

Marine Conservation: an initial appraisal

Nina Ross & Barry Supple

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INTRODUCTION

In this report to the Donor Board of Arcadia, we outline some key issues in the field of marine conservation, as well as possible approaches to supporting them. The document has received preliminary consideration, and has already led to the offer of a grant to **Oceana** (is discussed in more detail below). Other possible grants are under active consideration in the context of an overall strategy for marine conservation. The crucial objective is the achievement of the greatest impact within the resources available and Arcadia's area(s) of interest.

SUMMARY

There is increasing recognition of need for positive marine conservation. But it is still under-funded. The main cause of deterioration and loss of marine resources is currently the (unregulated or imperfectly regulated) fishing industry. However, the potential effects of climate change are considerable and it may ultimately become the main threat to marine life. Pollution and invasive species also continue to damage the oceans, and within any issue, the question of how human rights interact with marine conservation is worth considering.

Arcadia could support ameliorative efforts in one or a combination of these issues, by means of various approaches: research, education, advocacy, and

activism; and pursue these aims through grants to cooperation with and/or grants to networks or foundations. Arcadia also has the option to help fund either the core costs of an NGO, or specific and well targetted campaigns. As a first step in its commitment to this field, the Arcadia Donor Board has offered a grant of \$1.75 million annually to Oceana to help meet its core costs. A description of that organisation's work can be found below.

KEY ISSUES

Marine conservation is both urgently needed and under-funded. There is a convincing argument that ocean life is imminently threatened. A number of studies point to serious declines in marine life globally and to large-scale obliteration of its habitats. This has led the Oceana to predict that there is a 20-year window to prevent collapse. Yet marine conservation receives a fraction of green grants as compared to its terrestrial cousin. An Arcadia grant in this field therefore presents an opportunity to have a considerable impact, and make a substantial difference.

All marine conservation NGOs are committed to reversing the destruction of marine biodiversity and its habitats. Approaches to this either centre on preventing the causes of marine destruction, (damaging fishing techniques, climate change, pollution and the proliferation of invasive species), or on taking positive steps to enhance marine life (creating marine protected areas, and saving specific species). Many approaches also address the interplay between marine destruction and social and human rights.

1. Destructive fishing techniques

The fishing industry is easily the biggest cause of marine destruction at the moment, (with climate change perhaps being the biggest threat for the future).

Problems

The biggest problems are caused by destructive fishing:

- bottom-trawling (destructive of the undersea habitat)
- dirty fishing (discarding unwanted species caught in nets)
- over-fishing
- unfair fishing
- fish farming
- pirate fishing

Numerous NGOs campaign to stop destructive fishing techniques. In this respect, Arcadia can sustain their activities by (a) grants to support their core capacity, which would perhaps be the most helpful from their perspective; and/or (b) funding specific campaign(s) in the relevant activities:

Bottom-trawling

Bottom trawling involves dragging large, heavy nets along the sea floor, bulldozing the area where there is most biodiversity. It is used to catch shrimp, cod, haddock, scallop and other species. Evidence indicates that deep-water species are very slow to recover from trawling damage, if they recover at all. Since sea-beds are largely unexplored, Greenpeace compares bottom trawling to “blowing up Mars before we get there”.

Dirty fishing (bycatch)

This is the incidental capture of mammals, seabirds, turtles, sharks and other species by fishing techniques including types of netting and long-line fishing. According to Greenpeace, anywhere between 8% and 25% of total global catch is discarded. The scale of this mortality is such that bycatch in some fisheries disrupts the structure and function of whole marine ecosystems. Thus dirty fishing is widely recognised as one of the most serious threats to marine life caused by fisheries.

Over-fishing

Each year, commercial fishing worldwide wastes more than 16 billion pounds of fish. EU subsidies are one of the biggest drivers of over-fishing, amounting to at least US\$30 billion annually, or 40% of the value of the world's fish catch. At least \$20 billion of these subsidies (e.g. fuel subsidies) drive overcapacity. Over-fishing is especially problematic for certain species, including whales, tuna, and sharks, which are being fished to extinction, and in turn creating unbalanced ecosystems.

Fish farming

Fish farming is often no less destructive or unsustainable than conventional fishing. Fish farms vacuum the oceans for oily fish to feed their stock, shoot or trap predator mammals such as whales and seals to protect their stock, and spread fish waste and disease to surrounding ecosystems. Shrimp farming is one of the biggest culprits since it also desolates tropical coastlines, clearing mangrove forests to make space for its activities.

Unfair fishing

Western fisheries are starting to exploit waters around developing countries (especially in the Pacific), instead of addressing their own depleted fish stocks. This not only depletes and ruins the oceans but also takes advantage of developing countries. The economic return for developing countries from access fees and licenses is a mere 5% (or less) of the US\$2 billion that the fish is worth on the market.

Pirate fishing

Pirate fishing exploits coastal communities from the South Pacific to West Africa, by stealing fish and selling it to European and Asian markets. Somalia, for example, loses US\$300 million a year to pirates, while developing countries globally lose more than US\$4 billion a year. In 2002, Greenpeace estimated there were at least 1,300 industrial scale pirate ships at sea. Naturally they also cause the same environmental problems as legal ships, and often more, because they ignore regulations.

Solutions

Efforts to ban or minimise these destructive practices centre on advocacy, which can be highly effective for a number of reasons. First, because ocean life is concentrated around coasts, bans on destructive fishing at national levels can solve most problems. This means NGOs can win important battles without recourse to international cooperation. Similarly, many destructive techniques are used by a very small number of fisheries, and relate to specific markets. Thus NGOs can target these to achieve significant results. Moreover, the power of the fishing industry is not such that NGOs are fighting a David vs. Goliath battle. In other words, destructive fishing techniques create the biggest problems but possibly present the easiest solutions. This potential for high impact makes this theme an attractive funding prospect.

Oceana, for example, has effected a number of useful changes through advocacy (and a touch of detective work) and a degree of expert legal intervention. Having identified bottom-trawling as a major problem, and Spain as the biggest culprit, Oceana pressured the Spanish government to create no-trawl zones in the Azores, Mediterranean and the Pacific. Another example is illegal drift-netting, (causing indiscriminate by-catch), for which France and Italy are the biggest culprits. By sending observers to follow French and Italian ships, Oceana managed to catch them red-handed and encourage their governments to enforce compliance with EU regulations.

We append a fuller description of Oceana's work, submitted by its CEO, Andrew Sharpless.

Aggressive advocacy is one effective technique, but NGOs can also take the softer approach of engaging with fisheries to persuade them that equally productive fishing is possible without destroying the oceans.

2. Climate change

Climate change is one of the most discussed issues in marine conservation. Its consequences are not yet being felt (at least to the same extent as those of the fishing industry), but the future threat is potentially huge.

The challenge is to find ways to help marine biodiversity survive climate change, by research into and the development of practical solutions to increase its resilience and promote stressed areas. This is important not only for marine life, but for its role in limiting climate change damage to the earth as a whole. Healthy oceans are necessary to regulate sea levels, weather systems, and the balance of gases in the atmosphere.

Efforts in this field are in the early stages. Results would be very long-term and Arcadia's contribution difficult to quantify. However, this is clearly an important and topical issue.

Problems

Damage to sea life and habitats

Disrupted currents, acidification, and increased temperatures caused by climate change can all damage marine life. Scientists cannot yet predict all the consequences. However, they suspect that:

- Acidification from increased carbon absorption might affect species' physiology, including their respiration and reproduction. This is particularly the case for coral and for species with shells, which rely on producing calcium carbonate. Coral bleaching is already occurring, destroying one of the ocean's most beautiful treasures and disrupting the food chains it sustains.
- Disrupted currents from arctic melt might prevent the circulation of nutrients and create ocean dead zones.
- It will be difficult for marine life to adjust to the unnaturally rapid increase in sea temperatures. This will be particularly critical in the case of species such as phytoplankton, which generate half the world's oxygen.

Rising sea levels

Rising temperatures and ice cap melt in the Arctic, Antarctic and the glaciers of Greenland could increase sea levels, and create problems including: coastal flooding; storms; eroding shorelines; fresh water contamination; flooding of coastal wetlands, agricultural areas and barrier islands; increases in estuary salinity, and their attendant damage to critical resources and marine habitats.

Unhealthy gas balances in the atmosphere

Warmer and more acidic oceans could also lead to increased CO₂ and methane in the atmosphere. Warmer or more acidic oceans decrease the rate at which phytoplankton sink carbon into the seabed, and increase the rate of microbial degradation in organic matter that produces methane.

Solutions

Solutions centre on protection schemes for endangered flora and fauna, and on technologies to mitigate gas emissions from warmer or disturbed waters.

Protection schemes

To date, protecting coral is by far the most developed response to climate change, and there are numerous NGOs to support in this area. Techniques include creating Marine Protected Areas (MPAs), managing fisheries, transplanting reefs, and enhancing coral resilience with nutrients.

Technologies

These are very much in their infancy. It would therefore be a highly experimental and risky grant that supported research into such techniques as:

- Fertilising the oceans. This means releasing iron sulphate into the seas to increase phytoplankton productivity and, in turn, carbon dioxide absorption. (Tests are ongoing and there are still problems).
- Capturing carbon and methane hydrates from the sea for storage for fuel.

3. Pollution

Pollution is perhaps the most widely known and addressed threat to the oceans, and it continues to be an important issue. It is not primarily associated with the fishing or even maritime industry, which accounts for only around 12% of marine pollution. Land based sources account for around 44%, and atmospheric inputs, 33%.

Although it is clearly crucial to minimise pollution, its varied causes make it difficult to tackle. The culprits of destructive fishing techniques are easy to identify. The culprits of pollution, however, range from farmers to industries to households. Many NGOs at least pay lip service to the problem of pollution, because it is visible and publicly understood, but for Arcadia to have any impact would require a very specific approach, i.e. supporting campaigns to limit toxic waste in the Atlantic.

Problems

Depending on the type of pollution, effects range from toxic, nuclear and metallic contamination, to dead zones created by nutrient inputs that promote oxygen-consuming algae. Creeping dead zones (CDZs) are increasing at alarming rates, and spread easily when they occur at mouths of major river systems. Clearly there are also human costs to pollution, including loss of livelihoods caused by reduced fish stocks and ruined beaches, and seafood contamination.

Solutions

Different pollutants require different solutions. An example is eliminating hydro-carbon dumping from vessels. Here NGOs are trying to improve the ways governments and the EU:

- Control, detect and prevent hydrocarbon dumping
- Treat waste
- Prosecute offenders

4. Invasive species

Species invasion occurs for a number of reasons, including increased use of marine and coastal regions, and sea transport practices such as discharging ballast water. Once invasive species enter marine ecosystems, the effects are difficult to reverse. The rate and intensity of such invasions have been increasing rapidly over the last 150 years.

Problems

There are human, economic and environmental costs to invasive species. Some invasives are benign to native ecosystems, but others can cause extinctions, upsetting foodwebs and creating habitat destruction. For the shipping industry, this can mean reduced stocks, and for people it can create seafood poisoning, ruin local livelihoods, and wreck recreational coastal activities. Furthermore, invasive species are more likely to settle in disturbed or degraded habitats and compound human-induced impacts such as over-harvesting or physical damage.

Solutions

NGOs are working on

- Researching the current status of invasions and invasion hotspots,
- Identifying ways to control and manage invasive species,
- Raising awareness among local communities and marine managers about the threats, and
- Predicting new invasions.

The International Union for the Conservation of Nature and Natural Resources (generally known as the IUCN or World Conservation Union) , for example, works with communities in such hotspots as coral reef islands in the Seychelles and the coastlines of Chile to create invasive species management plans.

5. Marine Protected Areas (MPAs)

Creating marine protected areas is a way of achieving tangible results in the oceans, and perhaps creates the greatest parallels with Arcadia's land-purchase efforts in terrestrial conservation. Although it is not possible for NGOs to manage sections of the ocean Fauna & Flora International do (with

the aid of its Arcadia Fund) in the case of land, they can pressure governments to create marine protected areas and advise on their management.

Since unilateral and immediate prevention of marine destruction is impossible, MPAs are a useful way to preserve at least some important and representative areas. Here, they can restore fish stocks and ocean productivity, avoid further degradation, provide sites for scientific study, generate income through tourism and sustainable fishing, and enhance resilience in the face of climate change. They are gaining increasing international recognition as a solution to marine destruction, and the UN have committed to creating a network of MPAs worldwide.

However, this approach has given rise to controversies, including doubts about the effectiveness of MPA management methods, and possible tensions between marine protection and local livelihoods in developing world coastal regions. There is also the issue of how effective MPAs can be in isolation, without parallel attempts to solve the causes of marine destruction, such as poor fisheries management.

Background

An MPA is a marine area with important flora or fauna, or historical or cultural features, and reserved for protection by law in perpetuity. The idea is that MPAs provide for the protection, restoration, wise use, understanding and enjoyment of marine heritage worldwide.

There are different classifications of MPA, depending on the size, type, public use, and vulnerability of the area being protected. The scale of protection can thus range from strict conservation reserves (which are basically untouchable), to areas designated for sustainable use. MPAs may protect small discrete areas, including unique habitats (such as seamounts or submarine canyons), or historical sites (such as shipwrecks). At the other end of the scale, MPAs may protect a large network of interconnected marine ecosystems, stretching across an entire region.

MPAs in national waters are approved by local authorities. To create and manage new MPAs, NGOs therefore have to lobby these authorities and negotiate with relevant stakeholders to arrange terms for their use. To create MPAs in the high seas is more complicated, requiring a system of international legislation and mechanisms for management and compliance that are still being developed. Currently less than 0.1% of the oceans are protected by MPAs, and none of these are in the high seas. Creating MPAs in the high seas is crucial, since so little is known about them, and yet so many of its rare and unstudied ecosystems are being destroyed by fisheries.

A sub-set of this issue is composed of marine heritage sites. To date there are around 20 such sites protected by World Heritage. They are the jewels of the ocean, and extreme forms of MPA. IUCN identify them, UNESCO choose

them, and IUCN ensure they are well managed. Examples include the Galapagos and the coral atoll, Aldabra, in the Indian Ocean.

Current activity

Initial impressions suggest activity is focused on building a global MPA network, both in the high seas and national waters. The World Wildlife Fund (WWF), for example, has created plans for an MPA network in the North-East Atlantic, while a facilitator organisation, IUCN, is coordinating efforts like WWF's at an international level. Greenpeace have recently completed a year's tour of the world's oceans and identified MPA sites for the attention of the UN, which had promised to map MPA sites by the end of 2006.

6. Human rights & marine conservation

The interplay between marine destruction and human rights is also an important issue. Developing countries can suffer disproportionately from both marine destruction and conservation. Western fisheries, pollution, and carbon emissions can deprive poor coastal communities of their natural resources, but attempts to conserve marine life can also be too costly, or disrupt local livelihoods. Thus Arcadia might consider supporting NGOs that promote developing world capacity to protect marine life (particularly given its wider interest in human rights and developing countries).

Problems

The exploitation of oceans and coastlines in developing countries:

- **Destructive practices, such as shrimp farming**
Shrimp farmers destroy tropical coastlines, especially in mangrove forests regions in Asia and Latin America, to make way for their activities. (Some estimates have 38% of mangrove forest being destroyed by shrimp farming). The industry destroys coastal and marine biodiversity, from monkeys and jaguars to crabs and mussels through pollution, erosion, and deforestation. This desolates the area and the shrimp farmers move on within three years.

All this destroys local people's environments and livelihoods that dependent on mangrove forests . Local people are increasingly trying to resist shrimp farming, but in some cases have been met with harassment or even murder for doing so.

- **Unfair fishing** (see page 4)
- **Pirate fishing** (see page 4)

Lack of capacity in developing countries to protect the marine environment

- **Insufficient funds to invest in ocean conservation**
Governments of developing countries struggle to fund clear-up operations, MPAs, or resist the effects of climate change, etc.
- **Dependence on destructive practices**
Such as over-fishing, polluting industries, etc.

Solutions

Managing projects that both protect the oceans and help local communities.

Seacology, for example, provides islanders with essential services, such as schools and clinics, in exchange for their help with environmental projects. IUCN works on MPAs, invasive species and other issues with local communities, to promote both sustainable livelihoods and marine management. There are many others doing similar work, and there would be plenty of scope for Arcadia to fund a program of grants in marine conservation and human rights.

Campaigning against exploitative western practices

Greenpeace, for example, run campaigns against unfair and pirate fishing.

KEY APPROACHES

Marine organisations tend to fall into the categories of advocacy and activism, research, education, networks and foundations. The following provide a flavour of activity across the field:

Activism

Science-based activism perhaps presents the best opportunity to achieve tangible results with Arcadia funding. Some leading examples:

Oceana

Oceana is an extremely focused and results-based advocacy and activist organisation. It has identified a crisis in world fish stocks, and determined that the biggest cause is the fishing industry, and more specifically, bottom-trawling and by-catch. Oceana therefore lobbies for the most achievable and important policy changes that will prevent these activities.

Of the two options for supporting Oceana - increasing its core capacity or funding a specific campaign - Arcadia has opted for the former in the first

instance. Oceana's campaigns range from the relatively conventional (e.g. preventing destructive shark fishing), to the more ambitious (e.g. lobbying all the arctic nations to protect new waters emerging from polar ice cap melt).

Oceans Alive

This is the marine branch of Environmental Defense, whose mission is to find constructive solutions to the most critical environmental problems. Oceans Alive has regional offices worldwide that work with local communities and NGOs to manage coastal areas. This includes creating MPAs; managing fisheries; protecting coasts from damaging industrial developments; advising local governments on protecting endangered species; recording biodiversity hotspots; helping communities create markets for sustainable seafood; and building local capacity for marine conservation.

Like Oceana, they are results-focused and able to specify both their past achievements and proposed solutions to current problems. Like Fauna & Flora International, they work with local partners to make regionally relevant changes that also help local people.

Global Coral Reef Alliance

Grows, protects and manages coral reefs. Its scientists work with foundations, governments and private firms to build and restore coral reefs. More specifically, it applies a copyrighted mineral accretion to reefs to protect them from excessive nutrients, acidification and rising temperatures in the oceans.

Greenpeace Oceans

Greenpeace cover all the issues covered in this document. They are highly experienced in aggressive advocacy and operating on small budgets.

The World Wildlife Fund (WWF)

WWF operates the largest marine conservation NGO. Like Greenpeace, it covers a broad range of issues, and operates programmes to promote sustainable fishing, create global networks of MPAs, protect marine habitats from tourism, shipping and development; and mitigate the effects of climate change.

Research

Since marine conservation is an emerging field, there are certain to be many research gaps to fill. However, it might be the case that applying existing research is more urgent than pursuing new projects.

Mote Marine Laboratory (MML)

MML is a large U.S research centre with 40 PhD scientists who focus on conservation-related themes. Major research areas include enhancing fisheries management, marine mammal and coral reef protection, and solutions to sea pollutants.

The National Oceanography Centre (NOC), Southampton University

One of the world's top five oceanographic research institutions, the NOC's work includes advising governments, businesses and charities on the effect of climate change on the oceans and marine ecosystems functions.

The Biological Conservation Research Foundation (BICREF)

BICREF conducts research to assist effective science-based action in marine conservation. It researches biodiversity and human impacts in important areas to help local NGOs, and disseminates its findings at local and international conferences.

Coral Bones

A project by environmental journalist Caspar Henderson that asks whether tropical coral reefs will be the first ecosystem to be eliminated by global warming.

Coral Reef Watch

Assists coral reef management by using technology to monitor and report on the condition of coral reef ecosystems worldwide.

Education

Educating the public about the importance of marine life is a necessary complement to research and activism. The media offers great potential to create mass pressure for change, but its results are difficult to quantify.

SeaWeb

Seaweb raises the awareness of marine conservation issues among policy-makers, businesses, philanthropists, journalists and the general public. Examples of its projects include:

- Providing monthly listings of recently published marine science papers
- Working with the seafood industry to create a market for sustainable produce.
- Running public education campaigns about how certain seafood products endanger threatened species.
- Publishing photos to inspire public respect for marine biodiversity and visually convey the extent of its destruction.

Adventure Ecology (AE)

Adventure Ecology raises awareness about conservation to young people (aged 9-16). It uses Apple multimedia tools to engage and educate thousands of young people through ecology missions, animation, and action-based learning resources. AE's current campaign focuses on marine pollution and will educate its audience through filmed missions to polluted areas in South America and China.

Artists Project Earth (APE)

APE raises awareness about the environment and climate change through music and the arts. It recruits internationally renowned musicians and artists to raise funds for environmental campaigns through albums, concerts and art exhibitions.

Networks

There are a number of organisations that liaise with NGOs, governments, corporations, the fishing industry and scientists to coordinate results in marine conservation. Supporting networks presents the opportunity to fund almost any issue from a “big picture” perspective, but the impact of Arcadia’s contribution might be difficult to quantify and in general such networks are well supported already.

IUCN

They work closely with the UN and their activities cover all the main issues and approaches to them. IUCN are predominately facilitators of marine conservation, bringing science-based technologies to marine managers and activists, and holding fisheries and governments to account for their actions. They also help members acquire funding for marine conservation, conduct research and educate the public.

They are then a good organisation in terms of providing information about the main issues, methods and players in the field. Since networks such as **IUCN** tend to be largely government-funded, possible support might be best directed to a specific project, (such as creating a particular marine heritage site).

Deep Sea Conservation Coalition

A network of 50 organisations worldwide that aims to protect cold-water corals, seamounts, and other vulnerable deep seas ecosystems. It is currently focused on achieving a global moratorium on bottom-trawling.

Foundations

Other grant-makers have established programmes to support a range of marine activity. Working alongside them might be an efficient way to capitalise on existing due diligence and experience.

Save Our Seas Foundation (SOS)

SOS makes grants to worthy marine conservation projects worldwide. It makes grants across all themes and approaches:

- Activism - creating an MPA in Red Sea
- Research – tagging and studying the Giant manta ray in Mexico

- Education - sponsoring a shark museum in South Africa, and producing a documentary for China on marine species threatened by its seafood market.

SOS's founder supports core costs and in-house due diligence, which means that all donations go directly to marine projects.

The David and Lucile Packard Foundation

Seeks to build incentives for responsible fisheries management by building market, business, and consumer support for marine conservation and improved fishing methods worldwide.

Oak Foundation.

A diverse foundation, with environment and specifically marine conservation as one of its priorities. The Oak Foundation was a prime mover in the creation and support of Oceana.

Multi-purpose organisations

Marine Conservation Biology Institute

Conducts both research and advocacy to protect the oceans. A team of scientists identifies the most important threats to marine biodiversity. A team of lawyers then tries to win key battles to prevent or minimise these threats. Together with other organisations they have achieved such results as persuading the U.S to create the world's largest MPA, the Northwestern Hawaiian Islands Marine National Monument.

NEXT STEPS

Some options

Minimising risk of wasted resources

A number of grant-making foundations have poured funds into individual marine projects, only to see those projects fail. Such incidents serve to highlight the importance of thorough due diligence and grant monitoring. They also suggest that, if the funds available warrant it, the Board will consider spreading Arcadia's support across several organisations or projects.

Choosing issues, types of action and level of support

In addition to the existing offer of a grant to Oceana, a fuller program to advance marine conservation could involve combinations of:

- Issues (destructive fishing, climate change, human rights etc)
- Methods (activism, research, education, etc)
- Regions, and
- Level of funding

Clearly, many permutations are possible here, from supporting multiple themes and methods in a very specific biodiversity hotspot; to funding a number of activists to stop bottom trawling worldwide.

Grants in the field of marine conservation will obviously relate to Arcadia's wider environmental strategy: it currently supports research, training, land purchase, and project grants to active conservationists. There may be useful parallels between Arcadia's environmental work on land and sea.

APPENDIX: Description of Oceana by Andrew Sharpless, CEO

Oceana was founded in 2001 by a philanthropic group including Pew Charitable Trusts, Rockefeller Brothers Fund and the Oak Foundation. Since then, this founding group has grown to include others, including Esmee Fairbairn Foundation (UK), Fondazione Zegna (Italy), MAVA Foundation (Switzerland) and Foundation Biodiversidad (Spain). This group share the following perspective on the status of the oceans:

- The worlds' oceans are nearing collapse
- The primary acute cause is mismanagement of commercial fisheries, in particular bad fishing techniques which destroy habitat and upset delicate ecosystems
- The most ecologically valuable parts of the ocean are coastal can therefore be protected by national (or EU) action.

Oceana's founders were motivated by the strong bias of much NGO conservation work towards terrestrial problems. Indeed a 1999 study by Pew showed that in some areas less than 1% of all such philanthropy went to ocean advocacy. Research, by comparison, is relatively well funded. In the UK the Natural Environment Research Council (NERC) spent £330million in 2006 alone and supported dedicated marine laboratories at Dunstaffnage and Plymouth. The most pressing problem in marine conservation is not that we are unsure of the problems, but that too little policy action is taken in support of scientific findings. Clearly it is not possible to privately buy marine areas and manage them for conservation in the manner done on land. Marine protection can only come about by abating or prohibiting the destructive activities which damage marine ecosystems. As a result, Oceana is: exclusively marine oriented; focused on changing government and corporate policy; and practical. We limit ourselves to no more than three or four campaigns at a time, and give ourselves three or four years to win.

I am happy to report that in the last three years our track record has grown to include more than a dozen major policy victories, including bottom trawl closures of more than 500,000 square miles; more than doubling funding for independent observers on commercial fishing fleets; criminalizing oil dumping at sea; stopping efforts to weaken laws protecting marine mammals from injury or death in commercial fishing gear; and stopping illegal driftnetting by the Italian fishing fleet.

While the circle of people willing and able to generously support marine advocacy remains very small, we have been able to broaden the base of support for Oceana. Our 2007 budget – covering work in North and South America and in Europe is \$12.6 Million. We currently focus on these areas not only because they are areas where we can make the most profound difference, but also because the reach of the vast European fishing fleet extends across the globe.

Our key fishery campaigns in all the regions where we work continue to be stopping habitat destruction from bottom trawling and reducing bycatch. We have expanded our efforts in both areas. Some of the most important policy changes we plan to win over the coming three years are:

- Setting strict limits in the EU on the killing of sharks and on the practice of cutting fins off live sharks known as shark finning.
- In response to the melting of the arctic ice sheet, we are seeking to limit the advance of destructive bottom trawling into that currently pristine area.
- Extending the provisions of the EU Habitats Directive to protect European waters from bottom trawling.
- Zoning key areas of Patagonian ocean (the southern coast of Chile) off limits to Salmon Farming
- Increasing independent observer coverage of the industrial fishing fleet in Chile and in the US.
- Enforcing driftnet bans on the French and Moroccan Fleets.

Oceans cover 70% of the surface of our world. They are the last frontier for exploration, yet the oceans are being destroyed before we even fully understand them. Industrial fishing gear 'efficiency' and seafood demand are both growing rapidly. Unless we act immediately in some areas the damage will be irreversible. We should also not forget that a billion people, mostly poor look to the seas as a primary source of protein. The oceans provide employment for 200 million people. They are home to countless wonderful (and sometimes remarkably strange) creatures, none of whom deserves to be hunted to near extinction.

We have pushed the oceans to their limits, and we are now in the final years in which to make the changes to assure that oceans are abundant in the future. Time is short, but we know what the solutions are and what to do. The circle of people who understand the peril and the opportunity is very small, but we are making progress.

Andrew Sharpless
CEO
Oceana
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