

Minutes: Proteus Annual Meeting 2016

Seascape and landscape-level planning: understanding, measuring and managing potential biodiversity impacts within and beyond the boundary fence.

Objectives

- To brief Proteus members on key developments in Proteus, strategic priorities and the future work plan and secure member input into them
- To explore the impact of Proteus and determine, with members, how that impact can be enhanced and the membership of Proteus broadened
- To highlight and discuss emerging issues and trends in biodiversity conservation, science and policy of strategic relevance to Proteus members
- To secure member input into UNEP-WCMC's engagement with the extractive sector on priority areas for future work development

Proteus Annual Meeting Day 1 – Tuesday 28th June 2016

The David Attenborough Building, Pembroke Street, Cambridge, CB2 3QZ.

Introduction and Proteus update

Presentation can be accessed via this [link](#).

Welcome and Introduction – Neville Ash (Director, UNEP-WCMC) opened the meeting by discussing some of the significant changes in the last year within the conservation agenda; with the adoption of Sustainable Development Goals (SDGs), 2030 Agenda for Sustainable Development and the Paris Climate Agreement; in the business agenda; and also with staffing changes in UNEP and UNEP-WCMC. He noted the importance of the Proteus partnership to UNEP and UNEP-WCMC in defining UNEP's strategic plan and ensuring this reflects business needs and requirements.

Proteus Update (2015 Highlights, Financial Report, Impact Survey and member discussion) – Matt Jones, Kerstin Brauner, Katie Leach and Annelisa Grigg (Business and Biodiversity Programme, UNEP-WCMC) jointly provided an update of the Proteus work plan and budget. This started with a summary of the technical delivery of Proteus, including attempts to include 'established' sites in the World Database on Protected Areas (WDPA), and the Ocean Data Viewer's (ODV) focus on increasing its usability now it has a good base of available datasets. This was followed with a brief summary of the Proteus budget, which highlighted the ability of Proteus to leverage

partner's funding, as well as explaining the renewal process to date. The total budget for Proteus in 2015/2016 amounted to USD 1,166,456, and this was used to leverage external funding at a ratio of 1:1.2. The overview concluded with the presentation of the 2016 Proteus survey, part of a wider drive by UNEP-WCMC to understand the impact of its work. The survey highlighted five initial high level findings:

1. Policy/corporate users tended to be more familiar with Proteus
2. Data provided through Proteus is used to shape Proteus member's decisions
3. The four top uses of Proteus data are: project-level risk assessment and site selection, screening investments, internal/external reporting, and company-level risk management
4. IBAT is used more regularly than other Proteus resources
5. Proteus could add value in biodiversity and ecosystem services assessment

After the introductory presentation, the partners first asked for clarification on member renewals. Matt Jones clarified that three members were not in a situation to renew during 2016: one had recently been bought by another partner, one was focussing on response to a recent incident, and the third, JOGMEC, has always had a slightly different remit to the majority of partners with the business case for their engagement in Proteus less clear. The rest of the discussion was centred on the following topics:

Survey responses

Partners agreed with the survey finding that technical data staff are less aware of the Proteus partnership. Many partners are undergoing internal review of their use of the Proteus data and information, and how best to integrate it into planning without business units feeling the need to speak with the central team multiple times. There was concern that rather than providing more datasets, UNEP-WCMC should be focusing on ways to consolidate current datasets; one partner indicated they had done this with their internal mapping system by converting Proteus data layers into sensitivity indicators.

Increasing the impact of Proteus

Partners suggested impact could be extended by UNEP-WCMC working more closely with focal points to present the internal business case within partner companies, as well as communicating the benefits of Proteus to the wider business community, with the Proteus partners acting as ambassadors. A Proteus member LinkedIn group was suggested. Partners suggested the following additional sectors to approach on a Proteus-like model: infrastructure, environmental consultancies, finance, cruising & shipping, and tourism.

Biodiversity conservation in a multifunctional land/sea-scape

Presentations can be accessed via this [link](#).

Strengthening biodiversity conservation at the land & seascape scale – Naomi Kingston (Head of Protected Areas Programme, UNEP-WCMC) introduced the concept of connectivity conservation and its relevance to the other effective area-based conservation measures (OECM) IUCN taskforce. She emphasised the importance of private and community protected areas for the connectivity of government areas, demonstrated the baseline of connectivity conservation initiatives, before summarising the UNEP-WCMC-led UNEP Connectivity Conservation strategy. The strategy outlines a long term project to assess the current uptake of connectivity conservation initiatives and Naomi concluded by suggesting that connectivity conservation initiatives should be integrated into any strategy for the expansion of the protected area network.

Diving deeper into seascape connectivity – Steve Fletcher (Head of Marine Programme, UNEP-WCMC) continued the theme of connectivity, emphasising that large marine mammals, like the sperm whale, do not care for national borders. Marine end-users must take into account not only the horizontal movements of marine biodiversity, but also the vertical movements. Steve presented the varied vertical and horizontal spatial distributions of devil rays off the Azores. Steve finished by providing an overview of the Centre's work in three key marine areas. Firstly, investigating the effect of land-based sources, such as fertiliser runoff, on marine habitats; secondly, biodiversity beyond national jurisdiction and the introduction of a new legal instrument under the Law of the Seas; and finally, marine spatial planning to accommodate the wealth of different end-users of the marine environment within national jurisdictions.

Key Biodiversity Areas – a unified system for determining the most important sites for biodiversity – Stuart Butchart (Chief Scientist, BirdLife International) opened by noting that the conservation movement has been criticised in the past for the number of area-based conservation mechanisms that exist, and that this was a primary driver for the new Key Biodiversity Area (KBA) standard. He emphasised that the KBA identification process is bottom up; anyone at a local or national level can propose a KBA. He gave a broad overview of the revised criteria for designating KBAs, before highlighting that KBAs are not solely a BirdLife initiative, and that they rely on the expert input of the KBA partnership. BirdLife is currently working with private sector stakeholders to create business guidance for operating near KBAs.

Questions and discussion (led by Annelisa Grigg, Head of Business and Biodiversity Programme, UNEP-WCMC)

KBAs in screening processes

Partners highlighted that identifying future protected areas is useful. KBAs are often included in screening processes for this purpose, so hearing that South Korea has expressed it will use the KBA network as the most likely expansion of its protected areas network is encouraging. Ramsar sites often

do not have spatial data so can KBAs be used as a substitute? Stuart mentioned that while KBAs may be a good substitute, there is not 100% overlap.

Harmonising criteria

The issue of harmonising with current standards was raised, especially the International Finance Corporation's Performance Standard 6 (IFC PS6). Stuart emphasised that the new KBA standard was based on current thinking in conservation science. Others added that the IFC guidance note is undergoing review and the expectation is that it will include the new KBA standard in the revision. UNEP-WCMC are looking into the implications of the KBA revision for the 2015 marine critical habitat analysis¹.

Marine habitats

One partner highlighted the differences presented by marine habitats: namely that species compositions and distributions change significantly year on year. Steve Fletcher explained that UNEP-WCMC is looking at this through big data and remote sensing. Stuart Butchart added that IUCN have recently won Horizon 2020 funding to investigate ways to augment the 7 million marine satellite observations that they currently hold.

Development data

Lastly, one partner questioned whether the connectivity conservation initiatives that Naomi Kingston spoke of need to factor in more real time development data, as development tends to happen faster than climate impacts and will affect corridor placement more quickly. While it is ultimately up to the governments to designate corridor areas and adequately protect, partners could see the benefits of including some sort of connectivity conservation initiatives output into screening processes.

¹ Martin C S *et al.* (2015) A global map to aid the identification and screening of critical habitat for marine industries. *Marine Policy*, 53:45-53

Natural Capital accounting – implications for extractives

Presentations can be accessed via this [link](#).

Policy background: understanding the international direction of travel for Natural Capital – James Vause (Lead Economist, UNEP-WCMC) and Steven King (Environmental Economist, UNEP-WCMC) introduced the session on Natural Capital accounting and the ongoing work at UNEP-WCMC. Natural Capital as a concept was first conceived in 1750. The erosion of this capital is likely to be a substantial drag on economic growth, especially sustainable growth. Steven discussed international and regional perspectives on Natural Capital, including the Natural Capital Declaration, and available tools/initiatives for ecosystem and species accounting. UNEP-WCMC are currently testing the suitability of biodiversity accounting, as a component of the System of Environmental-Economic Accounting Experimental Ecosystem Accounting (SEEA-EEA), for integration into national accounting systems.

The Natural Capital Protocol: factoring Natural Capital into corporate decision making - Mark Gough (Executive Director, Natural Capital Coalition) and James Spurgeon (Director, SustainValue) outlined the application of Natural Capital in businesses. Mark discussed the Natural Capital Protocol, a decision-making guide, and not another reporting framework, standardised into a single global framework and piloted by 50 businesses. He detailed the sector guides developed for Food & Beverage and Apparel companies, which will be extended to Real Estate, Finance and Water companies in the near future. James then outlined the evolution of corporate thinking on natural capital assessments in extractive companies, and discussed the benefits of the Natural Capital Protocol, noting that challenges remain with data availability, understanding of underlying science and degree of accuracy needed.

Pilot testing the Natural Capital Protocol – focusing on water valuation – Mikkel Kallesoe (Biodiversity and Ecosystems Advisor, Shell) outlined Shell's pilot testing of the Natural Capital Protocol, in two downstream assets to test reduction in business risk, enhancement of growth and improvements in return on investment. In order to do this the business value of water dependency, business costs of water management and value of water to stakeholders were required to fit within the Natural Capital Protocol framework. The results showed that the business value of water dependency was much higher than business costs of using water and value to stakeholders. Potential applications of this analysis include informing future screening of potential investments, new projects and countries, asset resilience and reducing impacts.

Questions and discussion (led by James Vause)

Partners were interested to learn whether Shell's assessment factored in climate change or seasonality. Mikkel Kallesoe explained that values for water supply and demand were calculated over time and factored in increases in rainfall. James Spurgeon who aided in the assessment explained that

two public valuations were carried out; one in the winter and one in the summer to account for seasonality in available water.

Partners were also interested to learn whether there would be traction for Natural Capital accounting in developing countries like Indonesia. A number of developing countries have undertaken natural capital assessments. Steven King explained that Botswana currently has capacity to perform Natural Capital accounting, but if funding were to discontinue the accounting would stop; therefore capacity and resources need to be built for accounting, but more importantly sustained. Kenya has collated a single repository of information for the public and private sector as they have recognised the value to the economy and livelihoods, so there is likely traction for Natural Capital accounting. UNEP-WCMC is working with TEEB (The Economics of Ecosystems and Biodiversity) on bottom-up approaches to guide in-country decision makers on Natural Capital.

Natural Capital Protocol:

- Partners asked Mark Gough and James Sturgeon where the Natural Capital Protocol would take us five years from now. Mark explained that the Protocol was currently being mapped against the UN Global Compact principles, and there will be a motion on Natural Capital at the World Conservation Congress and Convention on Biological Diversity – Conference of the Parties. In addition, a sector guide on Water will be prepared in the next 3-4 years, with a map being brought out later this year. James reminded partners that the Protocol is voluntary, but believes Natural Capital accounting will be rolled out very quickly.
- Data gaps within the Natural Capital Protocol were discussed. Although, data is available for water catchments and reservoirs, poor availability for data on forest and vegetation regulating services was noted. The Cambridge Conservation Initiative (CCI) will be a key partner for the Natural Capital Coalition in bringing biodiversity data into Natural Capital assessments.
- Mark Gough explained that social NGOs are beginning to be brought into the development of the Protocol, but further stakeholder mapping is needed. Steven King explained that private sector involvement in national-level assessments would be useful as countries establish and embed approaches, but further outreach is needed to understand the interaction between businesses and Natural Capital. James Vause directed partners to a new UNEP-WCMC guide for environmental practitioners: '[Natural Capital Assessments at the National and Sub-National level](#)'. The Natural Capital Coalition does not require membership or fees, and partners can either sign-up to the newsletter or receive automatic access through a sector initiative. To develop a sector initiative, the majority of the sector would need to be involved e.g. through ICMM or IPIECA, and they would work on a structure for the guide together with leading organisation and consultants. It would be a collaborative process with financing sought from joint bids, and the final output a guidance document for the sector.
- Partners were concerned about the focus on accounting tools, and wondered whether on-the-ground management of resources or business decisions would follow on from use of these tools. Mark Gough explained that the Protocol is not an accounting tool or a reporting framework, but a guidance document. Given the successful pilot studies with businesses and the development of a business hub to bring together case studies, he hopes that the Protocol will influence on-the-ground management of resources and decisions.

Understanding and monitoring biodiversity impacts – from global to local

Presentations can be accessed via this [link](#).

Remote Sensing – the application of technology to identify and monitor impact on biodiversity – **Steffen Fritz (Group Leader, Earth Observations Systems, International Institute for Applied Systems Analysis)** provided an overview on new remote sensing technologies, such as the Geo-WIKI Engagement Platform which includes an app for ground truthing with your smart phone, and advised that there would shortly be three metre resolution remote sensing data available. Steffen discussed a case study in the use of remote sensing data to estimate forest cover loss and to study the impacts of armed conflict, mining and protected areas in the Democratic Republic of Congo (DRC). Conflict and mining pressures together increased forest loss, but conflict appeared to lessen forest loss in areas with a very high level of mining. They also found that protected areas appeared to reduce forest loss, even in areas of conflict. Deforestation rates decreased as the distance from mines increased and there were prolonged impacts of roads and rivers on forest loss. Steffen then showed results from GLOBIOM (Global Biosphere Management) models exploring infrastructure hotspots in DRC as potential future drivers of deforestation.

Monitoring impacts in marine and terrestrial environments through remote sensing – **Mark Johnston (Group Ecologist & Technical Advisor, BP)** presented results from BP studies using remote sensing to map habitat change around operations. Assessing changes in habitats is highly dependent on data. There are often substantial resolution differences between terrestrial and marine datasets, and also between years due to the improvement in remote sensing technologies. However, studies can be relatively inexpensive with the majority of the budget spent on data interpretation. Mark also presented results of habitat change at a broader landscape level. This monitoring looked at a range of threats, pressures and cumulative impacts to the broad area, and used very high resolution data to conduct site-level assessments.

Use of new logger technologies for mapping and monitoring seabirds at sea – **Steinar Eldøy (Specialist, Environmental Technology, Statoil)** described the use of different logger technologies for the monitoring of seabirds. Seabirds are important for Statoil to monitor as they are highly susceptible to oil spills and are known to collide with offshore wind farms. Statoil have to conduct studies on Sandwich Terns on the Norfolk coast as part of biodiversity management plans, but now instead of using boats to count seabirds, which has in the past cost nearly £10 million, they now choose to use GPS loggers.

Plenary discussion (led by Brian O'Connor, Programme Officer, Science, UNEP-WCMC)

Brian O'Connor gave an overview of the remote sensing projects carried out within UNEP-WCMC, which include a review on how remote sensing can be used to monitor Aichi targets and development of the Group on Earth Observations Biodiversity Observation Network (GEO BON) Essential Biodiversity Variables, and then took questions. David Jensen asked if remotely sensed data was available in the public domain, and Brian explained that data from the European Space Agency Sentinel 1 or 2 is freely and openly available, but 'analysis-ready' data is not yet available to the public. Mark Johnston noted that sometimes permission from the government is required for lease of data

from remote sensing, for example in Indonesia. Kerstin Brauneder then asked if machine learning could be used to process the data. Steffen Fritz explained that the machine would need to be trained with on-the-ground data and images first, but there is a new technique called ‘computer vision’ which is being used to recognise patterns, for example house numbers from Google Street Map images, and which may be used to process data in the future.

Brian then introduced three questions for the plenary discussion:

1) To what extent is satellite remote sensing being used by Proteus members to assess and monitor impact on biodiversity?

Satellite remote sensing is widely used in early project screening stages, for monitoring the impact of operations, including impacts to other industries, such as fisheries, and on habitat regrowth, and for baseline data. It is also used for real-time GPS tagging and tracking, with turtles for example, real-time adaptive management for dredging and subsistence management, oil spill coastline sensitivity mapping, such as from natural oil seeps, and for mapping habitat types, such as those on the IPIECA ecosystem checklist.

2) Does this use focus on direct footprint or consider indirect and cumulative impacts?

Partners suggested that in the most part, direct footprint was assessed using satellite remote sensing, however third party impacts and liabilities were considered when identifying drivers behind habitat change over time. Planned and potential impacts are often used to monitor direct footprint, with Critical Habitat discrete management units also used to consider impacts for IFC Performance Standard 6.

3) What further support is required to access and interpret satellite remote sensing data for application within biodiversity management programmes?

Further support is required in the form of studies featuring trends in global change, for example forest cover, and data on foraging areas as well as nesting and breeding sites. It would be useful for UNEP-WCMC to contribute to the understanding of remote sensing data, i.e. what is available, from where and how to access, and to consider the possibility of including such data in IBAT as part of the business planning going forward.

Proteus Annual Meeting Day 2 – Wednesday 29th June 2016

The David Attenborough Building, Pembroke Street, Cambridge, CB2 3QZ.

Reflections on the first day

Partners agreed that the new KBA standard was a positive development, but wondered how KBAs would fit into the existing protected areas network. It was suggested that KBAs could be a likely predictor of terrestrial protected areas, as was shown to be the case in South Korea, but Special Protected Areas (SPAs) were better for the marine environment in Europe for the time being. The revised standard may help to broaden KBA marine coverage. One partner expressed a hope that there would be harmonisation between the new KBA standard and IFC PS6. The new KBA standard could be used to revise the definition of critical habitat in future IFC PS6 iterations. Another suggested that partners need help in order to 'sell' KBAs internally. There was also significant interest in connectivity conservation initiatives, and a request to set out their use for the industry. Other points of interest mentioned were the surprising low cost of a remote sensing analysis performed by one of the partners, concern that natural capital may not have the implementation as yet, and general interest in Indigenous Peoples' and Local Community Conserved Areas and Territories (ICCA) and social data.

Understanding and monitoring biodiversity impacts – from global to local (continued)

Presentations can be accessed via this [link](#).

Open data in the extractive sector for dialogue, benefit sharing, monitoring and positive communication – MAP-X – David Jensen (Head of Environmental Cooperation for Peacebuilding, UNEP). The G7+ countries approached UNEP for help after self-identifying as fragile countries with weak governance structures. UNEP have developed a tool that presents extractive and conservation data through one platform, with the primary intention of addressing an information asymmetry between the private sector, government, and civil society. David hosted a small question session, where partners asked about the sustainability of the data streams powering the tool, security of the data and its safe use, as well as the issue of rural communities without capacity to access the tool. David explained that while there are a lot of initial donors interested, the key issue is how to prove the tool's value so that governments and the private sector sustain the tool without undermining initiatives like Proteus. Of the current funding, 20% goes to the development of the tool, with 80% earmarked for community capacity development.

KPIs for avoiding and minimising potential impacts before, during and after seismic activities – Oriol López Plana (Environmental Engineer E&P Safety and Environment Direction, Repsol)

took partners through Repsol's seismic survey process at two of Repsol's operations. Oriol highlighted several academic papers resulting from Repsol's work in these areas before explaining what constituted a biologically sensitive area (BSA) for Repsol's biologists working with engineers, including clay licks, reproductive areas, anthills, feeders, drinking areas, and pathways. KPIs for this operation were relative abundance and frequency of use. Oriol concluded by giving an overview of an offshore operation, where sea turtles were fitted with VHF-transmitters and the KPI for mitigation measures (pause in airgun firing) was deemed as any turtle within a 500m range.

Break-out groups (facilitated by David Jensen and Kerstin Brauneder)

1) Transparency and conflict avoidance using spatial analysis

Company processes

Partners discussed their respective internal processes for stakeholder engagement. Not much is done spatially at this stage; it is more about establishing a long-term dialogue and trust. One partner mentioned that they hire members of the local community as community liaison officers; finding that they are most trusted when on the ground. Another partner added that ideally this would begin before entering a country, and completed alongside the initial risk assessment, linking social considerations with IFC performance.

Authoritative data

David mentioned that information given to communities is often not trusted; one of the aims of MAP-X is to provide best available data. Partners explained that authoritative data is a contested term, e.g. many governments will see themselves as the only 'authoritative' source of information, and land rights are often claimed to be authoritative but are contested on both sides. David mentioned that the tool needs a 'correct, but contested' label, with different levels of verification – company, government, and civil society. Data 'vendors' will be scored on the quality of data they provide, showing how often their data is challenged. Local universities are often much more trusted than corporates; one way round is to contract them or NGOs to conduct baseline surveys not linked to any company, which can then be used for further private sector operations or government policy. One current barrier is that stakeholder engagement will usually have to be carried out with the government or state-owned company's involvement. There was agreement between the partners that environmental data could and should be more publically available, as in Norway and the Netherlands.

2) Metrics for internal and external decision making and disclosure – challenges and opportunities

Annelisa Grigg introduced the break-out group, explaining that the debate on metrics and indicators is prolonged and many parties still appear to be interested in taking it forward, but there seems to be a blockage within discussions.

What is needed to reach an end point in which practical metrics can be better defined?

Partners noted very few business drivers for investing in the development of KPIs if only used for external disclosure. A focus on site level rather than corporate level and a focus on decision making rather than disclosure was noted as important. Oversimplifying to a small number of KPIs is not always feasible and may lead to loss of information. KPIs need to be linked for impact to be useful. Understanding of external pressures on biodiversity will be important to determine which issues are the responsibility of the company. The example of Saiga mortalities in Kazakhstan was cited in which the deaths were due to other pressures, but attributed to the company located there. Metrics must be designed to reflect multiple impacts and pressures on biodiversity within the landscape.

Partners suggested that it would be useful to have a single metric to reflect the portfolio, such as the ecosystem health indicator developed by the Cambridge Institute for Sustainability Leadership (CISL), and to consider landscape-level rather than species-level impacts. The identification of metrics will require compromises. It was suggested that the top 3 methods for indicator development be identified based on business needs and that these are then tested at site level to determine utility for decision making.

Are there lessons that can be learned from emerging thinking within the conservation community?

Samir Whitaker from BirdLife International explained that in their view less than ten, simple, effective measures, are needed. BirdLife are currently involved in the development of the Practical Impact assessment methods for Small and Medium-sized conservation projects (PRISM) tool, but believe there may be more appetite for Net Positive Impact or Natural Capital accounting which appear easier to understand. Samir believes a broad risk framework centred on the pressure, state, response concept may guide identification of appropriate biodiversity indicators. Partners indicated that companies can develop metrics themselves but often become stuck on complexity and difficulty; identifying a need for further collaboration with businesses, such as the current research fellow hosted at the University of Oxford who is looking at scientific contributions to corporate decision-making. The Science Programme at UNEP-WCMC have recently developed thinking on Essential Biodiversity Variables and believe this approach might have some utility with companies: more information is available [here](#). UNEP-WCMC are currently involved in the Remote Sensing for Essential Biodiversity Variables ([RS4EBV](#)) project to map and monitor a suite of variables describing plant status and health.

Partners then inquired as to UNEP-WCMC's role in metrics in the future. Annelisa feels that the conservation community needs to come together to work on a pilot study collaboratively, with UNEP-WCMC's role potentially as a broker, working with others to determine which indicators work in a business context. UNEP-WCMC is currently involved in a number of dialogues around metrics, and with their source of technical expertise and knowledge of government activities, they are well placed to piece together work from all parties. UNEP-WCMC could work together with the World Business Council for Sustainable Development (WBCSD) and CISL, as well as company representatives and NGOs, to develop indicators. Although KPIs are often sector-specific it would be useful to align across sectors for comparison and common reporting. Partners would like to see a discussion of metrics in the next Proteus Annual Meeting.

Why have initiatives to define and develop such metrics failed in the past?

Partners noted few internal drivers with governments and investors unlikely to ask for biodiversity information. Other social and environmental issues are easier to develop metrics for e.g. safety. The development of quantitative metrics for biodiversity/species is challenging and complicated by issues such as seasonal fluctuations in species populations. Partners reported an urgent need to move from qualitative to quantitative biodiversity metrics, with these metrics also reflecting performance and falling within a framework. Partners suggested if there were 1-3 indicators for biodiversity then the oil and gas industry would use them.

Managing ecosystems for operational resilience

Presentations can be accessed via this [link](#).

An integrated approach to operational resilience – trends, drivers and opportunities – John Firth (CEO and Co-Founder, Acclimatise) introduced Acclimatise, as working on solely climate change adaptation projects and not mitigation. Adapting to climate change is an important issue for extractives given the sector's long asset life, making it easier to implement ecosystem-based adaptation² (EbA). Climate change adaptation will become increasingly important for keeping asset integrity below critical thresholds, above which operations could see significant asset damage.

Biodiversity data for spill response planning: how much pre-planning is enough? – Anthony McMullen (HSE Manager, Exploration, Woodside) gave partners an overview of Woodside's process for incorporating biodiversity data into spill response planning in the wake of incidents such as Montara in August 2009. Anthony discussed other drivers behind scientific monitoring, defined operational and scientific monitoring, before describing Woodside's process for setting and obtaining a biodiversity data baseline. Anthony concluded by highlighting key learnings and challenges from Woodside's experience, including standardising methodologies for data collection, and investing in the maintenance of oil spill readiness.

Enhancing operational resilience to climate change through ecosystem conservation – Rob Munroe (Senior Programme Officer, Conventions and Policy Support, UNEP-WCMC) introduced the partners to UNEP-WCMC's work on EbA, highlighting the enhanced recognition of the approach, and its relevance to the private sector. He conceded that due to the many synonyms for EbA, it was difficult to build the evidence base for the approach, but a UNEP-WCMC report filtered through 7,500+ peer-reviewed papers to conclude that the literature “contains some information that will support making the case for EbA, but the evidence-base has a number of gaps that should be addressed”. Rob presented case studies from a variety of sectors, before concluding by suggesting a number of factors the extractive industries would need to consider in the future to implement EbA approaches.

² The use of biodiversity and ecosystem services to help people adapt to the adverse effects of climate change as part of an overall adaptation strategy (CBD, 2009).

Maximising value from biodiversity data for operational resilience

Break-out groups (led by Rob Munroe, Sebastian Dunnnett (Programme Officer, Business and Biodiversity, UNEP-WCMC) and Matt Jones)

Attendees were asked to rank the extent of their current and future consideration of climate risk within biodiversity management and consideration of ecosystems in climate change strategies. Most partners indicated some element of climate risk in biodiversity management plans currently, which they believe will increase in the future. The majority of participants felt that consideration of ecosystems within climate strategies was low currently, but there was less consensus on the extent to which this would change in the future. Partners reported difficulty in seeing the impact of climate change on biodiversity management and noted that management can quite often be adaptive.

As a real-world 2 x 2 matrix within the conference room, with one length of the room indicating the degree to which EbA could contribute to a company's climate change strategy and the other illustrating the degree to which it could contribute to the company's biodiversity strategy, partners were asked to position themselves. The majority were positioned in the middle of the room, i.e. EbA could partly contribute to company climate change and biodiversity strategies, with no partners ranking EbA as contributing to neither strategy. However some did rank the contribution of EbA to biodiversity strategies as low. They felt the evidence was not there yet, with a business case needed to demonstrate the importance of including EbA in climate adaptation strategies. The potential for green infrastructure and sequestration in such strategies was highlighted.

What are the strongest drivers to manage ecosystems for climate adaptation in the private sector?

Partners felt the strongest drivers were corporate social responsibility, investor and/or regulatory pressure, finances and additional costs that may lead to a decrease in production years, risks to current projects, especially material risks, stakeholder and/or community perceptions of climate change impacts. They also noted that together many of these are strong drivers for managing ecosystems for climate adaptation.

What's stopping a more integrated approach to climate and ecosystems management?

Partners believe that this is due to a lack of awareness or understanding of the need to integrate climate within ecosystem management, lack of evidence for climate change and/or benefits and costs of EbA, and lack of evidence to support justification of costs vs. liabilities. Other limiting factors were thought to be the lack of government incentives, lack of relationship between cost-benefit analyses and engineering priorities and timescales, and uncertainty of impacts and timeframe as benefits may be too far in the future for consideration (for example, benefits of restoration), and there may be conflicting timelines between using grey and green infrastructure. However, the most common were organisational barriers, including disparity in technical knowledge, culture and mind-set between those tasked with managing biodiversity for the organisation and those leading on climate change, lack of integration between climate change and environmental units, a large focus by companies on emissions reduction and a lack of resources.

What do you need from Proteus (or through over means) to overcome these barriers?

Partners would like increased knowledge sharing, exposure to different thinking, moral/peer support. Networking could provide an opportunity to help consider a landscape-scale, systems-based approach and provide demonstrated examples for an evidence-base. They need links to be created between government approaches and companies, and evidence, including spatial data of the role of natural habitats in climate change, the risk of areas to climate change, modelling examples, databases appropriate for different scales and geographies, mapping of ecosystem services, climatic hazards and risks, and temporal information on climate risk. They believe Proteus can have a role in international horizon scanning and stepping into the think-tank space, encouragement of hybrid solutions, integrating knowledge of climate risks to biodiversity and EbA within engineering education, providing training, promoting discussions between climate and environment units within companies, informing on how to build climate change risk into corporate risk management and on emerging risk messages from the UN. Partners expressed a keen interest to receive further information on EbA from UNEP-WCMC. A briefing note will be prepared on this topic for Partners.

Summary

John Firth summarised the break-out group discussions, explaining that the barriers to an integrated approach to climate and ecosystems management detailed in the discussion are not unique to the extractives industry, they seem to arise no matter what private-sector is concerned, but how it effects a particular sector is unique. In order to bring climate change into biodiversity and ecosystem risk management approaches for oil and gas companies, a greater understanding of the context of the sector, vision and key issues are required, as well as the capacity of the sector to conduct, for example EbA. Shared discussions across organisations are vital, especially between climate and environmental teams, but engineers are also very important. It would be very useful to have an engineering perspective when including climate change strategies within biodiversity risk management approaches. Likewise it is important to link with oil and gas associations, like IPIECA, and to record cases in which climate adaptation strategies fail.

Creating an enabling environment for effective biodiversity management

Presentations can be accessed via this [link](#).

Towards a new global paradigm for measuring and tracking economic, social and environmental performance: the Sustainable Development Goals – Casper Sonesson (Policy Advisor, Extractives Industries at United Nations Development Programme) provided an overview of Agenda 2030 and SDGs, and the relevance to extractives companies. Casper explained that national-level goals will be set by governments in addition to the aspirational, global SDGs, which may be of interest to partners. Through aligning to Agenda 2030 and SDGs, extractives companies may have the potential to enhance positive contributions and mitigate negative impacts. Casper provided case studies relating the SDGs to extractives and infrastructure corridors, and highlighted two reports ('Mapping Mining to SDGs' and 'Oil & Gas and the SDGs'). The former will be announced in July 2016 and released shortly afterwards, the latter is under development.

Biodiversity and the extractive sector – the role of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) – Ivar Baste (Senior Advisor, Norwegian Environment Agency and Bureau Member, IPBES) introduced IPBES whose main objective is to “strengthen the science-policy interface for biodiversity and ecosystem services”. As well as functions across the science-policy interface IPBES operates across spatial and temporal space: from local to global spatial scales, and using baselines, temporal trends and scenarios. The conceptual framework includes anthropogenic assets, governance, direct natural and anthropogenic drivers, ecosystem services and human wellbeing. IPBES assesses the state of knowledge of interactions between human societies and the natural world from an international perspective, involving experts from multiple scientific disciplines and indigenous and local knowledge systems. The assessments provide support for policy making and further knowledge generation. Due to asymmetries in capacity throughout the world, IPBES is rolling out a capacity building plan at the IPBES Capacity Building Forum in September 2016. They are currently in the process of preparing four regional assessments with summaries for policymakers and hope to complete a global assessment by 2019.

Challenging policy frameworks, developing a more enabling environment for business and biodiversity – Sharon Brooks (Senior Programme Officer, Business and Biodiversity, UNEP-WCMC) introduced recent work by UNEP-WCMC in identifying areas of potential tension between oil & gas and biodiversity in Africa. The analysis illustrated potential current and future overlaps of oil and gas development with protected areas and KBAs in Africa. She then provided an outline of the second report on strengthening governance of the oil and gas industry within Uganda and Kenya, and noted several governance challenges. Data availability is usually poor, especially in developing countries, and is often not used to inform decisions. The results from these reports highlight a need for communication and coordination between ministries, and as a conservation community more attention is needed on the smaller, often national companies. The two reports can be accessed via the following links: wcmc.io/StrengtheningGovernance and wcmc.io/AfricaOilGas.

Questions and discussion (led by Sharon Brooks)

Partners were concerned that the overlap analysis could be misunderstood and possibly overestimate potential threat due to the large size of the concessions. Sharon explained that the results show potential threat and not impact, the report raises awareness of designated areas appearing alongside oil and gas concessions (which may point to insufficient alignment in government policy), but also clarifies that these areas might not necessarily contain activity. This is made clear in the report. The need for more knowledge on the actual impact of activities was suggested by partners because the presence of oil and gas is assumed to be *a priori* and detrimental, but this is often untrue. Sharon noted awareness of this concern and explained that a concept note is currently being written by UNEP-WCMC to explore impacts of associated development as well as direct impacts of operations.

Mark Wright from UNEP-WCMC asked what mechanisms exist in the industry to work with smaller companies. Partners suggested that more work was needed to disseminate best practice guidance to smaller companies, with these companies often reliant on governments to set standards. They felt that more pressure should be placed on governments, because if this were to be brought up by industry they could be accused of anti-competitive behaviour.

Summary and close of meeting - Neville Ash and Annelisa Grigg

Neville summarised the meeting by readdressing the now prioritised suggestions for Proteus in the next five years which were raised as part of the Proteus members Impact survey. Priorities included the continued development of Critical Habitat layers to make these as robust as possible, continued improvement of the quality of the data in the WDPA and IBAT, and to move from data provider to insight provider. Overlap analyses alone are likely to be insufficient going forward, with more integrated approaches required. In addition, better communication, a single web-based GIS platform and guidance on tools were also noted as priorities. Neville thanked the speakers and Partners for their enthusiastic participation and contributions which produced a number of useful suggestions to take forward and integrate into the Proteus work plan.

Annelisa closed the meeting by suggesting that there were many issues still to discuss and the meetings in future years would dig deeper into these; with a particular focus on metrics, climate adaptation and resilience, and improvements to Proteus. Many companies have to convince colleagues of less familiar concepts and it is UNEP-WCMC's role to help in that dialogue. She thanked the partners for their continued support and encouraged them to continue to act as ambassadors for Proteus.