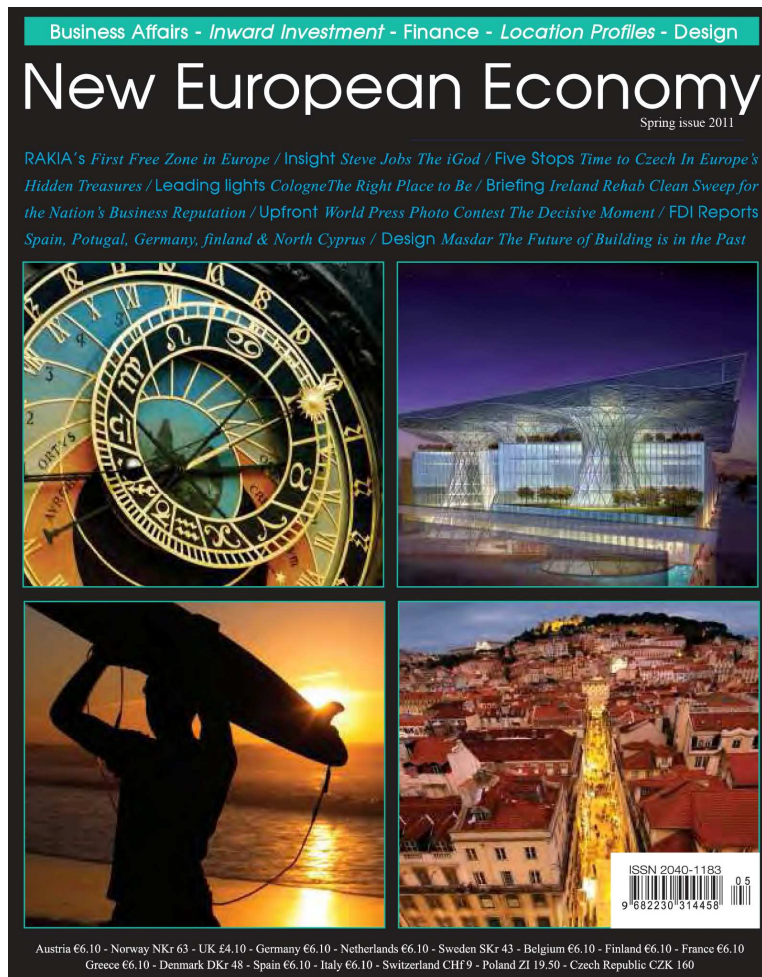


# *A decisive moment for Investing in Sustainability*

As the professional sustainability investment community emerges it is in the midst of a historic wave of sustainability challenges

By: © P.F. Henshaw



**T**he conference on “Investing in a Sustainable Future”<sup>1</sup> sponsored by the Financial Times at the NY Hilton on Mar 9, was the third annual FT sponsored conference for professionals involved with Comprehensive Sustainability Reporting (CSR). CSR helps businesses account for and invest in their relationships with the environment. Getting businesses to account for environmental impacts and find more profitable paths avoiding them, starts with measuring them, and leads to providing professional investment advice on what will be profitable down the road. It was a very smoothly run small conference of 250 professionals, casual and friendly, just a group of very talented people talking about their expanding role in business and their main common interest. It also seemed to coincide with something of a watershed moment for the environmental movement, and a changing of the guard,

A decisive moment

as the sustainable investment profession and businesses join forces and both recognize the present crescendo of emerging environmental impacts needing attention. So the theme was “getting up to speed”, as more large businesses realize their need for help in understanding what’s happening, and that it will become increasingly costly to delay taking the plunge.

As businesses learn about and respond to the tide of increasing business impacts on the environment, and the growing regulatory costs, big business, finance and government are beginning to take more seriously the difficult task of finding more profitable options. The need for help with participating in public/private partnerships responding to environmental concerns is becoming a necessity too, so there’s a need to have staffs knowledgeable about the scientific issues as well as methods of working with outside stakeholders. It makes understanding the hidden opportunities and liabilities contained in environmental investment choices closer to equal in importance to profit. It was hardly ever a concern of mainstream investment advisors before. So there’s an emerging profession using various new scientific and communication tools being given increasing responsibility for discovering how to steer the economy toward working with the natural world rather than just consuming it.

My own view comes from having started post graduate research in the 1970’s studying the natural laws of how “natural business systems” (ecologies, climates, cultures, etc) work together. It was part of looking for how “appropriate technology” could be designed to work the same way. Lots of natural systems seem to both maximize development and minimize conflict to work smoothly, for example. My initial work was instrumenting and studying the daily cycles of energy flow in passive solar buildings. It took some effort to push my own understanding of the basic physics of uncontrolled systems, to understand how complex air current networks emerge and develop. So that gave me a start on finding reliable explanatory principles that a naturalist might use, to understand individual energetic systems in nature by studying their life cycles.

My interest in the conference was in seeing the state of the art, in networking and in learning the language of this changing professional community as it was emerging. It’s a rather common occurrence that stakeholders in an environmental issue all speak with knowledge and values that are different enough to make it hard to communicate. One clear example is how very different the languages of finance and the environment are, though they are both about “what works” for the very same subject. Another example is how differently theorists and practitioners in either field speak, as if having little in common too.

So “getting up to speed” means a variety of things. One was seeing how many people were positively excited by their work and the financial value of their advice, and convinced that changing the way business is done had begun in earnest. As people have developed different ways of accounting for environmental, societal and governance (ESG) issues the accounting has become complex and sometimes unwieldy, though. Two widely used reporting standards are Environmental Performance Impact (EPI) and Global Reporting Initiative (GRI). There are lots of others used by individual professional groups, organizations and businesses as they

develop their own CSR models too. So there is inconsistency and a need for more scientifically rigorous and meaningful measures. There's also a need for a common standard, a fairly simple set of key indicators that everyone does the same way, with others for different levels of sophistication in addition. If government reporting requirements were intended as just that, a standard set of sustainability measures, most businesses would still go beyond them in their own areas of concern.

There was lots of excitement about some of the rather positive earnings numbers that some investments in sustainability seem to be generating. Some of it clearly comes from using this new way of thinking about the world to reveal hidden opportunities that others are missing. That's clearly one of the drives behind the present wave of interest. There's also concern with how far "monetizing nature" should go, and whether setting a price on the environment so investors can trade it as a commodity is the same thing as investing in the environment. Lots of the things being measured as ethical values for investing have unclear measurable effects, is another problem, and so it's not clear what it would mean to put a price on them. Only at a larger conference would there be time to hear technical discussion of the hidden liabilities that might lie in how one measures things.

The afternoon concluded with sessions on "anticipating the risks and finding the opportunities" discussing how to recognize the big challenges ahead. There was discussion of the difficulty of meeting the UN's MDG goals in the face of shortages for water and fertile land, increasing costs of food and fuel resources, lack of funding and continued population growth problems and social instability. Another panel discussed the host of problems related to climate change, and the need for economic strategies and technological solutions that are not yet in evidence. What didn't seem to get focused on is the continuing crescendo of diverse environmental crises itself, and where it might lead. That seems to be what the present moment significant, creating the sense of urgency and finally getting the attention of the business community.

It's that visible escalation of the scope and scale of hidden liabilities for how wealth was created in the past that that naturally gives people the palpable sense that our management of the earth is out of control. It's just as natural for business to respond by changing its attitude, and giving a new profession the job of fixing it. To use a football metaphor, for business to seem to so belatedly ask for help when its environmental impacts are reaching a crescendo like this, is in the character of a "hail Mary pass". It's also a way of responding that shows commitment to changing a whole way of thinking, not quite knowing what's ahead, and so is also both courageous as well as desperate.

So while it's obviously good to be "invited into the board room" in effect, having offered to help business find how to fit in with the natural world, it seems likely to be a combination of both blessings and burdens. The job of curing the global addiction to profiting from consuming ever growing quantities of natural resources, and also *continue* making a profit, is quite an extraordinary kind of creative task. In addition to creativity, curing addictions also takes both very strict guidance and unwavering emotional support. So the need to think about that part of

the challenge ahead is what I would have wanted to see more discussion of in the closing session.

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The other half of this “decisive moment” in the meeting of new business strategies and the earth, is how the earth is responding and how those responses could change. How the economy works as a whole is as different from what its smallest parts do and how they work as the things people talk about are different from workings of our own cells and how they communicate with each other. Different scales of organization speak different languages, so it helps to have a visual image for things on unfamiliar scales. For understanding climate change the graphs of radical temperature change over many centuries had visual impact, and seemed to crystallize the understanding of what climate change meant, for example. Not having that kind of image for pointing to our emerging conflicts with the earth as a whole, seems to have been part of why the public and various professions have kept losing interest in it too.

The four figures below show history curves for fifteen different key measures of the world economy since 1971, when most global economic records started to be recorded. They reflect what people have watched and lived through over the past 40 years. Any reader needs to judge for themselves what they mean, but they’re solid data to help in forming an image of the world economy and its present circumstance. I picked curves that seemed to reflect the whole economy’s energy resource demands, available supplies, and their recently erupting prices.

To me the curves show food and fuel demand growing faster than supply, leading to a long period of disruptive price escalation, for key resources for which previous prices had long been fairly stable. Figure 1 shows steadily accelerating growth of end goods and services (GDP), rising by a factor of 3.7 over the period, slower growing energy use rising by a factor of 2.5, and near linear population growth by 1.6, at the end of its historic exponential growth.

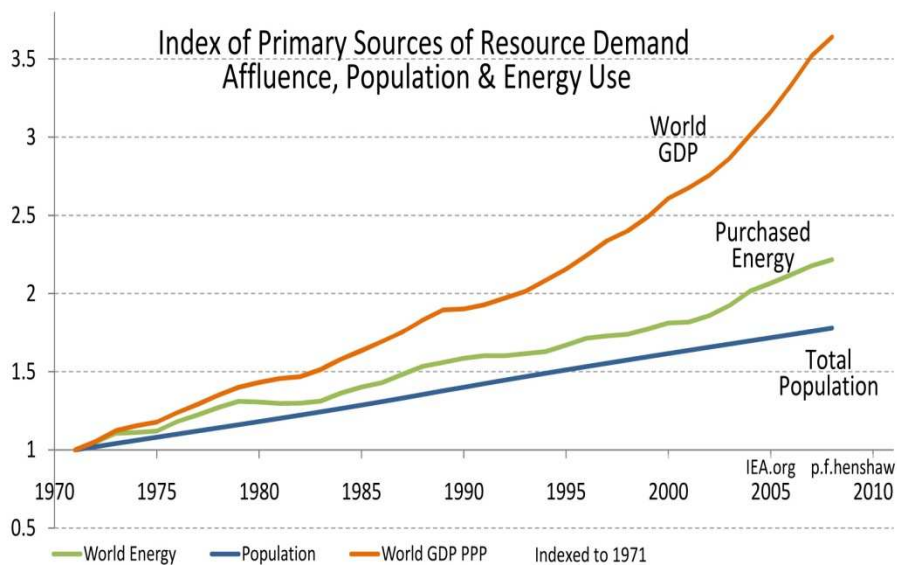


Figure 1 – IEA World GDP, Purchased Energy and Population

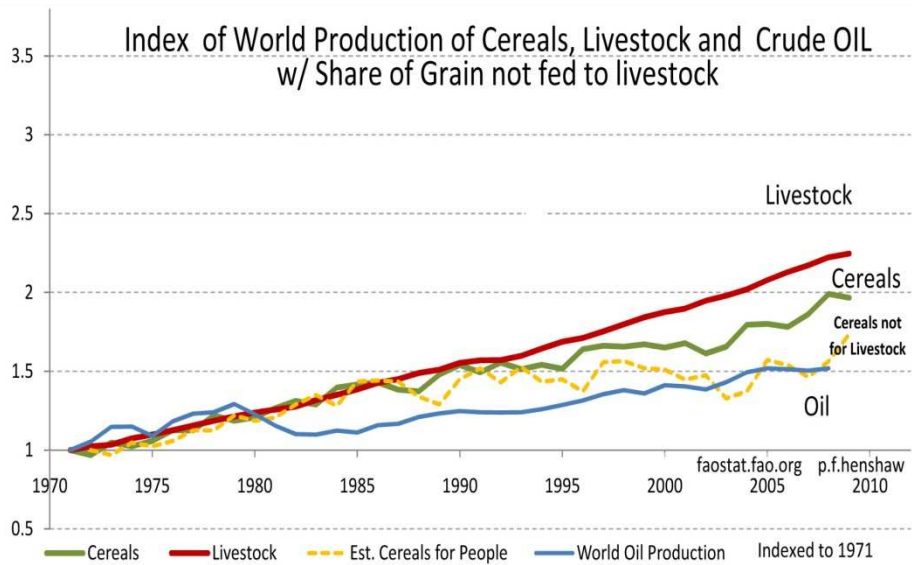


Figure 2 - FAO World Grain and Meat Production index, est. share of Grain not for meat, and EIA Crude Oil

Figure 2 shows relatively lagging resource supplies, with only the production of livestock increasing steadily along with world economic growth and energy consumption. With more people and more wealth there's been a completely flat supply of cereals not fed to livestock since around 1990. An increasing share of that has also been going to ethanol production for liquid fuel, in addition to being used increasingly for animal feed.

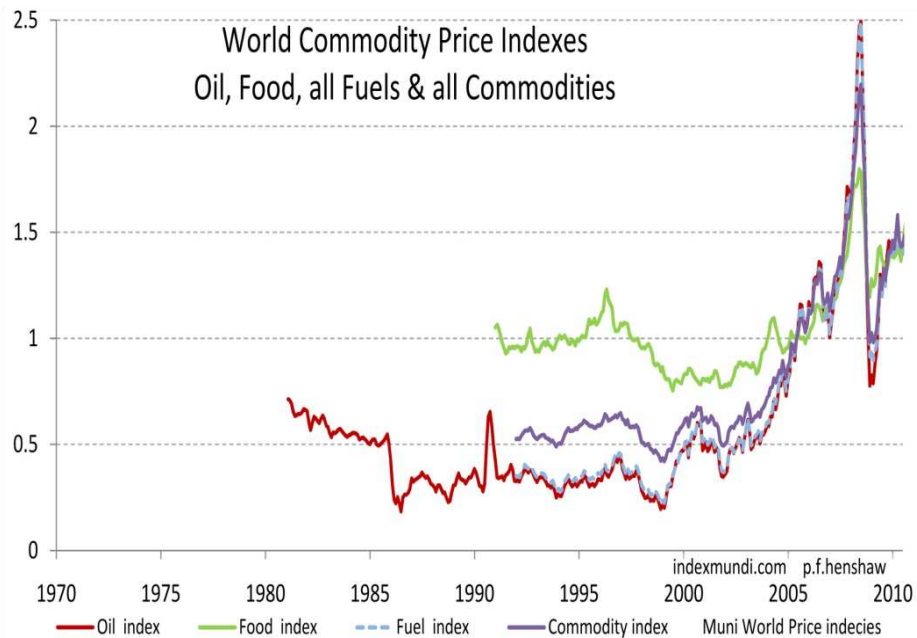


Figure 3 - Mundi World Commodities Price Index

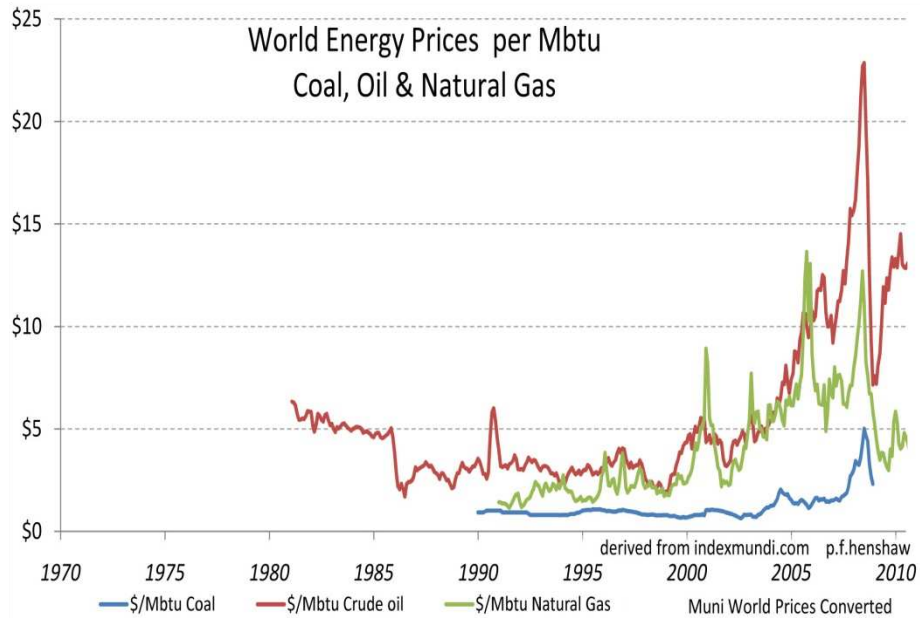


Figure 4 - Mundi World Energy Prices in \$/Mbtu

The question is how those elemental forces are connected to what is seen in Figures 3 & 4, a decade long global eruption of the whole spectrum of food and fuel resource prices, still raging. Why would a “grain shortage” seem to cause radical increases in all commodity prices together, including coal, oil, and natural gas? Well it’s partly because people need to eat, and in a shortage they’ll pay more, responding to demand exceeding supply by paying whatever is necessary. It’s not a matter of food resources going to zero, but a matter of demands by wealthy economies growing exponentially when resource supplies are not.

You can tell it’s a natural behavior of the whole world economy because the price curves are all moving together as a single phenomenon, and... that it neither has a name yet, nor has it been recognized as a subject to talk about in the media. That seems to make it clear that it’s a natural event. When you look at it you’d think someone would really take notice, but it hasn’t been in the news as the enduring global phenomenon it evidently is. Part of what’s so fascinating about it is that this apparent sharp collision between growth and natural limits is exactly what the environmental movement and scientists have been talking about approaching for so long. Seemingly no one noticed when it actually happened, though, because of not knowing what it would look like when it did.

Persistently increasing demand exceeding supply is what Malthus described in the early 1800’s as a naturally caused tragedy of the commons, for exponential population growth naturally outstripping food resources. It’s a riddle of failure by success, that people appear not to have been able to culturally understand or respond to. If it were only that growth systems need to devote the proceeds of growth to something else, fairly practical solutions would seem possible. With human societies being so complex, and people mostly only aware of their own domain, such behaviors of the whole system can be deeply imbedded in all kinds of things, that are both hard to trace and quite impossible to widely discuss.



That no one is in a position to “change the system” is a rather common perception. The interesting evidence running counter to that is that people in their own domains do intuitively understand the problem of needing to limit efforts while they’re still profitable rather well. No one at all would choose to run their lives like a population bomb. There are also many kinds natural systems to study, that evidently maximize their development but also keep working smoothly, managing to avoid ending their organized lives with waves of conflicts at natural limits.

The first sign of the apparent present global crisis of demand exceeding supply seems to be in the price of natural gas, in 2001, when the price suddenly quadrupled (Figure 4). That’s the first time that the graphically clear shape of “market panic” appears, to then be followed by many others in succession. If you study the problem you find key exchangeable resources, that sometimes switch back and forth between serving food and fuel demands. When there is surplus supply they provide flexibility in relieving pressures on food and fuel needs, like arable land for growing either food or fuels, and natural gas to use either to make fertilizer or for fuel. Panic pricing in markets reflects an extreme inability to predict the price, as if multiple markets are going after the same resource, having made plans to get supplies at one price, but then having to bid up the price when there is unexpected demand from others to compete with. The story here may have other important features, but it’s the general kind of story one is looking for to explain profit seeking by cost minimizing people, evidently cooperating worldwide, to drive prices through the roof.

Market panics are not usually just a matter of market manipulation, but an effect of normal profit seeking as resource markets operate in conditions of both inflexible demand and inflexible supply, that also invite manipulation too. It’s a phenomenon of how the global network of resource exchanges works as a whole, evidently responding in a panic to the quite accumulation of signals from nature that she was going to keep raising the price. The usual pattern in the past was for prices to reflect the practical costs of production, but that only works when there is spare capacity.

Why over ten years this new phenomenon didn’t become a familiar story in the news seems to be that this is something both long predicted and very new. This is would actually seem to be the very first time mankind has created scarcity by running up against the practical resource limits of increasing productivity to get more resources from the earth. Nature always had spare capacity before, and our economic system still operates on the myth the it forever will too. That we’ve never seen this before then seems to be a good reason for it looking quite unfamiliar.

What “snapped” in 2001 seems to be explained by the principle of elasticity, that pushing the elasticity of anything to its limits comes to a point of rigidity before failure. So if that’s the narrative you’re exploring for what happened, the hypothesis to test would be that the elasticity of the supply network as a whole reached its point of rigidity in 2001. Then the market system started to respond by exaggerating inequities instead of distributing them.

So, taking on an extraordinary set of tasks, as it becomes increasingly clear how much more extraordinary the problems are becoming than realized,... could easily exceed anyone's personal and professional limits of flexibility. Learning enough about the unfamiliar organic design of our global economic system to alter how it works, under pressure, is an extraordinary learning task. It seems to call for lots of people to give what no one can expect, over and over, presenting challenges that seem certain to be extreme and impossible to plan for. So, in a sense there's just no time left to "hurry up", and perhaps responding intuitively and "rolling with the punches" may be the better strategy than adopting any particular plan. What remains is the sometimes easy choice of whether or not to engage in the learning task as a new part of our lives.

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1. Investing in a Sustainable Future, CSR 2011. Financial Times and Social Investment Forum, Chair - Sarah Murray, 3/9/11  
<http://www.ftconferences.com/csr2011>