

# **BIOPOLICY: THE FUTURE OF ALTERNATIVE ENERGY**

**Contribution to the Economist's Second International Energy Summit  
Athens, February 27–28, 2007**

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## **Saving the continuity of bios – a long-term vision in energy policy**

Our world is experiencing a serious crisis in values. Arrogance and lack of vision in international policy has led to an unprecedented rate of environmental degradation and abuse. The very continuation of “bios” – life on our planet – is threatened by global warming, climate change, a declining resource base, the loss of species and habitats, inadequate water supplies, desertification. All are global problems, requiring global solutions and a new level of international cooperation and action.

Every scope of human activity will benefit from advancements in alternative energy, particularly in the areas of environmental quality, health and peace. A society that values the protection of the environment can find solutions that benefit and save life. The right mindset, appropriate technology, and, above all, a bios-enhancing vision in international policy will lead us to new and better energy resources. Since its inception in 1985, the Biopolitics International Organisation (B.I.O.) has been working to inspire such a vision, by promoting “biopolicy” in every human endeavour.

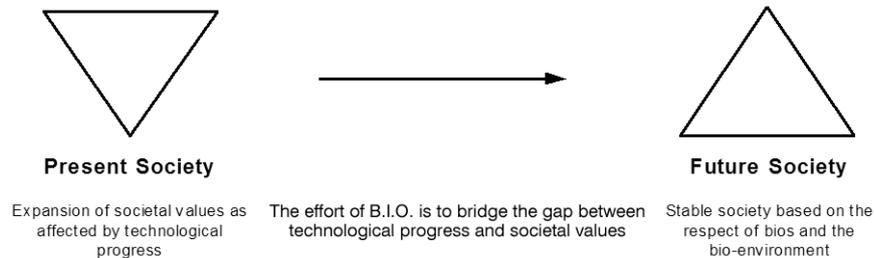
Climate change mitigation is a paramount challenge; its ethical, political and socio-cultural aspects necessitate an urgent paradigm shift, not only in the energy sector but in society as a whole. Because resources are abundant, we think we can overconsume. A fraction of the quantity of fossil fuels burned today could power our economies, if utilised more efficiently and less wastefully.

Many of the obstacles faced in the implementation of alternative energy policies by the global community are attributed to the absence of compliance with international agreements, such as the Kyoto Protocol. The Kyoto Protocol is a step in the right direction by assigning mandatory targets for combating climate change, but it is not the answer. Its shortcomings are clear in that greenhouse gas emissions are translated into a financial market lacking long-term value. The success of the Kyoto Protocol is not a question of which nations have endorsed it. Emissions trading and carbon credits just postpone the problem for the future.

Clean energy is free and inexhaustible. More in-depth research will help us to overcome the hurdles that exist in order for renewable energy to be used on a larger scale. The potential of solar energy is enormous and should be deployed as the primary source of energy by most countries, especially those with abundant sunlight. Wind farms are more and more common, and many economies are benefiting from this system of generating electricity that is both very reliable and almost pollution-free. The broad range of current and prototype fuel cell and hydrogen developments taking place in the field of transportation has led to better functioning electric automobiles with no noise pollution and no exhaust gases. Soon, current modes of transportation will be replaced by electric vehicles. These developments will lead to a greater and wider use of hydrogen cells, which is quickly becoming the wave of the future.

We do not lack the technology or the know-how necessary to integrate alternative energy into our economies and ensure the financial feasibility of these resources. What we urgently need is a new approach that will help our economies to shed the addiction to oil and other fossil fuels and rely on clean and renewable energy sources. Deep in our hearts we are all

aware of what is going on, and in ten-years time we will all agree there is no other alternative. Our fossil fuel based society, although well established, is unstable and could fail at any moment. It resembles an inverted pyramid, where nothing is in balance because we have based the whole structure on the wrong priorities. In the mid 1980s, who could have predicted that political regimes, which seemed invincible, were soon to collapse? Time is running out and, unless we espouse new thinking, the future of humanity and all life on our planet, will be at stake.



The contribution of the Economist Conferences in taking up the energy challenge is vital in this context. The Economist Conferences, a most widely respected and highly prestigious institution, can reach and influence numerous audiences around the world, empowering them with knowledge, engaging with them in exploring common interests, and working together to chart the path forward. The hope is to accelerate the development and availability of alternative energy in every corner of the world, through forward-looking initiatives for the promotion and protection of bios. This is the goal and vision of biopolicy.

### **Drawing insight from the evolution of life**

Biopolitics was created out of love for biology and the belief that bios is a link that unites all people. The study of life is a continuous source of joy and inspiration, with the miracle of creation taking place every second around us. For example, there are about 265 million (265.000.000) molecules of haemoglobin in every red blood cell, and 650.000.000.000.000 molecules of haemoglobin are produced every second in the human body. Every molecule of haemoglobin consists of carbon, hydrogen, oxygen, nitrogen, sulphur and iron atoms. These atoms combine to form 574 amino acids, which make up the structure of every haemoglobin molecule in 90 seconds. The misplacement of one amino acid is enough to cause the difference between health and disease. Besides haemoglobin, thousands of other proteins are produced by the millions in every cell, providing just a small example of what is taking place every fraction of a second in every living organism.

In the search for new energy alternatives, we must consider the perfect efficiency of the cell, one of the best examples of community survival, as evidenced by the compartmentalisation and cooperation among its separate structures. Under the cryptographic code control of the nucleus, many organelles and complex metabolites function in order to maintain a stable environment. Ribosomes interpret the genetic code and synthesise proteins. Mitochondria, the cellular power plants, burn fuel in dozens of small steps and produce energy with virtually no loss. Chloroplasts, the solar battery system of plant cells, convert sunlight into food and energy, and release oxygen into the environment. Maybe we can draw insight from these simple processes, which have been evolving for hundreds of millions of years, to search and develop better, cleaner and more efficient energy alternatives.

#### *Photosynthesis and the creation of the ozone layer*

Photosynthesis is typical for green plants, blue-green algae, and photosynthetic bacteria, and is based on the use of light energy and on the existence of electron transport chains. In the process of photosynthesis, plants take in water, carbon dioxide, and sunlight and convert them

to carbohydrates and oxygen. The oxygen is given off as a waste product and the carbohydrates are stored as a source of energy to be used later by the plants. Blue-green algae were the first organisms to use water in photosynthesis. As a consequence of their early photosynthetic activity, free oxygen entered the atmosphere and its concentration rose from originally almost zero to about 20%. Oxygen is present in two forms: normal oxygen O<sub>2</sub> consisting of two O atoms, and ozone O<sub>3</sub> consisting of three O atoms. In the presence of intensive UV light, normal oxygen splits to form single oxygen atoms. These atoms combine with remaining oxygen to form ozone molecules. This crucial step led to the formation of the ozone layer one billion years ago. The ozone layer is very effective at absorbing UV rays and acts as a shield, keeping out harmful UV radiation and making the evolution of terrestrial life possible. This changed the conditions of selection for all organisms on Earth.

#### *Cellular respiration – harvesting energy with the highest efficiency*

Another fundamental chemical process that has sustained life on our planet for hundreds of millions of years is cellular respiration, by which food molecules are converted into energy in the form of ATP, a high energy phosphate molecule used to store and release energy. ATP is produced in mitochondria, the cellular power plants, by a series of electron transfer reactions collectively called oxidative phosphorylation. A typical cell contains about 2,000 mitochondria, which occupy one fifth of its total volume.

Mitochondria are small cellular structures containing two membranes separated by a space. During oxidative phosphorylation, specialised enzymes “pump” hydrogen ions (H<sup>+</sup>), also called protons, into the mitochondrial space between the inner and outer mitochondrial membrane, thus establishing a proton gradient across the inner membrane. As the protons pass through certain enzyme complexes, the osmotic energy of the gradient is converted into chemical energy, in the form of ATP.

Perhaps energy technology in the 21<sup>st</sup> century can draw inspiration from these fundamental biophysical principles and replace the uncontrolled “burning” of energy sources with the discrete release of energy through efficient control mechanisms, such as those prevalent for millions of years in the evolution of life. A good example could be found in the developing technology of hydrogen fuel cells, which is based on electrochemical reactions and generates energy more efficiently than combustion.

#### **Inspiration through progress – clean and renewable energy sources**

As a first step in transforming the energy sector, alternative energy appears the obvious answer. The energy sector should find renewed inspiration in the many successes that have occurred in the last few decades of dedicated research and development. B.I.O. promotes a search for new solutions, the implementation of relevant policies, and socially conscious decision-making by governments, business sectors and individuals. Through our many educational programmes we are also hoping to inform all members of society on the various possibilities and concerns in this field so that they may make sound and educated decisions.

#### *Biomass and biofuels*

The environment has always provided a variety of options for alternative and renewable energy sources. Some alternatives have been used for years and others are still being developed. For example, biomass energy that has been used in developing countries is becoming increasingly common in industrialised countries as well. The term biomass refers to any organic matter available on a renewable basis and includes agricultural crops, wastes and residues – wood, animal, municipal, and aquatic plants. Biomass can be used to produce electricity, transportation fuels, or chemicals, which can replace petroleum and other non-renewable materials in wood adhesives, moulded plastic, and foam insulation. Moreover, the

use of biofuels, such as ethanol, which can be mixed with gasoline, results in less carbon monoxide emissions from vehicles and has resulted in the design of advanced vehicles.

#### *Solar, wind, ocean, geothermal*

Considerable importance has also been placed on the research and development of clean energy sources, such as solar power and photovoltaics, wind, waves, geothermal energy, hydrogen and fuel cells. Sunlight, or solar energy, can be used directly for heating and lighting homes and other buildings, heating water, generating electricity, and for a variety of commercial and industrial uses. Wind, driven by the sun's heat, produces energy that can be captured with turbines and converted into electricity. Wind turbines function alone or can be connected to a utility power grid or combined with a photovoltaic system. Stand-alone wind turbines are used for pumping water and for communications. Some estimates have shown that wind can potentially provide around one tenth of the world's power. That would cut down dioxide emissions by a billion tonnes a year. Geothermal energy taps the Earth's internal heat to produce electricity and to heat and cool buildings. The ocean's tidal energy and wave energy, as well as the temperature difference between surface and ocean depths, can be used to produce electricity.

#### *Hydrogen fuel cells*

In the realm of hydrogen and fuel cell technology, advancements have opened the door to the development of a quiet, clean source of energy. Fuel cells utilise the chemical energy of hydrogen to produce electricity and thermal energy. Water is the only by-product emitted if fuel cells use hydrogen directly, and they can achieve higher efficiencies than the internal combustion engine. Current fuel cell efficiencies are in the 40% to 50% range, with up to 80% efficiency reported when used in combined heat and power applications. We should celebrate these achievements and find inspiration in them in order to persevere in our efforts.

### **Towards a renewable energy economy – redefining the concept of profit**

Governments and international institutions are encouraging research and development in the energy sector through both the financing of projects and the implementation of policies that facilitate this work. There are energy policy options that favour zero-carbon fuels that simultaneously reduce energy dependency and carbon dioxide emissions. Market prices for renewables are currently higher than the cost of traditional energy, but this is in large part because environmental and other costs are not reflected in the price of fossil fuels. Further efforts to decrease energy intensity would also contribute towards lowering price risks from world markets through lower import dependency, as well as towards reducing carbon dioxide emissions. Areas for improving energy intensity, i.e. tackling energy demand without compromising economic growth, include the building and transport sectors. Moreover, as businesses begin to utilise renewable energy in areas such as heating and cooling, vehicles, lighting, and hot-water systems, market demand for renewables is resulting. Companies that generate their own renewable energy are provided protection from fluctuations in the energy market and from crises over dwindling supplies.

A large-scale embrace of alternative energy is rapidly creating new jobs in the design, manufacturing, installation, servicing, and marketing of new technologies and products. Jobs also arise indirectly from the supply of raw materials, transportation, equipment, and professional services. In the transportation sector, the use of hydrogen and fuel cells are creating a new concept of car technology and resulting new areas of research and development. Advancements in solar energy and the use of environmentally friendly construction materials have led to the creation of green buildings. Some green buildings are now completely and solely powered by solar thermal and electric energy that operates all systems, including heating, cooling, lighting, computers, water pumps, and office equipment.

In response to the growing interest and imminent need for renewable energy, a new global concept of the “hydrogen economy” has emerged. Hydrogen also opens the door to the development of other intermittent renewable energies, such as wind, solar and ocean. These are all difficult to integrate into the present electricity supply system in which supply must respond immediately to demand. Their role in the hydrogen economy would enable the energy produced to be stored and could provide a market which would ensure the economic feasibility of these resources. Furthermore, reliability of the global energy supply would be improved along with availability of energy for any type of utilisation.

Bio-Environment	
Quality of Life	<ul style="list-style-type: none"> <li>• Health - Safety - Justice - Happiness - Co-existence with all forms of life. External and Internal Wealth - Micro-Environment - Macro-Environment</li> </ul>
Ethical Values	<ul style="list-style-type: none"> <li>• Diachronic Values for Society - New Criteria for Business Compatible with Quality of Life</li> </ul>
Legislation	<ul style="list-style-type: none"> <li>• National - Global - Bios Rights - Bio-Diversity - Global Warming - Ozone Depletion - Overpopulation - Poverty - Deprivation</li> </ul>
Macro and Micro-Economics	<ul style="list-style-type: none"> <li>• Time and Space Scale - Historical Perspective - Millennium Approach - Cleaner Production</li> </ul>
Bio-Diplomacy	<ul style="list-style-type: none"> <li>• Interdependence - International Cooperation - Third World Viewed as Partner</li> </ul>
International Commerce	<ul style="list-style-type: none"> <li>• Durable Development - Internalizing External Costs - Consumer Protection</li> </ul>
Governance	<ul style="list-style-type: none"> <li>• New Models of Participatory Democracy - World Referendum - Defense for Bios</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Biocentric Curriculum in Economics - Satellites in Education</li> </ul>
Media and Communications	<ul style="list-style-type: none"> <li>• Internet Communication Feedback - Satellite Diffusion of Information - Marketing</li> </ul>
Energy	<ul style="list-style-type: none"> <li>• Protection of Resources - Study of Bios Models</li> </ul>
Employment	<ul style="list-style-type: none"> <li>• New Opportunities for Employment in Bio-Environmental Protection - Green Salary for Unemployed</li> </ul>
Culture	<ul style="list-style-type: none"> <li>• Arts, Cultural Values, Traditions</li> </ul>

Corporations and entrepreneurs can work together to tackle the energy challenge. A grassroots mobilisation and public participation, on both the local and international levels, can enhance the establishment of bios-supporting energy strategies worldwide. Preserving the wealth and beauty of our natural resources, removing sources of pollution, securing the health of the Earth’s population, providing fair rules of trade, and guaranteeing equal educational opportunities for every citizen in the world is of genuine value to society. The concept of profit has to be redefined and encompass elements, which constitute a true gain for humanity: health, quality of life, culture, biodiversity, clean energy, secure and safe resources. A three-dimensional approach to economics, with the environment at the core of all structural and fundamental policies, would help to replace current fragmented approaches and focus every activity on a developmental framework that places people and the planet before profits.

**Green Salary and new employment opportunities in renewable energy**

It is in everyone’s long-term interest to build a society that enhances the potential of all citizens, based on initiatives for environmental appreciation and protection. Industrialisation and growth without concern for the environment will further marginalise disadvantaged groups in society and also seriously limit regional aspirations to prosperity, thus hindering efforts to fight poverty. Moreover, many young people are entering the labour market with few skills and even fewer opportunities for productive work.

This points to the urgency of developing a knowledge base to create opportunities for sustainable livelihoods. Sustainable employment in the field of alternative energy opens the possibilities for disadvantaged groups and youth to develop their employment potential and also creates new jobs and work opportunities. Moreover, the magnitude and urgency of addressing the global problems of unemployment and climate change suggest that a mutual solution may be available.

The creation of new jobs, particularly for the young, will not only help to regenerate the world's economies, but is an ethical imperative in a responsible society. Rather than being provided with conventional benefit payments, the unemployed could be offered the opportunity to work in some area related to alternative energy and the environment, and thus earn a "green salary" for their contribution. No structural economic changes are necessary if governments already have an unemployment strategy in place. The opportunities for new jobs abound in the renewable energy industry, in emerging technologies, green buildings, transport and infrastructure, resource efficiency, as well as more general environmental projects, including creative initiatives. As an added incentive, companies and industries can be granted tax cuts and other financial privileges for engaging the unemployed in jobs that meet the basic standards of environmental responsibility, minimise environmental risks and promote the use of clean and renewable energy.

### **The bio-assessment of technology – bioethical responsibilities and the environment**

As our search for new energy technologies continues, we must carefully assess all of the advantages and disadvantages of recent developments to determine whether they pose any serious threats to public health and the environment, including the risk of accidents. Technology expands human potential, but can also have disastrous consequences if it proceeds without concern for its environmental impact. Only new technologies that prevent pollution, rely on clean and renewable energy, and encourage resource conservation should be further researched and pursued. Moreover, progress in every field of human endeavour should be evaluated in terms of its contribution to environmental appreciation and protection. Policy on industry-related risks, scientific research in and development of clean energy, and nuclear safety and radiation protection, must be implemented globally.

Solutions to the problems of global warming and climate change, and the development and implementation of environmentally sound energy alternatives, require a range of different disciplines and skills, and, in particular, imagination and innovation. The "bio-assessment of technology," as promoted by B.I.O. since 1985, involves a thorough re-evaluation of priorities and the development of initiatives that respect and help the environment. Based on a thesis, antithesis, and synthesis of new values, these initiatives include environmentally friendly technology and energy, which should always be carried out with the aim of protecting all forms of life on our planet.

Pollution and environmental degradation do not respect international treaties and state boundaries. Informing the public and soliciting active participation in the debate about the environment is a crucial and urgent task if destructive trends are to be curbed. Establishing codes of environmental ethics for all professions and assessing technological developments on the basis of environmental criteria would contribute to the elevation of our ethical responsibilities towards the environment into everyday decision-making and lead to greater respect for the gift of life, the most precious possession on our planet. The bio-assessment of technology can inspire new values in society and help to place respect for the environment at the core of every academic and professional initiative.

We are interdependent with the whole natural environment, with all forms of bios. If bios is systematically destroyed in the name of progress, there can be no gain. It is our unquestionable ethical responsibility to assess human progress in the context of partnership, equity, and balance among all forms of life on our planet. The ethical foundation found in medicine, stemming from the oath of Hippocrates, needs to be expanded into other fields. The anthropocentric view of the world, in which the environment was seen as existing for the benefit of humans, needs to be supplanted by a biocentric view, which promotes respect for all forms of life. Codes of ethics, which incorporate these values, should be developed and broadly adopted in the scientific and engineering fields, including the alternative energy sector, as well as in business. This is crucial for life to survive.

## **World Referendum and a Bank of Ideas for the promotion of alternative energy**

Access to knowledge with modern communication technology enables global participation in the race to save the environment, empowers sustainable development, and increases awareness of our bioethical responsibilities. As first proposed by B.I.O. in 1992, communication technology can help humanity to dynamically voice its concern over environmental deterioration and all its imminent dangers, such as climate change. A “World Referendum” for every citizen on the planet to simultaneously cast a vote for the protection of the environment, would result in immediate mobilisation for the reversal of destructive trends and would guarantee a brighter future.

The global effort for the promotion and implementation of renewable and alternative energy can be enhanced with the participation of every member of society. To be effective in responding to the energy challenge, it is essential to stop reinventing the wheel. Owing to poorly coordinated efforts, valuable time and resources are wasted while damage to the environment persists. The knowledge and technology to prevent further destruction are available, but they have to be disseminated more efficiently. An electronic “Bank of Ideas,” where any interested party may contribute information or opinions concerning alternative energy, can promote an expedient transfer of know-how that will help to harness pollution and environmental deterioration and put an end to wasteful and unethical practices.

The role of the media in the realisation of these initiatives is of the essence. The media coordinate and correlate information, thus shaping and inspiring social and cultural attitudes. Global warming and climate change receive great attention from the media and, therefore, the urgency of implementing alternative energy policies is reaching millions of people worldwide. The power of the media in influencing public opinion, as well as the infrastructure available, can make the implementation of the World Referendum a reality in every corner of the world. Similarly, through the “Bank of Ideas,” the voice of each citizen can be invaluable in guiding world leaders and policy formers to make long-term and enlightened decisions concerning alternative energy.

## **Bio-diplomacy – an international effort in defence of the environment**

Environmental pollution is an international problem and a matter of vital importance for all. Efforts to protect the environment cannot be fruitful in isolation, therefore alternative energy policies must be pursued as part of a concerted worldwide effort for the protection of bios. There are also some other issues to consider. Because traditional, non-renewable energy sources such as oil and coal are not freely accessible, energy security is becoming a global concern. In addition, energy can be found at the root of many environmental problems in developing countries. A shortage of access to energy is recognised as one of the great obstacles to development, impeding and disproportionately affecting the poor, who have traditionally the least access.

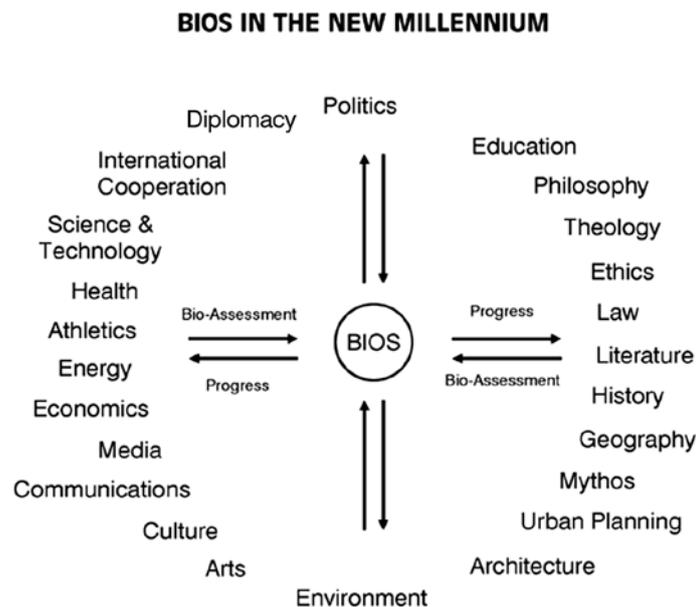
Renewable energy is cheap, abundant, and sustainable. Within the framework of “bio-diplomacy” – international cooperation in environmental protection – all nations can work together to promote the use of renewables globally. B.I.O. encourages every individual on the planet to actively engage in the search for new paradigms and to join environmentally committed legislators, scholars, educators and business leaders in influencing governmental regulation of energy issues around the world.

Bio-diplomacy is a concept pioneered by B.I.O. at a time when civic leaders, international organisations and the world community as whole had not fully realised the urgency of adopting common environmental policy as a priority. It focuses on the interdependence of all forms of life and calls upon diplomats and people of influence to engage in a collective endeavour in defence of the environment. Joint efforts to protect the environment can enhance international relations and act as a bridge between global impetus and decision-making at the national and local levels. Bio-diplomacy is an opportunity for the aspirations of sovereign states and civil society to converge in pursuit of long-term international environmental policy

and action. At the same time, bio-diplomacy actively supports efforts to maintain biological and cultural diversity and seeks to improve human relations and to attain the goal of world peace by replacing current diplomatic attitudes with a complete international and intercultural perspective.

### **Bio-education – the role of the International University for the Bio-Environment**

It is one of the basic goals of B.I.O. to sensitise and educate students, experts, policy formers and the general public on the importance of alternative energy as a vehicle for achieving a sustainable world economy. In this context, considerable effort has been given to the research and development of directions involving renewable and clean energy sources within the framework of the activities of the International University for the Bio-Environment (I.U.B.E.), an educational initiative launched by B.I.O. in 1990. The I.U.B.E. promotes bio-education and infuses existing educational institutions with environmental thinking. Through its numerous publications, conferences, seminars and other events, the I.U.B.E. encourages the incorporation of environmental concepts in every academic and professional field.



Bio-education uses the new options made available by technology to offer opportunities for information and education that can reach every citizen on our planet. B.I.O.’s e-learning programme in “Bio-Energy” places a wealth of educational material on renewable energy sources online, with the aim of presenting current concepts in clean and renewable energy, examining the new technologies and resources available, raising awareness of the urgency of removing the dependency on non-renewable resources and increasing understanding of the need for a global clean energy policy. The hope is that the course will stir new thinking concerning the importance of renewable and clean energy sources, provide comprehensive knowledge on the various issues and controversies involved in the development of a global energy policy and help to critically evaluate policies for the international management of renewable energy sources. More information on the course is available at [www.biopolitics.gr](http://www.biopolitics.gr)

### **A view to the future**

The break of the third millennium has coincided with major energy challenges: tackling the threats of climate change and global warming, meeting the rising demands for energy, and

safeguarding the security of energy supplies. These concerns are gaining ground mostly on economic considerations, but above all, decision-makers must realise that their choices in technology and policy will have a crucial impact on the fate of the environment and the continuity of life our planet. Life is in danger, and we urgently need an environmental vision to help us make the survival of bios our collective priority.

Energy production and environmental protection are not competing goals. Both can be achieved with new technology and a new vision. This vision can bring environmental concerns to the core of society, by setting out the challenges we face on the environment, the decline of conventional energy supplies and the need to reinforce policy with a view to the future. In this endeavour, the quality of energy resources must be kept in mind. This quality is not only defined by abundance, but also by accessibility, and impact on the environment and public health. The world's demand and consumption of energy continues to increase at a rapid speed. We must continue with our search for alternative sources of energy in order to promote the removal of the dependency on non-renewable resources and to achieve a sustainable world economy.

We cannot afford to wait for fluctuations in oil prices to spur our motivation. We must push ahead for many other reasons. The soaring cost of oil has always provided the incentive to find renewable energy sources. It is equally if not more important to consider the health risks, environmental degradation, and extinction of animal and plant life that are caused by pollution from current energy sources. We must continue our search to find technological solutions that reduce and resolve these problems.

Our common enemy is the destruction of bios, and we need to join forces to mount an adequate response to the environmental crisis. Time is running out, and international collaboration is key in securing the well-being and survival of future generations. Education through the International University for the Bio-Environment, public participation in the form of a World Referendum to save bios, awareness-raising and the involvement and mobilisation of individuals from all walks of life, are some of the initiatives launched over the past twenty years by B.I.O. in the struggle to protect bios.

Humanity has been given a final opportunity to respect the close relationship that exists between its actions and the environment. In order to promote equity and improve quality of life, we need a vision that can help us to set an international agenda for correcting the inequities of the past. Protecting and managing the global environment rationally will be the most challenging task for the new millennium. Technology has become infused in every field of human endeavour. Like a new Prometheus with sensitivity and prophecy, it has provided light and fire and has made possible the advent of a new era. This ability must be tempered with a solid base of fundamental values in order to lead to a better future. The current crisis in values is a great threat, not only to the environment but also to peace. This is why there is a pressing need to apply the vision of biopolicy to motivate every member of society towards the conservation of the environment and the fulfilment of a better life for all.

### *Harmony*

*With wings of the soul  
I touch the golden waves of infinity  
around, heavenly beauty like light  
sparkles rays with colours of flowers  
whispers the soil, awakens the earth  
not like a mother, just like a daughter  
of the cycle of wear  
and the infinite of the eternal  
the melody of the universe  
is surrounded by the rhythm of harmony*

A. Vlavianos-Arvanitis  
Oscillations, A Collection of Poems, 1983

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