

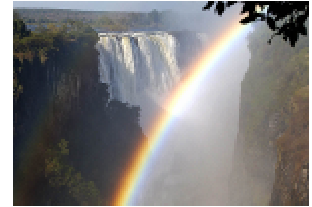


Consolidating and Building: The Proteus Business Plan 2008-2012

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“A world where biodiversity counts”





1. Summary

'Proteus' is a private sector partnership with the UNEP World Conservation Monitoring Centre (UNEP-WCMC). Its goal since 2003 has been to make biodiversity and conservation information more freely available to the world. After close consultation in 2006 Proteus was refocused exclusively on rebuilding the World Database on Protected Areas (WDPA) and improving its quality in priority areas. The WDPA is a 'foundation' dataset for conservation activity worldwide, and central to high-level risk assessment for private sector activities that have a footprint on the natural world. The launch of the new WDPA was set for early 2008, and UNEP-WCMC expects to meet that target.

As work on the WDPA redevelopment progressed, the private sector partners made an in-principle agreement to continue supporting the work of UNEP-WCMC through a revised five-year programme of work called 'Proteus 2012'. The business plan for Proteus 2012 is laid out in this document. It will deliver a range of benefits to private sector participants including information that will a) help reduce regulatory, reputation and financial risks, and b) support compliance and the delivery of projects on budget and on time.

Proteus 2012 will have three principal objectives¹.

1. Populate the new WDPA with the best available information and this will entail *inter alia* significant rebuilding of the IUCN expert network within the World Commission on Protected Areas. It will also involve a sharpened focus on data quality and maintenance processes.
2. Create decision-support tools, including early warning systems for the private sector based on both the WDPA and other foundation datasets for biodiversity, such as those dealing with the distribution of rare, restricted, threatened and endangered species.
3. Develop an online resource of critical coastal and inshore marine ecosystems and pioneer the use of 'Geo-Wiki' web tools for creating a continually updated online resource.

Meeting these objectives will require the development of new partnerships and data-sharing agreements in line with the principles of the Conservation Commons, and in **Proteus 2012** UNEP-WCMC will convene and facilitate the involvement of partners who either have, or have need of, integrated biodiversity data. Success will depend in part on the sharing of financial resources with conservation NGOs that will bring important new data and information into the Proteus mix.

From a practical point of view, the business plan seeks specificity without being inflexible over the five-year period. To achieve this balance, implementation is based on annual workplans that can be readily monitored.

Proteus 2012 will generate essential outputs from day one, but the whole integrated information system is designed for delivery to the international community for the next 'World Summit on Sustainable Development' that will take place in 2012.

The annual cost of implementing **Proteus 2012** has been calculated to be in the order of US\$ 1.8 million.

¹ These objectives have emerged from discussion at Proteus Partners' meetings as well as in more detailed consultation with the partners separately.



2. From the Director

The UNEP World Conservation Monitoring Centre, based in Cambridge, UK, is the specialist biodiversity information and assessment centre of the United Nations Environment Programme (UNEP), run cooperatively with WCMC 2000, a UK charity. The Centre's mission is to evaluate and highlight the many values of biodiversity and put authoritative biodiversity knowledge at the centre of decision-making. Since its establishment in the 1970s, it has been at the forefront of the compilation, management, analysis and dissemination of global biodiversity information, and has an outstanding record of achievement.

Proteus is a partnership between UNEP-WCMC and the private sector that was initiated in 2003 to make available the biodiversity and ecosystem data and information that were locked within the Centre. Its most significant achievement has been the rebuilding of the World Database on Protected Areas.

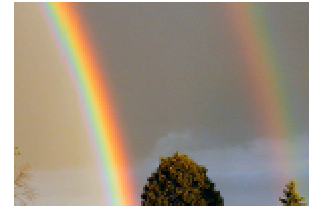
Building upon the vision of **Proteus 2012** first introduced to the private sector partners in April 2006, this business plan allows the Proteus partners to share and understand UNEP-WCMC's suggestions regarding the future direction of Proteus. It lays out a clear future direction and builds on the substantial progress made by Proteus since its inception, and especially over the last two years

The business plan sets the direction and is clear, but not so precise as to be inflexible or invalidated should external circumstances vary dramatically or unpredictably over the five-year span of the programme of work. It proposes a framework through which annual work plans can be determined and progress monitored.

The business plan not only dovetails with UNEP-WCMC's new Strategic Plan, it helps drive it forward on several fronts. The business plan envisages a role for the Centre that involves convening, facilitating and the development of a range of effective partnerships such that **Proteus 2012** will be based on a broad alliance encompassing not only corporate partners, but also important international conservation NGOs that are both leaders in their field and custodians of key datasets. This business plan calls for UNEP-WCMC to not only engage with our conservation data partners in a 'biodiversity data partnership' but also to help fund them through the proceeds of **Proteus 2012**.

I commend this plan for **Proteus 2012** and look forward to the renewal of a successful partnership.





3. Background

Introduction

The Proteus Partnership began in 2003 between companies in the energy and mining sectors and UNEP-WCMC. The goal of the partnership was to make resources available for the Centre to transition its data holdings into a more cohesive set of linked databases. For the first few years of the partnership, resources were used to develop a robust technology infrastructure within UNEP-WCMC, together with some key products (see box 1 below for details).

Box 1. The first three years of Proteus focused on a series of activities that strengthened internal processes and brought together ecological and environmental information for presentation to a wide audience via the Internet. It resulted in:

- Substantial development of the IMAPS Interactive map Service. This system was built to allow users to create customised maps for specific regions of the world with overlays of environmentally sensitive data such as protected areas, breeding grounds and species distribution.
- Rebuilding and management of the foundation database of international trade in threatened species for the Convention on International Trade in Endangered Species (CITES).
- Restructuring of the Centre's species databases to provide information on the legislative status of threatened and endangered species, and especially those in trade.
- Improvement of a wide range of datasets including those on coral reefs, mangroves and other critical coastal ecosystems.

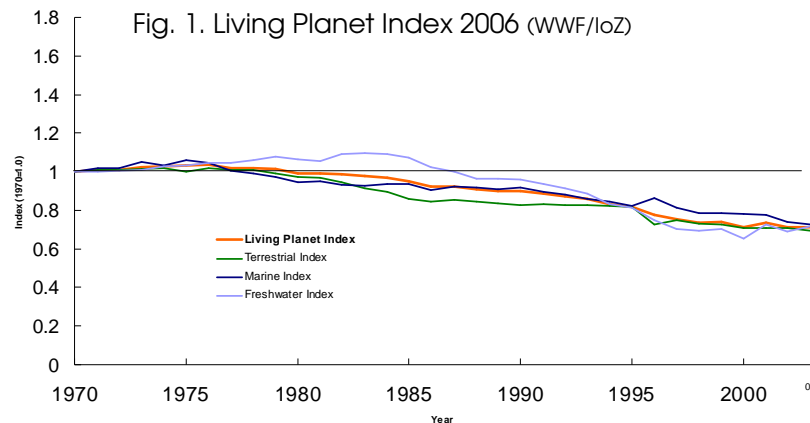
In early 2006, after UNEP-WCMC began a transition process under new management, Proteus partners were asked to articulate what they expected to achieve through the partnership. The overwhelming sentiment was that they were interested in improving the World Database on Protected Areas which is key to many of their internal processes for risk assessment related to pipeline routing, mines and other infrastructure, minimising impacts on biodiversity in addition to meeting high-profile commitments to shareholders and the public. Starting in June of 2006 UNEP-WCMC pledged to invest at least US\$ 1 million over 18 months to completely redevelop the WDPA, creating a dedicated team to that end under the direction of the protected areas programme.

Biodiversity in Decline

Much has been written about biodiversity and the private sector². In summary, society attributes great value to the myriad elements of biodiversity that range in scale from endangered species to whole ecosystems and landscapes. In recent years the importance of natural ecosystems to human well-being have been highlighted and brought to the attention of the international community through processes such as the Millennium Ecosystem Assessment (MA) and the Global Biodiversity Outlook produced by UNEP-WCMC for the Convention on Biological Diversity. Unfortunately, all current measurements, such as the Red List Index of threatened and endangered species produced by IUCN-The World Conservation Union, or the Living Planet Index produced by WWF/Institute of Zoology (Fig. 1),

² In this document 'private sector', 'corporate', 'industry' and 'business' are used interchangeably.

clearly show that biodiversity has been in rapid decline since the middle of the 20th Century. In response to this crisis the international community has made commitments to reduce the rate of loss of biodiversity by 2010, and biodiversity concerns have been integrated into the UN Millennium Development Goals. Most recently, the central role of natural ecosystems in greenhouse gas regulation and climate change mitigation have served to embed biodiversity into new global concerns with great traction.



Business and Biodiversity

Most businesses impact upon biodiversity to some extent, but representatives from a number – including the agriculture and forestry sectors, extractive industries and those that develop infrastructure – have been in the vanguard of a movement to evaluate and reduce the biodiversity impacts of business, creating new standards for business behaviour in the process. In fact, the business case for biodiversity has been well made on several occasions:

- Impacts on biodiversity lead to significant regulatory, reputation and financial risks.
- Understanding and reducing impacts on biodiversity helps with both compliance and the delivery of projects on budget and on time.
- Increasingly, demonstrating an understanding of biodiversity and systems to address the particular issues it raises constitute a 'license to operate' in competitive situations such as tenders.
- Third party funding increasingly depends on biodiversity awareness and effective strategies at operational levels.

Business and Protected Areas

Protected Areas – World Heritage Sites, protected wetlands of international importance, national parks, nature reserves and the like – constitute a significant element of the international response to biodiversity loss. Just 27 years ago there were 40,000 protected areas around the world, today there are at least 100,000 (Figs 2 and 3).

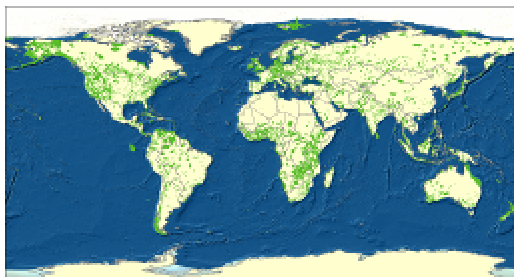


Fig 2: In 1980, there were 40,000 protected areas globally

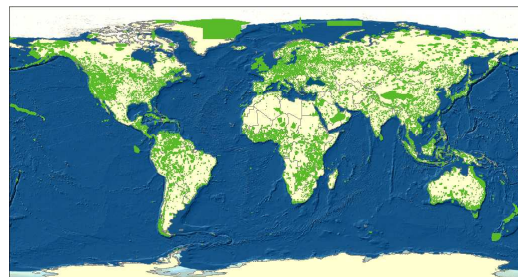
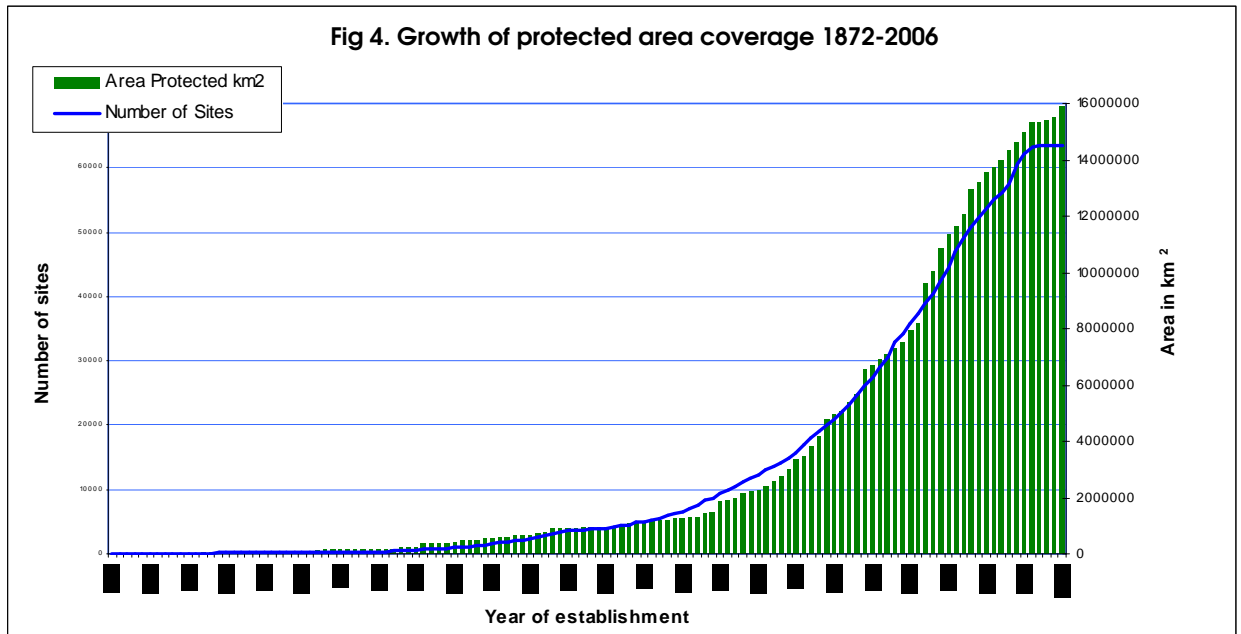


Fig 3: In 2006, there were 100,000 protected areas globally

In fact, the area under formal protection for biodiversity and landscape conservation is still growing dramatically (Fig 4) – and this excludes private land under voluntary protection. The statistics are known because the global repository for information on protected areas – the World Database on Protected Areas - is managed by UNEP-WCMC in a partnership with IUCN-The World Conservation Union.



The rapid growth in land set aside for conservation in the race to conserve dwindling biodiversity is mirrored by an equally rapid growth in the race for resources on the part of businesses worldwide. This growth has been particularly well measured in the oil and gas sector and its impact is clear when plotted on a map of the world in the same way as protected areas. The location of oil and gas operations in 1985 is shown in Fig 5, while the marked increase that had taken place by 2006³ is illustrated in Fig 6.

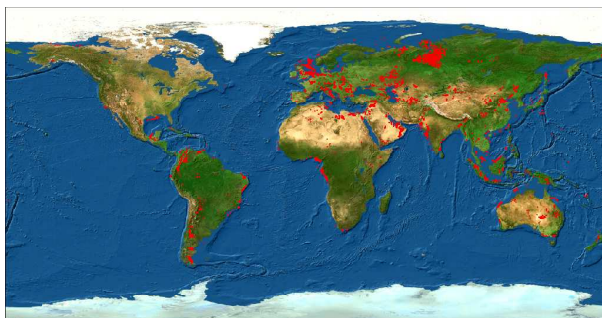


Fig 5. Location of Oil and Gas wells in 1985 (data from IHSE)

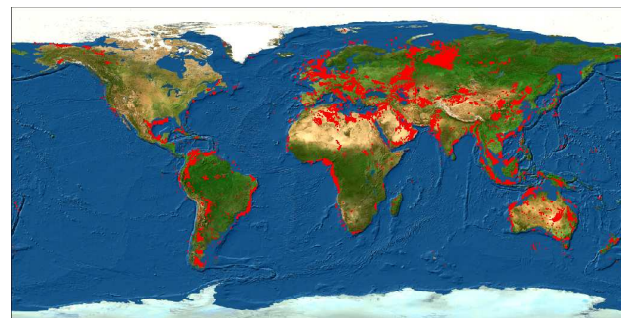


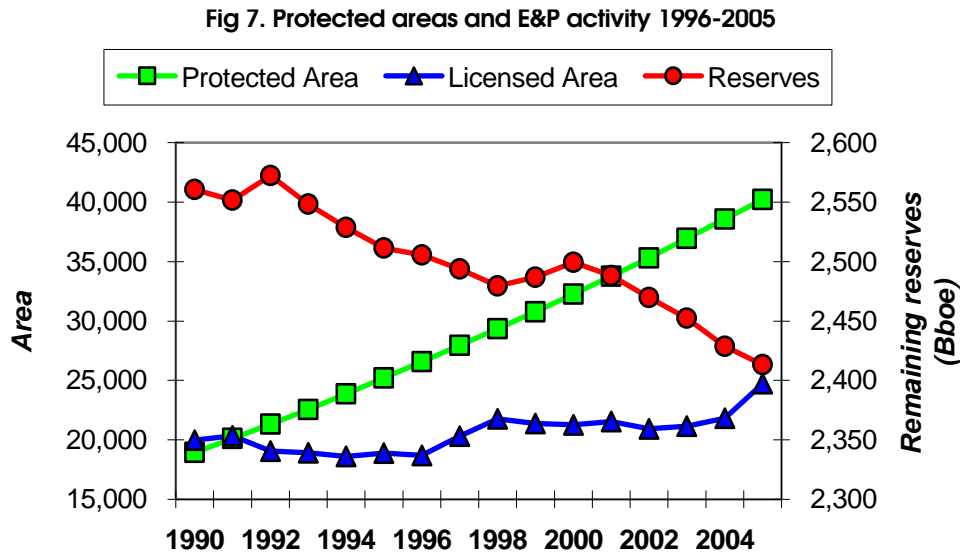
Fig 6. Location of Oil and Gas wells in 2006 (data from IHSE)

Recent analysis demonstrates very clearly how, coincidentally, the dramatic rate of increase in the area under biodiversity protection coincides with the decline in remaining global energy reserves (Fig 7). The uptake of licensed areas for energy activity is now also

³ Information kindly provided by IHS Energy, a Proteus Partner

increasing rapidly and while only 6% of the 9,300 wells drilled worldwide between 1991-2006 were within protected areas, this percentage is expected to climb rapidly in coming years. In any case, 6% still adds up to more than 500 drilling operations within globally recognized biodiversity refuges (Fig 8), with all the attendant risks to both biodiversity and business.

A full analysis of pipeline impacts on protected areas has not yet been completed, but between 1950 and 2000 roughly 1.7 million km of oil and gas pipelines were constructed



around the world, and the pace of growth has dramatically increased in recent years. Interactions between pipeline routing and biodiversity have produced some high profile and expensive debacles, such as that surrounding the Siberia-Pacific Ocean Pipeline which was diverted 40km to the north of Lake Baikal at a cost just short of US\$ 1 billion due to biodiversity concerns which could have been addressed in the initial planning. The 2006 global distribution of pipelines (excluding the USA) is shown in Fig 9.

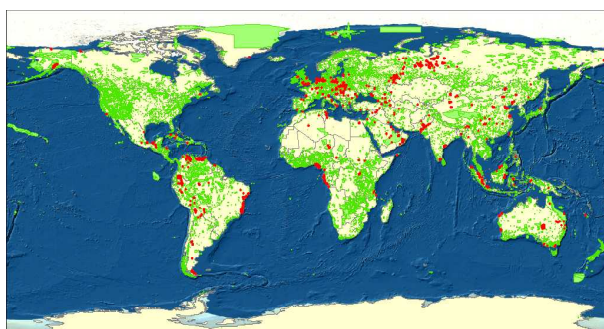


Fig 8. Oil and gas drilling in protected areas 1991-1996

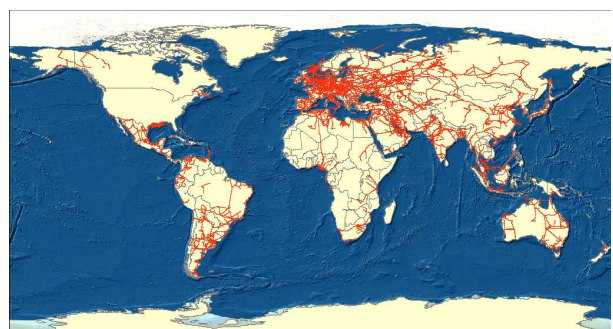


Fig 9. Global distribution of oil and gas pipelines in 2006

The WDPA provides information to the private sector on the location of protected areas, ultimately allowing companies to assess the risk and their impacts on biodiversity.

The World Database on Protected Areas

The World Database on Protected Areas (WDPA) provides the only comprehensive global inventory of the world’s protected areas. First established in 1981 and managed since that

time by the Conservation Monitoring Centre, now UNEP-WCMC, this database, which has approximately 117,000 records contained in both spatial (GIS) format and non-spatial database tables, represents a unique and important resource to a number of important constituencies which deploy it as the foundation for a wide range of processes (see Box 2).

In recent years it has become increasingly clear that for the WDPA to satisfy the demands of all those relying upon its data, its structure has to be significantly strengthened. An internal UNEP-WCMC review found that the WDPA did not meet the technical requirements of a “normalized” relational database, requiring updates to be manually processed, thus risking the introduction of unintended error. In addition, several other aspects of the WDPA were inadequate to meet the growing demands of users. These included the lack of adequate documentation (including metadata), of automated quality control standards and of back-end database tools to manage and summarise data.

As a result of this analysis UNEP-WCMC and the Proteus partners⁴ agreed to invest all their Proteus resources exclusively in producing a global database that would be efficient, accessible, accurate, sustainable and, above all, of great use to the conservation community, governments, private sector companies and anyone else with a vested interest in protected areas around the world. The vision of the rebuilding exercise was, by 2008:

To create a decentralised, user-friendly, up-to-date system for storing, managing, and reporting on trends in coverage for all the world’s protected areas – conforming to best practice techniques and providing a platform that allows for the easy integration of other conservation datasets and user opinion.

The rebuilding of the WDPA was a major technical and political project that was designed to:

- Allow for other protected area datasets to be included beyond those from national government authorities (e.g. from NGOs).
- Decentralise management of protected area data to regional entities.
- Provide the global coverage that is necessary to do complete global analysis.
- Provide more accurate boundary information.
- Provide more metadata, especially in regard to original sources of data.
- Give better direction and instruction in the proper use of WDPA data.
- Provide more web tools for querying the database.
- Allow for alternative viewpoints on protected areas to be contributed (Wiki functionality).
- Link to other data sources and projects that rely on WDPA data (such as information on protected area management effectiveness, tourism statistics, community displacement, poverty, etc.).

Beyond the structural and technical problems with the WDPA, UNEP-WCMC and its partner, the IUCN, recognised that the way that data were gathered and updated would have to change dramatically if the WDPA was to be sustainable and deliver all that was demanded of it. Experience has shown that with the resources available it is difficult, if not impossible, for UNEP-WCMC and IUCN to interact effectively with the 192 UN member countries and their protected area agencies to the degree necessary to effectively populate the database and keep it updated. It was therefore decided that the new WDPA should be based on a decentralized approach to data capture, management and reporting.

The major portion of the work on populating the WDPA is one of the three central objectives of **Proteus 2012**.

⁴ Those in place at the time.

Box 2. The **WPDA** is the only global repository for protected areas and is recognised by the Conservation Commons as one of three foundation datasets that are essential for conservation. It is of importance in the following ways:

The International Community

- The WDPDA is used as a tool (e.g. by the European Commission) to prioritize the distribution of funds for Overseas Development Assistance programmes.
- The WDPDA is the basis of the UN List of Protected Areas, and provides a key indicator for 2010 global biodiversity target and the UN Millennium Development Goals.
- The WDPDA supports the programme of work of the Convention on Biological Diversity, and IUCN's work on protected areas
- The WDPDA is a key dataset for emergency response and contingency planning, especially for oil spills but also for natural disasters such as Tsunamis

Governments

- The WDPDA is the only source of protected area information for many developing countries, while for others it is also the only backup to national data processes.
- The WDPDA assists in planning for economic sustainability. UNEP, working with partners such as Conservation International, Birdlife International and IUCN, intends to link the WDPDA to information on rare, restricted, threatened and endangered species to create a data repatriation tool for developing countries which will allow national conservation prioritisation and gap analysis.
- The WDPDA helps governments (and NGOs) in land-use planning processes - helping determine where protected areas are needed, as well as in processes that decrease habitat fragmentation and increase connectivity

The Private Sector

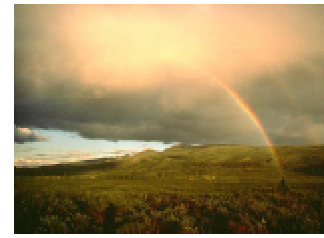
- The WDPDA assists the private sector (as well as governments and NGOs) by compiling and centralizing national protected area data that is scattered among states and regions. In this way it enables and enhances sharing and analysis of biodiversity data.
- The WDPDA is the foundation of high-level risk assessment processes for businesses with a footprint on natural ecosystems; it is also the basis of many local Environmental Impact Assessments.
- The WDPDA provides the private sector with biodiversity knowledge for areas of industry operation and aids in compliance with regulatory initiatives/requirements.
- The WDPDA helps environmental scientists in both the private and government sectors to determine potential impacts of, and mitigating actions for, industry operations.
- The WDPDA is a basic tool for many environmental businesses.

Academics

- The WDPDA is the basis of a large portion of academic work on ecosystem assessment, it enables academics to undertake gap analysis and for any ecosystem to examine threats, rates of change and the effectiveness of protected areas.
- The WDPDA allows academics to overlay new data to examine the threat and conservation strategies for rare, threatened, endangered species.

Public/Tourism

- The WDPDA aids local communities and others to develop ecotourism opportunities.
- The new WDPDA will be used for planning/reviewing ecotourism vacations on public platforms such as Microsoft Virtual Earth and Google Earth.
- The WDPDA increases public awareness of biodiversity and protected areas so that there is public support for the protection of biodiversity.



4. Objectives & Rationale

Between 2004 and 2007 the Proteus partnership created a number of important international biodiversity resources, helped rebuild UNEP-WCMC's internal capacity and technology and rebuilt the most important dataset in conservation – the World Database on Protected Areas (WDPA). However, more needs to be done to deliver comprehensive protected area information - and the task of joining different biodiversity datasets has barely started.

Proteus 2012 is the framework for consolidating the gains made by Proteus so far by delivering further capacity within UNEP-WCMC together with a comprehensive, fully up-to-date WDPA. It will build on its previous successes and reputation by bringing new datasets to bear through new partnerships; layering species and other information held by major conservation organisations on top of the WDPA to produce new analyses and tools of fundamental value to governments, academics and business alike. **Proteus 2012** will also pioneer the use of Geo-Wiki for critical coastal ecosystems, making the information freely available to all users.

The goal is for decision-makers in industry and elsewhere to have access to the best possible data and information on the location and distribution of biodiversity of the highest value as determined by globally important priority setting frameworks.

Proteus 2012 will provide an effective platform from which the private sector can support and engage with international organisations, national governments and non-governmental organisations to help conserve the world's biodiversity. The framework for **Proteus 2012** will allow the private sector to contribute to international processes such as the UN Millennium Development Goals (MDGs) and the CBD 2010 target, while creating the machinery to improve their own performance.

The Objectives of Proteus 2012

Proteus 2012 has three major objectives around which this business plan is constructed:

The first is to populate the new WDPA with the best available information and this will entail *inter alia* significant rebuilding of the IUCN expert network within the World Commission on Protected Areas, and a gradual move towards a decentralized and distributed approach to data capture, management and reporting. It will also involve a sharpened focus on data quality and maintenance processes.

The second is to combine other key biodiversity datasets with the WDPA, integrating them or making them fully interoperable, so that decision-makers have the best available data on irreplaceable, but unprotected biodiversity and prospective protected areas. This will involve the creation of decision-support tools, such as early warning systems for the private sector, based on both the WDPA and other foundation datasets for biodiversity, such as those dealing with the distribution of rare, restricted, threatened and endangered species.

The third is to develop an online resource on critical coastal and inshore marine ecosystems and pioneer the use of 'citizen science' (using 'Wiki-style' web tools) for creating a continually updated online resource.

In formal terms the Objectives of **Proteus 2012** can be stated as follows:

1. **To improve significantly the accuracy, completeness and currency of information available in the World Database on Protected Areas;**
2. **To provide integrated access to information on sites important for biodiversity identified by a wide range of internationally active; and**
3. **To increase access to up-to-date information on the distribution and status of coastal and marine ecosystems.**

The rationale behind these Objectives is as follows:

1. To improve significantly the accuracy, completeness and currency of information available in the World Database on Protected Areas

The WDPA currently holds spatial and attribute information on terrestrial and marine protected area systems including information on private, community and co-managed reserves. The database consists of two elements: the attribute database and the spatial database. At present, 120,000 sites are found within the attribute database. The spatial database currently contains polygon boundaries for 42% of sites, while a further 42% of sites have a known locality (latitude/longitude) but lack polygon boundaries. For the remaining sites have no location data at all. In addition only 70,907 (63.5%) of protected areas in the WDPA have IUCN categories assigned to them. It is suspected that more have been assigned in country, but these data have not yet been made available. The categorization process is important not least because there is strong international pressure for business, and especially extractive industries, to work to particularly high standards in protected areas designated within certain IUCN Categories.

The authority to manage national information about protected areas generally resides with national ministries and departments charged with this task. For some countries there is one authority but other countries, notably Brazil, Australia and the USA, have several different authorities responsible for different geographic regions or for different types of protected areas. Establishing effective communication with those authorities for almost 200 countries (more when territories and small island states are included) is a major task. At the latest count UNEP-WCMC works with more than 500 separate contributors of WDPA records.

In the new WDPA the management of updating will gradually move to national and regional authorities and rely on data capture and exchange over the Internet⁵. This requires a level of technical capacity within those responsible for management of protected areas data. In some countries there are no suitable partners while in others potential partners exist, but have yet to be engaged. Elsewhere, partners exist, but they do not have the technical capacity to engage with the WDPA. In other cases the technology exists but for various reasons cannot be made compatible without significant effort and investment.

In order to make best use of the new WDPA, data accumulation and management has to be a major focus of **Proteus 2012**. Between 2008 and 2012 UNEP-WCMC will work in partnership with the IUCN's World Commission on Protected Areas (WCPA) to develop the suite of relationships that will both populate the WDPA and create the interoperability necessary for its future management. By way of an example, the Inter-American Biodiversity Information Network (IABIN) is currently developing its capacity to be the focal point for protected areas for all of the Americas. UNEP-WCMC and WCPA regional members are

⁵ In this regard, the new WDPA allows for spatial and non-spatial data to be uploaded through the internet and it has validation functions to ensure data is formatted correctly in terms of spatial attributes, IUCN categories, dates of establishment, and so forth.

already working closely with and within IABIN to develop standards and systems for reporting protected area data direct to the WDPA.

2. To provide integrated access to information on sites important for biodiversity identified by a wide range of internationally active.

Most of those involved in economic development, from governments to the private sector, are concerned to integrate biodiversity issues into their planning. They are also aware of the dangers if this is not done, the destruction of ecosystem services, economic loss, the disruption of community livelihoods and non-compliance with national and international regulations.

Unfortunately, even where decision-makers are well informed and aware of biodiversity issues, they frequently struggle to find the information they need. Appropriately qualified consultants are usually able to construct an accurate view of the local environment, but by this time plans may be at an advanced stage and both expensive and difficult to modify. It is a marked irony that with all the investment that has been made into the study and conservation of species over the years, reliable distribution of data for most species remain either undeveloped or are inaccessible, widely scattered in different institutions and/or at resolution too coarse to be helpful.

These problems will be greatly reduced when those who hold species data are brought together into an alliance with UNEP-WCMC in such a way that their datasets are integrated and made interoperable with the WDPA and with each other. This will allow site-scale biodiversity information to be made available through appropriate tools so that decision-makers can be provided with more thorough analyses of biodiversity, informing their risk assessment procedures for existing and potential operations.

UNEP-WCMC will have to engage in a comprehensive needs assessment so that the private sector actors that support **Proteus 2012** receive datasets, analysis, tools and other outputs that are of maximum value to their operations.

There is another important driver of this second objective of **Proteus 2012**. There are loud complaints from biodiversity-rich developing countries that their biodiversity information is held in the industrialised countries of the North and that some form of repatriation is essential if they are effectively to grapple with their biodiversity problems. The Global Biodiversity Information Facility (GBIF) was established partly to develop web-tools to repatriate species data from museums and botanical collections. **Proteus 2012** will involve working with GBIF and others to meet the need for the repatriation of contemporary information held by a wide range of global actors and it is hoped that this will include IUCN, Conservation International and Birdlife International.

There are technical difficulties associated with this second Objective, but there are adequate technical resources amongst the Proteus partners to address these. Far more problematic will be the political challenges associated with partnerships involving INGOs many of which have developed very different algorithms for deciding areas of the highest biodiversity priority.

3. To increase access to up-to-date information on the distribution and status of coastal and marine ecosystems.

UNEP-WCMC is the custodian of a series of major global datasets on critical coastal and inshore ecosystems, including mangroves, seagrasses and coral reefs. These are of huge importance and in great demand because coastal and marine ecosystems are amongst the most productive ecosystems in the world and provide many services to human society. Unfortunately, they also face unprecedented level of threat and many have become severely degraded in recent years.

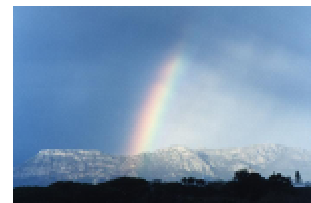
Estuaries, mangroves, lagoons, seagrasses, and kelp forests serve as nurseries for both inshore and offshore fish and other species, many of which are commercially significant. Marine and coastal ecosystems play an important role in photosynthesis and productivity and CO₂ is continuously exchanged between the atmosphere and ocean; it dissolves in surface waters and is then transported into the deep ocean. Fisheries provide direct employment to 38 million people, while aquaculture is the fastest-growing food producing sector, accounting for 30% of total fish consumption.

Coastal habitats have been affected by land use change and other processes, resulting in severe negative impacts on ecosystems and species. Excessive amounts of sedimentation and agricultural practices upstream have resulted in degradation of estuaries. Mangroves have been converted to allow for coastal zone development, aquaculture, and agriculture. Mudflats, saltmarshes, mangroves, and seagrasses are commonly destroyed for port and other industrial and infrastructure development or maintenance dredging. Coral reefs suffer from destructive fishing, use of coral for road and building construction, collection for the ornamental trade, sedimentation, and dumping of pollutants. The exploitation activities of extractive industries are also growing rapidly.

Unfortunately, while UNEP-WCMC has been able to develop unique and important datasets, it has not been able to maintain these and ensure their quality. This is largely because there have been funds to develop datasets, but not to curate them. Over the last few years, however, it has become technically possible to create spatial geographic datasets that anyone can view, visualize and annotate freely on the Internet. The availability of high-resolution imagery and its free deployment by Microsoft, Google and others has redefined the space of visualizing geographies. This has sparked off large-scale interest in annotating geographies in open data models, much like the development of Wikipedia. **Proteus 2012** will leverage the Wiki medium and the free availability of visualizing geographies for the monitoring and participative development of online data resources for critical coastal and inland marine ecosystems. The products will be of great value to a wide range of audiences, including governments, business, academics and development planners.

The main features of this element of **Proteus 2012** will be the deployment of key spatial databases onto a public platform, interfacing with visualizing geographies that are built on public Internet sites, followed by the facilitation of active participation from interested individuals with different levels of accreditation. These individuals will be able to add to or correct data, annotating it with notes, studies, images and comment. In the early stages much of such publicly contributed information is likely to be 'random noise', but Geo-Wiki is predicted to mature very quickly and achieve the same kind of efficiency and reliability as Wikipedia and related formats.

This, the third of the objectives under **Proteus 2012** will involve standard setting and a significant investment in the extension of the technology created for the new WDPA to other important databases.



5. Targets & Activities

Targets and Activities for Proteus 2012

A series of agreed, achievable targets will be established to allow the Proteus partners to monitor progress within **Proteus 2012**. These will be elaborated through consultation and stakeholder workshops undertaken before the new WDPA is released in early 2008. They will be delivered through a series of activities that are discussed, agreed and incorporated into Annual Workplans that will be regularly updated through internal management processes. At the moment, the following Targets and Activities are envisaged for each of the major Objectives:

1. Targets and Activities: To improve significantly the accuracy, completeness and currency of information available in the World Database on Protected Areas:

There are two target areas. By 2012 the WDPA will contain spatial polygon data for:

- 100% of natural and mixed World Heritage Sites
- 100% of special priority areas defined by Proteus partners
- 100% of protected areas within IUCN categories I-IV of over 100,000ha
- 100% of protected areas within IUCN categories V-VI of over 250,000ha
- 100% of Ramsar sites⁶.

In addition:

- 80% of sites within the WDPA will be allocated an IUCN protected area category where this is appropriate.
- All data that is entered will be checked by UNEP-WCMC staff, or members of the IUCN WCPA, in consultation with in-country experts.
- Effective mechanisms will be established in each of the 16 terrestrial IUCN WCPA regions to allow for access, delivery and use of data.

The following Activities will be of critical importance to meet the first Objective:

- Development of common data standards: A set of common data standards will be developed (with partners) to ensure data incorporated into the WDPA and into other tools developed meets the required high standard.
- Gathering and maintenance of high quality data on protected areas: The IUCN WCPA and UNEP-WCMC will work together to hold regional workshops to work with the providers of data. Workshops will be held every 2nd year within each of the 16 WCPA regions, to ensure the most up-to-date and accurate spatial and attribute data is available for incorporating into the WDPA. This activity will involve a significant investment of **Proteus 2012** resources into IUCN's WCPA network.
- Continued move towards a distributed database approach: UNEP-WCMC will work with both national and regional authorities to continue to increase the proportion of data that reaches the WDPA online, including development of any necessary tools, guidelines and case examples.

⁶ Ramsar sites are wetlands designated under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. These sites pose a statutory risk to the private sector. Currently there is 100% coverage of Ramsar sites in the WDPA as point data, and only 10% as polygon data.

2. Targets and Activities: To provide integrated access to information on sites important for biodiversity identified by a wide range of internationally active⁷.

Proteus 2012 will bring the WDPA together with other important biodiversity datasets such as Key Biodiversity Areas (KBAs) compiled by Conservation International and Important Bird Areas (IBAs) compiled by Birdlife International, both of which are likely to comprise many of the protected areas of the future. Other information such as the Red List data produced by IUCN and ecosystem classifications such as those used by WWF and the Nature Conservancy will also be considered.

Targets will depend on the outcomes of various needs assessments and ongoing negotiations with data-holders, but preliminary targets by 2012 are:

- To bring together the WDPA, KBAs and IBAs in an interoperable format.
- To combine the WDPA and Critically Endangered Eco-regions.
- To make interoperable the WDPA and GBIF Species data in a web-based format.
- To produce analyses and develop tools for risk assessment and data repatriation.
- To make new spatial data available to Proteus partners.

The following Activities will be of critical importance to meet the second Objective:

- Checking information needs: Workshops will be held with the oil & gas, minerals, mining and metals, retail and other sectors to confirm their needs with regard to biodiversity information.
- Development of data sharing agreements and a common understanding between partners: Agreements will be drafted and agreed upon to ensure all partners have a common understanding of expectations and outputs of **Proteus 2012**. Partners will include not only those from the private sector but also providers of other biodiversity datasets.
- Development of a technical base to allow data sharing: A common technical base will be developed in collaboration with other data providers to allow the sharing of a wider selection of key biodiversity datasets.
- Upgrading key datasets: Many of the biodiversity datasets that will be brought together with the WDPA are unfinished or suffer important omissions. This activity will involve a significant investment of **Proteus 2012** resources into the processes behind these datasets according to a pre-agreed schedule of priorities.
- Development of decision-support tools for the private sector: Tools and algorithms will be designed and developed for early warning systems for decision makers such as a traffic light system (green, amber, red) to assist the private sector in determining levels of precaution required or sensitivity of areas.
- Promotion of the Proteus partnership: The Proteus partnership will be promoted in important fora including the Conservation Commons, the Convention on Biological Diversity, and the World Conservation Congress and finally the 2012 World Summit on Sustainable Development.

⁷ The second objective may be achieved by the creation of a biodiversity data alliance bringing Proteus together with initiatives, similar in context, that are being developed by well-respected International NGOs. The creation of this alliance is the subject of facilitated discussion in the coming months.

3. Targets and Activities: To increase access to up-to-date information on the distribution and status of coastal and marine ecosystems.

The Targets for the third objective of **Proteus 2012** are, by 2012:

- To create standards and tools for Geo-Wiki online data improvement and maintenance.
- To bring together online the most up-to-date datasets for mangroves, seagrasses, saltmarshes, kelp, corals and inshore protected areas.
- To link critical biodiversity data resources on coastal and inshore environments to physical and other data publicly available.
- To produce analysis and develop tools for risk assessment and data repatriation.
- To create an alliance of marine and coastal specialists to support the **Proteus 2012** Geo-Wiki processes.

The following Activities will be of critical importance to meet the third Objective:

- Development of common standards and protocols: The aggregation and authentication of publicly contributed data will require new protocols.
- Development of data sharing agreements between partners: Agreements will be drafted and agreed between UNEP-WCMC and data-holders such as ReefBase and the University of British Columbia to ensure that new online Geo-Wiki databases are institutionally sustainable.
- Partnering with IUCN WCPA Marine Theme that is currently developing the "Wet List", a subset of marine and coastal protected areas, with extended attribution and comprehensive networking.
- Creation of a versioning system for key biodiversity datasets: All publicly contributed data will be verified and authenticated.
- Publicity: A campaign will be mounted to encourage active participation from interested and appropriate individuals with different levels of accreditation.
- Upgrading key datasets: Significant resources will be invested in the foundation datasets according to a pre-agreed schedule of priorities.
- Deployment of visualizing tools: Tools will be developed to adapt public Internet sites, such as Virtual Earth, to visualize combined datasets.
- Development of decision-support tools for the private sector: Tools and algorithms will be designed and developed to identify priority areas which constitute risks for developers.
- Promotion of the Proteus partnership: The Proteus partnership (and partners) will be promoted widely as the driving force behind the new Geo-Wiki.



6. Participation, Contributions & Benefits

Since its inception, the Proteus partnership has proved itself to be an effective vehicle for progressive corporate businesses to support the important work of UNEP-WCMC. A particular challenge for **Proteus 2012** is to build on the strengths of this early experience while charting a way into important new territory that involves extensive collaboration and flow of significant financial resources to data-rich conservation partners. Thus, **Proteus 2012** will become a strategic partnership between corporate business and important conservation organisations, facilitated by UNEP-WCMC.

Corporate participation in Proteus has broadened considerably since 2004, but at the start of 2007 it predominantly comprised major companies from the oil and gas, minerals and mining sectors, together with a number of important technology providers. As a result of the strong performance of Proteus in recent years, together with the adoption of a participatory model with more distinct benefits, it is expected that existing corporate partners will continue to provide the bedrock of **Proteus 2012**. However, from this platform it is anticipated that at least five members from new sectors will join **Proteus 2012** in the first two years of operation. In particular, it is expected that wholesale and retail companies will seek to avail themselves of spatial information on biodiversity to support decisions related to the supply of resources from biodiversity-rich developing countries.

The 2007 Proteus Partners are:

AngloAmerican;
 BHPBilliton; BP; Chevron;
 IHSE; PremierOil;
 RioTinto; Shell; StatOil;
 Total
 with technology and
 other support from ESRI,
 Oracle, Microsoft,
 Vodafone, HSBC and
 Earthwatch

Historically, some of business partners have contributed to Proteus from Corporate Social Responsibility (CSR) budgets while others have 'subscribed' to Proteus as an information service for its operational divisions. The standard contribution to Proteus has been £50,000 (around US\$ 100,000), but one or two partners have contributed at a reduced rate on the grounds that their funding opportunities from CSR budgets were limited or that they were companies of 'intermediate size'. Thus, the early Proteus followed a hybrid model of funding and this flexibility is probably responsible, at least in part, for the alacrity with which participation has grown. It is therefore one of the institutional strengths that will be maintained in **Proteus 2012**.

In **Proteus 2012** a three-tiered system of recognition and benefits (Platinum, Gold and Silver) is proposed for corporate contributors. The Platinum contribution will be pegged at a level consistent with the maximum 2006/7 'subscription' of US\$ 100,000 (See box 3) and partners in this tier will be fully involved in the governance of Proteus 2012 and have access to new biodiversity data as it becomes available. Gold partners will also have access to new biodiversity data as it becomes available, but less involvement in governance. Silver partners will have access to data when it has been fully incorporated into data-holdings⁸. UNEP-WCMC will have the flexibility to negotiate with individual businesses on their level of contribution providing the integrity of the Proteus partnership is not compromised.

⁸ It is important to note that UNEP-WCMC made a commitment to the Proteus partners that the WDPA would be made without restriction to all users once it was rebuilt and released in early 2008. However, this commitment was dependent on the development of a sustainable funding model. It may be that contributions from the Proteus partners constitute this model, but if funding falls short it may be necessary to release data to non-Proteus participants in 'view only' formats, or updates might appear annually rather than in an ongoing manner. This latter approach might also serve to discourage those who make extensive use of the WDPA, but who do not participate in its development. These issues are currently being discussed, not only within Proteus, but also with IUCN and within the Conservation Commons.

Box 3. System of Recognition and Benefits		
Level	Contribution	Benefits
Platinum	\$71,000 - \$100,000	Involvement in Decision-making; Access to new data as it emerges
Gold	\$11,000 - \$70,000	Access to new data as it emerges
Silver	Up to \$ 10,000	Access to data consolidated every 6 months

The transformation of **Proteus 2012** into a transparent association of data providers working together with an important user community demands a step-change in governance. In the early phases of Proteus the partners came together twice a year and responded to an agenda largely determined by UNEP-WCMC. In **Proteus 2012** UNEP-WCMC will act as the Secretariat to a network of corporate businesses and International NGOs that will interact within the terms of a simple Charter that will be drawn up before the current phase is finished. **Proteus 2012** governing council meetings will be held twice a year, interspersed with meetings of the technical advisory group. International NGO partners will be entitled to attend all meetings and these will respond to an agenda drawn up collaboratively in advance. Decisions, especially those relating to the deployment of resources, will normally be agreed by consensus, but in the event that there are issues that cannot be resolved in this way the opinion of Platinum level partners will take precedence over others.

Throughout the growth of Proteus the corporate partners have generously focused on the needs of UNEP-WCMC and the global biodiversity community with relatively little regard to benefits that accrue to their own businesses. While this will doubtless be the case in **Proteus 2012**, significant benefits will accrue to the corporate partners as outlined in Box 4, below.

Box 4. The **benefits** to corporate partners will be:

1. Information to help reduce regulatory, reputation and financial risks.
2. Information to support compliance and the delivery of projects on budget and on time.
3. The opportunity to help set priorities for data collection and improvement.
4. Annual licences for all non-proprietary data held by UNEP-WCMC, including the WDPA.
5. Access to spatial data to input into their own GIS systems as required.
6. Access to new data-sets and decision-support tools.
7. Advice, early warning and interpretation regarding biodiversity in all its permutations.
8. A close working association with UNEP through its dedicated biodiversity arm.
9. Recognition for support to key biodiversity processes, including very significant promotional opportunities at all stages, but most especially when the products of the partnership are delivered to the World Summit on Sustainable Development in 2012.



7. Budget & Contributions

Budget

We estimate the total five-year cost of the ambitious programme laid out for **Proteus 2012** to be \$9.13 million. The annual cost for UNEP-WCMC and its NGO partners to engage in the processes of data development, management and partner involvement will therefore be in the order of \$1.82 million per annum.

A key difference between **Proteus 2012** and earlier phases of Proteus is that many of the data resources will be drawn from outside UNEP-WCMC. In view of this, a successful programme will rely UNEP-WCMC playing a strong role at the centre of various data-providing networks and partnerships and sharing a significant portion of the financial resource arising from **Proteus 2012** with conservation partners to support their data collection and management activities. In the first objective, to improve the quality of the WDPA, the IUCN World Commission on Protected Areas (WCPA) will receive sub-grants in the order of US\$ 100,000 per year. In addition, it is likely that the majority of the financial resources associated with the second objective will be distributed to data partners to improve their own processes. In order to achieve the third objective significant parts of the processes to develop technology will be sub-contracted to partners from International NGOs and academic institutions, such as the Department of Geography at Kings College, London.

It is anticipated that business partners will contribute approximately \$900,000 per annum and that their contributions will leverage important additional contributions from governments, intergovernmental organisations and private foundations. **Proteus 2012** has been planned on the basis that the ratio between the partners' subscriptions and those they leverage will be roughly 1:1, however, the nature of bilateral and multilateral funding being what it is, this should be interpreted as an aspiration and not a binding commitment. In the event that the co-financing targets are not achieved, UNEP-WCMC and the participating partners will decide together which activities are priorities and which will be set aside.

The budget presented below has been drawn up for the whole five-year project in such a way that it can be fully successful and create a significant impact at the 'World Summit on Sustainable Development' in 2012. For clarity and transparency, the budget has been drawn up clearly showing resources needed for UNEP-WCMC activities and those needed by the conservation partners for theirs.

If divided into equal annual investments, this budget represents an annual income for the activities of **Proteus 2012** of US\$ 1,826,000 which is significantly higher than the average annual income for Proteus of US\$ 1.1 million during 2006 and 2007. However, UNEP-WCMC has been building both its technical and administrative capacity such that the partners can be confident of both project delivery as well as the effective and transparent deployment of resources.

The draft five-year budget is as follows:

UNEP-WCMC Activities		Cost US\$
Developing common data standards		80,000
Gathering and maintaining high quality data of protected areas		2,800,000
Pioneering Geo-wiki with critical ecosystem datasets		800,000
Needs Assessment in different sectors		70,000
Developing a common understanding between partners		60,000
Developing a technical base to allow data sharing		700,000
Developing decision-support tools		650,000
Promoting Proteus 2012		270,000
Management of Proteus 2012		500,000
Total US\$		5,930,000
Activities by partner organizations	Beneficiary	Cost US\$
IUCN liaison and coordination	IUCN Headquarters	200,000
Upgrading Protected areas datasets nationally and regionally	IUCN/World Commission on Protected Areas	250,000
High Priority Conservation Areas	NGO data partners	2,750,000
Total US\$		3,200,000

Proteus 2008-2012 Implementation Plan 2008

This implementation plan is for the first year of a five-year programme of activities. It is optimistic, but achievable with sufficient planning and the cooperation of partners and stakeholders.

Some of these activities will be completed in 2008, others will continue into 2009 and beyond in this or modified form. In addition, some activities will not start until later years, so the programme therefore does not include all activities necessary for achieving the objectives.

OBJECTIVE 1: Improve significantly the accuracy, completeness and currency of information available in the World Database on Protected Areas

1.1 Common data standards

- 1.1.1 Prepare a paper on draft standards as a basis for discussion, drawing on existing standards and common usage wherever possible
- 1.1.2 Working in close collaboration with IUCN and WCPA review the discussion paper with a wide range of protected areas professionals and other key stakeholders
- 1.1.3 Prepare a draft common data standard based on the feedback received and incorporating other identified standards (e.g. categories, metadata)
- 1.1.4 Secure endorsement of the draft standard by WCPA and OASIS⁹, and widely disseminate the agreed standard

1.2 Improved processes for data capture

- 1.2.1 Prepare guidelines on data management and use as one of the WCPA guidelines series, and promote these through WCPA and other fora with the standard
- 1.2.2 Review ways in which protected area management agencies and governments currently manage and make available protected areas data
- 1.2.3 Test means of directly accessing national or agency data with a number of countries with a view to moving towards a distributed database
- 1.2.4 Based on the review and experience develop a strategy for capacity building and extending direct access to national data, and identify what tools are required
- 1.2.5 Work with WCPA and WCPA regional meetings to increase the flow of information to the WDPA, including promoting development of a distributed approach
- 1.2.6 Work with other agencies and organizations holding protected areas data to increase its incorporation within the WDPA
- 1.2.7 Prepare a report on improvements in the WDPA over the year for communication to stakeholders

1.3 Improved processes for quality control

- 1.3.1 Document and test the data check and quality control processes implemented during the redevelopment of WDPA
- 1.3.2 Review the database to identify site data which does not pass these new checks and either quarantine the data or correct inadequacies/errors

⁹ OASIS is the Organization for the Advancement of Structured Information Standards. IUCN and OASIS recently convened a workshop on biodiversity conservation standards in which UNEP-WCMC participated.

1.3.3 Prepare a discussion paper on options for a structured WDPA peer review by WCPA and its membership

1.3.4 Convene a workshop with the WCPA Steering Committee (particularly regional vice-chairs) to review and agree on a process for WDPA peer review

1.3.5 Test the agreed WDPA peer review process in one WCPA region and review the results with the WCPA Steering Committee

1.3.6 Prepare, publish and disseminate a quality control and peer review plan based on the outcomes of these activities

1.4 Ongoing promotion of WDPA and its products

1.4.1 Prepare a marketing and communications strategy for the WDPA, working in collaboration with IUCN and WCPA

1.4.2 Use the World Conservation Congress, the World Protected Areas Leadership Forum and Durban+5 meetings as a major opportunities to promote the WDPA

1.4.3 Disseminate other marketing materials as agreed, including briefing materials in appropriate languages to all protected area management agencies

OBJECTIVE 2: Provide integrated access to information on sites important for biodiversity identified by a wide range of internationally active organizations

2.1 Analysis of opportunities and needs

2.1.1 Review opportunities and needs with key stakeholders as a basis for identifying key datasets and characteristics of necessary data capture and management tools

2.1.2 Review the essential characteristics of decision support tools with data providers and those we anticipate will ultimately use the tools

2.2 Data sharing partnerships and agreements

2.2.1 Develop partnership agreements with key data providers on data sharing, access and use, to ensure clear understanding of roles, responsibilities and resources

2.3 Improvements in key datasets

2.3.1 Work with partner organizations to review key datasets and identify data that needs to be added, modified or updated in the context of this programme

2.3.2 Provide individual partner organizations with the support necessary for making identified improvements as specified in partner-specific TOR

2.4 Online tools for data integration and access

2.4.1 Design tools for integrating and managing the datasets available within UNEP-WCMC and from partner organizations, either as a central or distributed database

2.4.2 Begin to develop and test the tools, incorporating data from multiple sources and combining them with other necessary data (e.g. country boundaries, topography)

2.4.3 Prepare initial analyses based on overlays of information for use in promotional materials (see below)

2.5 Decision support tools

2.5.1 Prepare initial design of decision support tools based on the input received from stakeholders through the review process

2.6 Promotion of the partnerships and products

2.6.1 Prepare the first draft of a marketing and communications strategy for review and comment

2.6.2 Prepare and dissemination promotional materials on the project and what it aims to achieve for data providers to use within their own organizations/networks

OBJECTIVE 3: Increase access to up-to-date information on the distribution and status of coastal and inshore marine ecosystems

3.1 Analysis of opportunities and needs

3.1.1 Review opportunities and needs with key stakeholders as a basis for identifying key datasets and characteristics of necessary data capture and management tools

3.1.2 Review the essential characteristics of decision support tools with data providers and those we anticipate will ultimately use the tools

3.2 Data sharing partnerships and agreements

3.2.1 Develop partnership agreements with key data providers on data sharing, access and use, to ensure clear understanding of roles, responsibilities and resources

3.3 Improvements in key datasets

3.3.1 Work with partner organizations to review key datasets and identify data that needs to be added, modified or updated in the context of this programme

3.3.2 Provide individual partner organizations with the support necessary for making identified improvements as specified in partner-specific TOR.

3.4 Online “geo-wiki” tools for data management

3.4.1 Design tools for integrating and managing the datasets available within UNEP-WCMC and from partner organizations, either as a central or distributed database

3.4.2 Begin to develop and test the tools, incorporating data from multiple sources and combining them with other necessary data (e.g. country boundaries, topography)

3.4.3 Begin to develop and test a geo-wiki component for incorporating data, including necessary checking, review and endorsement processes

3.4.4 Prepare initial analyses based on overlays of information for use in promotional materials (see below)

3.5 Online tools for data visualization

3.5.1 Review available tools and the ways in which they could be used to present data now and in the future

3.5.2 Initiate dialogue with those developing and marketing the visualization tools with a view to collaboration in delivery of information and services

3.6 Decision support tools

3.6.1 Prepare initial design of decision support tools based on the input received from stakeholders through the review process

3.7 Promotion of the partnerships and products

3.7.1 Prepare a communications strategy for encouraging the collaboration of those who can contribute to data content

3.7.2 Prepare and dissemination promotional materials on the project and what it aims to achieve for potential data providers and project partners and their networks

Proteus 2008-2012 Risk Management Plan

Successful implementation of Proteus 2008-2012 is predicated on a number of assumptions identified in the logical framework. In order to reduce the risk of these assumptions not being met UNEP-WCMC is planning to take the following action.

Assumption 1: That decision makers are willing to use the available tools in their processes

We cannot make decision-makers use the tools that we are providing. However we can involve decision makers and/or their advisers in design, we can identify their needs and ensure that they are addressed, we can demonstrate how the tools can help them, and we can brief their advisers. All of this is anticipated in the project activities.

Assumption 2: That actions lead to significant increase in information from all sources

Many of the project activities are explicitly concerned with stimulating dataflow, increasing access to data, and providing integrated access to data from a single point. It would be highly surprising if this did not lead to a significant increase in information available.

Assumption 3: That actions undertaken result in user-friendly tools that meet user needs

The design of decision support tools will be based on both an understanding of the data and reviews of information needs carried out with key stakeholders. This will include potential users such as the Proteus partners. During development of the decision support tools, Proteus partners will be invited to review and provide feedback on what is being developed, and once the tools are available for more general use we will continue to encourage and act upon feedback.

Assumption 4: That the common data standard for protected areas is adopted and used

Representatives of all key stakeholders will be involved in the review of the standard, and as part of this process we will ensure that they understand the value of the standard. We will be working with IUCN and WCPA to ensure that the IUCN and WCPA memberships welcome the standard, and will also be working with IUCN to help ensure promotion of the standard by the Organization for the Advancement of Structured Information Standards and by members of the Conservation Commons. Once adopted, the standard will be communicated to all protected area management agencies, who will be encouraged to use the standard in submitting data relevant to international processes such as the UN List, 2010 indicators, MDG indicators and CSD indicators.

Assumption 5: That governments and agencies are willing to share protected areas data online

Experience suggests that governments are highly variable in their willingness to provide data, but often this is dependent on (a) how much time is involved to do so, and (b) perceived value of doing so (which may depend also on ensuring the right person is asked). This is addressed through the described activities by aiming to simplify the process of sharing data, and by increasing understanding of why the data is required and what it is used for.

Assumption 6: That WCPA is able to establish an effective peer review process for the WDPA

Peer review of such a large database by anybody other than those who have responsibility for data management within countries is not easy as most potential peer reviewers would only be able to comment on specific groups of sites, or specific data elements. Methods have to be developed to address this working in collaboration with WCPA and its members, and in particular with the WCPA regional vice chairs. UNEP-WCMC and the IUCN Programme on

Protected Areas will need to work hard to ensure objectivity in this process. Improvement is likely to be iterative over time rather than immediate.

Assumption 7: That partner organizations are willing to enter into data-sharing agreements

This is perhaps the single most critical assumption in delivery of the information service, as the value of the service would be significantly compromised if those holding key datasets were unwilling to become data-sharing partners. We are therefore placing emphasis on the need for participatory planning and involvement in delivery, and transparent allocation of resources. We realise that only through true partnership approaches recognising the needs and obligations of each partner can we ensure participation and long term commitment. This is perhaps aided by each of the partners espousing the Conservation Commons in which we are playing an active role.

Assumption 8: That geo-wiki processes are effective at providing useful and valid information

The rapid growth of wiki type approaches and the impressive quality and quantity of resulting materials suggests that such an approach is likely to be successful, however several activities will be undertaken with the intention of helping to ensure success. We aim to make it easy for data providers to upload and edit data of all types, we aim to ensure that the tools and information provided are also of direct use to data providers themselves, and we will be advertising the tool widely within communities of potential data providers. We will also ensure that information and support is available in languages other than English wherever possible.

Proteus 2008-2012 Logical Framework

<i>Project description</i>	<i>Indicators (or targets)</i>	<i>Means of verification</i>	<i>Key assumptions (or risks)</i>
<p>Goal (or impact) Decisions potentially affecting key sites for biodiversity are taken with full understanding of the location and potential importance of these sites.</p>	<ul style="list-style-type: none"> o Evidence of areas important for biodiversity being increasingly avoided during development, and/or increased attention being paid to mitigation measures 	<ul style="list-style-type: none"> o Feedback from key officials on the extent to which the decisions being taken do indeed take account of biodiversity issues 	
<p>Purpose (or outcome) Substantial increase in the availability of good quality information on sites important for biodiversity and its conservation, in order to support decision-making.</p>	<ul style="list-style-type: none"> o Increased usage of data and information made available through the tools being developed o Increase in the data and information available through the tools being developed 	<ul style="list-style-type: none"> o Web statistics o Registration o Data licensing for commercial use o User feedback o Volume of data and information available o Number of people/partners providing data 	<p>Assumption 1: That decision makers are willing to use the available tools in decision making processes</p>
<p>Objectives (or intermediate results)</p> <ol style="list-style-type: none"> 1 <u>Protected areas</u>: Improve significantly the accuracy, completeness and currency of information available in the World Database on Protected Areas 2 <u>Key biodiversity sites</u>: Provide integrated access to information on sites important for biodiversity identified by a wide range of internationally active organizations 3 <u>Marine and coastal ecosystems</u>: Increase access to up-to-date information on the distribution and status of coastal and inshore marine ecosystems 	<p><u>Protected areas</u>:</p> <ul style="list-style-type: none"> o More complete data in the WDPA, including both digital files and categorization o Increased accuracy and currency of data in the WDPA <p><u>Key biodiversity sites</u>:</p> <ul style="list-style-type: none"> o Tool(s) available online incorporating a range of integrated datasets o Number and quality of datasets available, and adequacy of supporting metadata <p><u>Marine and coastal ecosystems</u>:</p> <ul style="list-style-type: none"> o Tool(s) available online delivering a range of data and datasets o Number of quality of datasets available, and adequacy of supporting metadata 	<p><u>Protected areas</u>:</p> <ul style="list-style-type: none"> o Database review and analysis o Peer review o Metadata and review of data sources <p><u>Key biodiversity sites</u>:</p> <ul style="list-style-type: none"> o Website o Database review and analysis o Metadata and review of data sources <p><u>Marine and coastal ecosystems</u>:</p> <ul style="list-style-type: none"> o Website o Database review and analysis o Metadata and review of data sources 	<p>Assumption 2: That actions undertaken lead to significant increase in information from all sources</p> <p>Assumption 3: That actions undertaken result in user-friendly tools that meet user needs</p>

Project description	Indicators (or targets)	Means of verification	Key assumptions (or risks)
<p>Outputs</p> <p><u>Protected Areas:</u></p> <ul style="list-style-type: none"> 1.1 Common data standards 1.2 Improved processes for data capture 1.3 Improved processes for quality control 1.4 Ongoing promotion of WDPA and its products <p><u>Key biodiversity sites:</u></p> <ul style="list-style-type: none"> 2.1 Analysis of opportunities and needs 2.2 Data sharing partnerships and agreements 2.3 Improvements in key datasets 2.4 Online tools for data integration and access 2.5 Decision support tools 2.6 Promotion of the partnerships and products <p><u>Marine and coastal ecosystems:</u></p> <ul style="list-style-type: none"> 3.1 Analysis of opportunities and needs 3.2 Data sharing partnerships and agreements 3.3 Improvements in key datasets 3.4 Online “geo-wiki” tools for data management 3.5 Online tools for data visualization 3.6 Decision support tools 3.7 Promotion of the partnerships and products 	<p><u>Protected areas:</u></p> <ul style="list-style-type: none"> o Common data standards adopted o Increase in datasets incorporated via Internet o Increased ease of data incorporation o Increase in data made available to WDPA o Reduced error/problem rate in received data o WDPA peer review process established o Increased visibility of WDPA <p><u>Key biodiversity sites:</u></p> <ul style="list-style-type: none"> o Number of partnership agreements o Improvements in identified datasets o Successful testing of data integration and management tools with partners o Successful testing of decision support tools with all stakeholders o Successful launch of new information service <p><u>Marine and coastal ecosystems:</u></p> <ul style="list-style-type: none"> o Number of partnership agreements o Improvements in identified datasets o Successful testing of data integration and management tools, including geo-wiki o Successful testing of decision support tools (including data visualisation) with stakeholders o Successful launch of new information service 	<p><u>Protected areas:</u></p> <ul style="list-style-type: none"> o Reports of WDPA & WCPA steering committees o Reports of WDPA/WCPA regional workshops o Database review and analysis o Tracking data receipt and improvement o Track dissemination of promotional materials <p><u>Key biodiversity sites:</u></p> <ul style="list-style-type: none"> o Text of agreements o Review of identified datasets against targets set o Results of tests (data capture and delivery) o Track launch and marketing <p><u>Marine and coastal ecosystems:</u></p> <ul style="list-style-type: none"> o Text of agreements o Review of identified datasets against targets set o Results of tests (data capture and delivery) o Track launch and marketing 	<p>Assumption 4: That the common data standard for protected areas is adopted and used</p> <p>Assumption 5: That governments and agencies are willing to share protected areas data online</p> <p>Assumption 6: That WCPA is able to establish an effective peer review process for the WDPA</p> <p>Assumption 7: That partner organizations are willing to enter into data-sharing agreements</p> <p>Assumption 8: That geo-wiki processes are effective at providing useful and valid information</p>