RIO+20: A Citizen's Background Document

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STATEMENT OF PURPOSE

Humanity is at a crossroads. The global economic and financial crisis challenges the dogmas of neoliberalism and indicates unerringly that following this model will lead us to a tragic abyss of no return. During the last four decades indebtedness and asymmetries accumulated, environmental degradation continued relentlessly, inequality intensified and the destruction of peoples' livelihoods advanced unquestioned. The banking and financial sectors in the mature capitalist economies were the epicentre of the crisis. Today they remain on the brink of collapse and record high levels of unemployment persist.

The world is looking ahead at a decade of stagnation and unemployment, and yet, at UNCSD 2012 (Rio+20) the crisis will be absent from the agenda.

Official documents and the unending barrage of propaganda in the international business press continue to distort the public's assessment of the origins and gravity of today's crisis, as well as its implications for sustainability.

This background document is a modest attempt to set the record straight and to provide reference material for a more objective assessment by concerned citizens.

Introduction

Two weeks before the start of the UN Conference on Sustainable Development (UNCSD) the Secretariat has released the draft of the Outcome Document, entitled "The Future We Want". Although intense negotiations are taking place to improve the text, the serious limitations and flaws of the document are already visible. This is an instrument that is not up to the challenges that defy humanity today. The people of the world and the global environment deserve something better.

The world economy is now entering the fifth year of a global economic and financial crisis. It is the worst slump since the Great Depression and it will probably last longer. Persistent high unemployment rates have already thrown millions into poverty. The banking and financial system, which was the epicentre of the crisis, remains under great pressure. Likewise, firms in the real (non-financial) sectors of the global economy have felt the negative impact of the deflationary phase of the crisis, with greater unsold inventories and little enthusiasm for new investments.

This economic collapse has evolved and gone through different stages. It morphed into a public finance crisis, where the fiscal accounts were compromised due to reductions in tax revenues, the launching of stimulus programs and the high costs of bailouts. The scars left on public accounts will have important fiscal policy implications for years to come. But the critical state of Spain's banking system

reminds everyone that the international banking and financial sector is the birthplace of the crisis.

Neoliberalism appeared to be quite successful in enforcing its priorities and policy regime. However, in the midst of the global economic and financial crisis its recipes and policy responses appear to be useless. Clearly, alternative priorities, with new institutional frameworks and novel regulatory regimes will be required to get out of this predicament.

But the world is not only threatened by stagnation, deflation, unemployment and fiscal accounts gone awry. Today we are trapped in a dramatic environmental predicament, one that may even imperil the survival of humankind. We are not only threatened by economic woes but also by deforestation, soil erosion, overexploitation of aquifers, the plunder of marine fisheries and a man-made event of mass extinction. The most important assessments of the global environment confirm that the world's ecosystems are losing their capacity to provide services (MEA 2005), that drylands, forests and aquifers have been continuously degraded (UNEP 2007) and that the accumulation of greenhouse gasses in the atmosphere is accelerating (IPCC 2007). A recent study identified nine planetary boundaries within which humanity can be expected to "operate safely" (see Rockström et al 2009) out of which three have already been transgressed (for climate change, biodiversity loss and changes in the nitrogen cycle).

Of course, the impact of a significant increase in population (from 5 billion in 1987 to 6.8 billion in 2010) is an important factor in this process. To be sure, the additional burden that this level of population poses to soils, aquifers, forests and oceans is significant. But the disparities in rates of consumption of the world's natural resources are just as important when it comes to discussing environmental deterioration. In addition, economic policies play a critical role in this process of environmental degradation. The social fabric of communities and small-scale agricultural producers that play a key role in environmental stewardship has been seriously degraded during these years by economic forces. Investment in items that are crucial for sustainability, such as health, education, sanitation and environmental stewardship has also been severely hampered by the neoliberal dogma of fiscal balance. In this context, talk about recovery and a return to 'normality' is not only premature, it is also misplaced because 'normality' is the name for a state of affairs in which inequality was increasing, and environmental destruction and species extinction proceeded at full speed.

In spite of these considerations, the UN Conference on Sustainable Development is leaving out of its agenda the most pressing problems of the moment. The draft of the Rio+20 Outcome Document reveals five critical problems.

First, it lacks a meaningful discussion of the nature, origins and evolution of the global economic and financial crisis that is wreaking havoc in the world today. This crisis is not going away any time soon and has significant implications for social and environmental sustainability. It cannot be

ignored in any international negotiation or debate on sustainable development.[1]

Second, the document also chooses to omit any reference to macroeconomic policies. Monetary, fiscal and incomes' policy priorities have a major impact on sustainability and urgently need to be analyzed and discussed. Macroeconomic policy reform is a prerequisite for the formulation of adequate sector level policies.

Third, the Draft Zero document overlooks almost all of the main structural problems weighing on the world economy today, as well as their implications for sustainability.

Fourth, the green economy notion advanced in the document is a misleading concept. It is essentially centred on technology, not on economic relations. Thus, for example, the document discusses 'decent jobs' but fails to examine the grave problems of stagnant wages and of high unemployment rates.

Fifth, the section on the means of implementation is utterly weak. The implementation measures that are advocated are totally insufficient, even for the limited scope of the goals of a green economy as advocated in the document. They foretell the failure of the objectives of sustainable development.

The outcome document appears therefore to be in a mode of complete denial as to the most urgent problems facing humanity today. This is why the current draft insists on pursuing the goal of sustainable development with the same framework that existed in 1992 in the heydays of neoliberalism. Rio+20 is a rescue mission, but not for the planet. Its objective is the salvation of the neoliberal model.

The structure of this background document is as follows. The **first** section focuses on the nature of the global economic and financial crisis, as well as its implications for sustainability. The **second** section centres on the importance of macroeconomic policies for a serious discussion of sustainability. The **third** section examines five structural characteristics of the world economy that need to be taken into account in any negotiation on sustainability (but are conspicuously absent from Rio+20). The **fourth** section presents a critique of the Green Economy report prepared by UNEP.

I. The Global Economic and Financial Macroeconomic Crisis: Implications for Sustainability

The world is going through the most severe crisis in eighty years. This crisis is still unfolding and in contrast with the financial crises of the last twenty years, it originated in the heart of the mature capitalist economies of the world. It is the crisis of a flawed economic model with a policy mix that considers both price stability and fiscal balanced budgets as the key priorities to attain growth, jobs and equilibrium.

[1] This is ironic since the UN 'World Economic Situation and Prospects 2012' report warns that the world is on the brink of another recession. The UN report even reduces global growth forecasts for 2013 to 2.5% (down from 4% in 2010) and considers 2012 is a decisive "make-or-break" year. The report is available at: http://www.un.org/en/development/desa/policy/wesp/index.html.

The neoliberal model achieved none of these goals. On the contrary, it delivered mediocre growth rates, a systematic deterioration in the quality of jobs, and increased volatility. In the end, it also gave us today's global economic and financial crisis with losses in the trillions. As a result, today we are looking at the perspective of a global economy undergoing a prolonged recession, with unemployment rates comparable to those of the Great Depression.

This is a most important point: today's global economic and financial crisis is an endogenous event. It was engendered by the contradictions of the neoliberal economic model. It is not the product of an external shock or of irresponsible spending by profligate states.

It is also essential to reaffirm the fact that today's crisis was not caused by sector level phenomena, that it is not a simple case of market failure (Palley, 2009). Nor was it originated by irresponsible states issuing unsustainable levels of sovereign debt. These perspectives are misleading and leave the root causes of the crisis untouched. Inability to correctly interpret the crisis is already leading to wrong policy responses and to a prolonged and painful process of economic stagnation. A faulty analysis of the roots and nature of the crisis has the potential to relegate to a distant future the possibility of attaining the objectives of sustainable development.

It is not possible to understand today's crisis without looking at the evolution of the world economy during the past six decades. In the next few paragraphs we engage in this review in order to set the stage for the analysis of how sustainability is affected by the crisis and how this affects deliberations and negotiations going on in Rio+20.

The birth of the neoliberal paradigm was marked by three critical events:

a. Declining profit rates in the real sectors of the economy (i.e., non financial sectors) during the sixties and seventies prompted capital to launch an offensive to reduce labour costs. *Wages ceased to follow productivity gains and stopped being a reference for aggregate demand and this brought about higher indebtedness; the offensive against labour led to dislocation of productive activities;*
b. The unfavourable evolution of profit rates led capital to seek more profitable outlets in the financial sector. As capital sought different channels to maintain or increase profitability it also pursued its quest for security and mobility through greater liquidity. *This is one of the most important forces behind the expansion of the financial sector after the seventies.*
a. The collapse of the Bretton Woods system in 1971-73 opened new avenues for speculation and this required financial liberalization. The debt crisis in the eighties opened the door to impose financial and trade liberalization.

The combined effects of these three events set the stage for the birth and development of the neoliberal policy regime. How they also led to today's global crisis is examined in the next few paragraphs.

Declining Profit Rates and Stagnant Wages

It is important to recall that in the post-war period the world economy attained fast and sustained growth. Annual growth rates of the mature capitalist economies averaged 5.5% between 1945-1975.[2] This period that has been described as the 'golden age' of capitalist accumulation. Between 1950-1971 gross fixed investment expanded at a rate of 6.1% per annum and productivity increased in the period 1960-1973 at a yearly rate of 4.5%. Real wages followed closely this expansion of productivity. Thus, economic growth was based on a wage norm that allowed for widespread participation in consumption without too much reliance on debt. Thus, American and European workers doubled their average standard of living in the twenty-five years after WWII. This picture was to change drastically in the 1970s.

Between 1950-1975 real wages followed closely the growth in productivity and this helped maintain rising aggregate demand. This kept pulling investment forward and renewed a process in which productivity growth and rising wages maintained strong aggregate demand. To close the cycle, this fuelled positive expectations and renewed investment, launching a new phase of the process.

In the second half of the sixties the rate of profit in the advanced capitalist economies started to stagnate and then continued to drop. By the start of the seventies this trend appeared to have been consolidated but by the eighties profitability rates recovered. The causes behind this drop in profitability remain the subject of animated debates in the literature.[3] Two very important effects followed from this reduction in profitability rates. The first was that this unleashed efforts to cut labour costs. The second was that investors started to seek for investment opportunities outside of the real sectors of the economy (the non financial sector) in order to maintain profitability levels. In many cases this involved engaging in speculative ventures.

In response to the drop in profitability, labour costs were cut as much as possible. In fact, in order to contain the growth of wages a general offensive was unleashed against labour unions and other institutions established as part of the social

[2] The data in this paragraph correspond to the G7 countries (United States, England, Germany, France, Italy, Canada and Japan).

[3] A recent study by Basu and Vasudevan (2011) provides a good summary of this debate. The analysis of Baran and Sweezy (1966) and Sweezy and Magdoff (1981) stressed the dominance of monopoly as the key factor behind the stagnation as the overinvestment in productive capacity outpaced internal demand. Several authors proposed a different explanation based on the impact of rising wages on profitability (Glyn and Sutcliffe 1972, Body and Crotty 1975). A somewhat related explanation is associated with the theory of social structures of accumulation and finds the driver of this stagnation in the fall of labour productivity in part related to a fall in the intensity of work (Bowles, Gordon and Weisskopf 1987). Other accounts emphasize the intensification of international competition as the main factor behind squeezed profit margins and persistent overcapacity in manufacturing (Brenner 2006). Moseley (1992) finds the explanation in the growth of the ratio of unproductive to productive labour as the main cause of the declining profitability. Shutt (2005) finds that market saturation played a critical role in this stagnation of the profit rate. A different line of analysis, more akin to Marx's views, is followed by Shaikh (1987) who finds that the crisis in the seventies was generated by the drop in the rate of profit (in turn caused by increasing capital intensity and labour saving technical change).

compact of the post war years. As a result, real wages stagnated in the U.S. since 1973 in spite of rising productivity (Weiher and Beladi 2012). While productivity grew by 62.5% between 1989 and 2010, real hourly wages only grew by 12% (Mishel and Shierholz 2011). Real hourly compensation increased by 20.5%, far behind productivity growth. Similar trends were followed by the European economies, although institutional differences were responsible for diverse time patterns and various degrees of intensity. By the time profit rates had recovered in the eighties, the US economy had already weakened unions and any institution that had helped maintain the linkages between productivity growth and wages.

After the eighties efforts to control and reduce labour costs were helped through the transfer of segments of the productive process to countries with inferior labour costs in the eighties. Later complete de-localisation of entire production facilities became the weapon of choice in order to reduce labour costs. Globalization, understood as the expansion of markets and relocation of production facilities ETC

As a direct result of stagnant wages households started to rely more on debt to maintain their living standards. Wages ceased to be the key reference for aggregate demand and debt became the instrument by which households maintained living standards. For example, according to Federal Reserve data, since 1975 total household debt in the US expanded 450% when adjusted for inflation. In turn, this greater indebtedness required periodic episodes of asset price inflation ('bubbles') to maintain aggregate demand. These episodes maintained alive the illusion that household income could sustain aggregate demand, but, in the end, these boom-and-bust cycles led directly to today's crisis. This was the experience of the US economy, but *mutatis mutandis*, it was also that of the vast majority of mature capitalist economies.

Declining Profit Rates and Growth of the Financial Sector

The origins of the expansion of the financial sector can be traced back to the long-term evolution of the world's capitalist economy. The historical and theoretical analysis for this can be found in Braudel (1982, 1984), Wallerstein (1974) and Arrighi (1994). The centre point of their analysis is that financial expansions take place whenever the investment of money in the real sectors of the economy (production and trade) is less effective than pure financial investments in generating or increasing the cash flows that capital requires.

In other terms, when in a long-term cycle of capital accumulation the rate of profit associated with industrial and commercial enterprise declines, capital seeks different channels to prop up profitability. Capital also seeks greater security and mobility, goals that are met through greater liquidity. Under these circumstances there will be greater preference for financial ventures.[4]

[4] According to Wallerstein's and Arrighi's analyses the history of capitalism includes several long term cycles of capital accumulation. The first one takes place in and around the northern Italian cities of Venice and Genoa in the fifteenth and sixteenth centuries. The second cycle is organized around Amsterdam when the centre of accumulation was displaced from Italy to the Netherlands in the seventeenth to eighteenth centuries. The third cycle revolves around England during the late eighteenth and the nineteenth centuries as the British Empire was consolidated. The fourth world cycle of accumulation takes place under the hegemony of the United States during the late nineteenth century and the twentieth century.

This expansion of financial capital required financial deregulation and a process of so-called innovation surrounded by a flawed institutional framework. The regulatory regime that had been inherited from the Great Depression was slowly dismantled. In 1978 the U.S. Supreme Court decided in *Marquette vs. First Omaha* that state anti-usury laws regulating interest rates could not be enforced against nationally chartered banks based in other states. In 1982 the Garn-St. Germain Depository Institutions Act was approved deregulating the savings and loans industry, a measure that led to the crisis in this sector in the end of the eighties. In 1994 the Riegle-Neal law eliminated restrictions on banks' interstate activities. In 1996 the Federal Reserve reinterpreted the Glass-Steagall Act allowing banking corporations to obtain up to 25 per cent of their profits from activities related to investment banking. The Gramm-Leach-Bliley Financial Services Modernization Act of 1999 did away with the Glass-Steagall Act that had been the backbone of banking sector regulation since 1933. From the academic standpoint, support for lax regulation was provided by the assumption that capital markets adequately price securities with respect to expected risk and return. "Buyers and sellers of financial securities were, it was argued, able to make optimal decisions that led to risk being held only by those capable of managing it" (Crotty 2009: 564). At the international level, the advice of the Basle I and Basle II agreements (a set of banking rules issued by the Basel Committee on Banking Supervision) recommended rather weak capital requirements. Finally, the WTO's General Agreement on Trade in Services (GATS) covered financial services and further promoted deregulation of the capital account.

Expansion of the financial sector also took place through a complex and opaque process of financial innovations. In the past two decades new families of financial instruments, most of them in the category of derivatives, were created. The key problem with this process of innovation is that many of the structured financial products are too complex and opaque to be evaluated objectively and therefore cannot be priced correctly. This not only introduces a series of perverse incentives for speculative operations, it also brings greater instability into the operations of financial markets. And because of securitisation (where risk was divided into tranches of financial products and sold to investors in different financial markets) the weaknesses of this edifice were transmitted and disseminated internationally.

Another aspect of financial innovation was the acceptance of off-balance operations that allowed different components of the financial sector to engage in extremely opaque activities. In the late nineties banks were allowed to hold risky securities off their balance sheets in structured investment vehicles with no capital requirement to support them. Thus, the regulatory regime provided an incentive to move the most risky and vulnerable assets out of sight into off-balance sheets. Finally, the rating agencies also played a negative role as they gave their seal of approval to these opaque and high-risk financial operations such as mortgage backed securities and collateral debt obligations. Ratings agencies are paid by the investment banks whose products they rate and thus they have a perverse incentive to rate them optimistically.

The expansion of the financial sector is the outcome of the convergence of several factors. One of the most important is the capacity of private banks to create money "out of thin air". Although most people think that only the central bank has the monopoly for money creation, it has been the practice of modern banking at least since the end of the XIXth century to create various instruments that have the characteristics of money *stricto sensu*. Thus, central banks cannot control directly the money supply.

Monetary creation and private banks

How we think about the economy is very important in shaping our views about the real world. Orthodox or mainstream economists deny this money-creating role of modern banks because they remain faithful to the old classic ideas of monetarism and loanable funds theories. Heterodox economists, many of whom are so-called post-Keynesians, think of money as an endogenous variable. In their analysis, when banks make a loan they open an account for the recipient of the loan. From that perspective, it's as if the recipient of the loan had made a deposit in the bank from which he/she can now make withdrawals. In this sense, "loans make deposits and deposits make reserves" as Marc Lavoie (2006) has cryptically stated. Empirical evidence supports this.

Incidentally, this analytical perspective provides an entirely new framework for interpreting the European crisis. The dominant narrative disseminated by mass media goes like this: the peoples of Greece, Italy, Spain, Portugal and Ireland lived above their means for many years and now the time to pay has come. The loans channelled to these countries were squandered and they need to be repaid. Since most people still believe those loans were backed by savings (deposits), this is the equivalent of saying that the savings of the virtuous peoples of the north were wasted by the lavishness of profligate spending in the south. This is why fiscal austerity is being imposed on the peoples of these countries. But this view of things changes radically when one considers the data on monetary creation by private banks: in 2008 for every 100 euros that were given out as loans by European banks, only 1.50 euros corresponded to or were backed by actual deposits.

To be sure, there are several constraints on the money creating capabilities of banks, not the least of which is the requirement to hold certain levels of reserves. But because banks are just like any other capitalist firm, that is to say, they exist in order to make profits, they seek to eliminate or avoid obstacles. This can be done through profit-seeking financial innovation (something that requires deep deregulation of banking and financial activities). Banks have an interest in lending because this is where they generate their profits.

The naïve view of banks as entities that play the role of simple intermediation, receiving deposits first and then finding investors that demand funds for investment needs to be abandoned. Today monetary creation is in the hands of private banks, while central banks can only aspire to control the short-term interest rate (for example, the federal funds rate in the US and the repo in the UK) at which it supplies reserves.

Fast-forward and you see that the convergence of all of these factors explains why phantom assets are pervasive in the world economy today. It is estimated that in 2008 there were close to 30 trillion in phantom assets and that at least 50% of this amount has already evaporated. The other half will probably go away in the coming months, bringing about a string of bankruptcies in the banking sector of the mature capitalist economies and renewed pressure from the financial sector for bailouts with public resources (the dogma of austerity notwithstanding). This will contribute to hold these economies in a recession-prone trajectory and this will further aggravate the debt problem. The panorama for 2012 does not bode well.

Collapse of the Bretton Woods System of Fixed Exchange Rates

Another important event took place at the start of the seventies. In 1971 the United States closed the window for gold transactions and the system of fixed exchange rates that was the keystone of the Bretton Woods system disappeared. This was the result of important structural changes in the world economy. The US had been the main victor in WWII and its economy had been spared. The international monetary system that emerged after the war was a fixed exchange rate system where all major currencies were pegged to the US dollar at fixed rates, while the US currency was pegged to gold at a fixed rate (35 USD per ounce of gold). The US economy had large gold reserves and was running a trade surplus for the first two decades after the war. By the second half of the sixties the US already was experiencing a current account deficit. The US had to devalue and in order to do this it had to abandon its exchange rate with gold. The Bretton Woods system of fixed exchange rates disappeared in 1971.

The new system of flexible exchange rates led to the privatization of risk (Eatwell and Taylor 2000). In the world of fixed exchange rates the private sector was shielded from the risk of fluctuating exchange currency rates. But the end of the Bretton Woods regime transferred the risks of foreign currency variations on private sector agents. It became urgent to reduce these costs and in order to do that, the controls on transboundary flows of capital had to be eliminated. Traders operating in international markets now had to be able to diversify their portfolios at will, changing the mix of currencies and financial assets according to their perceptions of risks and incentives. The new system of fluctuating exchange rates offered great opportunities for arbitraging and for speculation. This explains why the volume of international capital flows increased exponentially. Annual turnover in the world's currency markets expanded from US $4 trillion in 1973 to more than US $450 trillion in 2007 (Hillman et al 2006). The deregulation of capital flows became an imperative in order to hedge against the costs that fluctuating exchange rates entailed for the private sector.

The international debt crisis of the eighties provided an excellent opportunity for the elimination of trade barriers and obstacles to financial liberalization. The structural adjustment programs imposed on many key developing countries in that decade not only eradicated many of these barriers, they also helped establish the set of macroeconomic policy priorities that even today are the key reference in developing and developed countries. In addition, the wave of privatizations that

shook the developing economies undergoing shock therapy also opened new profitable opportunities for investors from mature capitalist economies.

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To summarize, the convergence of declining profitability in the real sectors of the economy during the seventies and the collapse of the Bretton Woods system led to an offensive on labour costs and on the financial regulatory framework. One of the vehicles for the expansion of the financial sector was intensive securitization, a process that built a closely-knit system for the transmission of toxic and phantom assets all over the global financial system. This is why the crisis has had such a virulent effect and is so difficult to get rid of.

The implications for sustainability are very important:

a) The environment and social justice have been displaced from the key priorities in the world's agenda;
b) Due to the amount of resources devoted to cover financial charges (from bailouts and stimulus programs) this crisis will reduce the amount of resources available for environmental sustainability;
c) Unemployment rates, as well as cuts in wages and pension entitlements are already increasing poverty and inequality that will take years to revert;
d) In many countries the crisis is already causing greater pressure on the natural resource base.

The widely discussed process of "financialization of nature" is closely related to this evolution of profitability in capitalist economies. As profit rates stagnated and the real sectors of the economy ceased to provide an attractive outlet for investment, capital sought alternative profitability spaces. This led to the creation of asset price inflation or bubbles in many sectors. Housing has traditionally been a sector in which bubbles take place. But in the eighties and nineties, many other spaces were identified by capital.

The expansion and development of financial markets and financial innovation facilitated this process. The *dot.com* bubble in the nineties was followed by the series of speculative episodes in the NASDAQ index. The promises of a new technological revolution with the internet, the digital superhighway, biotechnologies and genetically modified organisms were efforts to restore the illusion of profitability.[5] All of this was followed by the creation of new artificial commodities, such as carbon credits and biodiversity offsets.

For the same reasons financial capital was attracted to commodity exchange and futures markets. These markets were established to help producers cope with the uncertainties of agricultural production. Futures markets were introduced to facilitate price discovery and reduce volatility. In the U.S. participation in these markets was restricted to producers, farm processing agents and traders. Until recently, other agents were prevented by law from entering these markets in order

[5] In the case of GMOs, this was also part of an attempt to gain control over the production process in agriculture.

to prevent speculation. These restrictions were gradually relaxed and in 2000 the US Commodity Futures Trading Commission in charge of controlling market manipulation had to implement several deregulation measures.[6] The end result was increased trading and price hikes.

In the past there was some speculation in commodity exchanges and futures markets, but it was based on how agents perceive the evolution of supply and demand. Speculation in futures and mercantile exchange markets was simply the action of taking advantage of a system of relative prices. Carrying costs, delivery dates and inventories were critical in deciding how much to buy and when to sell. This changed when financial investors responded to risks in financial markets and went on to diversify their portfolio structures in order to search for optimal investment structures. For these agents, commodities become the physical support of a new investment that is not different (from the viewpoint of portfolio structures) from other financial assets. As futures contracts involving commodities became more common and were the object of complex securitization (Frankfurter and Accomazzo 2007), the normal price-inventory relationship was altered. To a financial investor securitized *commodity-linked instruments are now considered an investment rather than a risk-management tool*. This alters price dynamics and brings into commodity markets some of the negative traits of financial markets: herd behaviour and self-fulfilling prophecies that can engender higher prices until markets break down.

Financialization of commodities is a problem that goes well beyond the walls of the mercantile exchange and has direct impacts in output mix, technology choice and resource management practices. When they enter into a commodity market and start pushing prices upwards, financial operators may pull agricultural production into the space of financial transactions, risk management and speculation. Because of the magnitude of the resources at their disposal, their transactions in futures markets have direct effects on market (spot) prices.[7] But more than that, these effects are relayed through the workings of contracts that link agribusiness (with their own credit and marketing facilities) to direct producers in the field. Banking deregulation, tight monetary policies (with scarce and costly credit for rural producers), recessive fiscal policies and the withdrawal of support for small-scale agriculture, all combine to leave this space for large agri-business.

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[6] The CFTC controls potential market manipulation and excessive speculation through the Commitment of Traders (COT) report. But this was severely downgraded and rendered useless by the Commodity Futures Modernization Act enacted in 2000. In addition, the regulatory and monitoring capacity of the CFTC was further eroded when it allowed the Intercontinental Exchange (ICE) to use its trading terminals in the United States for trading of U.S. commodity futures contracts on the ICE futures exchange in London. Later, ICE Futures allowed traders in the United States to use ICE terminals in the United States to trade its synthetic futures contracts on the ICE Futures London exchange. This not only allowed unregistered funds to effectively bypass registration, it also contributed to distribute the effects of these operations worldwide.

7 Futures markets involve contracts in which traders pledge to buy or sell a commodity in the future at a pre-set price. The contract can be traded so that the agent does not have to actually take delivery of the commodity when the date expires. In the case of options, traders have the right but not the obligation to purchase or sell a commodity at a pre-set price in a future date and they pay a premium to the agents who make the opposite pledge.

The trend towards the financialization of nature will continue and will need to be confronted with decisive mobilizations. The policy response to the current global crisis has injected trillions of liquidity into the balance sheets of banks and large corporations. Because the mature capitalist economies affected by the crisis are undergoing a deflationary process, this excess liquidity is not finding its way into the real economy. Thus, corporations and banks are sitting atop a mountain of liquidity, part of which is being channelled as investments outside the countries affected by the crisis. This is one of the explanations behind the increase of reserves in countries like Brazil and Mexico, to mention a couple of examples.

This effect of quantitative easing is recognized by none other than the Federal Reserve: "the very low interest rates were negatively affecting pension funds and the profitability of the life insurance industry".[8] This combination of increased liquidity injected into the system and decreased profitability will generate greater pressure in seeking outlets for investment, leading directly to the financialization of nature and to more severe land grabbing events.

Thirty-five years of neoliberalism have shown that capitalist economies are inherently unstable and that they are capable of maintaining unacceptable unemployment rates for long periods of time. It has also shown that free unregulated capitalist markets, if left free from public policy interventions fail to provide decent levels of income for the vast majority of the population. All of this is perfectly compatible with the insights of John Maynard Keynes, the founder of macroeconomic theory. And the conclusion is that we need to have a serious and meaningful discussion on macroeconomic policies.

II. The Need to Discuss Macroeconomic Policies

Macroeconomic policies are related to the workings of the entire economic model. When discussing sustainability, meaningful references to macroeconomic policies are critical. But regretfully, this is never the case. This section examines the reasons for this and lays down the guidelines for a serious discussion of macroeconomic policies. The section draws heavily from our book *Rethinking Macroeconomics for Sustainability* (Zed Books 2011).

What are the Components of Macroeconomic Policy?

Macroeconomic policies deal with economic aggregates through a very small number of key variables, including the interest rate and the currency exchange rate. These are very powerful variables because changes in the values of these variables affects the behaviour of agents across the economy. Macroeconomic policy includes monetary and financial policies, and this should include the regulatory stance vis-à-vis the banking and financial sector. It also includes fiscal policy from the perspective of revenues (both tax and non-tax revenues), as well as from the angle of public expenditures. Macro policies also include exchange rate policy and capital account regulations, including rules on international capital flows. Incomes' policies are another crucial component of macroeconomic policies

[8] See Minutes of the Federal Reserve's FOMC meeting November 1-2, 2011: http://www.fderalreserve.gov/monetarypolicy/fomcminutes20111102.htm).

and, finally, the ability to impose certain economy-wide prices such as energy, foodstuffs, etc.

Why is Macroeconomic Policy Important?
Macroeconomic policies determine the rate of activity and investment dynamics of entire economies. This means they play a crucial role in determining usage and extraction rates of natural living and non-living resources. They also determine the asset composition of investment portfolios and they therefore play an instrumental role in channelling financial resources into spheres where social welfare and the environment are directly affected (commodities' and futures' markets, carbon markets, land grabbing and other examples of financialization of nature). This is especially important in view of the macroeconomic policy response that has injected vast amounts of liquidity into the financial sectors of Europe and the United States. Macroeconomic policies affect employment, income distribution and inequality. From this standpoint, they are critical in attaining one of the main pillars of sustainable development.

Because of their impact on the rate of investment, macroeconomic policies also condition the capacity of a country to undertake economy-wide structural transformations. Thus, macroeconomic policies may be an obstacle or a powerful agent for systemic technical change. This is highly relevant in climate change discussions where drastic reductions of greenhouse gas emissions need to be attained in relatively short periods of time. Sector level policies will not be up to this task unless macroeconomic policies are well tuned to this objective. Macroeconomic policies are also very important in determining the type of insertion of a given country in the international economy. For many poor countries, macroeconomic policies have played a decisive role in determining how the natural resource base is compromised in order to meet the challenges of debt service and closing the currency gap in general.

To summarize, macroeconomic policies determine the aggregate amount of resources that an economy allocates for environmental stewardship and for social welfare. Finally, macroeconomic policies affect the production strategies and resource management capabilities of all economic agents in a given economy. This applies to the largest and most powerful corporations, as well as to the smallest subsistence farmer.

Given these considerations, and the fact that today's crisis is macroeconomic in nature, it is rather astonishing that macroeconomic policies are off limits in Rio+20. It is evident that serious negotiations concerning sustainability demand a discussion on macroeconomic policy priorities and policy instruments. The refusal to discuss monetary and fiscal policies, as well as the structure of the international financial and payments' systems is much more than an oversight. How can this colossal act of negligence be explained?

There are several explanations, but perhaps the most important one is that when macroeconomic policy priorities are opened for discussion, the rationale of the entire economic model is called into question. And the political economy of who benefits and who pays is revealed for all to see. Determining the priorities of

monetary, fiscal and incomes' policies responds more to political reasons than to technical constraints. This of course will invite controversy. More important, it brings out in the open the true reasons behind the fact that we are distancing ourselves from the objectives of sustainability.

It is no exaggeration to affirm that today's main priorities in macroeconomic policy-making are dominated by the needs of the financial sector. Monetary policy is subordinated to the struggle against inflation, an objective that ranks above everything else in the agenda of finance capital. Thus, during the past thirty years the main objective of monetary policy has been price stability. In the end, this objective was not enough to steer the world economy away from speculation, volatility and crisis.

Not only was this posture of monetary policy totally inadequate, but in the pursuit of this objective other very important aspects of macroeconomic dynamics were sacrificed. Price stability in many developing countries was typically pursued through the containment of aggregate demand. This means real wages were repressed and fiscal expenditures were curtailed. In addition, an overvaluation of the exchange rate was maintained as this had a positive impact on the overall consumer price index (even though it had a negative effect on the external sector of these economies). Thus, the strategy seeking to attain price stability was based on instruments that promoted inequality and subjected sector level policies to a draconian discipline that led to increasing backlogs in health, education, housing and sanitation.

The international regulatory framework for the banking system has proven to be entirely deficient. The rules that came out of the Basle I and II regimes were inadequate and were incapable of preventing the current crisis. In a sense, these rules even promoted greater risk-taking by banks through opaque processes and were an incentive for speculation and excessive leverage. All of this aggravated a situation in which the monetary creation capabilities of banks led to even greater liquidity and asset price inflation (bubbles). It is clear that redefining the objectives of monetary policy is a fundamental priority. There is nothing that should prevent us from moving sustainable development (with its two pillars of social justice and environmental integrity) to the centre of monetary policy priorities. This should have been at the top of the list of priorities for UNCSD in Rio de Janeiro.

Something similar applies to fiscal policy, where the notion of a balanced budget is presented as healthy principle of public finance. This has been justified by mainstream academics through the notion of 'crowding out'. The rationale here is that deficit spending will lead to increments in the commercial interest rate and this will prevent private entrepreneurs to carry out new investments. Of course, an underlying assumption is that private sector investments are under all circumstances better or more efficient than public sector projects. Needless to say, the crowding out hypothesis is debatable and has generated much controversy in academic circles.

In reality, fiscal policy is dominated by the priorities of debt management. International financial institutions have imposed debt service payment as the paramount priority for fiscal policy in developing countries. Every sector level objective is disciplined by this overarching goal. And because new or increased taxes are considered to be impractical or counterproductive, the way to attain adequate "debt management" objectives is through cuts in public expenditure. Allocations for health, education, housing, environmental stewardship, infrastructure and transportation, R&D, etc., are subordinated to debt management.

In the jargon of fiscal policy specialists, the need to generate a primary surplus is synonymous with 'healthy' debt management. The primary surplus is the result of a comparison between all fiscal revenues (tax and non-tax) and expenditures net of financial charges. The *raison d'être* of the surplus is to cover the cost of debt service. This should also be at the top of the priority list in Rio+20.

Finally, incomes' policy is typically organized around the objective of not unleashing inflationary pressures and thus, it is determined not by productivity growth, but by the paramount objective of maintaining price stability. This is one of the most important components of macroeconomic policy and under neoliberalism it has led to two problems. One is rising inequality as incomes for the lower income brackets were more prone to suffer reductions (for example, through indexing wages with expected inflation instead of real inflation rates). The other is that aggregate demand started to depend more and more on debt and this made the entire edifice much more fragile.

The subordination of social and environmental considerations to macroeconomic policy imperatives has been the dominant mode of policy making under neoliberalism. Once macroeconomic objectives are determined, every other policy target is chiselled in accordance. In this sense, social and environmental policies are being shaped in central banks and ministries of the treasury. The domineering notions of a primary surplus, very low inflation rates and free capital flows are the macro policy objectives to which all other considerations must submit. Whether soil erosion or biodiversity, health or education, mainstream macroeconomic policymaking is adamant: these are sector level issues that need to be disciplined by macroeconomic imperatives. Redefining macroeconomic policy priorities should be at the forefront of negotiations on sustainability.

Our book *Rethinking Macroeconomics for Sustainability* (London: Zed Books 2011) contains a more detailed analysis of the issues mentioned in this section. It also includes two chapters on the guiding principles for redefining macroeconomic policies in order to subordinate them to the overarching objectives of social justice and environmental responsibility. Those chapters cover the policy reforms that are needed for sustainability, both at the domestic and the international levels.

III. Critical Features of the World Economy and Sustainability

Global economic relations reveal several important structural features that affect both social and environmental sustainability. They need to be part of a serious

discussion on sustainability. However, they are absent from international multilateral negotiations on sustainable development (e.g., Rio + 20).

In this paragraph we briefly consider five fundamental characteristics of the world economy. They are closely related to each other and should not be seen as separate items. The purpose here is not to carry an exhaustive analysis of each one of them, but to display their importance and indicate how they affect transformative changes. The five characteristics we examine here are the following:

a) Dominance of the financial sector
b) Inequality and poverty
c) Concentration of market power
d) International imbalances
e) Debt

What about the environmental disaster in the world? For example, the regulatory regime for climate change has been essentially destroyed. What is the Rio+20 Outcome Document going to say about this?

a) Dominance of the Financial Sector

The financial sector in the world economy has become the most powerful component in the global economy. Several indicators reveal that financial activities are the single most important sector in the world economy today, with an estimated value of assets several orders of magnitude above GDP and world trade flows. Finance has become separated from the real sectors of the economy and, as we have already noted, the financial sector also dominates the setting of policy priorities in the macroeconomic scene.

Today it is no exaggeration to affirm that the main priorities of macroeconomic policy are dominated (or dictated) by the requirements of the financial sector. As we shall see in the next section, monetary policy is dominated by the overarching objective of achieving price stability, while fiscal policy is subordinated to the objective of fiscal balance. Both objectives respond to the needs of finance capital. This has significant negative repercussions for sustainability. In what follows we discuss four problems that need to be addressed.

First, the combination of floating exchange rates and free capital flows distorts the role of interest rates. Because of the rate of return that can be associated to exchange rate variations, interest rates cease to be a simple reference for domestic investments in an economy where short-term financial capital flows are commonplace. Interest rates become another parameter for speculative allocations instead of being a reference for any kind of productive investment, not to speak of long-run investments for sustainability.

Second, the dominance of the financial sector distorts investment patterns. If rates of return are low in real economy sectors compared to returns in the financial sector, productive investments will suffer. This is especially true in the context of an economy that is dominated by finance and speculation aggregate investment

patterns will be affected in this manner, leading to less growth and inferior rates of employment generation. In the words of Keynes (1973: 159):

> "Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done."

This is of course aggravated in the context of a model of capital accumulation that relies on the creation of asset bubbles in order to maintain or drive aggregate demand. In this context, the economy will generate cyclically asset price inflation episodes that are accompanied (or fuelled) by rising expectations that lead to ever increasing price hikes until the process is arrested by interest rate increments or by the bursting of the bubble. Minsky (2008) comes to mind because in his model of financial instability the dynamics of rising expectations take the economy in a veritable whirlpool of speculation until the bubble bursts and deflation sets in.

Third, in the context of financial liberalization and free capital flows the exchange rate is not a variable (or the relative price of currencies) that adjusts in order to equilibrate markets. Thus, the exchange rate should not be seen as the variable that automatically adjusts the supply and demand of currencies as a function of the trade balance (deficit or surplus). Under a regime of financial liberalization the exchange rate is required to remain stable by capital inflows. In the words of Eatwell and Taylor (2000: 75) "portfolio adjustments do not provide a way for a 'fundamental' external deficit to generate an exchange rate adjustment that will make the (trade) deficit disappear". This makes the adjustment of the trade balance a difficult matter. When it finally takes place it is under conditions of chaos and overshooting devaluations. And the typical policy response under these circumstances is fiscal retrenchment and monetary contraction. This leads to recessions, bankruptcies, unemployment and poverty.

b) Inequality and Poverty

Inequality between developed and developing countries has increased in the past two decades. The ratio of the income accruing the world's richest 20% compared to that of the poorest 20% went from 30:1 in 1960 to 75:1 in 1999. In addition, poverty has worsened. The World Bank estimates that 48 per cent of the world's total population lives on less than US &2.50 a day. Approximately 80 per cent lives below the 10-dollar line.

How did this growth in inequality come about? First, it is now recognized that in most advanced industrial countries median wages stagnated during the last quarter century. Living standards were more or less maintained through increasing indebtedness of working and middle classes (i.e., increased household borrowing simply postponed the decline in living standards). Wages and compensations increased in the upper income brackets and this intensified income concentration and inequality.

Second, the main policy priority of macroeconomic policies was the control of inflation. This was attained through a regressive posture in fiscal policy as social expenditures suffered and tax cuts were implemented in favour of the rich. The struggle against inflation involved the contraction of aggregate demand. In many cases this was achieved through negotiations in which nominal wage adjustments were indexed to expected inflation rates. Real wages were reduced as real inflation exceeded the inflation targets.

Third, in the competition to attract foreign investment many developing countries dismantled the institutional network that contributed to better wage levels in the past. Unions and anything that was perceived as an obstacle to wage flexibility came under attack. This resulted in greater disparities between workers' compensation and the revenues of higher income strata. Neoliberal globalization has clearly contributed to this race to the bottom in wages and labour conditions as export led growth became the guiding post for economic policy.

Inequality is a key obstacle for sustainability, wildlife conservation and species survival. Already it is difficult to think about sustainability when 50 per cent of the world's population live below the poverty line. It has been stated that poor people rely more heavily on environmental services and under duress they may put more pressure on the natural resource base. But a policy response dominated by neoliberal priorities will exacerbate inequality and increase poverty.

c) International Imbalances

The rhetoric on globalization frequently emphasized the notion that continued financial and trade liberalization would lead to convergence in growth rates. In fact, neoliberal globalization led to enormous international imbalances and growing asymmetries. These imbalances reflect the contradictions of neoliberalism and should not be seen as accidental in nature.

Globalization made the adjustment of external imbalances more difficult. The increment in a country's external positions raised the vulnerability to the vagaries of financial markets and capital flows that depend on variations of interest rates, inflation and exchange rates. Expectations of fund managers depend not only on the so-called fundamentals of a given economy, but also (and perhaps more important) on the comparative performance of other economic spaces. This adds to the volatility of capital flows and the bigger risks that are faced by recipient countries. Where countries are more specialized in certain exports, or depend more on a single trading partner, adjustment is much more difficult.

Under neoliberalism the world economy has systematically experienced deficient aggregate demand. This was the result of the priorities in the policy package of neoliberalism: as countries countered inflationary pressures through tight monetary policies, the contraction of fiscal expenditures and the containment of real wages, aggregate demand weakened. In many cases, the only way out was to pursue export oriented growth policies in order to compensate for this weakened domestic demand. The US economy became the consumer of last resort because its own currency is used as a means of payment in international transactions.

In the past decade, growth of the global economy rested upon the performance of the Chinese and US economies. China provided extraordinary investment growth rates, while the US contributed with an insatiable appetite for imports. The current account surplus of the Chinese economy mirrored to deficit of the current account of the US. These domestic and international imbalances became unsustainable and were transmitted to the rest of the world economy with grave implications for all.

Now that the debt-financed consumption-led growth engine of the US economy has failed, the system is in danger of collapse. Of course, this poses a serious threat to the entire world economy because the US dollar continues to be the most important international reserve currency. Thus the crisis brought about by the contradictions of neoliberalism threatens today the international monetary regime.[9]

The global crisis has intensified the debate on the need for adjustment of the UIS current account deficit. Until recently the official view in Washington was that the deficit could be sustained for a long period of time, that it was not a serious problem and that it could be corrected in a gradual process. According to Bernanke, head of the Federal Reserve, the US current account deficit has been the key to absorb "excess savings" that have been generated in other countries, especially in Asia. In this view, these ever growing deficits in the US economy reflect the aggregate demand the world economy so badly needs. This is not a view shared in the academic community because the growing need of the US to finance its deficit represent a continuously increasing risk for China and other Asian economies.

These trends are further complicated by the fact that the world economy lacks a truly supranational currency for its payments system. Today's international monetary system consists of a set of currencies competing with each other to play the role of international reserve assets and means of international settlement. In the years 2005-2008 the liquidity and breadth of the European financial markets was approaching that of the U.S. dollar and the euro was eroding some of the advantages that historically supported the pre-eminence of the dollar's role as leading reserve currency. However, the euro crisis casts a dark shadow on the credibility of the European currency (and even on its future). The fact that the euro lacks its own treasury and the Treaty for the Functioning of the European Union includes a no-bailout clause (Article 125) does not help assuage creditors and financial markets. The situation in Spain, Portugal and Italy does not bode well for

[9] Countries issuing reserve currencies are constantly confronted with the Triffin dilemma between achieving domestic monetary policy goals and meeting other countries' demands for liquidity. When a national currency plays the role of international reserve currency, the source of liquidity in the country issuing that currency is its own trade deficit. In order to maintain liquidity at an adequate level, the issuing country must keep a deficit but this gradually destroys the value of the reserve currency. Thus, countries issuing reserve currencies cannot maintain the value of the reserve currencies and, at the same time, provide liquidity to the rest of the world.

the euro. Today, in the midst of the global financial and economic crisis, there is clearly no stable international currency.

d) Concentration of Market Power

Giant corporations with considerable market power have become key actors in international economic affairs. These mega-corporations play a very important role in international trade and investment: more than 66 per cent of world trade takes place through transnational corporations and 40 per cent of this is intra-firm trade. These agents concentrate enormous market power in sectors that are close to the natural resource base. The crises in energy and food prices in 2007/08 can be traced to the actions of these corporations.

Economic analysis of industries where high concentration coefficients prevail shows that price manipulation and collusion to build artificially high entry barriers are common practice. These are the most important distortions that affect markets and price formation. In addition, cartel and lobby-formation are easier in highly concentrated industries than in branches where economic power is more uniformly distributed. This also helps explain how policy can be and is frequently influenced in concentrated branches of economic activity.

In multilateral negotiations on trade liberalization the main objective was the elimination of distortions brought about by tariffs and subsidies. Yet, the single most important lacuna in all WTO agreements is this lack of reference to market power concentration, oligopolies and anti-trust enforcement measures. Although it is not possible to believe that international trade is not affected by unfair business practices, collusion and market concentration, WTO has left this problem area untouched. This is why all of these problems are left to the opaque workings of international commerce arbitration boards. However, the lack of transparency of these bodies is only one part of the problem. The other and more important problem is that their scope of competence does not include mandatory anti-trust measures applicable to the general case. And although this set of issues is screaming for attention it has never been addressed by WTO. Thus, although the rhetoric in this body is about liberating market forces, in reality these agents are the ones that truly distort any market outcome. In the end, the impact on the environment and on communities from ventures in open-pit mining or large forestry projects is not the result of pure competition market forces but of highly imperfect markets.

According to members of a U.S. congressional investigation into the Deepwater Horizon disaster (*Huffington Post* 14-VI-2010) the dramatic explosion and sinking of a British Petroleum drilling platform in the Gulf of Mexico were due to cost-reducing practices that sacrificed safety to profits. If these allegations were true they reveal what many already suspected: that these mega-corporations are doing what they want to the environment far away from adequate supervision and monitoring. Deep-water oil drilling is but one example. There are many other instances in the extractive industries, commercial logging, fisheries, agriculture, etc.

e) International Indebtedness

The debt of developing countries has long been recognized as a critical obstacle to development. It is also one of the most important connections between macroeconomic policy and environmental sustainability because of the impact on fiscal policy. In spite of this, a serious debate concerning the debt burden have been absent from negotiations on the MDGs, the Green Economy Report or climate change policy.

History of developing countries' debt problems goes back to the period opf decolonization in the fifties and sixties. Guissé (2004) shows that in 1960 at the peak of the decolonization period a debt of US$59 billion was imposed on the newly independent countries by the outgoing metropolitan states. At a rate of 14 per cent the debt accumulated rapidly. Thus, before the newly independent states had had a chance to set up their economies they were laden with the heavy burden of an external debt that had no economic or legal justification whatsoever, especially if one considers the extraction of natural resources from those territories during the colonial period.

In many developing countries debt has increased as a direct result of the actions of dictatorial and illegitimate governments. Frequently these resources have been used in ways contrary to the peoples' interests with the knowledge and/or connivance of the creditors. Under these circumstances, the concept of odious debt applies (this is a well established legal concept, Howse 2007). This ugly situation was aggravated for many of the poorest countries when in return for partial debt cancellation they have had to accept conditionality rules imposed by the IMF on trade liberalization, financial deregulation and constraints on fiscal policy (i.e., generation of a primary surplus).

Total public external debt of developing countries increased between 1970 and 2007 from US $70 billion to US$3,360 billion. Total debt service payments by developing to developed creditor countries during the period 1980-2007 amounted to a staggering US$7,150 billion. These numbers are stark indicators that something is truly wrong about the international economy.

In 1970, the world's poorest countries had a total debt of approximately US$25 billion. In 2002 these countries' debt had risen to US$523 billion. In the case of Africa, in 1970 its debt was US$11 billion, but three decades later it amounted to US$300 billion. By 2008 developing countries had reimbursed the equivalent of 102 times the amount of their debt in 1970, and in that period their outstanding debt was multiplied by a factor of 48 (Millet and Toussaint 2009).

For creditor countries the amounts involved in debt statistics may appear small. For poor debtor nations these amounts are of critical importance and may spell the difference between life and death for many of their citizens: as many as five million children and vulnerable adults may have lost their lives in sub-Saharan Africa since the late 1980s as a result of the debt crisis (Shah 2005).

Through a series of instruments and diverse forms of pressure, creditor countries have forced these indebted countries in the developing world to adopt a macroeconomic policy posture that entails significant cuts in social (health, education, housing), as well as environmental expenditures. The main priority of their fiscal policy has been debt service payments.

In addition to the transfer of resources that surrounds the debt problem, major sovereign debt crises have constituted a serious obstacle to growth and development during the past several decades. These crises have been extremely harmful and their costs in social and environmental terms have been overwhelming. The ensuing adjustment programs have brought about greater unemployment, inequality and poverty, exacerbating environmental problems such as deforestation and loss of biodiversity. Clearly, any discussion about resources for sustainability, wildlife conservation and species survival needs to address the issue of the debt bomb and the constraints it imposes on macroeconomic policy.

IV. The Green Economy

UNEP's Green Economy initiative is probably the cornerstone of UNCSD Rio+20. The central reference here is its document *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*.[10]

A green economy is defined in this document as one that ensures improved human well being and social equity, while significantly reducing environmental risks and ecological scarcities. According to UNEP this implies a low-carbon, resource efficient and socially inclusive economy. Probably the most important conclusion of UNEP's report *Towards a Green Economy* (TGE) is that investing just 2% of global GDP into ten key sectors of the world economy can initiate the transition towards a low carbon, resource efficient economy. If backed by appropriate policies at the national and global levels, this growth process would be possible without increasing risks, shocks, scarcities and crises inherent in the existing resource-depleting, high carbon 'brown' economy.

The **first** paragraph in this section concentrates on the fact that for UNEP, the green economy objective can be attained within the framework of neoliberalism. The **second** paragraph examines the recommendations on finance for a green economy. The **third** paragraph focuses on the notion of natural capital employed in UNEP's presentation of a green economy. The **fourth** section briefly considers the modelling exercise used by UNEP to reach its conclusions. This model is the so-called Threshold 21 model of the Millennium Institute and is used by UNEP to support its conclusion that investing 2% of GDP in ten sectors of the economy will lead to a green economy. The serious limitations in the model cast a shadow of doubt on this conclusion.

IV.A The Green Economy and Neoliberalism

[10] The document is available at: www.unep.org/greeneconomy.

UNEP's Green Economy Report (GER) describes what a green economy should look like and attempts to explain how this objective can be attained. In the Foreword we read that "a green economy does not favour one political perspective over another. It is relevant to all economies be they State or more market-led. Neither is it a replacement for sustainable development. Rather, it is a way of realising that development at the national, regional and global levels and in ways that resonate with and amplify the implementation of Agenda 21."

Thus, according to UNEP the notion of green economy is policy neutral. For the GER then, there is no need to engage in *policy reform at the level of the entire economic model*. UNEP acknowledges that some policy changes will be required at the sector level or even on things like subsidies or some specific taxes. But these changes do not compromise the entire neoliberal economic model.

Thus, for UNEP attaining the objective of a green economy is something that is perfectly compatible with the neoliberal economic model. And this is perhaps the single most incongruous conclusion in UNEP's report. The neoliberal model is in the midst of a global crisis of historical proportions. Rio+20 coincides with this truly historical event and UNEP not only wastes the opportunity to make a serious analysis of the crisis. In fact, its basic recommendation is the continuation of the model that generated this crisis, intensified inequality and environmental destruction everywhere. Any serious analysis of the evolution of the world economy will show that neoliberalism is the single most important obstacle to reach something resembling sustainable development.

The definition of a green economy provided by UNEP has several key components. One of them is social equity and the eradication of poverty. But how does a green economy lead to improved social equity and the eradication of poverty in an unprecedented scale, with speed and effectiveness?(UNEP 2011: 628) Here we see that UNEP's document lacks a serious analysis of how this comes about. In the absence of this analysis, one can only be led to believe that the objectives of social equity and poverty eradication are supposed to be attained through something that looks like "trickle-down" effects.

UNEP's central premise here is that a new economic growth paradigm that is friendly to the environment will in and by itself contribute to poverty eradication. The argument expounded by UNEP on this delicate point is that the transition to a green economy will reduce poverty because (UNEP, 2011: 20) "a number of sectors with green economy potential are particularly important for the poor, such as agriculture, forestry, fishery and water management."

But although it is true that the fate of millions of poor people would be improved if we had adequate policies in these (and other) sectors, under neoliberal priorities none of these policies and the investment required will be forthcoming under UNEP's blueprint for a green economy. To provide an example, resources allocated to agriculture are typically disciplined by the superior fiscal policy priorities of balanced budgets and the need to generate a primary surplus in order to cover financial charges. This is why in most countries in the Global South the aggregate measure of support mandated by World Trade Organization requirements is well

above actual resources allocated for agriculture. Once again, the dogmas of fiscal discipline act as a major restriction here. Without escaping this dogma it will not be possible to channel the resources needed to transform agriculture.

This is not the only problem. Under neoliberalism agriculture has suffered a major offensive through the powerful effect of economic forces. Trade liberalization has brought about a serious deterioration of terms of trade for agriculture (the high prices of agricultural foodstuffs registered in recent years have not benefitted poor farmers but the large corporations and intermediaries that act in agricultural markets). Fiscal restrictions made it impossible to maintain the real value of (WTO-compatible) income deficiency payments for farmers. In fact, in many countries the number of beneficiaries of these programs has dropped as a consequence of fiscal restrictions. These restrictions have also curtailed public investment in irrigation and water management schemes, roads, storage, insurance, extremely limited credit facilities, etc. The combined effect of these forces has put extraordinary pressure on small-scale and poor farmers, forcing them to search for off-site income generating activities. This has resulted in large-scale migratory processes that have effectively expelled millions of peasants from their lands in recent years. In turn, this has weakened the social fabric in rural communities and weakened or even destroyed their capacity for environmental stewardship. Finally, this migration also helped maintain low wages in rural areas. Shouldn't the green economy report consider this an important theme for consideration?

The linkages between poverty eradication and UNEP's "Green Economy" become less clear in the other sections of the UNEP report. The analysis of the manufacturing industry does not mention the forces that have dragged wages in the world's industrial system in a race to the bottom. This process of social dumping that was unleashed by globalization should be one of the first items to be considered in a serious analysis about sustainable development.

UNEP's green economy report does not contain a meaningful discussion on wages and workers' compensation. These have stagnated over the past couple of decades and this is at the centre not only of greater inequality, but also at the heart of the current global crisis because stagnant wages forced households down the road of increased indebtedness. If these trends continue, the generation of more poverty will continue and will most likely cancel out any gains that may be achieved in other sectors or branches of economic activity.

UNEP's green economy initiative is linked to the International Labour Organization's project on "decent jobs". But the ILO component also lacks the macroeconomic policy perspective required to set the world economy on the path to sustainability.[11] Although employment creation is one of the key elements of macroeconomic policies, the words monetary policy and fiscal policy simply do not appear in the ILO report. Several studies have documented the fact that in the past decades wages have grown at a substantially slower pace than GDP per capita. In fact,

[11] The ILO report *Green Jobs: Towards Decent Work in a Sustainable, Low Carbon World* is available at www.unep.org/labour_environment/features/greenjobs.asp

many studies talk about the compression of wages in order to analyse this process in which a great number of countries registered a decline in the share of national income that goes to wages as wages lagged well behind productivity increases.

Not paying attention to the evolution of wages and to incomes' policies in general is an especially important omission of the GER because the recovery from the global crisis will be very slow and in many countries, job creation will take a long time. It should be noted that for every year a person remains unemployed, the probability that he or she will remain unemployed and will fall below the poverty line increases. If on top of that current trends in the evolution of wages continue, then inequality and poverty will increase. In the context of the current global crisis, this is particularly worrying because wages tend to fall at faster rates in times of crisis. Recovery will be slower due to this additional factor that weakens aggregate demand. And because the emerging pattern of income distribution will be marked by greater inequality, a green and sustainable recovery will be difficult to attain.

In terms of poverty and environmental stewardship, the panorama that emerges from this picture is disquieting. The Green Economy Report should explicitly adopt the policy objective of redressing existing inequalities in income distribution and of establishing the institutions (such as collective bargaining) that could help revert the negative trends brought about by neoliberalism. Redefining incomes' policies, as well as reorienting taxation in a truly progressive manner, are two priorities over which UNEP keeps silence.

IV.B Finance for a Green Economy

As the Green Economy report tackles the issue of finance, the linkages with neoliberalism become stronger. The section on finance states that he transformation into a green economy will require "substantial financial resources". According to UNEP financial investment, banking and insurance are the major channels of private financing for a green economy. Its green economy report assures us that the resources controlled by the financial services and investment sectors "could potentially be directed towards a green economy". In addition, "the rapid growth and increasingly green orientation of capital markets, the evolution of emerging market instruments such as carbon finance and microfinance" are opening space for financing the transition to a global green economy. UNEP's commitment to the financial sector is confirmed by the list of new markets and instruments to be used in channelling resources for the green economy: green bonds, carbon markets, REDD+, green property as a new class of assets, etc. In the end, all of this promotes the stranglehold of the financial sector on key dimensions of the environment and nature.

But UNEP fails to present a serious analysis of the role of the financial and banking complex in the world economy today. The international financial sector has been at the centre of every important crisis since the Savings and Loans debacle in the final years of the seventies up until the present. The basic characteristics of financial capital are its propensity to be engaged in speculative activities, as well as its volatility. In the context of today's crisis the opacity of operations in the financial sector help explain today the velocity of contagion and the persistence of the freeze of the inter-bank money markets, the uselessness of flexible monetary policy and the duration of the crisis.

Given the dominant features of the financial sector it is truly a most astonishing aspect of the UNEP report to conclude that the transition to a green economy can be financed with resources from the financial sector. It is difficult to claim this sector should be the source of funds to support the transition to a green economy. But the faith that UNEP has on the financial sector dates back to the days when it thought a "Global Green New Deal" was possible. This is what it had to say on the causes of the global financial crisis (UNEP 2009:80):

> "The existing crisis may have more to do with a failure of governance and a lack of transparency rather than a lack of regulation. The financial system is already governed by many regulations and procedures. Most countries have a multitude of agencies supervising every aspect of financial activity – central and private banks, stock exchanges, securities, mortgage lenders and even other public agencies involved in the system".

This viewpoint is in complete contradiction with the need to set the world economy in the trajectory of sustainable development. The chapter on enabling conditions confirms the fact that UNEP believes that the green economy can be attained within the neoliberal model. Its rhetoric about rejecting 'business as usual' scenarios notwithstanding, UNEP's report claims that "the vast majority of the investment that needs to be re-directed to the green economy will need to come from the private financial sector if key sustainable development goals are to be achieved in the necessary time scales". Not a word about imposing taxes on financial transactions. The neoliberal model is not to be touched or modified in its essence.

IV.C Natural Capital

One of the most unfortunate aspects of the Green Economy report is its continuous reference to "natural capital". This is a constant leitmotif in the discourse of UNEP and forms a seamless fusion with the TEEB project (Economics of Ecosystems and Biodiversity) and the Natural Capital Declaration. The emphasis on the financial sector as the purveyor of the needed resources for the transition to a green economy should also be seen as part of this same mindset.

Capital is a social relation, not a thing. But in mainstream economic theory the word capital has been assimilated with all sorts of physical and intangible things. In a strange way, the notion of capital becomes almost meaningless when it is used to depict machines, non-embodied technology, human skills, rivers and biological diversity. As the dictum would say, if everything is capital, then nothing is capital. Yet UNEP, TEEB and the sponsors of the Natural Capital Declaration have no problem in advancing the idea that ecosystems, species and even genes are components of natural capital.

The main problem here is that if machines are capital, and they can be bought and sold, then it follows that ecosystems, species and genes can also be bought and sold in the market. The fact that it is possible to distinguish 'produced capital' from non-human capital does not contradict this. Thus, the notion of natural capital is intimately linked with the idea that all of nature is a commodity. The next step is to

provide for a price determination scheme and for markets well suited to each circumstance.

As we have pointed out, profitability in the real sectors of the world's economy has gone through periods of stagnation or behaved erratically in the past five decades. During this period, monetary creation ex nihilo by private banks and the instruments of financial innovation have generated a massive supply of investible funds. The search for profitable outlets for these investible funds has led to global financial deregulation and the plunder of public assets through massive privatization. It has also led to speculation in commodities and futures markets. The creation of artificial markets for things such as carbon trading is part of this quest for profitability. The notion of natural capital is the latest contribution to opening additional profitability spaces for these investible funds.

Both UNEP's Green Economy report and TEEB embrace the idea that environmental deterioration stems from the fact that there is no proper valuation of nature. According to UNEP this leads to a neglect of "natural capital" and to irrational decisions. The key premise here is that once prices are determined for each component of 'natural capital' environmental deterioration will be stopped or at least slowed down. This is an entirely improper way of framing the analysis of environmental destruction. Nothing in the process of price formation or in the dynamics of price systems will work in this direction.

Rio+20 includes an effort to push forward the so-called "Natural Capital Declaration" (NCD) that is supposed to include a commitment on the part of the financial sector with the principles of sustainable development and a green economy.[12] An analysis of this declaration shows how disingenuous this initiative is.

The NCD states that "financial institutions are an integral part of the economy and society" and "as the engine of global economic growth, the financial sector can provide some of the tools required to support a transition to sustainable development and eradicating poverty by providing loans, equity, insurance and other financial products". This is a self-serving statement because under the stranglehold of financial capital the world economy has been underperforming for decades and is now suffering the worst crisis in eighty years. In addition, under the domination of the financial sector, macroeconomic and sector level policies have resulted in greater inequality and even poverty. Thus, the financial sector is truly in a very uncomfortable position to be making this kind of statement.

The NCD states that natural capital is a part of the global commons and is treated largely as a free good. Thus "governments must act to create a framework regulating and incentivizing the private sector (including the financial sector) to operate responsibly regarding its sustainable use". The sponsors of the NCD seem to think that because natural capital is under the regime of "global commons" it is possible to set the stage for its appropriation. This implies that the notion of "global commons" is synonymous of the *res nullius* property regime of Classical

[12] The declaration is available at http://www.naturalcapitaldeclaration.org.

Roman law. *Res nullius* means that a thing has no owner and, therefore, if a thing is res nullius, anyone can appropriate it. But if a thing is part of the commons, then it is under the regime of *res communis*. And as such, it cannot be the object of private appropriation. This is not what the financial sector is promoting with its declaration.

The notion of natural capital is not an innocent error or misconception. It is part of a discourse that seeks to reduce all of nature to the role of a commodity. Here we endorse the BankTrack statement (available at http://tinyurl.com/cvfrd66):

> "instead of expanding the scope of markets to every domain of nature, creating a true green economy would start from the opposite; reversing the tide of commodification and financialisation, reducing the role of markets and the financial sector, acknowledging the limits of business versus other spheres of life, and recognising the collective responsibility of all people for, and strengthening the democratic control over the worlds' ecological commons. Rather than a Natural Capital Declaration we need more Nature without Capital."

IV.D Modelling

UNEP's Green Economy report is based on a modelling exercise supposed to provide a solid foundation to the claim that investing in the environment will lead to healthy macroeconomic results and help in the eradication of poverty. UNEP relies on the Threshold 21 World model that uses systems dynamics, a methodology that incorporates feedback loops in its simulations. This enables modellers to study complex systems.

The use and abuse of models in economics is old practice. It is true that simulation models can be used to extract interesting insights from the complex behaviour of economic systems. But the quality of these insights depends on the model's assumptions and coverage. Models in applied economics quite frequently ignore the conclusions of serious economic theory for the sake of using flashy mathematical tools to prove their "conclusions". Models are regularly used to impress upon the public the appearance of rigour that is conveyed by mathematical precision. The policy maker that relies on simulation models to obtain "hard numbers" should be fully aware of the limitations of the model he/she selects.

Full Disclosure

There are several things that must be taken into account when using models. The first is that because the modelling exercise typically claims to be scientific and rigorous, the entire model needs to be disclosed, with all of its equations, parameters and results. This allows for anyone to carry out independent runs and tests with the model to confirm, find counterfactuals or disprove the original claims. Without full disclosure, the results presented in UNEP's Green Economy report cannot be considered definitive.

Although the details of the model are not available, information provided in the special chapter on the T21 model already allows us to make several critical comments on this model and on its use in the context of the Green Economy report.

Financial Sector

The model's economic sphere is made up of six sectors: agriculture, fishery, forestry, industry, services and a sector for economic accounts. Thus, the model does not have a financial sector. The banking system, capital flows, financial transactions and the operations of the stock markets, all of that remains outside of the model. Monetary policy and its impact on the behaviour of the model's key variables is also absent.

This poses three serious problems. First, the model ignores one of the most important components of the world economy. The global financial sector dwarfs every other component of the world economy. Financial capital also dominates macroeconomic policy making today. Among other things, this is why sector level policies are disciplined by monetary and fiscal policy priorities that cater to the interests of financial capital. For these reasons an alert and comprehensive discussion about the world economy today cannot avoid making reference to the global financial sector.

Second, by excluding the financial sector, the model leaves out financial instability, volatility and uncertainty. These are essential features of modern finance and they are at the origin of important crises in developing and mature capitalist economies. The T 21 model may perform certain simulations without major upheavals, but the user of the model cannot confidently conclude this is a faithful reproduction of real world economics without incorporating the financial sector in the model's structure.

Third, there is a serious disconnect between the claim that the vast majority of the investment for a transition to a green economy will have to come from the private financial sector and the complete absence of the financial sector from the simulation model used by UNEP.

T21 and Economic Crisis

The T 21 model has no room for economic crises. The model does not appear to be able to integrate problems related to the collapse of aggregate demand or of uncertainty on investment decisions. The T 21 model does not tolerate the presence of something like a "macroeconomic problem".

In addition, at the sector or branch levels, the T 21 model is unable to replicate the presence of disequilibrium situations. The module on relative prices may allow for the calculation of some numerical coefficients the authors of the model call prices, but it is totally incapable of describing the price formation process that is supposed to rule in a market economy. In fact, this module is derived from computable general equilibrium models. The grave limitations of these models are by now well known. One of them is that CGE models hide the fact that in general

markets are unstable. The use of systems dynamics does not change the fact that CGE models are not a good approximation to reality.

Technology and Production

The use of Cobb-Douglas production functions has serious limitations, both in terms of replicating technological choice and in terms of describing production processes. Even within the limited scope of UNEP's notion of a green economy the use of Cobb-Douglas production functions leaves many unanswered questions. The process of systemic technical change that is required to ensure the transition to a green economy is likely to involve significant turmoil and will shock existing economic structures. The use of Cobb-Douglas production functions is totally inadequate to examine the process of technical change.

Cobb-Douglas production functions are instruments that were originally designed to examine income distribution. They were derived initially as part of the analysis of marginal productivity theory, a construct that attempted to explain income distribution as the result of the contribution of each factor of production to total output. The theoretical foundations of this were shown to be wrong as a result of the Cambridge controversies over capital theory in the seventies. But the relevant point here is that production functions are not adequate representations of productive processes.

Using Cobb-Douglas functions to describe the transformation of the world economy requires the performance of several leaps of faith. There is a serious controversy in the literature concerning the apparent good fit in estimates of Cobb Douglas production functions. For example, Simon (1979) sees in the goodness of fit of the Cobb-Douglas function an statistical artifact in that the data being fit correspond to the income identity (the accounting relation equating valkue of output to the sum of factor costs). Shaikh (1990, 2005) also showed that the Cobb-Douglas function is simply an anti-logarithmic transformation of the income identity under certain assumption. Until UNEP discloses the entire T 21 model the questions posed by these considerations and debates will remain unanswered. UNEP's conclusions about the transition to a green economy will also have to be put on hold.

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