Rio+20: the Dark Clouds of Disappointment

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Introduction
Two weeks before the start of the UN Conference on Sustainable Development (UNCSD) the Secretariat released the draft of the outcome document entitled The Future We Want. Although intense negotiations were taking place to improve the text, the serious limitations and flaws of the document were already visible. At the end of the conference it became clear to everyone that the outcome document was not up to the challenges that defy humanity today. The main features of the world economy, and in particular, the global financial and economic crisis, were two critical set of items that were absent from the conference’s agenda, as if they were of no consequence to a discussion on global sustainability. The people of the world and the global environment deserve something better.

This TEMTI background document provides reference material for an objective assessment of the outcome of the Rio+20 conference. The structure of this document is as follows. The first section focuses on UNCSD’s outcome document and its shortcomings. The second section presents a critique of the Green Economy report prepared by UNEP and discussed profusely in Rio+20. We wrap up our line of reasoning in the concluding remarks.

This paper draws on the analysis presented by the author at the Delhi Ministerial Dialogue on the “Green Economy and Inclusive Growth” (3-4 October 2011), as well as on his on-line submission to the agenda of UNCSD. It also draws heavily from a paper circulated at the end of Rio+20.

I. UNCSD: The Outcome Document
The main outcome of Rio+20 was a document entitled The Future We Want (available at www.uncsd2012.org). Its fifty-three pages are unevenly divided between the declaratory sections reaffirming the commitments to the goals of sustainable development and the section devoted to the green economy. It is a document that reiterates the pledges that were made
twenty years ago, during the first UNCED 1992. This is the main positive outcome of the conference: twenty years after UNCED today’s participants declare they remain dedicated to the goals and objectives that were first set forth in 1992.

But that positive result is weakened by the fact that the new outcome document fails to assess the obstacles that block the path to sustainable development. It also fails to analyze the reasons that explain the failure to reach the objectives set forth twenty years ago. From this perspective, the only value of The Future We Want document is its declaratory power.

UNCSD’s outcome document is a very weak contribution to the discussion of the problems surrounding sustainable development today. Consider the following.

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. The derivatives market, the epicentre of this huge catastrophe, remains largely unregulated and its instability can lead rapidly to a new collapse that would make 2008 look like a dress rehearsal. 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, a sequel of bankruptcies and little enthusiasm for new investment.

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. Today’s collapse may very well evolve into a major currency crisis with the possible demise of the euro, an event that will have extremely negative effects for the world economy.

It is important to note that today’s 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 that considers both price stability and fiscal balanced budgets as the key priorities to attain growth, jobs and equilibrium. In fact, the neoliberal model has not achieved these goals. On the contrary, it delivered mediocre growth rates, a systematic deterioration in the quality of jobs, intense inequality 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.

But this is the 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. To insist in conserving this model as a means to attain the goal of sustainable development is senseless.

It is also essential to understand that today’s crisis was not caused by sector level phenomena, that it is not a simple case of market failure (e.g., in exuberant unregulated financial markets) but a macroeconomic crisis (Palley, 2009). Nor was this crisis 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.

In the midst of the global economic and financial crisis, the recipes and policy responses of neoliberalism appear to be useless and even counterproductive. The austerity measures imposed on Greece, Spain, Italy, Portugal and Ireland are clear examples of this as they force these countries into deeper recessions. Clearly, alternative priorities, with new institutional frameworks and novel regulatory regimes will be required to get out of this predicament. All of the points raised in these lines have significant implications for poverty alleviation, allocation of resources for environmental stewardship and, in general, for the type of systemic
technical change that is required for greater efficiency in the use of natural resources and for the transition to a low-carbon economies. In other terms, while reaffirming the political commitment to sustainability is important, not paying attention to these issues is tantamount to staying behind in the sphere of good wishes.

An important example pertains the Millennium Development Goals (MDGs). The document reaffirms the importance and relevance of these objectives. It recognizes the uneven progress in attaining these objectives, but presents no analysis whatsoever that attempts to explain why we find ourselves in the current situation. Clearly, a serious discussion concerning the obstacles in attaining the MDGs is needed. It is surprising to see that these objectives were set forth without any reference to the macroeconomic policy framework that would be required to achieve them (Nadal 2011). The neoliberal set of policy priorities, especially the paramount objective of price stability, is not the best way to approach growth and poverty eradication, unless one believes that price stability in and by itself brings about economic expansion and improves income distribution. Clearly this has not been the case for the past two decades. But, in addition, today’s global crisis will significantly hamper any further progress in achieving the MDGs. UNCSĐ’s agenda should have included a key component to consider this.

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, over exploitation 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 gases 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.

The problems encountered today to achieve something resembling sustainable development are of a highly complex nature. Yet, at the world’s most important conference on sustainability we found a very superficial treatment to the difficult problems faced by humankind. For example, one of the most important sections in this document concerns “Means of Implementation”. Here the document starts with the issue of finance and makes an appeal to all countries to set sustainable development as the key priority in the allocation of resources. It then proceeds to discuss the question of official development assistance (ODA).

*The Future We Want* calls for developed countries to honour their commitments in the realm of ODA. This means they should achieve a target of 0.7% of GNP for ODA to developing countries by 2015. But, it fails to observe that in 2011 aid from the Development Assistance Committee (DAC) of OECD came to $133.5 billion USD or barely 0.31% of their gross national income. Out of DAC’s 23 members, only four comply with the commitment of channelling more than 0.7% of GDP to development assistance. The global crisis will not help these countries meet their commitments.
In the context of a dialogue on sustainable development a hard look at the historical trends that have shaped ODA would be advisable. It appears that official development assistance has changed significantly since the aftermath of WWII and the period of de-colonization, to the days of the Cold War and later to the decades of the eighties and nineties. In the eighties, the debt crisis and structural adjustment had a very important effect on ODA, as the flow of resources began to be conditioned to the enactment of structural reforms in many developing countries. In the nineties, the decline in ODA resources was replaced by increased participation from the private sector, but many of the new resources (especially short term portfolio investments) can hardly be described as instruments for development. None of these issues is mentioned or analyzed in the UNCSD outcome document.

When it comes to debt relief, the document *The Future We Want* simply goes in the wrong direction and erroneously states there has been significant progress in this field. 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 its impact on fiscal policy. In spite of this, a serious debate concerning the debt burden has been absent from negotiations on the MDGs, the Green Economy Report or climate change policy.\(^1\)\(^2\)

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

\(^1\) History of developing countries’ debt problems goes back to the period of 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.

\(^2\) 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).
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.
To summarize, the UN Conference on Sustainable Development left out of its agenda the most pressing problems of the moment. The final version of the Rio+20 *The Future We Want* 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.³

*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 outcome 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 Future We Want* discusses ‘decent jobs’ but fails to examine the grave problems of stagnant wages and of high unemployment rates. In fact, the word “wages” is never mentioned in the document.

*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.

**II. The Green Economy**

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³ 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.
UNEP’s Green Economy initiative was 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.*

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 macroeconomic and sector level policies that characterize 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. The so-called Threshold 21 model of the Millennium Institute 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 and other conclusions.

II.A The Green Economy and Neoliberalism

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.

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4 The document is available at: www.unep.org/greeneconomy.
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 at 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. 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, 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

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5 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
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.

II.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. 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.

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. The size of the derivatives market alone is estimated at 1.2 quadrillion USD, a magnitude twenty times bigger than the world economy. 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. UNEP should have at least opened a discussion on controls on capital flows, taxation of financial transactions and reforming macroeconomic policies in order to respond to the objectives of sustainability. In addition, the expansion of liquidity and the size of unregulated markets (like the derivatives market) need to be taken into account because these feed directly into the financial domination of nature as its elements start to be treated just as financial assets.

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. For the enthusiasts of the green economy initiative, the neoliberal model is not to be touched or modified in its essence.

II.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.\(^6\) 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 \textit{res nullius} property regime of Classical Roman law. \textit{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 \textit{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):

\begin{quote}
“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
\end{quote}

\(^6\) The declaration is available at http://www.naturalcapitaldeclaration.org.
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 world's ecological commons. Rather than a Natural Capital Declaration we need more Nature without Capital.”

II.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 Crises*
Despite its alleged complex systems approach, the T 21 model fails to capture key economic systems dynamics that are associated with the generation of financial and 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 or the demand for money. The T21 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 (see Taylor and von Arnim 2006, Ackerman and Gallagher 2004, Stanford 2003). 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 T21 model makes extensive use of a particular type of mathematical functions (the Cobb-Douglas function) to relate inputs to outputs in all its sector-level sub-models. 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 involves a leap 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 a statistical artifact in that the data being fit correspond to the income identity (the accounting relation equating value 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 T21 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.

**Concluding Remarks**

The UN Conference on Sustainable Development was a watershed opportunity to reorient the trajectory of the world’s economic system. This was a juncture to assess the performance of past economic recipes, as well as of international environmental agreements (including those that predate 1992) and, in general, of the effects of neoliberal globalization. One very important aspect of the state of the world today is, of course, the global economic and financial crisis. Rio+20 was an occasion to discuss this crisis as it is closely related to social inequality, a major stumbling block for sustainability. The crisis will have a durable impact on the ability of nations to allocate sufficient resources for environmental stewardship, so it was clearly a subject that could not be overlooked in Rio+20.

Yet, the outcome document *The Future We Want* and UNEP’s report *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* fail to seriously acknowledge the problems that afflict today’s global economy. Nowhere in those documents is there room for an objective assessment of the causes and gravity of today’s economic crisis. This is probably the most glaring omission in the agenda and outcome of Rio+20.
The Green Economy Initiative designed by UNEP deserves special attention. It concentrates on technological issues and ignores the most important aspects of today’s economies, both at the national and international levels. It is true that more efficient technologies are needed, but it is also a fact that economic transformation cannot reside exclusively on technical solutions.

Economics is about social relations, not about technology or physical objects. Those social relations are associated with numerical magnitudes such as wages, profits and prices. They also pertain to monetary variables, such as the investment and consumption functions, as well as on the demand for liquidity. These social relations are also reflected in the actions of economic agents, from the smallest subsistence farmers, to the largest corporations, and these actions have important implications for livelihoods and the environment. Although the discourse on the green economy sometimes blends in some rhetoric about reducing poverty, technology remains the main focus, it never explains how poverty and inequality are going to be overcome. It’s as if a monumental trickle-down effect would automatically take place if green technologies are adopted in the key sector’s of UNEP’s world. Clearly, this approach leaves several thorny economic policy issues aside. It entirely misses the point about economics and sustainability.

UNEP’s assertion that the vast majority of the investment needed for a transition to a green economy will have to come from the private financial sector involves a distorted vision of how the world economy works today. The private financial sector was the epicentre of the gravest crisis in eight decades, a catastrophe that was still unfolding, even as the delegates were exchanging views in Rio+20. The sequel of unemployment, poverty, people losing their homes and jobs, is an ugly scar on the world economy. The instability of the global derivatives market, estimated at more than 1.4 quadrillion dollars (more than twenty times the size of the world’s economy) continues to be a major threat, as the losses of JP Morgan in May-June of this year reveal. And yet, UNEP nonchalantly advances the absurd proposition that it is this sector that will drive us into the green economy. And, as if this were not enough, the model used by UNEP to provide quantitative support to its green economy programme has no room for the financial sector.
There is no doubt: things like energy efficiency and truly sustainable production technologies in which recycling, reuse and reduced inputs per unit of output are crucial. But unless we integrate economic relations in the analysis of sustainability, and this includes monetary and financial relations, we will not be able to understand the economic forces driving environmental destruction. This means we will not be able to redefine and implement the economic policies that are required to harness and control these forces. Living under their power will not take us in a trajectory of sustainable development. It is obvious that we need to follow a more rigorous approach to sustainability, one that blends realistic alternatives with objective analysis. This is the only path to clear the dark clouds of disappointment.


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