

LANGUAGES OF VALUATION

- 1.- In the last few months, I remember Frederick Soddy's *Wealth, Virtual Wealth and Debt* published in 1926. He had a Nobel Prize in Chemistry and was a professor at Oxford as explained in my book *Ecological Economics* of 1987. Also Herman Daly wrote on Frederick Soddy. His 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 (of not less than 4 or 5 per cent per year) 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. This was Soddy's doctrine. He was certainly a precursor of ecological economics.
2. - The economic crisis will mean a welcome change to the totally unsustainable increase of CO₂ emissions of the last few years. The very moderate EU Kyoto objectives will be fulfilled more easily, and the carbon trade will collapse unless lower caps are adopted. Indeed, an economic crisis affords an opportunity to put the economy on a different trajectory as regards material and energy flows. It might also give an opportunity for a restructuring of social institutions: the objective in western countries should be to live well without the imperative of economic growth. It seems that happiness is not related to income growth, above a certain level of income. Moreover, economic accounting does not properly count environmental damages and the exhaustibility of resources. Now it is the moment to substitute GDP by social and environmental indicators at the macro-level. The discussion on *décroissance soutenable* or socially sustainable economic de-growth, that Georgescu-Roegen started thirty years ago, should reach a wide audience in western countries at this moment of crisis.
- 3.- The critique of conventional economic accounting often begins by emphasizing the forgotten current values of environmental services from ecosystems. This approach is good but it is insufficient in order to grasp the relations between economy and environment. Our economy depends on the photosynthesis of millions of years ago for our main energy sources, it depends on ancient biochemical cycles for other mineral resources that we are squandering without replacement. In the case of oil, the extraction peak will be reached soon. We are now taking 85 mbd – in terms of calories, the world average is equivalent to about 20,000 kcal per person/day (ten times the food energy intake), and in the USA it is equivalent to 100,000 kcal per person/day. In exosomatic energy terms, oil is then far more important than biomass. Climate change is a threat to biodiversity. But the immediate threat is the increase of the HANPP, the human appropriation of net primary production.
- 4.- The present economic crisis is not only a financial crisis, and it is not caused only by a supply of new houses that exceeded the demand that could be financed sustainably. The crisis was also triggered by high oil prices, due not only to the OPEC oligopoly but also to the approaching peak-oil. In fact, economic theory does not say that an exhaustible resource should be sold at the marginal cost of extraction. Oil at 120 US\$ a barrel is in fact cheap from the point of view of its fair inter-generational allocation and the externalities it produces. As the crisis deepens, the price of oil

will go down to some extent but it will recover when the economy grows again. However, the historic trend is towards increasing energy costs of obtaining energy (a lower EROI). Coming down from the peak the Hubbert curve will be politically and environmentally difficult. Appeal to some other energy sources (agrofuels, nuclear energy) will compound the difficulties.

5.- Conventional economic accounting is certainly misleading. The experience that Pavan Sukhdev (with Haripriya Gundimeda and Pushpam Kumar) gained in India trying to give economic values to non-timber products from forests, and to other environmental services (such as carbon uptake, water and soil retention), has been an inspiration for the TEEB process (The Economics of Ecosystems and Biodiversity) sponsored by DG Environment of the European Commission and by the German Minister of Environment. As the TEEB team states, a monetary representation of the services provided by clean water, access to wood and pastures, and medicinal plants, does not really measure the essential dependence of poor people on such resources and services. In National Income Accounting one could introduce valuations of ecosystem and biodiversity losses either in satellite accounts (physical and monetary) or in adjusted GDP accounts ("Green Accounts"). The economic valuation of losses might be low compared to the economic gains of projects that destroy biodiversity. However, which groups of people suffer most by such losses? In their project "Green Accounting for India" they found that the most significant direct beneficiaries of forest biodiversity and ecosystem services are the poor, and the predominant impact of a loss or denial of these inputs is on the well-being of the poor. The poverty of the beneficiaries makes these losses more acute as a proportion of their "livelihood incomes" than is the case for the people of India at large. Hence the notion of "the GDP of the Poor".

6- Toxic Assets and Poisonous Liabilities. The assets that take the form of claims to debts that will remain unpaid, have been given the funny name of Toxic Assets. Our accounting conventions are false because they do not deduct damages to the environment. An enormous "carbon debt" is owed to future generations, and to the poor people of the world who have produced little greenhouse gases. Large environmental liabilities are due by private firms. Chevron-Texaco is being asked to pay back 16 billion dollars in a court case in Ecuador. The Rio Tinto company left behind very large liabilities since 1888 in Andalusia where it got its name, also in Bougainville, in Namibia, in West Papua together with Freeport McMoran... debts to poor or indigenous peoples. Shell has a great liability in the Niger Delta. Don't worry. These poisonous debts are in the history books but not in the accounting books.

7.- Decisions may indeed be improved by giving money values to environmental resources and services which are undervalued or not valued at all in conventional economic accounting. But there are other considerations. First, don't forget our uncertain knowledge about the working of ecosystems, and about the impact of technologies. Second, do not exclude non-monetary values from decision making processes. Don't practice the fetishism of fictitious commodities. Look at the current case of Vedanta mining bauxite in the Niyamgiri hill in Orissa. The decline in the price of aluminium as the economic crisis deepens might save the Niyamgiri hill. We may still ask: how many tones of bauxite is a tribe or a species on the edge of extinction worth? And how can you express such values in terms that a minister of finance or a Supreme Court judge can understand? Against the economic logic of euros and cents, the peasant and tribal languages of valuation go unheeded. These include the language of territorial rights against external exploitation, the ILO convention 169 which guarantees prior consent for projects on indigenous land, or in India the protection of the adivasi by the Constitution and by court decisions. Appeal could be made to ecological and aesthetic values. The Niyamgiri hill is sacred to the Dongria Kondh. We could ask them: How much for your God? How much for the services provided by your God?

8.- In decision-making processes, economics becomes a tool of power. The question is: who has the power to simplify complexity and impose a particular language of valuation? The world conservation movement should indeed criticize conventional economic accounting and push for the introduction of an economic language that reflects better our relations with nature, while not forgetting the legitimacy of other languages: territorial rights, environmental and social justice, livelihood, sacredness. This is essential for an alliance between the conservation movement and the environmentalism of the poor.