

Environmental challenges & Investment opportunities

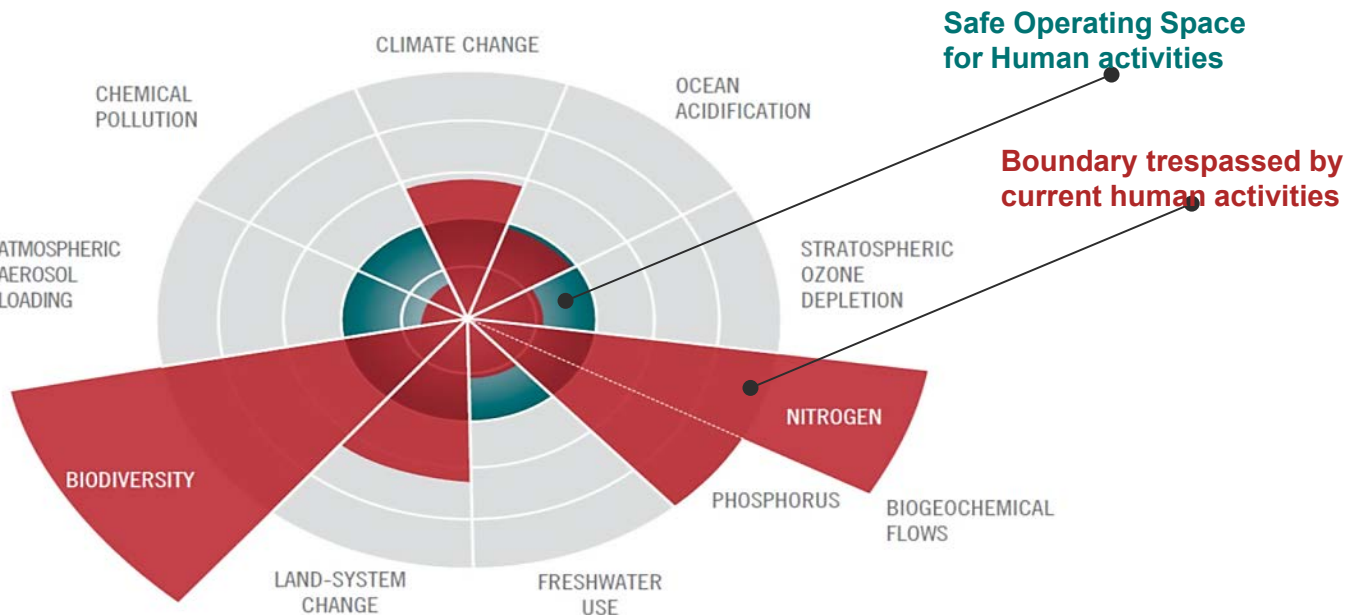
MR MARC-OLIVIER BUFFLE



PLANETARY BOUNDARIES

- › 9 global environmental challenges identified
- › “*Safe Operating Space*” defined as space where sustainable economic activities can occur

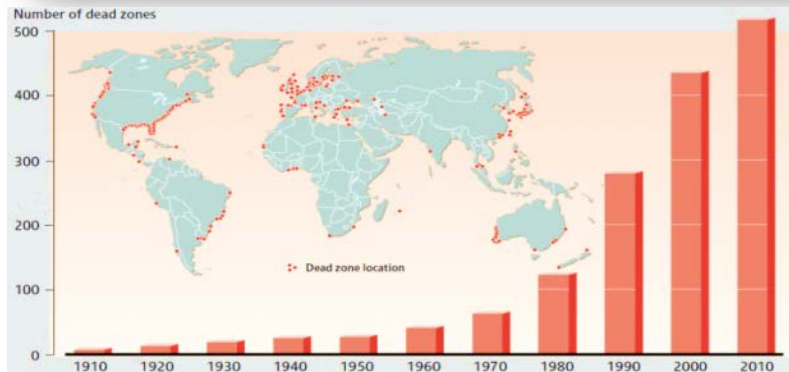
Planetary boundaries framework



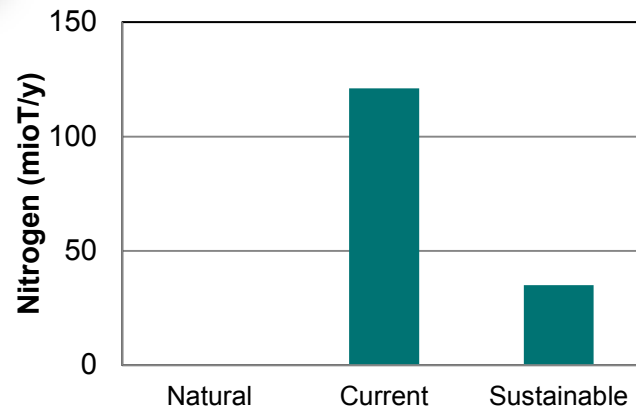
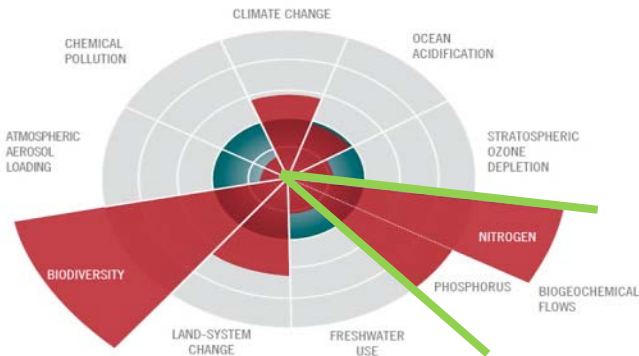
Source: “The trajectory of the Anthropocene: the great acceleration”. Steffen et al. March 2015. Stockholm Resilience Centre, “Nature” September 2009

NUTRIENTS OVERLOAD - NATURE'S OWN FAST FOOD CHALLENGE

- > Overuse of Nitrogen and Phosphorus in agriculture leads to eutrophication ...
- > And cyanobacteria bloom which can represent public health risk

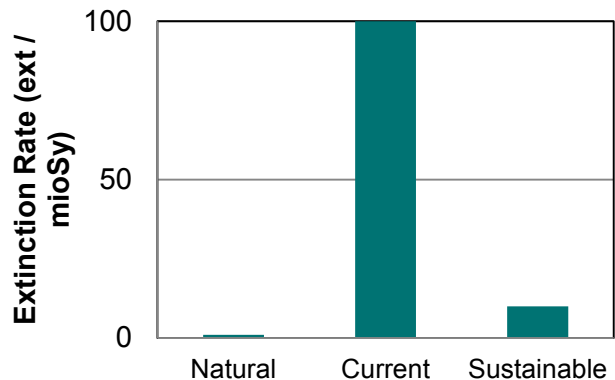
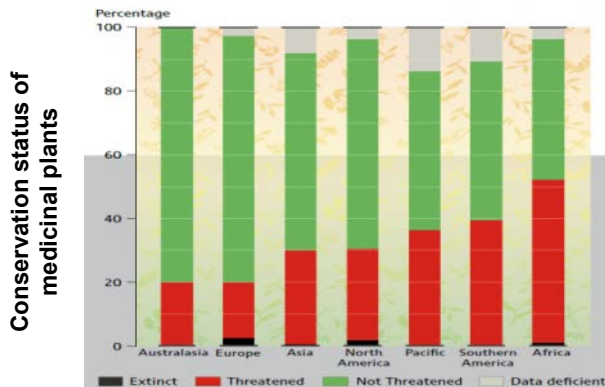
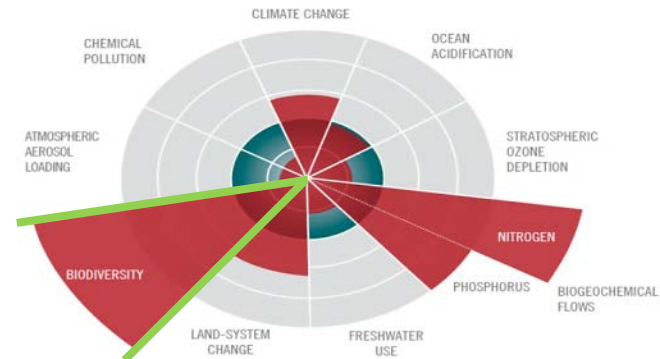


Note: Algae bloom, China. Updated from Diaz and Rosenberg (2008). Science.



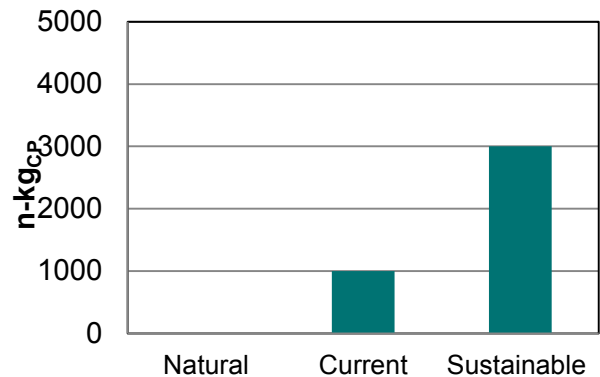
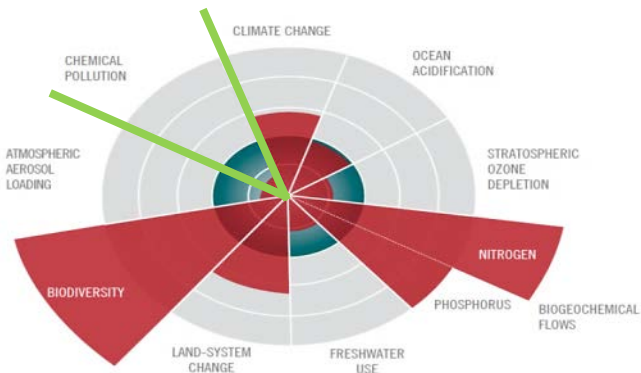
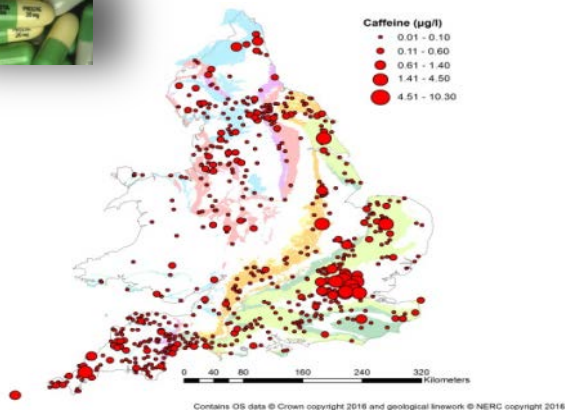
BIODIVERSITY LOSS - EARTH'S 6TH MASS EXTINCTION

- Species disappearing at higher rates than ever before
- Some species of utmost importance (75% of world's food crop pollinated by insects)
- New meds often from undiscovered natural compounds, 25% of drugs used



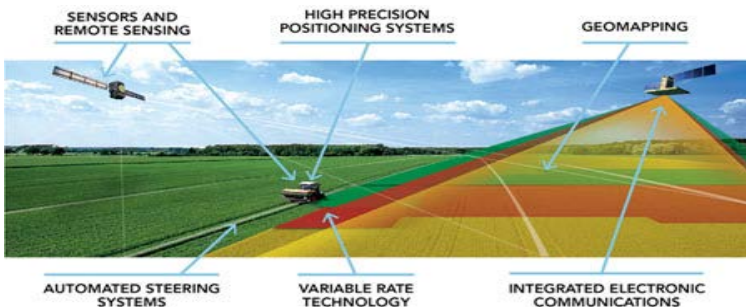
CHEMICAL POLLUTION – NERVOUS FISH

- > 1000 of new chemicals invented each year
- > With advanced analytics found in most surface waters
- > Cocktail effect not understood

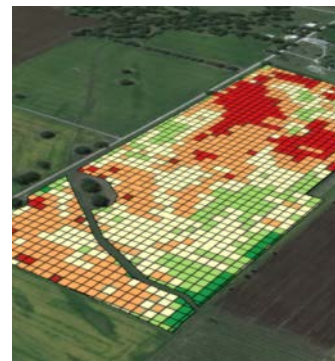
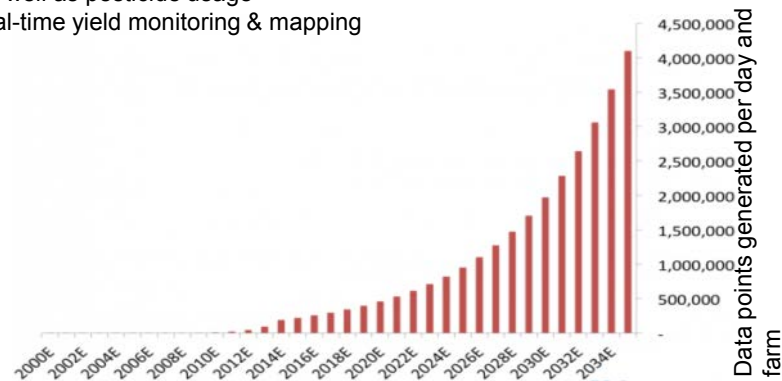


PRECISION FARMING

- > 70% increase in food needed by 2050. In next 50y more food needed than in past 10'000 Y
- > Agriculture is a main user and polluter of water (pesticides, fertilizers) and emitter of CO₂eq
- > Precision farming can reduce CO₂ emission by 50%, fertilizer by >20% as well as pesticide usage
- > Smart strip-till, seeding, crop mngt & crop sensors, fleet mngt software, real-time yield monitoring & mapping

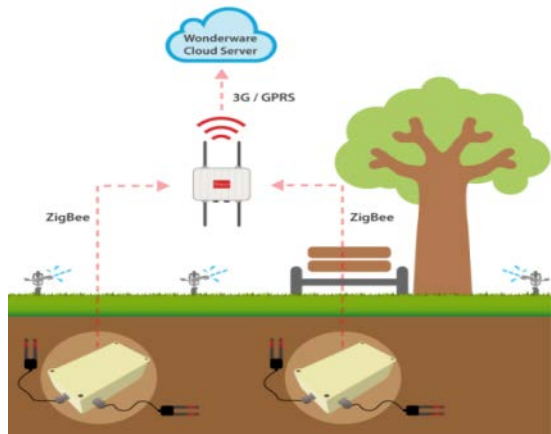


Source: Pictet

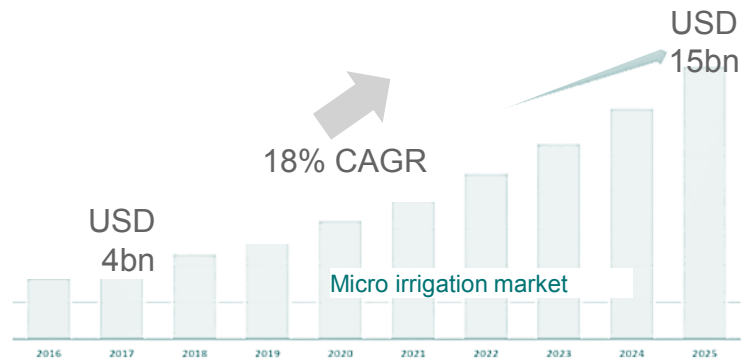


MICRO IRRIGATION

- > >70% of global water consumption is from irrigation, of which 95% is flood irrigation
- > Micro- and smart irrigation can save 30-80% water
- > Precision irrigation leads to less fungicide, herbicide and pesticide usage

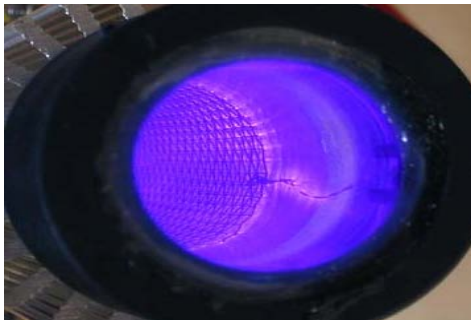
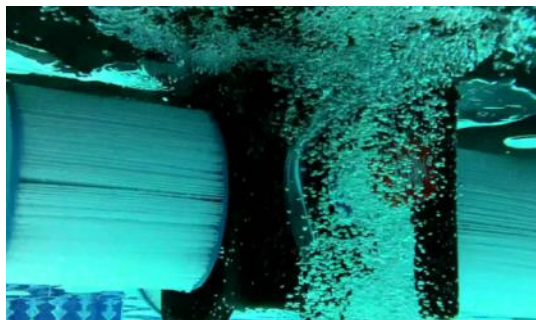
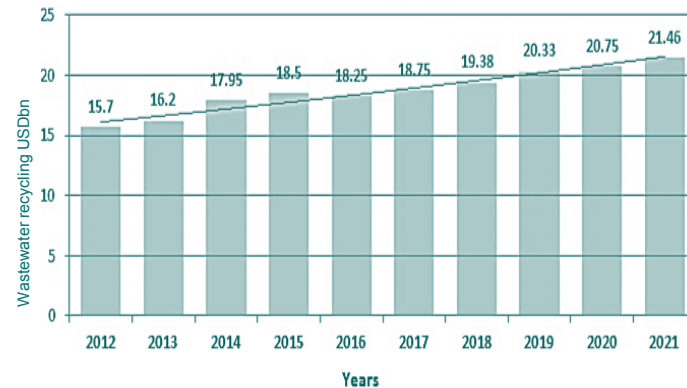
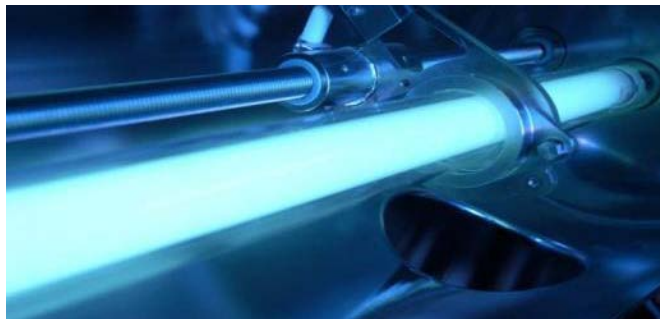


Source: Pictet



WATER RECYCLING TECHNOLOGIES

- > >65% of surface water in Europe and US contain pharmaceuticals from WW
- > In some rivers >70% of fish were female, due to hormones in WW
- > WW a sustainable source of NEW water, once recycled
- > Needs advanced technology to remove micropollutants
- > Growth of wastewater recycling market is 20% p.a.



ENVIRONMENTAL MARKET

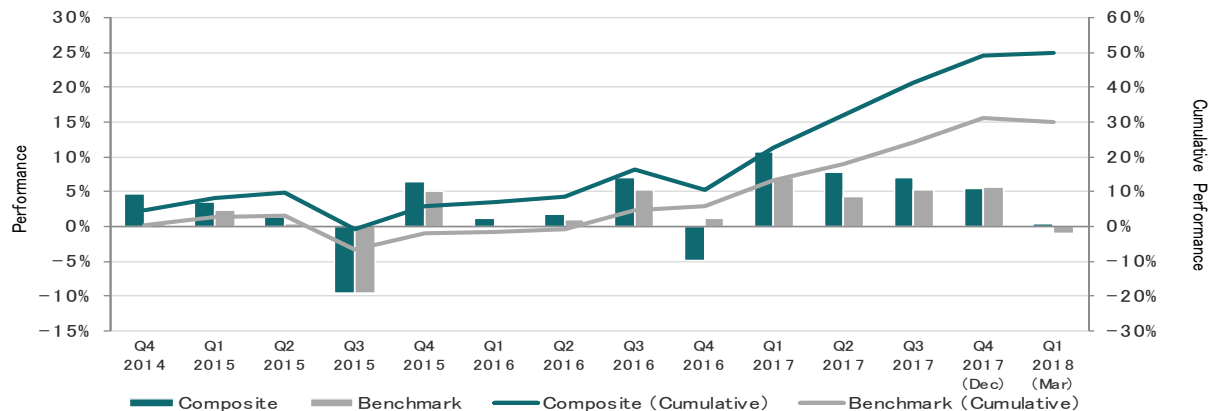
A \$2 trillion market growing at 6-7% p.a. with a broad impact on the economy

		Energy & utilities	Transportation	Manufacturing	Infrastructure & buildings	Agriculture
Resource efficiency	Energy	Renewables	Hybrid & electric vehicles	Industrial automation	LED lighting	Precision agriculture
		Energy storage	Light materials	Virtualization, 3D simulation	Thermal insulation	Smart irrigation
	Water Soil	Smart grids	Fleet management	Power electronics	Building automation	Food waste reduction
		Biomass & waste-to-energy			High-efficiency appliances	
Pollution control	Air	Produced water treatment	Automotive catalysts	Wastewater and solid waste	Wastewater treatment	Sustainable agriculture
		Waste management	Parts recycling	Air and water quality testing	Point-of-use purification	Food testing
	Water Soil	Air treatment & pollution control		Air treatment & pollution control		
				Green chemistry		

Source: Pictet Asset Management

PICTET GLOBAL ENVIRONMENTAL OPPORTUNITIES

Performance since inception

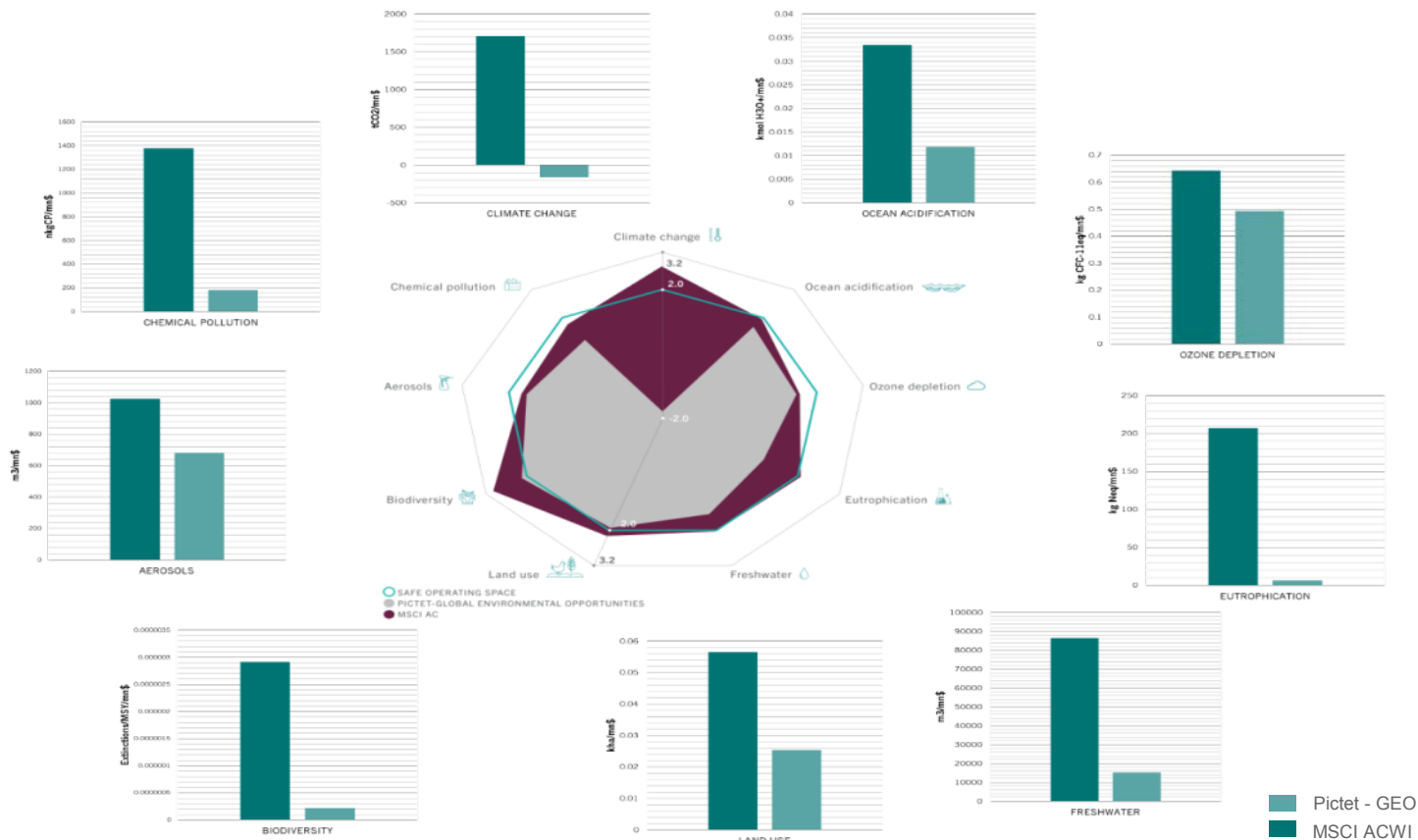


Source for all tables and charts : Pictet Asset Management as of 31.03.2018

PERFORMANCE (ANNUALISED BEYOND 1 YEAR)	PORTFOLIO	BENCHMARK	RELATIVE	RISK MEASURES 3 YEARS	PORTFOLIO	BENCHMARK
1M	-0.72	-2.14	1.42	Annualised volatility (%)	11.30	10.84
3M	0.45	-0.96	1.42	Tracking error (%)	4.63	-
YTD	0.45	-0.96	1.42	Information ratio	0.59	-
1Y	22.21	14.85	7.36	Beta	0.95	-
3Y	11.38	8.12	3.26	Sharpe ratio	0.90	0.64
Since inception 30.09.2014	12.21	7.75	4.47	Performance Gross of fees in USD as of 31.03.2018		

Source: Pictet Asset Management 31.03.2018

ENVIRONMENTAL IMPACT PERFORMANCE



Source: Pictet Asset Management as of 31.12.2017

For more information, please contact

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