



EUROPEAN
ORGANIZATION
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AUDIT INSTITUTIONS



Environmental Liabilities

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**Public environmental
audit**

**International seminar
Barcelona, 16 October 2009**

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PASIVOS AMBIENTALES

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Barcelona
16 October 2009

Two main questions for the Economic-Environmental Auditor would be:

First, why should one or another concrete topic be audited?

We cannot audit everything.

Second, is the topic auditable?

I shall remain within this framework.

Keywords

- GDP growth? How much still?
- Pluralism of values. Multi-criteria assessments
- How to measure the socio-ecological transition (MEFA; HANPP)
- Externalities as cost shifting: climate change, biodiversity loss...
- Green Keynesianism vs. environmental damage from infrastructures
- Cost-benefit analysis and the discount rate
- Climate change and the Ecological debt

Economic accounting rests on really existing costs and prices.

It does not take into account positive or negative externalities.

This is true in business firms, public companies and administration, and in macro-economic accounting.

Environmental liabilities are not included.

Why is GDP growth still “good” (in economies with income per capita of 20 000 €/year)?

When a region in Europe in 2009 experiences

- a decrease in GDP,
- increased unemployment (bad),
- decreased emissions of greenhouse gases (good),
- less soil sealing (good),

... are we worse off or better off?

This is a debate that President Sarkozy is now pushing in Europe, and also Environment Commissioner Stavros Dimas.

- When invited to one of Dimas' meetings in Brussels, I wrote back that I was disgusted by the lack of historical memory (no mention of Georgescu-Roegen 1971, Roefie Hueting, 1980, Herman Daly, 1973, René Passet, 1979).
- Even more disgraceful was not to quote Sicco Mansholt, a president of the European Commission who already in 1972 criticized GDP growth.

Debates on the relations between the economy and the environment

- Strong sustainability means that so-called “natural capital” (e.g. the decreased availability of fishes) is not substitutable (in the long run) by increases in manufactured capitals (kw of power in the fishing fleet).
- The notion of weak sustainability allows instead for an increase in manufactured capital or ecological restoration to compensate always for a decrease in natural resources.

Acknowledging the critiques against GDP from the 1960s and 1970s is a matter of intellectual honesty.

It also reinforces today's arguments by Sarkozy et al, because one cannot attribute the critique of GDP only to sour grapes in the current economic crisis.

Not so long ago wetlands and mangroves were described as “malarial swamps” that should be drained (*bonifica* in Italy).

Now we have the Ramsar convention, and many conflicts around the world on the preservation of mangroves against the shrimp industry, and the preservation of wetlands against public works, housing for tourists, or agriculture (as in Catalonia in the Llobregat Delta, the Ebro Delta, the Empordà (Costa Brava)).



El Pantanal, MGN

Not so long ago deforestation in order to put fields into cultivation or pastures was seen as progress in European history.

It is still subsidized in Brazil in the form of road building in the Amazon. Now we have REDD, discussed in Copenhagen in December 2009. This means payments for avoided deforestation. Better REDD than dead, or suffocated by increased temperatures.





Acre, Brazil
August 2009

Photo:
B.Rodriguez-
Labajos (UAB)

The world human population might peak at 8.5 billion before 2050, earlier than it was thought. It might then decline to 6 billion.

Depopulation might have negative economic and environmental consequences (as we see in some regions of central and east Europe)

but at world level it goes together with a decrease in the HANPP, the human appropriation of net primary production of biomass.

A lower HANPP means less pressure on biodiversity, because more food is available for other species. The European Union had once the goal of “halting the loss of biodiversity” by 2010.

A decrease in the HANPP would be favoured by a decrease in the human population. So, depopulation is good and bad, and we cannot reduce its effects to a single dimension.

What is the role of the Economic-
Environmental Auditor when politicians at
international, national or regional levels

push for public policies against wetlands,
or the increase the HANPP by subsidizing
biofuels,

or give prizes for higher birth-rates (with
the spurious argument that a larger
population will make the payment of
pensions easier)?

Some economic indicators are deteriorating, some environmental indicators improve, some social indicators improve and some are deteriorating.

The Sarkozy-Dimas initiatives are useful for the Economic-Environmental Auditor promoting the multi-dimensional assessment of socio-economic-environmental sustainability at the level of firms, municipalities, regions, states.

The Auditor should examine the changes in reporting macro-economic accounting that reflect environmental liabilities.

Jeroen van den Bergh (ICTA-UAB) recently authored an article (the initial title was "Abolishing GDP") trying to explain why

despite "all theoretically and empirically motivated criticism of GDP as a social welfare and progress indicator, its role in economics, public policy, politics and society continues to be influential" .

J. van den Bergh, The GDP Paradox, Journal of Economic Psychology, 30(2), 117-135, 2009.

Socio ecological transition

- Until 2007 all forms of energy were growing in the world economy. Coal extraction increased six times in the 20th century, oil and gas much more than this. When the economy grows, increased efficiency leads in part to **Jevons Paradox** or the rebound effect, i.e. more energy instead of less energy is used because energy becomes relatively cheaper because of the increased efficiency.
- Oil extraction will soon reach the **Hubbert peak**, perhaps already reached it at 87 mbd in 2007. But this might lead to **increased coal extraction**, with terrible effects

Social metabolism

- The economy may be described in terms of **economic indicators** such as growth of GDP, savings ratio, budget deficit as percentage of GDP, current account balance in the external sector... Social factors may be taken into account, as in the Human Development Index.
- The economy may also be described in terms of **physical indicators**. Economic, social, and physical indicators are non-equivalent descriptions.

An economy may be described in these terms:

- it provides 280 GJ gigajoules- of energy per person/year,
- its HANPP is 35%,
- material flow amounts to 20 tons per person/year of which fossil fuels account for 5 tons.
- Of the material flows, 6 tons are imported, 1 ton is exported.
- Income per capita is 34,000 US\$.
- It ranks 12 in the Human Development Index.

• Another economy

- provides only 35 GJ person/year,
- its HANPP is 60% (a heavily populated country, relying on biomass, with little external trade).
- its materials flow amounts to only 4 tons person/year,
- Foreign trade is less than 0.3 ton per capita/year of exports or imports.
- Income per capita is 2,000 US\$ (at PPP).
- It ranks 127 in the HDI.

CO2 emissions have decreased in 2008-09

World carbon dioxide emissions peaked in 2007, they are down at least 3 % in 2008-09.

This strong, early reduction had not been foreseen by the IPCC or by Lord Stern (a problem of mental censorship).

Is this a peak in a cordillera of peaks?

Externalities as cost shifting

- The Stern report (2006) said that climate change is the largest market failure ever.
- In fact, biodiversity loss, the 6th great extinction, is perhaps a “bigger” market failure. Rather than an “externality” to be internalized into the price system, we have cases of “successful cost shifting” to future generations and other species, and to poor people today.
- Externalities are damages not measured either by market prices or by private or public accounting rules.

There are social reactions against systematic cost-shifting ...

... in resource extraction conflicts (mining, quarries, oil and gas fields), transport conflicts (Val di Susa?), waste disposal conflicts (incinerators, or waste dumps as in Campania).

Such movements proclaim, "*we are not NIMBY but NIABY*", not in anyone's backyard.

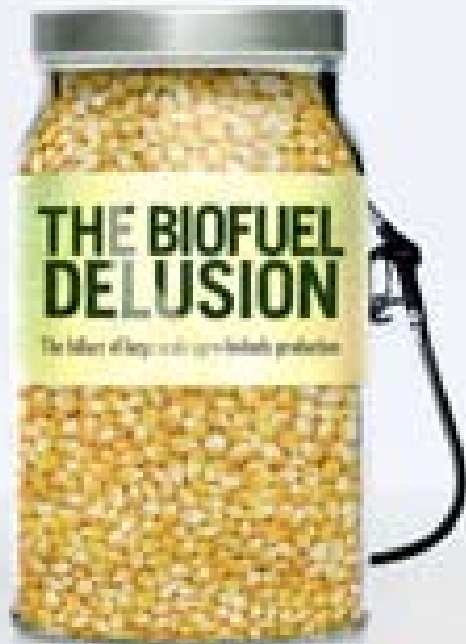
We have to take decisions taking into account the money values but also other relevant values. Cosmetic Environmental Impact Assessments do not solve such issues.

Who has the power to decide the method for decision-making?

Which valuation languages are allowed or forbidden?

The Environmental Auditor should recommend the use of participatory multi-criteria evaluation.

Biofuels



Mario Giampietro
Kozo Mayumi

- An audit could look into biofuels programmes meant to reduce GHG emissions, whether they really do so in an effective and cost-effective manner, researching also the consistency between biofuels programmes and the goal of halting biodiversity loss, taking into account the low EROI in biofuel production, the increased HANPP, and also the “virtual” water spent in cultivation.
- International impacts should also be considered

Green Keynesianism in the crisis of 2008-09 and investment in infrastructures

Relentless, large public investments in so-called **infrastructures** (e.g. the airport and the new harbour in Barcelona) are financed with European, state and regional funds.

The projection of trends in passenger number and in materials trade, **inconsistent** with policies meant to internalize the environmental costs into prices (e.g. carbon dioxide emission costs into the price of air travel). They are also **inconsistent** with the goal of “**dematerializing**” the economy increasing resource productivity.

Cost-benefit analysis and the discount rate

Consider an audit on whether a road programme takes duly into account non-economic costs such as the loss of landscape quality and the effects of fragmentation on biodiversity - are such non-economic costs evaluated by the authorities through extended CBA?

Discuss then the role of different discount rates in the results of CBA, and recommend an appropriate discount rate. A high discount rate lowers the present value of (distant) benefits and costs.

The optimist's paradox

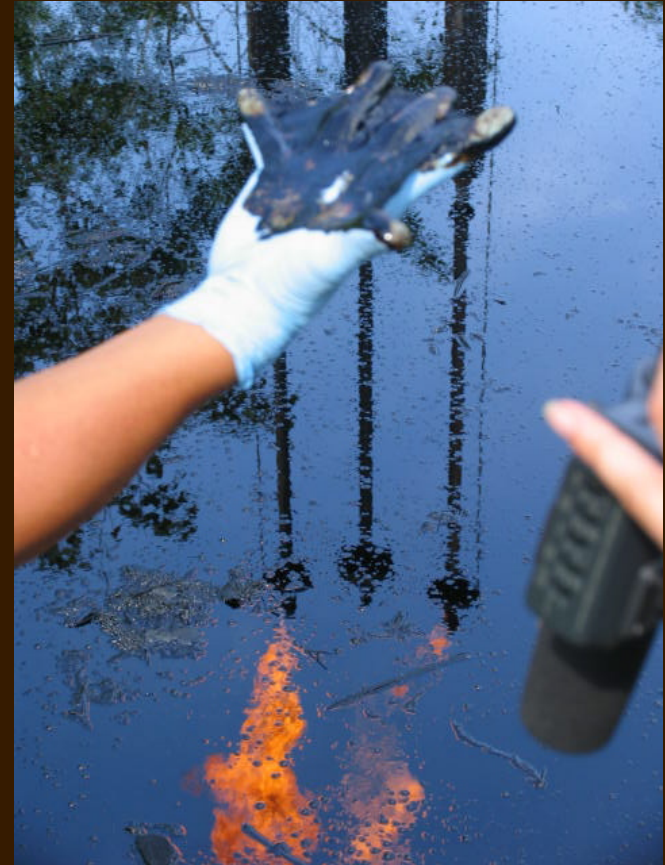
When the **discount rate** is based as in Ramsey (1928) on the assumption of economic growth, it is taken for granted that today's investments lead to growth.

The assumption of growth implies future declining marginal utility as consumption is supposed to increase.

Our descendants will be better off. This justifies using now more resources and polluting more. Therefore a degraded environment and a lower quality of life are left to future generations, undermining the initial assumption of growth.

International and Local Environmental Liabilities

- The Economic-Environmental Auditor, taking into account that the results of private firms provide the main inputs for macroeconomic accounting, could sponsor research on the **un-paid liabilities of private companies** in the regional or national territories and abroad.
- Such liabilities will most likely come into the open (as with Rio Tinto, Shell and Chevron) only when dramatic court cases are brought against such companies.
What should such legislation establish?



Near Lago Agrio, Ecuador, August 07
Photo: Mariana Walter, UAB

Take other environmental liabilities left by private companies (chemical companies like Flix in Catalonia, or storage of nuclear waste left by electricity companies).

Could an audit examine whether the use of public funds in order to pay for such liabilities, while being legal, is or is not in agreement with the polluter pays principle that aims at internalizing externalities into the price system?

Ecological Debt

- Could the Economic-Environmental Auditor examine the claims for an ecological debt (carbon debt or climate debt) coming from civil society organizations and some governments of the South, that try to operationalize the notion of “historical responsibility” acknowledged in Rio de Janeiro (1992) and Kyoto(1997).
- Are Northern countries really liable for such debt?