



Eco-Insurance for a Sustainable Future

A CONTRIBUTION TO THE JOHANNESBURG PLAN OF IMPLEMENTATION



CONSULTATION PAPER

September 2003

J. Steven Lovink

Eco-Insurance for a Sustainable Future is a joint initiative of the Institute for Environmental Security and TransGlobal Ventures, Inc.



The Institute for Environmental Security is a foundation based in The Hague, The Netherlands with liaison offices in Brussels and The Hague. Its mission is to advance global environmental security by means of Horizon 21 a multidisciplinary work program integrating the fields of diplomacy, law, finance and education.



TransGlobal Ventures, Inc. is a Washington DC-based finance and venture development company dedicated to creating synergies between information technology, earth sciences, education and sustainable development. The author is the company's founder and president and he is co-founder of the Institute for Environmental Security.



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The moderator's report on initial consultations was prepared by Tom Spencer, Executive Director of the European Centre for Public Affairs, University of Surrey, England.

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Preface

This Consultation Paper and its Report on Initial Consultations with experts introduces *Eco-Insurance for a Sustainable Future* to a broader audience of stakeholders from around the world for comments and suggestions. It is the first step of what will be a challenging journey towards practical implementation of an exciting initiative through public-private international cooperation.

A draft of a more detailed and lengthy version of the paper was initially reviewed by a small group of experts drawn from government, the private sector, NGOs, academia and multilateral organizations. Their insightful comments were most helpful and precipitated the production of the current abbreviated version. This new version, along with a questionnaire, was subsequently circulated to a small group of additional experts that provided the input which formed the basis for the moderator's reflections on Eco-Insurance presented at the end of this document as well as several useful improvements in the text.

Eco-Insurance for a Sustainable Future is being made available online and in-print by the Institute for Environmental Security as part of its mission to contribute to global environmental security by promoting innovative integrated solutions which bridge the disciplines of diplomacy, law, finance and education.

Your thoughts and ideas are important to us; please e-mail your comments and suggestions to the author at jslovink@eco-insurance.net. Updated information on Eco-Insurance and an e-Discussion Forum will be made available at www.eco-insurance.net toward the end of 2003.

Acknowledgements

Many people and experiences planted the seeds that culminated in the strong urge to develop and propose a possible solution for addressing humankind's collective inability to make the necessary investments to sustain life.

- Special thanks have to go to the people that encouraged me to put my thoughts on paper, my colleagues at the Institute for Environmental Security Wouter Veening and Ronald Kingham, in particular.
- The comments and suggestions from Michael Dulworth, Franz Knecht, Gottfried Leibbrand, Jeff McNeely, Janos Pasztor, Tom Spencer, Pier Vellinga, and Mathis Wackernagel resulted in a much more focused document and flagged issues that required better or more subtle presentation.
- Andrew Dlugolecki, Herbert Diemont, Elizabeth Dowdeswell, John Forgash, Reindert Houben, Sven Janssen, Paul Jefferris, David Lavigne, Aubrey Meyer, Colin Moorcraft, Hemmo Muntingh, Marc Pallemmaerts, Nigel Purvis, Jean-François Rischard, Michael Rubino, Ed Sanders, Jonathan Shopley, Jason Switzer, and David Webber facilitated further improvements to the paper and their feedback helped to formulate the challenges that should be addressed during the next phases of Eco-Insurance.
- Linda Kleinschmidt's review of various drafts of the consultation paper was most helpful.

Tom Spencer's spirited report in the final chapter captures the contours of the way forward from here; his thoughts have been stimulating and insightful throughout the review process.

Everyone who participated in the review of Eco-Insurance for a Sustainable Future contributed on a personal basis; their feedback did not necessarily reflect the opinions or policies of the organizations they represent. The views expressed in the consultation paper are those of, and the final responsibility for any inadequacies rests with, the author.

Finally, the consultation paper and review process would not have been possible without the generous support from The Ministry of Housing, Spatial Planning and the Environmental (VROM) of The Netherlands.

A sincere hope is that *Eco-Insurance for a Sustainable Future* will lead to vivid and enthusiastic dialogue about its possibilities amongst people and organizations from every corner of the world.

September 6th, 2003

J. Steven Lovink

Washington DC

Introduction

“Ecosystems sustain us. They are Earth’s primary producers, solar-powered factories that yield the most basic necessities – food, fiber, water. Ecosystems also provide essential services – air and water purification, climate control, nutrient cycling, and soil production – services we can’t replace at any reasonable price.”

From: *People and Ecosystems: The Fraying Web of Life*¹.

After the events of September 11, 2001, the world is investing more heavily in security than ever before. The expectation is that a more secure world in which freedom, the rule of law, democracy, and the market system dominate, will pave the way for continued economic growth and prosperity for all. As government and industry budgets are realigned to meet the challenges of tomorrow’s perceived realities, we should not neglect to remind ourselves that security, whether national, economic, or human, is built on the foundation of well-functioning life-supporting ecosystems. Indeed, among the global challenges that are facing humankind, effective management of the global commons – the planet’s atmosphere, water resources, habitats, soil fertility, and biodiversity – may be primary. In the long run our society and economy can only properly function within the boundaries of the regenerative capacity of the globe’s life-supporting ecosystems. A growing, but still insufficiently empowered, number of people recognize that this crucial fact of life will need to become the main organizing principle for the 21st century. It may one day become the driving force for a new era of multilateralism.

The 2002 World Summit on Sustainable Development in Johannesburg presented an important opportunity to demonstrate a renewed commitment to a sustainable future. Most governments, businesses, and NGOs realized that the promise and eventual benefits of sustainable development could only come about on the heels of pro-active long term investments in sustainability facilitated by active diplomatic efforts within an international cooperative framework. The ten years since the first Earth Summit in Rio de Janeiro² convincingly demonstrated that declining levels of Official Development Assistance (ODA), combined with increasing but volatile private investment flows and fast-growing international trade, do not secure that sustainable future³. Yet despite the valuable lessons that have been learned and the numerous promising initiatives announced in Johannesburg, the ‘earth’s stewards’ at the Johannesburg Summit failed to agree on a credible plan that would guarantee adequate resources for investments in a sustainable future⁴. In the aftermath of Johannesburg, the world community will have to conclude that another historic opportunity to address a growing ecological deficit or ‘Eco-Investment Gap’ – the difference between what is and what should be invested in the globe’s life-supporting ecosystems -- has been squandered⁵. As a direct result of that failure, the Millennium Development Goals (MDGs) of 1999⁶ are unlikely to be achieved⁷, and environmentally induced financial instability will increase.⁸ Mounting ecological deficits will exact a heavy environmental, economic and human toll on the world. When nature decides time is up, its wrath may hit anyone, anytime, any place. The sooner we protect and insure ourselves against this basic fact of life, the better off our pocketbooks will be and the less future generations will be burdened by the financial consequences of current policy failures⁹.

“...it is imperative that substantial investments in the globe’s life-supporting ecosystems– the cornerstone of any credible security policy – are not ignored. ”

Eco-Insurance can be embraced as an investment that promotes security in every sense of the word. At a time when most nations are prepared to make very significant resources available to deliver on the promise of security, it is imperative that substantial investments in the globe’s life-supporting ecosystems – the cornerstone of any credible security policy – are not ignored.

Eco-Insurance for a Sustainable Future

A CONTRIBUTION TO THE JOHANNESBURG PLAN OF IMPLEMENTATION



Summary

Eco-Insurance* -- a *proposed home-insurance plan for our planet* is a new and prudent financial innovation. It seeks to levy a modest Eco-Insurance premium from people and organizations for investment in the restoration and maintenance of the globe's life-supporting ecosystems in order to promote global environmental, economic, and human security.

The globe's life-supporting ecosystems provide us with water, food, shelter, medicines, clean air, fertile soils and climate stability¹⁰. The quality and available amount of these goods is rapidly declining¹¹. The globe's ecological goods and services are valuable¹² and their proper maintenance is necessary to avoid economic decline, (non-linear) environmental changes and natural resource conflicts¹³. This maintenance requires sustained and sizeable investments.

Ecological footprint data, income levels, and a global Eco-Insurance risk factor, taken together, determine how much Eco-Insurance should be paid. Eco-Insurance will be used to capitalize a new financial institution -- a World Conservation Bank, Fund or Eco-Insurance Trust -- to be governed for and on behalf of the world's community as beneficiaries. The Bank, Fund or Trust will be responsible for the implementation of a multibillion dollar Global Community Investment Program through strategic financial partners following transparent and measurable performance criteria.

Eco-Insurance for a Sustainable Future -- the provision of a global public good -- can best be realized through international cooperation between governments, the private sector, multilateral institutions, academia, and NGOs with mounting support from the globe's citizens. Strong leadership by example from a network of committed launch partners would be a logical next step.

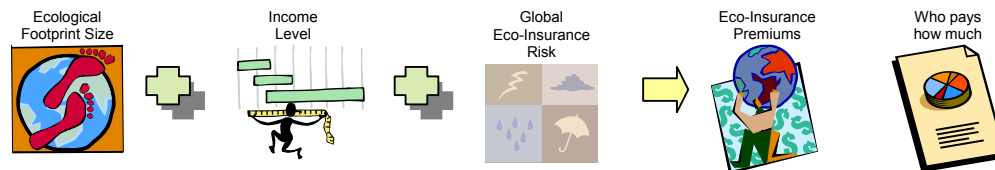
* [from Gr. *Oikos*, house + *insurance*, the business of insuring against loss]

What is Eco-Insurance?

Eco-Insurance is a new and prudent financing mechanism that promotes global, environmental, economic, and human security by mobilizing financial resources from people and organizations for sustained investments in the restoration and maintenance of the globe's life-supporting ecosystems. Eco-Insurance seeks to stimulate international collaboration amongst governments, the private sector, multilateral institutions, academia, NGOs and the world's citizens toward a pro-active global investment strategy -- an ecological Marshall Plan -- to act as a collective insurance policy to sustain life on earth.

The five mutually reinforcing objectives of Eco-Insurance are: (i) restore and maintain the globe's life-supporting ecosystems; (ii) reduce ecological deficits of people, organizations, and nations; (iii) promote sustainable consumption, production, investment and trade; (iv) reduce the incidence and impact of environmental change; and (v) strengthen environmental governance and finance.

How it works



Eco-Insurance proposes to collect a modest premium from people and organizations, based on ecological footprint data, levels of income, and global Eco-Insurance risk. The underlying rationale for this formula is that:

- *Ecological footprints* can measure a nation's, organization's, or individual's consumption of food, materials, and energy in terms of the area of biologically productive land or sea required to produce those resources and then absorb the corresponding waste using prevailing technology¹⁴. The resulting ecological deficit or surplus (remainder)¹⁵ can be used to set targets for a 'balanced ecological budget' from the global to the local level;
- *Income levels* reflect the extent to which nations, organizations and individuals benefit from the world economic system, including their ability to pay for the often free or discounted costs of using the globe's life-supporting ecosystems;
- *Global Eco-Insurance risk* expresses the aggregate level of Eco-Insurance to be mobilized on an annual basis to ensure that sufficient funds are available for sustained investment in the restoration and maintenance of the globe's life-supporting ecosystems. Global Eco-Insurance risk would be assessed by an independent competent organization¹⁶.

Eco-Insurance is designed to be a flexible financial mechanism that stimulates nations, organizations and individuals to think more directly about the sustainability of their consumption, production, investment, and trade patterns, in other words, their impact on the Earth. Ecological deficits would be discouraged through progressively higher Eco-Insurance premiums, while nations, organizations and individuals that have or move towards a more balanced ecological budget would be rewarded by means of reduced Eco-Insurance premiums. The mechanism could work at both the individual level or for society as a whole. Interventions ranging from fiscal stimuli to economic and other incentives would be necessary to facilitate early voluntary adoption of Eco-Insurance¹⁷.

Modest Premiums, Big Impact

Large global challenges become far easier to finance if more people contribute to their proposed solution. A back of the envelope calculation will show that if the global insurance risk is estimated at \$50 billion per annum – the lower range of what should be invested in life-supporting ecosystems on an

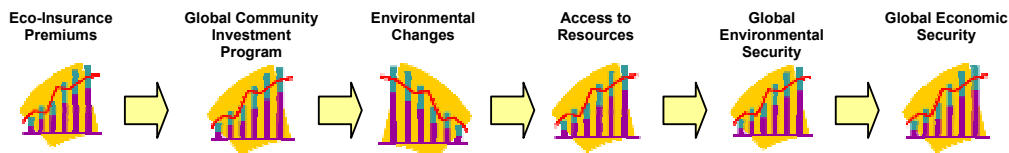
annual basis¹⁸ – the average annual Eco-Insurance premium payable by an OECD citizen would amount to less than \$ 50 per capita, the equivalent of approximately \$ 1.00 per week. Non-OECD citizens would have to pay an average annual Eco-Insurance premium of \$ 1.80, or the equivalent of less than 4 cents per week. Actual Eco-Insurance premiums would vary amongst nations, organizations and individuals based on (i) applicable ecological footprint and income data and (ii) whether ecological footprint benchmarks, targets or norms would be compared at the national, organizational or individual level. Eco-Insurance would ensure that modest per capita Eco-Insurance premiums will be able to mobilize significant financial resources for contemplated investments maintaining the globe's life-supporting ecosystems.

Shrink and Share

Eco-Insurance promotes Shrink & Share¹⁹, a process similar to Contraction and Convergence (C&C). C&C is a path-breaking international policy framework for dealing with global climate change based on the principles of precaution, equity and efficiency^{20,21}. CO₂ emissions are responsible for about fifty percent of humankind's ecological footprint.²² Unlike C&C which focuses exclusively on CO₂ emissions, Shrink & Share extends the argument to the biosphere as a whole, taking the entire ecological footprint of humanity into consideration. Shrinkage occurs when nations, organizations and individuals reduce their ecological footprints. This is encouraged by Eco-Insurance premiums that progressively reward the achievement of a balanced ecological budget. Eco-Insurance stimulates stakeholders to adopt consumption, production, investment, and trade activities that do not exceed the regenerative capacity of the globe's life-supporting ecosystems. The impact that individual nations, organizations and people have on the earth varies greatly²³. For example, an average citizen of the 900 million people living in high income countries has an ecological footprint of about 6.5 global hectares, whereas the 2.1 billion people living in the poorest countries have an average footprint of 0.8 hectares. The world's existing capacity was 1.9 hectares per person in 1999²⁴. Sharing happens when nations, organizations and individuals start exhibiting consumption, production, investment, and trade patterns that result in ecological footprints that deviate less and less from each other, or at least there is a move to a fairer distribution of resource use (and compensation for overuse). Like C&C, Shrink & Share toward balanced ecological budgets can take place within either a shorter or longer time span by setting the appropriate targets, but longer time spans increase the risk of unpredictable costs or irreversible damages²⁵.

Why we need Eco-Insurance

Eco-Insurance is necessary because of the world's structural underinvestment in the restoration and maintenance of the globe's life-supporting ecosystems. This 'Eco-investment Gap' currently amounts to \$100 billion per annum²⁶ and has resulted in serious ecological deficits that already severely jeopardize global economic and environmental security.



Global Economic Security

When ecosystems lose their capacity to provide the inputs that keep economies running, the world economic system will be subjected to increasingly severe shocks, followed by long term decline²⁷. To the extent humankind lives beyond the regenerative capacity of the globe's life-supporting ecosystems, global economic security will spiral downward. In the past, civilizations have collapsed because fragile or degraded ecosystems were no longer capable of sustaining them²⁸. This time however, the threat of collapse involves the fate of the whole planet.

There are four main reasons for purchasing adequate Eco-Insurance coverage to collectively enhance global economic security:

- *Insurance against Financial Risks and Instability:* Worldwide losses due to natural disasters appear to be doubling every ten years and have reached almost \$ 1 trillion over the past 15 years²⁹. Based on current trends, annual loss amounts within the next decade may approach \$ 150 billion³⁰, not counting the effects of climate change. The financial impact of such a development exceeds what insurance companies can sustain³¹. At the same time, the vast majority of people, organizations and nations, especially the poor, cannot afford natural disaster insurance and suffer most from not having insurance coverage³². Eco-Insurance potentially lowers environmentally induced risks and instability to the economy for the benefit of everyone.
- *Insurance against Market and Policy Failure:* Market failures inherent in our world economic system externalize the true cost of the use of our globe's life-supporting ecosystems. In our efforts to reconcile the demands of human development with the tolerances of nature, it has become increasingly apparent that policy failures, which could have corrected for market failure, have been ineffective. Eco-Insurance is a prudent financial strategy to lower the exponentially rising current and future costs that can result from market and policy failures³³.
- *Counter-balancing Globalization:* Free markets are efficient at creating wealth, but they often are ill-equipped to optimize our social or environmental capital. Globalization is known to cause misallocations between private and public goods. Global markets can also marginalize people and countries. Eco-Insurance addresses society's collective inability to adequately balance the benefits of market efficiency with the effective provision of (global) public goods; it increases social and environmental capital.
- *Realizing the Millennium Development Goals:* Eco-Insurance has the potential to generate substantial financial resources that are insufficiently available through ODA or private investment. It will simply not be possible to achieve the MDGs if the supply of ecosystem goods and services is compromised. Eco-Insurance is a first line of defense against poverty, promotes sustainable development, and facilitates realization of the MDGs.

Global Environmental Security

Environmental resource scarcity can cause conflict, including violent conflict from the local to the global level. Environmental refugees are more common³⁴. Environmental resources are becoming scarce due to (i) the environmental impact of growing populations with their associated patterns of consumption, production, investment and trade; (ii) uneven access to resources; and (iii) (non-linear) environmental changes³⁵. The cumulative effect is decreased global environmental security.

The world's population now exceeds six billion people and may reach nine billion people by the year 2050³⁶. Access to resources is unevenly distributed amongst geographic regions and people³⁷. Leading environmental changes of major concern are: (i) depletion and pollution of fresh water supplies; (ii) depletion of fisheries; (iii) degradation and loss of biodiversity; (iv) degradation and loss of agricultural lands; (v) food and health safety; (vi) stratospheric ozone depletion; and (vii) global warming³⁸.

The planet's atmosphere, water resources, habitats, soil fertility and biodiversity are resources that form part of the global commons³⁹. They represent global public goods that belong to everyone and no one. Unclear ownership and property rights makes them particularly susceptible to what is often referred to as the Tragedy of the Commons – the tendency for common resources to be consumed until they become exceedingly scarce, or worse, cease to exist⁴⁰. Experts agree that global public goods are undersupplied⁴¹ and international collective action is required to maintain or increase the supply of these goods⁴².

There are three main reasons why coverage by Eco-Insurance offers a solution for enhancing global environmental security:

- Environmental changes will be reduced and mitigated against by means of substantial and sustained investments in the restoration and maintenance of life-supporting ecosystems;
- More equitable access to (and distribution of) resources, in particular to the poor, is facilitated through international resource transfers, based on ecological footprint size, level of income, and global insurance risk;

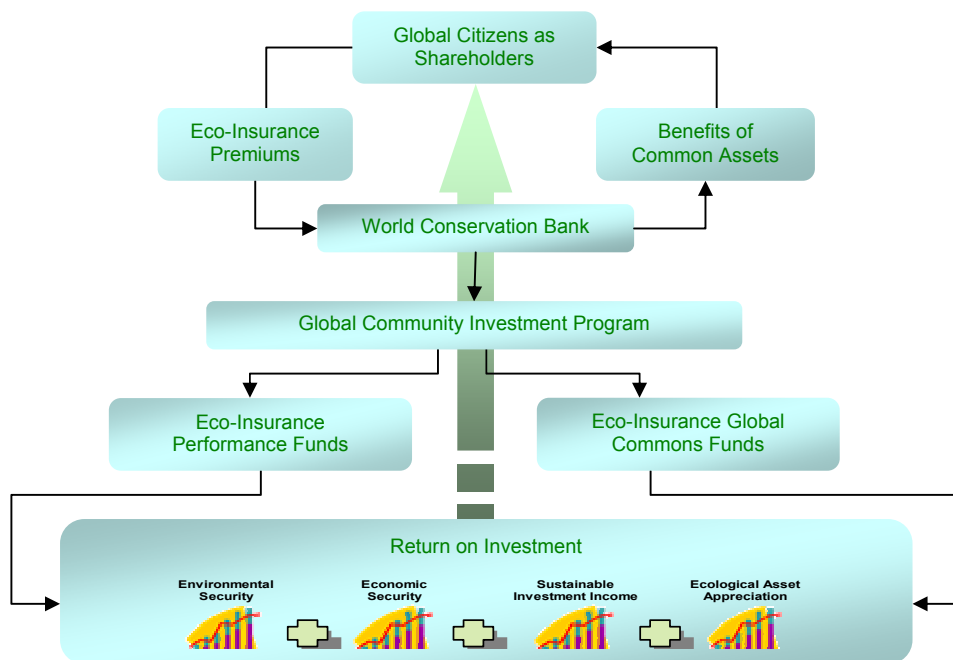
- Built-in incentives can help manage population growth⁴³ and assist in the adoption of sustainable consumption, production, investment, and trade practices⁴⁴.

The World Conservation Bank

Using Capitalism for the Common Good

An integral part of the Eco-Insurance proposal is the establishment of a World Conservation Bank¹. Its mission will be to advance global environmental and economic security through the implementation of a Global Community Investment Program dedicated to the restoration and maintenance of the globe's life-supporting ecosystems following transparent, measurable performance criteria. Specific objectives are to (i) mobilize Eco-Insurance premiums in an innovative manner; (ii) invest Eco-Insurance premiums in a sustainable future for maximum benefit to current and future generations; and (iii) implement an inclusive governance and ownership structure to allow capitalism to work for the global commons and privatize the ecosystem goods and services for the benefit of all the globe's citizens^{45,46}.

The World Conservation Bank is intended to remain a modestly-sized organization allied with value-added implementation partners from the private sector, NGOs, multilateral development institutions, and governments to fulfill its mission. Importantly, the World Conservation Bank can in principal be established through private entrepreneurial initiative following existing company law. No treaties or formal international conventions are required.



A New Financial Institution: Why?

The main reasons for proposing a new financial institution derive from the fact that: (i) present multilateral development institutions are country driven institutions and, with the exception of the Global Environment Facility (GEF), do not have a dedicated mission to invest in the globe's life-supporting

¹ Note: The World Conservation Bank is a suggested name used throughout this document, but other appropriate names could be the Global or World Community Bank. Importantly, the mission of the Bank can also be equally well achieved if organized as a fund or a trust; this would make names such as the World Conservation Fund or a Global Eco-Insurance or Community Trust more appropriate depending on the legal form that would ultimately be selected.

ecosystems; (ii) multilateral development institutions serve at the pleasure of governments and can only have nations as shareholders; (iii) different groups of stakeholders are difficult to formally accommodate in existing multilateral decision making processes; (iv) Eco-Insurance funds are to be invested through multiple channels, not only multilateral channels; (v) on-going programs to mainstream sustainability criteria into day to day operations of multilateral development institutions and inter-agency cooperation can be strengthened by stipulating how Eco-Insurance funds should be invested; and finally (vi) the World Conservation Bank can internalize an innovative governance and ownership structure to provide access to and distribute the benefits of joint ownership of the global commons in an equitable manner.

Eco-Insurance Premium Mobilization

Several innovative promotional programs can be used to mobilize Eco-Insurance premiums from people and organizations:

- *MyEcoFoot™ for People and Organizations*⁴⁷ is an internet-based resource mobilization mechanism designed to: *show* people and organizations the impact they and others have on the world's ecosystems, *offer* e-learning resources on how to reduce one's "ecological footprint", and *provide* people and organizations the opportunity to offset the inherent risk profile of their footprint size by paying a relatively modest annual Eco-Insurance premium to be invested in a sustainable future.
- *One Percent in a Sustainable Future™* is a promotional program modeled on successful community-based investment approaches.⁴⁸ It is designed to dramatically increase assets to be invested in its Global Community Investment Program by encouraging people and organizations to shift at least an Eco-Insurance premium equal to one percent of their investment dollars into the Bank's investment program.
- An *EcoSmartCard™*, an affinity credit card, can be offered to people and organizations to automate their Eco-Insurance payments and obtain discounts on selected environmentally friendly goods and services; *Eco-Insurance Bonds* may be issued to investors to promote pre-payment of Eco-Insurance for periods of five to ten years⁴⁹.

The combined resource mobilization potential of these programs is substantial. An average Eco-Insurance premium of a little more than two dollar cents per global citizen per day would raise approximately \$50 billion per year mostly from OECD countries⁵⁰. The amount of investment assets under professional management with investing institutions, including pension funds, mutual fund families, foundations, and religious organizations is approximately \$ 34 trillion worldwide⁵¹. If a modest one-tenth of one percent of these investment assets would be shifted into Eco-Insurance (just one percent of total assets over a ten-year period), that program would generate in excess of \$ 30 billion per year⁵².

Global Community Investment Program

As a catalyst of an accelerated transition to a sustainable future, the Bank will be tasked to implement a multi-billion dollar Global Community Investment Program in life-supporting ecosystems through two unique and complimentary investment products⁵³:

- the *Eco-Insurance Performance Funds* will be invested in balanced portfolios of listed securities that meet specified sustainability criteria as indicated by the emerging sustainability indices, environmental indicators, sustainability screens and matrices employed by professional asset managers to be selected by the Bank. Sample portfolios include but are not limited to: water, energy, health, agriculture and biodiversity, as well as index funds of environmentally responsible companies. This would:
 - *demonstrate* that investments in companies that internalize sustainability criteria in their operations, offer equal or better returns on investment than companies that do not⁵⁴;
 - *create* an asset base generating \$ 25-50 billion in annual income that can be reinvested in the Eco-Insurance Global Commons Fund in perpetuity⁵⁵;

- *use* investment clout to mainstream sustainability in socially and environmentally responsible corporate governance through shareholder advocacy⁵⁶;
- *build* an asset base of strategic investments supportive of maintaining the regenerative capacity of life-supporting ecosystems that can be passed on to future generations; and,
- *serve* as a temporary place to invest Eco-Insurance proceeds earmarked for the Eco-Insurance Global Commons Fund, in the event there is a lack of absorptive capacity for direct investments.

Performance of the *Eco-Insurance Performance Funds* would be measured against well-established benchmarks, such as the DJIA, the S&P 500, the DJSI and the MSCI.

- the *Eco-Insurance Global Commons Funds* will invest through selected financial intermediaries a combination of grants, debt and equity in capacity building, the research, development and commercialization of eco-enterprises, technologies and programs that promote the restoration and maintenance of the globe's life-supporting ecosystems, including, but not limited to, sustainable enterprise development, performance-based payment systems for conservation, sustainable forestry management, non timber forest products, ecotourism, environmental technologies (water, energy, health, agriculture) and environmental education. This would:
 - *enhance* environmental and economic security by investing in activities that incubate change and build capacity as part of a stable long -term investment strategy to protect the global commons;
 - *catalyze* through leverage the growth and formation of a synergistic and mutually reinforcing set of financial instruments to support emerging conservation and sustainable development activities;
 - *stimulate* payments systems for ecosystem goods and services which empower and reward local communities as ecosystem managers⁵⁷; and,
 - *manage* a strategic inventory of global ecological assets with substantial appreciation potential, as scarcity becomes more prevalent and natural assets are enclosed in the market place⁵⁸.

Performance *Eco-Insurance Global Commons Funds* would be measured against targeted rates of return for eco-enterprises and specific conservation goals (e.g. the number of hectares protected and used for sustainable development activities through performance based payment systems to ecosystem managers).

The World Conservation Bank would invest its resources following an integrated strategy that takes absorptive capacity of markets and sectors into consideration. The Bank would initially invest 75-90% of its resources in the Eco-Insurance Performance Funds. Once total assets exceed a certain threshold, a growing percentage would be invested in the Eco-Insurance Global Commons Funds. Eco-Insurance Performance Funds would in essence become a trust fund guaranteeing income for investment in the globe's life-supporting ecosystems in perpetuity, independent of potentially variable Eco-Insurance proceeds.

Innovative Governance and Ownership

Governance issues figure prominently in discussions throughout the world. Transparency and accountability are important cornerstones of good governance. As trustee and investor of Eco-Insurance funds, the Bank will engage and inform its shareholders through modern means, including through internet-based strategies offering personalized interactivity, reporting, opinion polling, and information transfer. Open decision making would apply to all facets of its operation on the basis of transparent policies, procedures, and a clear organizational structure⁵⁹. The governance structure of the World Conservation Bank would feature supervisory and management boards reporting to an annual meeting

of global citizen shareholders. The governance structure would receive advice from a Steering Committee, an Honorary Board of Trustees, a Scientific Advisory Committee, and an Investment Committee to manage and direct the Bank's Global Community Investment Program

A unique feature of the World Conservation Bank is that the annual meeting of shareholders would consist of global citizens or their representatives who would receive share certificates based on their commitment to pay applicable annual Eco-Insurance premium to offset the risk profile of their ecological footprint size. Each and every global citizen is encouraged to become a shareholder and will be asked to self-direct how their Eco-Insurance premium will have to be invested from amongst the portfolio alternatives offered by the Global Community Investment Program. By becoming a shareholder, global citizens can also confirm their support for the goals of Millennium Declaration⁶⁰ and the Earth Charter⁶¹; both will be incorporated in the founding articles of the World Conservation Bank. Each shareholder will receive regular online updates about the activities of the World Conservation Bank, its progress, news items, and performance results. A Digital Connect program will ensure that global citizens that do not have easy access to the Internet can have that access at work, local internet cafes, web-enabled cell phones, or a network of affiliated banks. Attendance at annual shareholders' meetings and voting may be in person, by proxy, or online.

Why should world citizens care and want to become shareholders? First, they become co-owners of a growing and increasingly valuable asset pool of investments that build a sustainable future. Second, this co-ownership enables current generations of world citizens to transfer these tangible assets as an inheritance to future generations. And third, Eco-Insurance empowers every global citizen and gives each a clear personal stake in the governance and ownership of the global environmental commons.

Towards Implementation

Feasibility Factors

How feasible is future implementation of *Eco-Insurance for a Sustainable Future*? There are many positive factors that make Eco-Insurance very powerful, for it offers: (i) a timely proposed solution to an important global issue; (ii) a practical formula for calculating Eco-Insurance premiums; (iii) great flexibility; (iv) an innovative financial institution as the implementation vehicle; (v) civil society involvement and governance; (vi) fair principles and equity considerations; (vii) a framework for reinforcing existing institutions; (viii) lower transaction costs through a strong role for information technologies, including the internet; (ix) substantial funds for sustainable development; and finally, (x) the democratic use of investment funds.

On the other hand, doubts about the feasibility of Eco-Insurance may be summarized as follows: (i) people only serve their self-interest; incentives for participation need to be very clear and tangible; (ii) the view that governments need to make Eco-Insurance mandatory or Eco-Insurance will not work; (iii) political feasibility and inability to gain multi-stakeholder support makes the concept impractical; (iv) without support from opinion leaders, governments, the private sector, academia and NGOs, it will be difficult to convince the general public to participate; (v) the world has already enough international financial institutions, and (vi) the proposed mechanism presents challenging governance, transparency and accountability issues.

Policy Options

There are a number of policy options available to governments, multilateral development institutions, the private sector, academic institutions, and NGOs that wish to overcome feasibility concerns and help bring about future implementation of Eco-Insurance:

- *governments* should consider using market-based fiscal and economic instruments to create the necessary conditions for voluntary adoption of Eco-Insurance to take hold; governments benefit as Eco-Insurance eventually presents a significant source of financing other than ODA in support of sustainable development goals;

- *multilateral development institutions*, which are familiar with the challenges of sustainable development, should lobby national governments (their shareholders) to support Eco-Insurance and cement implementation partnerships with the World Conservation Bank that will create co-financing opportunities and promote interagency cooperation;
- *the private sector*, led by the banking and insurance industry, should lobby governments for a supportive framework and develop implementation partnerships for the Global Community Investment Program, showcase good governance, and provide their knowledge capital on investment and credit risks to investors and clients; numerous opportunities exist for private sector companies, including the oil, energy and automobile industries, to promote their products and voluntary payment of Eco-Insurance at the same time, or alternatively, to qualify purchases that are exempt from or lower Eco-Insurance;
- *academic institutions*, should support the development and implementation of Eco-Insurance by mainstreaming the concept in curricula, through applied research, economic analysis, case studies, policy recommendations, optimization of flexibility, and awareness building;
- *NGOs*, as highly effective networks spanning the globe, should lobby national governments, multilateral institutions, and the private sector and their members in support of Eco-Insurance; develop implementation partnerships with the World Conservation Bank; and, otherwise facilitate early adoption of Eco-Insurance.

All stakeholders should give serious consideration to committing *One Percent to a Sustainable Future* by encouraging their employees, members, and shareholders to shift one percent of their investment assets into Eco-Insurance on a voluntary basis. The cost of Eco-Insurance is small, relative its ability to promote change.

Next Steps

It is hoped a network of committed launch partners will emerge to provide Eco-Insurance with the necessary critical mass that will bring about its implementation. Any member of the above listed stakeholder groups can decide to become a launch partner of Eco-Insurance. Launch partners would be organizations willing to invest time and resources to cooperate on the further development and eventual implementation of *Eco-Insurance for a Sustainable Future*.

Toward that end, *Eco-Insurance for a Sustainable Future* should lead to discussions with stakeholders regarding support and participation, the identification and commitment of a network of launch partners, and the development of an implementation strategy. Articles of incorporation of the World Conservation Bank (Fund or Eco-Insurance Trust) should be proposed and reviewed. It should also be evaluated how Eco-Insurance may be implemented on an eco-regional basis as part of a demonstration project.

What is the bottom line? Eco-Insurance is essentially a global public good. Global public goods can be defined as commodities, resources and services – and also systems of rules or policy regimes – with substantial cross-border externalities that are important for development and poverty reduction. These can be produced in sufficient supply only through cooperation and collective action by developed and developing countries⁶². Examples are: the environmental commons, national, economic, environmental and human security, financial stability, humanitarian rights, and knowledge. Global Public Goods provide a central rationale for international collective action⁶³. Successful development and implementation of Eco-Insurance will be strongly conditioned upon international cooperation between governments, the private sector, multilateral institutions, academia, NGOs, and ultimately the globe's citizens. Strong leadership by example from a network of committed launch partners is the logical next step⁶⁴.



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Eco-Insurance for a Sustainable Future Peer Review: Moderator's Report

Review and Conclusions

Invitations to review the document were sent to 180 experts of whom 42 agreed to participate. Of those, 15 sent in a completed questionnaire and /or their comments. The initial review, which led to this abbreviated version, was reviewed by 10 experts out of the 15 invited. All in all, about 25 individuals reviewed and commented on Eco-Insurance for a Sustainable Future during the first six months of 2003. I have also benefited from verbal comments from some of those who did not put their thoughts to paper. I regard the consultation as valid and helpful. I concur with the plans for future consultations that will more heavily involve Southern perspectives.

The results of the review indicate that despite considerable obstacles to implementation Eco-Insurance is considered to be a proposal that merits serious attention and is worth developing into an actionable plan and strategy. All reviewers expressed interest to stay involved with the initiative as it develops.

5th September 2003

Tom Spencer

Executive Director, ECPA

Visiting Professor of Global Governance, University of Surrey

Key Issues

1. The World is not Dutch Enough!

The peer review indicated that Eco-Insurance is an idea that scored high on innovation and low on political achievability. I detect an unspoken consensus that there is a regrettably low level of “Dutchness” in the global political population. “Dutchness” being defined for these purposes as: “the willingness to collectively invest in long-term amelioration of a commonly recognised threat”. The review however clearly points towards a strategy for surmounting this perceived defect in the global polis.

2. Suspicions about the Name

The World Conservation Bank may need to be presented as a Global Eco-Insurance Trust (Fund or Facility) as opposed to an immediately global institution. While the WCB may be a good idea, many decision makers seem blinded by the pre-conceived notion that new international institutions are simply a bad idea. Linked to this is the valid concern that there are challenging governance issues for an institution (particularly if it is to remain of reasonable size) that would manage very substantial investment assets. We should start reviewing several interesting, recently launched governance structures as models for Eco-Insurance in more detail. (The Global Conservation Trust recently started by FAO, CGIAR and others to preserve crop diversity (funding goal: a \$ 260 million endowment), the Sky Trust and The Alaska Fund).

3. Ignorance of Technical Possibilities

The World Conservation Bank, as a potential private sector vehicle for the production of a global public good, using modern technologies to streamline investment operations, may be under-appreciated or misunderstood, perhaps because it is such an unusual approach and the possibilities for automation using information technologies are not widely known (and often proprietary).

4. North/South

More attention should be paid to acknowledgement of North-South differences on the environment-development debate and how Eco-Insurance bridges the divide.

5. Disagreement on non-essential elements relating to current debates

Impediments to implementation may need elaboration; it should for instance be made clearer how Eco-Insurance has the potential of receiving greater (political) support than alternative financial mechanisms (existing or proposed), such as the GEF, Carbon Taxes, Emission Trading, the Tobin Tax. This was explained in more detail in the long version of the document. It was unavoidable that some things got lost during the document’s compression to 12 pages.

Many reviewers liked the use of fairly well-known and established ecological footprint methodology, but some noted that it is a contested concept, e.g. what is the relative impact of country rankings? It is however possible to decouple ecological foot printing from Eco-Insurance if this would improve political acceptability. Decoupling could be accomplished by focusing on the *One percent for a Sustainable Future* concept. I prefer that approach because it would use invested assets as the basis for paying Eco-Insurance, since investments are seeds of change – whether good or bad. *One percent for a Sustainable Future* shifts more and more investments to sustainable endeavors based on wealth that is built on the back of an economic system that externalizes environmental costs. The polluter thus pays Eco-Insurance to help maintain the source of the investor’s wealth at the personal, organizational and/or country level. One percent of a \$ 40 trillion global stock market capitalization yields \$ 400 billion (yielding perhaps \$20-40 billion to invest in life-supporting ecosystems annually). The goal should be to develop a campaign directed at convincing the wealthy (people, organizations and nations) why they should feel good about parting with one tenth of a percentage point of their assets as “portfolio Eco-Insurance” over a period of ten years (to achieve one percent by year ten) to a global Eco-Insurance trust benefiting the globe’s citizens. Governments could facilitate such transfers by exempting them from wealth taxes or by providing tax credits or similar incentives. Early adopters should be rewarded as well. An international

competition for goodwill could celebrate those people, organizations and nations that have taken concrete steps to commit and/or promote *One percent for a Sustainable Future*.

6. Beyond Voluntary versus Mandatory: A Tipping Point?

The opinions expressed on promoting voluntary versus mandatory Eco-Insurance were often diametrically opposed amongst different reviewers. The European/multilateral/NGO perspective appears to favor a strong role for government in making Eco-Insurance mandatory, while US and private sector reviewers believe voluntary approaches are more appropriate. But there is a general consensus that governments would at a minimum need to facilitate implementation of Eco-Insurance with fiscal and economic incentives for it to work; a direction the consultation paper advocates.

The shadow of American opposition hangs heavy in the minds of our reviewers, producing both a pessimism about new multilateralist institutions and a defensiveness about their own and existing institutions. I believe we should accept this as the flavour of the month and begin our long march towards an institution from a voluntary starting point.

We should transcend the division between those wanting a powerful global institution backed by governments versus those seeking a private sector, citizen based pragmatically evolving institution. We should posit a private sector institution with the ability to transform itself at some stage in the future when it reaches "a tipping point". Such a point can be defined in the mission statement in terms of a specific number of countries or endorsement by a specified number of UN and global governance institutions. We will begin with the vigour of the private sector and the empowering force of the individual, but hold out the prospect of a cumulating coalition of the willing amongst governments and initially suspicious elements of existing global governance.

7. Premium Calculation

The Eco-Insurance formula for calculating the premium needs refinement, including alternative approaches. What does it mean to various countries? How would the process of Contraction and Convergence apply to ecological footprints, and global Eco-Insurance risk? How do Eco-Insurance caps lead to market-based trades?

8. The Lasting Importance of a Strong Launch

Many reviewers suggested clear incentives or an early return on investment should be incorporated in the approach to convince people, organizations or nations to pay Eco-Insurance, especially if it is to be voluntary.

If we chose our words carefully we can make this campaign for Eco-Insurance into a movement of concerned people of the planet keen to do something for themselves, their children, other species and ultimately for Planet Earth. I believe we should have as launch partners, not just the usual alliance of a bank, an insurance company, a big NGO and a credit card corporation, but also schools, churches, local NGOs, animal welfare groups, etc. We should seek pro bono publico support from advertising/PR/PA companies. The emotional tone should be one of "another world is possible", linked to the power of church and citizen movements to make things happen.

This would then be the first global institution that genuinely grew from people power. This, rather than a notional global citizenship share holding would give the institution its claim to a special identity. We need to make early, long-term alliances with established mass membership institutions like the micro credit banks and small and medium sized NGOs in the South. My reading of the Peer Review is that our contributors believe that the technical challenges can be met by the financiers and technicians, but that the political cynicism and inertia can only be overcome by a very Dutch campaign that lifts the spirits. To get this politically airborne it must reflect all the Dutch qualities. It must be perceived as technically reliable, commercially sound, morally right and fun to be part of. This is an example of a project like the Jubilee 2000* where the circumstances of the launch permanently condition the perception of the project.

* Jubilee 2000 is an ongoing campaign (now known as "Jubilee Plus") which mobilised over 24 million people in support of debt forgiveness of developing countries; it started as a grassroots initiative in the United Kingdom by churches and civil society organizations.

Selected Quotations from Reviewers

- 'It is innovative; it is necessary; it is well-considered... it uses capitalism and markets for the common good.'
- 'The underlying approach to the fund raising mechanisms is to ensure Eco-Insurance is participative: people and organizations need to engage and help manage the commons out of self interest; global funds and taxes are what governments/politicians do and it usually takes for ever to agree on something; the WCB and its perhaps gimmicky tools are there to provide mechanisms that can be launched right away through private initiative and entrepreneurship; it empowers people as stakeholders with property rights.'
- 'I really like the Eco-Insurance concept itself, and the three elements entering the premium assessment, which are logical and compelling. I also like the way you describe the benefits of Eco-Insurance, and even follow you a long way on your sense of feasibility and of the potential for fund-raising.'
- 'Was truly delighted to read this executive summary, as it is probably a lifesaver for the WSSD program and Ecosystems in general. I would stress that it maintains a strong private sector mentality with focus and control of overheads.'
- 'The approach [of the initial draft] is global, yet it is too "eco-" or "environment" oriented. Most of the world would be more concerned with the socio-economic aspects of sustainability. This needs to be better in the [final version] as a whole... the approach is very "North" oriented. Population growth seems to be listed as the main evil throughout the [initial draft]. Yet consumption patterns of the rich are rarely mentioned... The report often talks about certain things that the international community should be doing, but do not analyse and explain why those are not happening. I believe that a good analysis of the reasons why certain things are not happening would help better define how the Eco-Insurance system might work one day.'
- 'I find there are many good elements in the [initial draft], many of which could be taken up through existing financial institutions – in a step-by-step manner, without having to go all the way to creating the WCB as such. We could initiate a series of discussions with existing financial mechanisms, and see the extent to which they could pick up these (or some of these) issues in their existing mandates.'
- 'The plan is essentially a global progressive environmental tax because the benefits accrue to future generations and not in proportion to contributions. The term "insurance" is a nice spin, but not likely to be accepted by many people in the US or developing countries.'
- 'The ecological footprint and Eco-Insurance ideas have promise as a mechanism for convincing individuals in wealthy nations to make voluntary contributions to a global ecological fund.'
- '[The three weakest point of the proposal are] its weakness in not explaining how this idea is better than other similar ideas, or why politically this would work and not they; its relatively shallow analysis of practical impediments; and its inattention to North-South differences.'
- 'Eco-Insurance is an innovative physical product to emerge from the global sustainability debate – the public often say "but what can I do by myself" – this type of product offers everybody the opportunity to get involved. The debate over Eco-Insurance will be key to showing clearly the linkages between sustainable development and global security. Finally,

Eco-Insurance promotes the idea that global sustainability and security can only be achieved by creating a more equitable global community.'

- 'The issue for me is how to energise the people to contribute directly. Maybe start through a grassroots effort that builds momentum over time. Need to energise the children... especially those that are connected via the internet. I'd also recommend some high visibility personalities for PR purposes (e.g. Bono).'
- 'Perverse policies (subsidies for fossil fuels, pesticides), lack of political will, and entrenched political/economic interest (like oil, political elites) skew business toward unsustainable practices. Changing perverse subsidies and price signals is likely to do far more than an Eco-Insurance fund. But how to do this? Building constituencies step-by-step, business-by-business, project-by-project is one way. A fund can finance such initiatives and broadcast the lessons learned.'
- 'Rather than a grand, dirigiste, environmental Marshall Plan, I would recommend that the initiative start with a more modest and focussed approach. If it works, it will evolve into something larger... get some high profile lead participants (individuals, governments, institutional investors, a credit card company and corporations) to be founding members – maximise the PR benefits of participating – use the proceeds to give grants or set up a revolving loan fund or both.'
- 'I would start with voluntary adoption, in order to get it mandatory in the next phase.'
- 'Instead of a direct payment, something that will feel like a charitable contribution, how about some other method of payment that does not feel like a charitable contribution. Maybe I purchase something and a portion of the purchase price goes towards an Eco-Insurance premium, like airline mileage programs or the cash-back feature of the Discover credit card.'

End Notes

¹ *World Resources 2000-2001, People and Ecosystems: The Fraying Web of Life*, United Nations Development Program, United Nations Environment Program, World Bank, World Resources Institute; World Resources Institute, Washington DC 2000, page 8.

² The Earth Summit gathered over 100 Heads of States and Government, representatives from 178 countries, and 17,000 participants from around the world. The Earth Summit's principal outputs were: (i) The Rio Declaration on Environment and Development, (ii) the UN Framework Convention on Climate Change (UNFCCC), (iii) the Convention on Biological Diversity (CBD), (iv) the Statement of Forest Principals, and (v) Agenda 21, a comprehensive program of action for sustainable development

³ For coverage of issues related to ODA and FDI and potential avenues to attract more private and public sector resources to invest in sustainable development, see: *Financing for Sustainable Development* by Fiscal Affairs Department of the International Monetary Fund, UNEP and the World Bank, World Bank July 2002.

⁴ For an analysis of the WSSD including partnership plenaries see: *Summary World Summit on Sustainable Development* at <http://www.iisd.ca/linkages/download/pdf/enb2251e.pdf>.

⁵ On the positive side: In April 2003, Britain's Chancellor to the Exchequer, Gordon Brown, presented an ambitious proposal to double foreign aid to \$ 100 billion per year until 2015 based on long-term commitments to an International Finance Facility as a means to the International Monetary Fund's board.

⁶ The Millennium Development Goals are: (i) Eradicate extreme poverty and hunger; (ii) Achieve universal primary education; (iii) Promote gender equality and empower women; (iv) Reduce child mortality; (v) Improve maternal health; (vi) Combat HIV/AIDS, malaria, and other diseases; (vii) Ensure environmental sustainability; and (viii) Develop a global partnership for development

⁷ Ibid 2, page 1 states that an additional \$ 40-60 billion would be required to reach the MDGs.

⁸ See for instance: (i) *Climate Change & The Financial Services Industry*, prepared for the UNEP Finance Initiatives Climate Change Working Group by Innovest with guidance from UNEP Finance Initiatives Project Coach, Dr. Andrew Dlugolecki, July 2002; (ii) Homer-Dixon, T. *The Ingenuity Gap: how can we solve the problems of our future*, Knopf 2000 New York –Toronto, on nonlinearity; (iii) Gardiner, R. *Sustainable Finance: Seeking Global Financial Security*, UNED Economic Briefing No3.

⁹ Postponing accelerated investments in the restoration and maintenance of the globe's life-supporting systems is a bad idea from an ecological and financial point of view: (i) the future cost of restoring and maintaining the globe's life-supporting ecosystems will increase exponentially due to

accelerated and nonlinear environmental changes; past and projected insurance company economic loss data confirm this -- an ounce of prevention is worth a pound of cure; and, (ii) due to the wonders of compound interest, the future cost of restoring and maintaining the globe's life-supporting ecosystems is easier to finance if society agrees to make regular contributions starting in the present.

¹⁰ See: Ibid 1, page 9 for overview of goods and services provided by life-supporting ecosystems.

¹¹ See for example: (i) *Living Planet Report 2002*, WWF with UNEP's WCMC and Redefining Progress, (ii) *Global Environmental Outlook 3: Past Present and Future Perspectives* UNEP, 2002; (iii) *ibid* 1, page 19, and (iii) Wackernagel, M. et al., *Tracking the ecological overshoot of the human economy*. Proceedings of the National Academy of Sciences, June 24, 2002.

¹² For an approximation of the value of what may be priceless and returns on conservation as an investment, see: *Economic Reasons for Conserving Wild Nature* Andrew Balmford, Aaron Bruner, Philip Cooper, Robert Costanza, Stephen Farber, Rhys E. Green, Martin Jenkins, Paul Jefferiss, Valma Jessamy, Joah Madden, Kat Munro, Norman Myers, Shahid Naeem, Jouni Paavola, Matthew Rayment, Sergio Rosendo, Joan Roughgarden, Kate Trumper, and R. Kerry Turner, *Science* 2002 August 9; 297: 950-953.

¹³ See for example: (i) *Conserving the Peace: Resources, Livelihoods and Security*, Edited by Matthew, R., Halle, M. and Switzer, J. International Institute for Sustainable Development, 2002; (ii) Homer-Dixon, T., *Environment, Scarcity, and Violence*, Princeton University Press, June 2001.

¹⁴ The following resources on ecological footprint analysis are helpful: Wackernagel, M and Rees, W., *Our Ecological Footprint: Reducing Human Impact on the Earth*, New Society Publishers, Gabriola Island, BC, Canada, 1996; Chambers, N., Simmons, C., Wackernagel, M., *Sharing Nature's Interest: Ecological Footprints as an indicator of sustainability*, Earthscan Publications Ltd., London and Sterling VA, 2000.

¹⁵ "Remainder" is a more appropriate term than surplus because on a global level a surplus does not exist; humankind has been running an ecological deficit with the earth since the 1980s.

¹⁶ The suggestion here is that UNEP may be an appropriate agency for providing such an assessment based on its current work program, expertise and increased attention to scenarios, such as included in the Global Environmental Outlook.

¹⁷ Appropriate examples of fiscal and economic interventions include, but are not limited to: Eco-Insurance deductibility from VAT or income tax purposes, credits of Eco-Insurance payments against qualified environmental or carbon taxes, Eco-Insurance investment credits, the shifting of perverse subsidies, Eco-Insurance exempt goods and services, etc.

¹⁸ The cost of achieving sustainable development has been estimated at \$ 600 billion of which \$ 125 billion was to be provided as foreign assistance to

developing countries; the estimated demand for financing the globe's life-supporting ecosystems is estimated to be in excess of \$ 100 billion (see for example: *What the World Wants* at www.osearth.com); the estimated supply for financing Global Public Goods is approximately \$ 5 billion of which \$ 1-2 billion reaches the globe's life-supporting ecosystems via the GEF (see: *Effective Use of Development Finance for International Public Goods*, in Global Development Finance 2001, The World Bank, Washington DC).

¹⁹ Shrink & Share is a term coined by Mathis Wackernagel during discussions with the author concerning Ecological Footprints, C&C and Eco-Insurance.

²⁰ C&C has been developed by the London-based Global Commons Institute (GCI)

²¹ See: Meyer, Aubrey, *Contraction & Convergence: The global Solution to Climate Change*, published by Green Books on behalf of the Schumacher Society, 2000.

²² See: *Ecological Footprint Accounts: Moving Sustainability from Concept to Measurable Goal*, Redefining Progress.

²³ *Living Planet Report 2002*, WWF with UNEP's WCMC and Redefining Progress.

²⁴ Ibid 23.

²⁵ See: www.gci.org.uk for mathematical options model for Contraction and Convergence scenarios.

²⁶ Ibid 23

²⁷ For discussion on ecological deficits and its consequences, see for example: Brown, Lester, R., *Eco-Economy: Building an Economy for the Earth*, Earth Policy Institute, W.W. Norton & Company, New York and London.

²⁸ For example: the civilizations of Mesopotamia and Easter Island.

²⁹ See: *Climate Change and the Financial Services Industry*, Executive Briefing, UNEP Finance Initiatives, 2002.

³⁰ IPCC, Third Assessment Report - Climate Change 2001. Working Group I: The Scientific Basis. Summary for Policy Makers. Geneva, World Meteorological Organization and United Nations Environment Programme, 2001

³¹ *Climate Related Perils Could Bankrupt Insurers*, ENS News, October 7, 2002.

³² Ibid 8 (i)

³³ Ibid 9

³⁴ Myers, N. *Environmental refugees: a growing phenomenon of the 21st Century*, Philosophical Transactions of the Royal Society, London, May 2001, 356.

³⁵ Ibid 8 (ii)

³⁶ World Population 1950-2050, US Census Bureau, <http://www.census.gov/ipc/www/img/worldpop.gif> International Database 5-10-00

³⁷ See: Diamond, Jared, *Guns, Steel and Germs: The Fate of Human Societies* Norton, W. W. & Company, Inc, 1999.

³⁸ See the UN's Framework Papers on Water, Energy, Health, Agriculture and Biodiversity for summaries on these interrelated environmental changes related to sustainability: http://www.johannesburgsummit.org/html/documents/wehab_papers.html

³⁹ A global commons may be loosely defined as a domain that is beyond the exclusive jurisdiction of any one nation but one that all nations may use for their own purposes (such as extracting resources or discharging pollutants). Without effective controls, the use of a commons may increase to the point that it becomes severely depleted, contaminated, or degraded, a tendency Garrett Hardin refers to as the "tragedy of the commons."

⁴⁰ Hardin, G. The Tragedy of the Commons, Science 162, 1968, 1243

⁴¹ See for example: (i) Kaul, I., Le Goulven, K., Schnupf, M., *Financing Global Public Goods: Policy Experience and Future Challenges*, in Global Public Goods Financing: New Tools for New Challenges, A policy dialogue, edited by Inge Kaul, Katell Le Goulven and Mirjam Schnupf, 2002 and (ii) Gardiner, R., Le Goulven, K. *Sustaining our Global Public Goods*, UNED Economic Briefing No 3.

⁴² See: Stiglitz, Joseph, E., Knowledge as a Global Public Good, www.worldbank.org/knowledge/chiefecon/articles and also: *Sustaining our Global Public Goods*, Towards Earth Summit 2002, Economic Briefing No.3, UNED Forum

⁴³ The amount of Eco-Insurance payable is inversely related to the number of people (and their ecological footprint).

⁴⁴ Sustainable consumption, production, trade and investment activities will lower Eco-Insurance premiums.

⁴⁵ As the global commons become enclosed in the market system due to increased scarcity, a free market system will tend to privatize what is common to all without optimizing social or environmental capital. The World Conservation Bank is a deliberate attempt to privatize on behalf and for the benefit of global citizens – it is a private sector delivery system for a global public good.

⁴⁶ Two interesting ways of ensuring that people benefit from common assets share by all are the following:

(i) The Alaska Permanent Fund was established in 1976 and sets aside 25 percent of the funds received by the state in connection with the development of its oil reserves. The money goes into a permanent fund, run by a board of trustees accountable to the state and the people of Alaska. The fund currently holds \$ 23 billion and currently pays an annual dividend of \$ 1,500 to every resident man, woman and child.

(ii) The Sky Trust is modeled after the Alaska Permanent Fund. Sky Trust income will come from selling carbon emission permits to fossil fuel companies. That income would then be distributed to

all U.S. citizens in the form of equal dividends. The amount of dividend would vary from year to year. It would be calculated by dividing the annual income of the Trust by the number of U.S. citizens. Depending on the value of carbon emission permits, yearly dividend checks could range from \$100 to over \$1,000. The Climate Stewardship Act of 2003, introduced by Senators Lieberman and McCain, contains many of the concepts pioneered by the Sky Trust.

⁴⁷ MyEcoFoot is a development stage public-private initiative of the Institute for Environmental Security and TransGlobal Ventures, Inc., see: www.myecofoot.org

⁴⁸ See: 1% community campaign at Social Investment Forum at <http://www.communityinvest.org/campaign.htm>

⁴⁹ Eco-Insurance Bonds are proposed to be issued upon pre-payment of Eco-Insurance premiums and would have the following basic features: (i) a face value equivalent to the premium amount; (ii) cumulative interest on the face value at a specified rate; and (iii) maturity of accumulated interest in five or ten years. Early adopters would be protected against future increases of Eco-Insurance premiums pursuant to increased global risk up and until the effective maturity date of five, ten, fifteen or twenty years. One or a combination of the following tax incentives may support Eco-Insurance: (i) a tax deduction from current or future income equal to face value; (ii) a cumulative interest exemption for income tax purposes at maturity; (iii) ability to offset face value against future environmental or carbon taxes

⁵⁰ Calculation: \$ 50 billion divided by six billion world citizens divided by 365 days = \$ 0.0228

⁵¹ Global retail assets under management; Source: Cerulli Associates, Financial Times June 26, 2002

⁵² Calculation: One percent of \$ 34 trillion = 340 billion divided by ten years = \$ 34 billion per year.

⁵³ An investment program of scale is necessary to achieve desired results; global insurance risk will indicate what the appropriate scale would be. Estimates indicate that the required scale may be between \$ 50-100 billion per year.

⁵⁴ See for instance: *Socially Screened Assets grew 15 times faster than all U.S. Managed Portfolio Assets since 1999*, Washington DC, November 28, 2001 for report see: [2001 Report on SRI Trends](#); *Market Slump Providing Unexpected Boost to Socially Responsible Mutual Funds*, Social Investment Forum, Washington DC, July 30, 2002: [News Release](#); *Statement from Forum President on Proxy Voting Disclosure Victory* Washington, DC, January 23, 2003: [News Release](#)

⁵⁵ Assuming an annual rate of return on investment of 5-10% on an investment portfolio of \$ 500 billion

⁵⁶ *2003 Proxy Season Expected to Set Records, With CEO Pay and Global Warming Among Top Issues*. Social Investment Forum, Washington, DC, February 12, 2003: [News Release](#); *Statement from Forum President on Proxy Voting Disclosure Victory* Washington, DC, January 23, 2003: [News Release](#)

⁵⁷ For a possible eco-regional approach see: Lovink, J.S., *The Guiana Shield Sustainable Development Corporation: An Eco-regional Financing Mechanism?* March 2003. A report for the Guiana Shield Initiative; copy on file with author and Netherlands Committee for IUCN.

⁵⁸ While enclosure of the global commons in the market system through appropriate price signals is a positive development, it matters from the point of view of equity who receives the payment for the scarcity value of the global commons for it should benefit all living things. Ideally this should be a source funds for financing poverty alleviation and Global Public Goods; see: Daly, H.E., *Sustainable Development: Definitions, Principles, Policies*, Address at World Bank, April 30, 2002

⁵⁹ Internet & communications technologies can be powerful tools for facilitating democratic processes including through polling and communicating transparent policies, procedures, and a clear organizational structure

⁶⁰ On Friday, September 8, 2000 over 150 heads of state from around the world executed the Millennium Declaration <http://www.un.org/millennium/declaration/ares552e.pdf>

⁶¹ For the Earth Charter Initiative and a copy of the Earth Charter: <http://www.earthcharter.org/earthcharter/charter.htm>

⁶² See: *Poverty Reduction and Global Public Goods: Issues for the World Bank in Supporting Global Collective Action* (DC/2001-07), April 2001.

⁶³ Stiglitz, Joseph, E., Knowledge as a Global Public Good, www.worldbank.org/knowledge/chiefecon/articles

⁶⁴ For a discussion on Global Issues Networks as a means of solving global challenges, see: Rischard, J.F. *High Noon: Twenty Global Problems, Twenty Years to Solve Them*, Basic Books, 2002.

About The Institute

The Institute for Environmental Security is a foundation based in The Hague, the Netherlands with liaison offices in Brussels and The Hague. Its mission is to advance global environmental security by means of Horizon 21, a multidisciplinary work programme integrating the fields of diplomacy, law, finance and education.

Overall Horizon 21 objectives are to:

- Create enhanced decision tools for foreign policy makers;
- Contribute to the development of a more effective system of international environmental law and governance;
- Introduce new and innovative financial mechanisms for the maintenance of the globe's ecosystems; and,
- Build the environmental knowledge capital of people and organizations.



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