



“Natural capital, the world’s stock of natural assets, provides a stream of benefits to humans. For a sustainable global value chain, we need to account for the contributions of our natural capital to our economic ecosystem and society.”

-Sherien ELAGROUDY

Image Source: Green hedges in rural agricultural areas contribute to biodiversity and water resources preservation, a key asset in times of mounting drought episodes. Although they bring significant environmental services, they are too often in competition with intensive agricultural practices. Replanting them when they have disappeared gives an idea of the magnitude of the hidden value of natural capital. On the photography, replantation of green hedges in Normandy (Orne District, community of Le pays fertile et le bocage carrougien), an investment of circa €10K /km (or €100K for 10 km), and the result of long preliminary land management negotiations. Image by Nicolas J.A. Buchoud, all rights reserved ©.



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A perspective on accounting for natural capital in the global value

Every part of the total global value chain depends on natural capital such as forests, rivers, minerals, oceans, air, and land. Humanity is now witnessing its dominant impact on the operation of the biosphere and its natural capital. It is essential to account for natural capital within the global value chain to transform actions, technologies, and developments towards a circular economy.

Up until the industrialization era, humans did not account for their impact on the ecosystem. Today, we are experiencing the undeniable impacts of climate change and biodiversity loss; we have realized that human activities are damaging the biosphere. For example, over the last century, water engineering and irrigation systems that control river discharge to oceans have modified the hydrological behavior of water resources and have caused irreversible losses (UN-Water 2009). Moreover, the global population

has already consumed approximately 50% of all renewable freshwater sources, which has led to considerable ecological disturbances such as the vanishing of 50% of the biosphere's wetlands (Gleick and Palaniappan 2010).

Ecological economists have introduced the concept of natural capital with a focus on 1) evaluating the magnitude of human activities and ensuring that they are ecologically sustainable, and 2) efficient and fair distribution of resources between the current and future generation ("Investing in Natural Capital" 2013). Natural capital comprises non-renewable resources such as oil, coal and minerals. Renewable resources include ecosystem services which make human life possible, ranging from the air we breathe, to the water we drink, the food we eat, and even the inspirations we gain from the beauty of nature and wildlife.

In short, natural capital can be described as the world's stock of natural assets that provides a stream of benefits to humans and their economic ecosystem. Degradation of this natural capital therefore poses risks for the economic system, including for the financial institutions that invest in these businesses.

The last decade has seen increasing investments in natural capital to preserve natural ecosystems. Efforts have also been made to quantify natural capital to make it perceptible within the economic system. Altogether, this has spurred further investments. For example, natural capital

accounts for 30-50% of the total wealth of African countries but it is being depleted in several of these countries, negatively affecting their economies and making livelihood improvements of the underprivileged only slightly noticeable (Lange, Wodon and Carey 2017). Some countries like Uganda and Rwanda have adopted the World Bank-led Wealth Accounting and the Valuation of Ecosystem Services (WAVES) program (“About Us | Wealth Accounting” 2016), which aims to measure the contribution of natural capital and ensure that natural resources are represented in national economic accounts, thereby providing these countries with a better understanding of the trade-offs of their investment choices (Lange, Wodon, and Carey 2017).

After implementing WAVES, Rwanda has witnessed improvements in its land accounts. Policymakers were able to study trends in land use and changes over time, thus leading to better land management nationally (“Natural Capital Accounting | Wealth Accounting” 2018). In 2019, Egypt joined the WAVES program and is working towards developing air emission, waste, and coastal ecosystems accounts (“Natural Capital Accounting | Wealth Accounting” 2018).

For the global value chain to function sustainably, we need to consider accounting for our natural capital and its important services to business, economy, and society.

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