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2012 Aurelio Peccei Lecture

"Learning to Live on Only One Planet—Towards the UN Summit in Rio"

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Distinguished delegates, ladies and gentlemen,

Thank you for giving me the honour of delivering the 2012 Peccei Foundation Lecture.

Looking at the distinguished list of previous lecturers I am quite humbled to have been asked to address this remarkable and influential gathering.

Honourable Minister, ladies and gentlemen,

Over the past few years the preoccupation in Europe including Italy and indeed across many countries in the world has been how to respond to the financial and economic crisis that hit in 2008.

Small wonder that the UN Conference on Sustainable Development 2012-- or Rio+20-- has perhaps not been uppermost in the minds of the some political leaders, captains of industry and the public as a whole.

But in my lecture I would like to argue that a transformational outcome in Rio in June—two decades after the Earth Summit that set the course and laid the foundations for sustainable development—could hold the seeds to countering a suite of persistent, evolving and emerging crises that could make the current one appear perhaps tranquil in comparison.

And that a transformational outcome in Rio may also provide some confidence to a global public that those responsible for managing a planet of now seven billion people have indeed got solutions and the resolve of leadership to not only deliver economic progress, but social and environmental progress too.

For I would contend that today we have a crisis of confidence and a crisis of vision—long term vision—as much as a crisis of the banking sector or the financial markets.

And a crisis or struggle to make the economic models, inherited from the past, operate in a very different world in which we find ourselves today—not just geopolitically but also economically as well as environmentally.

Wealth as defined in the 20th and 19th centuries was wealth based on manufacturing, mining the globe's natural and nature-based assets and laterally service sectors propelled by growing patterns of consumption that are quite frankly unsustainable today and totally unconscionable in a world of over nine billion by 2050 if—and that is the key word, if—they continue as they are.

Many of the critical sectors of the economy such as human capital and the full ecosystem services of 'natural' capital such as forests, the atmosphere, freshwaters were either marginalized of simply invisible in the ledgers of profits and loss.

But there is today a recognition by some countries, companies, cities and citizens—based on the burgeoning levels of science and more sophisticated economic analyses—that not only are extraordinary losses being sustained by this narrow notion of wealth.

- Over the last 25 years, while the world economy has more than doubled, 60% of the world's ecosystem services covered by the Millennium Ecosystem Assessment are found degraded or used unsustainably.
- Each year, 13 million ha of the world's forests – the size of Greece – disappear.
- According to UNEP's Year Book 2012, 24 per cent of the global land area has already suffered declines in health and productivity over the past quarter century as a result of unsustainable land-use.
- Some kinds of conventional and intensive agriculture are triggering soil erosion rates some 100 times greater than the rates at which nature can form soil in the first place.
- By 2030, without changes in the way land is managed, over 20 per cent of terrestrial habitats such as forests, peat lands and grasslands in

developing countries alone could be converted to cropland-aggravating losses of vital ecosystem services and biodiversity.

- Greenhouse gas emissions continue to climb, pushing the planet towards the 2 degrees C threshold above which scientist fear some environmental changes could become irreversible--global warming could trigger increasing numbers of displaced people and make whole countries inhabitable including the low lying island of the Maldives and Kiribati.

The world is, on its current trajectory, undercutting some of the essential services that nature has for millennia freely provided and is driving unprecedented conditions that could tip these services into new and perhaps less productive states with significant consequences for global supply chains, human well-being and social stability—here in Italy, in Europe and across countries and continents everywhere.

Excellences, delegates, ladies and gentlemen,

It was in response to the financial and economic crisis that UNEP rapidly convened some of the best economic and scientific minds in order to imagine a way of realizing sustainable development and perhaps a way out of these twin crises and those to come. This was the birth of what was termed the **Global Green New Deal/Green Economy Initiative**. Today the Green Economy in the context of sustainable development and poverty eradication is one of the two overarching themes for Rio+20 in June.

When UNEP launched its work on a Green Economy in 2008, we could not have foreseen how it might resonate, including here in Italy—how despite or perhaps because of the shocks of the financial and economic crisis, far from being closed and defensive, many in the North and the South were open to a new idea. Indeed as we meet here today the pathways and policies towards an economy that delivers economic progress and generates decent employment, but without pushing humanity through planetary boundaries has gained almost universal acceptance.

There remain skeptics — some perceive the concepts and pathways as ‘commoditizing’ nature while other are still convinced that it carries risks of eco barriers to trade. Some initially perceived a Green Economy as perhaps some kind of Emperor’s green new clothes or an alternative Universe.

But my sense, based on UNEP's gathering of world environment ministers in Nairobi in February, is that the debate is generally maturing beyond ideology and into managing legitimate concerns and ensuring the social outcomes—including poverty eradication—are maximized.

While some countries and civil society groups perhaps perceived a Green Economy as a reform or retrofitting of industrialized economies, there is widespread understanding that it can echo to all economies at different stages in their development—and may be even more relevant to developing economies than developed. A point evidenced by the fact that all 54 of Africa's states are backing a Green Economy as part of their submissions going into Rio+20. Many, indeed I would suggest the overwhelming number of countries, now perceive it as a way of implementing sustainable development and the aims of 1992, rather than an alternative path.

UNEP's complete Green Economy Report—pathways to sustainable development and poverty eradication was released late in 2011. The report estimates that initiating a transition will require a global investment of two per cent of global GDP up to 2050 into ten key sectors ranging from energy supply and sustainable transport to fisheries, forests and sustainable agriculture.

Let me perhaps mention two — energy supply and fisheries — as they underline different challenges, policies and opportunities. The report suggests that investing about one and a quarter per cent of global GDP each year in energy efficiency and renewable energies could cut global primary energy demand by nine per cent in 2020 and close to 40 per cent by 2050.

- Employment levels in the energy sector would be one-fifth higher than under a business as usual scenario as renewable energies take close to 30 per cent of the share of primary global energy demand by mid century.
- Savings on capital and fuel costs in power generation would under a Green Economy scenario, be on average $760 billion a year between 2010 and 2050.

Fisheries subsidies estimated at around $27 billion a year have generated excess fishing capacity by a factor of two relative to the ability of fish to

reproduce. The report suggests that investing in strengthened fisheries management, including the establishment of Marine Protected Areas and the decommissioning and reduction of fleet capacity, as well as retraining, can rebuild the planet's fish resources.

- Such an investment backed by policy measures will result in an increase in catches from the current 80 million tones to 90 million tonnes in 2050, although between now and 2020 there would initially be a fall.
- "The present value of benefits from greening the fishing sector is estimated to be three to five times the necessary investment," says the report.
- Focusing cuts in capacity on a small number of large-scale fishers over small-scale artisanal fleets can minimize jobs losses in the short to medium term.
- Jobs in fisheries are expected to grow again by 2050 as depleted stocks recover.

As the fisheries analysis underlines, there may be pain for some sections of society especially if such a transition is not carefully and sensitively managed and alternative training and livelihoods found. But the alternative—a business as usual path offers only pain and a zero sum game for millions either directly or indirectly dependent on fish for livelihoods and protein.

There are clear signs that many countries are already heading onto more creative and intelligent paths at least in some sectors and areas of their economies. Italy for example has in some sectors been embracing a Green Economy transition.

- 33% of SMEs in Italy are adopting technologies aimed at reducing environmental impact including close to 50 per cent pursuing or considering investments in photo-voltaics, according to a study released last year by Fondazione Impresa.
- Already the second largest photo voltaic market in the world, Italy has extended its feed-in tariff through 2012 and is supporting the expansion of small-wind turbines less than 1 Mw through a special tariff.
- Plans for the solar-powered Catania-Siracusa motorway—perhaps a world first.

- Kyoto protocol revolving fund of 600 million Euro established to reduce greenhouse gases emissions from industry.
- Italy is in the top ten of countries around the world with the biggest number of hectares of land under organic agriculture—just behind China and ahead of Germany.
- 20 % protected areas including Natura 2000 designated sites.

But as with other countries, many serious challenges remain: for example-

- An estimated 75 hecatres a day of agricultural land lost to urbanization—amounting to perhaps 600,000 hectares by 2030.
- 4.3% of Italy classed as being at risk of desertification, while 12.7% is classified as “vulnerable”.

Italy is not alone in both the persistent and emerging challenges but also the glimpsing of a Green Economy-led development path. By early 2011, 61 countries and 26 states or provinces have implemented feed-in-tariffs, including 16 developing countries. In 2010, new global investment in renewables reached over $210 billion—more than in new fossil fuels according UNEP’s Sustainable Energy Finance Initiative report compiled by Bloomberg New Energy Finance.

Kenya, where UNEP’s headquarters is based in Nairobi, introduced feed-in tariffs in 2008 to expand renewable energy power generation in the country. This will incentivize an estimated additional energy generation capacity of 1300 Megawatts (MW) alone in geothermal - thereby doubling Kenya’s total present capacity. Kenya’s strategy is not just about increased energy generation but also about increasing access to energy in rural areas, providing an important starting point for lifting people out of poverty and diversifying livelihoods.

Uganda is among many countries rapidly expanding its organic agriculture production with farmers in some cases earning three times on the export markets than from conventionally grown crops and in some cases seeing yields up 100 per cent.

Other studies show similar trends and opportunities from such pathways: A recent study commissioned by a coalition of Environmental Groups estimates that shifting 15% of the EU budget to renewable energies, energy saving in buildings, management of the Natura 2000 network and

sustainable transport would yield three times more jobs than with current investments. When only comparing with Common Agriculture Policy spending, for example, investment in the Natura 2000 network can create 5 times more jobs per €.

Public spending may be essential in jumpstarting such investments but the key in many ways is to foster and leverage private sector involvement with enabling public policies and institutions.

The question facing world leaders, ministers, business and civil society heading for Rio+20, is what kind of big cooperative agreements could propel, scale-up and accelerate such a transition so that the pace of positive sustainable change begins to outstrip so many negative indicators on the sustainability dial?

There are clearly some obvious candidates that represent absurdities—or gross misallocations of capital in our global economic systems. I mentioned fisheries subsidies of over $27 billion, only $8 billion of which are considered 'good' support mechanisms with the rest contributing to fisheries declines. But what about others such as fertilizers and pesticide subsidies, and what about those amounting to between $400 billion and over $600 billion for fossil fuels? Subsidies whose size contrasts with those for renewables amounting to somewhere over $70 billion a year.

In Rio countries could press forward on this issue—some already have: Indonesia, Iran and Ghana with generally positive economic, social and environmental benefits. Nigeria's attempts have so far roused civil unrest, underlining that how the phase-out is managed is as much key to the outcome as the action itself.

Dealing with subsidies is a good, short-term measure—dealing with distortions and liberating investment into other Green Economy sectors such as recycling or sustainable transport or schools, hospitals and social enterprises. But Rio+20 needs to be about more than subsidies, it needs to deal with fundamental barriers. In respect to greater uptake of renewable energy sources on a Continent like Africa, the challenges are no longer cost and technology, but rather one of financing and infrastructure.

Obstacles that need to be removed – according to a recent study from UNEP's Finance Initiative– are the up-front costs, difficult grid access and

risks – political, regulatory and commercial – present in many sub-Saharan countries. While complex, these risks can be abated and their impact lessened by the use of risk-mitigation instruments already available.

Rio+20 also needs to deal with the fundamentals of **an overall, new and transformational indicator of wealth**. Hence the very animated debate and emerging action towards an indicator or indicators that goes beyond the narrowness and bluntness of Gross Domestic Product (GDP). Measuring well-being will require a shift to metrics that incorporate *non*-economic markets based aspects of well-being, including sustainability issues.

UNEP in its submission to the outcome document has called for a '*Committing to the development of an internationally-agreed accounting framework and metrics to complement GDP for better measurement for progress towards sustainable development'* and pointed to building blocks that already exist and could be synthesized and integrated into national accounting frameworks. A number of initiatives are leading the way to new measurements, in which UNEP as well as many of you here today are involved:

- The work on *Inclusive Wealth*, which is based on the World Bank's *Adjusted Net Saving* indicator, is developing a more inclusive indicator of national wealth, covering not only produced capital, human capital, and natural capital, but also critical ecosystems. Results are expected before Rio.
- Such initiatives are also being informed by the findings and the ways of measuring wealth outlined in The Economics of Ecosystems and Biodiversity (TEEB) — a broad partnership that emerged from the G8 in Potsdam and eventually hosted by UNEP.
- The EU effort to go "*Beyond GDP*" – launched in November 2007 aiming to come up with a broader set of macro-level indexes other than GDP and provide information on how economic growth affects its own foundation (stock of all assets).

The accounting of Environmental Goods and Services Sector (EGSS) in select countries. OECD and Eurostat have pioneered the development of a statistical framework for measuring the EGSS. This framework is now part of

the UN's SEEA (System of Environmental-Economic Accounting), which is becoming an international statistical standard.

- OECD's initiative on measuring progress of societies.
- The work of the UNEP-hosted International Resource Panel is also providing analysis on how to decouple economic growth from resource use amid concern that resource use could triple by 2050 without that decoupling: in short the aim is to de-link economic growth and well being from physical growth as another supportive element of a transition to a Green Economy.
- A transition to a Green Economy is characterized by a significant decoupling from environmental impacts with the global ecological footprint to biocapacity ratio projected to decline from a current level of 1.5 to less than 1.2 by 2050 – much closer to a sustainable threshold value of 1 – as opposed to rising beyond a level of 2 under 'business as usual'.

Ladies and gentlemen,

Rio+20's second overarching theme is an **institutional framework for sustainable development – IFSD -.** It is aimed at reforming and refocusing the institutions and the bodies charged with delivering sustainable development in order to better equip them for a new century including how best to focus and maximize investment flows. One topic within the overall issue is environmental governance including whether world needs an UN organization or a world organization for the environment.

It is perhaps beyond these remarks to delve into the whys and the wherefores—but perhaps one driving force is the concern that the ministers responsible for the environment remain marginalized in respect to their counterparts in ministries of finance and development to those for foreign affairs and say health. Meanwhile the decisions taken by ministers responsible for the environment at for example the UNEP Governing Council are sent to New York where they are subject to the vagaries of the General Assembly process—quite literally those decisions can be shelved or shredded. We need to strengthen the environmental governance dimension of our activities, including at the global level to achieve a more balanced public policy discourse.

In short, a Green Economy or whatever sustainable economy is eventually secured needs a top to which to aim.

Excellences, Honourable delegates,

Did the Rio Earth Summit of 1992 fail? No: it laid the foundations upon which a new generation leaders must build. The directions and compass forged in 1992 however need to reflect the markedly different world I remarked upon earlier. We also need to implement what was agreed rather than leave it to the vagaries of short-term market forces that currently are benefiting too few at the expense of too many. The encouraging signals are that many parts of the world are actively looking and engaging on finding ways to a sustainable economy and social progress—the Chinese may call it an 'ecological civilization' and Bhutan, the 'gross national happiness' index.

Many are calling it the Green Economy—the actual term matters little.

What is clear as evidenced here in Italy is that there is a desire for a new kind of progress and the kind of economic and social analysis that has been incubating for decades—often on the back burners or in the halls of academia or the think tanks of NGOs and institutes-- is coming to the fore. As are the extraordinary number and range of remarkable projects and policies being tried and tested in both developing and developed countries and which, in some cases may be starting to achieve critical mass.

An understanding in some quarters too that in a world of many, how an economy manages scarcities will in many ways define they and their citizens' futures. Whether sufficient world leaders will seize the moment and take the opportunity of a world looking for a new compass—one that is cooperative rather than competitive, one that can allow all human beings to fulfill their potential, remains an open question for Rio+20. But whether it happens in 2012 or in a few years' time, happen it must—either by default or by design—that is what the science of what is happening to our world makes clear. Seven billion people are not going to wait forever for the Future they Want —they are looking to national and international institutions to show leadership now.

Rio+20 represents a moment in time when those who wish to be the architects have the opportunity to show that leadership in support of truly sustainable and progressive 21st century.