



2010 KATOOMBA GROUP MEETING XVI

Private Sector Roundtable: Emerging Markets and Approaches for Marine Ecosystem Services

EXECUTIVE SUMMARY

Coastal and marine ecosystem services are essential, though often unrecognized, assets in business operations or as business infrastructure. The continuing decline of marine and coastal ecosystem health, and thus the services they provide, is not only raising concerns about current management and regulatory practices, but also beginning to pose risks to businesses that rely on them.

This roundtable, co-hosted by Forest Trends' MARES Program, the Katoomba Group, and T.C. Hoffmann & Associates, LLC, brought together private sector leaders reliant on marine and coastal ecosystems to address these issues. More than 50 participants from the private sector along with key members of academia, government, and non-profit conservation organizations engaged in order to:

- Discuss business needs related to ecosystem services in coastal and marine areas;
- Explore enabling conditions for private sector engagement in coastal and marine payments for ecosystem services and environmental markets;
- Identify options and pilot approaches for future private sector engagement.

The group recognized that businesses require clarity, predictability, and transparency in ecosystem service values and pricing, policies, standards, and flow of funds to have confidence in investing in ecosystem service protection and maintenance. As a potential pathway forward, a set of obstacles and opportunities were identified including:

Obstacle 1:

Knowledge gaps exist in coastal and marine ecosystem services science, especially social science and policy dimensions.

Opportunity 1:

- **Synthesize and communicate existing information on coastal and marine ecosystem services restoration and conservation needs in a language that is understandable and actionable to a business audience.**
- **Identify and address information gaps.**

Obstacle 2:

There is a lack of incentives to engage in conservation and maintenance of coastal and marine ecosystems.

Opportunity 2:

Identification of specific places and initiatives that will:

- **Reinvent coastal and marine ecosystem stewardship incentives in such a way that recognizes conservation and maintenance of “natural infrastructure” as the same goal and increases incentives for the private sector to act as stewards.**
- **Enable cross-sectoral—and/or integrated supply chain—initiatives that demonstrate payment for ecosystem services (PES) schemes and market development.**
- **Establish market systems that enable private sector investment at a meaningful scale while concurrently providing clarity in value pricing, quantification of intangible values, and linkages with a return on investment underpinning well-functioning markets.**



Obstacle 3:

A lack of political and governance clarity due to overlapping jurisdictions in coastal and marine ecosystems.

Opportunity 3:

- **Advise Governments to establish clarity on “new” ecosystem service-related environmental assets, remove detrimental incentives, and, most importantly, create a level playing field for all players.**
- **Seed funds for market-based conservation may help spur the development of markets.**
- **Linking PES and markets with recent marine spatial planning efforts around the world may provide the needed clarity and transparency.**

Businesses can take the lead to reduce risks and safeguard the ecosystem services upon which they rely. Tangible incentives for the private sector include the benefits of good public relations and the opportunity to get ahead of and help shape regulation. Early and broad engagement with businesses will help ensure a process that incorporates their interests. Future pilot approaches should consider the appropriate scale for the associated complexities and contribute to standardizing methodologies.

The Roundtable ended with the participants expressing an interest in forming a network for continued in-person engagement, information sharing, identifying pilot PES opportunities, and in-depth investigation into areas of common interests.



CONTEXT: ECOSYSTEM SERVICES AS THE EMERGING NEW FRAME FOR MARINE AND COASTAL RESOURCE USE AND MANAGEMENT

Coastal protection from storm surges; healthy and abundant seafood; carbon sinks; attractive and revitalizing travel destinations; powerful sources of economic and social well-being. These services are but a few that well-functioning coastal and marine ecosystems provide to society.

These coastal and marine ecosystem services provide essential, though often unrecognized, business infrastructure that needs the same attention for maintenance and investment as any infrastructure upon which human activity relies. However, as with many terrestrial ecosystems, significant downward trends have been documented which have raised questions about current management and regulatory practices.

In response, interest among thought leaders has grown around market-based mechanisms for valuing ecosystem services. If trends continue, then it will become increasingly important for industry to understand their impacts and dependencies on ecosystem services as well as strategies to minimize impact and even restore or protect marine ecosystem services.

With the intent of providing a forum for informed and open discussion of these concerns, Forest Trends, the Katoomba Group, and T.C. Hoffmann & Associates, LLC (TCH&A) co-hosted a half-day roundtable for about 50 people from a range of sectors with concerns about coastal and ocean ecosystems (including, tourism, recreation, fisheries, oil/gas, aquaculture, insurance, coastal development, investors in private equity and the carbon markets, along with a few leaders from the NGO, academic and government sectors). The group considered how businesses can manage risks over time, prepare to respond to potential future regulations, and play a role in shaping the management and regulatory landscape, specifically in the development of marine ecosystem services markets through PES.

OPENING REMARKS AND OBJECTIVES OF THE ROUNDTABLE:

The meeting opened with Michael Jenkins, President of Forest Trends, outlining the purpose of the Private Sector Roundtable. He stated four key objectives:

1. Engage with private sector leaders reliant on marine ecosystems.
2. Outline ways to effectively engage with the private sector on market-based solutions for sustainably managing, protecting, or conserving marine ecosystem services in the future.
3. Identify options for future private sector engagement (e.g., community of practice and pilot sites).
4. Open and strengthen lines of communication among participants for peer-to-peer learning and have fun.

He explained that we are at a point where many key marine ecosystem services are suffering declines and are impacting business investments and growth in certain sectors. There is a need to reduce risk and increase reliability of the marine ecosystem services for private industries to invest and develop sustainable business models. Yet, it is unclear what the new framework for sustainable management and conservation of marine ecosystem services means for business. The purpose of the roundtable is to



discuss how businesses can manage marine ecosystem service risk over time and how to play a role in shaping this new emerging landscape of marine ecosystem service markets and PES.

STRUCTURED DISCUSSION - THE PARADIGM SHIFT OF MARINE ECOSYSTEM SERVICES

Tegan Hoffmann from TCH&A moderated a structured discussion with five panelists each bringing their unique points of view representing the investment community, commercial fisheries, tourism, government, and oil and gas sectors. The panelists made remarks specifically addressing three key questions summarized below in the context of: *Leadership Opportunities, Managing Risk, Creating Value, and Investing in the Future.*

Question 1: How does protection of marine and coastal ecosystem services reduce risk and increase value for businesses and their investment?

Panelists presented examples from the tourism and fishery sectors highlighting how protection of marine and coastal ecosystem services reduces risk and increases value. Three themes emerged:

- **Business Can Take the Lead:** The *tragedy of the commons* is a well-documented phenomenon, but when industry recognizes the threat to its business resulting from over-exploitation, pollution, or other externalities, it has demonstrated the ability to organize, educate the community, and provide leadership in sustainable management for mitigation of identified threats. The Washington State shellfisheries history of the past 100+ years provides an encouraging example of private industry's success in recognizing and responding to the need for the protection of marine ecosystem services.
- **Sustainability is Value:** The world's coral reefs are a highly visible example of an ecosystem with strong links between sustainability and "market" value, especially with regard to tourism. Reef protection is essential for maintaining these areas as a draw for tourists, and by immediate extension, protecting their value for the tourism businesses that rely upon them. Clear dangers to that value result from knowledge gaps—specifically with regard to maintaining biodiversity, the reefs' carrying capacity, the need for proper staffing of management structures and, ultimately, funding of management efforts.
- **Consequences of Inaction:** Market collapses provide clear and sufficient cautionary impetus for industry to respond: examples ranging from the crash of the cod fisheries to the outbreak of mad cow disease established alarming precedents for businesses reliant upon similar natural resources for their businesses. By way of illustration, Unilever's immediate and substantial support for development of the Marine Stewardship Council and decisive fisheries management in the European market was catalyzed by the damage to their business resulting from bovine encephalopathy's spread in the United Kingdom.

Question 2: What are the roadblocks to market-based conservation and how do we overcome them?

In our ocean world, ecosystems are vast, complex, largely unexplored, and only partially understood. Even coastal areas that have been central to human habitation and existence for considerable lengths of time such as the Mediterranean, the Mississippi Delta, and the South China Sea are examples of regions

reliant on marine ecosystem services, yet they are not managed sustainably or protected because of formidable barriers in funding, policy, governance, or incomplete understanding of the marine resources and the communities that rely on them. Establishment of a reasonable framework for PES must confront these barriers and complexities straightforwardly if the effort has any hope of success. Five themes emerged from the remarks made by the panelists:

- **Seed Funds for Market-based Conservation:** The need for funding is real and obvious for ocean and coastal sustainable management, though establishing the basis for funding may reflect the same level of complexity as the ecosystems themselves. PES is one way to secure funding that ideally would directly support sustainable management, protection, and conservation of these valuable services. The beneficiaries of the ecosystem services can be very broadly based, reaching across ecosystem and governmental boundaries. Sources of funding will likely have to be established on many fronts:
 - Through donors and donor organizations;
 - PES—where it was noted that the tourism industry must be represented in funding proportionate to the benefits it receives;
 - Carbon Offsets—a market that is still in its infancy;
 - Biodiversity Offsets—potential funding source that could be established along the lines of carbon offsets as the economic pricing of the benefits becomes more firmly understood and accepted.
- **Clarity, Balance, and Transparency:** Businesses require clarity and predictability to feel sufficiently confident to invest in ecosystem management programs such as PES. Policy, regulation and independent markets have not yet caught up with these requirements in managing our marine ecosystems, presenting a variety of challenges to private industries when confronted with the need to establish, or comply with, sustainable environmental practices.
 - Varying standards and conflicting values in different parts of the world create difficulties in pricing risk and understanding costs for business.
 - Social concerns and environmental concerns require a balance which will vary by location.
 - International standards for environmental management methods (e.g., marine spatial planning, marine protected areas) are not yet established, adding to pricing complexities.
 - The economics of pricing externalities into the cost of utilizing the natural infrastructure of our world is still in its infancy.
 - Developing countries may lack the capacity to design and implement effective management policy and regulation.
 - Local government structures can create perverse incentives, making funding and management inefficient or ineffective.
 - Government subsidies often have the effect of damaging markets or environments and often both.
 - Regulatory authority is largely absent in international waters.
- **A Paradigm Shift for the Private Sector:** PES are different than private-industry markets, and do not lend themselves readily to the sorts of pricing structures necessary for institutional investment, as they are specific both in scope and in location to the ecosystems they are intended to serve.

- **Gaps in Science and Policy:** Knowledge gaps in science and policy abound, mitigating effectiveness of sustainable management and development.
- **Reinventing Stewardship:** Environmental management, and the financing of that management, has historically been consigned to the responsibility of government, with the private sector usually taking a secondary role, if at all. A new precedent for private industry participation must be more firmly established.

Question 3: How do we arrive at the necessary enabling conditions for sustainable marine ecosystem markets?

In order to fully engage the private sector in the process of establishing, funding and complying with sustainable marine ecosystem markets and payments for services the clarity, transparency, and predictability necessary for pricing risk and value can be established using several, widely-acknowledged approaches.

- **Address Knowledge Gaps:** Knowledge gaps must be filled with broadly-supported science, both natural and social science. This may be done through business initiative or public trust funding, but must involve peer-reviewed, verifiable investigation.
- **Recognize Shared Interests:** Align interests along the recognition that our “natural infrastructure” has a value similar and greatly in excess of that for human-made infrastructure, with the same demand for maintenance and care. In this effort, information, precedent, and social pressures can all be effective in addressing the need for investment, maintenance, and engagement.
- **Clarify Value Pricing:** Private industry investment requires:
 - Fungibility
 - Predictability
 - Precedence
 - Transparency
- **Quantify Intangible Values:** Not to be overlooked, business often responds positively when the value of intangible aspects can be quantified, such as:
 - The growth in demand created by an enhanced reputation, “branding”, as a responsible steward of the environment;
 - The cost of damage mitigation for poor ecosystem management;
 - Avoidance of regulation;
 - Quantification of the long-term economic implications of sound management of ecosystems and their services helps insure continuation of the business into the future.
- **Identify and Eliminate Counter-productive Measures:** Subsidies, insurance and bad regulation can be destructive and counter-productive to the goals of sound environmental management, requiring clear acknowledgment from all stakeholders.
- **Make Participation Broad-based:** Establishing alliances across stakeholder profiles is critical. The perception that all parties who benefit from ecosystem services are also participating is essential to the success of PES markets and management efforts.
- **Link Marine Spatial Planning with PES:** Building on the bullet above, panelists highlighted the need for comprehensive planning and an opportunity to link PES with marine spatial planning and leveling of the playing field.

BREAK OUT GROUPS

The Round Table then broke into three smaller groups, facilitated by Tundi Agardy and Winnie Lau of Forest Trends, and Tegan Hoffmann of TCH&A, for discussion of these issues in greater and more specific detail, from the broader perspectives afforded by the participants' various backgrounds. The groups formed their comments around Guiding Questions related to three main subject categories: 1) business needs, 2) identifying approaches for PES, and 3) engaging the private sector.

Question Set 1: Business Needs, Guiding Questions:

What are the business needs as this domain develops? Do we have adequate information on the current and projected state of these ecosystem services and their potential for non-linear changes over the time frames relevant to our business? Do we have any programs or plans to minimize impacts or contribute to maintenance and enhancement of these ecosystem services, or the diversity of expertise to manage these issues?

Key themes discussed:

Gaps in Science-based, Especially Social Science-based, Knowledge and Information: There is a need and opportunity for more data and information on the natural and social science of marine ecosystem services to inform decision-making. Participants highlighted large gaps in understanding of uses as well as data on the values of marine ecosystems. Furthermore, common challenge is the lack of a centralized base of information. The current situation is a very fragmented information market. Basic elements around information flow do not exist.

- Convert information into a language all stakeholders can understand.
- Extract information in such a way that is actionable, e.g., through decision and risk analyses.
- Base solid policy and management decisions on solid science that is open, accessible, and free of political bias.
- Derive funding for the science from multiple sources to increase the likelihood that information will be perceived as serving a particular constituency. Depoliticize the science used to fill data gaps.
- Recognize the temptation to yield long-term ecosystem health to short-term gains of a local or political nature.

Clarity and Transparency: Businesses are much more likely to be willing participants, and even leaders for change, when pricing and valuation and the subsequent flow of funds can be clear, transparent and predictable.

- Management standards that transcend boundaries can be helpful in this regard, particularly for multi-national industries, though there is real difficulty in establishing standards when dealing with many, diverse environments and situations.
- Though ecosystem service valuation is complex and may increase the perception of risk, it is an important component of price discovery.
- The flow of funds must be transparent and allow for accountability.

Establish Market Systems: Establishing values for services is insufficient in itself. The private sector also needs markets that function.



- Buyers don't need to know inherent value of ecosystem services – just whether they can make money within confines of the rules that govern a specific area.
- Funds from governments and foundations do not require financial return. Those from business do.
- Markets allow for investments and capital flow, particularly from the financial sector, to occur at a broader scale beyond multiple one-off transactions.

Question Set 2: Identifying and Piloting Approaches and Emerging Markets for Marine and Coastal Ecosystem Services, Guiding Questions:

What business benefits do you see in pursuing ecosystem services work? What would be the elements of pilot tests of marine and coastal ecosystem system services concepts that could work in your business sector? What are the initial areas of focus, e.g. payments for ecosystem services in coastal areas, applying ecosystem services tools to key marine geographies or key industries? What long-term business opportunities might there be?

Key themes discussed:

Strong Governance: Management must be solid, well-financed, long-term, and broadly-based to achieve success, with obvious needs to:

- Build capacities;
- Strip away subsidies that finance or even incentivize destruction;
- At the same time, incentivize good behavior;
- Establish financing that goes directly to the system and not into bureaucracy.

Clarify the Links and Return on Investment (ROI): The private sector responds to environmental questions when they have direct bearing on benefits for their businesses. It is important for businesses to have incentives for participating in PES and see a ROI.

Multi-user and Stakeholder Engagement: Ecosystem services benefit from the involvement of a wide array of users, inclusive of all beneficiaries.

- Engage stakeholders in these multiple spaces: if the benefits flow from the mountaintop to the ocean, the thinking has to come from each of those areas involved.
- Examine the whole value-chain to optimize aggregation of potential buyers.
- Beware of the tendency to optimize the local perspective at the expense of ignoring systemic problems.
- Use comprehensive planning through MSP as a forum for institutionalizing PES.

Question Set 3: Engaging the Private Sector, Guiding Questions

What are useful mechanisms, informational resources, and tools that could increase private sector learning and engagement on emerging markets for marine and coastal ecosystem services? What could be the attributes of a useful learning network on marine and coastal ecosystem services, for example? How could it be structured and led?

Key themes discussed:

Do Not Underestimate the Value of Good Public Relations: Business leaders recognize the benefits of appearing sensitive to environmental issues, goaded by social pressures originating from customers and shareholders. For example, Mexico effectively published findings on resorts' sanitation system utilization, thereby shaping tourist preferences, leading directly to greater adoption of cleaner systems.

Get Ahead of Regulation: Private sector leaders can be motivated to avoid impending regulatory legislation by voluntarily adopting new approaches:

- Carrot of shaping firm's own destiny;
- Stick of regulation for recalcitrant operators;
- Opportunity to inform regulation.

Policy Drivers: Government policies and regulations facilitate the creation of an asset.

Engage Early and Widely: There are usually many different stakeholders engaged in the activities of marine ecosystems, with widely varying perspectives, motivations and interests. Broadly-based and inclusive involvement of all stakeholders early in the process is imperative in establishing PES mechanisms.

- When all parties who benefit from the ecosystem services are involved in managing, funding, and regulating those services, there is much greater likelihood of successful implementation and compliance.
- When parties are left out of the process, opportunities for mischief arise. Governments, NGOs, and private industry each have their valuable roles, and their respective contributions must be acknowledged and respected.
- Recognize the different, and often competing, perspectives held by different industries, such as oil/gas, mineral extraction, fisheries, tourism, and recreation. Hierarchy of priorities is inevitable.
- Bankers should not be overlooked as key players in enforcing the establishment of management methods and standards as a means of minimizing investment risk.

Be Mindful of Scale: Establish PES and management practices that account for the scale of the ecosystem area and its complexities. Smaller may be better.

- A manageable scale can enable success, as represented by remediation of a eutrophified Norway fjord: multiple stakeholders in a localized area organized themselves for a multiple-win scenario.
- As a cautionary note, the Mississippi Delta and Chesapeake Bay areas have been slow to develop full PES in water quality trading, perhaps as a result of the size and complexity of their systems and service areas.
- It is important to match the scale of markets to the scale of the resources to avoid distortions of alignment.

Standardize Methodologies When Possible: Standardization of methods, tools and procedures can be at odds with established management practices and funding mechanisms which are, by nature:

- Local;

- Specific to the ecosystem which they are meant to serve, though this specificity can compound the difficulties of pricing value and risk for private industry;
- In need of recognized, science-based standard practices and methods.

NEXT STEPS

The Roundtable reconvened to share the breakout groups' findings, and to express a community interest in building a learning and information network. Drawing from the discussion of the morning, the network could provide opportunities to further the establishment of PES by:

- 1) Offering opportunities for more face-to-face engagement with an integrated approach to ecosystem services;
- 2) Communicating more widely among the ecosystem services industry;
- 3) Identifying pilot PES projects and share lessons learned;
- 4) Getting involved in the MSP discussion and link with PES;
- 5) Serving as a dissemination of information on areas, industries and individuals that would benefit from enhanced understanding of sound management practices;
- 6) Identifying and sponsoring deeper investigation into four or five areas of common interest and benefit for the Katoomba group.



ROUNDTABLE CO-HOSTS

THE KATOOMBA GROUP seeks to address key challenges in developing markets for ecosystem services, from enabling legislation to the establishment of new market institutions, to strategies of pricing and marketing, and performance monitoring. It seeks to achieve this goal through strategic partnerships for analysis, information-sharing, investment, market services and policy advocacy. The Katoomba Group includes over 180 experts and practitioners from around the world representing a unique range of experience in business finance, policy, research and advocacy. www.katoombagroup.org

FOREST TRENDS is an international, non-profit organization that focuses on market-based mechanisms because of their powerful and lasting means of: ensuring the maintenance of ecological functions and services provided by forests and other ecosystem services; generating economic benefits; and promoting the equitable distribution of benefits among diverse stakeholders. Our approach integrates the fundamental dimensions of ecology, economy, and equity because our goal is for impact of a scale that is meaningful globally.

FOREST TREND'S MARINE ECOSYSTEM SERVICES (MARES) PROGRAM is focused on marine and coastal markets and market-like mechanisms for conservation and effective management. Its initial focus on four key ecosystem services allows field-testing of concepts developed for land and forest conservation, and has already begun to build a community of practice around coastal PES, coastal and marine conservation banking, and marine biodiversity offsets

T.C. HOFFMANN & ASSOCIATES, LLC (TCH&A), is a boutique consulting firm that specializes in developing sustainable solutions to complex, multifaceted ocean and coastal issues. TCH&A works with communities, businesses, non-governmental organizations, and governments to provide the best ideas and consulting services that will help improve resource management and sustainable practices around the world. Through the use of innovative and practical tools, TCH&A engages in strategic planning, monitoring and evaluation, risk assessment and modeling, research and analysis, and the implementation of management measures. Although TCH&A works internationally, the firm has extensive expertise in designing solutions for clients working to improve California and the U.S. West Coast's coastal and ocean health, South Asia and the Pacific, and Mexico and the Wider Caribbean.