

## Environmental Science and Planet Earth: Realities and Facts — Education for a Sustainable Future —

This comprehensive, transdisciplinary Working Document for students, educators and the wider public includes statements, up-to-date scientific findings, reports, articles, research and study links by the Intergovernmental Panel on Climate Change (IPCC)\* the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and others concerned with the future of humanity, who provide experience, professional inter-generational observation and state of knowledge of the complex interrelated issues, including: The Sciences ♦ Climate Change ♦ Global Warming ♦ Safeguarding Indigenous Biodiversity Knowledge ♦ Educating Earth-literate Leaders ♦ Science of Human Behaviour ♦ Global Mental Health, Violence, Conflict and War, Youth Development ♦ Degradation of Environmental Resources ♦ Education for Conflict Resolution ♦ Religions of the World and Ecology ♦ Ecological Regeneration ♦ Equitable Sustainable Development ♦ Globalization ♦ Peace and Tolerance

### HOME – A Survey of the Planet and Solutions for a Sustainable World

Video, filmed in more than 50 countries, directed by Yann Arthus-Bertrand (2 min, click title)



Courtesy of the World Meteorological Organization (WMO)

*“There is but one ocean though its coves have many names; a single sea of atmosphere with no coves at all; the miracle of soil, alive and giving life, lying thin on the Earth, for which there is no spare.*”

David R. Brower (1912-2000), Founder, Earth Island Institute

\* IPCC was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). IPCC is the recipient, with former U.S. Vice-President Al Gore Jr. of the

### 2007 Nobel Peace Prize

**“for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.”**



**The Nobel Peace Prize Committee has made it clear that combating climate change is a central peace and security policy for the 21 century. The IPCC and former US Vice-President Al Gore have contributed significantly to elevating public attention on the issue of global warming while outlining the enormous risks, but also the enormous opportunities confronting the world.**

The role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of the risk of human-induced climate change, its potential impact and options for adaptation and mitigation.

**Public Awareness Education Programs (PAEP)** as one of the NGO members with consultative status at UNEP, and the **International Youth Network for the Advancement of the Sciences, Humanities and Global Bioethics (IYNet)** project have contributed in this process, building awareness and mutual understanding by widely disseminating the work of the IPCC, UNEP, UNSECO and others to young people internationally.

**This Canadian International Youth Letter is dedicated  
in commemoration of the life and contributions of  
Prof. Dr. Isam Kadhem Al Rawi (1949 – 2006)  
– Geologist, Environmentalist and Peacemaker –  
– and his colleagues' and students in Iraq, and internationally –  
(please see pages 14 to 19)**

### **Nobel Peace Prize Background**

**Bertha von Sutner, a novelist and radical pacifist, was the first woman recipient of the Nobel Peace Prize in 1905.** Though her personal contact with Alfred Nobel, scientist, inventor, entrepreneur, author and pacifist, had been brief, she corresponded with him until his death in 1896. It is believed that she was a major influence in his decision to include a peace prize among those prizes provided in his will.

In her Nobel lecture she recalls Alfred Nobel's request: "If you keep me in touch with developments, and if I hear that the Peace Movement is moving along the road of practical activity, then I will help it on with money."

Her Nobel Lecture includes an observation that still resonates with us all: ". . . one of the eternal rights is the individual's right to live. The strongest of all instincts, that of self-preservation, is an assertion of this right, affirmed and sanctified by the ancient commandment **"Thou shalt not kill."** It is unnecessary for me to point out how little this right and this commandment are respected in the present state of civilization. Up to the present time, the military organization of our society has been founded upon a denial of the possibility of peace, a contempt for the value of human life, and an acceptance of the urge to kill."

Bertha von Sutner wrote this over 100 years ago. Since then, little progress in education has been made in replacing the predominately faith-based, racial discord with harmony, reason, rationality and constructive dialogue. Of paramount importance is the maturing away from the cult of violence and war, and the glorification of war in the name of peace.

**Militarizing development, research and science and maintaining an arms economy for geopolitical, corporate and private gain has clearly become an unacceptable and economically unsustainable concept. In Iraq, it has terrorized and laid waste an entire civilization. The belief that the world should be made safe for democracy even if it takes force to do so, has set a dangerous and unwise example for hundreds of millions of young people world-wide. It has eroded confidence and trust.**

**Mutual understanding cannot be achieved by a mind-set that is trained to use force. War is not the answer. It is very likely that conversion or the demilitarization of science cultures and institutions will stimulate different directions and content in our knowledge systems. Re-channeling the obsession with militarism by deconstructing/dismantling war as an institution in society, establishing and maintaining an open, transparent and constructive dialogue, concerned with the future of humanity and ecological integrity, and actively dealing with the issues that matter through an Education for a Sustainable Future, is the better way.**

**Planet Earth, our global home, cannot afford any other way. There is no spare.**

**\*\* (Please view the Global Peace Index Report, page 40)**

In preparing this transdisciplinary Working Document inter-generational attention was given to UNESCO's role as the seedbed of the culture of peace, inscribed in the opening words of its Constitution of 16 November 1945: **"Since wars begin in the minds of men it is in the minds of men that the defences of peace must be constructed."** It emphasizes "that a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the peoples of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind."

## The Science of Human Behaviour – Psychology of Normalcy – Are We Sane?

*"Today, we are at a turning point in our history. We can no longer continue to accept tradition for tradition's sake. We can no longer go on playing the same old war games without eventually becoming conscious of the dimensions of the destruction involved. We have no other choice but to become fully conscious of the darker aspects of our own cultural heritage. Only then will we cease to pass them blindly on to future generations.*

*Victims of a devastating trauma may never be the same [again] biologically. It does not matter if it was the incessant terror of combat, torture, repeated abuse in childhood, or a one-time experience."*

Dennis S. Charney, M.D., Dean of Academic and Scientific Affairs, Professor of Neuroscience, Mount Sinai School of Medicine

*"War might be avoidable were more emphasis placed on the training to social interest, less on the attainment of egotistical grandeur."*

Lydia Sicher, M.D. (1890 – 1962), Psychiatrist, Editor, Journal of Individual Psychology

*"What is so deceptive about the state of mind of the members of a society is the "consensual validation" of their concepts. It is naively assumed that the fact that the majority of people share certain ideas or feelings proves the validity of these ideas and feelings. Nothing is further from the truth.*

*Consensual validation as such has no bearing whatsoever on reason or mental health.*

*Just as there is a "folie à deux" there is a "folie à millions." The fact that millions of people share the same vices does not make them virtuous, the fact that they share so many errors does not make the errors to be truths, and the fact that millions of people share the same forms of mental pathology does not make them sane."*

Erich Fromm (1900 – 1980) Social Psychologist, Psychoanalyst, Humanistic Philosopher

*"It is part of the general pattern of misguided policy that our country is now geared to an arms economy which was bred in an artificially induced psychosis of war hysteria and nurtured upon an incessant propaganda of fear."*

Douglas MacArthur (1880 – 1964) General of the Army (US)

*"...it is of vast importance that our people reach some general understanding of what the complications really are, rather than react from a passion or a prejudice or an emotion of the moment...It is virtually impossible at this distance merely by reading, or listening, or even seeing photographs or motion pictures, to grasp at all the real significance of the situation.*

*And yet the whole world of the future hangs on a proper judgment.*

*If this Nation is to remain great it must bear in mind now and in the future that war is not the choice of those who wish passionately for peace. It is the choice of those who are willing to resort to violence for political advantage."*

George C. Marshall (1880-1959)

former General of the Army and United States Secretary of State.

*We used to wonder where war lived, what it was that made it so vile.*

*And now we realize that we know where it lives . . . inside ourselves.*

Albert Camus (1913 -1960), author, philosopher, journalist, 1957 Nobel Laureate for Literature

*“All wars, with their turmoil, maiming and killing, wantonly destroy the soul and disfigure the memory of what constitutes a people’s very identity, in other words, its culture.*

*In Iraq, as a result of thirteen years of sanctions and the chaos that followed the recent armed conflict, eight thousand years of human history now hang in the balance.”*

**Mounir Bouchenaki, Assistant Director-General for Culture, UNESCO 2004**

*“Peace is only possible if men cease to place their happiness in the possession of things*

*“which cannot be shared,” and if they raise themselves to a point where they adopt an absolute principle superior to their egotisms.*

*In other words, it can only be obtained by a betterment of human morality.”*

**Julien Benda (1867-1956) French philosopher, psychologist**

*“As long as the child will be trained not by love, but by fear, so long will humanity live not by justice, but by force. As long as the child will be ruled by the educator’s threat and by the father’s rod, so long will mankind be dominated by the policeman’s club, by fear of jail, and by panic of invasion by armies and navies.”*

**Boris Sidis, Ph.D., M.D. (1867 - 1923) Psychologist, Physician, Psychiatrist, and Philosopher of Education.**  
From "A lecture on the abuse of the fear instinct in early education," Journal of Abnormal Psychology, 1919.



### **The Psychology of Normalcy (1954)**

<http://www.erich-fromm.de/data/pdf/1954a-e.pdf>

### **Sane Thinking in Foreign Policy**

*“A sane foreign policy depends on the sanity of the minds who make and support it. Our defense is as sound as our minds are sane.*

*Most people never question the sanity of thoughts which are shared by millions. Yet it is a peculiar fact that men, who in their private affairs think sanely and act morally, in public affairs seem to be swayed by insane modes of thought and to lose their ordinary moral scruples.*

*Yet errors shared by millions do not become truths, any more than immoral acts approved by millions become virtues.”*

<http://www.erich-fromm.de/data/pdf/1961e-e.pdf>

### **Are We Sane?**

*“The means have become ends. We produce in order to produce; we consume, in order to consume. We talk a lot about freedom, ideals, God—yet the fact is that our main interests are purely material and selfish, that we are in the process of becoming little automatons, each one a little cog in the vast organization machine of production and consumption. Our main interest is to produce things and to consume things—and in the process we ourselves become transformed into things. We make machines which act like men—and we become men who act like machines.”*

**Erich Fromm (1900-1980) Social Psychologist, Psychoanalyst, Humanistic Philosopher**

<http://www.erich-fromm.de/data/pdf/1965j-e.pdf>

**The work of Erich Fromm, author of The Anatomy of Human Destructiveness,**  
can be accessed at <http://www.erich-fromm.de/e/index.htm>

*"We are exploring and exploiting the qualities and capacities of our existing state—seeing oneself in the eyes of others, doing all that we can with what we have and are, and building social structures with the present human bricks. It is fun of a kind though it is getting pretty rough.*

*But whether we can understand much more than we do of the nature of things and what it is all about, without improving our individual quality, I am not all that sure.*

*Since reason governs so well when it understands the circumstances and has such a yearning to comprehend, our lack of understanding and our troubles must come largely from the limitations arising from immaturity. We are confused about almost everything, but our confusion is essentially human and is hardly the kind we share with the rest of the animal kingdom; it marks us off, so that there is much truth in the statement that man's toughest problem is himself.*

*The real trouble however is not that we are human but that we are not human enough, and the problem now is to define the essence of that humanity, to see what it means to be more human, and how we may possibly arrive at such a state. It is just as much a scientific problem as was that of realising atomic energy or the unsolved problem of discovering the nature and cure of cancer. The fact that human destiny is bound up with success or failure in this instance is beside the point. Nor does the inclusion of values make much difference.*

***The idea, common in scientific and other intellectual circles that science has nothing to do with values has been unfortunate and damaging, for it has tended to exclude the possibility of any scientific understanding of any human experience itself.***

*Science, apart from its practical exploitation, is not more materialistic than the humanities or religion and is just as much concerned with the ultimate meaning of things whether of matter or mind.*

*The scientific technique of putting questions in certain ways and expecting answers in certain terms is merely one of methodical expediency. There is no barrier beyond which inquiry cannot be pushed, simply because prior claims have been made, and if science enters the field of the spirit, so much the better for the scientists, especially those who like to be thought tough-minded.*

***The truth in any case, cannot suffer.***

*Bernard Shaw came to the conclusion that the trouble with human beings is that they never grow up. They mature so slowly that they are still irresponsible adolescents at the time of their deaths.*

***... so far as the rest of nature is concerned we are like a cancer whose strange cells multiply without restraint, ruthlessly demanding the nourishment that all the body has need of.***

***The analogy is not farfetched for cancer cells no more than whole organisms know when to stop multiplying, and sooner or later the body or the community is starved of support and dies."***

*Norman J. Berrill (1903-1996) Biologist, Embryologist, Author of Man's Emerging Mind (1955)*



***David Bohm [1917-1992, Quantum Physicist], in "The Nature of Collective Thought,"***  
*proposes that a "pool of knowledge" – both tacit and overt – has accumulated throughout human evolution. It is this pool of knowledge that gives rise to much of our perception of the world, the meanings we assign to events and indeed our very sense of individuality. Such knowledge, or thought, moves independent of any individual, or even any particular culture – very much like a virus. What is called for, says Bohm, is to begin to attend to the movement of thought in a new way, to look in places we have previously ignored. Using the analogy of a river that is perpetually polluted at its source Bohm points out that removing the pollution "downstream" cannot really solve the problem. The real solution lies in addressing what is generating the pollution at the source."* Lee Nichol, Peter M. Senge, MIT



***"Peace cannot exist without equality; that is an intellectual value desperately in need of reiteration, demonstration, and reinforcement.***

*The terrible conflicts that herd people under falsely unifying rubrics such as "America," "the West" or "Islam" and invent collective identities for large numbers of individuals who are actually quite diverse, cannot remain as potent as they are, and must be opposed. We still have at our disposal the rational interpretive skills that are*

*the legacy of humanistic education, not as a sentimental piety enjoining us to return to traditional values or the classics but as the active practice of worldly secular rational discourse.*

*The secular world is the world of history as made by human beings. Critical thought does not submit to commands to join in the ranks marching against one or another approved enemy. Rather than the manufactured clash of civilisations, we need to concentrate on the slow working together of cultures that overlap, borrow from each other, and live together.*

*But for that kind of wider perception we need time, patient and skeptical inquiry, supported by faith in communities of interpretation that are difficult to sustain in a world demanding instant action and reaction.*

*Humanism is centred upon the agency of human individuality and subjective intuition, rather than on received ideas and authority. Texts have to be read as texts that were produced and live on in all sorts of what I have called worldly ways. But this by no means excludes power, since on the contrary I have tried to show the insinuations, the imbrications of power into even the most recondite of studies. And lastly, most important, humanism is the only, and I would go as far as to say the final resistance we have against the inhuman practices and injustices that disfigure human history.”*

Edward W. Said (1935-2003), Humanist, Literary Scholar

He wrote his last essay **A Window on the World** in 2003, just months after the start of the pre-emptive, illegal war of aggression against Iraq by an international alliance of 49 nations. It has destroyed millions of families. It has degraded an 8000 year old World Heritage site and its environment. I has destroyed a civilization.

**Excerpts from IYNet Project Development: Core Issues, Key Considerations and Observations**  
<http://www.paep.ca/IYNET/IYNET2008devissues.pdf>

## **Advancing the Emerging Discipline of Global Bioethics**

**Developing an appropriate ethic and advancing moral progress does largely depend upon the growth of scientific, factual knowledge both of human behaviour and human affairs, and of the world in which we live.**

We are all inherently interconnected and interdependent. There is only one human race. The natural environment provides the basic conditions without which humanity could not survive. Biological diversity is the essential resource upon which the individual, families, communities, nations and future generations depend

Let us firmly link human development to actions where youth is informed by **global bioethics (i.e. life-ethics)**, a concept of ethics as a global integration of biology and values, on knowledge how to use knowledge for our shared humanity. An ethic of care, informed by an awareness of interdependence to guide human survival, ever mindful of ecology and environmental preservation. **Learning to locate a reflective understanding of care is the most adequate guide to the resolution of conflicts in human relationships.**

**Resolving environmental issues does not so much involve the need for novel technologies and new legislation as an entire change of collective consciousness.** This implies a major transformation in the order of the global society. Insufficiencies of education, violence, wars and conflicts leading to disruptions of value systems, migration, unequal access to goods, and lack of governance are considered to be among the primary contributing factors for the degradation of the environment and the slow progress of international peace.

The degradation of environmental resources mirrors the totality of mental, physical, economical, cultural, aesthetic and social circumstances that surround and affect the quality of peoples' lives. **Equitable, sustainable use of natural resources is a precondition for sound economic development and peace.**

**Of vital importance is preparing youth for the intellectual, moral and ethical responsibilities needed for a deeper understanding of interconnectedness, the respect for cultural diversity, and the safeguarding of biodiversity for achieving equitable sustainability to ensure the quality of life and dignity of future generations.**

**To build a stronger foundation for our shared humanity in the transformation from the production-consumption model of our industrial age to the emerging industrial age of sustainability and interdependence, we must advance not only a scientific-technological, but also an environmentally and inter-culturally educated human resource base.**

*"We find ourselves in the early steep climb of exponential change: per capita consumption of materials and energy; the demand for shrinking natural resources, most critical of which is fresh water; climate change with an impact on virtually every aspect of human welfare; the cost of war; and the destruction of ecosystems and species, which have hitherto sustained us scot free. These trends are interlocked and mutually reinforcing. We must study and address them as a unity.*

*Success would ensure a future for humanitarian civilization. Failure is unthinkable."*

**E.O. Wilson, Ecologist, Harvard University, 2008**

*"War-torn countries rich in natural resources face particular challenges in the stabilization and reconstruction of their societies, despite the apparent promise that natural resource wealth holds for peacebuilding and development. Where resource exploitation has driven war, or served to impede peace, improving governance capacity to control natural resources is a critical element of peacebuilding."*

**Carolyn McAskie, UN Assistant Secretary-General for Peacebuilding Support, 2007**

## **The Task of Education**

*"The task of education is to teach, at one and the same time, the diversity of the human race and an awareness of the similarities between and the interdependence of all humans. By teaching young people to adopt the point of view of other ethnic or religious groups, the lack of understanding that leads to hatred and violence among adults can be avoided. The teaching of history of religions and customs can thus serve as a useful benchmark for future behaviour."*

**Jaques Delors, Chair, International Commission on Education for the Twenty-first Century (UNESCO) 1996  
Former President, European Commission,**

*"To know and understand our own culture, we must learn to see it from the point of view of other cultures, comparing our customs and beliefs with those of other times and places.*

*With globalization now upon us, and external diversity on the retreat, it is becoming a matter of urgency to protect and preserve the internal diversity that each society owes to its constituent groups and subgroups, all of which develop differences that they consider highly important.*

*It should accordingly be possible at least to maintain and encourage cultural diversity to a degree by preserving the cultural characteristics of the different social groups: and in the same way as gene banks of plant species are created to prevent the impoverishment of biological diversity and the impairment of our earthly environment, we must, if we are to safeguard the vitality of our societies, preserve at the very least the living memory of irreplaceable customs, practices and know-how that should not be allowed to disappear.*

*For it is diversity itself that must be saved rather than the historical content that each epoch invests in it and which none can perpetuate beyond its own confines. Global civilization could never be anything other than the coalition at global levels of cultures, each of them retaining its originality."*

**Claude Lévi-Strauss, Ethnologist**

*. . . teachers are faced not simply with a mass of misconceptions and unexamined assumptions. They must engage in a fight to help the student confront and reject the verbal formulas and stock responses, to convert passive acceptance into active, constructive power. It is a fight against illiteracy and for the maturation of the mental processes, for the development of skills which once acquired will never become obsolete."*

**H. Northrop Frye (1911-1991) Literary Critic**

### **Educating Earth-literate Leaders**

Stephen Martin, University College Worcester & Open University, UK;  
Rolf Jucker, Department of German, University of Wales, Swansea, UK  
International Conference on Education for a Sustainable Future (2003)  
International Association of Universities and Charles University, Prague  
<http://www.unesco.org/iau/sd/pdf/Jucker-Martins.pdf>

**Leadership and Impunity: The Politics Behind the Traumatization of Children During Armed Conflict (2002)**

Nigel Fisher, President & CEO, UNICEF Canada (since 2005)

This article addresses some fundamental questions regarding the nature of identity-based armed conflict within states, conflict which abuses and consciously targets children and women, leaving them physically scarred and psychologically traumatized. It argues that the poor quality of leadership and the lack of accountability of those wielding military, economic or political power, are significant root causes of the abuse and traumatization of children, witnessed most graphically in times of armed conflict within states. Exploitative leaders benefit from a sense of invulnerability, of safety from any kind of accountability for their actions – in other words, from a pervasive climate of impunity.

[www.fsu.edu/~trauma/v8/Leadership.PDF](http://www.fsu.edu/~trauma/v8/Leadership.PDF)



**From Conflict to Peacebuilding - the Role of Natural Resources and the Environment  
Report by the United Nations Environment Programme, Editor: Silja Halle (Feb. 2009)**

State failure and civil war in developing countries represent some of the greatest risks to global peace and security. Since the end of the Cold War, at least eighteen violent conflicts have been driven by the exploitation of natural resources. While political and military issues remain critical, conceptions of security and conflict have broadened, with environmental degradation now seen as a significant contributing factor to conflict.

In this changing security landscape, a radical shift in the way the UN engages in conflict prevention, post-conflict reconstruction, and peacebuilding is required. Indeed, recognizing that environmental and natural resources can be a contributing factor to violent conflict only highlights their potential significance as tools for cooperation and confidence-building in war-torn societies. Consequently, this United Nations Environment Programme (UNEP) report aims to summarize current knowledge on the links between environment, conflict and peacebuilding through thirteen field-based case studies.

[http://www.unep.org/pdf/pcdmb\\_policy\\_01.pdf](http://www.unep.org/pdf/pcdmb_policy_01.pdf)



**Education and Conflict  
The Role of Education in the Creation, Prevention  
and Resolution of Societal Crises –  
Consequences for Development Cooperation**

Published by Deutsche Gesellschaft für  
Technische Zusammenarbeit (GTZ) GmbH – German Technical Cooperation –  
Health, Education, Social Protection Sector Project “Innovative Approaches in Formal  
And Non-formal Education” Sector Project “Education And Conflict Transformation”  
Responsible Dr. Rüdiger Blumör, Author Dr. Klaus Seitz,

<http://www2.gtz.de/dokumente/bib/05-0160.pdf>



**Natural Allies: Engaging Civil Society in UNEP’s Work**

With this second, 2009 edition, UNEP hopes this book will contribute to assisting civil society catalyse the political and social changes needed if we are to accelerate a transition to a resource efficient, low carbon, sustainable Green Economy in the 21st century.

[http://www.unep.org/civil\\_society/PDF\\_docs/UNEP-NaturalAllies-June2009.pdf](http://www.unep.org/civil_society/PDF_docs/UNEP-NaturalAllies-June2009.pdf)



**UNEP Training Resource Manual  
The use of Economic Instruments for Environmental  
and Natural Resource Management. First Edition 2009**

Economic instruments can help to achieve sustainable development by creating the financial incentives to change behaviour in favour of more sustainable consumption



and production patterns. UNEP's Economics and Trade Branch aims to enhance capacities of governments, policy makers, private sector decision makers, and civil society to develop, design and implement economic instruments that contribute to sustainable development and poverty reduction.

<http://www.unep.ch/etb/areas/econInst.php>

**This transdisciplinary Canadian International Youth Letter (CIYL)** is part of a new series with an emphasis on science and human affairs. Under the theme '**Exploring New Ways of Knowing – A Meeting of Minds, Science and Human Experience**' it is part of the **Public Awareness Education Programs (PAEP)** project of the **International Youth Network for the Advancement of the Sciences, Humanities and Global Bioethics (IYNet)**.

**The key objective of the new transdisciplinary IYNet project is to advance youth as a value-creating resource, building on scholarship, inter-generational dialogue and the commitment to global ethics. IYNet emphasizes the humanistic functions of science for our shared humanity in an interdependent world.**

The CIYL series incorporates cultural and youth studies as well as research-based information on the science of human behaviour, including the effects of war, destructiveness and violence on youth development, the advancement of the sciences and knowledge-building, global mental health and the environment.

Contributors **are scholars, scientists and engineers representing advanced education, the humanities and social sciences, as well as public life and industry.** Their concern for the future of humanity, their progressive ideas, scientific, cultural and social thought for the world and future generations help build and advance open, transparent and constructive dialogue towards universal values and action for a sustainable world community. **(cont'd on pages 36,37)**

### **The Barack Obama for America Campaign: The Science for Sustainability – From the Cult of War and Violence to a Sustainable Culture of Peace –**

**PAEP/IYNet has been working with the Barack Obama for America Campaign for the advancement of the sciences, the humanities and global bioethics since 2007, when Senator Barack Obama announced his candidacy for President of the United States. Particularly with youth in the USA, as well as internationally, highlighting pivotal issues that needed to be addressed:**

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**Climate Change ♦ Science for Sustainability – From the Cult of War and Violence to a Sustainable Culture of Peace ♦ Restoring Science to Its Rightful Place ♦ The War Against Iraq ♦ Stand for Change**

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Since 2000, eight years of neo-conservative policy in the United States, characterized by disdain for the sciences, multilateral organizations, and treaties, has done great harm to democracy, youth development and the advancement of science and thereby degraded the image of America and Western civilization, through disinformation, censorship, and surveillance. These politics have stifled and distorted the integrity of the scientific process in policy-making through the well-established pattern of threats, suppression of scientific findings (classifying them "false," "wrong," or "a distortion") and have thus compromised the morale and integrity of hundreds of thousands of academics, librarians, scientists, and teachers representing America's world-class governmental, educational and research institutions. The corrosive effects of this agenda are international in scope.

**The comprehensive scientific findings, reports, articles, research and study links of this Canadian International Youth Letter on Education for a Sustainable Future, the IYNet Project aims and objectives, Development Core Issues, Key Considerations and Observations (*please see links below*) were widely disseminated to students, educators and the wider public in the USA as well as internationally, including:**

- American Library Association (ALA)
- American Association for the Advancement of Science (AAAS)
- Boards of Education
- National Education Association (NEA)
- International Association of Universities (IAU)
- International Scientific Union (ICSU)
- ScienceDebate 2008 (USA)
- United Nations Educational and Scientific Organization (UNESCO)
- United Nations Environment Programme (UNEP)
- United States Students Association (USSA)
- and Others (representing an approximate active membership of over 30 million)

(The transdisciplinary PAEP/IYNet Project objectives and the Canadian International Youth Letters have proved to serve as curriculum resources for members of student and teacher associations)

**Iraq and Climate Change** (click title)

**Why is the Iraq War so closely tied to our failure in addressing climate change?**

Michael Klare, Five Colleges Professor of Peace and World Security Studies, Hampshire College, USA

**IYNet Project Development: Core Issues, Key Considerations and Observations**

*Incorporating the crucial lessons to be learned from the 2003 pre-emptive, illegal and immoral war of aggression against Iraq: The erosion of confidence and trust, the detrimental affect on youth internationally, global mental health, and the advancement of the sciences, knowledge-building and global ethics for our shared humanity.*

<http://www.paep.ca/IYNET/IYNET2008devissues.pdf>

**IYNet Core Issues Expanded Section, including:  
The Science of Human Behaviour: A Working Document  
The Effects of War and Violence on Children, Youth  
and the Advancement of Education, Science and Humanity.**

Including images of the war, 2003-2008 – Regarding the Pain of Others

*(Courtesy of Agence France Presse, Associated Press, Reuters, United Nations and Others)*

*In order to grasp the the terrible human anguish, the enormity of the destruction, the magnitude of the atrocities against Iraq, its people, particularly its children and youth, this segment includes images as a collection of the human cost involved. The images are meant to teach, to deepen awareness of the collective immaturity, the psychopathology and inhumanity involved in the cult of violence and of war.*

<http://www.paep.ca/doc/IraqImages-ChildrenandYouth.pdf>

**Selected images from “IYNet Core Issues” showing the psychological impact, particular on children and youth. These images and others were and are not readily accessible.**





Displaced families living in destroyed barracks in Baghdad.  
© AP Photo/Samir Mizban



© Ghaith Abdul-Ahad/Getty Images



400,000 Iraqis have suffered detention since 2003, including 6,500 minors and 10,000 women  
There are 26 official prisons and approximately 600 secret prisons.  
(AP Photo/Petr David Josek)



**Barack Obama is the inheritor of one of the bleakest legacies ever in a modern state. It has affected us all, globally. It is our common responsibility to end the cult of violence and war.**

The largely faith-based, pre-emptive and illegal war of aggression against Iraq for the control of natural resources, for geopolitical, corporate and private gain by **an international alliance of 49 nations**, and the accompanying media misinformation and disinformation about the world of Islam has set a terrifying and unwise example for hundreds of millions of youths worldwide. The dehumanization and humiliation of Islamic civilization, the lack of respect for human dignity and sensitivity, the large-scale attempt of enforced acculturation, has caused great harm and anger. This war is in serious violation of international law. It has betrayed and eroded young people's trust and mutual confidence in Western civilization and democracy. It has provided their minds with misleading directions for serious future reform, and has created a new generation of angry youths and radicalism worldwide. The war has uprooted and destroyed millions of families and degraded an 8000 year old World Heritage Site and its environment. The war against Iraq terrorized and laid waste an entire civilization. It has increased terrorism to regions where there was none before.

Fundamentalists, globally, are now becoming more eager to derail dialogue and compromise. The long-term consequences and intergenerational reverberations that Western civilization and the advancement of science, knowledge-building, global ethics, universal values, democracy and human rights for our shared humanity will be facing is incalculable.

Sofar, no critical analysis has been undertaken and no serious efforts are being made to hold those responsible who planned and committed this serious crime against humanity.

**On January 31, 2008 Senator Barack Obama announced:**

***"I don't want to just end the war, I want to end the mind-set that got us into war in the first place. That's the kind of leadership I'm going to provide as president of the United States."***

**We are privileged and honoured that President Barack Obama officially acknowledged PAEP/IYNet and its contributors' work, and has encouraged us to continue.**

#### **Globalization with a Human Face - Benefiting All**

*"However impersonal the forces shaping our world may seem, in practice they occur through the actions of people - as they live, work, think, choose and decide . . .*

*In many areas of life, the ethical ground is shifting beneath our feet due to the very rapidity of scientific and technological change, which is outstripping our capacity to devise appropriate ethical, political and social responses . . . The very nature of globalization requires the development of knowledge, values, skill and behaviours that enable young people to cope with complexity and change."*

**Koïchiro Matsuura**, Director-General, UNESCO

[http://www.paep.ca/en/CIYL/2003/doc/matsuura\\_globalization.pdf](http://www.paep.ca/en/CIYL/2003/doc/matsuura_globalization.pdf)

**Global Ethics - “Do We Still Have Universal Values?”** (click title)

*“We must firmly condemn the cold-blooded nihilism of attacks such as those that struck the United States on 11 September 2001. But we must not allow them to provoke a “clash of civilisations”, in which millions of flesh-and-blood human beings fall victim to a battle between two abstractions - “Islam” and “the West” – as if Islamic and western values were incompatible.*

*In the end history will judge us, not by what we say but by what we do.*

*Those who preach certain values loudest - such as the values of freedom, the rule of law, and equality before the law - have a special obligation to live by those values in their own lives and their own societies, and to apply them to those they consider their enemies as well as their friends. And we need to find within ourselves the will to live by the values we proclaim - in our private lives, in our local and national societies, and in the world.*

**Kofi Annan, Secretary General of the United Nations (1997–2007)  
Nobel Peace Prize Laureate 2001**



**The Science of Human Behaviour  
Crucial Lessons to be learned from the 2003 pre-emptive and  
illegal war against Iraq and its impact on youth, world-wide.**

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**The Devastation of Iraq’s Education System and Indigenous Knowledge Base:  
The Assassinations of Iraqi Academics and Intellectuals – A Summary**

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**This Canadian International Youth Letter is dedicated  
in commemoration of the life and contributions of  
Prof. Dr. Isam Kadhem Al Rawi (1949 – 2006)  
– Geologist, Environmentalist and Peacemaker –  
– and his colleagues and students in Iraq, and internationally –**



Dr. Al Rawi was professor of geology and environmental science, Earth Science Department, Baghdad University. A distinguished international academic, he also lectured on religious affairs, history, and religious extremism. He was a candidate for the position of higher education and scientific research minister in Iraq. Prof. Al Rawi was murdered by contracted assassins in front of his home while on his way to teach.

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◆ **A Note on History** ◆

**All history is a history of thought.  
History is our bridge from the past to the future. History matters.  
The great achievements of human history are our “heritage.”  
The cultural wealth of the world is its diversity in dialogue.**



Head of a Woman from Warka – 3100 BCE  
Iraq's most cherished antiquity

**In Islamic countries, history is not simply a story of past events but a living, continual experience to be carefully tended, its meanings, lessons and resentments preserved and nurtured.**



Erick Bonnier / Polaris

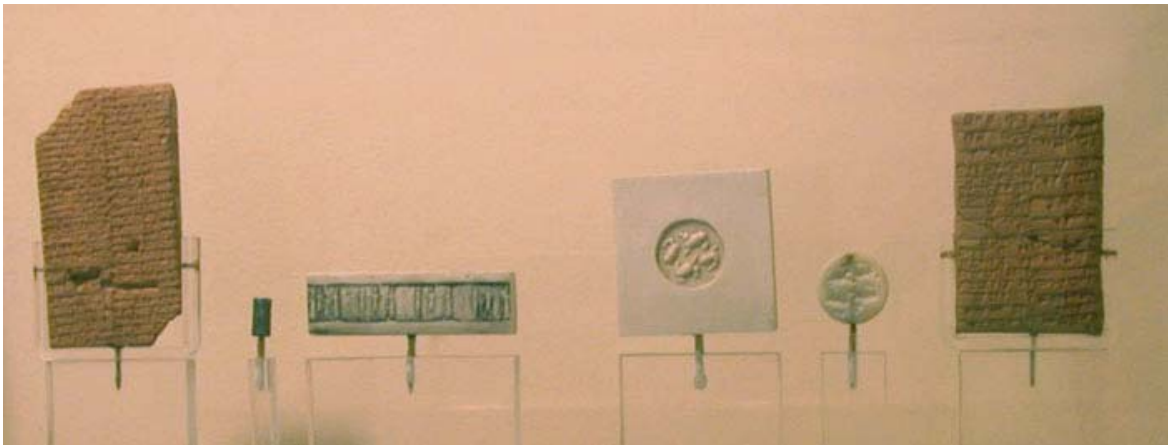


Photo © UNESCO

Relics from Iraq, dating from 3000 to 1700 B.C.E. Clay tablets (2036-1985 B.C.E.), hematite cylinder-seal (circa 1700 B.C.E.) and flat stone seal (3000 B.C.E.)  
Donation made by Iraq on the occasion of the 25th anniversary of UNESCO in 1971.

**Iraq represents an 8000 year old World Heritage Site.  
Iraq signifies the repository of intellectual and scientific growth.**

*Iraq, the "Land between the two Rivers", has been the cradle of major civilizations starting from the fifth millennium BCE, which marked the watershed between the prehistory and history of humanity. It has gifted the world with many of academia's pillars of wisdom, knowledge and science.*

*Iraq designates the foundation where human beings first built cities, organized complex states, formulated elaborate religious beliefs (including the Abrahamic religions of Judaism, Christianity, and Islam), invented writing, developed sophisticated visual and literary expression, and articulated measures for maintaining law and justice. The first written records, domestic laws, astronomy, mathematics, pharmacology, and the wheel are considered to have been developed at Ur, the earliest civil society in the world.*

*A thousand years ago, the Muslim World made remarkable contributions to science. Muslims introduced new methods of experiment, observation, and measurement. Ibn al-Haytham wrote the laws of the reflection and refraction of light and expounded the principles of inertia (long before Isaac Newton formulated his theories).*

*Ibn Sina wrote the Canon of Medicine (al-Quanun fi'l-Tibb), a 318-page medical text that was the basis for all medical teaching in Europe and the Middle East for hundreds of years. The translations of scholarly treatises made the banks of the Tigris and the Euphrates the forum of civilizations.*

**Eleanor Robson, Professor of History and Philosophy of Science, University of Cambridge.  
Farkhonda Hassan, Professor of Geology, American University, Cairo**



*"How little we know of the Arab world, of Iraq and its people, of the place that Baghdad – the Florence of the Middle East – has in the hearts and minds of Arab peoples. Iraq, the Cradle of Civilization – how could we have thought that Iraqis would not defend their country from invasion? I have taught about the peoples and cultures of the Arab world at Berkeley since 1960. I have been struck by the depth of ignorance about this large expanse of the world.*

**Laura Nader, Professor of Anthropology, University of California, Berkeley**

(for continuation click): [\*\*Iraq's History and Cultural Heritage - Science and Civilization: Research Papers and Educational Links for Advancing the Understanding, Study and Rebuilding of Iraqi Cultural Heritage, Education, the Sciences and Humanities\*\*](#)



In the 1980s, the US and Britain backed Iraq's ruthless dictator Saddam Hussein in the war against Iran, and supplied him with weapons, money, satellite intelligence, and even chemical & bio-weapon precursors. United States military advisors supported Iraqi forces and helped select targets for Iraqi air and missile attacks.

Prof. Al Rawi and many of his colleagues and students opposed this as a crime against humanity.

Defending their stand as a moral imperative, he was arrested and interrogated in 1985 for insubordinate behaviour and activities against the government of Iraq. He was sentenced to death.

The intervention of international Islamic scholars prompted Prof. Al Rawi's commutation of the death sentence and release from prison in 1987. Refusing to leave his country and its people, he continued teaching for several years at the University of Saladin in Irbi, bridging differences between Arabs and Kurds. Following the 2003 invasion of Iraq by the US/UK led international coalition forces he joined the Association of Muslim Scholars in Iraq, and founded the Association of University Lecturers of Iraq (AUL) with colleagues and students.

They shouldered the responsibility for upholding the academic community's human rights for autonomy, freedom of thought and expression, and resistance against the pre-emptive, illegal war of aggression and subjugation for geopolitical control of natural resources, for corporate and private gain.

***The US/UK led international coalition of 49 countries are parties and signatories to the United Nations Charter, of which Article II, Section 4, states, "All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state. ..." Iraq had not attacked the United States, Great Britain, or any of the other countries. The war against Iraq is in clear violation of international law, including the laws enshrined in the U.S. Constitution***



They resisted the international occupation with the same intellectual determination they used to oppose their own dictatorial government. They tried to uphold the dignity and courage of the Iraqi people who had worked for decades to establish their own, genuine democracy for an independent Iraq, from within Iraq.

Again, Professor Al Rawi refused to leave his country, his colleagues and students, in order to help protect not only the historical but also the environmental and ecological integrity of Iraq; to honour, defend, and safeguard Mesopotamia's cultural, intellectual and scientific heritage – its inestimable contributions to world civilization and the development of science over 8000 years. He witnessed the vast, deliberate destruction of Iraq's infrastructure, its museums, universities, schools, libraries and the obliteration of hundreds of thousands of irreplaceable documents; the exodus of thousands of Iraqi academics.

He witnessed the threats, violence, torture and terror, kidnappings and imprisonment waged against tens of thousands of Iraqi intellectuals, the custodians of Iraq's indigenous knowledge-base.

He bore witness to the systematic liquidation of that knowledge-base; the calculated fuelling of sectarian conflict, the state-ordered assassinations by death squads (trained and contracted from intelligence sources outside and inside Iraq), of over 3000 leading academics and intellectuals. They include university presidents and deans, biologists, chemists, engineers, geologists, journalists, judges, lawyers, librarians, media professionals, physicians, scientists, students, teachers from grade 1 to 12, artists, poets and writers. Thousands are unaccounted for.

A key source of national sovereignty is a given country's intellectual capacity. Iraqi academics are not simply the lifeblood of the educational system. They compose the intellectual class, which is the mind of Iraq, as well as the practical scientific, technical and administrative base necessary to guide Iraq towards independence, true democracy and development. The act of intentional destruction has deprived future generations of their rightful, inherent tangible and intangible intellectual heritage. It may in the future be classified as cultural genocide.

This disfiguration of Iraq's eight thousand years of human history, science and culture, the accompanying eradication of the material record – the memory of Iraq – of the world's first urban, literate civilization, is a monumental tragedy for the people of Iraq, its children and youth, the Arab Nations, for the world of Islam, the international community, our shared history, and humanity.

It is an irreplaceable loss for human civilization, for the world of ideas, science, and for world heritage.

There is no fit language to portray the humiliation, the terrible human anguish, and the terror of this war of aggression (planned since 1998). Prof. Al Rawi tried to keep a partial record of this state-ordered crime and was still able to forward the names of his colleagues who were murdered to The BRussels Tribunal in Europe.

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<http://www.brusselstribunal.org/academicsList.htm> ♦ <http://www.brusselstribunal.org/JournalistKilled.htm>  
<http://www.brusselstribunal.org/AlRawi.htm>

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**They were colleagues and friends advancing science and knowledge-building for our shared humanity. Professor Al Rawi and his colleagues strengthened the voices of conscience, in Iraq and internationally. We shall honour and remember them as defenders of humanity, as pillars of moral courage and dignity, for the people of Iraq – and for us all.**

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### ♦ The Human Cost - Our Common Responsibility ♦

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*UN Humanitarian Coordinators for Iraq, Dennis Halliday (1997-1998) and Hans von Sponeck (1998-2000), resigned in protest of the international policy of sanctions towards Iraq. The sanctions, imposed after Saddam Hussein ordered the invasion of Kuwait in 1990, were described as "genocidal" by Denis Halliday.*

*Hans von Sponeck stated:*

***"What has been done to Iraq in the name of democracy and freedom has no parallel in history."***

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***Urgent efforts in education must be made to prevent such massive crimes against humanity in the future. What is most difficult to witness is the socially accepted chilling indifference, apathy and silence afforded to the pain of others, their inconceivable depths of terror, suffering and despair.***

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Baghdad, October 25, 2002  
Credit: Thorne Anderson/Corbis Sygma



Bagdad, Juli 2005 © Ghaith Abdul-Ahad/Getty Images

The UNESCO and Education in Iraq Fact Sheet reports on 28 March 2003 that “The Education system in Iraq, prior to 1990, was one of the best in the region, with 100 per cent Gross Enrolment Rate for primary schooling and high levels of literacy for both women and men. The Higher Education, especially the scientific and technological institutions, was of an international standard, staffed by high quality personnel.”

- The United Nations University reported that since the occupation of 2003, 85 per cent of Iraq's institutions of higher education have been burnt, looted or destroyed. Hundreds of thousands of books, manuscripts, scientific and literary papers, and ancient documents—constituting a people's very identity—have been lost.
- Based on UN statistics, since 1991 the imposed sanctions and war against Iraq has caused 2.5 million avoidable (excess) deaths, including the deaths of 1 million children under the age of five. The sanctions brought malnutrition, disease, and lack of medicines. Iraqis became nearly completely reliant on food rations for survival.
- Iraq's population in 2003 was estimated at 28 million. Half of Iraq's population is under the age of 18.
- Iraq's population (2008) was approximately 23 million.
- Up to 1.5 million avoidable (excess) civilian deaths, mostly women and children, have occurred after the occupation of Iraq in 2003.
- Over 5 million civilian Iraqi refugees, 3 million have fled Iraq. Millions of families have been destroyed. (War and political violence cause not only direct psychosocial health problems in the exposed population, but additional psychological trauma in the refugees who attempt to flee the fighting).
- 5 million orphans, many of whom are homeless (estimated at 500,000), 2.3 million widows.
- Shell-shock, terror, trauma, post-traumatic stress disorders (PTSD), severe injuries and mutilation, widespread disease and chronic illness, are critically affecting the mental and physical health of an estimated 8 million women, children, and men. It will seriously impact the development of future generations. (*The psychosocial bombings and kidnappings did not exist before the occupation in 2003*)
- Nearly 350 children under the age of five die every day of diarrhea and pneumonia since 1990.
- Because of the indiscriminate use of depleted uranium bombing by the occupation the number of cancer cases and miscarriages has drastically increased. It will affect the health of Iraqis for decades.
- Four out of 10 Iraqis live under the poverty threshold
- 400,000 Iraqis have suffered detention since 2003, including 6,500 minors and 10,000 women. There are 26 official prisons and approximately 600 secret prisons.

- Over 3000 leading academics and intellectuals have been assassinated by organized intelligence death squads from outside and inside Iraq. The victims include university presidents and deans, biologists, chemists, engineers, geologists, journalists, judges, lawyers, librarians, physicians, scientists, students, teachers (public and high school) artists, poets and writers.
- The destruction of Iraq's ecological integrity, its biodiversity and wildlife is extensive.
- The scale of terror, despair, fear, trauma, suffering and grief, caused by this international atrocity against the people of Iraq, representatives of an ancient civilization, surpasses the much publicized toll of the 1994 genocide in Rwanda. Iraq's devastation is a mirror of the minds of those who committed it and a reflection of the educational, cultural and political environment that is steeped in a war economy.
- For Iraq US Coalition Statistics please view <http://icasualties.org/Iraq/index.aspx>

## Environmental Degradation in Iraq – An Outline

### Crimes of the Century: Occupation & Contaminating Iraq with Depleted Uranium

Dr. Souad N. Al-Azzawi, Associate Professor in Environmental Engineering, Iraq

<http://www.brusselstribunal.org/pdf/DU-Azzawi2.pdf>



### Depleted Uranium Radioactive Contamination In Iraq: An Overview

Dr. Souad N. Al-Azzawi, August 2006

Mamoun University for Science & Technology

<http://www.brusselstribunal.org/pdf/DU-Azzawi.pdf>

### Crime of the Century: Iraq's Occupation and Depleted Uranium Contamination

Prof. Dr. Souad N. Al-Azzawi

Assistant Professor in Environmental Engineering, University of Baghdad

[http://www.internazionaleleliobasso.it/public/contributi/Multiple\\_Impacts.pdf](http://www.internazionaleleliobasso.it/public/contributi/Multiple_Impacts.pdf)



### Desk Study on the Environment in Iraq

United Nations Environment Programme, April 2003

[http://www.unep.org/pdf/iraq\\_ds\\_lowres.pdf](http://www.unep.org/pdf/iraq_ds_lowres.pdf)



### Iraq-Environment: Eden in the Line of Fire

María Amparo Lasso, Editor - Tierramérica, Mexico City, April 2003

A recurring nightmare is troubling environmentalists worldwide: the firepower being used in the second Gulf War is devastating what little is left of the wetlands of Mesopotamia,

<http://ipsnews.net/print.asp?idnews=17293>



### Earth Day In The Shadow Of War: Militarism And Environmental Destruction Go Hand In Hand

Mark Engler, Nuclear Age Peace Foundation

[http://www.wagingpeace.org/articles/2003/04/23\\_engler\\_earth-day.htm](http://www.wagingpeace.org/articles/2003/04/23_engler_earth-day.htm)



### Iraq's War Disfigured Babies

Association of Muslim Scholars in Iraq, March 2009

<http://heyetnet.org/eng/reports/3964-iraqs-war-disfigured-babies-.html>

**A Cloud over Civilization:** (click title)  
**Corporate Power is the Driving Force**  
**Behind US Foreign Policy – and the Slaughter in Iraq** (2004)

*“Defense and weapons development are motivating forces in foreign policy. For some years, there has also been recognized corporate control of the Treasury. And of environmental policy. We cherish the progress in Civilization since biblical times and long before. But there is a needed and, indeed, accepted qualification.*

*We are accepting programmed death for the young and random slaughter for men and women of all ages. So it was in the first and second world wars, and is still so in Iraq. Civilized life, as it is called, is a great white tower celebrating human achievements, but at the top there is permanently a large black cloud.*

*Human progress dominated by unimaginable cruelty and death. Civilization has made great strides over the centuries in science, healthcare, the arts and most, if not all, economic well-being. But it has also given a privileged position to the development of weapons and the threat and reality of war.*

*Mass slaughter has become the ultimate civilized achievement.*

*The facts of war are inescapable - death and random cruelty, suspension of civilized values, a disordered aftermath. Thus the human condition and prospect is now supremely evident. The economic and social problems here described can, with thought and action, be addressed. So they have already been. War remains the decisive human failure.”*

**In his 1997 inaugural Senator Keith Davey Lecture, “The Socially Concerned Today,”** at the University of Toronto, Galbraith exposed the grievous flaws in the social, economic, and political landscape, and provided guidance for the socially concerned towards more reasonable, caring and humane policies for the future. He concluded:

*“Those who would reverse social action or allow it to stagnate in the present are not in conflict with the socially concerned; they are at odds with the great force of history.*

*We can have a measure of sympathy with them – for those who oppose us. We, not they, are in step with history. But we should also be aware of our own role. It was one not of invention but of accommodation. The world and its commitment to change being as they are, there will be continuing need for adjustment.*

*Our task – that of all who are in compassionate step with history – is never over.*

*While we resist those who seek to arrest or reverse such accommodation, we must be in step with further change.”*

**John Kenneth Galbraith (1908 – 2006), Economist, Scholar and Humanist**



**War: Realities and Myths**  
**Chris Hedges**

<http://www.paep.ca/en/CIYL/2007/doc/War%20-%20Realities%20and%20Myths%20-%20Chris%20Hedges.pdf>



**Children and Conflict in a Changing World**  
**Machel Study 10-Year Strategic Review** (2009)

The 1996 Machel Study challenged the world to recognize that "war affects every right of the child."

This follow-up report analyses the progress – and challenges – of the subsequent decade.

More than 40 UN agencies, non-governmental organizations and academic institutions – along with children from nearly 100 countries – contributed to this review, which was co-convened by the Office of the Special Representative of the Secretary-General for Children and Armed Conflict and UNICEF.

The Strategic Review is part of ongoing advocacy efforts to bring the issues of children in conflict to the forefront.

[http://www.unicef.org/publications/files/Machel\\_Study\\_10\\_Year\\_Strategic\\_Review\\_EN\\_030909.pdf](http://www.unicef.org/publications/files/Machel_Study_10_Year_Strategic_Review_EN_030909.pdf)

### **The Millennium Ecosystem Assessment**

The Millennium Ecosystem Assessment (MA) was called for by the United Nations Secretary-General Kofi Annan in 2000. The objective of the MA was to assess the consequences of ecosystem change for human well-being and the scientific basis for action needed to enhance the conservation and sustainable use of those systems and their contribution to human well-being. From 2001 to 2005 the MA has involved the work of more than 1,360 experts worldwide. Their findings provide a state-of-the-art scientific appraisal of the condition and trends in the world's ecosystems and the services they provide (such as clean water, food, forest products, flood control, and natural resources) as well as the scientific basis for action to conserve and use them sustainably.

<http://www.millenniumassessment.org/en/index.aspx>



### **Biodiversity in UNESCO (2007)**

Biodiversity encompasses the wide variety of genetic resources and species, as well as ecosystems and landscapes. Provision of food, fuel and fibre, shelter and building materials, purification of air and water, detoxification of wastes, moderation of floods and droughts, stabilization of climate, control of pests and diseases, as well as cultural and aesthetic benefits: these are just some of the many services that biodiversity provides to sustain life on earth. Yet, over the past decades, biodiversity has been lost at an unprecedented rate, mostly due to unsustainable human activities.

Species are disappearing at 50 to 100 times the natural rate, their genetic diversity is being eroded, aquatic and terrestrial ecosystems are being seriously degraded worldwide and their structure and functioning is increasingly altered.

Given the importance of biodiversity to basic human well-being, the reversal of biodiversity loss has become one of the major challenges that society faces today. Governments around the world have thus committed themselves to significantly reduce the current rate of biodiversity loss by 2010 in order to achieve the Millennium Development Goals.

<http://unesdoc.unesco.org/images/0015/001514/151402e.pdf>



### **UNESCO Universal Declaration on Cultural Diversity**

This is a legal instrument which recognizes, for the first time, Cultural Diversity as a “Common Heritage of Humanity” and considers its safeguarding to be a concrete and ethical imperative, inseparable from respect for human dignity. 2 November 2001

<http://unesdoc.unesco.org/images/0012/001271/127160m.pdf>



### **United Nations Declaration on The Rights Of Indigenous Peoples**

Adopted by the General Assembly, 13 September 2007

The Declaration on the Rights of Indigenous Peoples was adopted by a majority of 144 states in favour, 4 votes against (Australia, Canada, New Zealand and the United States) and 11 abstentions (Azerbaijan, Bangladesh, Bhutan, Burundi, Colombia, Georgia, Kenya, Nigeria, Russian Federation, Samoa and Ukraine).

<http://www.un.org/esa/socdev/unpfii/en/declaration.html>

**Society for Ecological Restoration International  
Welcome to the Indigenous Peoples' Restoration Network**

We believe that as a community of ecologists living in times of unprecedented ecological change, we can no longer afford the questionable luxury of working solely within our own traditions if we are to learn to live sustainably.

Conserving our options means, in part, conserving the diversity of ways of thinking about problems.

<http://www.ser.org/iprn/default.asp>



**United Nations Environment Programme  
Environment and Development**

**Green Economy Initiative**

<http://www.unep.org/greeneconomy/index.asp>

including:

**Global Green New Deal**

**Policy Brief – March 2009**

*Published by the United Nations Environment Programme as part of its Green Economy Initiative in collaboration with a wide range of international partners and experts.*

The world today finds itself in the worst financial and economic crisis in generations.

The financial crisis has triggered an unprecedented policy response: interest rates have been dramatically reduced, in some cases down to almost zero, and hundreds of billions of dollars in liquidity support and fresh capital have been provided to banking systems around the world.

Moreover, governments are planning to deploy fiscal resources on an unprecedented scale: at the time of writing, proposed fiscal stimulus packages totaled around US\$ 3.0 trillion globally.

The question arises: are these responses going to create a post-recession economy that is sustainable in the medium to longer term? And would it not be efficient and wise to invest now to build that future sustainability, whilst stimulating the economy for growth, jobs and tackling poverty?

[http://www.unep.org/pdf/A\\_Global\\_Green\\_New\\_Deal\\_Policy\\_Brief.pdf](http://www.unep.org/pdf/A_Global_Green_New_Deal_Policy_Brief.pdf)

**Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World**

United Nations Environment Programme Report 2008 (376 pages)

Changing patterns of employment and investment resulting from efforts to reduce climate change and its effects are already generating new jobs in many sectors and economies, and could create millions more in both developed and developing countries.

[http://www.unep.org/PDF/UNEPGreenJobs\\_report08.pdf](http://www.unep.org/PDF/UNEPGreenJobs_report08.pdf)

**The Economics of Ecosystems and Biodiversity  
An Interim Report (68 pages)**

Biological diversity represents the natural wealth of the Earth, and provides the basis for life and prosperity for the whole of humankind. However, biodiversity is currently vanishing at an alarming rate, all over the world. We are, so to speak, erasing nature's hard drive without even knowing what data it contains. The aim of the Convention on Biological Diversity (CBD) and its 190 Contracting Parties is to significantly reduce the loss of biodiversity by 2010. This is an ambitious goal which can only be achieved through the concerted efforts and combined strength of all sections of society.

We therefore need both national and international alliances between policy makers, science, the public and business.

[http://www.unep.org/greeneconomy/docs/TEEB\\_English.pdf](http://www.unep.org/greeneconomy/docs/TEEB_English.pdf)

### **People, Biodiversity & Ecology**

The 21st session of the International Coordinating Council of the Man and the Biosphere Programme (MAB-ICC) was held from 25 to 29 May 2009 on the Island of Jeju, Republic of Korea. The MAB-ICC decided to add 22 new sites from 17 countries to the UNESCO's World Network of Biosphere Reserves (WNBR) which now counts 553 sites in 107 countries.

#### **Four Interacting Foundations**

Discussions on sustainable development have a working rationale only when the four dimensions of development (*the economic, the environmental, the social and the cultural*) are discussed all together and in their interactions.

[http://portal.unesco.org/science/en/ev.php-URL\\_ID=4793&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=4793&URL_DO=DO_TOPIC&URL_SECTION=201.html)



### **Climate Change and Human Development – Videos**

The Human Development Report 2007/2008 warns that the world has less than a decade to avoid a climate change crisis that could bring unprecedented reversals in poverty reduction, nutrition, health and education to the world's poorest people.

<http://hdr.undp.org/en/reports/global/hdr2007-2008/videos/>



### **Human Development Report 2008**

Fighting Climate Change: Human Solidarity in a Divided World

The Report shows that climate change is not just a future scenario.

Increased exposure to droughts, floods and storms is already destroying opportunity and reinforcing inequality. Meanwhile, there is now overwhelming scientific evidence that the world is moving towards the point at which irreversible ecological catastrophe becomes unavoidable.

Business-as-usual climate change points in a clear direction: unprecedented reversal in human development in our lifetime, and acute risks for our children and their grandchildren.

What we do today about climate change has consequences that will last a century or more. The part of that change that is due to greenhouse gas emissions is not reversible in the foreseeable future. The heat trapping gases we send into the atmosphere in 2008 will stay there until 2108 and beyond. We are therefore making choices today that will affect our own lives, but even more so the lives of our children and grandchildren.

This makes climate change different and more difficult than other policy challenges.

**Full Report, including A Young People's Summary of the United Nations Human Development Report**

<http://hdr.undp.org/en/reports/global/hdr2007-2008/>



### **In Dead Water**

**Merging of Climate Change with Pollution, Over-Harvest, and Infestations in the World's Fishing Grounds.**

[http://www.unep.org/pdf/InDeadWater\\_LR.pdf](http://www.unep.org/pdf/InDeadWater_LR.pdf)

### **Mapping Human Impacts On The Biosphere**

<http://www.globio.info/>



### **Biodiversity and climate change: Our work**

United Nations Environment Programme

World Conservation Monitoring Centre

<http://www.unep-wcmc.org/Climate/>

**The Living Planet Report 2008**  
**World Wide Fund for Nature**

The recent downturn in the global economy is a stark reminder of the consequences of living beyond our means. But the possibility of financial recession pales in comparison to the looming ecological credit crunch. Whether we live on the edge of the forest or in the heart of the city, our livelihoods and indeed our lives depend on the services provided by the Earth's natural systems.

The Living Planet Report 2008 tells us that we are consuming the resources that underpin those services much too fast – faster than they can be replenished. Just as reckless spending is causing recession, so reckless consumption is depleting the world's natural capital to a point where we are endangering our future prosperity.

The Living Planet Index shows that over the past 35 years alone the Earth's wildlife populations have declined by a third.

<http://www.ourplanet.com/imgversn/footprint/Living%20Planet%20Report%202008.pdf>



**Our Planet**

United Nations Environment Programme's magazine  
 for environmentally sustainable development

<http://www.ourplanet.com/>

<http://www.unep.org/Tunza/>  
 (for Children and Youth)

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**Environmental Science and Planet Earth: Realities and Facts**

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**Environment for Development,  
 Introduction to Climate Change**

**Major Initiatives, Key Issues, Resources,  
 Background Information Guides,  
 Handbooks and Information Kits**

United Nations Environment Programme (UNEP)  
<http://www.unep.org/themes/climatechange/>

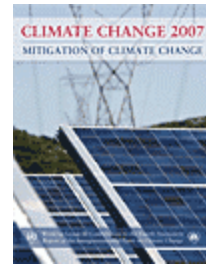
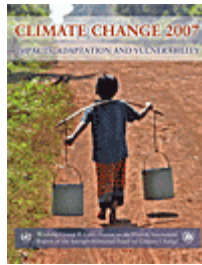


**Intergovernmental Panel on Climate Change (IPCC)**

Recognizing the problem of potential global climate change, the **World Meteorological Organization (WMO)** and the **United Nations Environment Programme (UNEP)** established the **Intergovernmental Panel on Climate Change (IPCC)** in 1988. The role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation.

The reports by the three Working Groups provide a comprehensive and up-to-date assessment of the current state of knowledge on climate change. The Synthesis Report integrates the information around six topic areas.





The Physical Science Basis Impacts ♦ Adaptation and Vulnerability ♦ Mitigation of Climate Change

<http://www.ipcc.ch/>



**IPCC confirms that cost-effective policies and technologies could greatly reduce global warming**

<http://www.unep.org/Documents/Multilingual/Default.asp?DocumentID=506&ArticleID=5578&l=en>



#### **Case Studies on Climate Change and World Heritage**

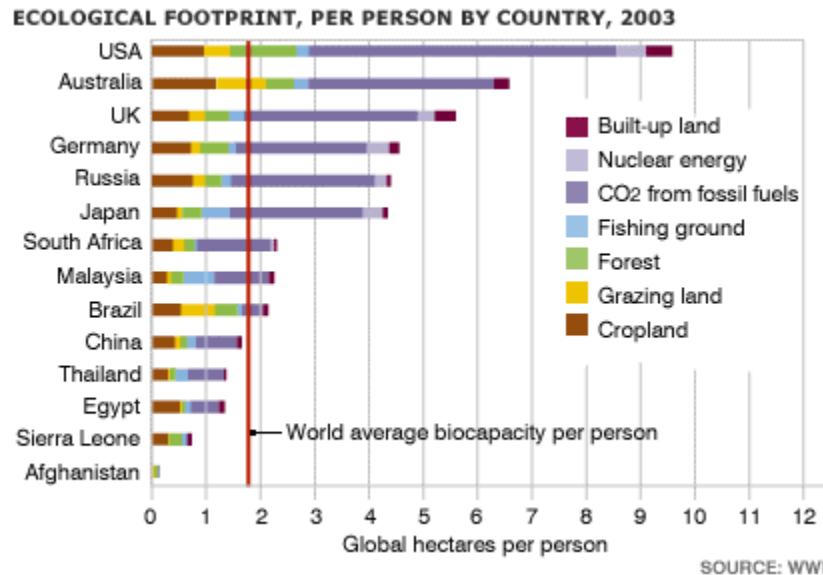
The threats posed by climate change to natural and cultural sites on UNESCO's World Heritage List are outlined. The report features 26 examples - including the Tower of London, Kilimanjaro National Park and the Great Barrier Reef - case studies that are representative of the dangers faced by the 830 sites inscribed on the World Heritage List.

[http://whc.unesco.org/documents/publi\\_climatechange.pdf](http://whc.unesco.org/documents/publi_climatechange.pdf)

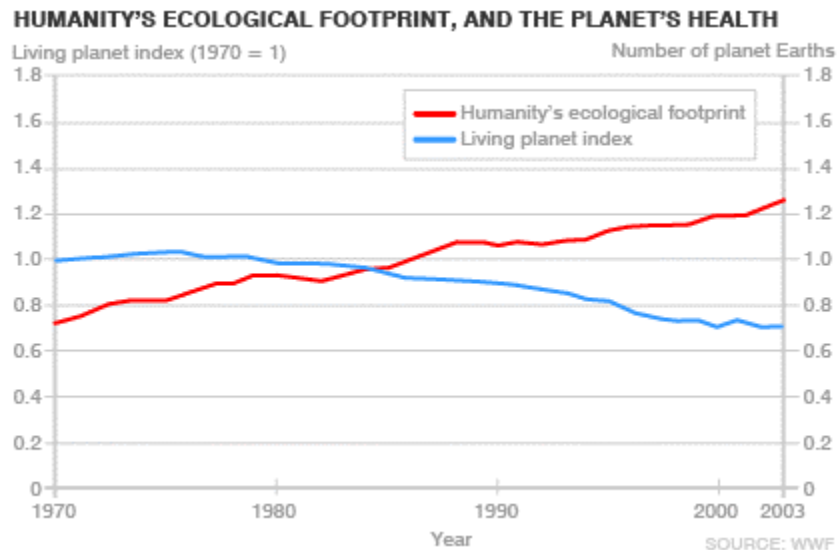
## The Living Planet: Facts and Figures

The planet's natural resources are being consumed faster than they can be replaced, according to the WWF (Formerly World Wildlife Fund)

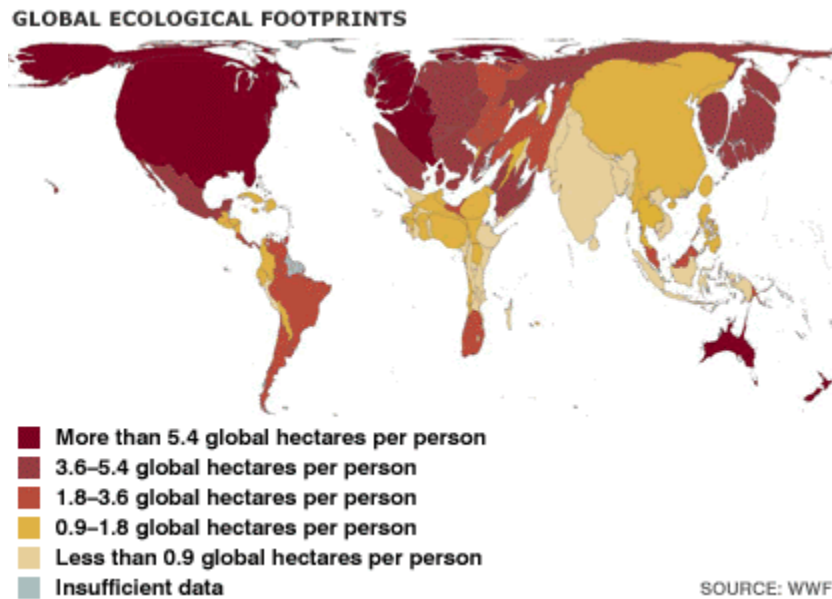
If current trends continue two planets would be needed by 2050 to meet humanity's demands.



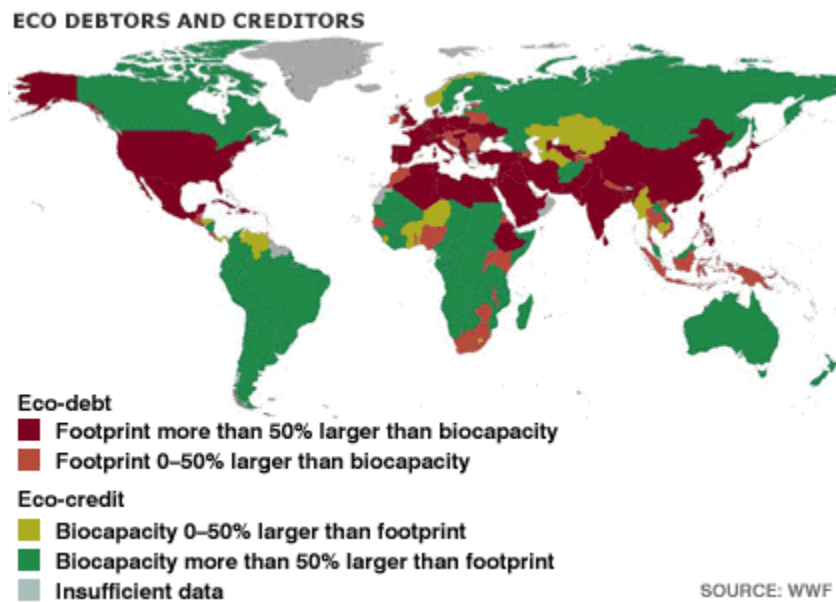
Lifestyles and the consumption of resources vary wildly from country to country. On average each person needs 2.2 global hectares to support the demands they place on the environment, but the planet is only able to meet consumption levels of 1.8 global hectares per person.



Humanity's demand for resources is now outstripping supply by about 25%, as the growth of our ecological footprint shows. Meanwhile the health of the planet's ecosystems, measured by the living planet index, is falling, at "a rate unprecedented in human history," according to the WWF.



Countries are shown in proportion to the amount of natural resources they consume.



Debtor countries are defined as consuming their own natural resources, or resources from elsewhere, more quickly than they can recover, or they may be releasing more CO<sub>2</sub> than they can absorb themselves.



**The World's Undernourished Population**  
[http://www.fao.org/es/ess/faostat/foodsecurity/FSMap/flash\\_map.htm](http://www.fao.org/es/ess/faostat/foodsecurity/FSMap/flash_map.htm)

**Plan B 3.0: Mobilizing to Save Civilization**

Lester R. Brown, President, Earth Policy Institute

(Published by, W.W. Norton &amp; Co., 2008. Free book chapters in pdf)

<http://www.earth-policy.org/Books/PB3/Contents.htm>**Outgrowing the Earth: The Food Security Challenge in an Age of Falling Water Table and Rising Temperatures**

Lester R. Brown, President, Earth Policy Institute

(Published by, W.W. Norton &amp; Co., 2004. Free book chapters in pdf)

<http://www.earth-policy.org/Books/Out/Contents.htm>**Eco-Economy: Building an Economy for the Earth**

Book by Lester R. Brown, Earth Policy Institute

(Published by W.W. Norton &amp; Co., 2001)

[http://www.earth-policy.org/Books/Eco\\_contents.htm](http://www.earth-policy.org/Books/Eco_contents.htm)**The Role of Science in Sustainable Development** (click title)

Sustainable development can succeed only if all areas of the political sector, of society, and of science accept the concept and work together to implement it.

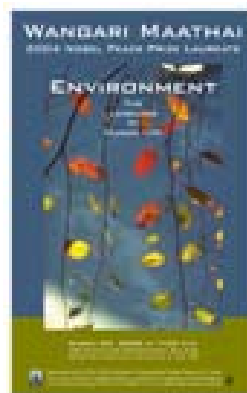
A common basic understanding of environmental ethics is needed to ensure that protection of the natural foundation of life becomes a major consideration in all political and individual action. A dialogue among representatives of all sectors of society is needed if appropriate environmental policies are to be devised and implemented.

**Angela Merkel, Chancellor of Germany****The Earth and Its People: Repairing Broken Connections**

Godfrey S. Nowlan, Research Scientist, Geological Survey of Canada

<http://www.geoscience.ca/cgen/Nowlan.pdf>**Opportunities in the Earth Sciences: Making Connections Between the Earth and Its People**

Godfrey S. Nowlan, Research Scientist, Geological Survey of Canada

[http://www.paep.ca/en/CIYL/2002/doc/nowlan\\_earth\\_sciences.pdf](http://www.paep.ca/en/CIYL/2002/doc/nowlan_earth_sciences.pdf)

**Environment – The Language of Human Life (Video – 89min)**  
**Wangari Maathai youtube, 2004 Nobel Peace Prize Laureate**

Founder, The Green Belt Movement  
 Lecture of the International Centre for Writing and Translation  
<http://www.humanities.uci.edu/icwt/multimedia/Mathaii.ram>  
 or <http://www.humanities.uci.edu/icwt/>



### **Human Development Report 2007/2008**

#### **Fighting Climate Change: Human Solidarity in a Divided World**

The Report shows that climate change is not just a future scenario.

Increased exposure to droughts, floods and storms is already destroying opportunity and reinforcing inequality. Meanwhile, there is now overwhelming scientific evidence that the world is moving towards the point at which irreversible ecological catastrophe becomes unavoidable.

Business-as-usual climate change points in a clear direction: unprecedented reversal in human development in our lifetime, and acute risks for our children and their grandchildren.

<http://hdr.undp.org/en/reports/global/hdr2007-2008/>

### **Human Development Report 2009**

#### **Overcoming barriers: Human mobility and development**

Human development is about putting people at the centre of development.

It is about people realizing their potential, increasing their choices and enjoying the freedom to lead lives they value. Since 1990, annual Human Development Reports have explored challenges including poverty, gender, democracy, human rights, cultural liberty, globalization, water scarcity and climate change.

<http://hdr.undp.org/en/reports/global/hdr2009/>



© Steve McCurry/Magnum/Paris



#### **PLANT FOR THE PLANET - A Call to Action**

The United Nations Environment Programme (UNEP) has launched a major worldwide tree planting campaign.

Under the Plant for the Planet: Billion Tree Campaign, people, communities, business and industry, civil society

organizations and governments are encouraged to enter tree planting pledges online with the objective of planting at least one billion trees worldwide each year. In a call to further individual and collective action, UNEP has set a new goal of planting 7 billion trees by the end of 2009. The campaign strongly encourages the planting of indigenous trees and trees that are appropriate to the local environment.  
<http://www.unep.org/billiontreecampaign/index.asp>

## Dialogue Among Civilizations – Religions of the World and Ecology

### Dialogue Among Civilizations – Dialogue Assumes Equality (click)

*“We must understand that the Other is a subject like oneself, meaning an autonomous individual who commands respect. Then you need the subjective impetus of interest and sympathy. Without that, there is no comprehension. Today we are in conditions of collective hysteria and Manichaeism that prevent sympathy and therefore understanding. We are in a period where understanding is losing ground because of the war and its consequences.”*

Interview with Edgar Morin, Philosopher and Sociologist



### Declaration Toward a Global Ethic (Text in 15 languages) Council of the Parliament of the World’s Religions

***“ No peace among the nations  
 without peace among the religions.***

***No peace among the religions  
 without dialogue between the religions.***

***No dialogue between the religions  
 without investigation of the foundation of the religions.”***

Dr. Hans Küng, Professor of Theology, University of Tübingen  
 President, Global Ethic Foundation

<http://www.weltethos.org/dat-english/03-declaration.htm>



### Introduction to Religion and Ecology Religions of the World and Ecology: Discovering the Common Ground

Mary Evelyn Tucker; John Grim, Yale University

The environmental crisis is one that is well documented in its various interlocking manifestations of industrial pollution, resource depletion, and population explosion. The urgency of the problems are manifold, namely, the essential ingredients for human survival, especially water supplies and agricultural land, are being threatened across the planet by population and consumption pressures. With the collapse of fishing industries and with increasing soil erosion and farm land loss, serious questions are being raised about the ability of the human community to feed its own offspring. Moreover, the widespread destruction of species and the unrelenting loss of habitat continues to accelerate.

Clearly religions need to be involved with the development of a more comprehensive worldview and ethics to assist in reversing this trend.

Whether from an anthropocentric or a biocentric perspective, more adequate environmental values need to be formulated and linked to areas of public policy. Scholars of religion can be key players in this

articulation process. Moreover, there are calls from other concerned parties to participate in a broader alliance to halt the loss of species, topsoil, and natural resources. It is our hope to expand this alliance of scholars and activists by creating common ground for dialogue and creative partnership in envisioning and implementing long range solutions to some of our most pressing environmental problems.

This is critical because the attitudes and values that shape people's concepts of nature come primarily from religious worldviews and ethical practices. The moral imperative and value systems of religions are indispensable in mobilizing the sensibilities of people toward preserving the environment for future generations.

One of the greatest challenges to contemporary religions, then, is how to respond to the environmental crisis which some believe has been perpetuated by the enormous inroads of materialism and secularization in contemporary societies, especially those societies arising in or influenced by the modern West. Others such as the medieval historian Lynn White have suggested that the emphasis in Judaism and Christianity on the transcendence of God above nature and the dominion of humans over nature has led to a devaluing of the natural world and a subsequent destruction of its resources for utilitarian ends. While the particulars of this argument have been vehemently debated, it is increasingly clear that the environmental crisis presents a serious challenge to the world's religions. This is especially true because many of these religions have traditionally been concerned with the paths of personal salvation which frequently emphasize other worldly goals and reject this world as corrupting.

How to adapt religious teachings to this task of revaluing nature so as to prevent its destruction marks a significant new phase in religious thought. Indeed, as the historian of religions, Thomas Berry, has so aptly pointed out, what is necessary is a comprehensive reevaluation of human-earth relations if the human is to continue as a viable species on an increasingly degraded planet. In addition to major economic and political changes, this will require adopting worldviews that differ from those which have captured the imagination of contemporary industrialized societies that view nature as a commodity to be exploited. How to utilize the insights of the world's religions is a task of formidable urgency. Indeed, the formulation of a new ecological theology and environmental ethic is already emerging from within several of the world's religions. Clearly each of the world's religious traditions has something to contribute to this discussion.

<http://fore.research.yale.edu/religion/>



#### **Hinduism, Jainism, and Ecology**

Christopher Key Chapple, Loyola Marymount University

<http://fore.research.yale.edu/religion/hinduism/index.html>

#### **Jainism, Hinduism, and Ecology**

Christopher Key Chapple, Loyola Marymount University

<http://fore.research.yale.edu/religion/jainism/index.html>

#### **Buddhism and Ecology: Challenge and Promise**

Donald K. Swearer, Harvard University

<http://fore.research.yale.edu/religion/buddhism/index.html>

#### **Confucianism and Ecology: Potential and Limits**

Mary Evelyn Tucker, Yale University

<http://fore.research.yale.edu/religion/confucianism/index.html>

**Daoism and Ecology**

James Miller, Queen's University

<http://fore.research.yale.edu/religion/daoism/index.html>**Shinto and Ecology:**

Practice and Orientations to Nature

Rosemarie Bernard, Harvard University

<http://fore.research.yale.edu/religion/shinto/index.html>**Indigenous Traditions and Ecology**

John A. Grim, Yale University

<http://fore.research.yale.edu/religion/indigenous/index.html>**Judaism and Ecology: A Theology of Creation**

Daniel B. Fink, Congregation Ahavath Beth Israel

<http://fore.research.yale.edu/religion/judaism/index.html>**Christianity and Ecology:****Wholeness, Respect, Justice, Sustainability**

Dieter T. Hessel, Program on Ecology, Justice, and Faith

<http://fore.research.yale.edu/religion/christianity/index.html>**Islam and Ecology: A Bestowed Trust****Inviting Balanced Stewardship**

Frederick M. Denny, University of Colorado

<http://fore.research.yale.edu/religion/islam/index.html>**Inviting Balanced Stewardship**

Frederick M. Denny, University of Colorado

<http://fore.research.yale.edu/religion/islam/index.html>**Declaration of Montserrat on  
Religions and the Building of Peace**

10th April 2008

Misleading information on the origin of conflicts requires a clear cut analysis of the relation between religious feelings and violence, in order to advance towards the building of peace through its prevention and peaceful resolution.

Unless we carefully analyse and communicate this relationship, some media and many people in the world will continue to wrongly think and perceive that religion is often fuel for violence. Indeed, violence is mostly originated at the level of power, resources and ideologies, and religion is often misused to stir up these conflicts.

[http://www.fund-culturadepaz.org/BarnaDOC/MONTSERRAT\\_DECLARATION\\_ENG.pdf](http://www.fund-culturadepaz.org/BarnaDOC/MONTSERRAT_DECLARATION_ENG.pdf)**Understanding Evolution**[http://www.paep.ca/en/CIYL/2004/doc/ucberkeley\\_evolution.pdf](http://www.paep.ca/en/CIYL/2004/doc/ucberkeley_evolution.pdf)**After Homo Sapiens, What Next?**

Pamela J. Peck, Cultural Anthropologist

*"Any crisis is essentially a crisis of perception . . . It derives from the fact that we are trying to apply the concept of an outdated world view - the mechanistic world view of science - to a reality that can no longer be understood in terms of those concepts. We live today in a globally inter-connected world in which biological, psychological, social and environmental phenomena are all interdependent."* Fritjof Capra, Physicist

[http://www.paep.ca/en/CIYL/2002/doc/peck\\_homo\\_sapiens.pdf](http://www.paep.ca/en/CIYL/2002/doc/peck_homo_sapiens.pdf)



### **The Role of the Humanities** (click title)

*"The vast majority of things that we hear today are prejudices and clichés, simply verbal formulas that have no thought behind them but are put up as a pretence of thinking. It is not until we realize that these things conceal meaning, rather than reveal it, that we can begin to develop our own powers of articulateness. The teaching of humanities is, therefore, a militant job.*

*Teachers are faced not simply with a mass of misconceptions and unexamined assumptions. They must engage in a fight to help the student confront and reject the verbal formulas and stock responses, to convert passive acceptance into active, constructive power. It is a fight against illiteracy and for the maturation of the mental processes, for the development of skills which once acquired will never become obsolete."*

**H. Northrop Frye (1911-1991), Literary Critic**



### **The Humanistic and Cultural Aspects of Science & Technology Education** (click title)

(Marie Skłodowska Curie (1867-1934), the 1903 and 1911 Nobel Laureate for Physics, while serving in the 1920 on the council of the League of Nations and on its international committee on intellectual cooperation, stated:

***"After all, science is essentially international, and it is only through lack of the historical sense that national qualities have been attributed to it."***

**Glen S. Aikenhead, Professor of Education,  
University of Saskatchewan, Saskatoon, Canada**



*"Everyone has the responsibility to shape the future of humanity. The way in which ideas are formed is what gives character to the human mind. We must become more truthful and active in life – there is so much to articulate and to set into motion.*

*Our single most important enterprise is an education that creates a common network of rational thought across the globe."*

**Louanne Smrke (1951-1991), Journalist, Co-founder of PAEP (1979)**  
PAEP/IYNet Writing Awards <http://www.paep.ca/writingawards.php>



### **Science for Whom? The Role of Women in the Next Millennium**

**Ann B. Shteir, Professor, Humanities/School of Women's Studies, York University**  
[http://www.paep.ca/en/CIYL/2002/doc/shteir\\_scienceforwhom.pdf](http://www.paep.ca/en/CIYL/2002/doc/shteir_scienceforwhom.pdf)



### **Advancing the Emerging Discipline of Global Bioethics**

We are all inherently interconnected and interdependent. There is only one human race. The natural environment provides the basic conditions without which humanity could not survive. Biological diversity is the essential resource upon which the individual, families, communities, nations and future generations depend. Let us firmly link human development to actions where youth is informed by **global bioethics (i.e. life-ethics)**, a concept of ethics as a global integration of biology and values, on knowledge how to use knowledge for our shared humanity. An ethic of care, informed by an awareness of interdependence to guide human survival, ever mindful of ecology and environmental preservation.

**Learning to locate a reflective understanding of care is the most adequate guide to the resolution of conflicts in human relationships.**

<http://www.paep.ca/en/CIYL/2006/doc/Global%20Bioethics%202006.pdf>

### **Towards Knowledge Societies**

The first UNESCO World Report (2005) published in six languages, emphasizes the challenges and opportunities connected with the expansion of knowledge societies. It puts forward ten operational recommendations to improve knowledge sharing at international level.

UNESCO clearly makes a distinction between knowledge societies and the information society. While the information society is based on technological breakthroughs, knowledge societies encompass broader social, ethical and political dimensions.

[http://portal.unesco.org/en/ev.php-URL\\_ID=44282&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/en/ev.php-URL_ID=44282&URL_DO=DO_TOPIC&URL_SECTION=201.html)



### **International Youth Network for the Advancement of the Sciences, Humanities and Global Bioethics (IYNet)**

*As current world events demonstrate, there is an urgent need to focus on that which unites humanity rather than that which divides it. Moral and ethical progress does largely depend upon the growth of scientific, factual knowledge both of human behaviour and of the world in which we live.*

*To build a stronger foundation for our shared humanity in the transformation from the production-consumption model of our industrial age to the emerging industrial age of sustainability and interdependence, we must advance not only a scientific-technological, but also an environmentally and inter-culturally educated human resource base.*

*The key objective of the new transdisciplinary IYNet project is to advance youth as a value-creating resource, building on scholarship, inter-generational dialogue and the commitment to global bioethics. IYNet emphasizes the humanistic functions of science for our shared humanity in an interdependent world.*

***The project is a meeting of minds, science and human experience.***

<http://www.paep.ca/IYNet.php>

### **IYNet Project Development: Core Issues, Key Considerations and Observations**

*Incorporating the crucial lessons to be learned from the 2003 pre-emptive, illegal and immoral war of aggression against Iraq: The erosion of confidence and trust, the detrimental affect on youth internationally, global mental health, and the advancement of the sciences, knowledge-building and global bioethics for our shared humanity.*

<http://www.paep.ca/IYNET/IYNET2008devissues.pdf>

### **IYNet Core Issues Expanded Section, including:**

#### **The Science of Human Behaviour: A Working Document**

#### **The Effects of War and Violence on Children, Youth and the Advancement of Education, Science and Humanity.**

Including images of the war, 2003-2008 – Regarding the Pain of Others

*(Courtesy of Agence France Presse, Associated Press, Reuters, United Nations and Others)*

*In order to grasp the the terrible human anguish, the enormity of the destruction, the magnitude of the atrocities against Iraq, its people, particularly its children and youth this segment includes images as a collection of the human cost involved. The images are meant to teach, to deepen awareness of the immaturity, insanity and inhumanity involved in the cult of violence and of war.*

<http://www.paep.ca/doc/IraqImages-ChildrenandYouth.pdf>



### **Canadian International Youth Letter (CIYL)**

A special transdisciplinary series has been prepared with an emphasis on science and human affairs.

Under the theme '**Exploring New Ways of Knowing –**

**A Meeting of Minds, Science and Human Experience'**

the series incorporates cultural and youth studies as well as research-based information on the science of human behaviour, including the effects of war, destructiveness and violence on youth development, global mental health and the environment.

The objective is on gaining an improved understanding of our shared intellectual heritage for our common humanity.

**Contributors are scholars, scientists and engineers, representing advanced education, the humanities and social sciences, as well as public life and industry.** Their concern for the future of humanity, their progressive ideas, scientific, cultural and social thought for the world and future generations help build and advance open, transparent and constructive dialogue towards universal values and action for a sustainable world community.

**Exploring New Ways of Knowing**

**A Meeting of Minds, Science and Human Experience – CIYL IYNet Series**  
*Educational and Scientific Links – UNESCO Declarations – Essays and Statistics*

**Part I**

**The Science of Human Behaviour**

**The Impact of Violence, War and Displacement on Children:  
The Effects of Terror and Trauma on Child and Youth Development**

**Part II**

**Iraq's History and Cultural Heritage - Science and Civilization:  
Research Papers and Educational Links for Advancing  
the Understanding, Study and Rebuilding of Iraqi Cultural Heritage,  
Education, the Sciences and Humanities**

**Part III**

**The Effects of War on the Advancement of Education, Science and Humanity -  
The Human Cost - Our Common Responsibility**

**Part IV**

**Environmental Science and Planet Earth: Realities and Facts  
Education for a Sustainable Future *Working Document***

**The Role of Science and Sustainable Development *Angela Merkel***

**Opportunities in the Earth Sciences:  
Making Connections Between the Earth and Its People *Godfrey Nowlan***

**Iraq and Climate Change *Michael Klare***



**Dialogue Among Civilizations - Dialogue Assumes Equality *Edgar Morin***

**Global Ethics - "Do We Still Have Universal Values?" *Kofi Annan***

**Globalization With a Human Face - Benefiting All *Koïchiro Matsuura***

**The Role of the Humanities *Northrop Frye***

**Art, Truth and Politics *Harold Pinter***

**Science and Civilization in Islam *Seyyed Hossein Nasr***

**A Window on the World *Edward Said***

**Who Governs the World in the 21st Century? *Helmut Schmidt***



**Science for Whom? The Role of Women in the Next Millenium** *Ann Shteir*

**The Humanistic and Cultural Aspects  
of Science & Technology Education** *Glen Aikenhead*

**Back to the Future: John Galbraith's Vision for Engineering Education** *Kim Vicente*

**Modern Poetry and Science** *Octavio Paz*



**The Ethical Theory of Epicurus (341-270 BCE) - A Summary**

**Global Bioethics** *Global Bioethics Network*

**On a Politician's Ethics** *Helmut Schmidt*



**A Cloud Over Civilization** *John Kenneth Galbraith*

**Astronomy in the Baghdad of the Caliphs** *David King*

**War - Realities and Myths** *Chris Hedges*

**Remembering Hiroshima and Nagasaki** *David Krieger*

**The Russell-Einstein Manifesto 1955**

**Peace Makers**



**Discovering What Democracy Means** *Bill Moyers*

**Empire v. Democracy** *Chalmers Johnson*



**Trip to our Ancestors - Max Planck Institute** *Jean-Jacques Hublin*

**Understanding Evolution** *University of California, Berkeley*

**Life is Hanging by a Thread** *Jane Goodall*

**After Homo Sapiens, What Next?** *Pamela Peck*



**Alcohol and Muslims**

**My Experience at the International Olympiad in Informatics 2002** *Matei Zaharia*

CIYLs can also be accessed at <http://www.paep.ca/en/CIYL/youthletters.php>



**World Report on the Culture of Peace  
and Youth for Culture of Peace  
for the International Decade for a Culture of Peace  
and Non-Violence for the Children of the World (2001-2010)**  
<http://decade-culture-of-peace.org/>

**World Report on the Culture of Peace (2005)**  
Civil Society report at midpoint of the Culture of Peace Decade  
<http://decade-culture-of-peace.org/report/wrcpx.pdf>

**Youth for Alliance of Civilizations:  
Promoting Dialogue, Building a Culture of Peace**

Survey Results and Proposal

Global Youth Solidarity Fund and Programme

This report is the result of a survey of 475 youth organizations in 125 countries that took place during the summer of 2006.

<http://decade-culture-of-peace.org/report/YouthReport.pdf>



**International Decade for a Culture of Peace and Non-Violence  
for the Children of the World, 2001-2010**

Resolution adopted by the United Nations General Assembly

<http://cpnn-usa.org/resolutions/resA-59-143.html>



**International Day for Preventing the Exploitation  
of the Environment in War and Armed Conflict**

On 5 November 2001, the General Assembly declared

6 November of each year as the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict. In taking this action, it considered that damage to the environment in times of armed conflict impairs ecosystems and natural resources long after the period of conflict, often extending beyond the limits of national territories and the present generation.

[http://www.un.org/depts/dhl/environment\\_war/index.html](http://www.un.org/depts/dhl/environment_war/index.html)



**Peace Makers**

**In this Canadian International Youth Letter 'Peace Maker' the question is raised:**

"Is peace a goal which can be worked toward effectively? Or must it remain forever a hoped-for but elusive vision? Contributors, each in her or his own way, have fashioned inspiring personal responses to these questions.

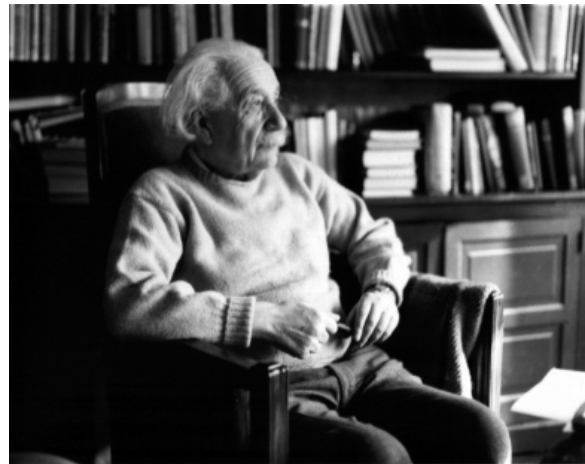
Their lives and writings reveal the presence of an overwhelming commitment to the end of violence, and a wealth of thought and effort borne from this dedication. They show peacemaking to be a process based on each person's individual struggle for spiritual growth; and they show us that in the end peacemaking is its own reward."

[http://www.paep.ca/en/CIYL/2002/hfs\\_peace\\_makers.pdf](http://www.paep.ca/en/CIYL/2002/hfs_peace_makers.pdf)



*Ullstein Bilderdienst, Berlin*

**Bertha von Suttner (1843 –1914)  
Nobel Laureate 1905**



**Albert Einstein (1879 – 1955) in Princeton, ca. 1950  
Nobel Laureate 1921**

*“It is of great importance that the general public be given an opportunity to experience – consciously and intelligently – the effects and results of scientific research. It is not sufficient that each result be taken up, elaborated, and applied by a few specialists in the field. Restricting the body of knowledge to a small group deadens the philosophical spirit of a people and leads to spiritual poverty.*

*The development of technology and of the implements of war has brought something akin to a shrinking of our planet. Economic interlinking has made the destinies of nations interdependent to a degree far greater than in previous years. The available weapons of destruction are of a kind such that no place on earth is safeguarded against sudden total destruction. The only hope for protection lies in the securing of peace in a supernatural way. A world government must be created which is able to solve conflicts between nations by judicial decision.*

*A person or a nation can be considered peace loving only if it is ready to cede its military force to the international authorities and to renounce every attempt or even the means of achieving its interests abroad by the use of force.*

*A permanent peace cannot be prepared by threats but only by the honest attempt to create mutual trust. However strong national armaments may be, they do not create military security for any nation nor do they guarantee the maintenance of peace.*

*Think of what a world we could build if the power unleashed in war were applied to constructive tasks! One-tenth of the energy that the various belligerents spent in the World War, a fraction of the money they exploded in hand grenades and poison gas, would suffice to raise the standard of living in every country and avert the economic catastrophe of worldwide unemployment. We must be prepared to make the same heroic sacrifices for the cause of peace we make ungrudgingly for the cause of war. There is no task that is more important or closer to my heart.”*

**Albert Einstein**



#### **The Russell-Einstein Manifesto, 9 July 1955**

The Russell-Einstein Manifesto marks the beginning of the nuclear disarmament campaign by prominent members of the scientific community.  
<http://www.paep.ca/en/CIYL/2006/doc/The%20Russell-Einstein%20Manifesto%201955.pdf>



#### **Art, Truth and Politics Harold Pinter – Nobel Lecture**



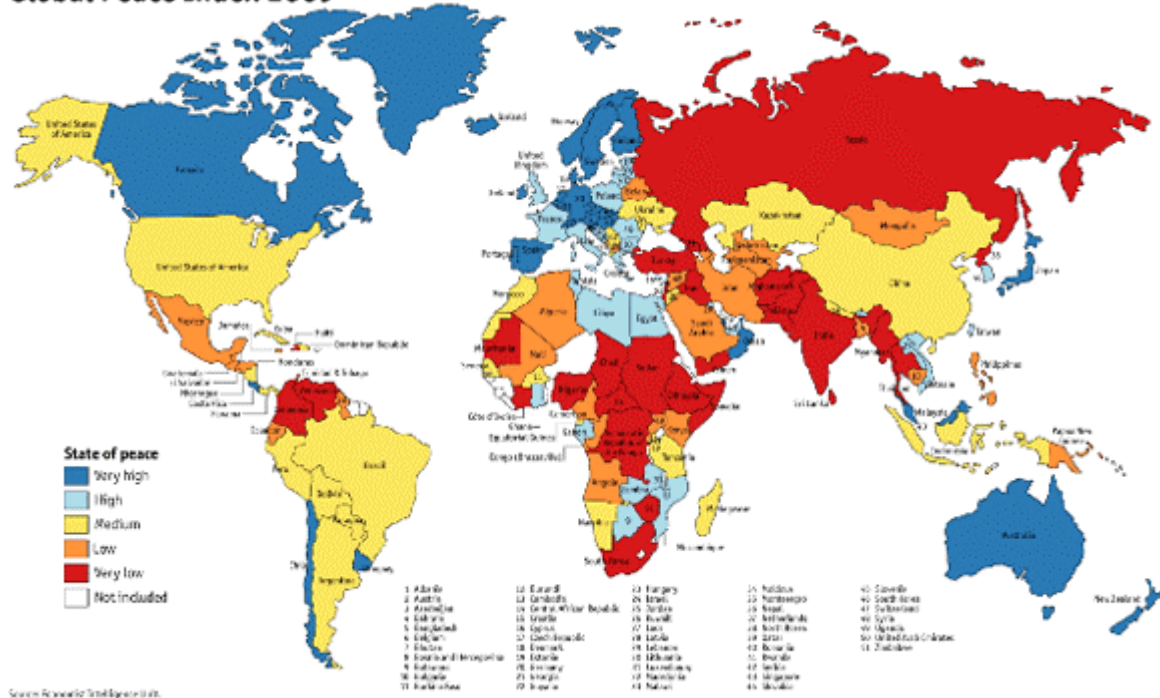
#### **Nobel Prize for Literature 2005**

*“I believe that despite the enormous odds which exist, unflinching, unswerving, fierce intellectual determination, as citizens, to define the real truth of our lives and our societies is a crucial obligation which devolves upon us all. It is in fact mandatory. If such a determination is not embodied in our political vision we have no hope of restoring what is so nearly lost to us - the dignity of man.”*

**Harold Pinter (1930 - 2008)**

<http://www.paep.ca/en/CIYL/2007/doc/Art,%20Truth%20and%20Politics%20-%20Harold%20Pinter.pdf>  
 Video (46 min) <http://nobelprize.org/mediaplayer/index.php?id=620>

## Global Peace Index 2009



[Click here to download 2009 GPI Map](#)

The Global Peace Index Report, Results and Findings is a ground-breaking milestone in the study of peace. It is the first time that an Index has been created that ranks the nations of the world by their peacefulness and identifies some of the drivers of that peace.

<http://www.visionofhumanity.org/images/content/GPI-2009/2009-GPI-ResultsReport-20090526.pdf>

### [The Ethical Theory of Epicurus \(341-270 BCE\) - A Summary](#) (click title)

The "Principal Doctrines," are a collection of forty quotes from the writings of Epicurus that serve as a handy summary of his ethical theory



### Universal Declaration of Human Rights

On December 10, 1948 the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights (UDHR) the full text of which appears in the following pages. Following this historic act the Assembly called upon all Member countries to publicize the text of the Declaration and "to cause it to be disseminated, displayed, read and expounded principally in schools and other educational institutions, without distinction based on the political status of countries or territories."  
(335 different language versions are available)

<http://www.un.org/en/documents/udhr/>



## UNESCO

### Its Purpose and Its Philosophy

Preparatory Commission of The United Nations Educational, Scientific and Cultural Organisation  
by Julian Huxley, First Director-General, 1946

<http://unesdoc.unesco.org/images/0006/000681/068197eo.pdf>



Photos © UNESCO

*“The primary threat to nature and people today comes from centralising and monopolizing power and control. Not until diversity is made the logic of production will there be a chance for sustainability, justice and peace. Cultivating and conserving diversity is no luxury in our times: it is a survival imperative.”*

**Vandana Shiva, Physicist, Environmental Activist**



### Cultural Diversity

#### Common Heritage – Plural Identities

In these troubled times with the world in search of its bearings, and wayward minds using the terms “culture” and “civilization” in an attempt to turn human beings against one another, there is an urgent need to remember how fundamental cultural diversity is to humanity itself.

As early as 1945, the Commission responsible for preparing UNESCO’s programme placed special emphasis on “Cultural Studies”, and by 1953 the Organization was already demonstrating its commitment to the recognition of diversity with the launch of a series of publications entitled Unity and Diversity of Cultures. United Nations Educational, Scientific and Cultural Organization (2002)

<http://unesdoc.unesco.org/images/0012/001271/127161e.pdf>



## Proposal for the Education of the Future

In 1985 the Collège de France presented the President of the Republic with a report entitled **Propositions pour l'enseignement de l'avenir. (Proposal for the Education of the Future)**

According to the most eminent academic institution in France, the first of ten principles to which modern schools must subscribe reads as follows:

### 1. L'unité de la science et la pluralité des cultures.

Un enseignement harmonieux doit pouvoir concilier l'universalisme inherent a la pensée scientifique et le relativisme qu'enseignent les sciences humaines, attentives à la pluralité des modes de vie, des sagesses et des sensibilités culturelles.

### The Unity of Science and the Plurality of Cultures.

A carefully fashioned system of education must be able to integrate the universalism inherent in scientific thought with the relativism of the social sciences, that is, with the disciplines attentive to the significance of cultural differences among people and to the ways people live, think and feel. [transl.]



**Summary: PAEP's transdisciplinary Youth Forums, the Canadian International Youth Letter and the International Youth Network for the Advancement of the Sciences, Humanities and Global Bioethics, incorporate the principles of the Collège de France report, reflected in the John Dewey (1859-1952) and Tsunesaburo Makiguchi (1871-1944) concept of inter-generational knowledge-building and sharing (shiso no kagaku), or science of thought.**

**The PAEP/IYNet Project aims and objectives, and the Canadian International Youth Letters have proved to serve as curriculum resources for members of student and teacher associations.**



**Please share this Canadian International Youth Letter (CIYL) Working Document with students, colleagues, friends, and members of your community. It is a work in progress. The information is valued as a reliable resource for open, transparent and constructive dialogue for:**

**Building Awareness ◆ Sharing and Expanding Knowledge ◆ Developing ideas into independent local IYNet Project Initiatives ◆ Establishing your own Regional IYNet Dialogue Centre for the development of International Youth Forums of the Sciences and Humanities – Values and Society.**

◆ **We welcome your thoughts and ideas** ◆

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**Motto: Address Issues that Matter (AIM) – Be Concerned with the Future of Humanity**

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**This Canadian International Youth Letter (CIYL) is part of a new series with an emphasis on science and human affairs.** The series incorporates cultural and youth studies as well as research-based information on the science of human behaviour, including the effects of war, destructiveness and violence on youth development, global mental health and the environment. Under the theme '**Exploring New Ways of Knowing – A Meeting of Minds, Science and Human Experience**' it is part of the new project of the **International Youth Network for the Advancement of the Sciences, Humanities and Global Bioethics (IYNet)**

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As an NGO member of Forum UNESCO and UNEP, PAEP takes grassroots initiatives, working with and for youth to advance the universal values and principles of the United Nations Educational, Scientific and Cultural Organization and UNEP: To understand and respect cultural diversity as the common heritage of humanity; foster a new transdisciplinary educational, scientific, environmental and inter-cultural dialogue towards a universal code of ethics for the benefit of future generations; build awareness and mutual understanding; and strengthen international cooperation in the protection of the world's natural, cultural, intellectual and scientific heritage.

**Contact: Hans F. Schweinsberg – Tel: 416-486-9333 – Fax: 416-483-0002 – [paep.utm@utoronto.ca](mailto:paep.utm@utoronto.ca) – <http://www.paep.ca>**

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