



How Can We Protect Nature?

In this article I outline my policies that I believe will aid governments around the world in protecting and restoring natural environments.

My first proposal is that governments abandon their use of GDP as a measure of one's economic success and wealth- for this suggests an ignorant approach to sustainable development- and adopt an inclusive measure of wealth that considers the accounting price of capital goods. By considering the social worth of an economy's assets, the ability for economies to record periods of economic growth at the expense of depreciating natural capital, in turn degrading the natural environment will be stifled. In doing this governments worldwide can be alerted that they are grossly abusing the natural environment- awareness of this issue is critical for the protection of nature. Following this, I recommend targeted fiscal expenditure into nature based solutions such as the conservation and restoration of vegetated coastal habitats. This not only contributes to the sustainable management of natural or modified ecosystems,

but also provides a multitude of benefits to human well-being and biodiversity. A contemporary example is the coastal realignment that took place at Medmerry on the east coast of England. The scheme reduced flood risk in the area to 1/1000, while also creating 300 hectares of intertidal habitats, namely mudflats, and salt marshes, contributing to the enhancement of sediment accretion acting as natural barriers to flooding, allowing for the provisioning and maintenance services of nature to continue without disruption (Environment Agency, 2016). Marine vegetated habitats only occupy 0.2% of the ocean's surface, yet contribute to 50% of carbon burial and marine sediments, therefore it is imperative that we spend more in these areas as mitigating climate change signifies that natural environments can be protected with regards to their ability to host a variety of species (Dasgupta, 2021). Generic criticisms of nature based solutions are that the simplistic approaches can entail perverse outcomes with insufficient planning, however if governments can display prudence when assessing the costs and benefits to potential

sites of interest, this approach can be particularly effective at protecting natural environments. I again reference the Medmerry case study: the £28 million investment (The Guardian, 2013) involved creating a fishing nursery, a source of local tourism in the area, benefiting the local economy. This is relevant as on average, for every US\$1 million invested in nature based solutions, close to 40 jobs are created (Dasgupta, 2021). The multiplier of these types of investment are marked, with evidence that 70% is reinvested or spent locally (Dasgupta, 2021). A priori, we can observe that the jobs created will result in some workers being better off (they could have been unemployed prior). As this

The protection of the oceans beyond the 200 mile exclusive zone should be subject to international control, given that the costs of overusing resources is inflicted upon everyone, known as the tragedy of the commons theory. Governments must implement taxation on transportation and ocean fisheries to prevent over-exploitation. This could extend towards land, where extraction fees have the potential reduce the impact inequality caused by our excessive demands of the biosphere relative to its regenerative rate. Revenue generated could then be reinvested into the finance of sustainable projects for example habitat restoration in developing

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shift occurs, it is likely we see an increase in those who are more amenable to paying more for certain goods, assuming they are made in a sustainable manner- the Environmental Kuznets curve would suggest this, therefore over time the product of nature based solutions would likely be reduced environmental degradation and depreciation of natural capital.

It is essential to emphasise the importance of governments worldwide directing public finance towards the conservation, restoration and sustainable use of nature. This is because we can observe multiple states amplifying adverse environmental externalities by paying people more to exploit natural capital than they do to protect it. Such profligacy takes the form of extensive perverse subsidies to fisheries, energy companies and more, encouraging over extraction and harvesting of the biosphere. It is estimated that direct subsidies that are harmful to natural environments total US\$500 million each year (Dasgupta, 2021). This must cease, given that aggregate finance flows towards improving natural habitats are around US\$143 billion per annum, around 29% of the value of subsidies (Dasgupta, 2021). With the issue of 'free-riding' being particularly prevalent in nature, it is understandable why there is limited incentive for firms to invest, so governments worldwide must account for this. Pigouvian taxes must be imposed on activities that are particularly polluting, internalising reciprocal externalities that are commonly associated with global public goods such as the world's oceans.

countries as the ecological footprint of these economies is minuscule in comparison to high income countries- sub-Saharan Africa's footprint amounts to only 6% of the global footprint (Dasgupta, 2021). They cannot be held responsible for our unsustainable interactions with nature, but equally may not be able to finance nature based solutions, therefore it is equitable to assist them, for this is a global effort.

My final proposal is that governments around the world make use of findings by behavioural economists. Research in psychology shows that there are systemic biases in our reading of the world and in the choices humans as individuals make: these are simply biases in the manner in which one takes in information and responds. This is of importance as it means that governments can stimulate shifts in behaviour by intelligently setting default options on consumer's energy plans when using online applications. When a green energy supply was made the default, 69% of people in a trial of 40,000 households ended up choosing it, compared to 7% when it wasn't the default option (Dasgupta, 2021). Studies like this emphasise the effectiveness of 'nudging' consumers to take the more ecologically friendly option- this must continue to protect natural environments.

In conclusion I believe these policies would effectively address the issue regarding the protection and restoration of natural environments, mainly through nature based solutions and forms of government spending, signifying sustainable interactions with the biosphere