

Bio News



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Bios in the Next Millennium

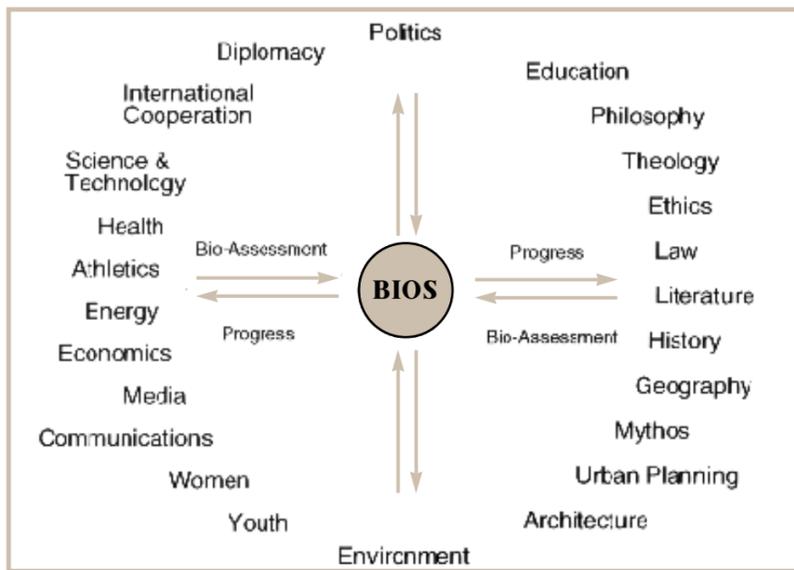
At the threshold of the new millennium, technological progress has expanded the horizons of human understanding. Technology may serve as a pathway leading to the revelation of the truth and to a better future.

However, in the present meta-industrial era, society is undergoing a crisis of values. The present destruction rate threatens not only aesthetic values but also the very essence of bio-diversity on our planet. What is in danger nowadays is bios, life itself. Every moment that a clock is ticking, some form of life disappears.

Many of the threats to the present world are due to the near-sighted approach adopted in decision-making processes. A perception of timescales may provide the guidelines for a far-sighted policy in the future. A millennium vision in decision making can give the needed unifying dimensions allowing for the shifting of thought from personal or national issues to the real essence of the continuation of the chain of life. Bios has existed for hundreds of millions of years. In terms of the long chain of evolution of life, the presence of human beings is realised only in the last few seconds.

In the course of human history, several political systems have been developed. Tyranny and democracy are among the older ones; new terms like capitalism and socialism have been proposed as alternative models of society. However, bios has been tested in unlimited varieties which have survived through the powerful selection of evolution. The hope is that bios may provide the desired dimensions and expanding strategies for the future.

The symmetry and beauty of bios, as revealed in the micro-environment, the scale of the cell, and the macro-environment, could become a



source of inspiration and strength for building a harmonious future.

In order to ensure the harmonious co-existence of all forms of life, the Biopolitics International Organisation has stressed the need for a new era of bio-culture based on the shift from anthropocentric to biocentric values.

Protection of bios may become a unifying vision for humanity. National defense could become the defense of bios rights. International cooperation may lead to a new era of bio-diplomacy, by facing as enemies the destruction of the ozone layer, pollution, starvation and disease and promoting better physical and mental health.

All human beings belong to the same body of humanity. Differences of religion, colour, language and tradition, constitute an enrichment of humanity rather than a reason for division. Furthermore, humanity is a part of the body of bios. Joint efforts to protect bio-diversity, the real wealth of nations, are crucial for the survival of

humankind and for improving quality of life for future generations.

In addition to the theoretical search for values, action will be needed in order to use the progress of technology for preserving the bio-environment:

- develop a bio-syllabus and new curriculum materials for pre-school, elementary, middle and higher levels of education and audio-visual materials on issues related to bios and the bio-environment;

- introduce a positive feeling among the unemployed by paying a "Green Salary" instead of benefits, with the commitment to work for the protection of the bio-environment (planting of trees, cleaning of cities etc.)

- 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;

- generate environmental action groups, utilising both the enthusiasm of youth and the experience of retired people to tackle local issues;

- encourage life-supporting economic strategy to replace destructive policies, and a worldwide interdisciplinary exchange of information promoting the appreciation of the bio-environment. Exchange of bios-supporting data between cities, individuals, universities, etc;

- promote the establishment of a computerized Bank of Ideas in which scientists, academicians and philosophers, as well as every individual, may deposit their thoughts, to create a rich source of information and reflections on bios;

- organize a World Referendum so as to allow people throughout the world to express their willingness to preserve bios on our planet;

Since society is flexible and dynamic, educational systems have to be continuously revised. By the time proposals and studies are implemented, they tend to be already outdated. The more we understand the most unique gift of the universe, bios, the more successful we will be in fulfilling the needs of the community, the country or the world. One realizes that humanity possesses the option for alternative futures. The rapid rate of technological advancement provides the ascending ladder of knowledge and the linking bridge between the present and the future.

Waves of energy penetrate our soul and create a dimension of hope for the future. Light waves, in the whole spectrum of wavelengths reveal to our senses the miracle of creation. Sound and music, through melody, rhythm and harmony are transient waves to the beauty of the microcosmos and the macrocosmos. Waves of communication, through media, modulate our daily action and thought.

Bio-culture may serve as a lever to uplift the spirit of humanity toward a greater maturity and deeper understanding of the positive aspects of progress. The hope is to spread the value of love for bios, as a source of joy and solidarity for the whole of humanity.

Galaxy or galaxies are small dimensions not infinity
Neutrons are small very small not infinity

And what am I a neutron to the galaxy or a galaxy to the neutron?
(Oscillations, 1983, Dr. Agni Vlavianos-Arvanitis)

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Atmospheric Pollution in Greater Athens

BY ANGELIKI DANTOU

Following a serious increase in atmospheric pollution in the Greater Athens area during the 1970s, a series of measures was undertaken by the Greek government in order to stabilise and eventually reduce the concentration levels of most pollutants. Since 1990, the concentration levels of primary pollutants (except carbon monoxide) have decreased, but those of certain photochemical pollutants, such as nitrogen dioxide and ozone, have been rising.

These trends in atmospheric pollution during the last decade can be explained in terms of the economic, demographic and social reality of the Greater Athens Area (GAA):

- Between 1981 and 1991 the population of the municipality of Athens decreased by 5%, while the population in surrounding areas increased. In cities located in Eastern Attiki this increase reached 28%. This demographic shift, combined with geographic and meteorological parameters, is the key to understanding the increase in photochemical pollution.

- From 1980 to 1990 the number of cars in GAA doubled (640,000 in 1980 as against 1,200,000 in 1990). In view of this, the relative success of the Greek government in controlling the level of lead and carbon monoxide in the atmosphere (with yearly averages below the national quality limits imposed by the E.U.) must be considered an achievement. It is mainly due to a series of legal measures; a) the reduction of lead concentration in fuel to meet E.U. standards (0.15 gr/lit); b) voting for financial incentives so that old cars are replaced by those with catalytic converters; c) imposing a compulsory emissions inspection for all privately-owned and government vehicles; and d), imposing regular checks on industrial emissions and central heating installations.

Pollution by traffic is very difficult to control because of the high concentration of public and private activities in Athens. This was brought about by the lack of proper urban planning in the past. 19 out of 23 hospitals, 4 of the ministries, more than 80% of public service headquarters, 70% of legal companies, 60% of medical offices, are located in the centre of the GAA. Overall, Athens is the location for more than 55% of sites of economic activity in Greece.

Consequently, decentralisation is crucial in order to achieve pollution reduction at source. To achieve decentralisation, a considerable improvement in public transportation

is necessary. This is already underway, assisted by the European Union, with the construction of a new subway system. At present, the car is the main means of transportation for most Athenians, with an average of 1.5 passengers per circulating car. Hopefully this trend will be halted when the Athens metropolitan subway opens in 1998.

As far as industry is concerned, emissions are usually associated with a high concentration of sulphur dioxide and its consequence, acid rain.

The alarming increase in this pollutant in the 1970s (with a peak of 112 $\mu\text{g}/\text{m}^3$ in 1978) led to drastic legal measures, the most important of which concerned the reduction of sulphur concentration in fuel from 3.5% to 1% and in mazout (central-heating oil) from 1% to 0.7%. In addition, a five-year project for pollution minimisation in industry resulted in a decrease in total industrial emissions by 23 % between 1986 and 1990.

For 6 years, between 1978 and 1984, the results of this policy were spectacular, with an average 10% reduction per year.

The sulphur dioxide concentration was 47 $\mu\text{g}/\text{m}^3$ in 1984 but from then on there has been

Continued on page 2

What is the Bio-Environment?

It is becoming more and more obvious today that technology and ignorance are threatening modern society. How often do we in our daily lives feel uncomfortable due to our surrounding environment?

Inadequacies in education, misuse of technology, irresponsible leadership, major accidents, as well as destruction by war, are factors which threaten the very existence of future generations. The awareness of imminent danger is awakening in people everywhere.

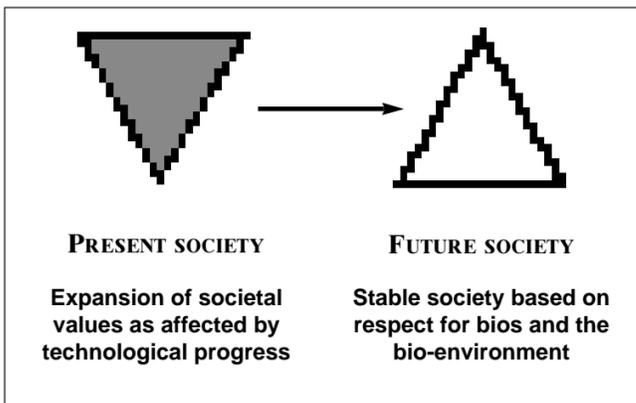
There is an ever-increasing number of organisations being formed aimed at specific ways of protecting our future. But is it not time to look at our situation more globally? To breakdown the geographical cultural and political borders? Is it not also time to stop and think about what effect our ignorance is having on all forms of life, whether micro-organisms, plant or animal and how we need all of these forms of life to live harmoniously? For how long can we continue to believe that there is no imminent danger?

We must expand on our current and future technology to lead towards new alternatives based upon the sympathetic understanding, preservation and enhancement of bios (life) and the bio-environment

Bios is derived from the Greek word meaning life, of living things. Bios as far as we know up to the present time, only exists on our planet and is both a precious and fragile gift.

The Bios Theory and BIO

The survival of humanity will depend on an increased respect for bios. The present fragmented view of science and technology allows for only a limited part of the human potential to be utilised. At the threshold of a new millennium, we need to tap human resources by understanding the deeper interactions, and establishing links between seemingly diverse fields of knowledge. New perspectives of evolution in every human endeavour may thus flourish. In order to broaden the spectrum of our thought the bios theory was first proposed in 1985 by Dr. Agni Vlavianos-Arvanitis. The bios theory promotes a unifying inter-disciplinary vision, by investi-



gating connections between fields such as ethics, legislation, economics, technology, theology, aesthetics, history and diplomacy, as related to a common denominator - the appreciation and better understanding of bios.

One of the major goals of the BIO has been to alert public opinion about the impact of technology on the bio-environment. In modern society, progress in technology provides humanity with completely new dimensions of understanding. However, modern society is going through a critical transitional stage brought about by a crisis of values. This crisis is universal and affects every aspect of our daily lives. The very essence of bio-diversity on our planet is threatened. Destruction of the natural environment is proceeding at an alarming rate.

In the sixties, the theory called "ecology" was developed as a reaction to the destruction of the "ecos" (the house) that was endangered. However, what is in danger nowadays is bios, life itself.

Bios has existed for about one and a half billion years. In view of the existing threats to bios, progress needs to be assessed, not through the prism of competition and financial interest, but through a completely different dimension: bios in the next millennium. In terms of the long chain of evolution of life, a thousand years is nothing. A millennium approach may provide the unifying dimension for the future allowing for the shifting of thought from personal or national issues to the real essence of the continuation of the chain of life. Humanity has no right to

destroy within one or two generations the gift of bios, the most precious possession on our planet.

In order to implement this vision, BIO has proposed immediate reforms at all levels of education, by placing the respect and appreciation for the bio-environment as the core of every educational system. Undoubtedly, educational systems have provided enormous progress in our society. However, modern education is based on over specialisation, leading to a lack of general concern for the problems of society, which are considered only the government's responsibility. Many of the problems of our times exist because of the inefficient, fragmented view inherent in the modern educational system.

Individuals and educational institutions have already included BIO ideals and resolutions in their work and curricula. The enthusiastic support of participants in the six BIO international conferences held between 1987 and 1993 has resulted in the publication of proceedings and the world-wide growth of the Bios Theory, through the launching of the International University for the Bio-Environment (I.U.B.E.).

Since society is flexible and dynamic, by the time proposals and studies are implemented they tend to be already outdated. The more we understand the most unique gift of the universe, bios, the more successful we will be in fulfilling the needs of the community, the country and the world.

EDITORIAL

Ten Years of B.I.O.



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

For the past ten years, the Biopolitics International Organisation has been stressing the need for a new era of bio-culture, based on a shift from anthropocentric to biocentric values, in order to ensure the harmonious coexistence of all forms of life.

On the tenth anniversary of the founding of B.I.O., the need for communicating these values is becoming more and more critical. In order for society to be sensitised to the importance of adopting biocentrism as a new value system, a major pathway for promoting information on the appreciation of the bio-environment is a necessity. Furthermore, B.I.O.'s many dedicated friends and supporters, represented by 83 countries, need to have a practical means of presenting and exchanging ideas and information, and for promoting the new value system that B.I.O. is trying to instigate.

This newspaper is therefore an attempt to establish a communication channel, through which new, bio-centric models will emerge. Models for bio-education, bio-legislation, bio-diplomacy, and bio-economy, which will promote the unifying concepts of humanity, and stress the interdependence of all forms of life.

Within the new framework of societal needs, this is the proper time to study the problems of *transition*. For the next millennium, it is essential to realize that real wealth is found only in a better quality of life, and in health, hope and joy, and the discovery of inner riches. Therefore it is imperative that we redefine existing concepts, and work towards converting our present arrogant, anthropocentric society to a society that respects bio-diversity, and is dedicated to the preservation and continuation of bios.

BIO REPRESENTATIVES IN THE FOLLOWING COUNTRIES

AFRICA:
Algeria; Botswana; Egypt; Ethiopia; Ghana; Kenya; Malawi; Mauritius; Morocco; Mozambique; Nigeria; Senegal; Seychelles; Sudan; Tanzania; Chad

AMERICA:
Argentina; Bahamas; Bermuda; Brazil; Canada; Chile; Colombia; Cuba; Ecuador; Guyana; Mexico; Peru; United States; Venezuela

ASIA:
Cambodia; China; Hong Kong; India; Indonesia; Israel; Japan; Jordan; Kuwait; Lebanon; Malaysia; Pakistan; Philippines; Singapore; Sri Lanka; Thailand

EUROPE:
Albania; Austria; Belarus; Belgium; Bulgaria; Croatia; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Monaco; Netherlands; Poland; Portugal; Romania; Russia; Slovakia; Spain; Sweden; Switzerland; Turkey; Ukraine; United Kingdom; Yugoslavia

OCEANIA:
Australia; Guinea; Papua New Guinea; Solomon Islands

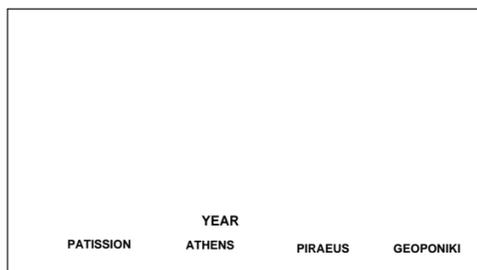


Figure 1. Annual changes in average atmospheric CO₂ levels

Figure 2. Annual changes in average atmospheric SO₂ levels

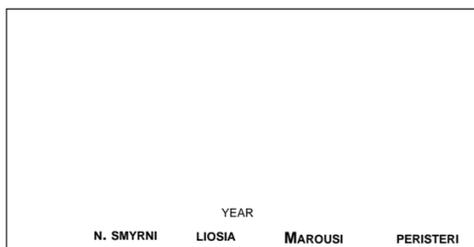
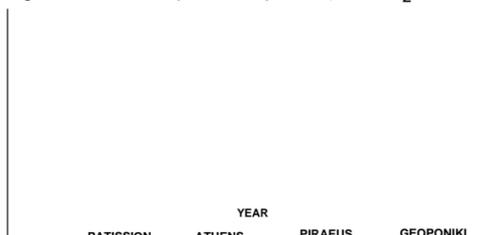


Figure 3. Annual changes in average atmospheric O₃ levels

Source: National Ministry of Environment and Public Works. PERPA, 1994 Report on Atmospheric Pollution in Greater Athens Area.

a marginal increase in this trend. Despite these encouraging achievements, it remains true that Athens still has a very long way to go before becoming a clean-air city and ensuring a better quality of life. The most important obstacle is the combined effect of over-population and inadequate infrastructure. The present situation has its roots in the explosive population growth in Athens immediately after World War II, and the lack of farsighted urban planning.

As a result, Athenians are now aware that the struggle against pollution will inevitably be a long and painful process.



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The International University for the Bio-Environment

During its fourth international conference in January 1990, the Biopolitics International Organisation launched the International University for the Bio-Environment (I.U.B.E.). The I.U.B.E. promotes a model for global bio-education by introducing biocentric educational reforms at all levels of education. Universities are requested to revise

The International University for the Bio-Environment (I.U.B.E.) was proposed and adopted by the Conference in January 1990, in an attempt to create a formal educational structure based on a shared bio-sensitive value system. 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.

In addition to offering educational alternatives, the I.U.B.E. will actively engage educational institutions throughout the world as partners in the process of effecting desirable and necessary changes in curricula and teaching programs so as 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.

It will also cooperate with other universities, international organisations, 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.

Its main objective will be to formulate and disseminate new educational alternatives so as to institute a value system conducive to the protection of bios. However, it will avoid duplicating efforts initiated by other organisations.

The specific aims of the I.U.B.E. are:

1. To propagate educational reforms by identifying and developing a model global bio-education. These reforms will try to meet the needs of the meta-industrial era, and infuse original models for existing educational institutions to implement bio-environmental education.

2. To identify, develop and implement trans-disciplinary educational strategies on bios.

3. To construct and develop concepts for the effective teaching of bios and bios-related subjects at all educational levels.

4. To educate and train experts in all fields of bio-environmental education.

5. To initiate regional cooperation by developing feasible systems or models for bio-environmental protection.

6. To promote the establishment of an international information system on the bio-environment through the media, and especially satellites.

7. To initiate an international exchange for scholars and practitioners in bio-environmental education.

8. To propose and initiate needed legislation and policy reforms in bio-environmental protection.

9. To encourage dedicated individuals and prominent organisations to establish a computer network for people wishing to cooperate and contribute towards saving the bio-environment.

10. To generate diverse environmental action groups, to help tackle local bio-environmental issues.

11. To set the foundation for the promotion of bio-cultural models.

Recommendations

To achieve the aforementioned aims over the short and long-terms, the following recommendations have been made:

- Establishing of a Scientific Council by B.I.O. in order to help identify issues and problems threatening bios, and recommend individuals from a broad spectrum of expertise who can be involved in addressing these problems.
- Holding consultative meetings to formulate educational and research programs relevant to the pursuit of B.I.O. objectives.
- 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 sensitised to the objectives of bios.

Furthermore, the media should also be engaged in raising public awareness and disseminating infor-

mation 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 should be instituted so as to establish 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 computer networks and satellite communication.

Similarly, it will have to explore and develop original methods of conveying bio-environmental information, such as constructing informational models and programmes specifically aimed at groups and communities with special needs.

Proposals

The Conference has adopted a tentative scheme to actualise the concept of the I.U.B.E. under the aegis of the B.I.O. The following proposals have been submitted:

- The institution of a Governing Board.
- The establishment of a central facility incorporating the I.U.B.E. secretariat, library and facilities for student internships, workshops and meetings. This central facility will also be equipped with an international data base listing industries, academic institutions and environmental groups throughout the world.
- The creation of a body known as the Club of Athens. Members of the Club will be sympathetic to the objectives of the B.I.O., and their

presence will contribute to the growth of the I.U.B.E.

The Conference also adopted the proposal to draw up a legal charter for the I.U.B.E., and accepted the recommendation to create a Fund Raising Committee for the implementation of I.U.B.E. financial goals.

Finally, it was suggested that the I.U.B.E. should take immediate steps to set up administrative headquarters in Athens, in order 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.

In conclusion, the Conference took note of the need to move with caution and realism in implementing the I.U.B.E. goals, and recognised the importance of mobilising 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. They also pledged their unwavering support to Dr. Agni Vlavianos-Arvanitis, President and Founder of the B.I.O., and her efforts to promote the objectives envisaged for the I.U.B.E. in Athens.

Bio-Economics



Biopolitics International Organisation opened its first international conference on May 7, 1987. Some of the talks presented at the conference focused on the principle of incorporating bio-centric values in political and economic decision-making. As a result, the concept of environmental protection as a viable business strategy was first introduced. What follows is an example of some of the proposals presented, as published in the first issue of Bio News (Vol 1, number 1) in 1987.

Professor Udo E. Simonis, director of the International Institute for Environment and Society for the Federal Republic of Germany, pointed out that ecological stability and economic growth are diametrically opposed. "One solution lies in redefining economic interest, the other in producing an ecologically-oriented economic policy.

A basic principle that can effectively reduce damage to the environment is that of responsibility or liability of those establishments responsible for increasing the levels of pollution.

Due to the logic of day-to-day survival utilisation of resources and sustainability of the ecological systems are not yet compatible. Once utilised or exported the value of

non-renewable resources is lost. These relations exemplify the responsibility of the industrial countries when it comes to harmonising ecology and economy internationally."

Professor Gyula Bora, vice-rector of Budapest University of Economic Sciences in Hungary, said that the formal functioning of any society necessarily produces anti-environmental effects because the economics of the society ultimately rely on the environment as a source of organic and inorganic materials. "The protection of the bio-environment need not necessarily hinder the growth of economy; rather it could serve the economy by its unlimited capability to provide new materials."

Professor Bora also added that up-to-date technology has largely contributed to the alteration and destruction of the bio-environment. However, technology can be viewed from another angle... that of its potential use in the protection and even restoration of the bio-environment.

Professor A.M. de Souza Otto, director of the Ministry of Industry and Commerce in Algarve, Portugal mentioned that the role of bio-technology should be not only to innovate more efficient methods for the recycling of waste

materials but also to actively participate in the refinement of production and research. "If we wish to guarantee the conditions of life for future generations and to avoid the proliferation of synthetic materials, we need to use natural products rationally and recycle waste materials. This perspective should continuously preoccupy public administration and private entrepreneurs."

However such radical changes in the structure of our society cannot be implemented without sensitising younger generations and eliciting their cooperation.

James Muldoon Junior, Assistant Field Director for the UNA, United States cited the growing despair among the youth of our planet about the prospects of resolving problems which warrant greater attention by the world's leadership.

"Our biological survival depends on our offspring to begin adapting to this environment, releasing energies that will move humanity an evolutionary step forward.

I believe that we are at a crossroads and the youth have not been given any road-signs to follow. The choices they will have to make will definitely include risks."

Business Strategy Finds New Dimensions

As we find ourselves on the threshold of a new millennium, the need for compatibility of business with the bio-environment is becoming increasingly apparent. Therefore, a radical change in business perspective is critical, in order to insure that the economic driving force does not work against the natural environment, but actively contributes towards a global appreciation of bios.

Professor Donald Huisingh, an international government and business consultant, summarised the aspirations of the symposium in the words of Albert Einstein: "If mankind is to survive, we shall require a substantially new manner of thinking." According to Professor Huisingh, the business world has already started to adopt this new way of thinking. "Companies are definitely envisioning and documenting much more clearly where they are. Every company needs a clear image of what it is, where it wants to go and how to get there. What has been realised is that an integrative approach is needed in which there are important structural and technical strategies to reach that improved performance."

UNITED STATES

The United States Environmental Protection Agency, has instituted the National Environment Education Act, under the leadership of Dr. Bradley Smith, to encourage partnerships between the government, educational institutions and environmental organisations. According to Dr Smith, for the Act to have an impact, a longer term view is necessary; a citizenry which is conscious of what is right and wrong and concerned enough to make the change.

"A longer term view is necessary; a citizenry which is conscious of what is right and wrong, and concerned enough to make the change."



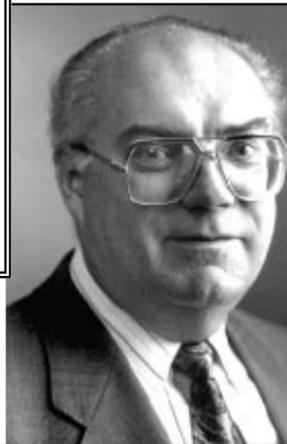
Professor Constantinos Yapijakis, from the Cooper Union School of Engineering, in New York, spoke of a new philosophy in environmental and public health protection, and made businesses aware, that, in order to remain competitive, they will have to incorporate this philosophy into their strategic planning.

The President of Economics America, Dr Stephen Buckles is involved in merging environmental education and business economics, two subjects which, he says, have until now been diametrically opposed. Without a change in the educational system there can be no significant progress in finding sustainable solutions to environmental problems, which are mainly economic in nature.

Jared Blum, president of the Polyisocyanurate Insulation Manufacturer's Association (PIMA), sug-

gested that an effective manner for business to respond to environmental issues is by partnering with government. Advisory committees and environmental groups can provide expert input, so that a prudent regulatory framework can be established, and endorsed by both the government and the impacted industries. As a result, overreaching legislation with significant economic impact and very little environmental benefit can be prevented.

"Xerox have found that ... in the long-term, caring for the environment can be financially very profitable"



Rank Xerox have implemented a number of vital programs over a period of many years. Their environmental director, Karl Kummer, feels that they have had a positive effect in several areas, especially in waste disposal. He also stresses that manufacturing processes have to be changed, but it is not enough for a company to institute environmentally sound programs on its own. Everyone connected with that company, from the suppliers to the workforce, must be committed to the same goal. Xerox have found that such actions actually save money, and that in the long run, caring for the environment can be very profitable financially.

The same issue was also brought up by Scott Blackmer, a partner with Wilmer, Cutler and Pickering, who pointed out that, under a proposed legislation on environmental liability, companies will be held accountable for environmental harm they have caused, and will be required to pay for the clean-up.

Another U.S.-based company, N-Viro Energy Systems is making a success story of converting waste products. All wastes have an impact on the environment and yet there is a tremendous market for them once they are processed. For example, sewage sludge, combined with other alkaline waste ashes, produces a safe, pasteurised product like a soil with all the properties of natural soil. However, J. Patrick Nicholson, chairman of N-Viro Energy Systems warns that it must be understood that recycling is not a panacea, it must not be done at the

expense of groundwater, but it must be safe and have real markets. "Resource conservation really makes economic sense by applying the principles of commitment, love and truth. That way the whole idea can become a reality."

increasing the sensitivity of the business world to the need for protecting the bio-environment. He also stressed the fact that incorporating an environmental dimension into business strategies will ultimately contribute towards improving the quality of life itself. "Businesses which respect and protect the bio-environment will be securing the real wealth of the country, which is its natural and cultural heritage, and provide the natural resources necessary for the survival of future generations."

GREECE

George Papandreou, Minister for Education in the Greek government, mentioned that business strategy concerns the whole production process, from the development of social and local initiatives to the confrontation of hyper-consumerism through restructuring supply and demand to satisfy real needs. It also concerns the decentralisation and regional organisation of businesses, and, therefore, requires social participation.

The general manager of PERAN Environment and Development S.A., Polychronis Polychroniadis, is the innovator of a recycling scheme called "Lucky Can", where small machines combine the safe collection and compression of cans, with games and prizes provided by a built-in computer. The compressed cans are then sent to smelting plants. Mr Polychroniadis stressed the importance of recycling, reuse and reduced packaging in lowering the cost of waste administration.

A leading consulting agency, ICAP, and its managing director,

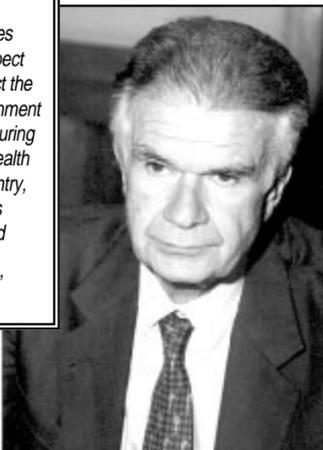
"What about competitiveness for companies who face rising costs when reconciling environmental protection with the need for development?"



Dimitris Maniatakis, reported that important changes have taken place in production methods in order to minimise detrimental side-effects. Ten years ago, there were only 1,000 businesses in the ecology industry. Today there are 4,000 businesses producing products exclusively for the protection of the environment, and the demand for clean products and environmentally friendly production methods is continuing to grow.

The Director of Investments Promotion for the United Nations Industrial Development Organisation, UNIDO, Asimakis Fotilas, asks the following question "What about competitiveness for companies who face the problem of rising costs when reconciling environmental protection with the need for development?" The answer, after careful sci-

"Businesses which respect and protect the bio-environment will be securing the real wealth of the country, which is its natural and cultural heritage..."

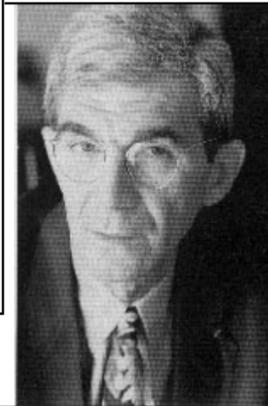


entific study of the problem, is rather unexpected. It was found that, in many cases, clean technology is more profitable. Therefore, a business strategy should be based on the principal of increasing profitability through environmentally friendly schemes.

Dr Costas Masmanidis, managing director of Dow, Hellas S.A., gave an outline of the Responsible Care program, that is implemented by the chemical industry at an international level. This program consists of a series of guidelines and codes of management practice, which analyse in detail, from an environmental point of view, every stage in the life-cycle of a product, and is an example of how one sector of industry is taking responsibility for its product.

Michael Pagidas, general manager of SC Johnson Hellas sees a moral dimension in the discussions of environmental issues. His company has included this moral dimension in its normal company policy for many

"Could the word profit in the future be accepted as a measure which includes cultural, esthetic, and moral values?"



years. SC Johnson has been setting aside pre-tax profits for community projects of a social and environmental nature, such as tree-planting, or art exhibitions, believing it can continue to direct its technological resources to protect this world for the future, while pursuing new business opportunities.

Christos Tsiliyannis, technical manager of Waste Management, Greece, traced the evolution of environmental protection methods from the 1950s through today. He pointed out that, unlike previous decades, the 1990s are characterised by the global nature of pollution phenomena and the corresponding global legislation frameworks designed to confront them. He also remarked that restoration, clean-up and remedial costs are much higher than the cost of protection at source, which is always more economical and effective than treatment. So, detoxification and risk annihilation have resulted in notable environmental and financial benefits.

The final words at the conference came from John Boutaris, president of J. Boutaris and Son, SA.

Like the fine wines his company produces, his words complemented and enhanced the symposium. He wondered whether the word *profit* would in the future be accepted as a measure which includes cultural, aesthetic and moral values, rather than being known as the result of an economic activity which gives rise to income, as it is today. And Mr Boutaris continued: "Work is also another key word, defined as human endeavour which yields profit. These deep-rooted attitudes regulate our lives and behaviour and require labour, automation and technology and the over-exploitation of natural resources. Monotonous labour in an automated production line makes the worker just a part of the machine. Statistics may show a prosperous society, but how can they register stress, insecurity, and alienation, and who takes these parameters seriously? We must not abandon technological progress, but reconcile it with human life in such a way that it does not become oppressive. We must change the limits within which our present day reality and our utopia are defined."

If you would like a copy of Business Strategy I and Business Strategy II which is now in print, please fill out the coupon on page 11

The International Sakharov Festival

In the hope of contributing to the search for bio-cultural values, the Biopolitics International Organisation accepted the invitation by the Russian Academy of Sciences and the Russian Cultural Organisation, GOSCO, to hold the International Sakharov Festival in Greece. It took place in Athens,

from July 28 to 31, 1994 with the theme "Biopolitics-The Bio-Environment-Bio-Culture in the Next Millennium" and the participation of world famous artists.

The honorary guest of the Festival was Elena Bonner, the widow of Andrei Sakharov, who created the Sakharov

Foundation after his death, to perpetuate his legacy and continue his work. She is now chairman of the Moscow and U.S. Sakharov Foundations.

The Musical Festival consisted of a gala concert at the Herod Atticus Ancient Theatre, with the participation of world famous artists.

The Festival also included a symposium where prominent international figures of the political, diplomatic, scientific and educational worlds presented their views and opinions on the importance of incorporating the principal of environmental protection in all aspects of human endeavour.

Andrei Sakharov

FESTIVAL



MSTISLAV ROSTROPOVICH's long life has combined his exceptional and world-famous career as a cellist with long-term human rights activities, both political and humanitarian. Exiled from the USSR for befriending Soltzhenitsyn, he returned in 1993, to give the first orchestral concert ever held in Red Square. He has given generously and joyously not only to hospitals and institutions, but to the World Wide Fund and CITES, in order to preserve the totality of life on this planet.

Although HILDEGARD BEHRENS' distinguished career as a world-famous dramatic soprano has included all major dramatic interpretations, she is especially renowned for her performances of the great Wagnerian roles. She is now living in Germany and New York.



DIMITRIS SGOUROU was born in Athens in 1969. His career began when he was 12. He has already played with the greatest conductors and orchestras of the



world and has received numerous awards. The cities of Hamburg and Singapore have recently inaugurated Sgouros Festivals.

LEONIDAS KAVAKOS comes from a Greek musical family and embarked when he was very young on his international career. He has already played with major international orchestras and conductors, world-wide, winning the Gramophone Award for Best Concerto Recording, 1991.

YURI TEMIRKANOV is one of the most important modern Soviet conductors. He has also been invited to conduct major orchestras, world-wide, being given the title "Honoured Guest Conductor" by the Royal Philharmonic Orchestra, London. His interest lies especially in conducting opera.

Theodoras Kritas was the musical festival co-ordinator

Programme

I.

R. Wagner (1813 - 1883)
• *Opera TITANICUS*

II. Wagner (1813 - 1883)
• *Liebestod* from *Tristan and Isolde*
• *Immolation Scene* from *Gotterdammerung*
Soprano: HILDEGARD BEHRENS

III.

P. I. Tchaikovsky (1819 - 1893)
• *Anatolie* symphony no. 4 *Grande Polonaise Brillante*
for piano and orchestra, opus 22
Conductor: DIMITRIS SGOUROU

C. Sibelius - Sibelius (1865 - 1957)
• *Finlandia*, opus 26
Soprano: HILDEGARD BEHRENS

P. I. Tchaikovsky (1840 - 1893)
• *Waltz*, opus 39
Soprano: HILDEGARD BEHRENS

P. I. Tchaikovsky (1840 - 1893)
• *Rococo Variations*
for violin and orchestra, opus 33
Soprano: HILDEGARD BEHRENS
Arranged by: ANTONIS SGOURO
with the help of: YURI TEMIRKANOV



Mstislav Rostropovich presents his bouquet to Dr. Agni Vlavianos-Arvanitis during an emotional moment at the climax of the Festival Concert at the Ancient theatre of Herod Atticus in Athens.

The Gala Concert was a great success and a great musical experience for those present.

Miss Behrens' interpretation of the Immolation Scene gave an inner reflective dimension to Wagner's music, which demands all a singer's expertise, emphasising the pathos and femininity of this great role.

Dimitris Sgouros' love for the piano was the overriding impression left on an audience who responded, not only to the total assurance of his technical skill, but to the great joy he clearly felt in creating his interpretation of Chopin's music.

Leonidas Kavakos' pyrotechnics filled the audience with delight, as he

pushed his violin to the extremes of its range, playing with a zest which infected audience and orchestra alike.

Mstislav Rostropovich's close sympathy with his long-term associate and friend, Yuri Temirkanov, was clear from the first chord; there was an empathy which made maestro and instrument, instrument and orchestra, one harmonious, living creation of music.

As each, maestro and conductor, responded to the other, the joy of making music together was a complementary facet to Rostropovich's enduring ability to make his instrument call to those things which usually lie deeply hidden within us.



Andrei Dmitrievich Sakharov
May 21 1921-December 1989

Sakharov's father, Dmitry Ivanovich Sakharov, was a Professor of Physics and his mother was Ekaterina Alexeeva Sakharova (nee Sophiano). His grandfather, born on the Greek island of Zeya, had become a Russian citizen and was granted a title by Catherine II.

After his childhood and adolescence in Moscow he enrolled in the Department of Physics of Moscow University in 1938. Soon after receiving his Candidate degree from the Lebedev Physics Institute of the Academy of Sciences in 1948, he joined a research team developing thermonuclear weapons, and has often been referred to as "the father of the hydrogen bomb".

After major contributions in the thermonuclear field, cosmology, field theory and elementary particle physics, he was elected a full member of the Academy of Sciences of the USSR, in 1953.

His public activism grew between 1956-62, and in 1963 he was an initiator of the Moscow Test Ban Treaty. His long essay, "Thoughts on Progress, Peaceful Co-existence and Intellectual Freedom", published in 1968 and widely disseminated in the West, resulted in his being denied access to secret projects. In 1969 he donated his life savings (139,000 roubles) to the Red Cross in Moscow.

His creation of the Committee for Human Rights in 1970 began a period dedicated to the struggle for all forms of freedom, and resulted in his being awarded the Nobel Peace Prize in 1975. In his Nobel lecture he states "Peace, Progress and Human Rights - these goals are inseparably linked and none of them can be attained if another is ignored".

In 1980 Sakharov was exiled to Gorky without trial and was progressively stripped

of all his awards, prizes and titles by Decree of the Supreme Soviet. Here he continued his public activism and scientific work, including an open letter to Brezhnev on Afghanistan, and his article on "The Threat of Thermonuclear War". He also held four long hunger strikes, protesting against pressure placed upon his family.

In 1986 he was released, and in 1987 spoke on disarmament at the International Forum for a Nuclear-Free World and Disarmament, proposing the "two-track strategy" which was then adopted by Gor-

bachev. In 1989 he was elected to the Congress of People's Deputies and as a member of its Constitutional Commission, presented a draft for a new constitution of the USSR, based on the concept of individual rights and all nations' equal rights to statehood.

Honoured by foreign academies and universities world-wide, Andrei Sakharov died in December 1989 and was buried in Vostyakovskoye Cemetery, Moscow. His life's works became available to the general public in 1991.

The Sakharov Foundation

Shortly after Andrei Sakharov's death in December 1989, his widow Elena Bonner organised in Moscow a "Public Commission for the Preservation of Andrei Sakharov's Legacy." The Public Commission has now been registered in Moscow as the "Public Commission for the Preservation of Andrei Sakharov's Legacy - Sakharov Foundation." It operates from premises on Moscow's Garden Ring and is currently negotiating the acquisition of additional space for a Sakharov Museum in Moscow. The Andrei Sakharov Foundation (U.S.) was incorporated in Delaware in August 1990.

Elena Bonner serves as a Chairman of both the Moscow Commission and the U.S. Foundation, insuring that their educational, scientific and humanitarian activities are co-ordinated and advance the goals of "Peace, Progress and Human Rights" as expounded in Dr. Sakharov's writings and exemplified by his life.

Biopolitics - the Bio-Environment - Bio-Culture

The Sakharov Festival under the auspices of the Millennium

During the Sakharov Festival Symposium, many distinguished personalities contributed their valuable insight for opening pathways leading to a new bio-centric society for the next millennium. Highlights of some of the speeches and presentations appear on the following three pages.

His All Holiness Vartholomeos, the Ecumenical Patriarch of the Orthodox Church sent the following message:

After observing the activities of the Biopolitics International Organisation, presided over by the honourable Dr. Agni Vlavianos-Arvanitis, and its achievements over a relatively short period of time, we had the pleasure of being informed about the International Sakharov Festival held in Athens with the theme 'Biopolitics - The Bio-Environment - Bio-Culture in the Next Millennium' and the participation of distinguished personalities from the world of science, politics and the arts.

The awareness which can be observed with respect to the preservation of the environment gives joy and heartfelt pleasure, because, as it is well known the Ecumenical Patriarchate is one of the pioneers in this area, and also because its pertinent goal is the maintenance of balance and the restoration, once again, of the connection between Creation and the Maker and Creator of All Creation, which would guarantee primarily, among other things, respect for our environment, a divine gift to all nature.

The evident destruction of the natural environment during these recent times has been a result of the deviation of

"The arrival in Athens of many famous representatives of Russian science and culture as well as journalists, testifies to the keen interest in this festival which is shown in our country, where democratic transformations are becoming a reality. It will be a good opportunity for deepening fruitful contacts between man and science and culture from Russia, Greece and other countries...."

H.E. AMBASSADOR OF RUSSIA
VALERY NIKOLAYENKO

"Since peace, progress, human rights and bios are inseparably linked, against what happens in Bosnia, Rwanda and elsewhere. Therefore, know the challenges of interdependence and harmonious ex



Elena Bonner receiving a plaque from the City of Athens.
From left: H.E. Ambassador Mr. G. Petropoulos, H.E. Ambassador of Russia, Valery Nikolayenko, Dr Agni Vlavianos-Arvanitis, and the Deputy Mayor of Athens

humanity from its proper course, to which it can return only through returning to the path of Christ. In this way the perfect balance, as expressed in the proper relationship between man and Creation, all of which comes to man from God the Saviour, can be achieved. These divine gifts should be appreciated and used without destructiveness or abuse.

The Minister of Foreign Affairs, Greece
Mr. Karolos Papoulias
(address delivered by H.E. Ambassador
Mr. George Georgiou)

The work of Biopolitics and of Andrei Sakharov are monuments before which, today, the whole of humanity must bow, because they constitute essential elements of a pan-humanitarian heritage. A heritage we have received and must deliver to future generations with parental care.

Sakharov fought for the protection of human values. The work of Biopolitics consists of the preservation of the bio-environment and every form of life for the need to adopt new values in every form of social activity, leading, through education, to the building of "bio-culture" which constitutes the theme of the International Sakharov Festival.

Bio-culture reveals the dimensions that link people, irrespective of national, religious and cultural diversity. These dimensions are derived from the respect for, and the realisation of, the uniqueness of the invaluable gift of life. In this way the humanitarian bond is verified and humanity finds a new creative role; the role of protecting and safeguarding what Biopolitics rightly names "the body

of bios".

For the achievement of this goal Biopolitics calls for the necessity of international co-operation. Through "bio-diplomacy", the joint confrontation of issues concerning the bio-environment and unity and friendship among nations are hammered into a shape which constitutes the major aim of humanity for the future.

Minister of Education, Greece
Mr. George Papandreou

This combination of an assembly of decision makers from all over the world and of a musical festival with the participation of world-famous artists makes us recall the ancient Greek belief in the unity between science, arts and culture. This underlying unity is the quintessence of ancient Greek education, meant to inspire reverence for life and to build a harmonious body and spirit. Education may be the catalyst for the creation of the necessary new ethical foundations of society. The role of education is not limited to increasing public sensitisation on environmental issues, it is also of great importance in deepening the understanding of the responsibility of everyone in the joint effort to preserve the bio-environment.

Education is expected to motivate future generations to take the essential action needed to protect bio-diversity. At the same time, inspiration may be drawn from many aspects of the bio-environment in order to enrich educational curricula. According to Biopolitics, through this "biocentric" vision, education may become a real pathway to bio-culture.



Participants in the symposium outside Evgenidion Hall in

H.E. the Ambassador of the Czech Republic
Professor Jiri Marvan

In ecology, we observe a very curious paradox. The best values we possess, the values given us by God - air, nature, health - are taken for granted and only if they are endangered, almost when it is too late, do we notice them.

The same applies to the spiritual environment, to spiritual ecology. A European who experienced the Communist assault on his soul, on his basic spiritual values, on his linguistic, national and cultural environment, is acutely aware of the dangers his Western fellow-European might be facing in several generations.

The human tragedy of Bosnia is a result of negligence involving basic spiritual values, the basic principles of a true human, spiritual ecology. It is negligence for which the Communist East and Capitalist West must share the blame.

Had the money and human effort invested in this conflict been used to create a scholar's research centre to educate this continent in the field of human ecology, would not this world be far better than it is today? Would not peace

be cheaper than this war? And would it not be a good idea to reserve the first year of studies for our top journalists, politicians and diplomats?

Dr Edna Aphek, Associate Professor at the David Yellin Seminary for Teachers in Jerusalem.

The dire need for guarding Bios has led to the establishment of the International University for the Bio Environment, I.U.B.E. In addition to this, we are suggesting an additional tool to be utilised for the same purpose: Creative Thinking (with special emphasis on the E Alternative Method). Creative Thinking stresses the importance of breaking away from rigid recurrent thinking patterns, the avoidance of automatic thinking and the need for original, practical solutions.

Using the aforementioned tool, we are calling for the establishment of a Bio Interdisciplinary Centre (B.I.C.) in which illustrious people from various disciplines, using the tools of Creative Thinking and the unique E Alternative

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MINISTRY OF PHYSICAL PLANNING-ENVIRONMENT-PUBLIC WORKS
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A.G. LEVENTIS FOUNDATION
MUNICIPALITY OF ATHENS
EVGENIDION FOUNDATION
THEMIS HADGIYIANNI
RAPTAKI GROUP OF ENTERPRISES
EKO ABEE
INFORM LYKOS S.A.
ELAIS S.A.

MI-THITA GROUP OF ENTERPRISES
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G. VASSILOPOULOS
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HELLENIC INDUSTRIAL DEVELOPMENT BANK
ZENECA HELLAS S.A.

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nt - Bio-Culture in the Next Millennium

uspices of the Ministry of Foreign Affairs

bios are inseparably linked, free minds have to react elsewhere. Therefore, knowledge should be used to face dependence and harmonious existence."

PROFESSOR RUSEN KELES



posium outside Evgenidion Hall in Athens

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Associate Professor at the David or Teachers in Jerusalem.

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Method, will meet and raise alternative, innovative, practical solutions, as well as suggestions for their implementa- tion, for various problems, all dealing with the Bio issue.

Professor Rusen Keles Political Sciences, Ankara University of Ankara, Turkey, Member of the Board of Trustees of the Biopolitics International Organisation

The emergence of the idea of Biopolitics not only contributed to the progress of thought concerning the bio-environment, but has also paved the way to forming a sincere and friendly milieu in which the most distinguished personalities of the world gather from time to time to strengthen the ties linking them together. This has undoubtedly the potential to provide one of the most efficient diplomatic tools as distinct from the conventional means based on legal norms. Biopolitics has a great role to play in creating sustainable solidarity among nations in the future.

A. - MI-THITA GROUP OF ENTERPRISES
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 * K.E. Kalamarakis
 * KALLAS S.A.
 * Manouella and Ioanna N. Vardinoyannis

THE SAKHAROV FESTIVAL

"The important feature of the world Biopolitical movement is its dedication to the future. Biopolitical ideas are easily and deeply understood by the young generation...because they are based on the unique and fruitful combination of eternal truth with the front-line developments in modern biological science and ecology..."

PROFESSOR PAVEL J. SARKISOV

International solidarity provides an opportunity, perhaps for the first time, to rally humankind in the struggle against the mortal dangers which threaten it.

The erosion of the state-centric world is being gradually but slowly replaced by universalism and multi-centralism. The sovereignty-free actors in the multi-centric world include multinational corporations, ethnic minorities, subnational governments and bureaucracies, professional organisations, NGO's, political parties and the like. Individually and sometimes jointly, they compete, conflict, co-operate, or otherwise interact with the sovereignty-bound actors of the state-centric world.

In the framework of such a complex bonds of relationships, bio-environmental groups have wider opportunities to be active on the world scene, to mobilise support

"Diplomacy is the art of persuasion. Is persuasion really necessary to protect bios? It would seem logical that every man should feel it natural to protect and maintain life around him because every threat against life is ultimately a threat against Man himself..."

H.E. AMBASSADOR
 KAI FALKMAN,
 GENERAL CONSUL OF SWEDEN IN
 ISTANBUL

for, and exert pressure on behalf of, their goals.

Under these circumstances, the question of how we are to prevent selfish (or ignorant) nations from taking actions which destroy the environment can be more satisfactorily answered.

As pointed out by the distinguished President of the Biopolitics International Organisation, "as the human body originates from one cell, with the same genetic material, and since the human body forms a whole, with all its different parts being interdependent, humanity has no right to destroy the parts of this body."

**Professor Sergei Kolesnikov
 Co-President of The State International Physicians for the Prevention of Nuclear War
 Nobel Prize for Peace**

There is an old Chinese saying, a sort of farewell to the enemy, "I wish you to live in the time of dramatic chang-



ing." But we are living in such a world! And we are responsible for this. So let us try together to analyse this situation and its impact on our own movement.

I must stress two additional things. Now is the right time to combine more closely our efforts with our public movements. This process is already going on, especially after the European Anti-Nuclear Congress in Brussels and the anti-nuclear case in the World Court. I want to stress that we must restore the connection between politicians and nuclear scientists, so that they are better, and more clearly, informed about nuclear issues, in an attempt to find an exit from the nuclear dead-end in which we now find ourselves. I am confident that nuclear scientists and politicians are human beings, and both are suffering from the nuclear nightmare.

**Professor Jiro Kondo,
 The President of the Science Council of Japan,
 Member of the Board of Trustees of the Biopolitics International Organisation**

We recognise that the spirit of the present Festival will meet the demands of UNCED. I also recall that ancient
Continued on page 8

"We are talking about commitment, compliance, compensation, changing courses of action related to industry, energy, and assistance in preserving shared natural resources. This is why diplomats are now engaged in negotiations, at either bilateral, regional or global levels, to agree on terms of reference, codes of conduct, action plans, and rules of law to manage shared natural resources and eco-geographic systems..."

H.E. AMBASSADOR OF EGYPT
 AHMED NABIL EL SALAWY

Continued from page 7

Greek philosophers stressed the co-existence of humanity with nature. In Japan we accept the idea of The Rio Declaration which states: "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature." Therefore, co-existence will be implemented in the basic plan of environmental policy.

H.E. the Ambassador of Colombia, Member of the Board of Trustees of the Biopolitics International Organisation
Mario Calderon Rivera

"Almost everything men have said best, they have said in Greek". And the truth is that there are few aspects of the history of human thought that do not lead, finally, to the primary source, Hellenism.

Biopolitics is, without doubt, a renewed expression of classical humanism and of its worship for the entire human environment. Agni Vlavianos-Arvanitis is an admirable reincarnation of the past and present validity of Greek philosophy, representing the essence of modern Greek philosophy, confronted with the essence of modern life. It is no coincidence that Aristotle is regarded as the first biologist of the classical world and his work considered as of eternal value.

The absorbing interest which the ideology of Biopolitics has raised on the eve of the third millennium is fully understandable, since the planet's biological restoration can be the consequence only of political decisions taken at the highest levels of power.

Dr. Alexander Lutsko, Rector of the International Sakharov College of Radioecology, Minsk, Belarus.

Suggests that the way forward for the ecological and economic problems of Belarus is the creation of a new generation of high level specialists to replace non-professionals. They should concentrate on the area of radiation accidents and disasters. A university in memory of A.D. Sakharov, the International Sakharov College of Radioecology was founded in Minsk two years ago to inject new, high quality education into the exhausted scientific life of Belarus, in the name of scientific honesty and freedom.

Dr. Bernard Feltz, director of the Senior Institute of Philosophy and Logic, Philosophy of Science and Center of Philosophy of Science at the Catholic University of Louvain, Belgium.

A philosophical approach analyses the relationship between humanity and nature from a philosophical new point. A fusion of historical positions is necessary, in order to modify the Cartesian position of scientists in the direction of scientific ecology, without becoming merely romantic in their attitude toward nature. The question of philosophically justifying the preservation of the bio-environment will also be considered.

Professor F. Lints, Director of Studies at the European Association for Society, Science and Technology in Louvain, Belgium.

Warns of the potential dangers of biotechnology in agriculture. One problem would be attempts to control

"The way forward for Belarus is the creation of a new generation of high-level specialists to replace non-professionals..."

DR. ALEXANDER LUTSKO

markets for seed and herbicides, by international chemical firms. The main threat, however, is the conflict between the mechanistic approach to nature held by some molecular biologists and the interactive view held by ecologists. Global resolutions in bioethics are the only solution.

Dr. George Strongylis Astrophysicist, Commission of the European Union

Outlines the current situation on the control of Carbon Dioxide and other greenhouse gases. The problem is seen from a global perspective (World Bank involvement) as well as from that of EU strategies. Future plans are outlined, to reduce emissions further, through implementation of commitments, and North-South cooperation.

Dr. Ung Phyrun, Deputy General Director of the State Secretariat for the Environment, Phnom Penh City, Cambodia

Outlines the background to Cambodia, including its geographical topography, population and occupational breakdown. He then goes on to describe the present environmental situation in all its aspects, including the state of the forest, before and after the civil war, the marine areas and environmental pollutions.

"Culture should be defined as the synthesising capability of humankind to be used for the preservation and improvement of life..."

SNJIN DRAGOJEVIC

Snjin Dragojevic, lecturer on cultural management at the Institute of Cultural Management, Vienna, and the Institute for Cultural Research, Krems, Croatia

As a natural consequence of the anthropocentric conception of life, man is seen solely as being of projection and self-realisation. The only limit to human interests and actions are the actions and acts of other human beings. The same analogy we find in the division of particular segments of human reality.

Dr Sergei Olenin research scientist at the Centre of System Analysis, Klaipeda University, Lithuania. Dr. Vitalij Denisov, Senior Lecturer in the Department of Applied Mathematics and Computer Sciences at Klaipeda University, Lithuania.

The TEMPUS project "Computer-

Based Environmental Studies - Lithuania." Klaipeda University shows a general trend to use educational software traditional teaching materials like words, paper and chalk. Another important point is that at Klaipeda specialisations besides others includes environmental sciences courses like General Ecology and Living Systems.

Professor T. Alifakiotis is on the Agricultural Planning Committee for Rural Development and the Scientific Committee of the National Committee of the National Agricultural Research Institution.

Stresses the need for care in re-assessing modern agricultural methods, such as the overuse of chemicals and elimination of crop rotation. Although new moves toward Low Input Sustainable Agriculture (LISA) within the EU are to be welcomed, the new priorities of alternative agriculture must not be permitted to lower productivity and possibly lead to real food shortage

Professor Gyula Bora is vice-rector, Budapest University of Economics, Hungary.

Agenda 21, accepted by the governments which participated in the United Nations Conference on Environment and Development in Rio de Janeiro, in 1991, gives comprehensive guidance for the strategy planning in all fields of socio-economic activities. One major subject is so-called sustainable development, which, in the thinking of many politicians and scholars, may be one possible solution to maintaining the conditions for human life as a part of the biodiversity, at global and national levels. Sustainable development will remain an illusion for mankind without respectful and efficient economic means and measures, including changes in the minds of economists.

Dr. Stefan Rokem, Senior Lecturer, Department of Applied Microbiology, Hebrew University of Jerusalem, Israel.

Most current technologies used in industry and to a large extent also in intensive agriculture are "end of the pipe" processes. Non-renewable raw materials are consumed for the production of goods and services that are "considered to enhance" life quality. The sought-after goods and services imply the simultaneous production of a wide variety of waste materials of more or less recalcitrant qualities.

The awareness and perception of the importance of the introduction of cyclic processes and sustainable development is slowly having an impact on Israeli society. Even though the larger part of the population are, as yet, not involved or interested, there are many developments both in industry and

"The dire need for guarding the Bios has led to the establishment of the International University for the Bio-Environment ... and Creative Thinking, a creative tool for the same purpose"

DR EDNA APHEK

agriculture that are initial indications of the willingness to introduce cyclic processing and sustainable development ideals.

Leading these efforts is the Ministry of Environmental Quality, who by legislation sets the new standards. The development of biological agents for disease and weed control in agriculture, the development of drip irrigation for agriculture, the development of processes for manure handling to produce energy and feed, the biological treatment of non-toxic and toxic industrial effluents are but a few of the many recent projects in various stages of development.

There are still many processes to be

"It harbours exquisite coral reefs and related tropical fauna and flora, as well as mangrove swamps, constituting a particularly fragile sensitive, ecosystem to man-induced perturbations..."

PROFESSOR BARUCH KIMOR

developed based, based on the principles of ecological bio-processing, fully compatible with sustainable development, whereby current anthropocentric manufacturing practices can be exchanged for biocentered processes. Large educational efforts are also required, in Israel, to change attitudes and values in order to promote the ideals of a biocentred life.

Professor Baruch Kimor, research biologist and scientific advisor, National Centre of Mariculture, Red Sea, Israel.

Nowhere is the delicate balance between economic development and environmental stability more important than in the coastal waters of enclosed marine environments with limited access to open seas, where the accumulation factor of prolonged man-induced perturbations, primarily pollutants, tends to be particularly serious.

Coastal management continues to be a prevailing topic of discussion and consideration in current and recent international congresses, workshops and other forums, in which decision-makers, scientists and educators join forces in sharing their expertise towards the achievement of a common goal: the preservation of the biodiversity of the environments, both terrestrial and coastal, without interfering with the normal economic development of the regions concerned.

Enclosed coastal seas, such as the Mediterranean, Chesapeake Bay, the Seto Inland Sea and many others, have received special attention in recent years and formed the subject of two international symposia, code named EMECS'90 and '93 (Economic Management of Enclosed Coastal Seas).

The monitoring programme of the gulf of Aqaba, one of the most northerly extensions of the Red Sea, is part of the Syrian-African Rift System. It is a desert-enclosed marine environment connected with the Red Sea itself by a shallow sill in its south-

ern part. It harbours exquisite coral reefs and related tropical fauna and flora, as well as mangrove swamps, constituting a particularly fragile sensitive, ecosystem to man-induced perturbations.

A rapidly developing tourist industry in the northern part of the Gulf, around the Israeli and Jordanian port cities of Eilat and Aqaba, with the inherent shipping activity, particularly by oil tankers, pose a direct threat to the living resources of this unique marine environment. Lately, the preservation of this ecosystem became a cause of concern not only of Israel and Jordan but also of the two other states bordering on the Gulf of Aqaba, Egypt and Saudi Arabia.

A monitoring programme of the planktonic micro biota as a diagnostic tool of eventual changes in the water quality of the Gulf was initiated with the participation of the author and other scientists under the auspices of the National Center for Mariculture of Eilat, a branch of the Israel Oceanographic and Limnological Research Institute (IOLR). The aim of the project is to establish a data-base in the form of an inventory of planktonic biota, thought to be especially sensitive to the impact induced by human activity as indicated above.

It is hoped that an interchange of information and a transfer of knowledge among the four bordering states in the Gulf will be instituted in due time, thus making the Gulf of Aqaba a model field laboratory with the aim of ensuring the preservation of its biodiversity without interfering with the normal growth and economic devel-

"If companies are to succeed in the market, they will have to consider waste just as nature does with its own waste: turn it into food ..."

DR GUNTER PAULI

opment of this region.

Dr Gunter Pauli, Advisor to the Rector of the United Nations University.

Management education does not include courses on biology, physics, meteorology and the like. It is no surprise that the concept of sustainability is only treated as a PR element, and not as an integral part of the corporate strategy.

"Biopolitics is, without doubt, a renewed expression of classical humanism and of its worship for the entire human environment"

MARIO CALDERON RIVERA

Though, if companies are to succeed on the market, they will have to consider waste just as nature does with its own waste: turn it into food for a new cycle. Actually, industry can only pretend it is efficient when it fully applies its own axiom: "Minimum input - maximum output" and that requires cutting out a lot of waste.

European Environmental Policy, Legislative and Economic Framework

The following article is the first section of a paper presented by Scott Blackmer of *Wilmer, Cutler & Pickering* at the B.I.O. Business Strategy Conference in 1993. Parts two and three will be published in the subsequent issues of Bio News

In Europe the sources of environmental policy began with national and local regulations that were rather uncoordinated. First, there was a political recognition. This could be at city council level, where a particular problem was realized, such as how to handle waste water, traffic, production from a factory outside the city, or farmers bringing in more water to irrigate, thus creating problems for fishing, by polluting the water of the bay. Therefore, policy decisions began at national and local levels but in a very uncoordinated way.

International conventions, such as the Rio Convention on Bio-Diversity and Climate Change, or the Montreal Protocol, under the United Nations auspices, concerning the depletion of the ozone layer, have taken place. How do these high level pol-

And then the classic problem of environmental regulation arises, which is: "Who goes first?" If, for example, the Danes can improve their standard of health, or the environment, additional costs will be imposed on businesses there. As a result, the latter will cease to be as competitive, as similar businesses in the Netherlands, France, or Spain. There is always the problem of environmental regulation. Some level of uniformity must be established, even if methods of trying out the same policies are a little different. Similar costs and burdens must be imposed on all the players in the industrial game. This is difficult during economic recession when governments, examining economic conditions, say: "There is high unemployment, we are losing market share in our principal markets to outsiders, which means incredible demands are placed on our budget. The higher the unemployment level, the higher the amounts paid in the form of social benefits. How can we possibly pay for the additional costs imposed by environmental regulations?"

Within the member states of the European Union there is a need to try to coordinate environmental activities, which increasingly affects the Alpine, Nordic and Eastern European countries as well. Similar costs and standards must be created to establish some common guidelines for environmental protection. As a result, the benefits from better public health and a better environment will be recognized. Ultimately, even increased profits for individual companies will be achieved.

Some of these trends are already recognizable. Businesses are already thinking much more about environmental matters than before, most commonly as a result of requirements to establish an environmental impact-assessment or statement. This is done before embarking on plant expansion, for example, or introducing a

"In ancient times the answers received from the Delphic oracle were confusing, ambiguous, but they always came true. Fate could not be avoided. Today's messages to the oracle at Brussels receive replies that are ambiguous, confusing and not always clear. Nevertheless, we are assured that they will always come true, and our fate is unavoidable!"

new product line.

In the European Union the concept of integrating pollution control is being developed into legislation. The result will be that, instead of dealing separately with each emission, waste and hazardous product problem, it will be possible to go to one national authority with experts in each area, which is already beginning to happen in England, for example. A company can develop a plan for each manufacturing facility and each large agricultural operation, taking into account

the hazardous materials, emissions into air, water and soil resulting from these activities, as well as taking into account how the plant's waste stream will be handled. These developments represent a trend that has only just begun.

The use of fiscal measures is also increasing. The European Union proposal for an eco-tax is now in serious trouble. An alternative might be the introduction of harmonized excise taxes on carbon-based fuels. But unless all member states agree to move collectively, none of them will be willing to

impose the additional costs. Increasing political cooperation can therefore be expected. This has an impact on investment in business, both in expanding facilities and in attracting foreign capital. Taking out a flotation on the London Stock Market, the New York Stock Exchange, or attracting foreign investment for loans from the European Investment Bank or the World Bank, means that one of the first questions will be: "What are your environmental risks?" After consultation with lawyers and technical consultants, an eco-audit is

NATIONAL AND LOCAL REGULATION

- * WIDE VARIATIONS IN LAW ENFORCEMENT
- * NEW ENVIRONMENTAL ACTS
- * TRADITIONAL ADMINISTRATIVE LAW FOCUS, BUT; UNDEFINED STANDARDS FOR POLLUTION, CONTAMINATION UNCOORDINATED PERMITS AND PROCEDURES
- * RECENT DEVELOPMENT OF CIVIL AND CRIMINAL LIABILITY

carried out to discover if the environmental risks are being minimized. Such an audit will make the project interesting for investors, in the long term. The profit motive itself, begins to drive the change in operations and procedures, as well as in final products.

Finally, the concept of green-marketing, or green-publicity. Such ideas were developed by the Minnesota Manufacturing and Mining Company in the 1970's, very early, before some of the regulatory requirements were in place. This company now has the reputation of being very environmentally-conscious. It produces thousands of different consumer products which increasingly affect the consumer marketplace, as individual consumers become more interested in environmental affairs. In Germany for example, consumers are beginning to look for labels showing that products have been produced in an environmentally sound way. The ability to use the new eco-label, now approved by the European Union, also exists, and is in the process of being applied to different product lines. This is also beginning to make a difference in the market place. So even on the consumer's side, the demand to consider the environment is growing.

EUROPEAN ENVIRONMENTAL REGULATION

SOURCES OF REGULATION

- * NATIONAL AND LOCAL REGULATIONS
- * INTERNATIONAL CONVENTIONS AND RECOMMENDATIONS
- * EUROPEAN UNION LEGISLATION

KEY TRENDS AND DEVELOPMENTS

- * STRICTER REGULATION AND LIABILITY
- * EIA, IPC, AND COMMON STANDARDS
- * FISCAL MEASURES
- * GROWING IMPACT ON INVESTMENT AND FINANCING
- * GREEN PUBLICITY: ECO-AUDIT, ECO-LABEL

icy decisions filter down to the daily practices of business people? This is one of the motivations for the legislation that comes from Brussels. There is now an agreement amongst the member states to establish principles and standards that will apply throughout the European Union. However, there was no environmental aspect in the Treaty of Rome when it was first signed. Its only goal then was to try to create an integrated market among member states.

European Environmental Policy, Legislative and Economic Framework: Council Directives

The Agriculture Council Ministers adopted the Directive on 21-22 September 1992 and stat-

COUNCIL DIRECTIVE ON SAVE PROGRAM:
Council adopted Directive on 13 September 1993 to limit carbon dioxide emissions by improving energy efficiency

ed that Member State laws and regulations in compliance with this Directive are to enter into force by: 21 Mar 1994: Legal Basis Art. 130s. Commission issued amended proposal for Council Directive on 26 May 1992. **Economic and Social Committee** Assigned to Section for Protection of the Environment, Public Health and Consumer Affairs. Committee adopted opinion on 28 December 1991. **Parliament:** Referred to Committee on Environment Public Health and Consumer Protection. Committee adopted

report on 22 April 1992. Council Environment Council Ministers agreed in principle on adoption of Directive on 26-27 May 1992] **SAVE PROGRAM**
Council adopted Directive on 13 September 1993 (D 93/76/EEC OJ L 237/93)
[Commission issued proposal for Directive to limit carbon dioxide

COUNCIL DIRECTIVE ON AIR POLLUTION BY OZONE: Requires (i) **Member States** to collect, exchange and provide to Commission data on ozone pollution (ii) **Commission** to issue proposal for control of ozone pollution by 1 July, 1997, and (iii) **Member States** to warn public when ozone pollution reaches certain levels.

emissions by improving energy efficiency (Save Programs). **Commission** issued amended proposal for Directive on 6 July 1993. **Parliament**-Proposal referred to Committee on Energy, Research

and Technology. Committee adopted report on 25 February 1993.

CARBON DIOXIDE EMISSIONS AND ENERGY TAX
Greek Presidency issued draft compromise proposal on issue in March 1994

Committee on Economic and Monetary Affairs and Industrial Policy asked to deliver opinion. Committee adopted opinion in let-

ECO-LABELING
Environment Council formally adopted Council Regulation on a Community award scheme for an Eco-Label signifying environmentally-friendly products on 23 March 1992

ter form on 4 November 1992. Parliamentary Committee on Environment, Public Health and

MONITORING CO₂ EMISSIONS

Fisheries Council formally adopted Decision on 25-26 June 1993 for a monitoring mechanism of Community CO₂

Consumer Protection asked to deliver opinion. Committee adopted opinion on 17 February 1993. Parliament plenary held debate on 112 March 1993. Plenary decided to send report back to Committee on Energy, Research and Technology. Committee discussed issue on 16 and 26 March 1993 and on 1-2 April 1993. Single Reading completed on 28

ECO-AUDIT (GREEN AUDIT)

Environment Council formally adopted Regulation on 28-29 June 1993

May 1993. **Council:** Energy Council held debate on 30 November 1992. Environment/Energy Council held debate on 23 April 1993. Energy Council agreed in principle on Directive on 25 June 1993.] **CARBON DIOXIDE EMISSIONS AND ENERGY TAX**
Greek presidency issued draft compromise proposal on issue in March 1994. Environment Council adopted conclusions on 25 March 1994

Proposal referred to Parliamentary Committee on Environment, Public Health and

PROTECTION OF WATER FROM POLLUTION BY NITRATES

Council adopted Directive concerning the protection of waters against pollution caused by nitrates from agricultural sources on 12 December 1991

Consumer Protection. Committee decided not to continue discussion while awaiting modified Commission

Environmental Olympics - Bios Prizes- Biocentric Vision

The harmonious development of human beings can be promoted by the revival of the ancient Olympic spirit. The Olympic Games were carried out in Greece for over 10 centuries, and represented important political, and cultural events. During the Olympics, a cease-fire was imposed over all opposite parties involved in the games, since the event was considered an opportunity for reconciliation and unifying vision rather than division. An athlete's highest honour was to participate in the Olympics. A sprig of olive tree was the prize for the winners. No financial award was given, but the winners and their families became among the most respectable in the City for the rest of their lives.

At the end of the 19th century, Baron Pierre de Coubertin re-introduced the Olympiads with the aim

The Biopolitics International Organisation has proposed the revival of the ancient ideal of cease-fire during the Olympics. The hope is that the bio-environment will act as a unifying force for peace leading to a new social structure, and the respect for bios will become the core of every human endeavour.

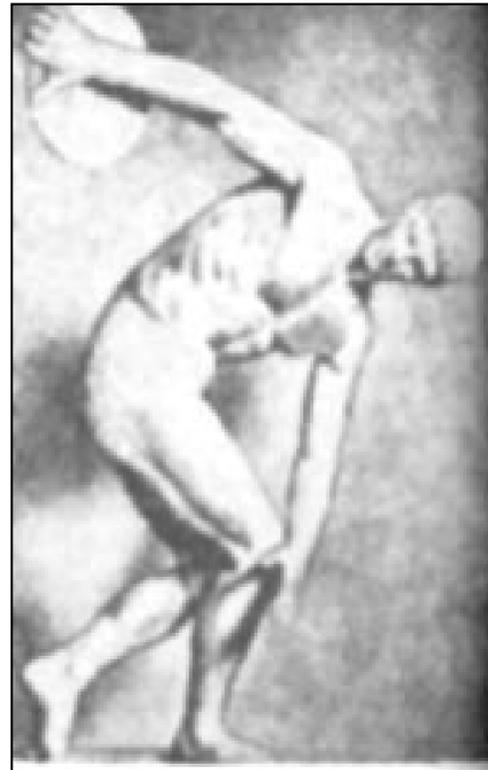
of reviving the ancient tradition. It is important to impart a broader sense to the term Olympics than is recognized today.

In an effort to raise awareness for the need for a faster prevention of environmental destruction, the Biopolitics International Organisation proposes the enrichment of the Olympics with new biocentric values. Presently, the Olympic Games, a beacon of world peace and hope, award medals only for athletic

The word *athletics* comes from the Greek word *athlos* meaning achievement. Therefore, athletics encompasses all possible physical or spiritual achievements of humanity.

proress. However, we should be reminded that the word athletics comes from the Greek word *athlos* meaning achievement. Therefore, athletics encompasses all possible physical or spiritual achievements of humanity. In modern times the concept of athletics has become identical with sports, the achievements of the body. The concept of athletics has to regain its original significance on the basis of new bios values.

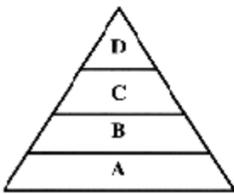
The bios theory embraces the spirit of harmonious, proportional development, both mental and physical. People should not confine themselves to training for achieving better performance in sports only. Top results in sports must not lead



The statue of the discus-thrower, by the ancient Greek sculptor Myron (Berlin Museum)

Environmental Olympics - Bios Prizes

Prizes to be awarded in about 30 disciplines (bio-ethics, bio-legislation, bio-economics, bio-theology, bio-architecture, bio-philosophy, etc) until 1996. Every discipline will be represented by its own pyramid. An example from bio-architecture is shown below



- A. Global community of architects to nominate candidates
- B. Chairmen of departments from universities and academics, and presidents of societies to receive nominations and propose up to 150 candidates for award
- C. Elected 30 member international Committee to select 15 nominations
- D. Three member international Committee to award three Bios Prizes

to robotization of athletes.

In order to promote the bio-assessment of technology and the bio-culture in the new millennium, B.I.O. proposes the creation of international committees in every field of human endeavour, assigned with the responsibility of assessing the progress of humanity and award Bios Prizes every four years during the Olympics to individuals who

have contributed to the preservation and better understanding of the environment.

Today, international prizes and competitions take place in various fields such as music, poetry, painting, and scientific research. However, these competitions represent a fragmented view of human achievements.

In order to re-establish the harmony and unity behind all the expressions of human endeavour, an overall recognition and award of achievements in sports, culture and science may be made simultaneously every four years at the time the Olympic flame is lit. The Olympics should be a period of world peace and an occasion for all the citizens of the world to live in a uniting atmosphere and assess values either at a personal level or through dialectic exchange. Media may contribute by expanding the message of unity of bios during the Olympic days. By adopting an environmentally - conscious approach at a grassroots level, the task of halting environmental destruction will become a realistic possibility and ensure a better quality of life.

Bad news

TRAGEDIES OF THE GULF WAR

The following article is taken from a talk presented at the First Polish Congress on Universalism (Warsaw, Sept. 23-29, 1994), by the President of Yellow Cross International, Professor Sir Siegfward H. Gunther.

A recent UNICEF report states that 900,000 children in Iraq are undernourished. Complications from malnutrition often render common illnesses, like the mumps or Whooping-cough, lethal. Moreover, many serious infectious diseases, such as Amoebic dysentery, Cholera, Malaria and Toxoplasmosis are on the rise, because of the lack of vaccines and medications. In the first months of 1993 alone, 21,000 children died of malnutrition and disease, because there is no possibility of treatment.

In Mosul, in northern Iraq, a city of nearly 2 million inhabitants, 42,000 families, with an average of 4-6 children, have been recorded by the Red Crescent society as living on a monthly income of around 300 Iraqi dinar. In this region an egg costs 10 dinar, while a kilo of meat costs 300 dinar.

In southern Iraq, in the town of

Basrah with around 1 1/2 million inhabitants, the supply of safe drinking water has been totally disrupted. In Basrah, as in the villages nearby, drinking water is brought by tanks and tank-lorries. One bottle of water is more expensive than one litre of petrol.

Waste water is another serious problem. Most of the waste water and sewerage are discharged into the Tigris and Euphrates rivers untreated. In some districts it overflows into the streets. Children play in the stagnating pools to cool themselves. As a consequence, diseases break out, which, in Europe, are known only from text books.

Since the Gulf war, radiation exposure has been a major health hazard for Iraqis. Radioactive military debris, which has been left behind on the battle fields, is causing the inhabitants of the surrounding areas to be exposed to dangerous radiation levels. More recently, waste from the uranium industry has added a new threat.

Depleted uranium penetrators were extensively used by the Allied forces during the Gulf War in 1991. Hundreds of tons of depleted uranium were left behind on the battle fields between Kuwait and Iraq, mostly in the form of toxic and

radioactive dust. Much of this dust has been scattered about thousands of square miles of desert, and it is feared that it may reach the ground water and pollute the food chain. Highly toxic uranium dust, if inhaled, can result in lung cancer.

The dangers of depleted uranium penetrators should not be overlooked. There are increasing reports from the United States about unusual ailments (hair loss, skin changes, abnormal births) among Gulf war veterans, which could possibly be attributed to contact with depleted uranium. Until recently many of these effects had remained unknown to the public. According to the press, a U.S. staff sergeant holds the view that many soldiers now fear that they may have been used as guinea-pigs in a radiation experiment. This subject, with special reference to depleted uranium penetrators was bought up for debate before the U. S. Congress.

Yellow Cross International makes a vehement appeal for the ban of utilisation ammunition as well as the newly developed laser weapons which cause irreparable eye damage.

Good news

VACCINE FOR MALARIA DEVELOPED IN COLUMBIA

The following information has been kindly provided by His Excellency the Ambassador of Columbia to Greece, Mr. Mario Calderon Rivera.

One of the world's leading killers has finally been restrained. Malaria, a disease which an annual mortality rate of more than two million worldwide, can now be controlled through vaccination. The first effective vaccine against Malaria, designated SPF66, has recently been developed in Columbia, by Prof. Manuel Patarollo, Founder and President of the Institute of Immunology of Columbia.

In addition to being the first vaccine against one of the most devastating tropical diseases, SPF66 is the first ever successful synthetic vaccine.

SPF66 has been tested in several countries in Latin America, Africa and Asia, and has been proven to be effective by approximately 60%. The legal rights covering the vaccine have been donated by Professor Patarollo to the World Health Organization, in order to make the product easily available to third world countries, which is where it is most desperately needed.

For additional information on how to get involved with the Bio-Olympics project, please write to:
Biopolitics International Organisation,
Tim Vassou 10,
Athens 115 21,
Greece.
Or send a fax to:
(301) 6434093

A Few Practical Suggestions for Young Bio-Environmentalists

* Split your class up into small groups and patrol your neighbourhood making a record of all litter sites you see. Give a copy of that record to the mayor every month.

* Work with discarded materials: Use your imagination, and items you would ordinarily throw away become art-work.

* Funny-looking garbage cans. Decorate the garbage cans in your neighbourhood.

* Walk: When you need to go somewhere don't ask for a ride. Walk there instead. If it is far away bring your friends along. The less we use cars, the better it is for the air we breathe, and we also conserve energy.

* Make a book: write stories about how to keep the environment clean

* Paper is valuable Use both sides of a sheet of paper.

* Recycle: If you have a recycling centre located near you, start recycling. You can recycle paper, glass and aluminium cans. Ask your family to help.

* Save energy: Turn off lights, TV sets and

radios when no-one is in the room. Do not leave the refrigerator door open.

* Have a discussion. Describe three garbage sites in your neighbourhood. Why do you think people litter? How can we avoid littering?

* Avoid making lots of noise. If you are walking around with a portable radio on, keep the volume down. Unnecessarily loud music means noise pollution.

* Be careful when you take the garbage out. Make sure the bags are sealed well

and close the garbage can tightly. Scattered garbage pollutes and makes the neighbourhood ugly.

* Start a garden. Get seeds from a nursery. Plant them in the school yard and ask

an expert how to take care of them best.

* Set up a competition: Give out prizes for the best poster, poem or song about the environment. Display posters in your school hallways or in shop windows.

* Circle a tree and try to discover all the different life-forms living on or around it. Not only the tree, but every bird, worm or parasite has its own role in the great circle of life. Destroying a forest means destroying all life forms living in that forest.

* Go on a field trip. Ask your parents or teachers to take you to a recycling centre. Take note of all the equipment used and the people who work there.

* Make up tunes. Make a list of all the songs you know about the earth or make up your own.

* Make shopping bags. Give them out to your parents and teachers, as replacements for plastic ones.

* Write a play about pollution. Present it to your friends and family. You can organise a show where everyone will play the part of a plant or animal.



When you carve your initials on a tree trunk, little bugs can penetrate the bark and destroy it. Trees need love too.

* Make book marks. Write "Do not litter" on them and give them to your teachers and friends.

* Pollution posters: Make a poster with pictures of clean and littered sites. Title it. "The choice is yours."

* Do something more: When you see a piece of garbage pick it up and throw it away. Just imagine how nice our parks and streets would look if everyone picked up just one piece of garbage every day.

* Mobilise your community: Try to convey to your friends and family the meaning of protecting the environment. Tell them about the ill-effects of pollution that you learned in school.



Just imagine how nice our parks would look if everyone picked up just one piece of garbage every day!

B.I.O. Publications

BIOPOLITICS - DIMENSIONS OF BIOLOGY

Dr. Agni Vlavianos-Arvanitis, 1985.

BIOPOLITICS - METHODS OF IMPLEMENTATION

Dr. Agni Vlavianos-Arvanitis, 1985.

BIONEWS Periodical Vol. I, No. 1, 1987.

BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME I

Dr. Agni Vlavianos-Arvanitis, Editor. Volume of Proceedings of the First B.I.O. International Conference held in May 1987 (1988)(400 pp.).

BIOS IN THE NEXT MILLENNIUM

Proceedings of a Francophone Symposium held in October 1987

BIOS IN THE NEXT MILLENNIUM

Lecture by the Right Honourable Lord Ennals sponsored by the British Council and the B.I.O., May 1988.

BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME II

Dr. Agni Vlavianos-Arvanitis, Editor. Volume of Proceedings of the Second B.I.O. International Conference held in October 1988 (1989) (543 pp.).

BIOPOLITICS - PROTECTING THE BIO-ENVIRONMENT

Lecture by His Excellency The Ambassador of Israel, Mr. Moshe Gilboa, at the Third B.I.O. International Conference, June 1989.

BIOPOLITICS - THE BIO-ENVIRONMENT

Presentation at the General Assembly of the Academy of Athens by Academician Professor Constantinos Bonis (in Greek), March 1990.

BIOPOLITICS - THE BIOS THEORY

Dr. Agni Vlavianos-Arvanitis (Greek version) 1990 (English version 1990 and 1991).

BIOPOLITICS - BIO-SYLLABUS

Brochure (Greek and English versions) 1989 (1990).

THE BIO-ENVIRONMENT AND INTERNATIONAL COOPERATION

Dr. Agni Vlavianos Arvanitis, Editor. A Hellenic-Turkish Symposium, City Hall of Athens, May 1990.

BIOPOLITICS - THE BIO-ENVIRONMENT - VOLUME III

Dr. Agni Vlavianos Arvanitis, Editor. Volume of Proceedings of the Fourth B.I.O. International Conference held in January 1991, including some presentations from the Third B.I.O. International Conference (1991) (683 pp.).

THE INTERNATIONAL UNIVERSITY FOR THE BIO-ENVIRONMENT

Brochure in English (1991-1993) and Greek (1991-1992).

BIOPOLITICS - THE BIO-ENVIRONMENT - BIO-SYLLABUS

Dr. Agni Vlavianos-Arvanitis - Alexander Oleskin, English 1992 Russian Translation (1993).

BIOPOLITICS- BIO-DIPLOMACY AND INTERNATIONAL COOPERATION

Dr. Agni Vlavianos-Arvanitis, Editor. Proceedings of Hellenic-Russian Symposium held in Athens, December 1991 (in print)

POPULATION GROWTH, FOOD SECURITY AND EQUITY

Proceedings of a Hellenic-Indian Day held in Athens, April 1993 (1993)

BIOPOLITICS- THE BIO-ENVIRONMENT - VOLUME IV

Dr. Agni Vlavianos Arvanitis, Editor. Professor Rusen Keles, Co-Editor. Proceedings of the Fifth B.I.O. International Conference held in Istanbul, May 1992 (1993)

BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOLUME I

Proceedings of the First Symposium on Business Strategy for the Bio-Environment held in Athens, November 1992 (1994)

BUSINESS STRATEGY FOR THE BIO-ENVIRONMENT - VOLUME II

Proceedings of the Second Symposium on Business Strategy for the Bio-Environment held in Athens, December 1993 (1994)

BIOPOLITICS - THE BIO-ENVIRONMENT- BIO-EDUCATION

Dr. Agni Vlavianos-Arvanitis Guidelines for the implementation of a biocentric curriculum, in Greek (1994)

BIOPOLITICS - THE BIO-ENVIRONMENT- BIO-CULTURE

IN THE NEXT MILLENNIUM - VOLUME V
Proceedings of the sixth BIO international conference, and International Sakharov Festival held in Athens, July 1994 (in print)

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Goals of the Biopolitics International



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

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



INTERNATIONAL LEGISLATION ON BIOS RIGHTS.

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



BIO-CULTURE - BIO-ENVIRONMENT.

are two unifying dimensions in the building of the needed values for the next millennium.



PROMOTION OF BIO-EDUCATION BY THE INTERNATIONAL UNIVERSITY FOR THE BIO-ENVIRONMENT.

The International University for the Bio-Environment was launched in order to promote educational reforms worldwide, so as to shift from the anthropocentric to a biocentric curriculum in every educational level.



BIO-ASSESSMENT OF TECHNOLOGY, A DIACHRONIC SEARCH FOR THE NEEDED NEW VALUES.

To bridge the gap between technological progress and societal values with the goal of a better quality of life and preservation of the bio-environment.



SENSITISATION OF PUBLIC OPINION TO THE RAMIFICATIONS OF THE BIOLOGICAL SCIENCES.

So that more people will realise that progress in the biological sciences relates to their own field of interest. The impact of this progress may open new fields of human endeavour such as bio-legislation, bio-medicine, bio-ethics, bio-literature, bio-culture, bio-linguistics, bio-economics, bio-athletics, bio-communication, bio-history, bio-education and bio-diplomacy.



INTERNATIONAL CAMPAIGN FOR ENVIRONMENTAL OLYMPICS AND BIOS PRIZES.

The Biopolitics International Organisation has proposed a cease-fire during the Olympic Games, a proposal which was recently adopted by United Nations Resolution. In order to promote the bio-assessment of technology and bio-culture in the new millennium, B.I.O. proposes the creation of international committees in every field of human endeavour, assigned with the responsibility of assessing the progress of humanity. Bios Prizes for every discipline will be awarded every four years, during the Olympics, to individuals who "have contributed to the preservation and better understanding of the bio-environment".

PROGRESS OF BIO

1985 The launch of the Biopolitics International Organisation

Progress in 1994

- Publication of "Business Strategy for the Bio-Environment", Volume I, Proceedings of the first B.I.O. Conference with the theme "Business Strategy for the Bio-Environment", held in Athens, November 1992
- Publication of volume "Biopolitics - The Bio-Environment - Bio-Culture", propositions for a biocentric curriculum
- Publication of "Business Strategy for the Bio-Environment", Volume II, Proceedings of the second B.I.O. Conference with the theme "Business Strategy for the Bio-Environment", held in Athens, December 1993
- Lecture on "Biopolitics - the Bio-Environment" at the "Malotio" Foundation, at a social event organised by the Boston Diocese, USA.
- Lecture on "Biopolitics and Old Age" at the Scientific Day of the "Evangelismos" Hospital Scientific Personnel Union, Athens, February 1994
- Session "Biopolitics - Bios Theory" at the Symposium of the Pan-Hellenic Union of Biologists, Athens, March 19-20 1994.
- Series of presentations at the Rotary Clubs of Rethymon, Heraklion and Chania on the island of Crete. Wide press coverage.
- Article on "Biopolitics - the Bio-Environment" in the periodical publication of the Rotary Clubs.
- Award with the honorary distinction "Woman of the Year 1994" from the American Biographical Institute to the President of the Biopolitics International Organisation
- Lecture on "Biopolitics - Bio-Education" to teachers, students and executives of primary education of the West Attica Prefecture
- Speech addressed to women's representatives of Vouliagmeni
- Wide press coverage of the B.I.O.'s activities. Radio and Television reports
- Italian Day with the participation of Greek entrepreneurs and representatives of Lombardia Risorsi, the largest Italian enterprise in the field of waste management
- The President of the Biopolitics International Organisation participates as a main speaker at the Conference on the theme of "Theological Education and the Environment", organised under the auspices of the Ecumenical Patriarchate, Chalki, June 1994
- International Sakharov Festival on "Biopolitics - The Bio-Environment - Bio-Culture in the next Millennium" comprising of a Musical Festival at the Herod Atticus Ancient Odeon, with the participation of Mstislav Rostropovitch, President of the Sakharov Festival, and an International Conference under the auspices of the Greek Ministry of Foreign Affairs with the participation of leading personalities, presidents of academies and universities, and representatives from UNESCO, government and non-government organisations, from 85 countries. The Festival was honoured by a message sent by His All Holiness the Ecumenical Patriarch
- The President of the B.I.O. delivered the closing address at the International Conference with the theme "Environment and the Quality of Life in Central Europe: Problems of Transition", organised in Prague under the auspices of Mr. V. Havel, President of the Czech Republic
- The President of the B.I.O. was the invited speaker at the First Polish Congress on Universalism, held in Warsaw
- President of B.I.O. invited speaker to the Fourth International Symposium on the World Energy System "Development of Interconnected Power Systems" held in Budapest, Hungary
- Issuing of Bionews, a monthly newspaper of the B.I.O. The newspaper is in English and is distributed in Greece and abroad
- A ten-day Seminar on Biopolitics at the State Technological University of St. Petersburg, Russia.
- Invitation from the Rector of the Mendeleev University of Moscow to the President of the Biopolitics International Organisation. Series of lectures to the professors and students on the course of Biopolitics, already introduced in the university's syllabus.



Biopolitics International Organisation

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