

Bigger than carbon: a systemic view

What's it all about?

Think of the environment as a system that is too big to fail. The global value of ecosystems has been partly estimated at c. USD125trn a year. However, resources are being exhausted and polluted faster than ever. We estimate that in 2015, the companies under our coverage alone were responsible for EUR2trn in damages to society through carbon emissions, but also water consumption, land occupation, and air and water pollution. Around 45% of these companies would not be profitable if they had to pay for these damages, which we see increasingly as financially-relevant. In this investor's guide, we have cherry-picked the most innovative and promising approaches to put carbon into a wider environmental perspective and show how they can be used to assess net impact and value-at-risk.

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the environment

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Bigger than carbon:a systemic view World Forum on Natural Capital -Edinburgh November 2017

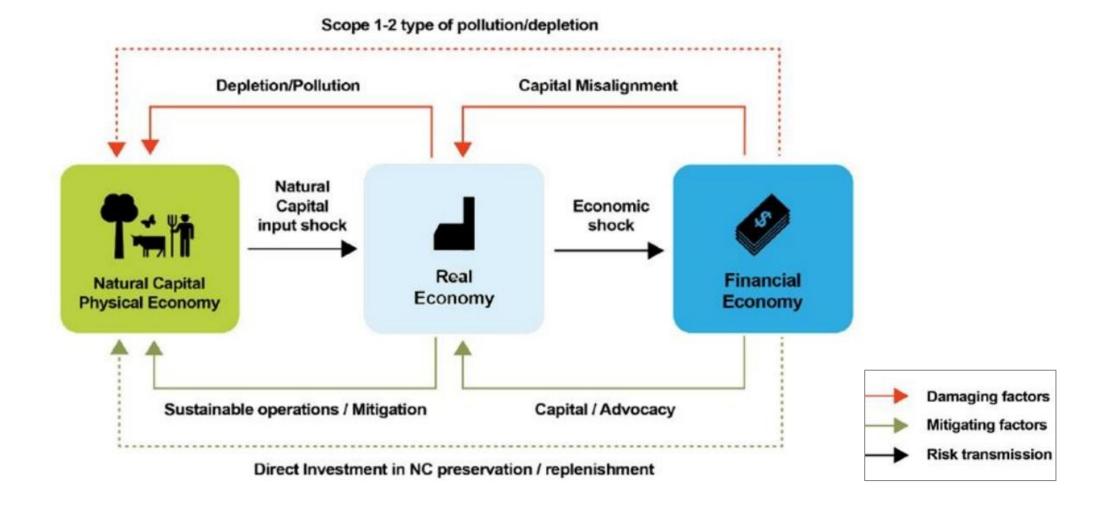


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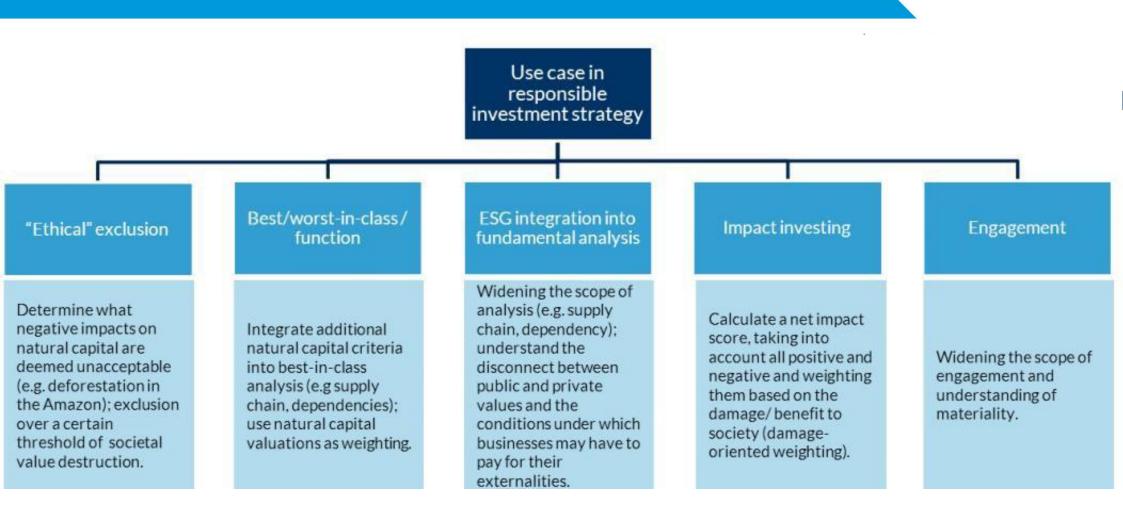
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Think about the environment as a system too big to fail



Source: Natural Capital Financial Alliance. In this report, we only explore the "full" lines, i.e. impacts linked to investments in companies that are themselves exposed to the environment.



All "responsible" investors are unique

500,000 How to choose between sectors/ 450,000 companies that have very different environmental profiles? 400.000 Monetisation can offer a science-350,000 based weighting system. 300,000 250,000 200,000 150,000 100,000 50,000 Forestry, paper & packaging T Hadware Ssenis Construction & noterials Partines & airports Medlech&Services Meals Ining Textiles Apparet Householddurables Auto& Parts Capital Books Financial services Travel & lebute General retail Chemicals ON GREE Utilities Beverages



Health is more than pharma and nutrition! Relative health impact of vegetables and cattle based on 1/ nutrition and 2/ health impact of their production because of the emission of pollution e.g.

	Health impacts					
	Related to environmental pressures:					
	Climate change	Water consumption	Air pollution	Health impacts as a proportion of total environmental impact	Nutrition	
Cultivation of vegetables, fruit, nuts	•	•	•	Over 50%	•	
Cattle			•	Less than 25%		

Complementing traditional financial accounts to understand dependencies on natural capital



Reporting year: 2016. Time period over which assets and liabilities are estimated: 100 years. WACC: 5.25%.

		Value to business	Value to society	Total Value	Of which reported in financial accounts
		€'m	€'m	€'m	€'m
Assets					
1	Timber	3,250		3,250	3,250
2	Biofuels	1,516		1,516	
3	Seedlings	257		257	-
4	Carbon sequestration		2,728	2,728	-
5	Recreational benefits		<1	<1	
6	Wider social benefits		4,617	4,617	-
	Gross asset value	5,023	7,346	12,369	3,250
Liabilities					
6	Maintenance provisions	(3,161)		(3,161)	-
7	Resource provisions		0	0	-
	Total liabilities	(3,161)	0	(3,161)	-
8	Retained earnings to stakeholders		(190)	(190)	
Total Net N	Total Net Natural Capital		7,155	9,018	3,250



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