

Environmental Services - an Increasingly Important Asset

Swedbank, 26 november, 2013

Co-organised by: SIANI, Stockholm Environment Institute (SEI), Stockholm Resilience Centre (SRC), Swedish Water House and SWESIF

In November 2013, economist **Pavan Sukhdev** visited Sweden to receive this year's Gothenburg Award for Sustainability. Pavan Sukhdev has made a career in banking, and is now working as the CEO of GIST, a specialized advisory and consulting firm that helps governments and companies to identify, measure, assess and manage their impact on nature and ecosystem services. *The Economics of Ecosystems and Biodiversity (TEEB)* project, led by Pavan Sukhdev, has already led to different accomplishments and numerous local and national studies. The *TEEB for Business Coalition* is picking up further activities and recently renamed itself to the *Natural Capital Coalition*.

Moderator: Johan L. Kuylenstierna, Executive Director SEI

Every day we use products and services without thinking of the value of the natural resources and environmental services which enable production. Generally speaking, business and society depend on biodiversity and functioning of ecosystem services in order to create wealth. Ecosystem services are provided to us for free by nature; these services allow us to produce food, clean water and energy. Our economy depends on ecosystem services, yet they are an unvalued component of our economy.

Key Messages from the Seminar:

- We depend on nature! Growing attention from policy makers, bankers and investors is increasingly contributing to the public debate on ecosystem services.
- The GDP of the poor is highly dependent on ecosystem services. Depriving small farmers of their ecological resource base would not only be an ecological and food-supply disaster, it would also leave about one billion people without alternative income.
- You cannot manage what you do not measure: There are various business risks associated with the ecological impacts of a company, all of them lacking quantitative analysis.
- Negative externalities of the top 3000 companies sum up to USD 2,15 trillion per year. Our economic system cannot continue to ignore this.
- Reporting has to shift from private physical capital to a broader stakeholder perspective, using standardized sector-wide methods to measure externalities.



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- The risk of inaccurate estimates of externalities along the value chain is far smaller than the risk of not acknowledging them at all. Even the roughest estimate will help to strengthen the right of the poor to access the affected resources.
- Use the right language and information for the right people! Think of managers, investors and poor farmers alike. Even the poor have to know about their rights and exposure.

Pavan Sukhdev opened up the seminar by explaining how he, as an economist and banker got involved in ecosystem economics. "It bothered me that people don't understand the difference between price and value." Even though he was frequently considered a somewhat strange banker with his love for nature, roaming in the forest, he clearly states a different, more conscious attitude towards ecosystems among many of his colleagues today. We depend on nature and the reason why we notice an increasing importance of ecosystem services in public debate is that it receives growing attention from policy makers, bankers and investors.

The great rainforests, notably the Amazon Basin, are rainfall factories and essential drivers of the global water cycle. A film from the National Center for Atmospheric Research (NCAR) was shown which impressively illustrated the role that the Amazon Basin, the Congo Basin and the Indonesian Archipelago play in producing the "heartbeat" that drives global weather systems. There are no means to convert these services into a market place or even tell the clouds where to rain and induce financial transactions. But this does not mean that it cannot and should not be protected. On the contrary, estimates show for example that the Rio Plata basin is supporting an agricultural economy of USD 240 billion, entirely dependent on the Amazon water "pump" putting 20 billion tons of water into the air daily. We cannot ignore the economic dependency on ecosystem services even though we lack the instruments to value them.

In the current economic paradigm there is a false dichotomy between development and conservation, partly due to the fact that ecosystem services are not part of the GDP. This failure is understandable since financial flows currently do not incorporate these costs. According to Sukhdev however, there are so many rough estimates in calculating GDP, that we could easily add those for ecosystem services. The risk of incorrect estimates is far smaller compared to the risk of not acknowledging them at all.

Considering the "GDP of the poor", and including estimates for the costs of ecosystem services shows that in India, Brazil and Indonesia, ecosystem services contribute approximately 50 to 90 percent to the "GDP of the poor". According to Sukhdev, this was one of the most significant results of the TEEB-process. This part of the economy is mostly driven by small subsistence farmers. Depriving them from their ecological resources would not only be an ecological and food-supply disaster, it would also leave about one billion people without alternative incomes with all the implications this would have on other aspects like education, health services etc. National economy and development must not ignore these dependencies.

TEEB for Business Coalition, now *Natural Capital Coalition*, is working intensely on analyzing these types of dependencies, impacts and risks since they are of growing interest for companies. Some of these dependencies can even serve as business opportunities. Ex-



amples include Green Carbon (i.e. using growth of natural carbon sinks as part of emission trading) but also the intellectual property of nature can be used as a driver for innovation. Biomimicry for instance, can use 3,8 billion years of evolutionary knowledge embedded in nature and transform this information into a thriving business. In light of this, a significant reflection is that nature does not produce waste – thus putting human waste issues into the light of a systemic design failure, and thus calling for innovation.

There are numerous risks that are associated with the ecological impacts of a company, such as business disruption, resource prices and even reputational risks, all of which arise from a lack of quantitative analysis. But you cannot manage what you do not measure. The same is true for externalities. A report by *Trucost* produced for *UNPRI 2010*, estimates the negative externalities for the top 3000 companies to USD 2,15 trillion per year. Not all impacts can be measured, but if they are of this magnitude, they cannot be ignored. How can something that is so important be so completely ignored in our current economic system?

Many of these externalities directly relate to the so called “Planetary Boundaries” and more specifically the boundaries that are related to ecosystems and biodiversity. However, change will only come about when considering the relevant drivers. Macroscopic issues touching planetary boundaries like excessive demand, underpriced supply, resource depletion and public capital loss, all have their drivers on the micro-level. Thereby solutions will be found on the micro-level: reduce blind consumerism by responsible advertising, measure and disclose externalities in order to reduce externalized costs and promote resource taxes instead of perverse subsidies.

To create change, we need to involve the private sector where a significant power of change is found. Today's reporting is reduced to private physical capital of the shareholders. But companies depend upon and impact all dimensions of private and public wealth, including social, human and natural capital. Many companies and initiatives have already started to measure and even disclose externalities throughout the supply chain. This is called real stakeholder reporting. The *TEEB for Business Coalition* revealed extreme disproportions between actual revenues and costs in terms of natural capital (e.g. for cattle farming in South America). Hence, a standardized approach for how to measure, value and disclose externalities per sector is needed.

The business models of corporations will have to change. Corporations that follow the model that Sukhdev outlines in his recent key publication *Corporation 2020* will have a social purpose, align their goals with society and strive to serve for positive instead of negative externalities. It will even develop human and social capital, thus acting as an integrated part of society. The reforms that Sukhdev sees incorporated into the DNA of future business have to ensure accountable advertising, limits to leverage, resource taxation and disclosure of externalities.

Panel discussion

Maria Schultz, Stockholm Resilience Centre and Committee Chair of Swedish Government Official Report "Making the value of ecosystem services visible". One of the findings of the report is that some Swedish companies already work with ecosystem services re-



views. The priority should be to set a framework that business can apply. Many ecosystem services are public goods. Schultz considers the state as having a central role at this point. A global standardization, transparency and better reporting tools should be achieved, in addition to economic instruments such as taxes, fees and contributions. The Government Official Report identifies 25 action points, including the distribution of benefits, in the areas of integration into decision making processes, improving the knowledge base and learning processes about ecosystem services.

Phillia Restiani, Stockholm International Water Institute (SIWI) stressed the fact that even though governments will have to set the framework, their control is limited and it is becoming essential to work with the private sector, too. The problem with existing reporting systems is that they only regard the first tier of the supply chain. Although some Swedish companies are very active, there is a lack of incentives to visibly disclose ecosystem services. Institutional issues might even distort the process. There is a need for fundamental decisions between a "beneficiary pays principle" like in most "Payment for Ecosystem Services"-Schemes (PES) or a "polluter pays principle". Furthermore, we need to scale up from current projects to solid internalization and the creation of markets.

Jonas Ahlén, CEO of Storebrand Asset Management and investment manager for sustainable investment, pointed out that the financial sector is deeply conservative and that reporting of externalities is different compared to other sectors. The main driver for Storebrand to engage in sustainable investment is to identify risks. To understand and compare companies' performance is a key for an investor. Understanding risks related to environmental issues makes you a better asset manager and this is what customers demand. There is already quite some disclosure regarding water that even has impacts on near term profits. Many customers demand transparent and sustainable investments and although few actually act so far, this is the fastest growing customer group. Thus, standardization is a good thing and it is important that more and more institutions are moving in this direction. But to integrate it into an equity manager's every-day business we also have to use the sector's language and terminology. The power of demonstration will show that the most resource efficient companies will finally "outcompete" the average.

In the following discussion, Pavan Sukhdev claimed that "the customers" are actually human beings who should be empowered and educated to understand the value of externalities and make responsible decisions. Nowadays, according to Sukhdev, the educated are not agitating and the agitators are not educated. In the same context, Maria Schultz mentioned a disparity between the basic importance of ecosystem services and the decreasing proportion of the GDP they serve for in Sweden. In combination with urbanization this does not help to sensitize a broader public.

Science and even arts are important in shifting from a price driven to a value driven society. We can create incentives for investment managers to have sustainable portfolios, but that requires adequate disclosure and benchmarking – the challenge is once again that we are not valuing what we are not measuring.

Trade helps to export externalities globally along the value chain and makes the impacts less transparent. The challenge is to estimate even global impacts and address them by sector. This will in turn also affect decision-making. Thinking of the "GDP of the poor" and the dependency of small farmers on natural resources, even the roughest estimate of



externalities along the value chain will help acknowledging the right of the poor to access the affected resources.

Sector wide approaches are essential to make the shift fair and transparent. Life-cycle analysis databases will be an instrument even for small companies, since no one knows the supply chain well enough to provide estimates and extrapolations. The point is not ultimate precision but the fact that the impacts are taken into account at all.

Final statements underlined the importance of language: Use the right language and information for the right people! Even the poor have to know about their rights and exposure.

Outlook

- See interviews by Pavan Sukhdev with business leaders and learn about "Corporation 2020" on <http://corp2020.com>.
- Information about the TEEB-Process: <http://www.teebweb.org>
- Swedish study "Making the value of Ecosystem Services visible" (long version and swedish/english summaries): <http://regeringen.se/sb/d/16982/a/226192>. Maria Schultz explained that the report is sent out for referral in the Swedish society.

Panelists



Pavan Sukhdev is Founder-CEO of GIST Advisory, a specialist consulting firm which helps governments and corporations discover, measure, value, and manage their impacts on natural and human capital. He is a Visiting Fellow at Yale University, where he was awarded the 2011 McCluskey Fellowship and wrote his book "Corporation 2020". Earlier, he was Special Adviser and Head of UNEP's Green Economy Initiative, and lead author of their report "Towards a Green Economy". He was also Study Leader for the G8+5 commissioned project on The Economics of Ecosystems and Biodiversity ("TEEB"). Pavan was appointed to lead TEEB by the EU Commission and Germany, and delivered its "Interim Report" whilst still working full time at Deutsche Bank in 2008. A career banker, Pavan then took a sabbatical from the Bank to lead TEEB & the Green Economy Initiative for UNEP. While at Deutsche Bank, Pavan had founded (2006) and then chaired Global Markets Centre – Mumbai, a leading-edge front-office offshoring company. Pavan was a speaker at the World Economic Forum meetings at Davos in 2010 and 2011. He serves on the boards of Conservation International and the Stockholm Resilience Centre.



Maria Schultz is Programme Director of the Resilience and Development Programme - SwedBio - a programme mainly financed by Sida situated at Stockholm Resilience Centre. The Resilience and Development Programme is a knowledge interface between practice, policy and science, on issues concerning poverty alleviation, sustainable livelihoods, equity and human wellbeing through development towards resilient ecosystems and societies. Maria has her formal education in Systems Ecology and media communication. Work



experience include an indigenous organisation in the Amazon region, Swedish Ministry of Environment as CBD focal point, Swedish International Development Cooperation Agency (Sida), Universities and consultant.



Phyllia Restiani is an Economist at SIWI Knowledge Services under the thematic area of Water, Energy and Food Nexus. Prior to joining SIWI, Phyllia was a workstream leader for Indonesia's National REDD+ Strategy at the Indonesia's REDD+ Task Force. She has also worked for the Center for Energy and Environmental Markets (CEEM) at the University of New South Wales in Australia and International Association for Energy Economics (IAEE). In Indonesia, she taught in several universities and worked with Indonesian government agencies and NGO. Phyllia received both her undergraduate degree in Environmental Engineering and master's degree in Industrial Engineering and Management from Bandung Institute of Technology (ITB) in Indonesia. She was awarded a PhD in Environmental Economics from the University of New South Wales in Australia.



Jonas Ahlén is CEO of Storebrand Asset Management Sweden and investment manager for sustainable investments. Spent the first five years of his career as an investment banker in London and the following five years at Sida, the Swedish development agency, where he advised on investments for sustainable development in places like Africa and Latin America. Responsible for Storebrand's investments in developing countries and for the retail fund SPP Global Topp 100, which invests in what they view as the 100 most sustainable listed companies globally.



Johan L. Kuylenstierna is Executive Director for SEI. He holds an adjunct professorship in international water resources issues at the Department of Physical Geography and Quaternary Sciences at the Stockholm University. Johan has previously worked as the Chief Technical Advisor to the Chair of UN-Water, based at FAO in Rome. Before joining the United Nations, he served as Project Director at the Stockholm International Water Institute with the overall responsibility for the World Water Week in Stockholm. He also established the Swedish Water House initiative and served as its first manager. He has experience from international policy work through professional positions at the World Meteorological Organization in Geneva and the Division on Sustainable Development (CSD) at the United Nations Headquarters in New York. He focused primarily on water and climate change issues from policy and management perspectives. He worked in close cooperation with governments, international organizations, NGO's, and the academic and business communities.

