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Natural capital underlies everything



Over 800 experts in many fields met recently in Dubai to prepare for the World Economic Forum's annual meeting at Davos. No less than 75 major global problem areas or domains were identified, and each was assigned to a Global Agenda Council of a dozen experts to brainstorm and distill into broad lessons for global cooperation. I was asked to chair a council on the loss of ecosystems and biodiversity — or natural capital — but as we began deliberating we soon found that the problems of our domain were shared by — or, indeed, caused problems in — no less than 40 of the others.

Councils evaluating global risks (freshwater scarcity, food scarcity, nutrition, pandemics, catastrophic events, and illicit trade), for example, all saw ecosystem and biodiversity losses as key underlying drivers. The council on migration found that its biggest problem arose from the dying tropical coral reefs and fisheries — potentially producing 200 million migrants. Security concerns (fragile states, human rights) were connected to the availability of the goods and services of nature to poor people. All regional councils — from Australia to Latin America — had big issues rooted in misused natural capital. Climate change — through ecosystem-based mitigation and adaptation and ocean governance — through questions over the survival of ocean fisheries were also inextricably linked with ecosystems and biodiversity.

When I mentioned this to a friend from another council, he raised his eyebrows, and said, “Well, I am not surprised. All the other councils live inside yours!” That says a lot: that the Earth is our only home, and that its ecosystems and biodiversity — the physical and living fabric of the planet — provide us with air, food, water, fuel, fibre, and a host of ecosystem services that make the planet habitable for humanity.

Natural Capital — ecosystems and biodiversity providing benefits for humankind — clearly underlies everything. Yet, the annual loss of land-based Natural Capital — in terms of lost human welfare benefits from forest loss alone — has reached \$2 trillion to \$4.5 trillion. Why have such significant capital losses escaped public scrutiny and adequate policy responses? I believe it is largely because of the economic invisibility of Natural Capital, as most of its goods and services are “public goods”, delivered free directly to the beneficiaries, and also are mostly unmeasured and unmanaged.

It is, for example, not reflected in national accounts. As we know them, these date back to World War II and the Marshall Plan when economists Richard Stone and James Meade with support from J.M. Keynes designed them as a way of keeping track of economic activity. Given the circumstances, their framework was necessarily “industrial” in its essence: there was no space in it

for environmental degradation and sociodemographic developments. After the War, the same framework carried on and was adapted to create the GDP measurement now used around the world.

The creators of GDP realized its limitations. “The three pillars on which analysis of society ought to rest are studies of economic, sociodemographic and environmental phenomena,” said Richard Stone in his 1984 Nobel Memorial Lecture. He added that his work had focused mostly on economic accounting and that he had not been able to spend much time on its environmental equivalent even though he understood that “environmental issues, such as pollution, land use and non-renewable resources offer plenty of scope for accounting”.

Thus the creators of the current system of calculating GDP thought of it as work-in-progress, and admitted as much 25 years ago. Unfortunately, the world has continued to focus much of its energy on maximizing this incomplete and out-of-date paradigm.

Our economic compass is faulty and must be updated, better to reflect the roles of human capital and natural capital. We must ensure that the costs and benefits of conserving nature are calculated as best possible, are recognized by leaders, businesses and citizens alike, are included in society’s accounts, and are managed so as to be distributed more fairly across communities and sustainable for generations to come.

*“We need
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Presenting solutions to the economic invisibility of natural capital and describing ways in which the flows from it can be recognized and rewarded is the main purpose of TEEB, our project on The Economics of Ecosystems and Biodiversity — now part of UNEP’s Green Economy initiative — which will present its results to the Convention of Biological Diversity in October. TEEB reports and the *Green Economy Report* both address modern capitalism and its discontents, and recommend many ways in which to reform policy and organize markets to produce greater wealth, more decent jobs, and less poverty. Natural Capital, its values, and better use, are both at the heart of TEEB, and an important component of the future Green Economy.

For capitalism to work, capital itself must be recognized in all its dimensions — physical (financial assets, other human-made assets), human (education, health), social (communal harmony, human relationships, etc.) and natural (rivers, wetlands, forests, coral reefs, etc. and their resident biodiversity). This thought is not new: it goes back to Adam Smith’s basic economic resources “land, labour and capital”. But in Smith’s day, land and labour were plenteous — and colonization expanded their supply. Energy was not even a major factor of production. The scarce resource was financial capital. How times have changed!

We now need a “three-dimensional” capitalism, including natural and human capital. We need a “Green Economy”, which harnesses the productive potential of nature to increase Earth’s biocapacity, and thus to ensure greater human well-being and its equitable distribution. We need to think of natural capital not as a subordinate asset class — a source of “stuff” for our production engines — but as a complex and valuable ecological infrastructure that simultaneously provides us goods (food, fuel, fibre, etc.), services (air cleansing, freshwater regulation, climate regulation, etc.) and ideas (bio-mimicry applications which can radically transform production as we know it). We need a combined policy and business focus on rebuilding Natural Capital, so that its largely free contributions to human welfare can continue to benefit not just us and our children, but generations as yet unborn.