

## BIOPOLITICS – THE BIO-ENVIRONMENT – VOLUME I

*Proceedings of the First B.I.O. International Conference  
held in Athens in May 1987*

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**Dr. David Watts**, University of Hull

## RESOLUTIONS FROM THE FIRST B.I.O. INTERNATIONAL CONFERENCE

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

- *promote and initiate awareness* and a deep sense of responsibility for 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 medico-biological processes;
- *promote and initiate regional cooperation* for the development of the bio- environment and its protection against technically avoidable pollution among all relevant organizations 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 propose 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 organizations 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.

Participants in this conference expressed their deep gratitude to the organisers and supporters of the conference held in Greece, which is recommended as the ideal meeting place for people from all specialist fields to assess progress and values.

## BIOPOLITICS – THE BIO-ENVIRONMENT – VOLUME II

### *BIOS IN THE NEXT MILLENNIUM*

*Proceedings of the Second B.I.O. International Conference  
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## RESOLUTIONS FROM THE SECOND B.I.O. INTERNATIONAL CONFERENCE

At the end of the Second B.I.O. International Conference held in Athens in October 1988, the following resolutions were accepted unanimously by the participants, who re-dedicated themselves to the task of achieving the basic goals of B.I.O. as enunciated at its inauguration in 1985. All participants stressed the need that a scientific technological expertise be created to deal with the increasing moral and material complexities of bio- research, and proposed the recommendations stated below:

### Recommendations

As mankind enters the next millennium, the issue of bios will grow in complexity. More than just the protection and promotion of bios in all its varied manifestations, mankind will have to confront fundamental moral, legal and political dilemmas based on cumulative advancements made in bio- research. These scientific and technological breakthroughs could be life- enhancing or life-threatening depending on mankind's ability to understand the various implications, as well as the readiness to preserve the common good. The urgent task ahead is to create an informed public regarding the challenge and promise for bios in the next millennium, so as to achieve both moral and mental preparation in facing the uncertainties ahead. In this connection, B.I.O. recommends that:

- an *integrated* and *systematic* approach be adopted to solve problems associated with bios and its promotion;
- various concerted efforts be made to *re-evaluate the current bases of human action and behaviour*, in particular, the logic underlying economic behaviour to achieve a balanced non-exploitative condition conducive to the promotion of bios;
- further and more comprehensive efforts be made to *enhance* the physical conditions promoting bios, among them, the control and reduction of chemical and toxic substances in the air;
- the *protection of the natural environment* such as the tropical forests, the conservation of soils, and greater realization in land utilisation including urban planning and development ? to ensure a clear and healthy atmosphere, an International Commission on Atmospheric Pollution, pursuant to a UN General Assembly Resolution on Atmospheric Pollution in 1989, should be established to propose and enact *international legislation* in cases where bios is threatened;
- *non-sustainable activities should become uneconomical*. This will require intervention in various forms such as prohibiting the use of toxic substances, imposing high standards in the supply of utilities such as water, and the initiation of taxes to render resource consumption and pollution less profitable than resource conservation;
- *appropriate information be disseminated* to the public concerning the linkage between product consumption and the destruction of the environment, so as to stress the environmental costs involved. In this regard, a fund should be initiated to solve the problems created by environmental degradation;
- dependency on non-renewable resources be gradually alleviated in order *to achieve a sustainable world economy*. Steps that could be undertaken include: diversifying resource use; optimizing resource use with regard to natural regeneration; and providing assistance to affected economies to achieve transition to a sustainable economy;
- *legal solutions* proposed should promote both research and development in bio-research without at the same time harming the legitimate interests of the public. Intellectual creativity should be afforded adequate legal protection nationally and internationally, with the more intensive efforts being made to redirect budgetary priorities, in particular, those

relating to the military and security matters, so as to meet the more urgent needs of bios and its maintenance.

Given these urgent and fundamental concerns, the B.I.O. advocates the following program of action encouraging efforts 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 all *media resources*, including the use of satellite communication to inform, educate and sensitise the public regarding bios and its future;
- *mobilize the expertise* and energies of scholars, professionals and creative artists to give purpose and direction in the promotion of bios;
- *initiate programs* of teaching and research relating to bios in educational institutions;
- 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 in promoting 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.

### THIRD B.I.O. INTERNATIONAL CONFERENCE

*Biopolitics - Curriculum Revision*  
*Athens, June 8-12, 1989*

*A Blueprint for Bios in the Next Millennium*

**Sponsors:** Ministry of Culture; Ministry of Foreign Affairs; A.G. Leventis Foundation; National Tourism Organisation; Commercial Bank of Greece; Rank Xerox; National Bank of Greece; A.G. Petzetakis S.A.; Hellenic Plastic and Rubber Industry; A.B. Vassilopoulos; P. Zeritis; Thrace Paper Mills (DIANA); Hellenic Industrial Development Bank; American Express; N. Kouvaras.

The following participants contributed their views:

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- **Professor Constantinos Bonis**, former President, Academy of Athens, Greece
- **Professor Costas A. Cassios**, Technical University of Athens, Greece
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- **Professor Rom Harre**, Department of Philosophy, Oxford University, UK
- The Very Reverend **Meliton Karas**, Secretary of the Holy Synod Ecumenical Patriarchate, Turkey
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## **RESOLUTIONS FROM THE THIRD B.I.O. INTERNATIONAL CONFERENCE PROPOSAL 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 made to incorporate the progress of the biological sciences in fields such as theology, philosophy, diplomacy, economics, law and 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 mankind. Progress in technology has given hope for a more abundant and satisfying future. The horizon of human thought and understanding seems unlimited. Yet, at the same time, technology is also seen as life-threatening, challenging mankind's cherished beliefs and 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 bio-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 multi-faceted manifestations and processes. More than just the concern for the protection of the environment, it envisages not only the identification, promotion and institutionalization 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 the 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 – emphasizing knowledge about bios – and evaluational – emphasizing 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 knowledge of bios and at the same time, learn to relate to bios with sensitivity, understanding and intelligence.

#### **Aims**

The aims of this Bio-Syllabus at this level should include inter alia:

- a) familiarizing students with their bio-environment so that they may develop self-awareness and

- also awareness of the living things around them;
- b) helping students to develop an understanding of growth processes in order to foster love, care and protection of bios;
  - c) making students understand the relationships between the various components of bios within a given ecosystem;
  - d) helping students to develop moral understanding vis-a-vis bios and the capacity to make moral decisions.

### **Methods and Procedures**

To realize the broad aims presented, consideration 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.

### **Learning Principles Pertaining to Bios**

Pupils must acquire an understanding of the following important principles pertaining to bios:

- a) the principle of structure and function;
- b) the relationship between the ecosystem (syncology) and the population (autecology);
- c) the interrelation of organisms whether as predator and prey, symbiotic, parasitic, competitive, neutral or commensal;
- d) the difference between potential niche (the sum total of a species' activity in the habitat) and the realised niche;
- e) the meaning and implication of evolution, natural selection, selection pressures, gene pool and gene flow including DNA;
- f) the factors controlling the size of a biotic population with special attention to the concepts of density-dependent versus density-independent;
- g) the principle of photosynthesis;
- h) complexity and diversity as a condition of stability in bios; and
- i) the meaning of conservation – a process requiring control of pollution.

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, the need to deal with bios and bio-related topics as a unified area of knowledge and values should be recognized. 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:

- a) teaching students how to discover regularities or underlying principles in the bio-environment;
- b) assisting students in identifying and analysing causes pertaining to bios and natural phenomena so as to develop unified ways of viewing and thinking;
- c) helping students to understand that there is harmony despite diversity and variety in bios;
- d) teaching students that all natural phenomena have a history governed largely by their habitat thereby heightening interest in the preservation of biotic forms;
- e) helping students to understand that human life is maintained by dynamic balance in the bio-environment;
- f) 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 realize 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 organization of talks, debates and discussions on bios. Other more innovative methods may also be attempted such as simulating dramatic presentations of bios, record- keeping and bios reportage.

### **The Bio-Syllabus (Secondary Level)**

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 enrich the knowledge about bios as well as sensitize 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) a firm understanding of the chemical basis of life - the development of organic living things from organic matter;
- b) an understanding of cellular structure and function;
- c) a knowledge of heredity and genetics including the interaction of heredity and environment in determining behavioural outcomes;
- d) an understanding of viruses and their role in relation to disease;
- e) an appreciation of the evolutionary sequence, the development of primordial life to the present;
- f) an understanding of the biology of man and its various systems, circulatory, skeletal, digestive, nervous, reproductive, excretory and endocrine;
- g) a knowledge of the invertebrates and their behavioral characteristics;
- h) a knowledge of flowerless plants such as algae, phytoplankton, fungi, mosses and ferns and their evolutionary significance;
- i) an appreciation of ecological relationships including the structure and diversity of ecological communities;
- j) an appreciation of biotic and abiotic factors in an ecosystem;
- k) 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 programs 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 the following 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.

- a) Science, architecture and engineering undergraduates: A compulsory course on *Bio-Assessment and Bio-Design*.
- b) Business accounting and economics undergraduates: A compulsory course covering subjects on *Production and Production-related Damage to the Bio-Environment*.
- c) Law undergraduates: A compulsory course on *Law as an Instrument for Social Control over Science and Technology* or alternatively, under a broader rubric *The Sociology of Law*.
- d) Students on disciplines centering on Bio-technology as a professional course: A compulsory course on *Bio-assessment and Bio-design*.
- e) Students undergoing training in the environment or environment-related science courses: A compulsory course on *Reactive versus Pro-Active Approaches in Bio-environmental Management*.
- f) Undergraduates in the Humanities and Social Sciences: A compulsory course on the role of values and attitudes in the conservation and management of bio-systems.

The proposed course of study should be supplemented by field experience and multi-disciplinary evaluation of real or contrived bio-technological issues. In doing so, students should be sensitised to the multidimensional nature of bios differentiating the practical or rational demands from the legal, moral and political. As in the other educational levels, universities should adjust or design bio-oriented teaching programmes in accordance with their practical needs and urgency. In conducting such courses, departmental or faculty staff may bear in mind the following guiding principles, including the need to:

- a) develop appropriate and value-oriented technology to advance sustainable development;

- b) utilize resources equitably, fairly and efficiently;
- c) ensure viable interdependencies between the bio-environment and economic needs;
- d) maximize biological diversity by judicious strategies; and
- e) monitor population growth to ensure the effective implementation of economic and bio-environment programmes.

### **Further/Continuing Education**

To ensure that scientists, engineers, lawyers and biotechnologists are kept up-to-date on the latest or most urgent problems pertaining to bios, it is proposed that a program on *Bio-habitability* be conducted either as a short or extended course. The target groups would include senior decision-makers of firms and industries including government officials and bio-environment activists. Universities should make available such a course preferably in collaboration with industry. Basic topics proposed for the course on *Bio-habitability* include:

- a) the evolution and quality of biological systems;
- b) physical and chemical systems and their effect on the bio-environment;
- c) economics as a guide to regulation and public policy;
- d) the political, legal and moral dimension pertaining to the protection of the bio-environment.

It is recommended that there should be case studies, preferably on a multi-disciplinary basis to clarify issues and propose solutions. If finance is a crucial consideration in organizing such courses, universities may wish to levy a charge on attendance to sustain the program. In doing so, such courses should be well-planned, current and conducted by well-informed and knowledgeable experts.

### **Implementation**

The sustenance and promotion of life in all its variegated forms through a bio-curriculum necessitates both education and propagation. In the case of the latter, the role of the mass media is fundamental. It is therefore proposed that 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 programs 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 programs 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 organizations 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 organizations and agencies within or without the U.N. system should be consulted and their assistance sought.

### **Invitation**

This invitation for the inclusion of the bio-syllabus in the curriculum is addressed to the presidents of universities, leaders in the fields of pre-school, elementary, middle and higher education, media specialists and all those who believe that education can provide the most effective pathway leading to the preservation and respect for bios (life). You are kindly informed that a bio- syllabus guideline is now available. You are asked to urgently incorporate these new dimensions.

## BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME III

### International University for the Bio-Environment

*Proceedings of the Fourth B.I.O. International Conference  
held in Athens on January 10-14, 1991*

(\* denotes contributions from the Third International Conference)

*Bios in the Next Millennium – The Need for Educational Reforms  
A volume dedicated to the preservation of bio-diversity in the Amazon*

*A global model of bio-education dedicated to a diachronic search in view of the challenges of the new millennium. The bio-assessment of technology leading to the needed reforms in education is to shift the center of gravity from anthropocentric to biocentric values to preserve the harmony of the bio-environment.*

The implementation of the B.I.O. goals and the realization of the Fourth International Conference were made possible thanks to the following sponsors: A. G. Leventis Foundation; Mrs. K. Kyriacopoulos, President, Bauxites Parnasse Mining Co.; Ministry of Foreign Affairs; General Secretariat for Youth of the Ministry of Culture; Olympic Airways; Captain N. Frangos; Mr. G. Vassilopoulos; Mr. E. Gatzonis; The British Council; Electra Hotel; Barclays Bank Plc.; Rank Xerox; Mr. D. Kourtakis; Mrs. D. Goulandris, Cycladic Art Museum; Mr. A. Potamianos, Epirotiki Lines and Pleasure Cruises; Elais S.A.; Mr. G Demakos; Sun Alliance Insurance Hellas S.A.; Cibar Software Technologies, Europe S.A.; Infoware; Mrs. A. Tombrou.

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- Singapore*        *Higher Education and the Bioenvironmental Challenge*  
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- Turkey*            *Towards an International University for the Bio-Environment*  
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**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 Civilization Diseases and on Environment
- Romania -*        *How to Educate People for a Better Attitude Regarding the Bio-Environment*  
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**Professor Jaanus Kiili**, Tallinn Teachers Training Institute, Estonia
- USSR -*            *Equilibrium Between Natura and Homo - the Leading Role of the I.U.B.E.*  
**Andrew Belkovsky**, Center of Human Sciences, Presidium of the Academy of Sciences
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### **Bio-Culture, from Mythos to the Present**

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- USSR -* *Ecological Monitoring of Seas and Oceans - The Eco-Aqua Project*  
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### **Structure of the International University for the Bio-Environment**

- France* *Has the Time Come for the I.U.B.E. ?*  
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- Greece* *The Financial Structure of the I.U.B.E.*  
**Achilles Exarchos**, Ambassador
- France* *Remarks on the Conditions for the Creation of the I.U.B.E.*  
**Professor Michel Despax**, Honorary President, University of Social Sciences of Toulouse
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### Recommendations for a Bio-Syllabus

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**Professor Donald Huisingh**, Erasmus Center for Environmental Studies, Erasmus University
- Israel *The B.I.O. Curriculum: The "Beyond" Curriculum*  
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- Greece *Study of Environmental Science at British Universities\**  
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- Hungary *Bio-Environment Courses in the Economics University*  
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- Philippines *Global Environmental Scenario - a Concern of the I.U.B.E.*  
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- Israel - *The Challenge of Protecting the Bio-Environment\**  
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- Egypt - *Egyptian Policy, Environmental Protection and International Cooperation*  
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### **Bio-Policy**

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- Nigeria *The Bio-Syllabus African Dimension: The Need for International Education*  
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- China- *China: A Quick Glance at a Developing Country's Bio-Environment Education*  
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- Israel - *The Israeli Environmental Scenario for the Year 2025*  
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- Yugoslavia* *Environment, Survival and Bioethics: The Drama of Contemporary Civilization*  
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## **RESOLUTIONS FROM THE FOURTH B.I.O. INTERNATIONAL CONFERENCE INTERNATIONAL UNIVERSITY FOR THE BIO-ENVIRONMENT**

At the end of the Fourth B.I.O. International Conference on the *International University for the Bio-Environment (I.U.B.E.)*, held in Athens from January 10 to 14, 1991, the following resolutions were accepted by participants unanimously:

### **Introduction**

The survival of humanity has reached a critical juncture, and much depends on our willingness and determination to maintain life in all its diverse forms. To do so successfully entails no less than the intelligent and effective management and utilization of earth's finite resources, guided by an appropriate and globally relevant moral-ethical system that is *bio-sensitive*. Technology will continue to be of high priority in our ceaseless search for solutions to the challenges of survival and material improvement yet, at the same time, it must be a technology tempered by wisdom. The evidence available points to the urgent need for both national and international action to arrest and, better still, reverse the destructive processes set in motion by decades of unrestrained misuse and exploitation of life-supporting systems throughout the world. New values must be created and new perspectives formulated to harness the benefits of technology to direct humankind safely into the next millennium.

### **The Rationale behind the I.U.B.E.**

Recognizing the cumulative threats to bios (life) and the urgent need to promote a *global* and *holistic* approach to addressing them, the Biopolitics International Organisation (B.I.O.) arranged the Fourth International Conference to discuss, plan and initiate the establishment of the I.U.B.E. This initiative to create a formal educational structure to promote, facilitate and implement the objectives of the B.I.O. represents a logical and tangible step forward to safeguard Earth for generations to come. The international representatives gathered at the conference were unanimous in their support of the initiative and pledged their continual commitment to the following B.I.O. goals:

- (i) promote *international cooperation* for better understanding bios;
- (ii) promote the development of international legislation on *Bios Rights*;
- (iii) promote the *bio-assessment* of technology, a dialectic approach to examining potential perspectives in all fields of human endeavour in an effort to improve the quality of life. Greece has been proposed as an ideal meeting place for the dialectic exchange of ideas and search for values for the new millennium. Scientists, academicians and philosophers, as well as every individual, may bequeath their thoughts to a *Bank of Ideas*;
- (iv) *sensitize* public opinion to the ramifications of the biological sciences and the impact this progress may have on other fields of study (bio- diplomacy, bio-law, bio-economics, bio-art, bio-literature, bio- environment);
- (v) introduce educational reforms internationally so as to shift from an *anthropocentric* to a *biocentric* curriculum and place the better understanding and appreciation of the bio-environment as the core of an *integrated* educational system.

### **The Educational Dimension of the I.U.B.E.**

Humankind's current existence seems to be underlined by paradox. On the one hand, technological progress holds great promise for a more secure future, positioning humankind to enter the next millennium with confidence. On the other, however, there is great moral-ethical uncertainty as to how technology may be fruitfully enhanced to fulfill humankind's material and spiritual needs. In other words, technology has been both life-enhancing and life-threatening.

The key to overcoming this predicament without a doubt lies with education, and must rest on

two basic premises: (1) it must increase, improve and extend humankind's technological competence to enable us to seek viable and appropriate solutions to maintain life in all its diversity; (2) it must create a system of moral-ethical values that can serve as a guide for technology and its application. The latter would require a fundamental shift or re-alignment of currently accepted ways of thought and action with respect to bios. The educational practice today is characterized by excessive specialisation resulting in the *fragmentation* of thought or a distorted vision of reality. Science and technology have become purely instrumental and utilitarian, out of harmony with basic life-sustaining processes. To reverse this trend therefore requires a *new* educational vision, one that is holistic and bio-sensitive and yet capable of addressing the continually evolving needs of humankind as a whole. Such an approach to education recognizes no artificial boundaries based on geography or ideology. The unifying feature of this new educational approach is life itself -- its preservation, protection and enhancement in all its variety and forms. Humankind must be made to recognise that life is an interdependent and harmonious whole and, having realized its nature, we must formulate ideas and initiate actions in order to preserve it.

This would require effective international cooperation for a better understanding of bios and the bio-environment and the institution of a global educational philosophy that stresses the value of life in all its diversity.

### **The International University for the Bio-Environment (I.U.B.E.)**

#### **Preamble**

In consideration of bios in the next millennium and in consideration of the need to create, transmit and internalize a shared value system conducive to the protection of bios, a formal educational structure designated as the *International University for the Bio-Environment* (I.U.B.E.) was proposed and adopted by the Conference. The decision to establish the I.U.B.E. gives full credence to the activating role of education in the creation of a *meta- university model*, one that embraces the needs of the future generations and assures the respect and preservation of the bio-environment. The I.U.B.E. will not only offer educational alternatives but will also actively engage educational institutions throughout the world as partners in the process of effecting necessary changes of curricula and teaching to promote bios.

#### **Structure and Governance**

The I.U.B.E. will be guided by the traditional functions of a university with respect to teaching, research and public service, as well as cooperating with other universities, international organizations, environmental institutions and industries. The I.U.B.E. aims to influence decision-makers at every level, so as to impress upon them the need to incorporate respect for the bio-environment in their short- and long-term planning. However, its central concern will be to formulate and disseminate new educational alternatives with a view to instituting a *value system* that is bio-sensitive. In doing so, it will avoid duplicating efforts initiated by other organisations. Therefore, its main *aims* are to:

- (i) propagate educational reforms principally by identifying and developing a *model global bio-education* to meet the needs of the meta- industrial era, and infuse original models for existing educational institutions to implement bio-environmental education;
- (ii) identify, develop and implement trans-disciplinary educational strategies on bios;
- (iii) construct and develop needed concepts for the effective teaching of bios and bios-related subjects at *all* educational levels;
- (iv) educate and train experts in all fields of bio-environmental education;
- (v) initiate regional cooperation principally in developing feasible systems or models for bio-environmental protection and the implementation of plans and programs requiring trans-national

cooperation;

- (vi) facilitate the establishment of an *international information system* on the bio-environment through the media, and especially satellites;
- (vii) initiate an international exchange for scholars and practitioners in bio-environmental education;
- (viii) propose and initiate needed legislation and policy reforms in bio- environmental protection;
- (ix) encourage the creation of a clearing house for both dedicated individuals and established organizations to provide, through the use of computer link-ups, a network of people wishing to cooperate and contribute towards saving the bio-environment;
- (x) generate environmental *action groups*, drawing from the enthusiasm of youth and the experience of retired people to tackle local bio- environmental issues;
- (xi) set the foundation for the furthering of *bio-cultural models*;

To achieve the aforementioned aims over the short and long terms, the following recommendations were made:

- (i) the B.I.O. should establish a Scientific Council composed of eminent scientists to help identify issues and problems threatening bios and recommend individuals of merit and stature from a broad spectrum of expertise who can be involved in addressing them;
- (ii) holding consultative meetings to formulate educational and research programmes relevant to the pursuit of B.I.O. objectives;
- (iii) proposing policy changes that will facilitate the implementation of decisions adopted.

To ensure that the I.U.B.E. attains the optimum outreach, it was proposed that political leaders, community groups, and corporate interests be sensitized to the objectives of bios. Furthermore, media must also be engaged in the cultivation of public opinion and the dissemination of relevant information on issues pertaining to bios. Indeed, for the I.U.B.E. to become fully effective, a quadripartite relationship involving the B.I.O., universities, industry and labour must be instituted so as to place the required linkages.

Clearly, for the I.U.B.E. to make the expected impact, it has to communicate effectively and adequately, using all appropriate media including networking and satellite communication. Similarly, it will have to explore and develop original methods of conveying bio-environmental information, including the construction of informational models and programs to be aimed at groups and communities with special needs, particularly youth, the aged, and the deprived.

The Conference adopted a tentative scheme to actualize the concept of the I.U.B.E. under the aegis of the B.I.O.:

- (i) the institution of a Governing Board;
- (ii) the establishment of a central facility incorporating the I.U.B.E. secretariat, library and facilities for sabbaticals, student internships, workshops and meetings. The central facility will also function as a data base listing industry, academic institutions and environmental groups throughout the world;
- (iii) the creation of a body known as the Club of Athens. The membership of the Club will be composed of eminent and influential individuals, particularly those sympathetic to the objectives of the B.I.O. and whose presence would contribute to the growth of the I.U.B.E.

The Conference adopted the proposal to draw up a legal charter for the I.U.B.E. It also accepted the recommendation to create a Fund Raising Committee with the appropriate status and authority to solicit seed money for the implementation of the I.U.B.E. The Committee's immediate task is to plan the realization of this objective. Finally, it was proposed that the I.U.B.E. should take immediate steps to set up the administrative headquarters in Athens to undertake the task of coordination and implementation. The administrative headquarters' main

task is to lay the foundation for the formal incorporation of the I.U.B.E. at the appropriate time under the auspices of the B.I.O.

### **Conclusion**

The Conference took note of the need to move with caution and realism in implementing the I.U.B.E. goals. It recognized the importance of mobilizing more support from the international community. At the same time, participants of the conference understood the need for commitment and hard work and pledged their full assistance. To that end, they willingly pledged their support to Dr. Agni Vlavianos-Arvanitis, President Founder of the B.I.O., in her efforts to promote the objectives envisaged for the I.U.B.E, in Athens. The I.U.B.E. will serve as the prime vehicle for both the pursuit of B.I.O. objectives as well as in the implementation of the proposed programs and projects on a global basis.