



BUSINESS AS USUAL

Another View on Natural Capital

'Prince of Botanists', zoologist and creator of the hierarchical system of nature, Carl Linnaeus brought measurable order to our world. He should have pressed on, applying this vertical arrangement to other fields of study, especially energy and money—the accelerated embrace of which has raised our standard of living while afflicting the environment. How to tackle this contradictory predicament? Enter Natural Capital, a reassuring phrase that works well with our modern economic values, while highlighting our ecological concern. Natural Capital wishes to value the stock (asset), and flow (income) of nature, creating its balance sheet and income statement, putting this information into our national accounts. This apparent use of 'hard' numbers somehow removes it from the 'woolly' realm of sustainability discourse, and magically converts it into one of measurable fact. Veiled in this implicit bargain is placing Natural Capital into the current frame of our economic and monetary system.

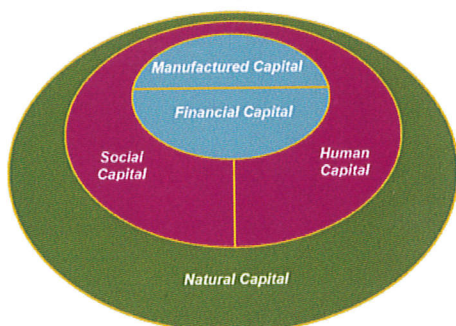


Fig 1

But perhaps some historical context. Natural Capital is resurrecting an old economic idea, one of 'externality'—accounting for hidden costs—but with a new twist, putting nature forward as an asset and its ecosystem services as income (Fig 1). The first to propose accounting for the externality thought process was the English

economist Arthur Pigou (1877–1959), who used Adam Smith's formula of land, capital and natural resources, and then subtracted the cost, the externality. This lasted until Simon Kuznets (1901–85), who in the 1930s used J.M. Keynes' work to put forward the ubiquitous gross domestic product ($GDP = \text{consumption} + \text{investment} + \text{govt. spending} + \text{net exports}$); 50 years later along came William Nordhaus (1941–) who adjusted this to ($\text{consumption} + \text{capital} - \text{externality} - \text{depreciation of nature}$).

All of these abstractions are thoughtful approaches, but Natural Capital is not joining such theoretical worlds. Rather, it is entering an economic system with a dominant hierarchical energy and monetary system. The energy system is fossil fuel-centric as we have moved up the caloric density chain (Fig 2). And to this energy base, we have added our current monetary system which adjusts by what we consider global money over the course of the last century. Global money is always at the top of the money hierarchy, followed by national money, followed by all forms of private credit; all of these monies are combined with open or closed capital accounts, and with managed trade, or free trade. With its inception in 1971, the current money system is based on an American-centric global collateral (the US Treasury) and is best illustrated by Mike Milken (1946–), the original bond king. His economic formula is that Prosperity = (Human capital + Social capital + Real assets) all multiplied by Financial engineering (Fe), where Fe is the ability to alter the capital/debt structure. For Milken, increasing forms of debt equals prosperity; he states it is "debt values that underpin all capital (asset) markets". If the value of the various forms of debt falls, then the economy and assets are in trouble. Our current global debt-centric monetary system has already treated nature as a costless externality; this can be seen in the -58% fall in the ZSL Living Planet Index since 1971, as total credit has risen 38x, allowing us to bring forward tomorrow's consumption to today (Fig 3).

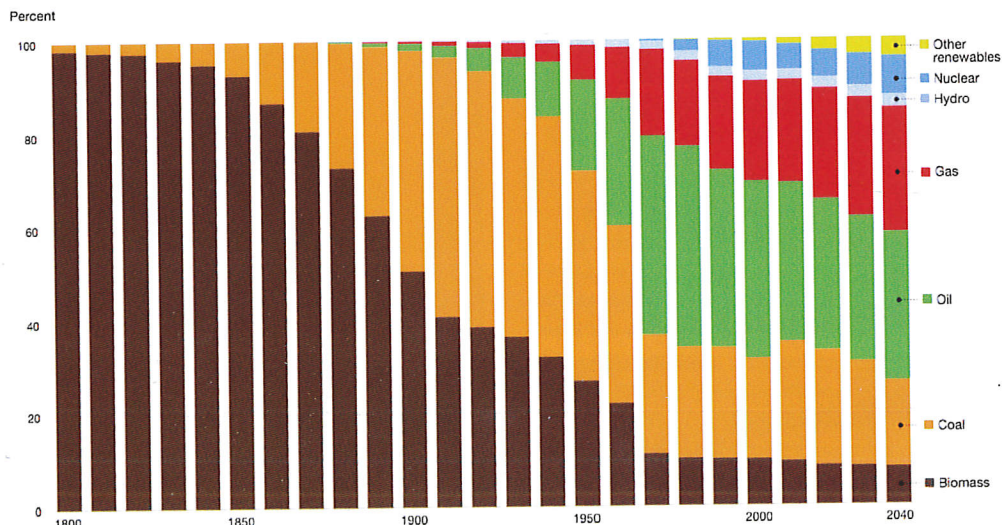


Fig 2

ABOVE:
Sergey Uryadnikov 2016,
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Fig 1:
NCI – Natural Capital
Monitoring
12 Jan 2016

Fig 2:
Vaclav Smil – 'Energy
Transitions, History and
Requirements', 2010

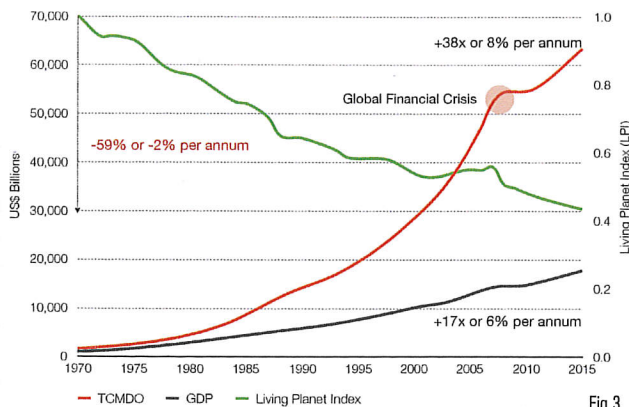
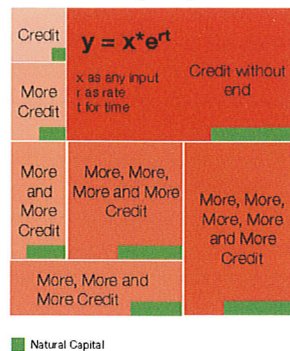
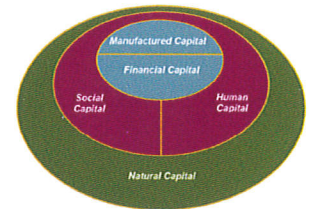


Fig 3

Monetary System



$$P = Ft(MC/FC) \times (RA(NC) + HC + SC)$$



■ Natural Capital joins as a participant to current monetary system

Fig 4

Natural Capital may be unwittingly putting itself forward as an asset to a monetary system that is built on applying financial engineering to the key forms of capital: 'human', 'social' and 'real'. So where does Natural Capital fit into this framework? If you recall the donut of Fig 1 that describes Natural Capital, let us now disaggregate the wording in terms of our current monetary system: 'human' and 'social' capital remain static, 'manufactured' and 'financial' capital become financial engineering, and Natural Capital joins the 'real' assets (Fig 4). By deliberate design finite Natural Capital puts itself forward as an asset of the infinite credit monetary system. So when the Natural Capital protocols state that they make nature 'relevant, replicable, and consistent', the financial-centered collateral world reads it as 'marketable, legal, standardizable, tradeable'. Natural Capital could be perceived as the woolly concept under the cloak of hard numbers and raw data.

Put simply, once nature is put forward as an asset, it simply becomes another asset in the chain of collateral. And if there is now a new asset there must be a corresponding liability—balance sheets must balance. Ironically, by becoming an asset of the credit consumption system, one possibility is that Natural Capital could speed up the rate of decline of nature. Even the eco-systems service 'green economic' model depends on the continuation of our present credit consumption model. The fundamental problem with Natural Capital is that it inadvertently joins the current credit driven model that provides us with the high standard of living and consumption we are used to, presenting itself as a new asset to the system. Our lives revolve around the use of natural resources: what we eat and wear, our building materials, how we travel and even how we communicate. But in this master plan have we simply put nature on the wrong side of the balance sheet; should nature be viewed as an asset? 'Human' and 'social' capitals are *liabilities*, with resources like education, safety and health funded by the taxpayer. Even the 2008

financial crisis bailout was funded by an expanded liability of the central banks' balance sheet. Nature is not our asset but our liability; perhaps we should accept the data and evidence before turning this well-intentioned belief into an educated conviction. Linnaeus would already be mapping the new pathway.

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Capital - A Breakdown

Human Capital: skills, training, education, demographics, male/female ratios and productivity of population

Social Capital: educational, cultural, religious, medical institutions, public services (police, fire), the rule of law, enforceable property rights, structure of government

Real Assets: fossil fuels, industrial and precious materials, real estate, water

Natural Capital: (from NCC) - species, ecological communities, soils, freshwaters, land, minerals, atmosphere

Financial/Manufactured Capital (Financial Engineering): Man-made capital for production and capital markets. Financial engineering is ability to alter the credit (debt-equity) structure

Fig 3:

TCMDO: Total Credit Debt Market Owed Annually since 1970 (not seasonally or inflation adjusted)
GDP: Gross Domestic Product since 1970 (not seasonally or inflation adjusted)
Credit: Federal Reserve Economic Data - St Louis Fed

Fig 4:

NCI - Natural Capital Monitoring
12 Jan 2016

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