Climate change is not our only problem, but there is a solution

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When reading the news one gets the impression that the world is currently facing three main problems. Two of these, the Covid-19 crisis and the resulting economic costs, are hopefully only transitory thanks to the recently developed vaccines. In contrast, climate change seems to be a more permanent problem for which the world just doesn't want to find a common solution and that looks like it is here to remain.

The recently published UNEP Emissions Gap Report 2020 provides some news that should make us very pessimistic about the path that we are taking: instead of the required reduction in CO2 emissions, the past years have actually seen an increase thereof, likely leading to a rise in global temperatures of 3°C by the end of this century. This is a disastrous evolution, too far away from the 1.5°C warming that is expected to yield controllable costs from climate change.

The common rhetoric is that if we solve this climate problem then our world will be back on a path of sustainability. What tends to be forgotten, however, is that our vast CO2 emissions are only one of the side effects of our lifestyle. There are similarly pressing problems that should not be forgotten, and they are all associated with our increasing demand, our wish for economic growth, and our inert need to catch up with the Joneses.

It was my father who introduced me, some years ago, to the *State of the World* books that had been written by the Worldwatch Institute. This series of books gave an annual update on whether or not the world was shifting towards a sustainable development, or one where our never ending desires make us deplete the resources provided by our planet even further. These books covered time series showing the evolution of our world's forest area, of our marine life, of biodiversity and similar measures that are important to understand how our lifestyles intervene with nature. While these books are not updated any longer, a recent article has been published in the journal *Frontiers in Conservation Science* which has been written by a large group of conservation scientists and covers similar issues as the State of the World books did until recently. Again, the news are anything but relieving.

The main points of the article are as follows. Firstly, we are currently in the phase of the sixth major mass extinction of species (defined as a loss of around 75% of all species on the planet in a short period of time). Secondly, we are consuming at a level that is roughly equal to 170% of the Earth's regenerative capacity, up from 76% in 1960. Thirdly, as also suggested in the Emissions Gap Report 2020, CO2 emissions are still increasing on a global scale instead

of decreasing. Overall, as is clearly stated by the authors, most nature-related targets from the United Nations Sustainable Development Goals have not been met.

It is clear that even if we manage to find a consensus on how to tackle climate change, and even if our efforts then are strong enough to limit climate change to 1.5°C warming, even then there will be huge tasks ahead of us, in terms of resource conservation and biodiversity loss prevention. These additional problems are clearly the result of our lifestyles, which derive from our wish to make our lives simpler and more pleasant. The issue is that resource conservation and biodiversity loss need to be dealt with at a similar level of scale and global governance as climate change, and we should therefore expect similar problems of global governance in order to solve them.

Economists have a general solution for these problems as they are essentially consumption-based, which works in most cases: provide an adequate price signal that effectively internalizes the indirect costs of our lifestyles. In other words, if there are two products, an environmentally friendly one and one which is not, then the dirty product should be priced in such a way as to take its impact on the environment into account. This will help direct our consumption behaviour towards the required sustainable path, and it does not require fundamental changes to capitalism or the likes. However, it requires the full support from both voters and the policy side, which is very difficult unless consumers obtain immediate feedback about the (often negative) impact of their consumption behaviour. A price would give this immediate (negative) feedback, but without the necessary support there will not be this price signal in the first place.

There is, however, one way in which this cycle can be broken. One could label each product with two prices – the current market price, and a hypothetical price that the product would cost if all its environmental impacts were included. This provides a signal to the consumers that allows them to compare similar products and understand how much more damage they are doing by preferring a product that the market prices more cheaply, but that would be more expensive if all its environmental impacts were taken into account. This would also familiarize consumers with the concept of a price that internalizes the environmental costs of a product (and potentially its life cycle costs) and thereby could be used as a first step towards introducing prices that fully internalize the externalities of all products on the market.