Minister

**Singapore:** Strategies for the Protection, Maintenance and Enhancement of Bios, Professor *Tham Seong Chee*, University of Singapore, President, UNA

**Cyprus:** The Bio-Environment - An Issue for Development and Foreign Policy, *Androulla Vassiliou*, Barrister-at-Law, Vice Chairman, Executive Committee, WFUNA

**Austria:** The Role of the United Nations in Preserving the Bio-Environment, *Peter H. Feeg*, Director, WFUNA, Vienna

**Sri Lanka:** Preservation of the Bio-Environment, *Kumaran Fernando*, Secretary, General, UNA

**Philippines:** The Bio-Environment: - Protection and Improvement of Life, Dr. *Liduvina R. Senora*, Executive Secretary, UNA

**Nigeria:** The Bio-Environment - African Dimensions, *Tina Uwechue*, Barrister-at-Law, Vice-President, UNA

***Politics, Education and Economics***

**Portugal:** Biopolitics - Regional and Interregional Perspectives, *Professor Antonio Manuel de Sousa Otto*, Director, Ministry of Industry and Commerce, Algarves

**Greece:** Biopolitical Science, Professor *Emmanuel E. Marcoglou*, Deree College

**G.D.R.:** The Bio-Environment and Education, Professor *Erich Taubert*, Weimar University

**Hungary:** The Bio-Environment - Economic Dimensions, Professor *Gyula Bora*, Vice-Rector, Karl Marx University

**F.R.G.:** Ecology and Economic Policy, Professor *Udo E. Simonis*, Director, International Institute for Environment and Society, Science Centre Berlin

***Legal Implications***

**C.S.S.R.:** Preservation and International Law, Professor *Juraj Cuth*, President of the Slovak Peace Council

**Turkey:** Urban Planning and Bio-Environmental Policy, Professor *Rusen Keles*, Director, Center for Urban Studies, Faculty of Political Sciences, Ankara University

**Israel:** Biopolitics Legal Dimensions, *Haim Klugman*, Director General, Ministry of Justice

**F.R.G.:** International Environmental Problems and the Role of Legislators, *Professor Udo E. Simonis*, Director, International Institute for Environment and Society, Science Center Berlin

***Technological Dimensions******Pollution***

**U.S.A.:** Global Warming and Sea Level Rise, Professor *Giulio Pontecorvo*, Columbia University

**F.R.G.:** Lake Restoration in Berlin, Professor *Gunther Klein*, Institute for Water, Soil and Air Hygiene, Federal Health Office, Berlin; Chemical and Engineering Aspects of Phosphate Elimination, Professor *Andreas Grohmann*, Institute for Water, Soil and Air Hygiene, Federal Health Office, Berlin

**Greece:** Transfer Factors of Heavy Metals in Aquatic Organisms of Different Trophic Levels, *Konstantina Akrida*, Food Chemistry Laboratory, University of Ioannina; Dr. *Vassiliki Kalfakakou*, Faculty of Medicine, University of Ioannina; Bio-Environmental Protection, Materials Recovery and Cost Saving: The Case of Flotation, Dr. *Anastasios I. Zouboulis*, Department of Chemistry, Aristotelian University, Thessaloniki and Professor *Francis A. Batzias*, Piraeus Graduate School of Industrial Studies

***Health***

**Greece.:** Bio-Engineering - Medical Dimensions, Professor *George M. Maniatis*, University of Patras Medical School; Nutrition - Single Cell Protein Twenty Years Later, Professor *Cleanthis J. Israelidis*, Food Technology Institute, Southeastern College

**F.R.G.:** Long-Term Air Pollution Effects and Health, Professor *Horst Malberg*, Free University, Berlin; Influences of Air Pollution and Weather on Croup Syndrome and Obstructive Respiratory Tract Disease of Children in Berlin, Dr. Med. *Ulrich Fegeler*, Meteorology Institute, University of Berlin

*New Perspectives*

**France:** Biotechnology, Man and the Bio-Environment, Dr. *Guy Sergheraert*, Centre de Valorisation des Glucides

**Greece:** Comments on Biotechnology Professor *Constantinos Sekeris*, University of Athens, Director of Biology Research, National Research Center; Biotechnology and the Environment, Professor *Michael Scoullas*, President, European Environmental Bureau

**Switzerland:** Telecommunications Science and Its Relation to Bios, Dr. *Peter Stavroulakis*, Manager, NYNEX International, Geneva

**U.S.A.:** Biotechnology and Fisheries Oceanography Dr. *Philip Lobel*, Research Scientist, Woods Hole Oceanographic Institute and Associate in Oceanography, Center for Earth and Planetary Physics, Harvard University

**U.K.:** Technology and Change in the Bio-Environment: Some Contributions to the Process Theory, Dr. *David Watts*, University of Hull

**RESOLUTIONS**

At the end of the First B.I.O. International Conference, held in Athens in May 1987, all B.I.O. goals were unanimously acknowledged by the conference participants, and the following recommendations were made:

- promote and initiate awareness of and a deep sense of responsibility by all peoples for the dangers arising from actual or possible direct interventions of man into his own and all other forms of bio-psychological substance by means of genetic and other bio-medical processes
- promote and initiate regional cooperation for the development of the bio-environment and its protection against technically avoidable pollution among all relevant organisations and groups, including recording and publicising channels of information feedback
- promote and initiate efforts aimed at minimising resource depletion as well as exploiting the use of recycled materials of all forms for the protection of the bio-environment
- promote and initiate the widespread collection and flow of information and data relevant to the protection and development of the bio-environment, in both specialist institutions and public media
- promote and initiate the incorporation of environmental education programs in national educational systems; and finally proposes for consideration
- the need for a Universal Declaration in light of previous UN and UNEP declarations on the environment comparable to the Declaration of Human Rights or other internationally agreed conventions
- work out rules and laws to facilitate the imposition of legal and moral sanctions on states and organisations failing to protect the environment
- submit the issue of the bio-environment and its protection for debate and deliberation in the forthcoming 31st Plenary Session of WFUNA to be held in Ottawa in August 1987, and its regional conferences in 1988

- create national groups to be affiliated to the Biopolitics International Organisation

## **BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME II**

*Proceedings from the Second B.I.O. international Conference*

*Athens, October, 1988*

### ***Theology, Ethics and Philosophy***

**Greece:** Biopolitics - the Bios Theory Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation; Views on Biopolitics Professor *Constantinos Bonis*, Former President, Academy of Athens; Church - Theology - Bio-Environment Professor *Athanasios Angelopoulos*, School of Theology, Aristotle University of Thessaloniki; Man's Historical Presence in the World Professor *Evangelos A. Moutsopoulos*, Faculty of Philosophy, University of Athens, Member, Academy of Athens; Mythos - an Aspect of Bios *Lala Nicoli*, General Secretary, Greek Soroptimist Union

**Belgium:** Genetic Engineering - Ethical Dimensions Professor *Charles Susanne*, Director, Centre of Bioethics, Free University of Brussels

**U.S.A.:** The Ethics of Secrecy, Professor *Richard Eells*, Columbia University; The Need for Biopolitics *F.T. Liu*, Former Assistant Secretary General, United Nations Bios and Literature; The Role of Literature in the March Toward Biopolitical Sanity Professor *David R. Weinberg*, Michigan State University

**U.K.:** Ecological Humanism Prof. *Andrew A. Brennan*, University of Stirling

**Yugoslavia:** Bios and Technology Philosophical Controversies Professor *Andreja Miletic*, Faculty of Political Sciences, Belgrade University

### ***Bios and Youth***

**U.S.A.:** The Future of Bios and Youth *James Muldoon, Jr.*, Assistant Field Director, UNA and *Jordan A. Horvath*, New York State Bar

**France:** Bio-Ethics and Youth, Dr. *Guy Sergheraert*, Center for the Exploitation of Glucides; Bios and Youth Responsibility, *Philippe de Braeckelaer*, Centre de Valorisation Agro-Industriel

**Singapore:** The Role of Youth, *Bert Koh*, Board of Directors, UNA Singapore and *Paul Ng*, Board of Directors, UNA Singapore

**U.K.:** Global Cooperation - a New Vision for Youth, *Nikki Malet de Carteret*, Consultant, Global Cooperation for a Better World

**Poland:** International Youth Movement and Bios, *P. Graniewski*, Secretary General, UNA

**Greece:** Development vs Environmental Order, *Hercules Roupas*, Financial Consultant

### ***Bios and the Role of Women***

**Belgium:** Women and Biopolitics, Dr. *Huberte Hanquet*, Senator, President of the Council of Belgian Women

**Finland:** Women and Bios, *Hilkka Pietila*, Secretary General UNA, Vice-President, WFUNA

### ***Technology and Health***

**U.S.A.:** In Praise of Technology's Humanity, Professor *Elias P. Gyftopoulos*, Ford

Professor of Nuclear Engineering, Massachusetts Institute of Technology

**Greece:** The Progress of Biological Sciences and the Future of Bios, *Professor George M. Maniatis*, Biology Department, University of Patras

**France:** Biotechnology in the Service of Agriculture, *George Martin*, Ingenieur I.A.N.

**Philippines:** The Future of Science and Technology in Asia Dr. *Frederick So Pada*, President, Technological University of the Philippines; Relevance and Responsiveness of Technology Transfer Dr. *Gloria C. Gatchalian*, Director, Special Science High School, *Eulogio Rodriguez* Institute of Science and Technology

**Switzerland:** Bios and the Use of Telecommunications Dr. *Peter Stavroulakis*, Nynex International Company

**G.D.R.:** Health for All by the Year 2000, Professor *Erich Taubert*, University of Weimar

#### ***Law, Education, Media***

**U.K.:** The Management of the Air, The Right Honourable *Lord Ennals*, House of Lords, Former Cabinet Minister

**Israel:** The Bio-Assessment of Law, Technology and Art, *Mayer Gabay*, Civil Service Commissioner, f. Director General, Ministry of Justice

**Poland:** Bio-Security - Legal Dimensions, Dr. *Josef A. Haber*, Technical University Gliwice, Vice-President, UNA

**Philippines:** The Teacher as Agent of Change in Biopolitics, Dr. *Gloria C. Gatchalian*, *Eulogio Rodriguez* Institute of Science and Technology

**Sri Lanka:** Outline of a Biopolitics Curriculum, *Henry Karunaratne*, Chairman, UNA Executive Committee

**Greece:** The Future of International Education, Dr. *Achilles C. Kanellopoulos*, Dean and Director of Studies, South-eastern College; Bio-Communications, *Haris Livas*, Director of International Relations, Ministry of the National Economy

#### ***Urban Planning and Architecture***

**Greece:** Landscape Values and Bio-Aesthetics, Professor *Costas A. Cassios*, National Technical University; Bio-Environment, Urban Planning and Architecture; Environment and the Role of Ekistics, Professor *John G. Papaioannou*, Advisor, Ekistics Centre

**Turkey:** Bios and Urban Planning - Dimensions for the Future, Professor *Rusen Keles*, Director, Centre for Urban Studies, Faculty of Political Sciences, Ankara University, President UNA; The Golden Horn Project, Professor *Ahmet Samsunlu*, Istanbul Technical University

**Poland:** Bios and Modern Cities, *Pawel Graniewski*, Secretary General, UNA; Bio-Environmental Evaluation, *Edward Kamienski*, Director, Center for Building Biology and Environmental Energy Action, BIOSKALA

**Cyprus:** Tradition: a Contribution to Civilization, *Alexis Theodossiadis*, Architect/Planner

#### ***Bio-Environment and International Co-operation***

**Belgium:** Biocycle - Man - Environment, Dr. *Stefan Klein*, President, International Society for Research on Civilization Diseases and on Environment

**Philippines:** Perspectives for the Improvement of Bios in Asia, Dr. *Liduvina R. Senora*,

Executive Secretary, UNA

**G.D.R.:** Bios and International Cooperation *Felicitas Richter*, Secretary General, UNA

**Sri Lanka:** The Future of Bios - Asian Dimension, *Kumaran Fernando*, Secretary General, UNA

**Poland:** Man and Environment, Dr. *Jan W. Dobrowolski*, Science Secretary, Committee for the Protection of Public Health, Polish Academy of Sciences

**Cyprus:** Rehabilitation of Habitats and Management of Resources, *Andreas Demetropoulos*, National Coordinator, Marine Pollution Monitoring Programme

**Greece:** The Role of the Environment, Dr. *Aldo Manos*, Coordinator, United Nations Environment Programme, Unit for the Mediterranean Action Plan

**U.S.A.:** Destruction of the Amazon and the Preservation of Bios, Professor *John Carroll*, Forest Resources, University of New Hampshire

**U.K.:** The Role of Animals in Forest Regeneration and the Economics of Rain Forest Conservation in Southeast Asia Dr. *David J. Chivers*, Cambridge University

Senegal: The Protection of Nature, *Moctar Kebe*, Minister for the Protection of Nature

**F.R.G.:** Internalizing External Costs, An Ecological Tax Reform, Professor *Ernst U. von Weizsaecker*, Director, Institute for European Environmental Policy; Environment Protection Expenditures - the German Example, Professor *Udo E. Simonis*, Director, International Institute for Environment and Society, Science Center of Berlin Dr. *Christian Leipert*, Science Center of Berlin; Industrial Restructuring for Sustainable Development: Three Strategic Elements, Professor *Udo E. Simonis*, Director, International Institute for Environment and Society, Science Center Berlin

**Hungary:** Economic Factors and the Environment, Professor *Gyula Bora*, Vice-Rector, Karl Marx Economic University

**Netherlands:** Good Environmental Practices Good Business Practices, Professor *Donald Huisingsh*, Environmental Consultant

**Ghana:** Bios in Africa Mr. *Bennard K. Kuma*, Honorary President, WFUNA; The Future of Bios in Africa, *Mike Awua-Asamoah*, Secretary General, UNA

**Nigeria:** The Future of Bios - African Dimension, *Tina Uwechue*, Barrister-at-Law, Vice-President, UNA

#### ***Bio-Diplomacy and Culture***

**U.S.A.:** Policy Issues Related to the Transfer of Technology to Developing Countries, Professor *Nicholas A. Ashford*, Department of Technology and Policy, M.I.T.

**U.K.:** Cultural Attitude Assessment: A Lost Dimension in the Technology Environment Equation, Dr. *David Watts*, University of Hull; Cultural Diplomacy - the Future Dr. *Robert T. Taylor*, Representative, British Council

**Singapore:** Bios and Culture in Asia Professor *Tham Seong Chee*, National University of Singapore, President, UNA

### ***RESOLUTIONS***

The conference participants, in addition to fully supporting all B.I.O. goals, resolved to:

- design, construct and implement an all-embracing educational strategy both to create

- consciousness regarding bios, as well as to provide feasible follow-up action plans for the achievement of B.I.O. objectives
- design, construct and implement a comprehensive syllabus on bios and all its ramifications for schools, colleges and universities
  - mobilise media resources and use satellites to inform, educate and sensitise the public on bios and its future
  - mobilise the expertise and energies of scholars, professionals and creative artists to give purpose and direction in the promotion of bios
  - encourage educational institutions to initiate programs of teaching and research relating to bios
  - promote cultural development and exchange to enhance both human understanding and the promotion of bios
  - develop and disseminate a bibliography on writings pertaining to bios, including literary writings in the form of novels, short stories, poetry and philosophical tracts.

Efforts to promote bios through education should remove ignorance and fear, give hope and add new moral-ethical boundaries capable of sustaining and promoting bios in the next millennium.

### **BIOPOLITICS - CURRICULUM REVISION**

*Third B.I.O. International Conference, Athens, June 1989*

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

**Singapore:** Professor *Tham Seong Chee*, National University of Singapore, UNA President

**Turkey:** Professor *Rusen Keles*, Director, Center for Urban Studies, Faculty of Political Sciences, Ankara University, President, United Nations Association

**USA:** Professor *Nicholas A. Ashford*, Policy Center for Technology, Massachusetts Institute of Technology

**Greece:** Professor *Constantinos Bonis*, former President, Academy of Athens

**Greece:** Professor *Costas A. Cassios*, Technical University of Athens

**U.K.:** *Terence Duffy*, University of Ulster

**USA:** *John Malcolm Forbes*, Founder, Teachers' Center for Global Education, and Chairman, Center for American Studies at Concord

**Israel:** *Mayer Gabay*, Civil Service Commissioner, and Former Director, General, Ministry of Justice

**Israel:** H.E. Ambassador of Israel Mr. *Moshe Gilboa*

**UK:** Professor *Rom Harre*, Department of Philosophy, Oxford University

**Turkey:** The Very Reverend *Meliton Karas*, Secretary of the Holy Synod Ecumenical Patriarchate

**Greece:** Professor George Maniatis, School of Biology, University of Patras

**Greece:** Dr. *Aldo Manos*, Coordinator, United Nations Environmental Program, Plan of

Action for the Mediterranean

**Greece:** Professor John G. Papaioannou, Athens Center of Ekistics

**USA:** Professor Giulio Pontecorvo, Director, Center for Business and Government Studies, Columbia University

**Greece:** Dr. Panayis Psomopoulos, President, Athens Center of Ekistics

**U.K.:** Dr. Robert T. Taylor, Representative, British Council

**Greece:** Professor Constantinos Voudouris, Department of Philosophy, University of Athens

### ***PROPOSALS FOR A BIOCENTRIC CURRICULUM***

Decision-makers met for the Third B.I.O. International Conference on *Biopolitics - Curriculum Revision* in order to initiate a worldwide bio-syllabus. It was acknowledged that there is an urgent need to incorporate the values of appreciation and a better understanding of bios (life) at all levels of education and that efforts would be to incorporate the progress of the biological sciences in fields such as theology, philosophy, diplomacy, economics, law, media, since technology may be viewed as a pathway leading to a better future. While setting the long-range philosophy of bio-education, immediate changes need to be incorporated in primary, secondary and university education. Public opinion is changing from day to day and the demands for the preservation and appreciation of bios are of utmost importance.

The fruitful outcome of this important meeting was the proposal for a bio-syllabus. Statement of Justification Maintaining and promoting bios (life) has, in general, become the most complex and urgent task facing humanity. Progress in technology has given hope for a more abundant and satisfying future. The horizons of human thought and understanding seem unlimited. Yet, at the same time, technology is also seen as life-threatening, challenging humanity's cherished beliefs, creating in its wake immense moral dilemmas as well as legal concerns. To ensure that bios remains at the center of human concern, it is imperative that technology be guided by appropriate values.

An important recommendation adopted at the First B.I.O. International Conference held in May 1987 was the preparation and promotion of bios-oriented educational programmes in national educational systems. This recommendation was subsequently reaffirmed at the Second B.I.O. International Conference in October 1988 where it was proposed that a bios curriculum for pre-school, secondary and tertiary educational institutions be formulated. The Third B.I.O. International Conference held in June 1989 addressed itself to this task.

#### *The Bio-Syllabus*

The bio-syllabus proposed by the Third B.I.O. International Conference stresses the need for a unified approach to understanding life and its multifaceted manifestations and processes. More than just the concern for the protection of the environment, it envisages not only the identification, promotion and institutionalisation of values and attitudes that are necessary for the maintenance of bios but also the protection of vital ecosystems by the intelligent application of technological know-how for the enrichment of life. Bios, on one hand, and bio-technological development, on the other, constitute two interacting components whose relationship with each other must be guided by appropriate values or principles of action to achieve desirable



outcomes. A bio-syllabus, then, is both cognitive emphasising knowledge about bios and evaluational emphasising right values or attitudes towards bio-assessment.

#### *Elementary Level*

Appreciation of bios can assume many forms - in the manner bios is presented as a manifestation or in the incorporation of bios topics in teaching subjects such as history, literature, geography, social studies, civics, music and elementary science. In doing so, pupils should be provided with sound basic simplified knowledge of bios and at the same time, learn to relate to bios with sensitivity, understanding and intelligence.

#### *Methods and Procedures*

To realise the broad aims presented, considerations should be given to assisting students to acquire an appreciation of nature, its rhythms and processes. This could be achieved by cultivating their powers of observation through sharpening their senses to sight, sound, smell, feeling and touch. Two sets of procedures could be followed: the purely didactic involving telling/explaining, shocking, informing and subject focus teaching and the less didactic involving individual research, information-handling, values clarification, motivating and decision-making skills. In addition to pure teaching, students could be encouraged to develop practical applications protecting the bio-environment. Teachers should encourage students to raise moral, ethical, religious, political, economic and other questions to assist them in arriving at appropriate value decisions.

#### *Secondary Level*

At this level, the study of bios can be more focused either in terms of themes or subjects. The presentation of bios topics can be done through the relevant subjects taught at the secondary schools. Though teaching at this level tends to be disciplined or subject-oriented, e.g. language, literature, history, biology, physics, chemistry, mathematics, etc., the need to deal with bios and bio-related topics as a unified area of knowledge and values should be recognised. However, it is important that students gradually come to realise that ecosystems are governed by common laws whether physical, biological or chemical and in the case of human beings, by values and norms.

#### *Aims*

The overall aim at this level should be to develop the students ability both to observe and inquire about bios thus deepening their understanding of the relationship between human beings and the bio-environment. In addition, students can be helped to seek problems pertaining to bios and in the process learn to imbibe the process of inquiry and the scientific ethos. At the more advanced level (grades 10-12 or upper secondary), the aims of the bio-syllabus should include inter alia:

- teaching students how to discover regularities or underlying principles in the bio-environment
- assisting students in identifying and analysing causes pertaining to bios and natural phenomena so as to develop unified ways of viewing and thinking
- helping students to understand that there is harmony despite diversity and variety in

bios

- teaching students that all natural phenomena have a history governed largely by their habitat thereby heightening interest in the preservation of biotic forms
- helping students to understand that human life is maintained by dynamic balance in the bio-environment
- deepening students' knowledge regarding the action of man and its impact on the bio-environment stressing the role of culture and values

#### *Methods and Procedures*

The focus at this level of study should not only be the appreciation of bios but also consciousness of bios in all its varied forms and manifestations. To realise this as an objective, a variety of activities and approaches may be attempted. To help students develop an appreciation of bios, various experiences should be provided through field studies; the use of audio-visual materials; the setting-up of laboratory experiments and the organisation of talks, debates and discussions on bios. Other more innovative methods may also be attempted such as simulation dramatic presentations of bios, record-keeping and bio-reporting.

Both the cognitive understanding of bios and the values pertaining to bios should constitute the basis for the structuring of the bio-syllabus at the secondary level. This means that science subjects should attempt to teach knowledge about bios as well as sensitise students to appropriate values pertaining to the promotion of bios. Subjects of a humanistic or social science orientation such as history, geography, social studies and music, should help to develop the sensitivity of students to and appreciation of values including the rhythms of life. The contents of the bio-syllabus should include:

- a firm understanding of the chemical basis of life - the development of organic living things from organic matter
- an understanding of cellular structure and function
- knowledge of heredity and genetics including the interaction of heredity and environment in determining behavioural outcomes
- an understanding of viruses and their role in relation to disease
- an appreciation of the evolutionary sequence, the development of primordial life to the present
- an understanding of the biology of man and its various systems viz., circulatory, skeletal, digestive, nervous, reproductive, excretory and endocrine
- knowledge of the invertebrates and their behavioral characteristics
- knowledge of flowerless plants such as algae, phytoplankton, fungi, mosses and ferns and their evolutionary significance
- appreciation of ecological relationships including the structure and diversity of ecological communities
- appreciation of biotic and abiotic factors in an ecosystem
- an understanding of population growth, regulation and interaction including the concept of mutation as the ultimate science of genetic change

As in the case of elementary schools, teachers at the secondary schools should endeavor to engage students in dialogue sessions on the various problems pertaining to bios and its maintenance. Such dialogue sessions could be issue or subject-oriented. The key concern should be the creation of a balanced and morally-sensitive perspective regarding bios. Given the diversity of cultural traditions and the unique existential circumstances underlying human societies, it is imperative that the approaches proposed to promote bios through education be modified and adapted according to the availability of resources and the perception of needs. It is important that students have both the intellectual and emotional maturity to engage actively in organised efforts to promote the objectives of bios both at the school and community levels.

#### *Tertiary/University Level*

Because of the great variety of disciplines and teaching programmes at the undergraduate level, it would not be possible to propose a detailed systematic bio-syllabus suitable for all students. However, it is assumed that students at this point of their learning experience would have absorbed the spirit of scientific inquiry and at the same time, deepened their understanding of the bio-environment as it relates to human societies. Similarly, it is assumed that they would have developed appropriate concerns and attitudes towards bios in general guided at the same time by a sense of service and responsibility.

Since university undergraduates are the potential leaders and decision-makers of society, it is necessary that they possess the requisite knowledge and public sense to discharge their responsibilities in the interest of bios. In an industrial capital-oriented society, certain categories of professional expertise play greater roles or exercise greater influence in determining decisions affecting bios. In this connection, tertiary educational institutions are encouraged to make available bios or bios-related courses at the undergraduate level on an urgent and formal basis. In doing so, it might be necessary to provide built-in incentive systems to ensure that the students adopt a serious attitude toward the concerns of the courses. The department or the faculty must regard these courses as integral to the overall professional education of the undergraduates. In conducting such courses, departmental or faculty staff may bear in mind the following guiding principles:

- the need to develop appropriate and value-oriented technology, one that advances sustainable development
- the need to utilise resources equitably, fairly and efficiently
- the need to ensure viable interdependencies between the bio-environment and economic need
- the need to maximise biological diversity by judicious strategies, and
- the need to monitor population growth to ensure the effective implementation of economic and bio-environment programmes

#### *Implementation*

Educational institutions promoting bios through the adoption of a bio-syllabus should endeavor to engage all forms of media (satellite broadcasts, newspapers, magazines both at the popular and professional levels and advertisements) to create and generate public awareness

and support for bios and bios-related programmes and initiatives. Bios and its enhancement, in this regard, should be promoted as a total commitment, a way of acting, thinking and feeling which gives a new dimension to life as a global manifestation. In this connection, institutions of higher learning with the requisite resources and commitment should provide the lead in implementing programmes of study and research whether at degree level or in the form of short courses and learning modules on understanding bios. Universities and colleges with law faculties in collaboration with relevant professional organisations should endeavor to formulate model laws dealing with the fundamental concepts and specific issues pertaining to the impact of biotechnological research on bios. If necessary, relevant international organisations and agencies within or without the U.N. system should be consulted and their assistance sought.

### **BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME III**

#### **The International University for the Bio-Environment**

*Proceedings from the Fourth B.I.O. International Conference*

*Athens, January 1991*

*\* denotes contributions from the Third B.I.O. International Conference*

#### ***Bio-Education as a Pathway to Bio-Culture***

**Greece:** International University for the Bio-Environment - a New Vision, Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

**Singapore:** Higher Education and the Bio-environmental Challenge, Professor *Tham Seong Chee*, University of Singapore

**Turkey:** Towards an International University for the Bio-Environment, Professor *Necdet Serin*, President, Ankara University

**U.S.A.:** Environmental Codetermination: From the Biopolitics Thesis to Praxis, Professor *Climis A. Davos*, Associate Dean for Student Affairs, School of Public Health, UCLA

**Belgium:** Man-Education-Industry, Dr. *Stefan Klein*, President, International Society for Research on Civilisation Diseases and on Environment

**Romania:** How to Educate People for a Better Attitude Regarding the Bio-Environment, Dr. *Pia Elena Mihnea*, Romanian Marine Research Institute

**USSR:** Environmental Education in Modern Society, Professor *Jaanus Kiili*, Tallinn Teachers Training Institute, Estonia; Equilibrium Between Natura and Homo - the Leading Role of the I.U.B.E., Andrew Belkovsky, Centre of Human Sciences, Presidium of the Academy of Sciences

**Australia:** Education for Survival and a Better World, Professor *Stephen Boyden*, Centre for Resource and Environmental Studies, Australian National University

#### ***Bio-Culture, from Mythos to the Present***

**Turkey:** Biospherical Anthropocentrism: Persisting Development of the Most Advanced Species, Professor *Yaman Ors*, M.D., Medical Faculty, Ankara University

**Greece:** Ideologies and Ecological Crisis, Professor *Megas L. Farantos*, University of Athens; Some Approaches to Environmental Issues in Societies of the Past, Dr. *Richard Witt*, New York College, Athens

**UK:** Environment East - Environment West: Choices for an Environment Syllabus, Dr. *David Watts*, Dean, School of Geography and Earth Resources, University of Hull

**Sri Lanka:** The Formulation of a Societal Value System for Bios in the Next Millennium, *Kumaran Fernando*, Secretary General, UNA

### ***The Philosophical Quest***

**UK:** Environmental Competence: The New Educational Challenge, Professor *Andrew Brennan*, Philosophy Department, University of Stirling; The Problem of the Definition of Bios\*, Professor *Rom Harre*, Department of Philosophy, Oxford University

**USSR:** Russian Culture and the Synthesis of Ecological Thought, *Maxim V. Provotorov*, Medical Institute of the Soviet Union; Bios and the Metamorphosis of Human Consciousness, Dr. *Nadezhda Shulenina*, Philosophy Department, Lomonosov University, Moscow

**Greece:** Space, Time and Kairos, Professor *Evanghelos A. Moutsopoulos*, Department of Philosophy, University of Athens, Member Academy of Athens

### ***The Quest for Bio-Ethics***

**Belgium:** Bioethics, Professor *Frederic A. Lints*, Catholic University of Louvain

**France:** How Far to go in Genetic Engineering and Genetic Manipulation, Professor *E.E. Creppy*, Laboratory of Toxicology and Applied Hygiene, University of Bordeaux II

**Belgium:** The Bio-Environment - a Gift to be Managed, Dr. *Huberte Hanquet*, Senator, President of the Commission of Foreign Affairs

**Turkey:** The Meaning of Life from the Christian Point of View\*, His Eminence the Metropolitan of Philadelphia, Dr. *Meliton Karas*, Secretary of the Holy Synod, Ecumenical Patriarchate

### ***The Biotechnological Challenge***

**USSR:** Industrial Biotechnology and Biopolitical Problems, Professor *Michail N. Manakov*, Moscow Mendeleyev Chemico-Technological Institute Professor *N.B. Gradova*, Moscow Mendeleyev Chemico-Technological Institute; Supraorganismic Biological Structures in Biopolitical Terms, Professor *Mikhail V. Gusev*, Dean, Faculty of Biology, Professor *Vitaly Samuilov*, Deputy Dean, Department of Biology and A. V. Oleskin, Department of Biology, Moscow State University

**Austria:** Biosociety - a Sustainable Society Using Technical Bioprocessing in Natural Cycles, Professor *Anton Moser*, Technical University of Graz

**Poland:** Biomedical and Ecological Conditions in the Creation of Bio-Environment, *Edward Kamienski*, Director, Centre for Building Biology and Environmental Energy Action

### ***Bio-Legislation - Past and Present Challenges***

**Greece:** The Embryo in Byzantine Canon Law, Professor *Spyros Troianos*, Faculty of Law, University of Athens

**Israel:** The Protection of Biotechno-logical Inventions, *Mayer Gabay*, Civil Service Commissioner, Former Director General, Ministry of Justice

**Bios and Business**

**Germany:** Towards a "World Budget." Thoughts on a World Resource Tax, Professor *Udo E. Simonis*, Director, International Institute for the Environment and Society, Science Centre Berlin; Motivation of Personnel for more Environmental Protection in Practice, Dr. *Georg Winter*, Chairman of the Board, B.A.U.M. Environmental Management Association

**Greece:** Bios and Business, *Kitty P. Kyriacopoulos*, Chairman of the Board, Bauxites Parnasse Mining Company S.A.

**Turkey:** Bios and Developing Economies, *Orhan Karakullukcu*, Industrialist, f. Mayor of Trabzon

**Maintaining Bio-Diversity**

**UK:** Tropical Rainforests and Sustainable Use: The Need for Global Education, Dr. *David J. Chivers*, Scientific Director, Department of Veterinary Anatomy; The I.U.B.E., An International Awareness Centre, *William J. Cairns*, Chairman, W.J. Cairns and Partners Belgium Views on the I.U.B.E. Structure, Dr. *Rene van Essche*, Director, Scientific and Regulatory Affairs for the EEC

**Turkey:** Bio-Diversity in Turkey, Professor *Aykut Kence*, Chairman, Department of Biology, Middle East Technical University

**Canada:** Restoration of the Coast: Positive Technology at Work, Dr. *Colin D. Levings*, Research Scientist, West Vancouver Laboratory

**Philippines:** ASEAN Coastal Management: Paradox Emerging from the Philosophy of Need, Dr. *Miguel D. Fortes*, Marine Science Institute, University of the Philippines

**Netherlands:** A Quantitative Method for the Description and Assessment of Ecosystems: The AMOEBA Approach, *B.J.I. ten Brink* and *F. Colijn*, Tidal Waters Division, Ministry of Transport and Public Works

**Israel:** Perturbations in the Marine Environment and their Impact on Living Resources, Professor *Baruch Kimor*, Faculty of Agricultural Engineering, Israel Institute of Technology

**CSSR:** The Oceans: Exploitation of Resources and Pollution, Professor *Vaclav K. Mejstrik*, Director, Environmental Ecology Institute, Czechoslovak Academy of Sciences

**USSR:** Ecological Monitoring of Seas and Oceans The Eco-Aqua Project, Dr. *Vladislav Souponitsky*, General Director of the Eco-Aqua Consortium, Structure of the International University for the Bio-Environment

**France:** Has the Time Come for the I.U.B.E.?, *Georges Martin*, Agronomic Consultant

**Greece:** I.U.B.E. Financial Structure, H.E. Ambassador *Achilles Exarchos*; The Role of the International University for the Bio-Environment, Professor *Basil C. Papadias*, National Technical University of Athens

**France:** Remarks on the Conditions for the Creation of the I.U.B.E., Professor *Michel Despax*, Honourary President, University of Social Sciences of Toulouse

**Ghana:** The Structure of the I.U.B.E., *Mike Awua-Asamoah*, Director, Deputy Secretary General, WFUNA Africa Regional Office

**Poland:** Sailing University, Captain *Krzysztof Baranowski*, International Class Afloat Foundation

**USA:** A Strategic Approach for Environmental Education, Professor *Nicholas A. Ashford*,

Massachusetts Institute of Technology

**Turkey:** The I.U.B.E.: Its Goals and Clients, Professor *Rusen Keles*, Director, Centre for Environmental Studies, Ankara University

**Portugal:** The I.U.B.E.: Education and Behaviour, Professor *Antonio Manuel de Sousa Otto*, Director, Ministry of Industry and Commerce

#### ***The Framework of the I.U.B.E.***

**Ghana:** Re-directing Societal Values and Attitudes for the Respect of the Bio-Environment *Bernard Kwami Kuma*, Honourary President, WFUNA

**Israel:** The Strategy Behind Environmental Education, Professor *Lev Fishelson*, University of Tel Aviv

**Belgium:** Human Ecology as an Example of Interdisciplinary Cooperation, Professor *Charles Susanne*, Laboratory of Human Genetics, Free University of Brussels

**Turkey:** Some Views on the I.U.B.E., Professor *Ahmet Samsunlu*, I.T.U.

**Greece:** Priorities and Urgency of Environmental Problems\*, Professor *John Papaioannou*, Adviser, Athens Centre of Ekistics

**UK:** The B.I.O. and the International University for the Bio-Environment, Professor *Andrew A. Brennan*, Department of Philosophy, University of Stirling

**Germany:** Think Globally Act Locally, Professor *Erich Taubert*, Member of the Board, UNA

**USA:** Systems Human Ecology: Towards a new Paradigm, Professor *Stephen L. Chorover*, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology

**Turkey:** Establishment of the I.U.B.E. to Provide Global Cooperation Professor *Hunay Evliya*, Cukorova University

**Poland:** The Conception of the I.U.B.E. Bio-Environment, Professor *Jan W. Dobrowolski*, Deputy Dean, Institute of Management and Protection of the Environment, Polish Academy of Sciences

**Netherlands:** The Sum of Billions of Individual Decisions Can Mean Change, *Albert T.H. Ten Houten*, Member of the Dutch National Advisory Council for Research on Nature and Environment

**Sri Lanka:** B.I.O. and the I.U.B.E., Observations on Goals and Objectives, *Kumaran Fernando*, Secretary General, UNA

**Philippines:** The I.U.B.E. - Goals and Priorities, Dr. *Liduvina R. Senora*, Executive Secretary, UNA

#### ***The Views of Youth***

**Greece:** I.U.B.E. - the Involvement of Youth, *Christos Efthimiopoulos*, University of Athens and *Alexis Coscoros*, Athens College

#### ***The Role of the Media***

**USA:** The Alliance Network for Environmental Education, Professor *Terence John Mills*, Director, Centre for Environmental Education, Oklahoma State University; The Importance of Context: Environmental Education in the United States, Dr. *David W. Shapiro*, Media Specialist

**Bio-Syllabus Recommendations**

**U.K.:** Study of Environmental Science at British Universities\*, Dr. *Robert T. Taylor*, British Council, Athens; Biopolitics and the Peace Studies Curriculum\*, *Terence Duffy*, Senior Tutor in Peace Studies, University of Ulster

**U.S.A.:** One Week Programme in Bio-Habitability\*, Professor *Giulio Pontecorvo*, Director, Centre for Business and Government Studies, Columbia University

**Netherlands:** A Bio-Syllabus: Cleaner Production - Theory, Concepts, Practice, Professor *Donald Huisingh*, Erasmus Centre for Environmental Studies

**Israel:** The B.I.O. Curriculum: The "Beyond" Curriculum, Professor *Edna Aphek*, The Seminary of Judaic Studies

**Hungary:** Bio-Environment Courses in the Economics University Professor *Gyula Bora*, Rector, Budapest University of Economics

**Turkey:** The I.U.B.E. - A Special Subject Model, Professor *Zafer Erturk*, Dean, Technical University Karadeniz

**USSR:** On the Problem of Anthropocentrism and Biocentrism, Professor *Mikhail V. Gusev*, Dean, Faculty of Biology, Moscow State University; Majoring in Biopolitics in the I.U.B.E., Dr. *Boris A. Gontarev*, President, Academy of World Civilizations, Moscow

**Israel:** Curriculum Format of the I.U.B.E., Dr. *Uri Marinov*, Director General, Ministry of the Environment

**Philippines:** Global Environmental Scenario a Concern of the I.U.B.E., *Gloria Castro Gatchalian*, Project Director, *Eulogio Amang Rodriguez* Institute of Science and Technology

**Bio-Diplomacy**

**Turkey:** Bio-Diplomacy and the Bio-Environment H.E., Ambassador *Gunduz Aktan*

**Colombia:** Bio-Diplomacy: The Colombian Dimension, Ambassador *Eduardo Barajas*

**Morocco:** Aspects of Environmental Policy in Morocco, Ambassador *Abdelaziz Laabi*

**Sudan:** The African Dimension, H.E. Ambassador Tagelsir Mohamed Abbas

**Israel:** The Challenge of Protecting the Bio-Environment,\* Ambassador *Moshe Gilboa*

**Egypt:** Egyptian Policy, Environmental Protection and International Co-operation, Ambassador *Ahmed Shaban El-Zant*

**Bio-Policy**

**USA:** Educational and Political Outreach by the I.U.B.E., *Jordan A. Horvath*, Board of Directors, UNA and *James P. Muldoon, Jr.*, Director, Model UN and Youth, UNA

**Nigeria:** The Bio-Syllabus African Dimension: The Need for International Education, *Tina Uwechue*, Barrister at Law, Vice-President, UNA

**China:** A Quick Glance at a Developing Country's Bio-Environmental Education, *Liu Chun Yu*, Deputy Director, Pollution Control Department, Environmental Protection Agency

**Japan:** Approach to Global Environmental Issues, Prof. *Jiro Kondo*, President, Science Council of Japan, Director, Research Institute of Innovative Technology for the Earth

**Israel:** The Israeli Environmental Scenario for the Year 2025, Dr. *Amram Pruginin*, Deputy Director General, Ministry of the Environment



**Poland:** Ecodevelopment-Education-Politics, Professor *Stanislaw Radwan*, Academy of Agriculture, Institute of Physical Planning; Bio-Environmental Protection, the Present and New Vision, Professor *Krzysztof Korzeniewski*, Institute of Oceanography, University of Gdansk and Professor *Janina Ewert*, Faculty of Mathematics and Sciences, Pedagogical University, Slupsk

**USSR:** Protection of the Environment - a Part of the Soviet Union's Science Policy, Professor *Y. Karabasov* and Professor *A. Shlikov*, State Committee for Science and Technology

**Germany:** Ecological Urban Restructuring, Professor *Udo E. Simonis*, Director, International Institute for the Environment and Society, Science Centre Berlin and Dr. *Ekhart Hahn*, Research Fellow, Science Centre of Berlin

**CSSR:** Political Decisions on Ecological Problems: Anthro-ecological Approach, Dr. *Jaroslav Stoklasa*, Chairman of the Federal Committee for the Environment, Academy of Sciences

**Yugoslavia:** Environment, Survival and Bioethics: The Drama of Contemporary Civilization, Professor *Dusan Kanazir*, President, Serbian Academy of Sciences and Arts.

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*Istanbul, May 1992*

#### ***The Bio-Environment and International Cooperation***

**Greece:** Bios in the Next Millennium: Reversing the Crisis of Values, Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

**Turkey:** The Responsibility of Universities, Professor *Necdet Serin*, President, Ankara University; A Responsibility for the Bio-Environment, Professor *Rusen Keles*, Faculty of Political Sciences, Ankara University; Biopolitics and International Co-operation, Professor *Nurettin Sozen*, Faculty of Agriculture, Ankara University; Planning for the Bio-Environment, *Hayri Kozakcioglu*, Governor of Istanbul; The Bio-Environment: Central and Local Policy, *Ismet Sezgin*, Minister of Interior; Bio-Environment and Development, *Abdulkadir Ates*, Minister of Tourism; Biopolitics and Governmental Policy, *Doganacan Akyurek*, Minister of Environment

#### ***Bio-Diplomacy***

**Sweden:** The Art of Bio-Diplomacy H.E. Ambassador *Kai Falkman*, General Consul of Sweden in Istanbul

**Greece:** The Unfinished Symphony, *Andreas Politakis*, Honorary Doctor, Founder of the Ipekci Peace and Friendship Prize

**Russia:** *Valerij Grishin*, Head of Information, Council of Ministers of Russia

#### ***Bio-Assessment of Technology***

**Sri Lanka:** Needed Educational Revision on the Impact of Technology, *Kumaran Fernando*, Secretary General, UNA

**U.S.A.:** Technological Imperatives - Challenges and Solutions, Professor *Nicholas Ashford*, Massachusetts Institute of Technology

**Turkey:** Preservation of Environmental Problems for the Future, Dr. *Adnan Aydin*, Director, Environmental Research Centre, Marmara University

**Czechoslovakia:** Anthro-Ecological Approach of Technology, Dr. *Jaroslav Stoklasa*, Chairman of the Commission, Czechoslovak Academy of Sciences

#### ***Bio-Ethics and Bio-Legislation***

**Yugoslavia:** Bioethics, Survival and Global Drama, Professor *Dusan Kanazir*, President, Serbian Academy of Sciences and Arts

**France:** Legal System of Fauna and Flora Protection in France, Professor *Michel Despax*, Honorary President, University of Social Sciences, Toulouse, Professor *William Coulet*, University of Social Sciences, Toulouse

**Greece:** Bios Rights - Legal Dimensions Related to the Preservation of the Bio-Environment, Dr. *Angelos Tsichrintzis*, Attorney at Law

**Russia:** Bio-Ethics and the Role of Women's Organisations, Dr. *Alexandra Momdjan*, President, International Women's Center, Vice President, Academy of Creative Endeavours

**Turkey:** Biopolitics in the Light of Bio-Ethics, Professor *Yaman Ors*, Ankara University Medical School

#### ***The Role of Bio-Education***

**Russia:** Biopolicy and the Training of Engineers: Biotechnologies in Russia, Professor *Michael Manakov*, Member of the Academy of Sciences and Head of Department, Mendeleev University of Chemical Technology, Professor *Pavel Sarkisov*, Rector, Mendeleev University of Chemical Technology

**Turkey:** The Role of Education and Technology for Efficient Environmental Policy, Professor *Nur Sozen*, Faculty of Agriculture, Ankara University; Environment and Adult Education, Professor *Cevat Geray*, Director, *Ernst Reuter* Center of Urban Studies, Faculty of Political Sciences, Ankara University; Environmental Education in Turkey, *Mehmet Tuncer* and *Memet Erol*, University of Ankara; Co-operation between Universities and Industry in Environmental Protection, Professor *Ahmet Samsunlu* and Professor *Veysel Eroglu*, Istanbul Technical University

**Nigeria:** The Need for the Integration of Environmental Concept in University Teaching - The Role of the I.U.B.E African Dimension, *Tina Uwechue*, Vice-President, UNA

**Japan:** Bio-Diversity, Professor *Jiro Kondo*, President, Science Council of Japan

**Philippines:** The Role of the I.U.B.E. in Natural Disasters, Dr. *Liduvina Senora*, Executive Secretary, UNA

**Greece:** International Exchange Programmes in Bio-Education - A New Perspective for Youth, *Christos Efthimiopoulos*, University of Athens, Member, Biopolitics International Organisation

#### ***Bio-Policy and Bio-Economy***

**Germany:** Toward a Houston Protocol - How to Allocate CO<sub>2</sub> Emission Reductions Between North and South, Professor *Udo Simonis*, Director, International Institute for the Environment and Society, Science Center Berlin; Poverty, Environment and Development,

*Deonanan Oodit*, Senior Economic Affairs Officer, United Nations, New York

**Hungary:** Contradictions of Technical Improvement in the Transition Time from Planned to Market Economy in Hungary, Professor *Gyula Bora*, Vice-Rector, Budapest University of Economics

**Netherlands:** Bio-Environmental Imperatives for Decision Making, *Albert ten Houten*, Milieu and Organisatie B.V. Netherlands; Business and Bio-Environment, *W.L. van Oyen*, Consultant, Ministry of Environment

**Turkey:** Ecotourism and Education, *Mehmet Arif Demirer*, Industrialist; Man, Environment, Technology and Universities, Professor *Aykut Kence* and Professor *Meral Kence*, Department of Biology, Middle East Technical University, Ankara

**Romania:** The Implementation of Biopolitics in Romania, Dr. *Pia Elena Mihnea*, Romanian Institute for Marine Research Technology and the Preservation of the Environment

### **RESOLUTIONS**

At the end of the Fifth B.I.O. Interantional Conference, the following resolutions were unanimously accepted by all participants, who first and foremost pledged complete support to the B.I.O. goals:

- the International University for the Bio-Environment constitutes the primary effort of the B.I.O. and needs to be used as the tool to implement the goals of the B.I.O. as stated in all previous conferences and resulting publications, since those include the commitment of representatives from 54 countries
- the biopolitics vision must be urgently implemented. This includes the sensitisation of all media, communications, educational institutions, representatives from industries and governments and decision makers in all levels of vertical responsibility on the need to place in the core of action and learning the respect for the bio-environment as a new value system
- this reform should be an on going process contributing to the harmonious coexistence of all forms of life and shifting from anthropocentric to biocentric values (bio-economics, bio-culture, bio-ethics, bio-legislation, bio-architecture, bio-theology)
- since in a consumer society money constitutes a value system which needs to be revised, it was resolved to consider as a priority a new definition of profit. Today's society equates value with the quantity of money. This understanding may evolve to include also the dimensions of quality of life.
- the active participation of women and youth in the decision making process is of utmost importance for the preservation of the bio-environment. In view of the Rio de Janeiro Earth Summit, it was proposed that the following be included as *Recommendations by the B.I.O. and its Supporters:*

"As previously published and recommended, a World Referendum could provide the expression of opinion by every individual of our Planet on the wish 'to support the bio-environment and the continuation of bios.' Bio-diplomacy may serve as a

new pathway of international cooperation. Bio-diplomacy substitutes the policies of fragmentation and division with a far-sighted unifying vision of interdependence. Since all people belong to the body of humanity, differentiation in culture, colour, tradition, religion may be viewed as an enrichment of bios rather than reason for division. In addition, all living species belong to the body bios and the protection of bio-diversity and harmonious coexistence of all forms of life constitute the basis of bio-diplomacy."

**BIOPOLITICS THE BIO-ENVIRONMENT - BIO-CULTURE IN THE NEXT  
MILLENNIUM - VOLUME V**

*Proceedings from the International Sakharov Festival  
Athens, July 28-31, 1994*

***Bios Theory***

**Greece:** Biopolitics - The Bio-Environment Bio-Culture in the Next Millennium, Dr. *Agni Vlavianos-Arvanitis*, Founder and President, Biopolitics International Organisation

***Bio-Diplomacy***

**Sweden:** The Presence and Essence of Bio-Diplomacy, Ambassador *Kai Falkman*, Ministry of Foreign Affairs

**Turkey:** Biopolitics as a Tool for Sustainable Solidarity, Professor *Rusen Keles*, Director of Environmental Studies, Faculty of Political Sciences, Ankara University; International Environmental Co-operation: Retrospect and Prospect, Professor *Ayşe Gulgun Tuna*, Department of International Relations, Bilkent University

**Greece:** Bio-Diplomacy as a Dimension of Bio-Culture, Ambassador *Panayotis Economou*, Public and International Relations Advisor, Biololitics International Organisation; The European Parliament Sakharov Prize, *George E. Saridakis*, f. Member of the European Parliament

**Czech Republic:** Revival of the European Soul: Post-Socialist Europeans Neglected but not Negligible, Ambassador *Jiri Marvan*, Ambassador of the Czech Republic to Greece

**Egypt:** New Pathways for International Co-operation, Ambassador *Ahmed Nabil El Salawy*, f. Ambassador of Egypt to Greece

***Bio-Legislation***

**Greece:** International and European Union Action Against Climate Change, *George Strongylis*, Commission of the European Union, Direction DG XI; Human Rights and the Environment: a Common Future, *Panayotis Karafotias*, f. Officer in Charge, United Nations Information Centre

**Russia:** Proposals for Environmental Preservation, *Yuri A. Korolev*, Institute of Legislation and Comparative Law

**Peru:** Bio-Legislation as a Solution to Environmental Problems in South America, Dr. *L.E. Ruelas Lierena*, United Nations Association Institute for Green Areas, Universidad Catolico de Santa Maria

**Slovak Republic:** Diplomacy and International Law in the Service of Biopolitics, Professor *Juraj Cuth*, Professor of International Law

### **Bio-Economics**

**Japan:** How to Compete in the 21st Century? The Importance of an Ethical and Environmental Corporate Commitment, Dr. *Gunter Pauli*, Advisor to the Rector, United Nations University, The Zero Emissions Research Institute

**U.S.A.:** Building a Sustainable Future, Professor *Nicholas Ashford*, Technology and Policy, Massachusetts Institute of Technology; Exploring Links Between Business and the Environment, Dr. *Julia Panourgia-Clones*, Environmental Consultant, The World Bank; Resource Conservation and Utilisation: a Magnificent Opportunity, *J. Patrick Nicholson*, Chairman and CEO, N-Viro International Corporation

**Greece:** How to Escape from the Cycle of Environmental Degradation, *Assimakis Fotilas*, f. Head, Investments Promotion Centre, UNIDO; Environmental Leadership: a New Business and Marketing Era, *Panayotis Vongas*; Technological Progress and the Future of Bios, *Nikos Katsaros*

**Switzerland:** The Bio-Environment as a Managerial Challenge, Dr. *Peter Kalantzis*, President, Lonza Ltd.

**Hungary:** Systems Analysis of Bio-Economy: Entropy and Negentropy in Biopolitics, Dr. *Lászlo Kapolyi*, President, Systems International Foundation; The Role of Economics in the Process of Sustainable Development, Professor *Gyula Bora*, Department of Economic Geography, Budapest University of Economic Science

### **Bio-Policy**

**Japan:** From Zero Defect, through Zero Inventory, to Zero Emissions, Dr. *Gunter Pauli*, Advisor to the Rector, United Nations University, The Zero Emissions Research Institute

**Sri Lanka:** Biopolitics: a New Approach to the Politics of Sustainable Development, A. *Henry Karunaratne*, Honorary President, United Nations Association

**Hungary:** Global Environmental Change: a Vision for a Better World, Professor *Hunay Evliya*, Director, Centre for Environmental Research, Çukurova University

**Russia:** The Environment and National Minorities, Dr. *Reguina A. Yavchunovskaya*, Academy of Creative Endeavours; Bio-Policy: Itinerary for Future Social Developments, Dr. *Natalia Grigorieva*, Social Policy - Social Development, Academy of Creative Endeavours

**Turkey:** Bio-Architecture as a Policy for Urban Planning, Professor *Ali Ozbilen*, Vice Dean, Department of Landscape Architecture, KTU Faculty of Forestry

**Yugoslavia:** Bio-Policy: a Quantitative Analysis of the Bio-Environment, Dr. *Ivana S. Djujic*, Institute of Chemistry, Technology and Metallurgy, Belgrade University

**Finland:** The Second Industrial Revolution: a Summary, Dr. *Eero Paloheimo*, Member of Parliament

**India:** Forestry: Reconciling Poverty and Equity Concerns, Dr. *Kamla Chowdhry*, Chairperson, Centre for Science and Environment

### **Regional Policy**

**Sudan:** Co-operation for Survival, Professor *Faysal Tageldim Abushama*, Director, National Centre for Research

**Czech Republic:** The Environmental Situation in Central and Eastern Europe: the Czechoslovak Example, Dr. *Jaroslav Stoklasa*, Environmental Advisor, Czech Academy of Sciences

**Indonesia:** Human Values, Modern Technology and Bio-Environmental Preservation, Professor *S. Budhisantoso*, Ministry of Environment

**Romania:** Environmental Protection and Scientific Research in Romania, Dr. *Mariana Constantinescu*, Ministry of Waters, Forests and Environmental Protection

**Philippines:** A Developing Region's Investment in Natural Capital, Professor *M. Dino Fortes*, Marine Science Institute

**Lithuania:** Biopolitics Goals: Lithuania's Obligations, Professor *Leonardas Kairiukstis*, Director of State Scientific Project ECOSLIT, Lithuanian Forest Institute

**Russia:** New Approaches to Environmental Management in Northwest Russia, Professor *Alexander I. Shishkin*, St. Petersburg State Technological University for Plant Polymers

**Cambodia:** The Environmental Situation in Cambodia: Policy and Instructions, Dr. *Ung Phyrun*, Deputy Director General, State Secretariat for Environment

#### ***Water Management***

**Germany:** Marine Biology, Pollution and the Protection of Nature, Professor *Wilfried Gunkel*, Former Director, Biologische Anstalt Helgoland

**Turkey:** The Conservation of Wetlands, Professor *Aykut Kence*, Chair, Department of Biology, Middle East Technical University

**Romania:** Reservoir Development and Exploitation for a Normal Trophic State, Dr. *Emil Rus*, Head, Hydraulics, Environmental Engineering Research Institute; Equilibria in Aquatic Environments, Dr. *Gabriella Ivancea*, Department of Aquatic Ecology, Ministry of Waters, Forests and Environmental Protection

**Poland:** Do We Need Protected Areas in the Baltic?, Professor *Anna Szaniawska and K.E. Skora*, Institute of Oceanography, Gdansk University; The Baltic Sea as a Great Potential Area for Biopolitics, Dr. *Eugeniusz Andruliewicz*, Department of Oceanography, Marine Quality Unit, Sea Fisheries Institute

**Israel:** Enclosed Coastal Seas - A Case Study: the Gulf of Aqaba, Red Sea, Professor *Baruch Kimor*, Faculty of Agricultural Engineering, Technion - Israel Institute of Technology

#### ***Bio-Education***

**Brazil:** Shaping the Future: Education for a Global Responsibility, Dr. *Paulo C. Moura*, President, Institute of Political and Social Studies

**Philippines:** Bio-Education for All: Achieving Environmentally Literate Global Citizens, Professor *Liduvina R. Senora*, UNA Executive Secretary, Eulogia "Amang" Rodriguez Institute

**Poland:** How to Improve Bio-Education, Professor *Leszek Kuznicki*, President, Polish

Academy of Science; Democratisation and Bio-Education: Action for a Better Quality of Life, Professor *Jan W. Dobrowolski*, Open University AGH, Polish Academy of Sciences

**Sri Lanka:** Biocentric Education and Development, *Kumaran Fernando*, Secretary-General, United Nations Association

**France:** The Bio-Environment in Primary Education, *Georges Martin*, Agricultural Engineer, Agronomic Consultant

**Russia:** Problems of Biopolitics in Teaching Chemical Technology, Professor *Pavel Sarkisov*, Rector, Mendeleev University of Chemical Technology and Professor *Michael Manakov*, Director, Biotechnology Centre, Mendeleev University of Chemical Technology; Humanitarian Education in Russian Technical Universities, Dr. *Lidia Masalkowa*, Department of Human Sciences, Mendeleev University of Chemical Technology; Bio-Education and its Contribution to Bio-Culture in the Next Millennium, Professor *Inna Parkhomenko*, Associate Professor of Biophysics, Moscow State University; Bio-Education: an Avenue Toward Sustainable Development in the Third Millennium, Professor *Sergey A. Ushakov*, Director, Earth Science Museum, Lomonosov Moscow State University; Biopolitics and the Problems of Professional Education in Russia, *Natalia Kuznetsova*, Financial Director, International Academy of Entrepreneurship; Bio-Education: the Realisation of Biocentric Values, Dr. *Nadezhda Shulenina*, Philosophy Department, Moscow Academy of Chemical Engineering

**Belarus:** Educational Challenges in the Post Chernobyl Years, Dr. *Alexander M. Lutsko*, Rector, International Sakharov College on Radioecology

**Lithuania:** Bio-Environmental Education: The Lithuanian Experience, Dr. *Vitalij Denisov*, Department of Applied Mathematics, Klaipeda University and *Sergej Olenin*, Centre for Systems Analysis, Klaipedia University

**Israel:** Biopolitics and Creative Thinking: the Search for Alternatives, Professor *Edna Aphek*, University of Jerusalem

**Slovak Republic:** Distance Learning for the Environment, *Jan Morovic*, President, City University of Bratislava

**The Netherlands:** Bio-Educational Reforms in Academic Curricula, *Albert Th. Ten Houten*, ATHMO, Wageningen

**Serbia:** An Environmental Approach to the Educational Process, Dr. *Gordana Brun*, Advisor to the Minister of Environment

**Czech Republic:** Raising Environmental Awareness through Education, Dr. *Jan Cerovsky*, President, ECOPOINT Foundation, Senior Scientist, Czech IUCN

**U.K.:** Literature and the Arts in the Biopolitics Curriculum, Dr. *Richard Witt*, Vice President, Society of Greek Scientists

#### **Bio-Energy**

**Greece:** Bio-Energy Perspectives versus Bio-Environmental Concerns, Professor *Basil C. Papadias*, Department of Electrical Engineering, National Technical University of Athens; Global Balances, Professor *Vlassios Sotiropoulos*, Head, Energy Department, Physical Process Laboratory, Aristotle University of Thessaloniki

**Israel:** Bios and the Physics of Light, Professor *Andrei Rubin*, Head, Department of Biophysics, Moscow State University

**Biotechnology and Agriculture**

**Belgium:** Biotechnology and Agriculture, Professor *Frederic A. Lints*, Catholic University of Louvain

**Ethiopia:** A Biotechnology Strategy for African Food and Agriculture, Dr. *Ali Haribou*, Project Analyst, United Nations Economic Commission for Africa

**Greece:** Ecology and Agriculture, Professor *Thomas Alifakiotis*, Department of Agricultural Engineering, Aristotle University of Thessaloniki

**Israel:** Decreasing Industrial Pollution and Improving Agriculture in Israel, Professor *J. Stefan Rokem*, Department of Applied Microbiology, Institute of Microbiology, Hebrew University, Hadassah Medical School

**Bio-Health**

**Russia:** Russia and Siberia: Health Problems in Environmentally Damaged Territories, Professor *Sergei I. Kolesnikov*, Co-President, International Physicians for the Prevention of Nuclear War

**U.K.:** Bio-Environment and Research on Health, Professor *Gustav V.R. Born*, Director, William Harvey Research Institute

**Estonia:** Environmental Co-operation and Children's Health, *Sirje Loot*, Legal Advisor

**Romania:** Biometeorology and Quality of Life, Dr. *Doina Popescu*, National Institute for Hydrology and Meteorology

**Iran:** The Rhythm of Bios, Dr. *Hossein S. Mehraban*, Psychology Department, Shiraz University

**Hungary:** An Extravagant Promise for the Future: Clean Air Over Central and Eastern Europe, *George J. Kollmann*, Chief Counsellor, Ministry of Welfare

**Russia:** New Technology and the Professional Healthy Man, Dr. *Yuri I. Voronkov*, Head, Department of Cosmonaut Selection, Ministry of Health

**Israel:** Bio-Environmental Quality, Health and Peace, Professor *Lev Fishelson*, Department of Zoology, Tel Aviv University

**Bio-Ethics**

**Turkey:** Defining Bio-Ethics, Professor *Yaman Örs*, Unit of Medical Ethics, Medical Faculty, Ankara University

**Greece:** A Bio-Ethical Assessment of Biotechnology, Dr. *Christos Yapijakis*, Department of Neurology, University of Athens

**Bio-Philosophy - Bio-Culture**

**India:** Buddhism and Environmental Activism, Dr. *Kamla Chowdhry*, Chairperson, Centre for Science and Environment

**U.K.:** Faith and Bios, Rabbi Dr. *Norman Solomon*, Fellow in Modern Jewish Thought, Oxford Centre for Hebrew and Jewish Studies, University of Oxford; Bio-Activism: Toward a Culture of Peace, Dr. *Terence M. Duffy*, Director of Peace Studies, University of Ulster, Magee College



**Philippines:** Love Versus Greed: a Key to the Prolongation of Life, Dr. *Gloria Castro-Gatchalian*, Dean, College of Arts and Sciences, Eulogio "Amang" Rodriguez Institute

**Greece:** Aristotle and the Bio-Environment, *Efstathia Valiantza*, Environmental Engineering Consultant; A Flight of Fancy: Music in the Next Millennium, Professor *John Papaioannou*, Advisor, Centre of Ekistics

**Turkey:** Inspiration From Nature and Culture for a Joint Attitude Towards the 21st Century, Professor *Nur Sözen*, Department of Landscape Architecture, Ankara University

**Czech Republic:** Protecting Bios in the Next Millennium: What Does it Mean?, Dr. *M. Lapka and V. Mejstrik*, Institute of Landscape Ecology, Czech Academy of Sciences

**Colombia:** Biopolitics as a Renewed Expression of Classical Humanism, Professor *Mario Calderon Rivera*, f. Ambassador to Greece, Santillana Foundation for Latin America

**Croatia:** Rationality and Cultural Capital in Improving International Understanding, *Sanjin Dragojevic*, Institute for Development and International Relations

### **RESOLUTIONS**

#### **Preamble**

The International Sakharov Festival, with the theme *Biopolitics - the Bio-Environment - Bio-Culture in the Next Millennium*, took place in Athens, July 28-31, 1994, and constituted the VIth international conference held by the Biopolitics International Organisation. Upon completion of the conference, the following resolution was unanimously adopted:

*In order to curb the destruction of biological species, habitats and ecosystems, and progress toward a biocentric society, it is essential to recognise the cumulative threats to bios, and the urgent need for a global and holistic approach to combating them. Therefore, all participants agree to promote and implement all resolutions and deliberations adopted by previous B.I.O. conferences, and pledge complete support to the following recommendations:*

#### **RECOMMENDATIONS**

The international community should create a solid ethical foundation for the work of protecting bios, firmly rooted in major local communities, and respecting indigenous cultures and their educational systems. Measures also need to be taken toward achieving greater social justice on a global level. It is thus imperative to inform, and most importantly, to influence those involved in decision-making processes, i.e., governmental officials, international and national financial institutions, corporations, universities and research centres, so as to advance toward a society comprising responsible and affected citizens.

#### **1. ENVIRONMENTAL OLYMPICS - BIOS PRIZES**

**Environmental Protection at the Core of Every Human Endeavour**

We are on the threshold of a new millennium. In order to overcome the crisis of values in modern society, brought on by severe environmental deterioration, a new order of priorities is essential. Due to serious threats to the environment, the gift of bios is endangered. Everyone has to take action if we are to reverse negative trends and ensure the harmonious coexistence of all forms of life. Humanity is wasting time. Solving environmental problems requires a dynamic approach, combining past experience and present opportunities to establish new, enriched models for the future. In 1992, as an effort to raise the necessary awareness of the urgent need for environmental action and promote new incentives for environmental protection, the Biopolitics International Organisation (B.I.O.) proposed the enrichment of the Olympic Games with new biocentric values.

Presently, the Olympic Games, a beacon for world peace and hope, are limited to physical achievement. However, this restricts the potential of the "Olympic Spirit," a concept that should evolve to encompass all possible accomplishments, both physical and intellectual. As a result, the B.I.O. has proposed the establishment of international committees in every field of human endeavour, assigned to assess progress in their respective fields. Bios Prizes in each field will be awarded every four years, at the time the Olympic Flame is lit, to individuals or institutions that have contributed to the preservation and appreciation of the bio-environment. For example, legislators can be awarded for having developed new environmental legislation, architects for having worked in the construction of "biopolis" models and business executives for having promoted environmentally-compatible economic policy.

Furthermore, the B.I.O. has been actively promoting global cease-fire during the Olympic Games, as was the case in antiquity. The B.I.O. cease-fire proposal has been recently adopted as a resolution by the UNA of Sri Lanka.

#### UNITED NATIONS ASSOCIATION OF SRI LANKA

Resolution calling for the suspension of armed conflict both inter-state and civil during the International Olympic Games, once every four years and for a month thereafter.

The United Nations Association of Sri Lanka

AWARE of the practice in ancient Greece where all hostilities between city states were suspended during the period the Olympic Games were in progress, CONCERNED that the community of nations, while paying lip service to the Greek ideals engage in civil and inter-state conflicts with unprecedented loss of life and property,

CONSCIOUS that there is an increasing body of world public opinion that sees a glaring contradiction between the ideals of sportsmanship and the dehumanising demands and consequences of all forms of modern warfare,

CALLS UPON the International Olympic Committee, as the first step toward a globally operative cease-fire, to accept and implement the proposal made by the Biopolitics International Organisation of Athens, Greece that, commencing from the next Olympiad, all civil and inter-state conflicts be suspended during the period during which the games are in progress and for one month thereafter.

### **1.1 Jacques-Yves Cousteau - First Bios Prize Recipient**

On the occasion of the 1996 summer Olympic Games, the *First Bios Prize Award* will be given to *Commander Jacques-Yves Cousteau*, who will not only be the first, but also, the only Bios Prize recipient for this century, emphasising his invaluable contribution to the comprehension and appreciation of the bio-environment. Commander Cousteau was the first to explore the limitless biodiversity of the planet's oceans and raise awareness of the most important task of protecting and preserving this biodiversity. He has worked tirelessly to further the idea of protecting life on our planet and, through groundbreaking research, has continuously offered unique information on the intricacies and beauty of bios. As the century is drawing to a close, his achievements represent one of the most positive contributions to humanity. We are not only witnessing the turn of the century, but we are on the doorstep of a new millennium. By awarding the First Bios Prize to Commander Cousteau, the B.I.O. hopes to set the pace for a millennium of hope, understanding and harmonious co-existence of all forms of life.

## **1. BIO-EDUCATION FOR ALL**

### **The Goal of Achieving Environmentally Literate Global Citizens**

It is crucial to establish a bio-environmental education that will cut through barriers and incorporate all academic fields, in co-operation with every sector of society. Critical thinking at all educational levels should be a top priority, in order to implement the necessary reforms and achieve the desired results. As part of ongoing efforts to raise awareness of the importance of protecting human and bios rights, it is necessary to unite the efforts of scientists, scholars, religious leaders, politicians, diplomats and business people, all over the world.

### **1. 1 International University for the Bio-Environment**

It is reaffirmed that the bio-environment should be the first priority on educational curricula, and that environmental education activities have to be targeted towards all age groups. Within the framework of the B.I.O. and the International University for the Bio-Environment (I.U.B.E.), a Committee on Bio-Education and the Strategy of Biopolitics needs to be assembled. This Committee will be responsible for:

- implementing programmes on bio-education

- organising lectures, workshops and seminars, aimed at every educational level
- defining the basic core of educational curricula, and incorporating interdisciplinary elements into every educational programme. Environmental education will thus become the major link among all disciplines in all nations
- organising action oriented programmes with the intention of raising public awareness

In view of the great impact of the *Bio-Syllabus* (published by the B.I.O. in 1992) as a guideline for an integrated environmental education world-wide, it is important to expand existing topics, develop new ones and introduce practical approaches for hands-on training.

It is essential to apply innovative educational plans and educational tools, such as films, books, art projects, or computer games, aimed at every educational level. Hour-long educational programmes on the bio-environment, should be established on television and radio networks. These programmes should be broadcast via satellite throughout the world and ensure environmental education which will reach a global audience quickly and efficiently.

The B.I.O. should encourage key educational leaders around the world to undertake thorough reviews of their curricula, with a view to recommend scientific and acceptable measures that would warrant multi-disciplinary and/or interdisciplinary approaches established at the core of all areas of specialisation.

An examination of existing materials and publications is required, in order to enhance the information-exchange service of the I.U.B.E. This includes establishing an exclusive library centre, to strengthen the technologies and capacities necessary to promote co-operation, research and information-sharing on environmental preservation.

A World Academic Board of Scientists needs to be established. Within the framework of the I.U.B.E., existing educational institutions are encouraged to create programmes for visiting professors, so that B.I.O. scholars can successfully promote bio-environmental values.

The I.U.B.E. should maintain a continuous monitoring system to assess its objectives, in order to learn the extent of its successes and shortcomings in the direction of progressive growth and development. To promote international co-operation and the better understanding of cultural diversity, the I.U.B.E. should strive to collaborate with various international organisations. In order to ensure the satisfactory global circulation of socio-economic, cultural and demographic information for bio-environmental education, a permanent budgetary outlay must be provided annually by the B.I.O.

It is recommended that the I.U.B.E. develop model training courses on bio-ethics, bio-economy and bio-diplomacy aimed at different groups, such as children, students, and administrators. These courses should be internationally co-ordinated. An International B.I.O. certificate could be awarded for completion of such courses. The B.I.O. could co-operate closely with UNESCO to integrate bio-educational concepts in the IEEP (International Environmental Education Programme) of UNESCO - UNEP.

## **1.2 Bio-Diplomacy - Bio-Legislation**

The B.I.O. should be actively involved in the study of the phenomena of war, peace, and conflict resolution. Within the framework of international co-operation for the protection and appreciation of bios, Biopolitics has been promoting the concept of bio-diplomacy. Bio-diplomacy recognises that cultural differentiation constitutes the wealth of the body of humanity. Furthermore, humanity is part of the overall body of bios, where DNA, the genetic code for every living organism, is the link connecting all forms of life. This unifying aspect is being promoted as the primary target for the implementation of ways of achieving international co-operation for the respect and maintenance of bio-diversity.

- In the spirit of international co-operation, the B.I.O. should register with the United Nations.
- An international network of non-governmental organisations (NGO's) could be established, in order to monitor and enforce relevant treaties on the bio-environment.
- An International Board of Bio-Diplomats should be established. Workshops for bio-diplomats could be organised to negotiate strategies and alternatives for the preservation of the bio-environment.
- Special informational and financial support needs to be given to developing countries in order to promote clean technologies and avoid the risk of large-scale environmental catastrophe.

### **1.3 International and Domestic Law for the Protection of Bios Rights**

The concepts of family, peace, education, culture and religion are promoted by the B.I.O. as essential societal values for the next millennium. In memory of Andrei Sakharov, one of the most ardent humanitarians of our time, we need to expound the fundamental human right of living in a clean environment. As a result, it is crucial to stress the importance of including bio-environmental protection in an overall framework of rights.

Limited work has been done on the relationship between bios rights and international humanitarian law. Bios rights could find essential protective provisions in the Geneva Law (and related protocols) and especially the proposed new Geneva Convention on the environment. Primary goals need to include:

- international agreements on the bio-environment, with precise and clear obligations to reach concerted global policies, imposed on states
- government recognition of the need to compromise sovereignty in order to maintain environmental protection. International law experts could be called upon to put pressure on governments to immediately implement international treaties relating to the bio-environment
- international collaboration in order to co-ordinate critical management and conservation issues, such as controlling water pollution, managing international oil transport and protecting endangered species

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- mobilisation of UN agencies such as WHO, UNEP, UNDP, UNICEF to take more effective action towards protecting the interests of bios
  - assisting the ICRC and the Red Cross in formulating new legislation to protect people and the bio-environment, especially in times of conflict
  - address the subject of Evolutionary Ethics

#### **1.4 Biocentric Models for the Next Millennium**

In the current crucial period of transition, society needs to adopt new models, in order to avoid static and negative prototypes, and progress toward a global bio-culture. It is imperative to redefine existing concepts, and work towards converting the present anthropocentric society into a society that respects bio-diversity and is dedicated to the preservation and appreciation of bios. The participants of the International Sakharov Festival recommended that, in addition to its scheduled activities, the B.I.O. should also:

- list the greatest developmental and environmental failures of the century, drawing possible lessons for the future
- establish a permanent committee to build up guidelines for bio-development in the next millennium. This committee would also be responsible for defining legislative means aimed at promoting bios on a global scale
- formulate co-operative goals, strategies and action oriented programmes taking into consideration the developmental potential of every nation
- foster planned goals through regional and international co-operation in the areas of capacity building, expansion of environmentally friendly technology and the exchange of environmental information. Partnerships based on mutual understanding, as well as respect and sharing of responsibilities are highly recommended
- promote internationally accepted guidelines for biotechnological research and applications, based on bio-ethical principles, the respect for the bio-environment and the interdependence of living organisms. The Helsinki Convention could serve as a starting point
- elaborate initiatives for the application of technologies resulting from research in biology
- establish a small model city, where people would work and live according to bios-principles

#### **1.5 Bio-Economics - Bio-Business**

In western culture, profit is associated with economic activities resulting in increased income and financial prosperity. However, the concept of profit needs to be redefined, in order to include the principles of quality of life, preservation of natural resources as a measurable part of a nation's wealth, better health and the protection of bio-diversity, which constitute a "genuine" profit for society. Corporate leaders around the world need to realise that environmental protection can become a viable and successful business strategy, and should thus be incorporated into every dimension of their activities.

Environmental administration should be conducted in the spirit of co-existence. In order to overcome greed and over-consumerism, it is essential to move beyond the antagonisms of governments, nations and business, and adopt a common responsibility to preserve the environment for the future. The Sakharov Festival stresses the importance of:

- encouraging a greater contribution from international bodies and multinational corporations for the development of environmentally friendly technologies in emerging economies
- emphasising practical and measurable projects
- developing a pro-active and progressive environmental policy for business, and encouraging corporations to adhere to the principles of bios-supporting "sustainable development," in the spirit of proposals from organisations such as the International Chamber of Commerce

### **1.6 Media and Publications**

In the quest for more efficient ways to promote bio-environmental education, mass media and the press can play a most valuable role. Moreover, computer networks and publications on B.I.O. activities can significantly improve the exchange of information on important bios issues. As a result, the following suggestions were put forward:

- starting a peer-reviewed journal, *Bio-Politica*, in order to pioneer concepts in Biopolitics
- regularly publishing a bulletin with information on all B.I.O. activities
- establishing Internet connections and other computer networks, and compiling an inventory of all international organisations and institutions with related goals
- filming and videotaping productions on Biopolitics and bio-environmental education
- directly publicising B.I.O. aims, actions and findings to the scientific community, among policy-making circles, and to the general public

## **2. GRASSROOTS OPERATIONS**

### **For the Promotion of B.I.O. Goals and Ideals**

Alternative, innovative, practical solutions for various problems, as well as methods for their implementation, need to be researched. What is required is not another institution, but rather a grassroots operation and a mechanism which will bring Biopolitics to more people and make its goals known throughout the world.

- Bio-Groups, responsible for carrying out this operation could be established world-wide. These groups would be active within local communities, and elicit the co-operation of children and senior citizens.
- Bio-Groups would be connected internationally via a bio-network. A periodic review of progress and updating of projects is anticipated.

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- Proposals developed would become part of the B.I.O. Bank of Ideas project. A data bank on the bio-environment could be established by various professional organisations to provide qualitative and analytical references for decision-makers.

### **3. GENETIC BANKS AS A MEANS OF PROTECTING BIO-DIVERSITY**

Protecting biodiversity at the macro and micro level is essential in order to ensure the continuation of life on our planet. Parks and protected areas have been used extensively for the protection of flora and fauna species, and the preservation of natural habitats and biotopes. However, this approach only guarantees protection of the macro-environment. The micro-environment, that of the gene and the cell, is still in danger.

- Biopolitics proposes the creation of Genetic Banks to secure conservation of the micro-environment. In order to be effective, these Genetic Banks need to be established locally and thus help preserve genetic diversity in endemic flora and fauna.
- The role of national parks and protected areas should be recognised as natural genetic banks preserving bio-diversity. The natural and cultural value of protected areas as learning environments for the process of bio-environmental education should be strengthened.
- Transboundary protected areas may become an effective starting point for the implementation of bio-diplomacy principles.
- The participants of the International Sakharov Festival express their support for the Planta Europa project aimed at conservation and the sustainable use of wild plant diversity in Europe.

### **4. RECOMMENDATIONS IN THE AREA OF FAMILY AND CHILDHOOD**

- Reveal and explain the causal relationships of many dangerous illnesses, especially in children, as the result of failure to observe primary environmental rules.
- Co-operate with UNICEF in evaluating the losses suffered as a result of environmental abuse.
- Establish a publishing house for environmental literature, targeted at children, as well as adults.
- Create attractive logos and establish symbolic prizes for participation and outstanding results

### **5. SPECIFIC PROPOSALS**

To help implement the aforementioned resolutions and recommendations, the Sakharov Festival participants also made several practical suggestions and submitted specific proposals:

- starting at the CUB (City University Bratislava) a faculty for bio-diplomacy and the bio-environment
- establishing the Earth Science Museum of Moscow State University as a centre for environmental education



- establishing, in Krakow, a Biopolis-International Centre for Research, Training and Education, based on interdisciplinary case studies, land-problem solving, training, open universities, distance education and partnerships among experts, decision-makers, local societies, different professional groups, and NGO's. This centre must be sponsored by the I.U.B.E.
- scheduling special panel lectures for the general public during future conferences

### **5.1 Suggestions for the Promotion of the B.I.O.**

- combining the 50-year anniversary of the UN with the 10-year anniversary of the B.I.O. and using local UN organisations to promote B.I.O. ideas
- creating a B.I.O. membership organisation, the Club of Athens, to organise and coordinate efforts to exchange environmental information and promote a global culture, based on international co-operation in the third millennium
- devoting an international exhibition to the activities of the B.I.O. and promoting biological and environmental education
- establishing a permanent B.I.O. forum
- registering B.I.O. associations, world-wide, in accordance with local law. Registration would enable them to get support from local authorities and reach more sponsors and potential members
- preparing short, multi-lingual booklets, focusing on B.I.O. activities and specifically aimed at those involved in global decision-making and policy-planning

## **BUSINESS**

### **BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOL. I (Greek)**

*Proceedings from the First B.I.O. Conference on Business Strategy for the Bio-Environment, Athens, November 1992*

**Biopolitics - Bio-Economics** Dr. Agni Vlavianos-Arvanitis, President and Founder of the Biopolitics International Organisation

The Bio-Environment and Development *George Gennimatas*, f. Parliamentarian and Cabinet Member

**Hellenic Industry and the Bio-Environment** *Iason Stratos*, President, Union of Greek Industries

**Business and the Bio-Environment** *Sokratis Kokkalis*, President, INTRACOM S.A.

**Chemical Industry and the Bio-Environment**, *Stathis Asvestis*, f. President, Dow Hellas S.A.

**Environmental Policy in the Chemical Industry** *Bob Donaldson*, Director of Plant Operations, ICI Hellas S.A.

**Greek Corporate Environmental policy - A Statistical Approach** *Dimitris Maniatakis*, General Manager, ICAP S.A.

**The Changing Role of the World Bank in the Protection of the Bio-Environment** Dr. *Julia Panourgia-Clones*, Environmental Advisor, The World Bank, Washington DC

**Cleaner Production - Preservation of the Bio-Environment - Increased Profit** *Donald Huisingh*, Erasmus Centre of Environmental Studies

***Pollution Preservation and Rational Management***, Professor *Constantine Yapijakis*,  
Alpert Nerken School of Engineering, Cooper Union, New York

***The Bio-Environment and Economic Reforms*** Professor *Udo Simonis*, Science Centre Berlin

**BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOL. II (Greek)**

*Proceedings from the Second B.I.O. Conference on Business Strategy for the  
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***Biopolitics: A Shift from Anthropocentric to Biocentric Values in Business*** Dr. *Agni  
Vlavianos-Arvanitis*, President and Founder of the Biopolitics International Organisation

***Business Strategy for the Protection of the Bio-Environment*** *George Papandreou*,  
Deputy Minister of Foreign Affairs

***Policy of the United States Environmental Protection Agency*** Dr. *Bradley Smith*,  
Director of Environmental Education, United States Environmental Protection Agency

***Structural Economic Change and the Bio-Environment*** Professor *Udo E. Simonis*,  
Science Center Berlin

***European Environmental Policy - Legislative and Economic Framework*** *Scott W.  
Blackmer*, Partner, Wilmer, Cutler & Pickering

***Cleaner Production - Preventing Pollution at Source*** Professor *Donald Huisingh*,  
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***Prevention - Green Chain of Production*** Professor *Constantinos Yapijakis*, Cooper  
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ICAP Hellas S.A.

***Investing in Survival*** *Asimakis Fotilas* Director of Investments Promotion, United  
Nations Industrial Development Organization (UNIDO)

***Bio-Environment - Governmental and Entrepreneurial Planning*** *Nikos Skoulas*,  
Consultant to the Food Industry, Former Minister of Tourism

***Reality and Prospects in Greek Industry*** Dr. *A. Paraskevopoulos*, Environmental Consultant

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Economics America, National Council on Economic Education

***Environmental Leadership - The Management of Change*** *Karl Kummer*, Environmental  
Director, Rank Xerox Ltd

***Dow - Responsible Care for the Environment*** Dr. *Constantinos Masmanidis*, General  
Manager, Dow Hellas S.A.

***Business and Environmental Protection*** Dr. *Christos Tsiliyannis*, Technical Manager,  
Waste Management Greece S.A.

***Manufacturers and Prevention Policy*** *Jared O. Blum*, President, Polyisocyanurate  
Insulation Manufacturers' Association

***S.C. Johnson and the Bio-Environment*** *Michael Pagidas*, General Manager, S.C.  
Johnson and Son Hellas Ltd.

***Prevention of Pollution at Source - Environment and the Consumer*** *Polychronis*

*Polychroniadis*, General Manager, PERAN Environment and Development S.A.  
and ELAN Hellenic Developments S.A.

**Resource Conservation and Recovery - Action Against Over-Consumerism, Pollution and Poverty** *J. Patrick Nicholson*, Chairman and CEO, N-Viro Energy Systems Ltd.  
United States Representative at the Rio Conference

**Proposal on a New Dimension of Profit** *John Boutaris*, President, I. Boutaris & Son S.A.

**BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOL. III (Greek)**  
**"PROFIT AND THE BIO-ENVIRONMENT"**

*Proceedings from the Fourth B.I.O. Conference on Business Strategy for the  
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***The Bio-Environment and New Models for the Future***

**Greece:** Biopolitics - A New Dimension of the Concept of Profit, Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation; International Co-operation on the Bio-Environment - Address from the Minister of Foreign Affairs *Carolos Papoulias*, Ambassador *Ioannis Beveratos*, Director of Cultural Affairs, Ministry of Foreign Affairs; The Environment in Every Social, National and Private Initiative, Professor *John Pasmazoglou*, President, Academy of Athens; Investing in the Protection of the Environment, *John Papathanasiou*, President, Athens Chamber of Commerce and Industry

**Sweden:** Bio-Diplomacy and the Struggle for Economic Power, Ambassador *Kai Falkman*, Ministry of Foreign Affairs

**Colombia:** Bio-Tropics and the Future of Humankind, Professor *Mario Calderon Rivera*, Santillana Foundation for Latin America

**Ukraine:** Biopolitics and the Future of the Human Race, *Volodymyr Aleksyeyev*, Vice-Chairman, Committee for Legislative Provision of Freedom of Speech and Mass Media, Supreme Rada (Parliament)

***Biocentric Values and the Ethics of Economic Policy***

**Greece:** Profit, Ethics and the Bio-Environment, *Kitty P. Kyriacopoulos*, Chairman of the Board, Bauxites Parnasse Mining Co.

**Republic of Serbia:** The Rush for Profit and the Ethics of Survival, Professor *Dusan Kanazir*, f. President. Serbian Academy of Sciences and Arts

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Professor *Max Oelschlaeger*, Department of Philosophy, University of North Texas

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***Bio-Policy and Environmental Regulation***

**U.S.A.:** There does not have to be an OR in the phrase "Environment or the Economy."

Professor *Bradley Smith*, Dean, Huxley College of Environmental Studies, Western Washington University

**Turkey:** An Attempt to Redefine Public Interest and the Bio-Environment, Professor *Rusen Keles*, Director of Environmental Studies, Faculty of Political Science, Ankara University

**Hungary:** Profit and Sustainable Development, Professor *Gyula Bora*, Vice-Rector, Budapest University of Economic Sciences

**Slovak Republic:** Profit and the Bio-Environment - Education, Dr. *Jan Morovic*, President, City University Bratislava

**Belgium:** European Union: A New Economic Development Model, *George Strongylis*, Commission of the European Union, Directorate DG XI

### **Regional Issues**

**Republic of Serbia:** The Role of Science in the Development of the Republic of Serbia: Business Interest and Environmental Protection, Professor *Slobodan Unkovic*, Vice-President of the Government of the Republic of Serbia, Minister of Science and Technology

**Russia:** Humanitarian Education at Technical Universities in Russia, Professor *Pavel Sarkisov*, Rector, and Dr. *Oleg Altakh*, International Department Director, Mendeleyev University of Chemical Technology; The Development of Profitable Technologies in the Context of Bios, *Valery V. Grishin*, Deputy Directorate Chief, Head of Press-Service, The Directorate of Government Information, Administration of the Government of the Russian Federation

**Ukraine:** Ukraine and Biopolitics, *Zoya Sharikova*, Senior Consultant, Committee for Legislative Provision of Freedom of Speech and Mass Media, Supreme Rada (Parliament); Chernobyl: An Update, *Elena Kutova*, Head, Department of Product Amalgamation, Chernobyl Nuclear Power Station

**Hungary:** Socio-Economic Changes in Central-Eastern Europe: Challenges for Biopolitics, Dr. *Laszlo Kapolyi*, President, System International Foundation

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**U.S.A.:** Global Charter - Making Sustainability a Legal Requirement "The Constitution of the World," Dr. *Martin Alpert*, Chairman and CEO, Click Technologies Inc.

### **Business Strategy for the Bio-Environment**

**U.S.A.:** The Corporate Role in Protecting Health, Safety and the Environment, Professor *Nicholas Ashford*, Technology and Policy, Massachusetts Institute of Technology; The Myth of "Jobs Versus the Environment," Professor *Constantine Yapijakis*, Director, Environmental Research Laboratory, The Cooper Union School of Engineering

**Switzerland:** Management Tools for Monitoring Environmental Progress, Dr. *Peter Kalantzis*, President, LONZA Ltd.

**Greece:** Environmental Business Policy, *Dimitris Maniatakis*, Managing Director, ICAP S.A.; The Zeneca Group Safety, Health and Environment Management System, *Dimitris Randopoulos*, Managing Director, Zeneca Hellas S.A.; Waste Water Treatment in Soft Drink Plants, *Christos Komminos*, General Manager, Hellenic Bottling Company; The Bio-Dimension of Profit, *Basil Kapsokavadis*, Managing Director, Gerling-Konzern Hellas GmbH; A Biocentric Sense of the Cost-Benefit Principle, Professor *Basil*

*Papadias*, Electrical Energy Systems, National Technical University of Athens

**Russia:** Strategy for Developing of a Global Energy System: Protecting the Bio-Environment through Profitable Technologies, *Boris Landa*, Alphabet Company

**Germany:** Steps Towards a Global Environmental Policy, Professor *Udo Simonis*, Science Centre Berlin

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***Cleaner Production - Preventing Pollution*** at Source Professor *Donald Huisingsh*, Erasmus Center for Environmental Studies

***Prevention - Green Chain of Production*** Professor *Constantinos Yapijakis*, Cooper Union School of Engineering, New York

***Business Strategy for the Bio-Environment*** *Iason Stratos*, President of the Union of Greek Industries

***Bio-Environment and Business Adaptation*** *Dimitris Maniatakis*, Managing Director, ICAP Hellas S.A.

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***Bio-Environment - Governmental and and Entrepreneurial Planning*** *Nikos Skoulas*, Consultant to the Food Industry, Former Minister of Tourism

***Reality and Prospects in Greek Industry*** Dr. *Alexis Paraskevopoulos*, Environmental Consultant

***Environmental Dimensions of Economic Education*** Dr. *Stephen Buckles* President, Economics America, National Council on Economic Education

***Environmental Leadership - The Management of Change*** *Karl Kummer*, Environmental Director, Rank Xerox Ltd

***Dow - Responsible Care for the Environment*** Dr. *Constantinos Masmanidis*, General Manager, Dow Hellas S.A.

***Business and Environmental Protection*** Dr. *Christos Tsiliyannis*, Technical Manager, Waste Management Greece S.A.

***Manufacturers and Prevention Policy*** *Jared O. Blum*, President, Polyisocyanurate

Insulation Manufacturers' Association

**S.C. Johnson and the Bio-Environment** *Michael Pagidas*, General Manager, S.C. Johnson and Son Hellas Ltd.

**Prevention of Pollution at Source - Environment and the Consumer** *Polychronis Polychroniadis*, General Manager, PERAN Environment and Development S.A. and ELAN Hellenic Developments S.A.

**Resource Conservation and Recovery - Action Against Over-Consumerism, Pollution and Poverty** *J. Patrick Nicholson*, Chairman and CEO, N-Viro Energy Systems Ltd. United States Representative at the Rio Conference

**Proposal on a New Dimension of Profit** *John Boutaris*, President, I. Boutaris & Son S.A.

### **BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOL. II (English)**

*Proceedings from the Third B.I.O. Conference on Business Strategy for the Bio-Environment, New York, February 1995*

**Biopolitics - The Bio-Environment - Bio-Culture and Business Opportunities** *Dr. Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

**The Third Eye of Industrial Ecology** *Carl Henn*, Senior Vice-President, Concord Energy

**Business Strategy for the Bio-Environment - The Technical Policy** *Professor Constantine Yapijakis*, Albert Nerken School of Engineering, Cooper Union, New York

**The Changing Role of the World Bank and the Bio-Environment** *Dr. Julia Panourgia-Clones*, The World Bank

**Creating Value for and from the Environment: The Arm and Hammer 6 P's Model** *Bryan Thomlison*, Director, Public Affairs and Environmental Management, Church & Dwight Co., Inc.

**ITT Mission, Principles and Practices** *Usha Wright*, Vice President and Director, Environment Health and Safety, ITT Corporation

**Xerox Corporation Environmental Strategy** *James McKenzie*, Director, Environment, Health and Safety, Xerox Corporation

**Resource Conservation and Utilization - A Magnificent Opportunity** *Patrick Nicholson* Chairman and CEO, N-Viro International Corporation

### **BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOL. III (English)**

#### **"PROFIT AND THE BIO-ENVIRONMENT"**

*Proceedings from the Fourth B.I.O. Conference on Business Strategy for the Bio-Environment, Athens, October 1995*

#### ***The Bio-Environment and New Models for the Future***

**Greece:** Biopolitics - A New Dimension of the Concept of Profit, *Dr. Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation; International Co-operation on the Bio-Environment - Address from the Minister of Foreign Affairs *Carolos Papoulias*, Ambassador *Ioannis Beveratos*, Director of Cultural Affairs, Ministry of Foreign Affairs; The Environment in Every Social, National and Private Initiative, Professor

*John Pasmazoglou*, President, Academy of Athens; Investing in the Protection of the Environment, *John Papathanasiou*, President, Athens Chamber of Commerce and Industry

**Sweden:** Bio-Diplomacy and the Struggle for Economic Power, Ambassador *Kai Falkman*, Ministry of Foreign Affairs

**Colombia:** Bio-Tropics and the Future of Humankind, Professor *Mario Calderon Rivera*, Santillana Foundation for Latin America

**Ukraine:** Biopolitics and the Future of the Human Race, *Volodymyr Aleksyeyev*, Vice-Chairman, Committee for Legislative Provision of Freedom of Speech and Mass Media, Supreme Rada (Parliament)

#### ***Biocentric Values and the Ethics of Economic Policy***

**Greece:** Profit, Ethics and the Bio-Environment, *Kitty P. Kyriacopoulos*, Chairman of the Board, Bauxites Parnasse Mining Co.

**Republic of Serbia:** The Rush for Profit and the Ethics of Survival, Professor *Dusan Kanazir*, f. President. Serbian Academy of Sciences and Arts

**U.S.A.:** Reconciling Profit with Biodiversity. An Inventory of Resources Ready to Hand Professor *Max Oelschlaeger*, Department of Philosophy, University of North Texas

#### ***Finance and the Bio-Environment***

Greece: The Bio-Environment in Financial Policy, *Panayiotis Poulis*, President, Commercial Bank of Greece

**U.S.A.:** "Greening" of the Private Sector and Partnerships with NGO's: The Social Dimensions of Business Strategies, Dr. *Julia Panourgia-Clones*, The World Bank

#### ***Bio-Policy and Environmental Regulation***

**U.S.A.:** There does not have to be an OR in the phrase "Environment or the Economy." Professor *Bradley Smith*, Dean, Huxley College of Environmental Studies, Western Washington University

**Turkey:** An Attempt to Redefine Public Interest and the Bio-Environment, Professor *Rusen Keles*, Director of Environmental Studies, Faculty of Political Science, Ankara University

**Hungary:** Profit and Sustainable Development, Professor *Gyula Bora*, Vice-Rector, Budapest University of Economic Sciences

**Slovak Republic:** Profit and the Bio-Environment - Education, Dr. *Jan Morovic*, President, City University Bratislava

**Belgium:** European Union: A New Economic Development Model, *George Strongylis*, Commission of the European Union, Directorate DG XI

#### ***Regional Issues***

**Republic of Serbia:** The Role of Science in the Development of the Republic of Serbia: Business Interest and Environmental Protection, Professor *Slobodan Unkovic*, Vice-President of the Government of the Republic of Serbia, Minister of Science and Technology

**Russia:** Humanitarian Education at Technical Universities in Russia, Professor *Pavel Sarkisov*, Rector, and Dr. *Oleg Altakh*, International Department Director, Mendeleev University of Chemical Technology; The Development of Profitable Technologies in the Context of Bios,

*Valery V. Grishin*, Deputy Directorate Chief, Head of Press-Service, The Directorate of Government Information, Administration of the Government of the Russian Federation

**Ukraine:** Ukraine and Biopolitics, *Zoya Sharikova*, Senior Consultant, Committee for Legislative Provision of Freedom of Speech and Mass Media, Supreme Rada (Parliament); Chernobyl: An Update, *Elena Kutova*, Head, Department of Product Amalgamation, Chernobyl Nuclear Power Station

**Hungary:** Socio-Economic Changes in Central-Eastern Europe: Challenges for Biopolitics, Dr. *Laszlo Kapolyi*, Presiden, System International Foundation

#### **Legal Framework**

**U.S.A.:** Global Charter - Making Sustainability a Legal Requirement "The Constitution of the World," Dr. *Martin Alpert*, Chairman and CEO, Click Technologies Inc.

#### **Business Strategy for the Bio-Environment**

**U.S.A.:** The Corporate Role in Protecting Health, Safety and the Environment, Professor *Nicholas Ashford*, Technology and Policy, Massachusetts Institute of Technology; The Myth of "Jobs Versus the Environment," Professor *Constantine Yapijakis*, Director, Environmental Research Laboratory, The Cooper Union School of Engineering

**Switzerland:** Management Tools for Monitoring Environmental Progress, Dr. *Peter Kalantzis*, President, LONZA Ltd.

**Greece:** Environmental Business Policy, *Dimitris Maniatakis*, Managing Director, ICAP S.A.; The Zeneca Group Safety, Health and Environment Management System, *Dimitris Randopoulos*, Managing Director, Zeneca Hellas S.A.; Waste Water Treatment in Soft Drink Plants, *Christos Komninos*, General Manager, Hellenic Bottling Company; The Bio-Dimension of Profit, *Basil Kapsokavadis*, Managing Director, Gerling-Konzern Hellas GmbH; A Biocentric Sense of the Cost-Benefit Principle, Professor *Basil Papadias*, Electrical Energy Systems, National Technical University of Athens

**Russia:** Strategy for Developing of a Global Energy System: Protecting the Bio-Environment through Profitable Technologies, *Boris Landa*, Alphabet Company

**Germany:** Steps Towards a Global Environmental Policy, Professor *Udo Simonis*, Science Centre Berlin

### **B.I.O. SYMPOSIA - BIO-DIPLOMACY**

#### **BIOS IN THE NEXT MILLENNIUM - FRENCH SYMPOSIUM**

*Proceedings from a Hellenic-French Cultural Symposium*

*Athens, October 1987*

**Official Opening** Ambassador *Francois Marcel Plaisant*, Embassy of France, Athens

**Dimensions of Biopolitics** Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

**Ethical and Social Dimensions of Biotechnology** Dr. *Guy Sergheraert*, Adj. Director



General, Centre de Valorisation des Glucides et Produits Naturels

**Agricultural Production and Bios in the Next Century** *Pierre Feillet*, I.N.R.A. Director of Research

**New Technologies: Perspectives of Equilibrium of Bios in Arid Tropical Zones**

*Georges Martin*, Agronomist, Consultant on International Co-operation for Agriculture

**Bios - Instruments and Surveillance of Planet Earth** Professor *Hubert Curien*, Minister of Research and Technology, President of the Defense Scientific Council, President of the European Space Research Council

### **BIOS IN THE NEXT MILLENNIUM - BRITISH SYMPOSIUM**

*Proceedings from a Hellenic-British Cultural Symposium*

*Athens, May 1988*

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

**Bios in the Next Millennium** The Right Honorable *Lord Ennals*, Member House of Lords, Former Cabinet Minister

### **THE BIO-ENVIRONMENT IN A META-INDUSTRIAL SOCIETY**

#### **ISRAELI SYMPOSIUM**

*A Hellenic-Israeli Cultural Symposium, Athens, January 1990*

**Lecturer** Mr. *Stef. Wertheimer* Founder-President, ISCAR Ltd

### **THE BIO-ENVIRONMENT AND INTERNATIONAL COOPERATION**

#### **TURKISH SYMPOSIUM**

*Proceedings from a Hellenic-Turkish Cultural Symposium*

*Athens, May 1990*

**Welcoming Ceremony - Medal of the City of Athens**, *Nicolaos Yatrakos*, Mayor of Athens

**Opening Address** His Eminence The Metropolitan of Chalcedon, Mr. *Vartholomeos*

**The International University for the Bio-Environment** Dr. *Agni Vlavianos Arvanitis*, President, Biopolitics International Organisation

**Bio-Diplomacy and the Bio-Environment** *Guntuz Aktan*, Ambassador of Turkey

**Bios and Developing Economies** *Orhan Karakullukcu*, Former Mayor of Trabzon

**Bios and Business** *Kitty Kyriacopoulos*, Chairman of the Board, Bauxites Parnasse Mining Company S.A.

**Environment and Economy** *Theodore Demopoulos*, Governor, Agricultural Bank of Greece

**The Golden Horn Project** Professor *Ahmet Samsunlu*, Istanbul Technical University

**Livable Cities** Professor *Zafer Erturk*, Dean, Karadeniz Technical University

**Bios and Education** Professor *Necdet Serin*, Rector, University of Ankara

**Closing Remarks** Professor *Rusen Keles*, Director, Centre of Urban Studies, Faculty of Political Sciences, University of Ankara

**BIO-ENVIRONMENTAL MONITORING OF THE OCEANS  
RUSSIAN SYMPOSIUM**

*A Hellenic-Soviet event organised by the Soviet Embassy in Athens and the Biopolitics International Organisation in honor of the Head of Expedition, Dr. Vladimir Berezniisky the Scientific Team of the Academician Alexey Krylov' Research Boat the General Director of the EcoAqua Consortium, Dr. Vladislav Souponitsky and the Soviet Cosmonaut Makarov, April 1991*

**INTEGRATED SYSTEMS FOR ECOLOGICAL MONITORING  
RUSSIAN SYMPOSIUM**

*A Hellenic-Soviet Cultural Symposium, Athens, May 1991*

**Contributors**

*V. E. Sinelnikov*, Captain Tasks and Programme of the Expedition

*Dr. Vladimir Berezniisky*, Head of Expedition The World Oceans Ecological Monitoring Project

*Dr. Vladislav Souponitsky*, General Director of the "EcoAqua" Consortium

*V. M. Pashin* Director, "Academician A. N. Krylov" Central Scientific Research Institute  
*Viktor Saviniyh* Pilot-Cosmonaut, Rector, Moscow Institute for Air Photography and Cartography

*Dr. M. K. Narayev* Representative, Institute for Space Equipment

Professor *Viktor Krasilnikov*, First Vice-President, All-Union Economic Society  
Biopolitics - The Bio-Environment

*Dr. Agni Vlavianos Arvanitis*, President, Biopolitics International Organisation

Professor *Vitalii Samuilov*, Director, Centre for Education in Biotechnology

Professor *Michail Gusev*, Dean, Biology Department Moscow State University

**THE BIO-ENVIRONMENT AND INTERNATIONAL COOPERATION  
RUSSIAN SYMPOSIUM**

*Proceedings from a Hellenic-Russian Cultural Symposium  
Athens, December 1991*

**Opening Address** Ambassador *Panayiotis Economou* General Secretary, Ministry of Foreign Affairs

**Greeting of Symposium Participants** *Valerij Grishin*, Head of the Information Department of the President of Russia

**Welcoming Address**

*Nikos Anagnostopoulos*, Secretary General of Adult Education

*Victor A. Boiko*, Chargé d' Affaires of the Russian Embassy

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

Dr. *Nikos Katsaros*, Senior Research Scientist, "Demokritos" National Centre of Physical Research

***The Bio-Environment and International Co-operation*** Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

***The Social and Cultural Impact of the Environment on Women*** Dr. *Alexandra Momdjan*, Vice-President of the Academy of Creative Endeavours, President of the International Women Centre

***The Impact of the Environment on the Health of Future Generations*** Professor *Sergei I. Kolesnikov*, President of the East Siberian Section of the Medical Academy

***Women's Health and the Environment*** Professor *Irina Manuilova*, Cor. Member of the Medical Academy of Russia, Director of the IWC Family Planning Clinic

***Personality Disorders Due to Environmental Degradation*** Professor *Ludmila P. Bueva*, Member of the Academy of Creative Endeavour, Member of the Board of the I.W.C.

***New Thinking and the Changing Role of Women in Public Organisations***

*Tatjana D. Matveeva*, Candidate of Historical Sciences Secretary of the I.W.C.

***Social Planning and Women's Problems***

*Natalia S. Grigorjeva*, Director, I.W.C. Science - Research Institute

***Youth and the Bio-Environment Needed Reforms in Education***

*Discussion Coordinator:* Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

*Participants:* *Eleni Daifa-Frantzeskaki*, President, Athenian Women's Organisation; *Lala Nicoli*, Head of Department of the Greek Soroptimist Society; *Efi Petrea*, President of the Greek Soroptimist Society; *Alexander Oleskin*, Research Scientist, Department of Biology, Moscow State University; *Christos Efthimiopoulos*, Student, University of Athens; *Tony Bosnackoudis*, Journalist and Author, Junior's Chamber; *Tasos Demetropoulos*, Head of Department, Junior's Chamber; *Manuella Kantzia*, Student, Athens College; *Maria Maroulidou*, Student, Athens College

## POPULATION GROWTH, FOOD SECURITY AND EQUITY INDIAN SYMPOSIUM

*Proceedings from a Hellenic-Indian Cultural Symposium*

*Athens, April 1993*

***Welcoming Address*** Ambassador *Panayotis Economou*, International and Public Relations Advisor, Biopolitics International Organisation; Ambassador *Aftab Seth*, Ambassador of India

***Biopolitics, the Bio-Environment, a Needed Value System for the Future*** Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

***Population Growth, Food Security and Equity***

Dr. *Kamla Chodhry*, f. Chairperson, National Wastelands Development Board of India

## BIO-CULTURE IN THE NEXT MILLENNIUM - CZECH SYMPOSIUM

*Proceedings from a Hellenic-Czech Cultural Symposium  
Athens, April 1995*

**Opening Session** Ambassador *George Georgiou*, Director of Cultural Affairs, Ministry of Foreign Affairs, Greece; Professor *Jiri Marvan*, Ambassador of the Czech Republic to Greece; Ambassador *Panayotis Economou*, International and Public Relations Advisor, Biopolitics International Organisation; *Panos Panettas*, Vice-President, Athens Chamber of Commerce and Industry

**Biopolitics - The Bio-Environment - Bio-Culture in the Next Millennium** Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation

**Science, Ecology and Society. Interactions, Risks and Prospects** Dr. *Rudolf Zahradnik*, President, Czech Academy of Sciences

**Economic Development and the Environment in the Czech Republic** Dr. *Jaroslav Stoklasa*, Environmental Advisor, Czech Academy of Sciences

**Academic Research in the Transition Economy of the Czech Republic** Professor *Vaclav Mejstrik*, Director, Institute of Landscape Ecology, Czech Academy of Sciences

**The Wealth of Protected Areas in the Czech Republic** Dr. *Jan Cerovsky*, President, ECOPOINT Foundation, Senior Scientist, Czech IUCN

**Environmental Policy and Public Participation** Dr. *Bedrich Moldan*, f. Minister of Environment, Centre for Environment, Charles University

**The Bio-Environment and Decision-Making** Dr. *Ivan Rynda*, f. Chairman, Environmental Committee of the Federal Assembly

**Searching for Human Values Compatible with Sustainable Ways of Living** Dr. *Josef Vavrousek* (1944-1995), Chairman, Society for Sustainable Living

## BIOPOLITICS - THE BIO-ENVIRONMENT EDUCATION IN THE YEAR 2000

*Adana, Turkey, May 17-20, 1995*

**Opening Ceremony** Professor *Hunay Evliya*, Director, Centre for Environmental Research, Cukurova University; Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation; Professor *Rusen Keles*, Director of Environmental Studies, Faculty of Political Science, Ankara University; Professor *Yusuf Unlu*, Deputy Rector, Cukurova University; Mr. *Aytac Durak*, The Honourable Mayor of Adana; Mr. *Naci Parmaksiz*, The Honourable Governor of Adana; Mr. *Taskin Tuna*, Ministry of Environment

**Academic Session I** Professor *Halet Cambel*, Archaeologist, Karatepe-Aslantaw Museum; Ambassador *Kai Falkman*, General Consul of Sweden in Istanbul; Professor *Andrei Rubin*, Academician, Head, Department of Biophysics, Moscow State University; Professor *Michael Manakov*, Academician, Director, Biotechnology Centre, Mendeleev University, Moscow; Professor *Gyula Bora*, Vice-Rector, Budapest University Professor *J.W. Dobrowolski*, Polish Academy of Sciences

**Academic Session II** Professor *Nur Sozen*, Head, Department of Landscape Architecture,

Ankara University; Professor Rusen Keles and Ms *Nilgun Gurer*, Faculty of Political Sciences, Ankara University; Professor *Cevat Geray* and Mr. *Mehmet Tuncer*, Faculty of Architecture and Engineering, University of Ankara; Professor *Yaman Ors*, Unit of Medical Ethics, Medical School of Ankara; Dr. *Fred Ernst*, Department of Soil Science, Cukurova University; Professor *Berna Alpagut*, Director, Institute for Social Sciences, Ankara University; Professor *Meral Kence*, Middles East Technical University; Professor *Erdogan Gultekin*, Cukurova University

***Biopolitics - The Bio-Environment - Biocentric Values for the Next Millennium - Round Table Discussion*** Dr. *Agni Vlavianos-Arvanitis*, President and Founder, Biopolitics International Organisation; Mr. *Orhan Karakullukcu*, Industrialist, Former Mayor of Trabzon; Mr. *Nicholas Lykos*, Industrialist; Professor *Mahir Fusunoglu*, Cukurova University

### BIOS DAYS

***First Bios Day*** a picnic lunch in the country home of the painter Angelos in honour of The Right Honourable Lord Ennals, May 1988

***Second Bios Day*** a picnic lunch in the country home of the painter Angelos in honour of His Excellency the Ambassador of Japan Kazuo Kaneko, May 1989

***Third Bios Day*** a picnic lunch at the country home of the painter Angelos in honour of His Excellency the Ambassador of Turkey Gunduz Aktan and the participants of the Hellenic-Turkish Symposium, May 1990

***Fourth Bios Day*** a picnic lunch in the country home of Mr. and Mrs. Lambropoulos in honour of the participants of the Hellenic-Soviet Symposium, May 1991

### BIO-SYLLABUS

Since its inception in 1985, the Biopolitics International Organisation has been raising awareness of the urgent need for global bio-educational reforms, which resulted in the formulation of a bio-syllabus outline to be used for the implementation of biocentric concepts in all academic disciplines. A comprehensive *Bio-Syllabus* was published by the B.I.O. in 1992. The B.I.O. *Bio-Syllabus* is used as a major textbook in many universities around the world and is available in English, Russian and Greek.

#### ***Bio-Ethics***

- Bio-Environmental Rights
- Bios Rights as Related to Bio-Ethics
- Animal Research and Bio-Ethics
- Human Embryo/Fetus: Bio-Ethical Implications
- Bio-Ethics in Relation to Artificial insemination and Fertilisation
- Death and Euthanasia
- Human Organs and Tissue in Terms of Bio-Ethics

#### ***Bio-Legislation***

- Bios Rights

- 
- Bio-Environment and the Enactment of Bios Rights
  - Cleaner Production Concepts
  - Pollution Prevention: Impact on Legislation
  - Making the Polluter Pay
  - Long Term Thinking in Relation to the Bio-Environment
  - Legislation on Genetic Engineering and Bio-Medical Issues
  - Impact of Biotechnology
  - The Distinction Between Environmental Law and the Biopolitics Approach

***Bio-Business***

- Establishing World-Wide Economic Stability
- Introducing Environmentally Friendly Industry
- Sustainability Concept
- Improving Agriculture for the Benefit of the Bio-Environment
- Establishing Waste-Free Production Cycles
- Introducing Ethical Dimensions in Bio-Business
- New Lifestyle and Bio-Business
- Addressing the Public at Large

***Bio-Technology***

- Methods of Bio-Technology
- Applications of Bio-Technology
- Genetic Engineering
- Human Genome Project
- Ecosystem Bio-Technology
- Bio-Technology and Biopolitics Centres
- The Interface of Biological Science and Business
- Impact of Bio-Technology on Economic Infrastructure
- Biopolitical Dimensions of Bio-Technology

***Bio-Energy***

- Bio-Energetics and Bio-Energy
- Methods of Technical Bio-Energetics
- Application of Ecosystem Bio-Technology for Bio-Energy Production

***Bio-Communications***

- Developing Computer Based Idea Banks on Biopolitics
- Promoting Biopolitics through Mass Media
- Use of Satellites in Bio-Communication
- Bio-Sensors
- Bio-Computers
- Imitating Sense Organs in Technology

***Bio-Theology***

- Bios as the Sacred Gift
- Religion and the Unity of Bios
- The Relationship between Biopolitics and Religion
- The Buddhist Attitude

- The Hinduist Attitude
- The Muslim Attitude
- The Hebrew Attitude
- The Christian Attitude

***Bio-Culture***

- The Meaning of Culture from a Biopolitical Perspective
- Bio-Aesthetics
- Bio-Literature
- Bio-Culture and Creativity

***Bio-History***

- Bio-Environment Humankind Interactions in History
- Biological Influences in Human Society
- Bio-History and Educational Reforms

***Bio-Architecture***

- Bios Patterns and Images in Architecture and Design
- The Biological Basis of Aesthetics: New Dimensions in Architecture
- Employment of Bio-Materials
- Urban Design and Global Planning

***Bio-Mathematics***

- Macrocosmos and Microcosmos
- Bio-Mathematics and Bio-Education
- Methodology of Bio-Mathematical Models
- The Bio-Environment as a Dynamic System
- Probability and the Bio-Environment: Dynamic Equilibrium and Evolution
- Limits of Bio-Mathematics

***Bio-Athletics***

- Sports Involving Bios
- Reorganisation of the Olympics on the Basis of Bios Values

***Bio-Diplomacy***

- Main Bio-Environmental Issues in Bio-Diplomacy
- Organisational Matters Relevant to Bio-Diplomacy
- Importance of Long-Term Thinking in Bio-Diplomacy
- Body of Humanity - Body of Bios

***Fundamentals of Biology***

- The Fundamentals of Biological Knowledge
- Classification of Living Organisms
- Chemicals
- Nucleic Acids and Genetic Information
- Cells
- Multicellular Organisms
- Ecology
- Evolution