INVESTING IN SUSTAINABILTY

We are experiencing an increasing awareness and uncomfortable pressure on the sustainability of the long term relationship between man and his environment. This is due to the continuous manifestation, in a variety of forms, of a number of increasingly critical issues and/or trends, key of which are:

Climate Change -- Carbon dioxide levels in the atmosphere rose last year at one of the fastest rates ever recorded, indicated by new figures released in March 2006 by the U.S. National Oceanic and Atmospheric Administration and climbed to 381 parts per million – 100 ppm above the average in the pre-industrial age. (1) . Scientists believe this global warming will have wide-ranging consequences including the rise of sea-levels, increased severity and frequency of extreme weather events and more extreme seasonal temperatures.

Pollution -- Largely due to the wasteful ways of the world over decades, pollution, in a variety of forms, has become one of the biggest challenges facing the economies of the world, specifically with regards to air and water quality and waste management.

Loss of Nature-Biodiversity -- Globally, species are disappearing at an accelerating rate and biodiversity is being lost as human activity disrupts fragile ecosystems. The loss of global biodiversity means lost sources of new foods and medicines, and lost productivity and adaptability of ecosystems.

Resource Scarcity -- Population growth and projected growth in demand for energy, food and materials, if based on today's technologies, will translate into growing pressure on the global resource base. As many life-sustaining resources are currently over-exploited (such as fisheries, forestry and soil), or already scarce (such as freshwater), new pressures on these resources might lead to local ecological collapse with serious regional or even global consequences.

Global poverty – as manifested by the statement, "1.1 billion people in the world live on less than $1 a day", based on over 400 socio-economic sample surveys spanning 100 countries. (2)

None of these pressures can be addressed through a singular focus on e.g. environmental protection alone, as the problems are too complex in themselves and the underlying determinants and solutions are too deeply rooted in our societies and our economies.

One approach is to develop an integrated and holistic approach, within a global context, using the Sustainability Model as a possible platform, from where specific questions, pertaining to a particular set of circumstances are raised and answered on a continuous basis.

What is happening? -- In the corporate world generally, and in the investment environment specifically, the time has arrived for making a sound case for becoming "sustainability aware", and it is happening at an increasing rate, judging from environmental markets benefiting from strong growth and increased political

support. In the latter case an increasing number of calls are heard for action to be taken on climate change, and an increased number of think tanks and environmentally orientated NGO's are established, albeit with a large variation in agenda and strategy.

An increasing number of corporate institutions, both large and small, are getting in on the act of developing new technologies, focused on either a specific area contributing to sustainability, or alternatively, on a broad range of issues.

Has the time arrived ? – this is the question to be asked by us all, public and private sectors and individuals; -- do we move sustainability into the core of our strategic thinking and more specifically, into our investment planning?

Further typical questions to address are:

How do we fund the solutions required?

What are the available investment opportunities?

What are the available investment vehicles?

In order to do so, a brief definition of the Sustainability Model is presented, from where an investment opportunity spectrum is derived, and briefly addressed with some initial answers to the posed questions.

SUSTAINABILITY – A DEFINITION

Historical Background

The exact origin of the concept of sustainable development is debatable, but as can be seen from studying the "Sustainable Development Time Line", available at the IISD web site (3), our understanding of man's tenuous relationship with nature developed over a considerable period of time. An alternative view is available at the web site of "The Sustainability Report" (4) providing "An environment and sustainability chronology".

Two important events along this road, were the arrival of the two concepts known as ***sustainable development*** and the ***triple bottom line*** respectively, enabling the capability of expressing complex relationships between current ***economic***, ***environmental***, and **social challenges**, as illustrated by the sustainability model as presented.

Sustainable Development

The use of the concept sustainable development gained world-wide currency through the work of the UN Commission initiated in 1984 -- World Commission on Environment and Development (WCED), chaired by then Norwegian Prime Minister, Gro Harlem Brundtland. The report, – ***Our Common Future*** – published in 1987, became better known as the Brundtland Report (5), and stated that critical global environmental problems were primarily the result of the enormous poverty of the "South" and the non-sustainable patterns of consumption and production in the

"North". It called for a strategy that united development and the environment – described by the now-common term «sustainable development».

The most quoted definition of sustainable development resulted from the Brundtland report as "***Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs***"

Triple Bottom Line (TBL)

The term "triple bottom line" was coined in 1994 by the environmental consultant, John Elkington, while looking for new language to express what he saw at the time as an inevitable expansion of the environmental agenda. He felt that the social and economic dimensions of the agenda – which had already been flagged in the Brundtland Report – would have to be addressed in a more integrated way if real environmental progress was to be made with special reference to the business environment.

The TBL, as described and presented by Elkington and his team, "focuses not just on the economic value a company or project add, but also on the environmental and social value they add – or destroy. At its narrowest, the term 'triple bottom line' is used as a framework for measuring and reporting corporate performance against economic, social and environmental parameters. At its broadest, the term is used to capture the whole set of values, issues and processes that companies must address in order to minimize any harm resulting from their activities and to create economic, social and environmental value. This involves being clear about the company's purpose and taking into consideration the needs of all the company's stakeholders – shareholders, customers, employees, business partners, governments, local communities and the public."

"The three primary value drivers, economic, environmental and social could be considered as "continental plates" that are not stable; but in constant flux, moving independently from each other due to social, political, economic and environmental pressures, cycles and conflicts."(6).

The TBL concept took off during the late 1990's to a point where PricewaterhouseCoopers published a survey of 140 U.S. corporations in 2003, arguing that companies that ignore the triple bottom line are "courting disaster." The triple bottom line, PwC concludes, "will increasingly be regarded as an important measure of value."(7)

An increasing number of Fortune 500 companies now table their annual reports taking cognizance, through separate analysis and reporting, of the corporation's contribution to relevant aspects of the TBL within their sphere of operation.

Sustainability Model

Sustainability and the TBL introduce the opportunity for an interpretation that is specific to the requirements of the user, effectively creating a model on which to base further communication on various aspects of the company as it relates to the sustainability challenges facing the company. Alternatively, the sustainability model could also be applied within the framework of a specific project.

Therefore, the interpretation of the sustainability model is subject to the user's own focus, as illustrated by diagram 1, in this case part of a sustainability report produced by ConocoPhillips (8), firstly indicating the primary "continental plates" representing **economic**, **social justice** (also referred to as **human well-being**) and **environmental** issues within the organization.

From the overlap of the three primary areas (i.e. the TBL), emerge the 'shear zones' shown in this application as **socio-economic**, **socio-environmental** and **eco-efficiency**, listing in diagram 1 the resulting issues to which consideration is given and resources are applied within this particular company.

It is recognized that, like any simplification of a complex challenge, this definition has its limitations and detractors, however, it is a starting point that is comprehensible, and has achieved a degree of consensus as a reasonable entry point into a complex issue.

SUSTAINABILITY INVESTMENT SPECTRUM

Optimal sustainability is achieved in each application, whether the long term sustainability strategy of a major company like Phillips Conoco or in a specific project application with defined boundaries, by achieving a balance between the independent movements of the three "continental plates", economy , environment and social justice, and with due consideration of the three resulting shear zones as shown in the previous paragraph.

From an investment point our interest is not necessarily the sustainability measurement of a corporation as a whole, but the achievable sustainability of a specific project or group of projects. Alternatively, we might be considering the sustainability of a product or product range The following are a few examples of a randomly chosen variety of projects and products, each making a smaller or larger contribution to achieving sustainability within a larger reference framework:

- Various aspects of environmental technology;
- Energy efficiency in construction;
- Ethical branding and trading;
- Research in renewable energies;
- Methodologies to prevent pollution;
- Methodologies to limit damage to the environment;
- Eco cities on a large scale or Sustainable Development Initiatives (SDI's) on smaller scale;
- Sustainable Communities;
- The "Green Individual" and the "Home of the Future";
- Innovative products to enhance sustainability;

The investment spectrum derived from this short list of case studies, each positioned at different positions of the Sustainability Model, include the **Public** and **Private Sectors**, the **Donor or Philanthropic Community** represented by foundations or high net worth individuals or families and **The Private Citizen** including the man in the street and his family.

The resulting sustainability investment spectrum consequently provides for a wide range of investment opportunities, and indeed a "horses for courses" situation. At

the same time it also requires a set of investment vehicles to provide and promote competitive investment opportunities.

What has to be recognized is that the resulting investment areas vary from **highly qualitative** (as in projects of a humanitarian nature) to **highly quantitative** (as in bankable commercial opportunities). For example, the investment parameters pertaining to a proposed investment into a start-up renewable energy company will vary hugely from the considerations in the case of a long term development of a sustainable community in an environmentally sensitive area within a developing country.

In the following section we will briefly review specific contributions and investment opportunities within various segments of the investment spectrum, applied towards achieving sustainability objectives utilizing an integrated and holistic framework as presented by the sustainability model.

PUBLIC SECTOR

Is it going too far to state "sustainability has become so valued, that it is described as the fourth new required aspect of government, i.e. egalité, liberté, fraternité, sustainabilté? (9)

The government of the day, however, has the challenge to provide not only a sustainability investment platform within the wide spread operations of the public sector, but also between the public and private sectors. The platform further extends to a global level addressing inter-governmental issues. The relationship between public sector and the private citizen, furthermore provides for an additional relationship when considering sustainability issues.

At global inter-governmental level an initiative like the Kyoto Climate Protocol (or treaty), which obliges industrialized signatory countries to cut carbon dioxide emissions between 2008 and 2012, represents a significant step forward, although it is considered in many circles as either far too little far too late or as unworkable and impractical. The Kyoto Protocol allows governments to limit green house emissions through the introduction of regulatory frameworks, like the European Union's Emissions Trading Scheme, in force as from 1 January 2005. The new regulation places strict limits on the amount of carbon that may be emitted in various industries, and companies that stay within their limits can sell any emission rights that they have not used to companies that have exceeded their carbon output quotas. The EU program operates on free-market logic, in other words by allowing producers to trade emission permits, the market will ultimately channel investments to companies where energy-efficient technologies are the cheapest.

Apart from permit trading the Kyoto Protocol also permits joint implementation (JI) and the clean development mechanism (CDM). With JI support for emissions-saving projects in "transition countries" earns emission reduction units, similar to allowances, while in the case of the CDM, support for a special class of emissions-saving projects in developing countries earn credits.(10)

Another example of where leverage of international co-operation between governments could be applied is in attacking global poverty alleviation. An example is in the proposed **International Finance Facility**, providing a financing mechanism which would:

- provide up to an additional $50 billion a year in development assistance between now and 2015;
- leverage in additional money from the international capital markets by issuing bonds, based on legally-binding long-term donor commitments;
- be responsible for repaying bondholders using future donor payment streams;
- disburse resources through existing multilateral and bilateral mechanisms.(11)

For a discussion on the structuring of the IFF, the article "How securitisation could cut world poverty" is informative. (12)

Within the public sector

An example is the Landfill Allowance Trading Scheme (LATS), a waste trading schemes for local authorities in the UK, that is aimed at reducing the amount of bio-degradeable waste - such as paper, food and garden waste - going to landfill.(13)

Between public and private sector

Examples where public sector leadership can be applied to stimulate investment in sustainability are:

- Allowing additional tax breaks for venture capital trusts investing their funds in new ventures with a focus on developing products that would advance sustainability;

- Creating platforms for the development of sustainable communities and eco cities, as in the case of the Shanghai Industrial Investment Corporation's proposed multi-billion pound 8,800 hectares development at Dongtan , aimed to be the world's first genuinely eco-friendly city, powered by renewable energy sources and as close to carbon-neutral as possible.(14)

- Promoting sustainability in procurement where all central government departments must apply the minimum environmental standards when buying certain types of product. These standards include energy efficiency, recycled content and biodegradability. (15)

Between public sector and the citizen

An example is government grants to home-owners for installing energy saving schemes, providing an incentive for the private citizen to consider investing in sustainability.

PRIVATE SECTOR

Setting the pace in sustainability investment in the private sector are, on the one hand, corporates like GE and BP, with on the other hand, technology focused start-ups, largely focused on renewable energy technology investments.

GE Ecomagination – Launched in May 2005, this new initiative represents the company's commitment to imagine and build innovative solutions for the benefit of their customers and society at large. Economically advantageous solutions are

created by combining the strengths of environmentally advanced technologies and innovation. In this initiative GE will be pouring US$1.5 billion into cleaner technologies in 2010, up from $700 million in 2004. The company will also introduce more "ecomagination"" products by continuing to add to the $10 billion in products and services already offered providing significant environmental performance advantages to customers. (16)

BP – In 2000 the transnational oil giant BP Amoco rebranded itself as "bp: beyond petroleum." The rebranding was part of an effort to portray BP as an energy company, not just an oil company: one that incorporated solar energy and other renewable energy forms, like solar, wind and hydrogen power and gas, in its portfolio and with a willingness to move away from oil.

Beyond means being a global leader in producing the cleanest burning fossil fuel. Natural Gas; being the first company to introduce cleaner burning fuels to many of the world's most polluted cities; being the largest producer of solar energy in the world and starting a journey that will take a world's expectations of energy beyond what anyone can see today.

It has to be mentioned that at the time, the announcement was met by some considerable skeptisism as portrayed by an article in CorpWatch in December 2000, stating **BP: Beyond Petroleum or Beyond Preposterous?** (17), with also a critical treatment by Sharon Beder in her book 'bp: Beyond Petroleum?' (18)

However, BP's intentions are clearly stated with the launch in 2005 **BP Alternative Energy** (19), stating a believe that solar, wind, hydrogen power and gas-fired power technologies have reached the tipping point and that the company can create a profitable, high-growth, global business in the course of the next decade.

Some further examples of major developments in the private sector, all largely contributing in a variety of ways to sustainability, are:

R&D in renewable technologies – major areas of on-going research in both corporate and university research departments as well as in entrepreneurial start-ups are solar thermal energy, solar photovoltaics, bioenergy, hydroelectricity, tidal power, wind energy, wave energy, geothermal energy, carbon sequestration, clean energy, alternative, future fuel technologies and oil alternatives, waste disposal technologies and fuel cells.

Banks and green investment policies – major financial institutions have a leading role to play in advancing the "sustainability envelope", either brought about by shareholder pressure, as in the case with J.P. Morgan or by a strategy to invest in an "energy future" as in the case of Rothschild Bank

In April 2005 the wall Street Journal reported that J.P. Morgan Chase & Co will adopt 'Green' Lending Policies, following pressure by ecological activists and shareholder groups, leading to the company adopting sweeping guidelines that will restrict its lending and underwriting practices for industrial projects that are likely to have an environmental impact.(20)

Rothschild Bank emerged at end of 2005 as the winner of the Bank of the Year Renewable Energy Finance Award, awarded for the second time by Euromoney and

Ernst and Young, emphasizing the "growing importance of the private sector in delivering clean and secure indigenous energy supplies, today and for future generations." (21)

Build environment – A forceful drive towards achieving sustainability in construction standards and practice is opening up a range of investment opportunities in focus areas such as delivering low/zero energy homes and modular construction, a construction approach allowing off-site manufacturing achieving higher sustainability standards. As expressed by Alan Cherry, Chairman of Countryside properties, a UK developer – "new development should generate wealth for communities and investors alike, promote special inclusion and safeguard the natural environment". (22)

Transport – Major investments are being made by leading car manufacturers in energy saving and emission reduction devices in new vehicles The hybrid technology developed by Toyota for the Prius, is an example now followed in a variety of ways and implementations by other manufacturers, enabling an expectation that Gordon Brown, the British Chancellor will announce adjustments to Vehcle Excise Duty rates in the 2006 Budget, providing a greater incentive for people to buy fuel-efficient cars. (23)

PHILANTHROPIC FOUNDATIONS/INDIVIDUALS

This investment sector applies itself typically to what is the most needy area of the sustainability model with alleviation of world poverty high on the agenda, followed closely by infrastructure improvement in the developing world and the fight against Aids. From a financial viewpoint these social challenges are largely treated as development aid by governments and development agencies or as donations to worthy causes, either directly or via charity organizations by high net worth individuals and philanthropic foundations.

Does this necessarily have to be the case?

This is certainly an area where the challenge is laid down for innovative thinking and solutions. An example is American Express, Converse, Gap and Giorgio Armani joining with Bono, the rock star, to sell products under a new brand, called ***Red*** , which will channel about 40 per cent of profits to the Global Fund to fight Aids, TB and Malaria in Africa (24).

A second approach is the ISD Donestor Model where the philanthropic **don**or becomes an inv**estor**, where protection of the invested capital along with an interest coupon is provided over a long term period, typically ten years, while providing a percentage of the invested capital to be applied to a highly qualitative or humanitarian project.

Someone once said – "the best form of charity is to enable the recipient not to have to rely on charity'' – leading to the conclusion that opening equitable trading opportunities for all people of the world is a further key to enabling sustainability in specially the developing world.

Initiatives like Fairtrade (25), created in the Netherlands in 1988, when Max Havelaar launched the first Fairtrade consumer guarantee label coffee sourced from

Mexico, set one possible direction, and investment opportunity. There are now in the order of 19 organisations that run the international standard setting and monitoring body fair-trade Leballing Organisations International (FLO). Producers registered with FLO receive a minimum price that covers the cost of production and an extra premium that is invested in the local community.

Another development worth watching is the fact that "rich people with cheque books instead of pith helmets, charities and trusts are buying vast swathes of The Third World or "renting" the timber rights to stop trees being cut down. A recent example is Johan Eliasch who is believed to have paid about 8 million pounds for a 400,000 acre plot in the heart of the Amazon rainforest (26).

THE INDIVIDUAL

"Sustainability starts at home"" completes the sustainability investor spectrum implying that we as individuals, the man in the street, in our own homes, are in an excellent position to be "sustainability investors" by taking cognizance of the variety of opportunities at our disposal in and around our daily lives. It is difficult these days not to open a newspaper and find an article addressing the individual's role vis-a-vis sustainability in some way or another. A good example is a recent insert in the weekly magazine Time Out London – ''the easy guide to living an ethical London lifestyle" – providing a list of 60 "cheap and fun ways to clear your conscience, clean up the capital and – the big one – save the planet".(27)

INVESTMENT VEHICLES

The investment opportunities in sustainability within the private sector are wide and diverse and is only limited by the risk profile of the investor. What is required, however, are more opportunities for the private investor to take advantage of these opportunities via suitable sustainability focused investment vehicles.

The London Alternative Investment Market (AIM) provides one such opportunity, and is currently operating with seventeen companies active in the alternative energy sector, with a combined market value that broke through 1 Billion pounds at the end 2005 (28)

A second example is the Impax ET50 Index (www.impax.co.uk), a performance trading index dedicated solely to publicly quoted companies that have core businesses in the development and operation of environmental technologies.

There is also no reason why specialised funds can not be created to create a funding vehicle for a specific sustainability focus areas, like the Recycling Fund, a venture capital fund combining public and private sector money, initiated the UK government's WRAP (Waste and Resources Action Programme).(29)

In order to catch the "environmental wave" amongst investors a number of companies have started funds or are planning funds with focus on various aspects of the sustainability model – e.g. eco-energy (renewable and low carbon forms of energy), clean water and pollution control. (30)

CONCLUSION

The sustainability model provides for a broad range of investment opportunities in all sectors of the global economy catering for the needs of a range of investors. While certain investment vehicles are at an advanced stage, the challenge is there to expand this base, opening up a wider range of investment opportunities, enabling a sustainable balance between economic, environmental and social considerations, as **drivers of profitable growth**, and meeting the needs of the present without compromising the ability of future generations to meet their own needs.

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END NOTES

If of interest to the reader, this paper is available from the author in electronic form, enabling easier access to listed web references.

(1) The METRO 15 March 2006 -- the new figures were produced by the U.S. National Oceanic and Atmospheric Administration which warned that carbon dioxide levels were rising at twice the rate from 30 years ago. When it began monitoring from its observatory in Hawaii in 1958, the figure stood at 315 ppm . In 2005 the increase was 2.6ppm, and the global CO2 level has now reached 381 ppm by volume.

(2) Based on calculations by World Bank group Povcalnet

http://iresearch.worldbank.org/PovcalNet/Introduction.html

(3) SD time line on the IISD web site terminates at the 2002 World Summit on Sustainable Development held in Johannesburg.

http://www.iisd.org/briefcase/timeline2002.asp

(4) An environment and sustainability chronology is available on the web site of the *Sustainability Report* (affiliated with the Institute for Research and Innovation in Sustainability in Canada)

http://www.sustreport.org/resource/es_timeline.htm

(5) The full text of the **Brundtland report** can be downloaded from

http://en.wikipedia.org/wiki/World_Commission_on_Environment_and_Development

(6) John Elkington is the Founder of SustainAbility, a London based environmental consulting company. (www.sustainability.com)

(7) **The Triple Bottom Line,** by Steven F. Hayward | Mar 17, 2003, FORBES.com

http://www.keepmedia.com/pubs/Forbes/2003/03/17/5301/?extID=10047&data=triple_bottom_line

(8) ConocoPhillips is an international, integrated energy company.

www.conocophillips.com

(9) www.newislington.co.uk

(10) **Practitioner** – Managing climate change emissions – a business guide, issued by the Institute of Environmental Management & Assessment, June 2001.

(11) International Finance Facility

http://www.hm-treasury.gov.uk/documents/international_issues/int_gnd_intfinance.cfm

(12) **How securitization could cut world poverty** – Mark Nicolaides, John-Patrick Sweny and Hannah Dutch.

http://www.legalmediagroup.com/iflr/default.asp?Page=1&SID=5958

(13) **Waste trading scheme fuels incineration fears** (8 April 2005)

http://www.edie.net/news/news_story.asp?id=9762&channel=0

(14) **British firm designs Chinese Manhattan** – The Sunday Times Business, August 28, 2005

(15) DEFRA web site

http://www.defra.gov.uk/corporate/finance/procurement/policy/award/sustain.htm

(16) GE Ecomagination

http://www.worldchanging.com/archives/002669.html

and at GreenOrder http://www.greenorder.com/, a New York-based consultancy specializing in sustainable business, that has consulted to GE, working at both strategic and ground levels.

(17) **BP: Beyond Petroleum or Beyond Preposterous?** by Kenny Bruno, Special to CorpWatch, December 14th, 2000

http://www.corpwatch.org/article.php?id=219

(18) Sharon Beder, 'bp: Beyond Petroleum?' in *Battling Big Business: Countering greenwash, infiltration and other forms of corporate bullying*, edited by Eveline Lubbers, Green Books, Devon, UK, 2002, pp. 26-32.

http://www.uow.edu.au/arts/sts/sbeder/bp.html

(19) BP Alternative Energy

http://www.bp.com/sectiongenericarticle.do?categoryId=22&contentId=2006538

(20) J.P. Morgan Adopts 'Green' Lending Policies, by Jim Carlton, Staff Reporter of The Wall Street Journal, April 25, 2005

http://www.minesandcommunities.org/Action/press607.htm

(21) **Investing in energy future** – page 76, Sustain magazine, v06 i06

(22) **Delivering sustainable communities** - a corporate publication

(23) **Brown set on Budget for global challenges** – Financial Times March 20,2006

(24) **Help give Aids the red card** – Metro 27 January 2006 and "”bono sees Red as means to fight Aids in Africa – FT 26 January 2006.

(25) www.fairtrade.org.uk

(26) **It's my rainforest now. No logging – The Sunday Times March 19, 2006**

(27) TO London -- http://www.timeout.com/london/features/164.html

(28) **Renewable energy gets second wind on AIM** – Business Section, The Sunday Times, January 29, 2006.

(29) **Recycling Fund takes stake in automotive waste -** Financial Times November 24, 2004

(30) **Investors shine a green light on risk assessment** – Financial Times fm 27 February 2006