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Green New Deal: A Green Way out of the Crisis?

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ABSTRACT
The multi-dimensional nature of the current global crisis requires a holistic approach in addressing economic, social and ecological problems. Following the crisis, several organizations started to publish reports on a concept called Green New Deal (GND) with reference to the New Deal policies of the 1930s in the USA. Since then, the concept has gained increasing popularity among the public. On the other hand, it fuelled a heated discussion between its supporters and ecosocialists. The aim of this paper is to highlight the points at which GND supporters and ecosocialists converge and diverge, and discuss critically the transformative capacity of different GND proposals. We conclude that GND policies can help to set the stage for the transformation long sought by the ecosocialist agenda, and hence from this perspective, these two approaches can be seen as complementary rather than substitutes.

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Introduction

In 2008, THE WORLD ECONOMY WAS CONFRONTED WITH A GLOBAL CRISIS. FROM THE VERY BEGINNING, MANY SCHOLARS resembled it to the Great Depression of 1929, which proved to be the case in the course of events that follow. During the Great Depression, world gross national product fell dramatically as unemployment soared to unprecedented levels in many countries. In the aftermath of the 2008 crisis, many countries were confronted with similar economic and social problems. But the world faced another problem in 2008 that was absent in 1929, namely the ecological crisis, which is represented by food and energy insecurities and climate change. What differentiated this crisis from its predecessors were its multi-dimensional characteristics, and hence it is often called a "triple crisis" (Lipietz, 2011). With the outbreak of the crisis, many governments around the globe found themselves obliged to bail-out the private sector, and to intervene in the economy more rigorously. At the same time, inspired from Roosevelt's New Deal (ND) programme of the 1930s, a new concept, the Green New Deal (GND), entered our lives. The GND aims to solve the triple crisis simultaneously by replacing the fossil-fuel-based economy with one based on renewable energy with the help of both public and private investments, often termed green investments. As in the ND, GND proposals underline the importance of regulatory frameworks. Several multilateral organizations such as the United Nations Environment Program (UNEP) and International Labor Organization (ILO), and non-governmental organizations such as the New Economic Foundation (NEF) and Green European Foundation (GEF) have published reports on GND and on related topics such as green investments and jobs. It is too early to claim that GND policies have found their places in economic policy-making, but nevertheless they have given a green colour to economic stabilization

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programmes of countries such as South Korea, China and the USA (Robins *et al.*, 2009). The BlueGreen Alliance in the US,[1] One Million Climate Jobs in the UK[2] and the Global Green New Deal (Barbier, 2010) are examples of GND initiatives.

No matter how limited in spirit and implementation, the green turn in the existing capitalist economic system has revitalized the century-old debate on the left: reform versus revolution (Luxemburg, 1900),[3] yet in a different setting. The original debate around the beginning of the 20th century was between orthodox Marxists, or revolutionaries, and revisionists or reformists. The former group believed that socialism can only be achieved through the self-emancipation of the working class, whereas the latter group denied the necessity of revolution, and argued that reforms linked to democratic rights and social welfare programmes were likely to pave the way to socialism. The latter believe that this can be achieved within the parliamentary democratic system. Today, the same debate has re-emerged in a slightly different form between ecosocialists and GND supporters.

Publication of the famous report "The Limits to Growth" (Meadows *et al.*, 1972) and the dismal environmental performance of Soviet-type central-plan economies broadened gaps within socialist thinkers in 1970s and led to the rise of a movement called as ecosocialism, whose roots can be traced back as far as the Russian Revolution of 1917. Following the Russian Revolution, several scientists (e.g. Aleksander Aleksandrovich Bogdanov) started to study ecological issues, in particular to provide an understanding of how thermodynamics and energetics are related to ecology. Bogdanov discussed humans as part of nature, and their capacity to obtain and process usable energy (Gare, 1996). These themes were debated in Proletarian Cultural and Educational Organizations (Proletkul't)[4] in 1918. However, Stalin preferred industrial growth policies to gain advantage over Western Europe and neutralized the assumptions of the Bolshevik leaders such as Bogdanov.[5] Therefore, Marxist and socialist analysis of ecology and the environment decreased.

In 1993, David Pepper published his work, *Ecosocialism: From Deep Ecology to Social Justice*, and asserted that Marxism, anarchism or deep ecology may have different solutions to the same problems but in fact these different approaches could be combined together under the name ecosocialism (Pepper, 1993, p. 2). Kovel (2007) defines ecosocialism as socialism that is ecologically rational. The ecosocialist manifesto launched by Joel Kovel and Micheal Löwy in 2001 presents it as an alternative to the capitalist world order and states that "the crises of ecology and those of societal breakdown are profoundly interrelated and should be seen as different manifestations of the same structural forces" (Kovel and Löwy, 2001, p. 1).

One of the main dividing lines between GND supporters and ecosocialists is the question of the actor. Who is capable of solving the triple crisis? GND supporters argue that the private sector with support of the state, in terms of public investments and incentives, can play a role in transforming the unsustainable economic system (Schepelmann *et al.*, 2009; Barbier, 2010), whereas ecosocialists, broadly speaking, dismiss the notion of GND as "green capitalism", being a new form of capitalism to be overthrown by civil rights, feminist and peace movements (Pepper, 1993). The second important element of the rift is the question of the mechanism and tools. GND supporters argue that the market-system, if regulated "adequately", can provide solutions, whereas ecosocialists are mainly against market-based strategies for overcoming the triple crisis (Löwy, 2002). The aim of this paper is to highlight the points at which GND supporters and ecosocialists converge and diverge, and discuss critically the transformative capacity of different GND proposals.

In the next section we present and discuss the dimensions of the triple crisis: economic, social and ecological. After demonstrating the links among these dimensions, we argue why conventional demand-side economic policies cannot be a part of the solution but rather the problem themselves. We then briefly summarize the main elements of ND programmes of the 1930s to lay the ground for GND. We outline and analyse the main elements of GND in the light of the criticisms raised by ecosocialists. The economic recovery packages offered by several countries are then analysed.

[1]http://www.bluegreenalliance.org
[2]http://www.climate-change-jobs.org
[3]See http://www.marxists.org/archive/luxemburg/1900/reform-revolution/index.htm
[4]See, for example, Mally (1990) for more details.
[5]See, fore example, Cohen (1980) for more details.

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Dimensions of the Triple Crisis

Today the world economy is trying to recover from the negative effects of the current financial crisis begun in 2008. Collapse of the US subprime mortgage bubble fuelled by lax monetary policies of the 2000s led to a dramatic credit crunch and brought many financial and real-estate firms to the point of bankruptcy.

US subprime mortgages provided an opportunity for borrowers with poor credit histories and weak income documentation to gain loans with incentives such as easy initial terms and the promise of a long-term trend of rising housing prices. As a result, the share of subprime mortgages in the overall mortgage market increased from less than 10 per cent in 2001 to almost 21 per cent in 2006 (Joint Center for Housing Studies of Harvard University, 2008). The problems were amplified by the advent of financial 'securitization'. Traditionally, banks originate a loan to the borrower (homeowner) and retain the credit (default) risk. Securitization, however, led the banks to distribute credit risk to investors through financial tools known as mortgage-based securities (MBSs) and collateralized debt obligations (CDOs). It enables banks to replenish their funds, which are then used to issue additional loans, as more loans equate to more transaction fees. These MBSs are valued according to mortgage payments and house prices. So, when house prices started to decline most of the financial institutions that had borrowed from subprime MBSs started to report significant losses. Thereafter, defaults and losses on other loan types also began to rise. In October 2008, the 10-City and 20-City Composites Indices posted annual declines of 19.1 and 18.0 per cent, respectively (S&P/Case-Shiller U.S. Home Prices Indices, 2009) The credit crisis forced households to increase their savings. Significant losses in the financial markets and bursting of the mortgage bubble caused consumers to spend less, thus leading to global financial panic à la Kindleberger and Aliber (2005).

Worried about the negative spillover effect of the financial instability the US Government bailed out key financial institutions such as the American International Group (AIG), the largest US insurance company at the time. These actions put enormous strain on the federal government budget. In the US alone, as Bloomberg (2009) indicated, bailing out these institutions placed a bill of $9.7 trillion on the shoulders of US taxpayers.

The US economic crisis spread rapidly to other parts of the world thanks to intensified financial and trade links. Global economic growth was 5.2 per cent in 2007, but this dropped to 0.6 per cent in 2009. The forecast for 2011 global economic growth is only 4.3 per cent, still less than the figure before the financial crisis (IMF, 2009, p. 155).

The brand new dimension associated with the triple crisis is the ecological crisis. One can define this in terms of the increasing pace of biodiversity loss, the extinction of species due to climate change, global warming due to high levels of greenhouse gas (GHG) emissions, and air, soil and water pollution. Climate change is the primary challenge facing humanity today. The Stern Review on the Economics of Climate Change (2007) indicates that average global temperature increases of only 1–2°C (above pre-industrial levels) could commit 15–40 per cent of species to extinction. According to the review, global temperature rise will lead to melting glaciers, declining crop yields, rising sea levels, and malnutrition and heat stress.

According to the World Resource Institute's total GHG emissions (CO_2) data, developed countries appear to be the major culprits for high levels of GHG emissions to the atmosphere. As seen in Table 1, 56 per cent of the world's CO_2 emissions were shared by China, the USA and the European Union (27) in 2007.

Expectedly, the economic crisis has aggravated the social problems in the form of increasing poverty, income inequality and unemployment. The ILO (2011) reports that global unemployment was 6.2 per cent (preliminary estimates) in 2010 as compared with 6.3 per cent in 2009, but still higher than the rate of 5.6 per cent in 2007. UNESCO (2009) reports that the reduced growth in 2009 due to the global financial crisis is likely to affect 390 million in sub-Saharan Africa living in extreme poverty. According to the study, their income fell by $18 billion, corresponding to a 20 per cent drop of the per-capita income of an average person living in Africa.

Increased food/commodities/energy prices and unemployment rates increase the vulnerability of the lower strata of societies in many countries. At a global level, Barbier (2010) reports that the demand for food will continue to increase towards 2050 as a result of the population growing by an additional 2.7 billion. Increasing food prices due to rising demands for food can be expected to lead to higher rates of infant and child mortality because of malnutrition and poverty. The International Energy Agency (2008) predicts that the price of oil may reach USD200 per barrel by 2030 due to rapidly increasing demand, in contrast to "increasingly constrained supply". Due to high crude oil prices, reliance on crops as biofuels is rising. Arable lands are thus increasingly being

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	Country/region	Percentage of total
1	China	22.70
2	USA	19.73
3	European Union (27)	13.76
4	Russian Federation	5.51
5	India	4.78
6	Japan	4.30
7	Germany	2.77
8	Canada	1.98
9	UK	1.80
10	Korea (South)	1.75

Table 1. Total GHG emissions in 2007 (CO_2) (excludes land-use change)
Source: Climate Analysis Indicators Tool (CAIT) Version 8.0 (World Resources Institute, 2011).

devoted to biofuel crops, posing another threat to food security.[6] The recent financial crisis has increased social vulnerabilities. As briefly indicated above, the adverse impact of the current financial crisis on vulnerable groups can be observed in rising unemployment rates, declining economic growth rates, and rising food and energy prices.

The accumulating scientific evidence on the effect of economic activities on the environment does not paint an optimist picture either. Ewing *et al.* (2010) claims that even by the mid 1970s human demand has led to an environmental degradation that surpasses the Earth's ecological capacity to regenerate, and this "overshooting" has been growing since. It is becoming increasingly clear that the mainstream economic growth paradigm is not sustainable, either economically, socially or ecologically (Jackson, 2009; Schneider *et al.*, 2010). However, following the 2008 crisis, many governments were quick in their attempt to revive their economies by pursuing conventional demand-side stabilization policies. It is highly questionable whether these policies would be able to solve the triple crisis, if not worsen them. The Stern Review of 2007 estimates that the total cost of 'business as usual' climate change over the next two decades equates to an average welfare loss equivalent to at least 5 per cent of the value of global per-capita consumption, now and forever. Also, it is predicted that stabilizing at or below 550 p.p.m. CO_2 equivalent would cost, on average, around 2 per cent annual global gross domestic product (GDP) by 2050.

Acknowledging that today's problems are far more complex than those of the 1930s, several institutions, on the international as well as national level, published reports involving policies to address economic, social and ecological problems simultaneously. Inspired by the ND policies of the 1930s, this policy set is known as the GND. Despite their differences in diagnosing the roots of the crisis, these reports (i.e. New Economics Foundation, 2008; Pollin *et al.*, 2008; Schepelmann *et al.*, 2009; Barbier, 2010) nevertheles, share many common points. The GND aims to ensure intra- and inter-generational prosperity. This objective is based on reconciling lifestyles with the physical limits of the world and reducing inequalities within and between societies.

In the next section we provide a brief review of the historical background that helped to shape the GND concept, and then analyse GND policies in depth.

From New Deal to Green New Deal

The historical roots of the GND go back to the 1930s when US President Franklin D. Roosevelt introduced a set of policies, known as the New Deal, in response to the Great Depression. Belief regarding self-regulating markets and viewing the crisis as a process of creative destruction has backfired following the unprecedented social and economic consequences in the years following the 1929 crisis. Yet, economists such as Keynes rejected the idea of self-regulating markets. His earlier works emphasized the importance of the public sector in reviving the economy and inspired many, including Roosevelt, in shaping his ND policies. Keynes's famous book entitled the

[6]The US Department of Agriculture (USDA) (2011) reports that the use of corn for biofuels in the United States has increased from 31 per cent of total corn output in 2008/9 to a projected 40 per cent in 2010/11.

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General Theory of Employment, Interest and Money, published in 1936, advocated the use of fiscal and monetary measures to mitigate the adverse effects of economic recessions and depressions (Peterson, 1977).

ND programmes rested on three pillars: relief, recovery and reform. By establishing new state agencies, and modifying existing ones (such as the FERA – Federal Emergency Relief Administration), government aimed to provide urgent relief to the unemployed and poor. Government-led large infrastructure investments (i.e. dam construction projects of the Tennessee Valley Authority) helped the economy to recover to normal levels. And, finally, it included reforms in several areas, most notably the financial system (i.e. Glass–Steagall Act), to prevent a similar crises in the future. The US government intervened heavily in the banking, transportation, construction and farming industries, and regulated the financial and labour markets extensively. The Glass–Steagall Act of 1933 regulated the financial sector by separating commercial and investment banking activities, which used to be conducted under the same institutions, with the aim to curb speculative actions. Regarding the labour market, several pieces of legislation were introduced, including the National Labor Relations Act of 1935 (also known as the Wagner Act), the Social Security Act of 1935 and the Fair Labor Standards Act of 1938. To increase employment the Works Progress Administration's relief programme was introduced in 1935. New institutions were developed, such as the United States Housing Authority and Farm Security Administration in 1937. In agriculture, the Agricultural Adjustment Act of 1938 aimed to address the problems in the agricultural sector.

The objective of these measures and regulations was to get the US economy on its feet again. And it proved to be extremely successful. However, some studies (e.g. Foster and Magdoff, 2009, p. 22) have questioned the efficacy of ND programmes by claiming that it was not the civilian government spending in ND which overcame the Great Depression but rather an expansion of military spending in preparation for the Second World War. ND programmes focused mainly on the United States' economic and social problems in the era of the Great Depression. Yet, they had no concern over the environmental impact of stimulus plans and regulations. Soon, the adverse effects of the large infrastructure projects started to be felt by the public. Kovel (2007) suggests that the US environmental movement was initiated in the 1950s and 1960s as a reaction to the negative environmental consequences of ND-type policies. Similarly, rapid industrialization during the 1960s, with the help of import-substitution policies in developing as well as developed countries, led to an ever-increasing pressure on nature, and paved the way for the ecological crisis facing us today. It is clear that ND-type policies, which helped to revive the economies in the 1930s, cannot solve but only aggravate today's problems. Undoubtedly, today's crisis requires urgent action from governments as was the case in 1930s, but these actions have to address ecological problems as well. A New Deal is required but in order to be effective and sustainable, it has to be green (Lipietz, 2011, p. 2). The following section will present the components of the GND.

Components of the Green New Deal

Barbier (2010) argues that today's triple crisis demands government leadership on a global scale and one that constitutes a comprehensive environmental vision. In this sense, a global GND can be thought of as a manifestation of a leadership trying to address three major objectives. The first is to represent a common desire to restore to health a disrupted financial system and an economy in recession which has led to severe job losses. The second objective is to ensure that the "post-crisis" economy follows a sustainable model and does not continue to add to the two most significant risks faced by society: ecological scarcity and climate instability. Finally, the third objective suggests inclusive growth, achievement of the Millennium Development Goals (MDGs) and an end to extreme poverty by 2015.

To achieve these objectives, the global GND identified four key components. The first is to reduce carbon dependency of the world economy to control global average temperature increase. The second objective is to reduce ecological scarcity and poverty by improving the sustainability of primary production for creating sustainable resource-dependent economies. The third component is to eliminate the challenges, such as "capital gap" and "skills and technological gap", faced by developing countries.[7] The last component is the national actions necessary for the

[7]For example, the global GND initiative proposes a new trade and financial mechanism to balance the capital gap in private and public financial investments (Barbier, 2010).

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implementation of global GND, i.e. that each country should spend at least 1 per cent of its GDP within a 2-year period on reducing carbon dependency, and increasing access to clean water and sanitation.

In line with the objectives and key components stated above, GND reports (New Economics Foundation, 2008; Barbier, 2010; Kapoor and Oksnes, 2011) indicate the key industries of a GND as energy, transportation, construction and basic materials. The Heinrich Boell Foundation (2009) provides a list of core elements of a GND. The top item on the list is building a green public infrastructure via smart grid technologies, green transportation through investing in rail, public transportation and electric cars, and also establishing recycling markets. The second item is termed leapfrogging opportunities. These opportunities can be seized by implementing green technology, improving efficiency and restructuring management practices. The third element calls for a green revolution in digital infrastructures to help reduce environmental impact. A rather broad, but extremely important element emphasizes the need for restructuring of prices and markets to promote a green economy.

As in the ND, creating jobs is also a priority of the GND. But what kinds of jobs are needed? The World Watch Institute (2008, p. 3) describes green jobs as "work in agricultural, manufacturing, research and development (R&D), administrative, and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high efficiency strategies; de-carbonize the economy; and minimize or altogether avoid the generation of all forms of waste and pollution." According to the definition above, a job is not green if it is not accompanied by decent working conditions. For example, a job in a renewable energy sector without occupational safety cannot be considered as green. Rather, the ideal green workplace should provide occupational health and safety, adequate wages, job security, gender equality and workers' rights.

To achieve sustainable green employment, the World Watch Institute (2008) proposes that the traditional industry and sector definitions may be forced to change so as to achieve low-carbon emissions and decent work place conditions. The creation of green and decent jobs through green investment is an important part of the green recovery. The current global financial crisis and ongoing threats of energy insecurity and climate change have forced governments to stimulate green investments particularly in clean energy sector. In 2009, the World Economic Forum (WEF) published a report about green investment opportunities in smart grid architecture, energy storage systems, carbon capture and storage systems. The report lists "eight emerging large scale clean energy sectors": onshore/offshore wind, solar photovoltaic, solar thermal electricity generation, cellulosic and next-generation biofuels, sugar-based ethanol and geothermal power. For investing in these clean energy systems, the WEF (2009) estimates that $500 billion per year of financing is required by 2020 to limit global warming to 2 °C, yet analysis reveals that only a half of the financing target has been achieved so far.

Along with renewable energy investments, transportation has been viewed as another key sector. To reduce the reliance on motor vehicles which use fossil fuels, green transport investments are advocated by GND supporters. The most important investment type that the GND proposes is to invest in "Nature's infrastructure" with an aim to protect the ecosystem. Along with government investments, the GND proposes carbon markets, wetland banks, water banks and conservation banks to protect biodiversity and ecosystems (Schepelmann *et al.*, 2009, p. 14). It can be argued that the GND represents yet another exit strategy of the mainstream capitalist system to overcome the crisis. It is a reformist proposal seeking to transform the economy within the system by making it greener. Given its reformist agenda, the GND has attracted criticism mainly from the ecosocialist school of thought, which will be reviewed in the following section.

Ecosocialists' Views on the GND

There is little dispute on the unsustainable nature of the conventional economic-growth paradigm between ecosocialists and GND supporters. Both approaches are in a consensus that the current crisis has economic, social and ecological dimensions. Also, both groups recognize the threats posed to vulnerable groups by rapid environmental degradation and poorly regulated economic expansion. And they both highlight the need for greater coordination on matters of safety and emergency for responding to the triple crisis.

Yet, GND supporters and ecosocialists disagree on the question of treatment, and on the actor of transformation. Ecosocialists are quite critical of the GND concept. First, they tend to view the GND as "green capitalism", and for

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them, profit-seeking and societal/environmental goals cannot be aligned within the same concept (Sarkar, 1999; Smith, 2011). Hence, for Smith (2011, p. 112) the only real solution is

> "collective democratic control over the economy to prioritize the needs of society and the environment. And they require national and international economic planning to re-organize the economy and redeploy labor and resources to these ends. I conclude, therefore, that if humanity is to save itself, we have no choice but to overthrow capitalism and replace it with a democratically planned socialist economy."

Yet, there appears to be no strategy to achieve this goal (Schwartzman, 2011). This brings us to the question of tools and actors. Who is going to transform the system and by using what kind of tools? As mentioned above, GND supporters argue for a transformation within the existing capitalist system. The actors of transformation range from ordinary individual to private sector CEOs and from municipalities to central government officials with existing market-based instruments at hand. On the ecosocialist side, Pepper (1993) analysed several potential agents and actors that could transform the system. According to classical socialist view, the proletariat should be the ideal actor for the transformation. But Pepper (1993) argues that they might have a false consciousness or "cognitive dissonance" linked to the fact that "the cult of the individual began to displace that of the collective in politics, destroying the working class's sense of itself and its own interests" (Sennett, 1978, p. 237). In this sense, other than the proletarian movement, there are also new groups, including the green, feminist, civil rights and peace movements. These new movements could raise awareness not only regarding focus on the control of the means of production but also to deal with consumption (Pepper, 1993, p. 136). The ecosocialist view rejects market-based mechanisms such as the "Cap and Trade" system and/or "Clean Development Mechanisms". Angus *et al.* (2009) argues that under the control of these mechanisms, capitalist interest groups can use carbon dioxide as a commodity, which explains the critical stance of ecosocialists against multilateral agreements such as the Kyoto Protocol.

Yet, it would be unfair to claim that ecosocialists are not aware that the transformation phase cannot meet the short-term needs to overcome the triple crisis (Kovel and Löwy, 2001). Urgent recovery is crucial to prevent the effects of global warming, especially its possible damage to ecology and vulnerable groups. In this regard, ecosocialists propose several immediate actions to deal with ecological and social problems in the short-run, such as reducing GHGs emissions, developing clean energy sources, providing provisions for a free transportation system and reducing working hours to establish pollution clean-up programmes (Löwy, 2002).

Another line of division emerges on the question of growth and the real sources of human well-being. The mainstream economic paradigm sees economic growth (green or conventional) as indispensible in increasing human well-being. GND supporters do not categorically oppose economic growth, which they view as crucial to create jobs in crisis-hit countries and to reach targets such as the MDGs by 2015 in Least Developed Countries. They are mainly concerned about the sectors and type of investments. By investing in renewable energy sources, and developing eco-efficient technologies, GND supporters argue that it would become possible to "decouple"[8] economic activity from environmental pressure. Yet, despite continual efforts, there are serious doubts on our ability to decouple economic growth from pressure on nature in absolute terms (Moldan *et al.*, 2012). Jackson (2009) claims that decoupling is a myth and places the blame long-term environmental problems and social inequalities on economic growth. Especially after the global crisis of 2008, the criticism against viewing economic growth as the only strategy in solving social and ecological problems gained momentum. For example, proponents of the "degrowth movement" argue that "human progress without economic growth is possible" (Schneider *et al.*, 2010, p. 512), by also adding that sustainable degrowth does not necessarily mean degrowth in all and every sector or region. The "Agrowth movement", on the other hand, argues that degrowth may not be an effective, let alone efficient strategy to reduce environmental pressure. For agrowth supporters, being indifferent about growth is a more logical solution, and such a strategy is more likely to obtain democratic-political support (van den Bergh, 2011). The inadequacy of GDP as an indicator of real prosperity lies at the heart of both approaches mentioned

[8]Decoupling can occur either relatively or in absolute terms. Absolute decoupling requires environmental pressure to be stable or decreasing while the economic driving force is growing, whereas relative decoupling occurs when the rate of environmental pressure is positive but less than the economic growth rate (OECD, 2002).

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above. Jackson (2009, p. 106) favours the term economic resilience over economic growth and he proposes some modifications in macroeconomic accounting in order

> "to account more systematically for changes in the asset base; to incorporate welfare losses from inequality in the distribution of incomes; to adjust for the depletion of material resources and other forms of natural capital, to account for the social costs of carbon emissions and other external environmental and social costs; and to correct for positional consumption and defensive expenditures."

In summary, the ecosocialist view argues that the transformation of mode of production and consumption is indispensible in combating the triple crisis. Yet, in the transition phase, some precautions may have to be taken within the capitalist system to deferring its destructive effects.

The Extent of the GND in Practice

As already mentioned, the ND was based on three Rs: Relief for the unemployed and poor, Recovery of the economy to pre-crisis levels, and Reform of the financial system. In this section, we attempt to uncover the relative of importance of the different Rs in governments' reaction to the 2008 crisis. It is fair to say that the majority of policies have focused on recovery, relief efforts have been unsatisfactory and reforms almost non-existent despite the increasing number of proposals.

Relief and Job Creation

Schepelmann *et al.* (2009) provides information about the job-creation potential of different programmes pursued following the global crisis. For example, in Germany it has been estimated that no fewer than 250 000 jobs can be saved through the German stimulus plan. Robins *et al.* (2009) shows that in France, there is a potential to create 80 000–110 000 jobs which can offset the possible loss of 90 000 jobs. In South Korea a total of 960 000 jobs are envisaged, mainly through green spending in construction. This figure is estimated to be 350 000 in the UK and 407 000 in Canada. In the US, the stimulus package aims to create and save 3500 000 jobs (Schepelmann *et al.*, 2009, p. 22).

However, these figures are based on estimates conditional on implementation. Yet, the policy of creating employment by using public resources faces important opposition in some countries, such as the USA. US President Barack Obama proposed The American Jobs Act on September 2011, a bill encompassing a set of proposals designed to get Americans back to work. The proposed measures include cutting and suspending USD245 billion worth of payroll taxes for qualifying employers and 160 million medium- to low-income employees, spending USD62 billion for a Pathways Back to Work Program for expanding opportunities for low-income youth and adults.[9] But the bill in its entirety fuelled considerable discussion in the Senate and finally in October 2011 the bill was voted on in the Senate where it failed to obtain the necessary votes to proceed. The bill was then broken into several smaller derivative bills and their legislation process is still ongoing.

According to Chinese officials, the Chinese government announced an economic package in November 2008 for two years at an amount of 4 trillion Yuan (USD 586 bn). One trillion Yuan has been projected to be spent on reconstructing earthquake-hit areas. Again, in an attempt to relieve the burden on the poor, the Chinese government pledged to spend 400 million Yuan for affordable housing, and 150 million for healthcare, education and cultural development.[10]

Recovery

Robins *et al.* (2009, p. 2) analyses more than 20 stimulus programmes, and categorized the spending and tax-cutting measures according to 18 investment themes. They identify green investment themes as: (1) Low Carbon

[9]See http://en.wikipedia.org/wiki/American_Jobs_Act
[10]See http://english.gov.cn/2009-12/27/content_1497729.htm.

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Power, which consists of investments in renewable energy and carbon capture-storage technology; (2) Energy Efficiency, which consists of investments in energy-efficient construction, low-carbon vehicles, railways and grid; and (3) Water/Waste. Their analysis reveals that governments around the globe pledged to spend USD2.8 trillion within the next few years, as of end-2008 in these 18 investment themes. They note also that USD430 billion, or 15 per cent of the total stimulus, can be considered as green stimulus in the areas mentioned above. Table 2 summarizes the main elements of these stimulus programmes for a selection of countries.

However, note that the green share of the stimulus package does not indicate how green overall government spending is (Schepelman, 2009, p. 19). For example, Canada's declaration of support for the nuclear industry as "green" is debatable. Also, Germany's "environmental bonus" system, which offers a financial bonus for those scrapping their old cars if they buy a new car which meets a minimum emission standard of Euro 4, is open to the risk that the new car could consume more fuel if people switch from small to bigger cars.

Reform

The third and perhaps most important element of the GND is reforming of the international trade and financial architectures as the success of both relief and recovery efforts depends heavily on the question of setting new rules so as to alleviate a future similar crisis. Yet, reviewing the current policies it is not hard to claim that the reform leg constitutes the weakest link in existing GND programmes, despite the existence of several proposals. Reforming international trade and financial architectures is not an easy task, however, and requires international cooperation both within and between North and South (Lipietz, 2011, p. 11). The difficulty in reaching an agreement on curbing GHG emissions in the Copenhagen and Durban climate conferences clearly shows the importance of international cooperation, and the urgent need to find proper mechanisms to take a step forward on the question of climate change.

Effective transformation of the economic system along sustainability principles requires getting prices right (Spratt *et al.*, 2009, p. 90). Prices should be adjusted accordingly to truly reflect social and environmental consequences. Such an adjustment will help to minimize the negative externalities emanating from international trade and financial flows. Yet, existing reform proposals are generally concentrated on the financial system. Following the crisis, the debate on taxing financial gains and extending the tax base to curb speculative activity intensified. On the EU and G20-level, a "financial transaction tax" proposal gained many supporters, but failed to win the backing of member countries. Yet, French President Nicholas Sarkozy announced in January 2012 a unilateral 0.1 per cent financial transaction tax which comes into effect in August 2012, with a hope that other EU member countries would follow suit (Kimball *et al.*, 2012). With such an EU-level financial transaction tax, Kapoor and Oksnes (2011) estimates total revenue ranging from USD200 to USD300 billion. Note that these revenues are important sources of public financing for green investments.

Country/ region	Green Stimulus (USD bn)	Percentage green stimulus	Green investment sectors
China	221	38	low-carbon vehicle, railways, grid, water/waste
USA	112	12	renewable, carbon capture-storage, energy-efficient construction, low-carbon vehicle, railways, grid, water/waste
South Korea	31	81	renewable, energy-efficient construction, low-carbon vehicles, water/waste
EU	23	59	renewable, carbon capture-storage, energy-efficient construction, low-carbon vehicle, grid
Germany	14	13	energy-efficient construction, low-carbon vehicles, railways
Japan	12	3	energy-efficient construction
France	7	21	renewable, energy-efficient construction, rail, grid
Canada	3	8	carbon capture-storage, energy-efficient construction, railways, grid, water/waste
Australia	2	9	energy-efficient construction
UK	2	7	energy-efficient construction, low-carbon vehicles, railways, water/waste

Table 2. Green stimulus in economic recovery packages
Source: Robins *et al.* (2009).

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But there are other sources as well. Kapoor and Oksnes (2011, p. 126) propose an EU-wide fiscal reform on taxation, specifically calls for an "environmental tax reform", which aims to shift the tax burden from levies on labour to levies on energy, transport, pollution and resource extraction.[11]

It is difficult to justify that the existing pattern of international trade is sustainable. Spratt *et al.* (2009, p. 59) highlight the extent of the trade that is ecologically wasteful: "In 2008, the UK exported 4,400 tons of ice cream to Italy, only to re-import 4,200 tons. We imported 22,000 tons of potatoes from Egypt whilst exporting 27,000 tones back again…" One should not forget the effects of trade liberalization on developing countries. In many countries trade liberalization has forced governments to lower their environmental as well as labour standards so as to be able to attract more foreign direct investment flows from developed countries. The so-called "pollution haven" and "race-to-the-bottom" hypotheses (Frankel and Rose, 2005) depict the negative consequences of trade liberalization on the environment. Yet, there are counter arguments such as the "gains from trade" hypothesis which asserts that trade enables countries to increase their environmental quality through increased access to environmentally friendly technology and higher income generated by trade (Braithwaite and Drahos, 2000).

After examining the elements in recent economic stabilization packages, we see the main objective as economic recovery rather than transforming the system along with sustainability principles, as these packages lack the most required reform leg. The green share in these recovery packages still needs to be fostered for effective transformation of the economic system towards one of low-carbon. Public investments may play a larger role, and fiscal and financial reforms would help governments in raising funds to finance these projects.

The transformative power of the GND depends more on reforms and international cooperation than on recovery in business-as-usual. The regulation of national and international financial system (à la Glass–Steagall) so as to curb speculative activities and to close down tax havens has been viewed as the most urgent action by several GND proposals (Heinrich Boell Stiftung, 2009; Barbier, 2010). Yet, as Lipietz (2011) argues, regulating the financial sector is a necessary but not a sufficient condition. As important as financial reform is the trade reform to better distribute the income globally between North and South.

Green investment job-creation capacity depends upon the technology employed. Labour-intensive technologies would help to absorb massive unemployment. Also, as Lipietz (2011, p. 11) argues, a green economy should be able to transform those unpaid activities such as personal care, housework and voluntary work to proper jobs to foster social sustainability within society.

All these reforms require international cooperation, which at present is very weak, disputes between the USA and China highlighting the question of responsibility for climate change. The existence of huge ecological debt makes it clear that it is the duty of developed countries to assist less developed countries to adopt their energy and transportation systems.

Conclusions

Following the global crisis of 2008, the GND concept has been gaining increasing interest from the public, as the recent successes of green parties, especially in Germany and France, clearly indicate. The GND proposes a gradual shift from a carbon-based economy to a one based on renewable energy. Green investments, both by the public and the private sector, are expected to solve the unemployment problem while helping to reduce the pressure on nature. Its emphasis on social equality both at the global and the national levels is also of note. However, transformation of the economic system along sustainability principles is not easy. It requires fairly radical reforms in international financial and trade architectures to solve massive negative externalities such as climate change. And this, in turn, requires effective cooperation of countries given the trans-boundary nature of the problems. Yet, the recent experience from climate negotiations between North and South does not portray an optimistic picture. The negative macroeconomic consequences of the economic crisis of 2008 on public budgets and on corporate sector profits are often presented as a pretext for non-action on environmental and social problems. Even reaching MDG targets, which were already agreed upon, by 2015 appears to be impossible, let alone reaching a deal on climate negotiations.

[11]According to the study, 50 per cent of tax revenue in EU countries is derived from labour taxes. Only 6.1 per cent derives from environmental taxes. Such a large asymmetry clearly disincentivizes employment. By shifting the burden from labour to envrionment, both environmental protection and job-creation objectives would be realized.

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GND supporters challenge this view by stating that ecology is not the enemy of economic activities. In other words, green investments carry a potential to hit both social and ecological targets without compromising economic growth. Despite severe criticism against the conventional economic growth paradigm, which maintains the idea that economic growth is the only panacea for both social and environmental problems, some economic growth seems to be indispensable mainly for political reasons in developed countries, where unemployment is a major problem. The political developments that followed the Great Depression of 1929 are worthy of note. The rise of fascism in Europe can be seen as a social and economical response to the crisis, which ultimately destroyed Europe. The rise of nationalism in contemporary Europe (e.g. the electoral success of authoritarian, EU-skeptic Fidesz – the Hungarian Civic Union political party) signals similar threats.

Although the ecosocialist perspective is more ambitious in reaching a more egalitarian and ecologically sustainable future in the long run, it lacks a clearly defined set of actors and road-map that can radically replace the existing global system with a one based on ecosocialist principles. Both ecosocialists and GND supporters agree that business-as-usual policies (i.e. ND-type) would not be able to solve the problems caused by the triple crisis. Yet, the two groups disagree on how to solve it. The former group calls for a revolution based on ecosocialist principles and highlights the importance of local and global civil movements. The latter group calls for a gradual transformation of the economy within the existing economic and political system through a democratic process. Having said that, GND supporters do not dismiss the importance of local movements but also note that "locality" appears bigger and bigger when addressing problems such as finance or climate crises (Lipietz, 2011, p. 15).

GND supporters argue that ecosocialists' description of the GND as green capitalism led them to put too much emphasis on a radical transformation of the existing system, possibly by an ecosocialist revolution. Whether there exists a political subject that has any plausible ability to effectively start a process of ecosocialist transition is questionable; the classical left's politics of "the worse, the better", in which the progressive worsening of the situation is seen as the main driving force behind effective revolutionary practice, neglects two issues: the notion of irreversibility, and the notion of a specific urgency to be met within a short period of time regarding climate change. Once the climate system is pushed beyond its already fragile state, returning to that state will be impossible, and if decisive measures are not introduced within the next couple of decades, very little will remain that can be saved at all.

For Wolf and Mueller (2010) and Schwartzman (2011), the ecosocialist group fails to trace the roots of the policies that are packaged under the GND title. Are they invented by CEOs of the capitalist system in an attempt to save their businesses following the crisis, or are they the fruit of long discussions within the left? Wolf and Mueller (2010) argues that the GND has not been one of capitalist renovation, because they are the policies that have been put forward by alternative movements such as the greens and ecosocialists following long discussions sparked by the recognition of the fact that the Soviet system failed to provide a democratic, social and ecological alternative within Soviet socialism at the end of the 1980s. This does not underestimate the ability of the capitalist system to domesticate every alternative and find a way to make money out of them. In the hands of the capitalist system, it is clear that the GND faces a huge risk of becoming a mere "green-washing". Yet, it is an ongoing struggle and a policy of "a green step forwards" is superior to "wait and see" or "the worse, the better" policies. Keeping in mind the historical origins of the GND concept, one may conclude that GND policies can help to set the stage for the transformation long sought by the ecosocialist agenda, and hence from this perspective, these two approaches can be seen as complementary rather than substitutes.

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