

**Valuing Natural Capital:**  
**Overcoming barriers to market valuation of biodiversity and ecosystem services**  
**in the private sector**

6<sup>th</sup> October, IUCN Congress 2008 - Minutes

Chair:

- **Mike Kelly:** Head of Corporate Social Responsibility, KPMG Europe LLP

Presenter & co-chair:

- **Annelisa Grigg:** Director of Environmental Markets, Fauna & Flora International (FFI)

Panellists:

- **Stuart Anstee:** Principle Advisor, Environment, Rio Tinto Australia
- **Simon Brooks:** Vice President, European Investment Bank
- **Sagarika Chatterjee:** Associate Director, Governance & Sustainable Investment, F&C Asset Management
- **Rudolf de Groot:** Associate Professor, Wageningen University, the Netherlands; *participated on the panel for the first half of the event*
- **Craig Hanson:** Deputy Director, People & Ecosystems Program, World Resources Institute
- **Sachin Kapila:** Biodiversity Advisor - Shell
- **Roberto Pedraza:** Grupo Ecológico Sierra Gorda, Mexico
- **Pavan Sukhdev:** Managing Director & Head of Global Markets, Deutsche Bank
- **Susan Steinhagen:** Business & Biodiversity Workstream, UNEP Finance Initiative (UNEP-FI); *speaking on behalf of Paul Clements-Hunt, Head of Unit, UNEP-FI*
- **Emma Stewart:** Business for Social Responsibility

**Event Background:**

This expert panel event took place at the IUCN World Conservation Congress in Barcelona, in October 2008. It convened a diverse panel of 10 experts from business, NGOs and academia to discuss key barriers to market valuation of biodiversity and ecosystem services and, most importantly, to identify the steps required to overcome them.

The event followed a similar workshop at the IUCN Congress four years ago, when these issues were nascent and evidence of activity was largely anecdotal and from individual case studies. As a sign of how the issues have matured since then, and their significance is increasingly recognised, this event discussed more institutionalised and cross-sectoral approaches to tackling biodiversity and ecosystem service valuation. This time the audience was a mix of business and NGOs in almost equal numbers – as opposed to very minimal private sector engagement in 2004 - with smaller groups from government and academia.

**Presentation: Annelisa Grigg**

Annelisa Grigg presented the findings of a review commissioned by FFI titled *“Ecosystem Services Management: A briefing on relevant public policy developments and emerging tools”*. The review, authored by Emma Stewart and Sissel Waage of Business for Social Responsibility, highlights the significant level of national and global policy activity on the issue of ecosystem service valuation, and considerable experimentation in voluntary and regulated markets for ecosystem services. The review also identified an emerging set of tools under development to assist private sector responses to the imperative of recognising the environmental and social impacts of the supply chain, as well as the economic ones.

Having highlighted the current ‘state of play’ in terms of policy and tools related to ecosystem service valuation, the presentation highlighted three key barriers to serious engagement of the finance

community – and therefore the private sector more widely – in the market valuation of biodiversity and ecosystem services:

- Lack of a **policy framework** that promotes collaboration to manage shared resources on which companies are dependent
- Lack of integration of these issues into existing environmental impact/ management approaches and **tools**
- Lack of a widely accepted **business case** to convince companies and finance institutions of the need to address the issue as one amongst a range of competing issues, combined with a lack of **capacity to act**

Full copies of the presentation and “Ecosystem Services Management: A briefing on relevant public policy developments and emerging tools” are available at: [www.naturalvalueinitiative.org](http://www.naturalvalueinitiative.org).

### Panel Session:

#### Summary of key issues arising:

- Importance of developing more sophisticated metrics to capture ecosystem service value;
- Evidence for ecosystem value is there (current estimates in the billions \$), but lack of collective ambition to act;
- Need for development of strong policies to help drive ecosystem service market development forward;
- No lack of ideas or tools – many are developing, but there is a lack of uptake;
- Effective communication of these tools is essential – but fundamentally issues of price and actual value are key;
- How do you value ecosystem service benefits to society – where do those benefits flow and how to put a price on them?
- The private sector looking for a return; the conservation community is looking for social and environmental benefits. But there is a meeting of minds and great opportunity for exciting times ahead.

The panel session took the form of a series of targeted questions addressing each of the three barriers highlighted in the presentation, with each question posed to a specific member(s) of the panel.

#### **Barrier 1: Lack of a policy framework that promotes collaboration to manage the shared resources on which companies are dependent**

**Question 1: How** do you see The Economics of Ecosystems and Biodiversity (TEEB) study impacting on the investment environment?

**Pavan Sukhdev:** This is an important area. Chapter 4 of the [interim TEEB report](#), titled “From economics to policies” looks at policy approaches to actualise markets in ecosystem services. The current policy framework itself is not using the right measures - we need to recognise the value flowing from ecosystem services to society at every level; from subsistence cultures to more developed economies.

We are able to demonstrate ecosystem service value, but we need to *capture* value.

In each area of policy creation there is some good work taking place, examples include:

- Attempts to reduce environmentally harmful subsidies;
- Projects where the benefits of conservation are shared e.g. Revenue Sharing Programme of the Ugandan Wildlife Authority;
- Payments for Ecosystem Services (PES) schemes, based on valuation of the costs of losing those services e.g. Costa Rica;

- Exploration of Reducing Emissions from Deforestation and Degradation (REDD).

There are many successful pilots, but a lack of collective ambition to institutionalise this – this needs to change.

**Simon Brooks:** Clearly TEEB is a very important piece of work. It has the potential to shift perception, and it could bring about the development of a strong regulatory framework, which is key to progress.

It is important to evaluate the extent to which culture defines how the issues are interpreted, and identify what needs to change culturally to successfully recognise the value of ecosystem services. GDP was never intended to be a measure of economic welfare – it is right to be looking for a different measure.

The carbon markets are a clear example of the extent to which ecosystem service issues can influence regulation.

**Question 2:** What role do you feel policy can play in incentivising the growth of markets for ecosystem services?

**Susan Steinhagen:** In terms of regulation, it is essential that policy makers develop policies that reflect practice – the private sector must still identify opportunities for investment and return. What role can policy play in incentivising the growth of ecosystem service based markets?

**Sachin Kapila:** Certainly a clear set of regulations for business to operate within is important. However, the enabling environment for policy implementation is also essential. Factors such as lack of technical or financial assistance to implement regulation; lack of capacity to implement on the ground; or the challenge of enforcement can compromise the success of policy. It is also essential to remove / reverse perverse subsidies in the market.

No single policy instrument will be sufficient. Multiple and flexible policy framework required.

**Emma Stewart:** The “*Ecosystem Services Management: A briefing on relevant public policy developments and emerging tools*” review focussed on landmark policy developments. Also important to consider:

- Incentive systems for business to act;
- Tools for managing ecosystem service markets;
- Ecosystem service scarcity is not fully projected in market. What is carbon worth today, and what should it be worth in future?
- Monopoly control / anti-trust experience – this may become an issue as markets involve.

Another important step is to introduce ecosystem services thinking into the education system, so these issues will be better understood, and managed, in the future.

**Craig Hanson:** A key challenge to getting policy right is the fact that it is difficult to measure ecosystem services. As such, it is easier to base policy on the underlying ecosystem, not the service(s) it provides. This presents problems. For example, in wetland banking the criteria for replacement do not include ecosystem services and frequently like is not replaced with like. It is essential to think beyond the underlying asset.

**Roberto Pedraza:** Looking specifically at the role policy can play in incentivising growth; in Sierra Gorda Biosphere Reserve in Mexico started to follow the Costa Rica model. A government payment scheme to landowners on 35,000ha forest is building bridges between communities and government and ensuring protection of forest ecosystem services.

Next step is carbon trading. The carbon value of the area is worth more than any other land use and is the basis for setting up a conservation economy in the area.

**Question 3:** What more evidence is required to prove the value to society and business of ecosystem services? Why has policy action to date not been greater? Or has the case for this been demonstrated?

**Rudolf de Groot:** I think the case for the value of ecosystem services to society and business has already been demonstrated convincingly by many years of study on economic valuation:

**Costanza et al, 1997:** Total contribution of ecosystem services estimated at \$33 trillion – more than total GDP at the time. Three-quarters of this value is not yet recognised in the market as the services are seen as free goods, and this drives unsustainable use of these services.

**Science, 2002:** Estimated \$250 billion annual loss caused by ecosystem degradation and loss of services and resources from ecosystems. Consider this an underestimate.

**The Cost of Policy Inaction (TEEB), 2008:** Estimated the value of the annual loss of terrestrial ecosystem services by 2050 \$14 trillion– equivalent to 7% projected GDP. This does not take into account the huge loss of marine ecosystem services from over-fishing and pollution.

**Millennium Ecosystem Assessment, 2005:** Made a global assessment of the impact of ecosystem service degradation on human health and quality of life. An **Economist editorial**, 2005, reflecting on the MEA-study, estimated a \$7.5 – \$200 return on investment for every dollar invested in nature conservation.

So I feel there is enough evidence for the value of ecosystems to human society but to take them truly into account will require fundamental changes in economic theory and practice.

**Stuart Anstee:** Agrees that the value of ecosystem services to society has been demonstrated – the question is how well this is communicated within different sectors. Experience is that ‘what if’ scenarios are not compelling in the business sector. Focus should be on risk reduction and, in particular, opportunities arising from careful management of ecosystem services.

### **Barrier 2: Lack of integration of ecosystem service issues into existing environmental impact management approaches and tools**

**Question 1:** What opportunities has your company realised from the development of emerging environmental markets? What level of value is this creating? Are any tools proving particularly valuable?

**Stuart Anstee:** In terms of realising business opportunities from environmental markets, the emphasis is on ‘is and will’. Rio Tinto has gone through an evolution around water, biodiversity and carbon. There is a keen focus on ecosystem service opportunities – being a major landowner this strengthens the scope for opportunities.

Work is already active in Kennecott Utah Copper through wetland banking and sale of credits. Rio Tinto is also beginning to link conservation activities with the carbon benefits arising from delivery of those activities.

**Sachin Kapila:** The private sector learned a great deal following the Clean Air Act and its direct impact on operations.

### ***Opportunities arising from environmental markets:***



UNEP Finance Initiative

- **Carbon markets:** Shell set-up an internal carbon trading mechanism and then worked with UK and EU on carbon trading;
- **Offsets:** 35 countries have offset legislation in place. Could the company lease land it owns to leverage conservation value?
- **Bundling ecosystem services:** Can services be bundled into single assets?

**Simon Brooks:** Rio Tinto and Shell panellists raised key issue: how do companies make ecosystem services pay? EIB lends money and can lend at cost to provide a good push to ecosystem service projects. However, they have to be worthwhile *and* have income stream attached to them. Just because a project is worthwhile, it won't fly if it is not (a) supported by policy, and (b) can pay for itself.

It is much easier to develop ecosystem service-based projects where the policy environment is supportive e.g. forestry projects that develop income streams. Enabling policy is essential to drive some opportunities forward e.g. ecosystem service initiatives in SMEs.

**Sagarika Chatterjee:** The key to realising opportunities from environmental markets is ability to quantify material risk or opportunity.

Finance institutions are increasingly recognising ecosystem service related activities in their investment decisions. For example, China's largest bank (CCIB) has a Green Credit Policy and will not give credit to polluting companies that included on their black list. F&C is investing in CCIB and a range of CCIB approved companies.

In the extractive sector, Xstrata and Lonmin, for example, are paying more to access land. If the land had associated ecosystem service value e.g. carbon store in forests, this could present an additional financial opportunity. However, companies continue to find it challenging to value these services.

**Question 2: How do you go about evaluating a companies impact and dependence on ecosystem services? What are the challenges?**

**Craig Hanson:** Over the last two years the World Resources Institute (WRI), with the World Business Council for Sustainable Development (WBCSD), has developed a way for companies to start thinking about ecosystem services and the bottom line, which may or may not include valuation.

The Corporate Ecosystem Services Review (CESR) takes companies through 5 steps to look at the link between operations and ecosystem services. What is their dependence on ecosystem services (e.g. water, agricultural commodities), and what are their impacts that present a potential risk to the bottom line (e.g. reputation, enforcement). The tool also helps companies to identify business opportunities, such as large landowners participating in new environmental markets, or technology developers producing tools that help companies meet stricter legislation.

**Question 3a: What is the most practical tool out there right now that a company could use?**

**Emma Stewart:** There is a comprehensive suite of tools available, some new or under development. Choice of tool depends on various factors:

- Point company is at in decision-making process
- Focus is at Group level or operations on the ground
- What industry sector
- Position in value chain
- Issue of focus

Suggest starting with the CESR to identify opportunities and trade-offs at corporate level; then turn to INVest tool for scenario planning and communicating impacts. The MIMES tool (Gund Institute)

explores the sensitivity in a given system. ARIES should be used to prioritise investments, to work out which actions should be taken first. The Integrated Biodiversity Assessment Tool (IBAT) is designed to help companies identify site specific impacts and biodiversity risks; for those interested in biodiversity offsets, the Business & Biodiversity Offsets Program (BBOP) Toolkit is most appropriate.

For finance Institutions: Natural Value Initiative benchmarking tool helps investors analyse the performance of food, beverage and tobacco companies in managing biodiversity and ecosystem service opportunities and risks.

### **Question 3b: What do think is preventing uptake of these tools?**

**Emma Stewart:** There are some key stumbling blocks to wider adoption of tools:

- **Priorities:** Different users have different priorities. Many models are built at the provisioning level, but focus less on the material benefits that those ecosystem services deliver;
- **Choice:** The proliferation of tools and need to streamline disclosure means only so many initiatives can be followed. Tools that bolt on to existing data collection are easiest to work with. Standardisation and integration of data is a concern to be addressed.

**Sagarika Chatterjee:** Tools are useful for management, but something more fundamental is needed in the market. Quantification of input costs and output opportunities and the development of a new market in trading of ecosystem services will make a major difference.

### **Barrier 3: Lack of widely recognised business case for biodiversity and ecosystem services: how do we convince companies to act?**

### **Question 1: If you were advising a major financial institution on whether and how to engage on this issue, what would you say?**

**Pavan Sukhdev:** A challenging question. The business case is not just a case for business. What are the benefits to society as a whole and where do they flow?

The benefits of ecosystem services – and the cost of losing them – must be established at government and society level and look at how business fits into that. Financiers needed to finance this. Nobody is safe in the market place. It comes down to price; there is much talk about demonstrating value, but not enough about *capturing* value. We need to get to the point of *transacting*.

Governments have an essential role to play in recognising the importance of services flowing from nature and including these services in the country's balance sheet e.g. Costa Rica.

**Sagarika Chatterjee:** Finance institutions can play a large role in engaging companies. They must help to create the right policy structure to build new markets, and develop strategies to protect against shock that is likely in the future.

### **Question 2: How can we shift thinking in the finance sector to value ecosystem services? Are you seeing this happen already?**

**Susan Steinhagen:** Witnessed significant shift in the way bankers and investors address biodiversity and ecosystem services. These issues have now registered as a blip on radar screen. Two years ago, there was the recognition of the need to take action that led UNEP FI members to call for creation of the Biodiversity & Ecosystem Services Workstream. A key first step publication "Bloom or Bust?" produced by this workstream removes the jargon and communicates the issues in a way financiers understand – with tangible numbers and facts. The Natural Value Initiative is now developing an agricultural sector benchmarking tool designed to inform investment practices. Finally, the UNPRI,

signed off by Kofi Annan, are an example of how investors come together and have desire to integrate BES in management practices and decision-making.

The insurance sector is lagging behind on these issues as the business case not as well developed. Action is needed from regulators and policy makers to strengthen the business case.

**Question 3: What more could your organisation be doing to overcome barriers to market entry? Are there partnerships that could be forged around this room?**

**Simon Brooks:** There are two business cases to be made, and it is important not to confuse them:

- Alerting businesses to the opportunities that already exist. There are advantages to companies from taking account of ecosystem services on which they depend and on which they impact – it is just good business. There is talk about such opportunities, but more action needed;
- Alerting businesses to activities for which the social value is higher than the private value. The social value must have a financial value in order for this case to be successfully made. Without this valuation, the business incentive is lacking. There is some action in this area, but it is currently a largely voluntary market for firms who want to do their work in a good way. Voluntary markets will only take us so far. Policy makers must lead on putting value on social benefits – the business sector will then respond.

EIB's Role:

- EIB ready to give red carpet treatment to ecosystem services projects, subject to repayment capacity;
- Raising awareness that this is an issue;
- Talking to policy makers to engage with the policy level, working towards valuing the discrepancies between private and social value;
- Learning to spot projects that potentially fulfil these benefits.

**Stuart Anstee:** Partnership is a critical delivery tool whenever a company / organisation is moving out of its comfort zone and into a new area of expertise. This certainly applies to ecosystem services, and partnership is essential to operate.

**Question 4: What do you see as the biggest opportunity relating to ecosystem service market development?**

**Sachin Kapila:** Big business operates with clear rules and guidelines. The biggest opportunity is the cheaper cost of carbon abatement from forest conservation, as compared to geological sequestration. However, need the right rules and strategy in place; clarity is required, and quickly. The additionality of protected areas must also be addressed – disagrees that protected areas cannot be used to secure carbon for additionality reasons.

**Roberto Pedraza:** Carbon a big opportunity for conservation. Sierra Gorda Biosphere Reserve has already made 7 sales under voluntary mechanism. Now working with companies like Price Waterhouse Coopers on bundling assets e.g. carbon, water and biodiversity.

**Emma Stewart:** Taking the question back to a more conceptual level, see this as an opportunity to demolish two mindsets:

1. That conservation can only be funded through philanthropy or someones' willingness to pay. Markets for ecosystem services will change this entirely.
2. Considering the natural world medium by medium. Markets for ecosystem services create a holistic approach that values the interactions and dependencies within entire ecosystems.

**Closing Question: What is the one thing to collaborate on to overcome these barriers?**



**Pavan Sukhdev:** Make REDD Real.

Perceives three fundamental problems with REDD:

1. Some REDD projects are being paid for already through philanthropic contracts. The sovereign fixation of REDD is a problem – cannot ignore state, government or community.
2. At its core is reward for cessation of bad behaviour, rather than reward for good behaviour. This worked for industrial carbon credits, but do not believe this is workable in the REDD context.
3. Need to think about whole ecosystems, rather than medium by medium, or may create conflict between different ecosystem services on same piece of land.

**Sachin Kapila:** Very simple. Demonstrate by doing. There is no single switch that will convince senior management – have to prove the point with actual projects.

**Simon Brooks:** Build a credible, immediate and practical case for explaining value of ecosystem services on social level.

**Sagarika Chatterjee:** Work together to lobby for the right policy options on Payments for Ecosystem Services (PES).

**Craig Hanson:** Partnerships to engage on policy level. For example, through the US Farm Bill landowners are now receiving payments for ecosystem services.

**Stuart Anstee:** Pilots and demonstration to inform well developed policy – an evidence based approach.

**Roberto Pedraza:** Need to collaborate to build bridges. What about the sellers of environmental services? Need to work with local communities to manage expectations and benefits.

**Emma Stewart:** There is a hurdle rate of just one year for most investments, and very difficult to get return that quickly from an ecosystem that still trying to understand. Work with individuals who are personally committed, try to communicate the importance of a little extra time to demonstrate benefits of these investments and prove a point.

**Susan Steinhagen:** Collaborate to put together regulatory framework for markets in biodiversity and other ecosystem services, not just carbon.