

## Highlights in Roefie Hueting's research

Roefie Hueting (born in 1929) has been publishing on the relationship between growth of national income and conservation of nature and environment since the mid 1960's. In 1969, he founded the department of environmental statistics at Statistics Netherlands. In 1970 he published the collection 'What is nature worth to us?'

His study 'New Scarcity and Economic Growth, more welfare through less production?', a cum laude thesis published in 1974, contains (1) probably the most complete enumeration ever of the shortcomings of GDP and (2) a thorough exploration of the valuation of the possible uses of the non human-made physical surroundings that are indispensable for human life (which he named 'environmental functions'). The latter he elaborated further in later studies. He arrives to the conclusion that this problem is insolvable, because the preferences for environmental functions can be measured only very partially. Consequently the correct prices of both environmental functions and market goods, that are produced and consumed at the expense of those functions, are unknowable.

However, information for policy weighing can be given by making assumptions about preferences. *One* assumption is that citizens and institutions have strong preferences for environmental sustainability. This 'solution' of the valuation problem holds true and is applicable for both the not in GDP recorded losses of environmental functions and other shortcomings of GDP. It is widely accepted and never disputed.

The conclusion that the correct prices for market goods, on which the calculation of standards national income (NI) is based, are also unknowable can for instance be found in the article that he wrote in 1991 together with Nobelist Jan Tinbergen for the Rio conference in 1992: 'GNP and market prices: wrong signals for sustainable economic success that mask environmental destruction' (Tinbergen is one of the founders of the concept of NI in the 1930's). This article contains an estimate of the environmentally sustainable world income that arrives at about 50% of standard world income. In 1992 the 'Methodology for the calculation of sustainable national income (SNI)' was brought out, that he wrote together with Bart de Boer en Peter Bosch.

Estimates of the environmentally sustainable national income (eSNI) for The Netherlands for the years 1990, 1995 and 2000 also arrive at about 50% of standard national income (NI). The concept of eSNI has been designed by Hueting. It is defined as the maximal attainable production level at which – with the technology in the year of calculation – vital environmental functions remain available for future generations. It is based on the assumption of preferences for environmental sustainability and on the factor costs of the measures to attain physical sustainability standards of our physical surroundings. The eSNI provides information and is by no means political/societal target setting. In the period 1990-2000 the distance between NI and eSNI of The Netherlands increased with 13 billion euros. An increase of this distance means that a country is drifting further away from ecological sustainability and vice versa.

Hueting wrote about 150 articles and papers and three books. He has been giving lectures in universities and contributing to seminars and conferences in many countries in Europe, Africa, Asia and South America and in the U.S. Part of his work originated in developing countries, where he was invited as consultant. He was amongst other things in the 1980's a contributing member of the UNEP-World Bank 'Working Group Environmental

Accounting for Sustainable Development' and contributed to the collection with the same title (WB, 1989). He received the UN Global 500 Award, is Officer in the Orde of Oranje Nassau (a royal honour) and was nominated by Jan Tinbergen for the Sasakawa Prize. Furthermore international symposia on Hueting's work were organised at the Royal Academy of Art and Sciences in Amsterdam, by the OECD in Paris and by The World Bank in Washington D.C.

At the latter occasion, in 2001, the book 'Economic Growth and Valuation of the Environment: a Debate', dedicated to his work and with comments on his work by the world's most outstanding environmental economists such as Daly, Pearce and Beckerman, was handed by minister Pronk to WB president Wolfensohn.

In the handbook 'Integrated Environmental and Economic Accounting 2003', published by the UN Statistical Office, is written: "Much of the initiative to look at an alternative path for the economy rather than a different measure of the economy came from the work of Hueting in the late 1960's and the early 1970's. He introduced the concept of environmental function referred to throughout this manual, explaining how pressure on functions leads to scarcity or competition for these functions. (.....)."

Currently Hueting is advisor of the Foundation SNI Research.

The address of his website is: [www.sni-hueting.info](http://www.sni-hueting.info)