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## **OPTIONS FOR SOCIALLY SUSTAINABLE ECONOMIC DEGROWTH**

### *Introduction*

Key words of environmental politics of the past twenty years have a hollow ring in the present economic downturn. The IPCC scenarios never contemplated (self-imposed censorship?), a decline in the rich countries' GDP of 5 per cent and then a long period of non-growth as might perhaps be the case. This was not in the economists' and industrial ecologists' script. For twenty years, the orthodox slogan has been Sustainable Development (Brundtland Report, 1987) meaning economic growth that is environmentally sustainable. We know however that economic growth was not environmentally sustainable. The discussion on *décroissance* or degrowth that Nicholas Georgescu-Roegen started thirty years ago, is now a topic for discussion in the rich countries because *la décroissance est arrivée*. Now it is the moment to substitute GDP by social and environmental indicators at the macro-level and to trace progress towards a socio-ecological transition by the behaviour of such indicators.

The economic crisis of 2008-09 affords an opportunity to put the economy of the rich countries on a different trajectory as regards material and energy flows. The objective in rich countries should be to live well without the imperative of economic growth.

Moreover, we are on the path for a reduction in world population once it peaks at 8,000 or 8,500 million, thereby reducing pressure on resources and sinks in the second half of the 21st century..

Georgescu-Roegen's explicit sponsorship of the concept of *décroissance* (degrowth) in 1979 (Grinevald and Rens, 1979), Herman Daly's views on the steady-state since the early 1970s, Serge Latouche's success in France and Italy in the last ten years insisting on economic degrowth (Latouche, 2007), have prepared the terrain. Now is the time in rich countries for socially sustainable economic degrowth reinforced by an alliance with the "environmentalism of the poor" of the South.

### *The economy has three levels*

Frederick Soddy's *Cartesian Economics* was published in 1922, and *Wealth, Virtual Wealth and Debt* in 1926. He had a Nobel Prize in Chemistry and was a professor at Oxford. Soddy's teachings of the 1920s became easy to understand for ecological economists who read Georgescu-Roegen's *The Entropy Law and the Economic Process* (1971). Soddy's main point was simple and applies today. It is easy for the financial system to increase the debts (private or public debts), and to mistake this expansion of credit for the creation of real wealth. However, in the industrial system,

growth of production and growth of consumption imply growth in the extraction and final destruction of fossil fuels. Energy is dissipated, cannot be recycled. Real wealth would be instead the current flow of energy from the sun. Economic accounting is false because it mistakes depletion of resources and the increase of entropy for wealth creation.

The obligation to pay debts at compound interest could be fulfilled by squeezing the debtors for a while. Other means of paying the debt are either inflation (debasement of the value of money), or economic growth - which is falsely measured because it is based on undervalued exhaustible resources and unvalued pollution. Economic accounting does not properly count environmental damages and the exhaustibility of resources. This was Soddy's doctrine. He was certainly a precursor of ecological economics.

In other words, the economy has three levels. At the top there is the financial level that can grow by loans made to the private sector or to the state, sometimes without any assurance of repayment as in the present crisis. The financial system borrows against the future, on the expectation that indefinite economic growth will give the means to repay the interests and the debts. The financial system creates "virtual" wealth. Banks give credit much beyond what they have got as deposits, and this drives or pulls economic growth at least for a while. Then there is what the economists describe as the real economy, the so-called productive economy. As reported in *The Economist* (11<sup>th</sup> April 2009), Hakan Samuelsson, chairman of the German truck-making firm MAN, made this distinction very clearly when he said: "Creating value through financial leverage will be harder in future, so we can get back to our real job which is creating industrial value through technology, innovation, and efficient manufacturing".

When the economist's real economy grows, it indeed allows to pay back some or all the debt, when it does not grow enough, debts are defaulted. The mountain of debt had grown in 2008 much beyond what the increases in GDP could pay back. The situation was financially not sustainable. But the GDP itself was not ecologically sustainable. Down below, in the basement and foundations of the economic building, underneath the economists' real economy, there is the third level: the ecological economists' *real-real* economy, the flows of energy and materials (carried by trucks and ships). Their growth depends partly on economic factors (types of markets, prices) and in part from physical limits. At present, there are not only resource limits but also conspicuous sink limits. Climate change is caused mainly by of the excessive burning of fossil fuels.

### *Green Keynesianism or Sustainable Degrowth?*

The economic crisis of 2008-09 has brought John Maynard Keynes back to the main stage. In Keynesian language, we can say that economies have unused productive capacity, there is a gap between effective demand and full-capacity utilization of

labour and industrial equipment. Unemployment is increasing, and the appropriate remedy is to increase public expenditure, “deficit spending” as it is called. Public spending is good because it will indirectly lead to buying cars, and paying off mortgages and even buying new houses, getting such industries out of the doldrums. Governments are under pressure not only to increase spending for public investments or consumption but to refinance private debts to banks that will not be paid (“toxic assets”), converting to some extent such private debts into public debts.

Keynes wanted to get out of the crisis of 1929. The pre-Keynesian prescription of waiting for the market to reach equilibrium, waiting therefore for increasing unemployment to depress wages so much that employers would want to hire workers again, was a receipt for disaster. To make this point clear, Keynes famously said that he did not care what happened in the long run once the economy would recover from the crisis. In the 1950s economists such as Roy Harrod and Evsey Domar converted Keynesianism into a doctrine of long term growth. Provided there was enough private or public expenditure in consumption and investment to keep effective demand close to potential supply at full capacity utilization, the economy would not fall into crisis. Meanwhile, the investment would have increased potential supply, so that new expenditure would be required in the next round in order for the economy not to fall into a crisis, in a virtuous path of continuous growth. Such economic models were metaphysical in the sense that they did not consider exhaustible resources or pollution.

Keynesianism was triumphant in the 1960s, the era of very cheap oil. Later, both short-run and long-run Keynesianisms were left aside. Neoliberal thought resurrected. The neoliberals, like Hayek, thought that markets knew much more than the state. But one unanswered objection to neo-liberalism raised by environmentalists was that the market did not value future, inter-generational scarcities (as Otto Neurath had already pointed out in Vienna in the 1920s against Von Mises and Hayek in the socialist calculation debate, cf. Martinez-Alier, 1987).

In the crisis of 2008-09, neoliberalism is suffering from ill health. Some bankers are asking for the State to take over their banks. Keynes has come back, reincarnated in Stiglitz and Krugman. As ecological economists we must ask, is this a short-run Keynes to get out of the worst aspects of the crisis, or also a long-run Keynes to get into a path of continuous economic growth?

Those who propose a short-run Green Keynesianism or a Green New Deal as a temporary measure, are close to ecological economics. If public investment must grow, as indeed it must to contain the rise in unemployment, it is better to channel it to the welfare of the citizens and to “green” energy production, than into motorways and airports. However, Green Keynesianism should not become a doctrine of continuous economic growth. In rich countries a slight economic decline is already taking place and it could easily be socially sustainable. We are not in the 1930s – in Europe we have economies with incomes per capita of over 25 000 euros. Going back ten per cent (with a corresponding decrease in energy and material flows) can be

managed if institutions of redistribution are in place. Thus, we shall enter into a socio-ecological transition. There is already an agreement in Europe for the carbon dioxide emissions be cut by 20% compared to 1990. In fact, emissions and GDP are in early 2009 decreasing faster than required to reach this target.

The feminist movement made clear many decades ago that GDP does not value what is not in the market, like unpaid domestic work and voluntary work. A society rich in "relational goods and services" would have a lower GDP than an (impossible) society where personal relations would be exclusively mediated by the market. The sustainable degrowth movement insists on the non-chrematistic value of local, reciprocal services. Moreover, economists (or rather, psychologists) now agree that above a certain threshold GDP growth does not lead necessarily to greater happiness. This research updates the literature on the so-called Easterlin Paradox. Therefore, GDP should no longer have the dominant position in politics that now has, to the detriment of environmental and social considerations.

However, degrowth might lead to social problems that we must face for the degrowth proposal to be socially accepted. If labor productivity (e.g. number of cars that a worker produces per year) grows by 2% annually, but the economy is not doing the same, this will lead to increased unemployment. The answer must be twofold. Increases in productivity are not well measured. If there is replacement of human energy by machines, does the price of energy take into account the depletion of resources and negative externalities? We know that it is not so. Furthermore, we should separate the right to receive remuneration from the fact of being employed. This separation already exists in many cases (children and young people, pensioners, persons receiving unemployment benefits), but it should be extended further. We have to redefine the meaning of 'job', taking into account the unpaid domestic services and the voluntary sector and we must introduce or expand the coverage of a universal Basic Income or Citizen Income. If a green Keynesianism is now relevant, even more relevant would be another Beveridge report, in the perspective of degrowth, an extension of the welfare state giving also much room to local initiatives.

Another objection is raised. Who will pay the mountain of debts, mortgages and other debt if the economy does not grow? The answer must be that no-one will pay. We can not force the economy to grow at the rate of compound interest at which debts accumulate. The financial system must have rules different from today. In the United States and Europe what is new is not, therefore, Keynesianism, not even Green Keynesianism. What is new is a growing social movement for sustainable degrowth. The crisis opens up opportunities for new institutions and social habits.

### *The peak in carbon dioxide emissions has been reached*

The economic crisis will mean a welcome change to the totally unsustainable increase of carbon dioxide emissions. The Kyoto objective of 1997 was generous with the rich countries because it gave them property rights on the carbon sinks and

the atmosphere in exchange for the promise of a reduction of 5 per cent of their emissions relative to 1990. This modest Kyoto objective will be fulfilled more easily. One could easily foresee by October 2008 that the carbon trade would collapse unless lower caps were adopted.

Moreover, there is a historic trend towards increasing energy costs of obtaining energy (a lower EROI). Brazil's recent discovery of 30,000 million barrels of oil (one year's of world consumption) thousands meters under the sea, might become a bottomless sink for energy and money. Coming down from the peak of the Hubbert curve will be politically and environmentally difficult. Conflicts arise in the Niger Delta and in the Amazonia of Peru and Ecuador against companies such as Shell, Repsol, Oxy. Appeal to some other energy sources (agro-fuels, nuclear energy) will compound the difficulties. Wind and photovoltaic energy are fortunately increasing. They will help to compensate for the dwindling supplies of oil over the next few decades. Coal supplies are increasing (they already grew seven times in the 20<sup>th</sup> century) but coal is noxious locally, and also globally because of carbon dioxide emissions.

The world peak in carbon dioxide emissions has been reached because of the economic crisis. Emissions are now (finally?) going down. This might become a unique historical chance.

In May 2008 it was announced that carbon dioxide concentration in the atmosphere was at a record level of 387 parts per million (ppm) according to the measurements at the Mauna Loa observatory in Hawaii. This meant an increase of 30 per cent above the level of 300 ppm that Svante Arrhenius used in his article of 1895, when he pointed out that burning coal would increase the concentration of carbon dioxide in the atmosphere and would increase temperatures. Between 1970 and 2000, the concentration had increased by 1.5 ppm per year, since 2001 and until 2007 growth in concentration reached 2.1 ppm. In early 2008 the world was still travelling at all speed towards 450 ppm to be reached in about thirty years. The great increase in the prices of oil, gas, and other commodities until July 2008, and the economic crisis in the second half of 2008 and in 2009, stopped economic growth and changed the trend in carbon dioxide emissions. From the point of view of climate change, the economic crisis should certainly be welcome.

Carbon dioxide concentration in the atmosphere will still increase, although not so quickly. Emissions are still much higher than the absorption capacity of the oceans, the soils and the new vegetation. The IPCC argues in its reports that emissions should go down by 60 per cent (and not by the paltry 2 or 3 per cent likely to occur in 2009 that hopefully signals a permanent change in the trend). The objective of 60 per cent reduction is far from today's reality, and also from the Kyoto and likely post-Kyoto commitments. Nevertheless, the IPCC recommendation is today's closer to implementation than previously.

It must be emphasized that the market for carbon dioxide allowances is an artificial

market. The supply depends on the political will to restrict emissions, not down to the necessary level (e.g. 60 per cent reduction), but what is seen as politically and economically bearable in a mindset that assumes continuous economic growth even in the richest countries.

“Hot air” is a name for the overflow of permits from Eastern European countries whose economies decreased after 1990 (and whose energy efficiency improved), such as Russia, Poland, Romania, Ukraine. In the Kyoto Protocol of 1997 the European Union gave itself a generous quota (equal to 1990 emissions minus a reduction of about 8 per cent for 2012), therefore large amounts of “hot air” will now appear also in western and central European countries such as Germany (that is already on the Kyoto path and whose economy seems to be decreasing by 5 per cent in 2009). The creation of cheap “hot air” is counterproductive for further reductions of emissions.

### *Towards Copenhagen 2009*

The GDP of the world will decrease by one or two per cent in 2009, while economic degrowth in the United States, the European Union and Japan will be larger than this. Between August 2008 and March 2009, consumption of gasoline in the United States decreased not less than ten per cent. Emissions from these countries plus Russia will decrease by not less than 5 per cent. This is really high in comparison with the objectives that were admitted politically up to now. However, because of a problem of mental censorship, neither the IPCC nor Lord Stern’s report, had contemplated a scenario of slight economic degrowth in the world economy followed by a period of non-growth in the European Union and the United States. This is the scenario that would convert the carbon dioxide emissions peak of 2007 into a unique historical event.

The economies of South America, that in the neoliberal period “reprimarized” themselves and became (again) raw material exporting economies in greater amounts than ever before, now will pay an economic price. Their growth is stopping because of the economic crisis, and declining terms of trade.

Increased carbon dioxide emissions from China and India are expected, more or less in line with economic growth in India (of about 5 per cent), and a little lower than economic growth in China. India’s emissions are per capita much below the world average (India has over 15 per cent of world population and about 4 per cent of emissions). China’s emissions are per capita much closer to the world average. As a country it is now the largest emitter. Increased emissions in India, China, Indonesia and a few other countries whose economies are growing in 2009 will not compensate for the decrease in the USA, the European Union, other European countries and Japan. There is a chance that 2007 was not an isolated peak, but on the contrary a historical peak, a unique event.

How will such developments be received in the climate change conference in

Copenhagen in December 2009? Will the positive effects of the crisis be acknowledged? Will a slight economic degrowth and a socio-ecological transition towards a steady state in the rich economies be accepted as a plausible and beneficial scenario? Or, on the contrary, will carbon emissions recover and increase again with economic recovery?

*From the South: a refusal to provide cheap commodities?*

With the economic crisis, will now be an end to the boom in exports of energy and materials thus diminishing pressures at the commodity frontiers? Grandiose plans for more and more exports from Latin America were pushed particularly by President Lula of Brazil. More roads, pipelines, harbours and *hidrovias*, more exports from Latin America of oil, gas, coal, copper, iron ore, soybeans, cellulose, biodiesel and ethanol, this was the credo of President Lula. In October 2008, and in total opposition to the views of Via Campesina and the MST in Brazil, Lula was still pushing for generally opening the world markets to agricultural exports. He went to go India to try and increase the rate of farmers' suicides by asking for the liberalization of agricultural imports and exports in the Doha round. True, the export boom gave Lula money for social purposes and increased his popularity. Petrobras was not less dangerous to the environment and to indigenous peoples of Latin America than Repsol or Oxy. Lula's obsession with primary exports made him do nothing about deforestation of Amazonia and drove environment minister Marina Silva to resign in 2008. What will the strategy of President Lula and the Latin American left be after the crash of 2008-09? Lula's insistence on the virtues of ethanol for export, is misguided. Agrofuels have a low EROI (especially taking into account the vegetation that already existed before agrofuels occupy the land), they increase the HANPP to the detriment of the biomass need of other species, and they imply large unpaid-for "virtual" water exports.

In fact, the crisis should be an incentive to focus on internal development, and not to sell the environment so cheaply. The prices of commodities have gone down, and moreover other values (social, environmental) have been sacrificed. In this respect, some proposals from Ecuador in 2007 (supported to a degree by president Rafael Correa, who is a traditional left-wing economist more than an ecological economist), are interesting. At the November 2007 OPEC summit meeting in Vienna when Ecuador came back to this organization, OPEC approved in principle a resolution in support of the Yasuni-ITT proposal (to leave oil in the ground in a territory with uncontacted indigenous people and of great biodiversity value), and it also voiced interest in the so-called Daly-Correa ecotax. The tax, proposed by president Correa at that OPEC meeting, is based on the concept by Herman Daly in a speech to OPEC in 2001 (Daly, 2007). OPEC countries have dismissed the existence of the enhanced greenhouse effect. This eco-tax would show their concern for climate change. An OPEC imposed carbon tax at the oil wellhead instead of attempted regulation of emissions from the tailpipe (by carbon taxes or cap-and-trade) would be fairer to

exporting countries and perhaps more effective in reducing global carbon dioxide emissions. This ecotax would make acceptance of climate change easier for oil exporting countries (and also, if imitated, for gas and coal exporting countries). The principle is, export less at a higher price. Money generated from the tax would go towards financing an energy transition away from fossil fuels, towards helping poor people around the world, and towards helping countries like Ecuador and Nigeria to keep oil (or gas or coal) in the ground when located under fragile and culturally sensitive ecosystems.

While in the 1920s, commodities decreased in price a few years before 1929, this time the increase in commodity prices (helped also by misguided agro-fuel subsidies, by the OPEC cartel, and by financial investment in the futures market) continued for some months after the strong decline in the stock exchange had started. However, in late 2008 commodity prices declined because of declining demand. The Baltic Dry Index measures shipping rates. It declined precipitously since July 2008 partly because of decreasing Chinese imports of iron.

A refusal from the South to provide cheap commodities to the industrial economy, imposing natural-capital depletion taxes and export quotas, would also help the North (including some parts of China) in its necessary long-term path towards an economy that uses less materials and energy.

### *Bottom-up neo-Malthusianism*

The socio-ecological transition towards lower levels of use of energy and materials will be helped if the world demographic transition is completed, and even more, if population after reaching a peak at 8,500 million inhabitants goes then down to 5,000 million, as some projections indicate (Lutz et al, 2001). Remember that world population increased four times in the 20<sup>th</sup> century from 1.500 million to 6,000 million. Environmental awareness might influence birth-rates (as in the European Neo-Malthusianism of 1900 and in China since 1980).

The importance of population growth in the increase of Social Metabolism is obvious. Paul Ehrlich's equation  $I = PAT$  could be applied historically, with an adequate indicator for T (technology).

There were many debates around 1900 on "how many people could the Earth feed" focusing only on the needs of the human species. The Neo-Malthusians of the late 19th and early 20th centuries were political radicals and feminists. There was a large difference between the original Malthusianism of T.R. Malthus and the neo-Malthusianism of 1900. Scholarly historical work on neo-Malthusianism has clearly documented the radical, feminist movement in favour of limiting births in Europe and the United States around 1900. In France this movement took the name of *la grève des ventres*. In South India, the "self-respect" movement launched by E.V. Ramasamy (called Periyar, a Tamil thinker and political activist, 1879-1973) took a similar line. In Brazil the feminist neo-Malthusian anarchist Maria Lacerda de Moura wrote:

“Love one another more and do not multiply so much”. This intellectual and social history allows me to present the following definitions.

**MALTHUSIANISM.**- Population undergoes exponential growth unless checked by war and pestilence, or by chastity and late marriages. Food grows less than proportionately to the labour input, because of decreasing returns. Hence, subsistence crises.

**NEO-MALTHUSIANISM OF 1900.**- Human populations could regulate their own growth through contraception. Women’s freedom was required for this, and desirable for its own sake. Poverty was explained by social inequality. “Conscious procreation” was needed to prevent low wages and pressure on natural resources. This was a successful bottom-up movement in Europe and America against States (which wanted more soldiers) and Churches. (Ronsin, 1980, Masjuan, 2000).

**NEO-MALTHUSIANISM AFTER 1970.**- A doctrine and practice sponsored by international organizations and some governments. Population growth is seen as a main cause of poverty and environmental degradation. Therefore States must introduce contraceptive methods, even without women’s prior consent.

**ANTI-MALTHUSIANISM.**- The view that assumes that human population growth is no major threat to the natural environment, and that it is even conducive to economic growth as Esther Boserup and other economists have argued

*Sustainable degrowth in the North and environmental and social justice everywhere*

A transition to sustainability requires new thinking on demography and on the socio-ecological transition. Marina Fischer-Kowalski and Helmut Haberl of the IFF in Vienna, influenced by the work of environmental historian Rolf Peter Sieferle and by ecological anthropologists, ecological economists, and industrial ecologists, recently edited a book entitled “Socio-Ecological Transitions” (Fischer-Kowalski and Haberl, 2007). From hunter-gatherer societies to agricultural societies to industrial societies, the authors of this book uncover quantifiable patterns of use of energy and materials, population densities, land use and working time. They try also to distinguish possible from impossible futures. For instance, is it plausible to think of a world of eight billion people with an energy expenditure of 300 GJ and a use of materials of 16 tons per capita/year? Are we on the contrary on the verge of a socio-ecological transition that will reduce energy and material use in the rich economies even if this implies economic de-growth?

The transition needs a reform of social institutions (to deal with unemployment), and also a reform of financial institutions to stop the financial level of the economy from growing without reference to the underlying physical realities.

At first sight, Southern countries have something to lose and little to gain from Degrowth in the North because of fewer opportunities for commodity and manufactured exports, and less availability of credits and donations. But, the movements for Environmental Justice and the “environmentalism of the poor” of the

South are the main allies of the Sustainable Degrowth movement of the North. These movements complain against disproportionate pollution (at local and global levels, including claims for repayment of the “carbon debt”), they complain against waste exports from North to South (e.g. the “Clemenceau” and so many other ships to the wrecking beaches of Alang in Gujarat, or electronic waste), they complain against biopiracy, and also against *Raubwirtschaft*, i.e. ecologically unequal exchange, and the destruction of nature and human livelihoods at the “commodity frontiers”. They also complain against the socio-environmental liabilities of Transnational Companies.

There could be a confluence among conservationists concerned with the loss of biodiversity, the many people concerned with climate change who push for solar energy, the socialists and trade unionists who want more economic justice in the world, urban squatters who preach “autonomy”, agro-ecologists, neo-rurals, and the large peasant movements (as represented by Via Campesina), the pessimists (or realists) on the risks and uncertainties of technical change (post-normal science), and the “environmentalism of the poor” that demands the preservation of the environment for livelihood. The international environmental justice movements have as objective: an economy that sustainably fulfils the food, health, education and housing needs for everybody, providing as much *joie de vivre* as possible. What is needed is an Aristotelian *buen vivir* (as the World Social Forum proclaims) guided by *oikonomia* rather than *chrematistics*.