

FUTURO AS A MONETARY METHODOLOGY FOR SUSTAINABILITY ASSESSMENT BASED ON THE ORIGIN OF COMPONENTS

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Topic addressed: Sustainable assessment and valuation

The futuro methodology aims to label goods with their sustainable prices, which shall include the external costs and thus can serve as valuable and understandable sustainable assessment indicators. "On the national level the methodology shall be used to calculate how much the consumers of one specific consuming country of the North "save" by unpaid/uncompensated external effects caused in the producing countries of the South" (Bußwald et al. 2009). The methodology shall also include social factors allowing to constitute the social disparities and the environmental consequences of the predominant current economic model. "Resource-intensive products are exported by developing countries to industrial countries...such a resource-intensive pattern of international trade can have damaging effects on the global environment" (Chichilnisky et al. 2008). Since 2002, the research group of Forschungsgesellschaft SOL has been working on different realizations of these methodological aims (e.g. Jakubowicz et al 2004, Bußwald et al. 2009).

The research described in this paper concentrates on latest futuro research, trying to identify and assess key influencing parameters reflecting a maximum share of the whole effects making the world unsustainable.

In a first step we investigated in virtual water, CO₂ emissions and wages representing three complementary effects of human activities.

Due to transitive effects and correlations we thereby also integrate – to a certain extent - energy consumption (via CO₂ emissions), social cohesion, security and public social expenses, literacy rates and educational budgets (via wages) as important indicators for welfare levels (Beça, 2010).

The futuro sustainability approach, for all single indicators, builds on the following steps:

1. Determination of current national and worldwide consumption (for input parameters like water) or emission patterns (for output/emission parameters like CO₂ emissions)

or the status-quo values (for wages) building on statistics and research results e.g. on water footprints (Mekonnen 2011)

2. Calculation of differences of worldwide average values and worldwide sustainable targets
3. Integration of these differences in a pricing model to assess actual (human) resources consumption or emissions.

Based on the prices for the single parameters water, CO₂ and wages, an aggregated futuro price can be determined for products as well as for all activities of nations:

The assessment of products is based on a lifecycle inventory focusing on CO₂ and water, for both each single value has to be assigned to a country of origin. In addition the import values for components of the product have to be collected and equally attached to import and export countries. Finally all inventory data is assessed by price factors for water, CO₂, wages, each depending on the respective country of origin.

On the national level we consider all import and export flows to calculate a whole country's difference to the world sustainable value.

The paper will in detail explain the concrete algorithms for water, CO₂ and wages, including assumptions, strengths and weaknesses:

For instance, in terms of wages, major problems include the fact that no data is available on wages respectively revenues of self-employed work.

Regarding water, it is especially challenging to develop a pricing approach mirroring its "true value" and sustainable role.

Comparing these latest research results with earlier versions, the water dimension has been newly integrated into the futuro approach, and CO₂ and wages have been significantly updated.

References

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