

Biopolicy – Ethical Responsibilities for Rio+20

Professor **Agni Vlavianos Arvanitis**

President and Founder, Biopolitics International Organisation

10 Tim. Vassou St., Athens 11521, Greece Tel: (+30210) 6432419, Fax: (+30210) 6434093

e-mail: bios@otenet.gr www.biopolitics.gr

Summary: *In June 2012, world leaders will once again convene in Brazil to mark the 20th anniversary of the 1992 United Nations Conference on Environment and Development. This upcoming world summit, more widely known as “Rio+20” will give leaders a renewed opportunity to issue a focused document tackling the transition to a global green economy and to reform the international institutions responsible for the eradication of poverty and the promotion of sustainable development. For this momentous task to succeed, we have to base the structure of society on an ethical framework promoting the interdependence of human needs and environmental requirements. Biopolicy provides the needed vision and ethical guidelines to convert a growing public concern for the state of Earth into effective support for specific measures to address concrete problems, such as climate change, a declining resource base, pollution, desertification, poverty and conflict. This is our concerted ethical responsibility for the future.*

Biopolicy – strengthening global governance for sustainability

The 1992 Earth Summit in Rio was a milestone in international policy. It brought environmental issues firmly into the public arena and made it clear that world environment and development needs must be addressed together. Even though we are still lagging behind, the climate negotiations launched at Rio were a crucial step forward in the determination of legally binding conventions for the mitigation of environmental destruction and global warming, changing attitudes and stimulating environmental progress across the globe.

Today, people are aware of environmental dangers, but we still have not implemented the needed action. Conventional structures and approaches have not been effective and fast enough. But time is of the essence, and we must act now. Insatiable over-consumerism has led to a crisis in values and to the financial and environmental instability threatening our future globally. It is essential to realize that peace, health, education, job security, culture, safe natural resources, biodiversity, clean air, are a genuine profit for humanity. We have to rebuild our value system by placing as a priority the preservation of life, the beauty of our world. The task is both enormous and urgent.

Less than a year away, Rio+20 provides a new opportunity for a coordinated response to this challenge. To succeed in this effort, it is essential to lay the foundation for a vibrant green economy focusing on clean energy, the protection of the environment and decent jobs for all. Since its inception in 1985, the Biopolitics International Organisation (B.I.O.) promotes such a foundation based on biopolicy for the protection and appreciation of *bios*, all life on our planet. Biopolicy proposes new educational and economic paradigms, new legislative and institutional frameworks for environmental protection, and new defence strategies to ensure our planet's health and security.

The transition to a green economy and the strengthening of international governance – both key objectives for Rio+20 – cannot be effective without environmental security. Bio-defence to protect life and the environment must become a priority on the global agenda, and all nations need to channel their efforts to eliminate environmental threats and to preserve life and prosperity. With the help of the bio-assessment of technology, the life-supporting

dimensions of progress can be evaluated and retained, and technology can be guided towards building a safer, cleaner and greener world for all.

The role of education is vital, as it is only through education that innovation can be achieved. Bio-education, with the environment at the core of every human endeavour, can lead to new technology, new policy and new employment opportunities, which can create sustainable livelihoods. Bioethics and environmental preservation are intricately related, and a true appreciation of human life cannot evolve without a conscious effort to protect the environment and all other living creatures on our planet. The media are also essential in this effort, because they can raise the necessary global awareness of the urgent need for action and change.

Placing our world onto on a more sustainable path requires the right institutional framework. Governments cannot achieve sustainability alone and need to work with citizens, international agencies, and all stakeholders. People who suffer most from environmental catastrophes, border disputes, natural disasters, polluted or depleted natural resources rarely have a say in world affairs. A World Referendum, where every citizen can voice their willingness to save the environment and life on our planet, can stimulate a global response that will urge world leaders to rethink development and prompt a wide range of actions for socially and environmentally sustainable economic growth.

Green economy and bioethics

Bio-Environment	
Quality of Life	• Health - Safety - Justice - Happiness - Co-existence with all forms of life - External and Internal Wealth - Micro-Environment - Macro-Environment
Ethical Values	• Diachronic Values for Society - New Criteria for Business Compatible with Quality of Life
Legislation	• National - Global - Bios Rights - Bio-Diversity - Global Warming - Ozone Depletion - Overpopulation - Poverty - Deprivation
Macro and Micro-Economics	• Time and Space Scale - Historical Perspective - Millennium Approach - Cleaner Production
Bio-Diplomacy	• Interdependence - International Cooperation - Third World Viewed as Partner
International Commerce	• Durable Development - Internalizing External Costs - Consumer Protection
Governance	• New Models of Participatory Democracy - World Referendum - Defense for Bios
Education	• Biocentric Curriculum in Economics - Satellites in Education
Media and Communications	• Internet Communication Feedback - Satellite Diffusion of Information - Marketing
Energy	• Protection of Resources - Study of Bios Models
Employment	• New Opportunities for Employment in Bio-Environmental Protection - Green Salary for Unemployed
Culture	• Arts, Cultural Values, Traditions

Rio+20 is expected to propose development policy for a new green economy resulting in global prosperity for decades to come. For this task to succeed, we need to set firm guidelines to restructure our economies, curb unemployment, eradicate poverty, protect biodiversity, and promote clean energy, education, international cooperation and intercultural dialogue.

By focusing on the fundamental human right of living in a clean environment, every endeavour can contribute to the reversal of destructive trends and to the building of the necessary moral framework for a global appreciation of bios. Better public health, the alleviation of poverty and the conservation of biodiversity constitute a genuine profit for society. The application of bioethics in all societal sectors and professional and academic initiatives can ensure the continuation of life on our planet and respect for the rights of future generations.

The interdependence of interests is obvious. We need to forget the paradigms of the past where the neighbour was considered a dangerous “other” and where differences in culture or religion were a source of alienation and power games. We need to give priority to a new

dimension of profit; not profit in terms of money only, but also in terms of values and of ways of rebuilding society.

Small additions to past patterns are no longer sufficient. Economic growth with concern for goods and income only is not viable. By encouraging over-consumerism, we are running towards a cliff. It is time for health, education, natural capital, water, food, biodiversity, culture, intellectual sharing, productivity, peace and security to be quantified and to assume their rightful place in a *three-dimensional* approach to economic growth. If we take into account the cost of environmental catastrophes such as floods and earthquakes, as well as increased migration due to environmental deterioration, the integration of environmental issues into investment decisions is more urgent than ever.

We cannot discard the old system within a day, but we can make big steps by introducing a new scale for evaluating “quality of life” and for encouraging an economy where the harmony and beauty of life are truly respected and appreciated.

Green salaries

The mitigation of environmental degradation is an overwhelming global responsibility, but it has also created new opportunities for employment and economic growth by spurring the need for innovation and skills. Environmental improvement jobs have benefitted many economies by providing the work force and their families with money to spend, which is then recycled through the economy. The environmental projects established may require equipment and materials, which must be purchased and create opportunities for new markets to develop. The eventual improvement to the environment is itself an economic benefit, allowing for productive use of the restored environment for resource management, wildlife habitat, parkland or tourism.

The problems of environmental degradation and unemployment may appear, at first glance, to be unrelated. However, numerous opportunities exist for linking the two through the concept of “green salaries,” a proposal put forward by B.I.O. in order to promote employment that also improves the environment and curtails climate change, pollution, loss of biodiversity and resource depletion. The green salary can also help to elicit a positive feeling among the unemployed, in addition to providing new opportunities for work and aiding the attempt to lower unemployment levels. Moreover, businesses could be granted special tax deductions and other financial privileges when providing opportunities for the unemployed to be involved in environmental projects. The creation of green jobs, particularly for youth, is an imperative for regenerating the world’s economies. Sustainable employment opens the possibilities for disadvantaged groups and youth to develop their employment potential and also creates new jobs and work opportunities, which is an ethical imperative in a socially responsible green economy.

Too often, people view the protection of the environment as someone else’s job. They consider that industry or the government should have the responsibility for cleaning up pollution. If we are to succeed in reversing global environmental degradation, people everywhere must be imbued with a love and respect for the environment.

Bio-energy for combating climate change

The consumption of energy drives the engine of our urbanised society. However, the impacts of energy based on fossil fuels on the global environment and its contribution to climate change make it imperative that we develop more sustainable energy sources. Raging wildfires in Russia and deadly floods that recently swept across central Europe and Pakistan are signals that climate change is occurring sooner than expected. It is therefore more urgent than ever to devote greater resources to the development of new energy technologies, which do not pollute the atmosphere and which do not contribute to global warming. Biological models can serve as paradigms for clean and renewable energy.

Algae are tiny biological factories that use photosynthesis to transform carbon dioxide and sunlight into energy. Algae can grow in salt water, freshwater or even contaminated water, at

sea or in ponds, and on land not suitable for food production. Moreover, algae grow even better when fed extra CO₂, the main greenhouse gas, and organic material like sewage, and can be used in carbon sequestration programmes. Algae also produce hydrogen under certain conditions and can be used for the renewable and environmentally friendly generation of large quantities of hydrogen (H₂) gas.

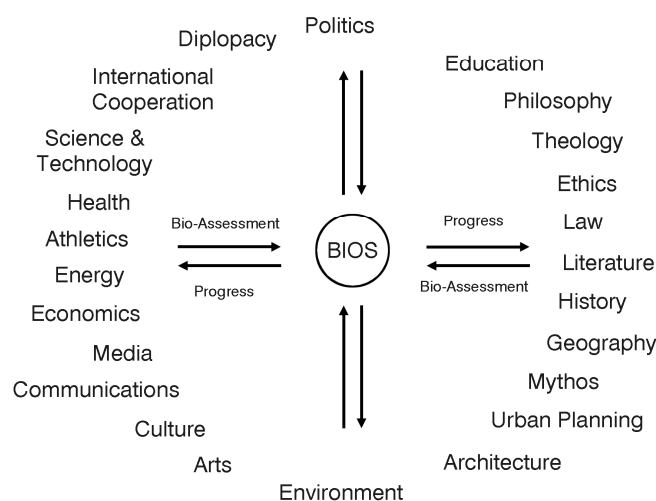
Hydrogen has unique potential for reducing today's dependency on fossil fuels. Hydrogen can be produced from renewable resources, such as water and agricultural products, eliminating the net production of CO₂ and helping to alleviate global warming. The transition to a hydrogen based economy begins with the commercial production of hydrogen-based fuel cells, where it is efficient and intrinsically clean, for all end-use applications. Additional research is needed in this area to reduce the cost of hydrogen production, solve hydrogen storage problems and in the longer term, integrate renewable energy sources into hydrogen fuel production.

Bio-education for a global ethical responsibility

The best way to protect our planet today and for future generations is to foster an environmentally aware and motivated society that values and nurtures the environment. This is the goal and vision of bio-education, which promotes environmental protection at the core of every academic and professional endeavour.

The purpose and responsibility of bio-education is to uplift the spirit of humanity and to reverse the crisis in values. By providing interdisciplinary models with environmental considerations in every speciality, bio-education seeks to apply environmental protection to every human endeavour. To advance this vision, B.I.O. launched the International University for the Bio-Environment (I.U.B.E.) in 1990. This educational initiative urges scholars, decision-makers, diplomats, business leaders, teachers and students to actively contribute to the development of an environmentally conscious society. Bearing in mind that universities should be, by definition, "universal," the I.U.B.E. promotes a model bio-education and acts as a catalyst to accelerate environmental awareness and impart a biocentric message to students and training professionals around the world. Leading educators and decision-makers infuse existing educational institutions with bios promoting values.

BIOS IN THE NEW MILLENNIUM



An essential vehicle for making bio-education available to as many individuals as possible, is the I.U.B.E.'s e-learning programme, a series of online environmental courses that have so far elicited the participation of representatives from 119 countries. The goal of these courses

is to address the urgent need to improve quality of life and to mobilise each individual to participate in protecting our common environment and its rich biodiversity. By using technological advances in this positive way, a uniquely rich source of information and training material can be placed at the fingertips of teachers, students and professionals around the world.

Bio-assessment of technology

The rapid rate of scientific progress unravels an ascending ladder of knowledge and a bridge which links the present to the future. Our frontiers are expanded and we are becoming increasingly aware not only of the enormous beauty and diversity of life, but also of the fragile interdependence that governs it. Awareness of our responsibility to defend this interdependence is the essence of bioethics.

Technology expands human potential, but can also have disastrous consequences if it proceeds without concern for its social and environmental impacts. Time and again, we have witnessed the emergence of new technologies which promised positive change, but which ultimately created greater problems than they solved.

A bio-assessment of technology, ensuring innovation and economic progress that support the environment would bridge the gap between technology and societal values. In a dialectic exchange of views, presenting a thesis and antithesis and then creating a synthesis of new concepts, ways of reducing negative environmental impact could be identified so as to truly benefit from the contributions of technological breakthroughs. Emphasis should be placed on the eradication of factors causing the decline of values in society, so as to harness environmental deterioration, species extinction, water and atmospheric pollution, climate change, soil erosion, acid rain and nuclear waste. This is a crucial responsibility for humanity if we are to develop technologies that respect and protect bios.

In our global effort to defend life, genetic diversity should not be overlooked. The true wealth of our planet is in the sheer breadth, richness and beauty of plants and animals. However, many of these species are being lost by resource plundering, and careless economic growth. B.I.O. proposes that we safeguard this wealth of life on our planet by creating *genetic banks* which preserve the genetic material of endemic plant and animal species and thereby protect biodiversity. The new technologies available in the field of genetics can be applied to preserving genetic variety in urban green spaces and stimulate wider interest and knowledge of the natural world. In rural areas, local genetic banks can preserve genetic material from endemic crop species. This can help to restore genetic variation in agricultural crops and result in pest-resistant, high-yield varieties which do not depend on chemical fertilisers. The preservation of genetic material can also be used in programmes relevant to human diseases and, therefore, have wide applications in medicine.

Bio-diplomacy and bio-defence to meet new and emerging challenges

Economic growth cannot be achieved on a planet ravaged by pollution, hunger and disease. The over-exploitation of environmental resources will not lead to long-term prosperity. What is urgently needed – and should be promoted by Rio+20 – is a common strategy, a global defence protocol against climate change, the loss of biodiversity and natural resources, environmental pollution, and the deterioration of land and water ecosystems. Just as all the parts of the human body need to function together in harmonious coordination to maintain a healthy individual, modern society desperately needs a common vision to secure a harmonious and peaceful future.

Bio-diplomacy – a concept pioneered by B.I.O. at a time when the world community had not fully realised the urgency of adopting common environmental policy – focuses on the interdependence of all forms of life. Bio-diplomacy 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. Within this framework, respect for human rights and the existence of multi-

ethnic and multi-cultural societies is an undeniable principle. International cooperation in environmental protection enhances the quality of life and strengthens efforts for peace and security.

Bio-diplomacy is an opportunity for the aspirations of sovereign states and civil society to converge in pursuit of long-term policy and action, enhancing a spirit of solidarity among states. It recognises that cultural differentiation constitutes the wealth of the body of humanity. Humanity is part of the overall body of bios, where DNA, the genetic code for every living organism, is the link connecting all forms of life. Environmental threats are international problems. Trees, the source of oxygen on our planet, can be considered the “lungs” of the body of bios. When a person’s lungs are damaged, the entire body suffers. Similarly, the widespread destruction of trees and forests that we are seeing today has drastic implications for the health of our entire planet. The required solutions entail the development of bold plans of action for international co-operation. Nations must declare war on environmental destruction and abuse. Foreign policy should shift from a fragmented, competitive framework to a vision of unity and interdependence. Bio-diplomacy seeks to improve human relations and attain the goal of world peace by replacing current diplomatic attitudes with a comprehensive international and intercultural perspective.

Re-channelling defence infrastructure

B.I.O. believes that the greatest challenge for the 21st century will be the permanent reconfiguration of defence infrastructure into programmes for the defence of the planet. The nations of the world must stop investing in instruments of destruction and begin investing in instruments of peace for the protection of our common environment. Competition to find better methods to destroy life, should be replaced with cooperation to find ways to save it. Time is of the essence, and this new vision is urgently needed.

National defence is a major priority among most nations of the world. A substantial portion of national budgets is committed to the maintenance of armed forces and the acquisition of weapons, such as highly sophisticated fighter aircraft, warships, submarines and missiles. Globally, about 10% of central government budgets are devoted to defence.

The environment, as a common point of reference, can bring all peoples of the world together, in a state of harmony and the absence of war. The conversion of war regimes to programmes for the preservation of the environment would guarantee a better future. Such a programme would not have negative economic effects, but rather, it would stimulate the global economy and provide jobs, since existing defence industries would be re-tooled into “defence-for-life” industries. Existing defence manpower and equipment can be adapted for peaceful tasks such as reforestation, water resource clean up, soil erosion recovery, protection of the ozone layer and de-contamination of areas affected by nuclear radiation. These problems represent real threats to the continuation of life on our planet, and no human resource should be spared in the effort to contain them.

The military offers a disciplined and trained source of manpower, readily available equipment such as road vehicles, ships and aircraft, communications and transportation capabilities, trained medical staff and logistics like tents, food and blankets. It has engineering capabilities and can work on civil projects, such as building or repairing roads, hospitals and schools. This resource has been already used to respond to natural disasters and to provide humanitarian assistance in areas ravaged by poverty and disease. In the same way, the military can apply its resources and know-how to work on projects of environmental restoration, including reforestation, erosion control, habitat and species protection, tree-planting, bringing fish back to the oceans, and cleaning up contaminated waters and soils.

Bioethics – strengthening the institutional framework for sustainable development

The pressing problem of our time concerns the fate of the environment, currently endangered by human arrogance, a problem with a strong ethical dimension. As human beings, we depend on all other forms of life on Earth. How, then, can we reconcile our

existence with the rapid deterioration of the environment? In order to achieve the attitudinal changes desired, the intrinsic unity of human and non-human life must be emphasised. This effort has to go hand in hand with institutional support and coordination, in order for international environmental agreements to be efficiently implemented and for national and global environmental policy-making to be enhanced. Ethically committed individuals, who can challenge traditional notions of governance with progressive participatory techniques through multi-stakeholder dialogue, systems thinking, and inclusive cross-cultural processes, are also instrumental in this process.

These elements, however, are like the branches of a tree. Without the right ethical and legislative framework, the tree cannot bear fruit. This framework can be provided by an International Court of the Environment, an initiative that has always been supported by B.I.O. In this context, B.I.O. has emphasized that, instead of relying on a punitive function, it is essential for an International Court of the Environment to develop as an institution that can provide new guidelines and set standards for international cooperation and understanding by overcoming the negative prototypes of the past. A beacon, conveying the needed values to help society put an end to the crisis that has resulted in our economic and environmental downfall and to empower a new structure of hope.

World Referendum – closing the gap between the rich and poor

Environmental and economic threats are growing because enlightened leadership is in scarcity in the world today. Effective environmental governance can spur environmental and economic progress by creating the context for change. Strong international environmental governance is important in preventing conflict, restoring peace, and building a society that can resist destructive tendencies. With the tools made available by modern technologies, governments everywhere can better focus on the true needs of their citizens.

Breakthroughs in the field of information and communication technology provide the opportunity for the public to be actively involved in issues concerning our daily lives and to be able to cast a vote through the internet and other communication link-ups, which can make immediate feedback possible from any corner of the globe. This will allow opinions to be actively expressed, so that politicians will no longer be able to delay or go back on their responsibilities.

It is the purpose of the B.I.O. World Referendum, first proposed in 1991, to transcend national boundaries and bring the world together in a common cause. In today's complex society, nations seldom share priorities. Climate change and other environmental concerns are possibly the only issues that are relevant to all the nations of the world. Furthermore, environmental degradation and resource depletion are often the impact of extreme poverty on the planet. A simultaneous electronic ballot on saving bios is a brilliant opportunity to demonstrate that, as citizens of the world, we can all – both rich and poor – agree on safeguarding the Earth for the generations to come.

Decisions on our common future should no longer rest solely on world leaders, who can evade or even obstruct meaningful change. Every individual, whether poor, underprivileged or not, can and should be involved. By giving priority to individual voices to be heard, the World Referendum can elicit the personal involvement of every citizen in the race to save the environment and help to bridge the gap between the rich and poor.

Building a “green” society – the ultimate ethical challenge for Rio+20

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

Following in the footsteps of previous Earth Summits, Rio+20 will again search for solutions to poverty, war, and the growing gap between industrialized and developing

countries. Concerned educators, leaders and decision-makers, who see the need for new mechanisms to protect the environment and ensure sustainable development, will convene to discuss the building blocks for change. The building blocks for a strong, effective, participatory and inclusive governance framework for sustainable development. A “green society” of security and transparency, where bios is valued over greed and where peace and harmony replace discord and destruction, helping us understand and value the multiple links between the environment, the economy and the future development of society.

Decisions on our common future should no longer rest solely on world leaders, who can evade or even obstruct meaningful change. Every individual can and should be involved. An important challenge for Rio+20 is to engage people everywhere much more directly and deeply in the process and move them to take action in their own communities and lives. By giving priority to individual voices to be heard through a World Referendum, we can encourage the participation of every individual and every profession in the race to save the environment.

The clock is ticking. Can we hear it and act now, or will we face the continued decline in our environment and quality of life? The pursuit of narrow self-interest has resulted in a global crisis which threatens world peace, as well as the natural environment and human prosperity. We urgently need to change these trends by building a responsible and sound economy that can lead humanity to a brighter future. A bios-promoting vision that places the ethics of bios at the heart of societal structure can provide the necessary framework to achieve a world in which the gift of life is truly appreciated.

The need for action is now. Climate change is accelerating desertification, plant and animal species are disappearing from the earth at unprecedented rates, human populations are being displaced and driven to poverty and disease, the credit crunch is affecting consumers’ environmental efforts across the globe. Humanity can no longer afford to disregard the close relationship between its actions and the environment. Meeting today’s challenges requires new ways of stimulating creativity in politics and policy-making, in technology, industry and commerce, in education and the arts, and in social and community development. The widespread adoption of environmental thinking is the only way to alleviate economic instability and create a green society of hope. This should be the ultimate challenge for Rio+20.

Bibliography

1. Vlavianos-Arvanitis A. (1985) *Biopolitics. Dimensions of biology*. Biopolitics International Organisation, Athens, 16 pp.
2. Vlavianos-Arvanitis A. (1999) *Protecting the environment and ensuring the continuity of bios – a priority policy for the millennium*. In: A. Vlavianos-Arvanitis and L. Kapolyi (eds.), *Biopolitics – the bio-environment VII. The Budapest Sessions*. Biopolitics International Organisation, Athens, pp. 12-28
3. Vlavianos-Arvanitis A. (1989) *Biopolitics. The Bios Theory*. In: A. Vlavianos-Arvanitis (ed.), *Biopolitics – the bio-environment II*. Biopolitics International Organisation, Athens, pp. 17-31
4. Vlavianos-Arvanitis A. (2001) *Biopolitics – bio-culture. A millennium vision for peace*. In: A. Vlavianos-Arvanitis (ed.), *Biopolitics – the bio-environment VIII. Racing to Save the Environment*. Biopolitics International Organisation, Athens, pp. 15-40
5. Vlavianos-Arvanitis A. (ed.) (1990) *Biopolitics – the bio-environment III. The International University for the Bio-Environment*. Biopolitics International Organisation, Athens, 683 pp.
6. Vlavianos-Arvanitis A. (1992) *Biopolitics – the bio-environment – Bio-Syllabus*. Biopolitics International Organisation, Athens, 151 pp.
7. Vlavianos-Arvanitis A. (1996) *Biopolitics: a new dimension of the concept of profit*. In: A. Vlavianos-Arvanitis (ed.), *Business strategy for the bio-environment III*. Biopolitics International Organisation, Athens, pp. 14

8. Vlavianos-Arvanitis A. (ed.) (2003) *Bio-Syllabus for European Environmental Education*. Biopolitics International Organisation, Athens, 880 pp.
9. Vlavianos-Arvanitis A. (2008) *Green Salaries: Reversing Unemployment through Environmental Protection*. Biopolitics International Organisation, Athens, 144 pp.

Author's Note: All of the above references are available electronically at www.biopolitics.gr