4th EDITION - MONACO BLUE INITIATIVE

23 & 24th June 2013, Monaco

« Making the most of marine resources: ecological and economic challenges »

Keynote speeches and Concluding address

Keynote speech: H.E. M. Beretitenti Anote Tong, President of the Republic of Kiribati

« Your Serene Highness Prince Albert II of Monaco, Your Royal Highness Prince Carl Philip of Sweden, Fellow Leader from the Pacific, President Remengesau of the Republic of Palau, Dr. Sebastian Troeng, Moderator, and Senior Vice President, Conservation International, Partners, supporters and friends of Monaco Blue Initiative, Fellow panellists, speakers, ladies and gentlemen

Kam na bane ni Mauri!

I am greatly honoured to be given this opportunity to speak to you today on the theme Marine Protected Areas at the heart of Blue Growth, and to share with you again the story of our Phoenix Islands Protected Area, more commonly known as PIPA for short. My participation in this important meeting would not have been possible without the kind invitation of Your Serene Royal Highness, and I thank Your Serene Highness wholeheartedly for that, and also for the warm hospitality accorded to me and my delegation since our arrival in this beautiful principality.

This same time last year, we met in South Korea to progress the initiative to expand conservation efforts for the world's oceans. Today, we are continuing that dialogue. And what better place to do that than right here in Monaco - the home and headquarters of the Monaco Blue Initiative Foundation.

There are two fundamental policy issues that I have been asked to address for the purpose of this session. The first is PIPA's contribution to the economic and social well-being of Kiribati and its people, and the second is the long-term financing model for PIPA and whether this can be replicated for other large MPAs. Let me deal with the first issue, which is essentially about making a business case for PIPA.

Much of the discussions to date on the Phoenix Islands Protected Area (PIPA) have been focussed largely on the ecological value and benefits of PIPA to Kiribati and the global community with little, if any, on the potential economic value and benefits of PIPA to Kiribati. Such bias is understandable since

PIPA was originally conceived as fulfilling our commitment to the international Convention on Biodiversity under the Rio Sustainable Development initiative. It was intended as a tool for preserving the rich and pristine biodiversity observed in the PIPA's ecosystem - hence the focus of the analyses on the biological and bio-physical elements.

But we must never forget that PIPA has as much to do with people as with nature. When we talk about PIPA, we are essentially talking about closing off approximately 11% of Kiribati's total EEZ – an area bigger than Japan and twice the size of the United Kingdom. For a small nation that depends entirely on its fisheries for economic growth, this move is not an easy one, but one that is worthwhile given the long-term benefits it brings with it. PIPA is our gift to humanity and we say this because as a blue initiative model, it is a compromise between conserving an ecological balance and promoting economic growth at the same time. Critics will see PIPA simply as an opportunity cost to economic development but what is often not seen is its sustainable development benefits to Kiribati, and the world at large.

So how can PIPA contribute to the economic well-being of Kiribati and its people?

Developing a Business Case for PIPA

There are multiple economic benefits of PIPA that we can talk about but, in the interest of time, I will focus only on those major economic benefits, or what I call PIPA's niche, that have the greatest potential of attracting potential donors and investors for investment in PIPA with potential positive impact for the people of Kiribati.

The first and foremost is the importance of PIPA to regional and global fisheries enhancement and to the future of the world's food supply (tuna). This is true given increasing concern on the sustainability of tuna fisheries in the Pacific Islands region and globally. As one of the major fishing grounds in the region and as the world's first marine protected area to be used in part as a contribution to tuna conservation management, PIPA will make a significant contribution to the control of over-fishing and managing tuna stock in the region through the closure of its waters from fishing activities by DWFNs.

Also, there is evidence that tuna spawns in PIPA and further research is needed to better understand the significance of these spawning grounds. By protecting these spawning grounds and related habitats, PIPA ensures recruitment and replenishment of tuna stock within the PIPA region with spill-over benefits to adjacent regions. This will help avoid total stock collapse and contribute in the long run to ensuring continuity of food supply to Kiribati, the region and the wider global community.

Related to this is the critical role that PIPA plays for the overall success of the Pacific Oceanscape. The world recognises the importance of the Pacific Oceanscape to the future of the world's food supply (tuna) and the importance of having large marine reserves for resilience to climate change. As you may be aware, the Pacific Oceanscape encompasses an ocean area of nearly 40 million square kilometers – over 10 percent of the Earth's ocean surface – and hosts the world's largest remaining stocks of tuna, providing approximately a third of the world's catches of tuna and related species. With PIPA being a

vital component of the Pacific Oceanscape, its success will underpin the effectiveness of the Pacific Oceanscape in addressing these two global concerns.

In short, PIPA plays a critical role in ensuring effective fisheries management and the future of the world's food supply (tuna), as well as in strengthening regional resilience to climate change. Therefore, by supporting PIPA, donors will be supporting a global effort to addressing these critical environmental issues.

The second important economic benefit is the unique importance of PIPA to science and research. Because of the relative absence of human stress (since all but one island are virtually uninhabited), PIPA is in itself a unique natural laboratory for understanding, identifying and monitoring the process of sea level change, assessing growth rates and age of reefs and reef builders (both geologically and historically), and evaluating the impacts of temperature changes and acidification on the health of coral reefs. . Accordingly, PIPA is well suited to serve as a benchmark for understanding and potentially restoring other degraded hard coral systems in Kiribati and elsewhere in the Pacific. In short, PIPA provides perfect conditions for the study and better understanding of the impacts of climate change on tropical marine and atoll island systems. This could open opportunities for consideration of the establishment a global research center in PIPA from which the people of Kiribati could benefit in terms of employment and related activities.

The third and final economic benefit is the opportunity that PIPA provides for the Government of Kiribati to diversify its economic options, particularly through the development of ecotourism to capitalise on PIPA's universal value and pristine ecosystems. With its massive size of 408,250 square kilometers, PIPA hosts an interesting and huge diversity of terrestrial and marine habitats that displays high levels of marine abundance as well as a full spectrum of species including turtles, giant clams, birds and coconut crabs. PIPA is indeed a unique marine wilderness. It's biodiversity and ecosystem structure does not resemble the typical coral reefs of today. In contrast, because of their remoteness, these reefs are what a reef might have looked like one thousand years ago, before humankind's impacts, such as coastal development and over fishing.

These pristine conditions and rich diversity of habitats and species, unparalleled anywhere else, provide a perfect set up for the development of a robust eco-tourism in PIPA in a well measured approach and in a way that will not compromise the integrity of the ecosystems and the environment. For a small island nation with limited resources and a narrow production base, this development opportunity is hugely welcome. Given the productivity linkages of tourism to the wider economy, there will be a wide range of other income generating opportunities that will emerge from this development, including employment, from which I-Kiribati people can benefit.

It is important to note that, without the PIPA project, most of the islands in the Phoenix group would have remained idle assets. Importantly, therefore, PIPA represents the Government of Kiribati's interest in exploring new development models for Kiribati's natural resources that are less dependent on resource exploitation and consumption. This is smart thinking which should be supported.

All these developments require finance, which brings me to the second issue that I have been tasked to address also in this keynote speech.

PIPA's sustainability financing model.

PIPA's Financing Model The establishment of PIPA in 2006 was done on the understanding that it should be a self-sustaining and self-financing operation. It was also the aim of the PIPA partners (the Government of Kiribati, Conservation International and New England Aquarium) that PIPA should benefit the future generations of Kiribati citizens without impacting negatively on current national

expenditures for health, education, and social welfare. This motivated the enactment of the PIPA Trust Act by Parliament in 2010, which legalised the establishment of the PIPA Trust as a charitable, non-government organisation (NGO). The main objective of the Trust is to address the need for a long-term sustainable approach to funding PIPA and the implementation of its Management Plan through the establishment of the PIPA Endowment Fund to be capitalised by private and public contributions.

By the provisions of this PIPA Trust Act, PIPA will be managed according to the terms of a Conservation Contract to be executed between Kiribati and the PIPA Trust. The basis of this Conservation Contract arrangement is a unique "reverse fishing license" financing program in which the Government of

Kiribati will be reimbursed by the PIPA Trust for the amount that they would have made from selling fishing licenses if PIPA were not protected (this is called the 'conservation fee') - conditional on the satisfactory performance by the Government of Kiribati on its obligation to ensure the long-term protection of the terrestrial, coral, and oceanic natural resources as well as any cultural resources within PIPA as defined under the Conservation Contract. The amount of conservation fee payable depends on the size of the no-take zone and catch intake attributable to the PIPA region. Additionally, the Trust will have to meet also the cost of implementing PIPA's Management Plan and the operation of PIPA, estimated to be around $500,000 per annum.

We have teamed up with our partners - New England and Conservation International - to structure global financial support for the capitalisation of the PTEF. To this end, the PIPA Trust Fundraising Framework has been developed which sets out the various opportunities and strategies that the PIPA partners can explore and employ to increase PIPA's funding base and attract external funds for the capitalisation of the PIPA Trust Fund. The Framework will inform and guide fundraising activities between now and 2014.

The overall goal of this fundraising campaign is to raise US$25 million, with an interim target of US$13.5 million by 2014. Conservation International and the Government of Kiribati have each agreed to put $2.5 million into the Endowment, so the Trust expects to have $5 million as a starting base. It is my greatest pleasure to report that Conservation International has wired US$2.5 million to the PIPA Trust bank account in Kiribati. This is a clear demonstration of a true partnership by Conservational International and a reflection of their genuine commitment to fulfil the goals and aspirations of PIPA. We are indeed very blessed to have partnered with Conservation International and New England Aquarium on this very special project, called PIPA. I must add that, on the part of the Kiribati Government, arrangements are being finalized for the early disbursement of our matching contribution of US $2.5 million to the PIPA Endowment.

Ladies and gentlemen, it is encouraging to note the positive transformation of a national development model like PIPA to the Pacific region through the Pacific Oceanscape which has seen the declaration of

other important MPAs in Fiji, Cook Islands, in Micronesian- the Micronesian Challenge, and in Australia. This growing momentum of the Pacific Oceanscape transforming from concept to plan of action and gaining support across the region, is a milestone achievement for us in the Pacific, signifying an important truth – of the urgency to act to protect our oceans now. I wish to acknowledge also the true partnership of the Monaco Blue Initiative in sharing our visions at the Pacific Oceanscape as testament in our leadership to create far-reaching global benefits from oceans conservation and I am very grateful of the World Bank's support to the Global Partnership for Oceans initiative which His Serene Highness and I launched last year in Rio.

Closing Statement and Message

Ladies and gentlemen, the foregoing gives you the picture on PIPA and how it benefits an island nation like Kiribati. I do hope that the Monaco Blue Initiative will continue to mobilize support from the rest of the world in its effort to globalise oceans conservation and protection. I thank you Serene Highness for the invitation and warm hospitality, fellow leaders, partners and friends of MBI. Te Mauri, Te Raoi, Te Tabomoa. »

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Keynote Speech: H.E. Mr Tommy E. Remengesau, President of the Republic of Palau

« Good morning my fellow environmentalists. I would like to begin by thanking His Serene Highness Prince Albert II of Monaco for inviting me to speak at this ongoing environmental initiative that he sponsors.

As I look around this room I see environmentalists from all over the world: Europe, North America, Australia, Africa, and, of course, small nations like mine from a little corner of the world in the middle of the Pacific Ocean. Environmentalists are from all over the world because protection of the environment is something that affects all of mankind no matter what little corner of the globe that you come from.

I would like to extend my sincere appreciation to Prince Albert for recognizing this and putting together the Monaco Blue Initiative as a platform where all of the people of the world, from all of its little corners, may come together to discuss what the appropriate steps are to protect our oceans for generations to come. The oceans do not divide us; the oceans bind us together in a common cause for all of mankind.

For my part, I would like to share with you some of the steps that my little corner of the world has taken to protect our environment and the economic opportunities that our protection policies have provided so that the world may discuss the small steps we each take can be applied collectively on a larger scale.

In Palau, my people have practiced environmental conservation for thousands of years. Palau is a small place, but it has 16 states, and within those states, are many small traditional hamlets. With our small country being broken down into these small areas we have traditionally been accustomed to thinking locally in our conservation efforts.

Before there were NGO's, before powerful international fishing lobbies existed, and even well before most of the world knew Palau existed, a Chief of a small hamlet could impose what we would now call "environmental protection" by enforcing a traditional bul that could be as simple as: "You see that

Turtle there, stop killing so many of them when they are mating or laying their eggs or else one day they will all be gone."

As time has gone on, Palau's understanding of how connected our larger environment is to its smaller components has, like the rest of the world, developed such that we now know that what happens in one place has a great impact upon the environment in another place. An understanding of this reality has caused Palau to think bigger in our environmental conservation efforts.

Palau now seeks to implement the traditional bul on a larger scale. Today, alongside the Chiefs in the little hamlets declaring a bul on the local level of conservation, we have State governments declaring large areas of our country to be protected environmental conservation areas and a President who seeks to create the world's largest Marine Sanctuary by banning foreign commercial fishing. But let's come back to that in a moment.

In Palau we face an economic situation that is much different from the economic situation in other parts of the world because our economy is isolated and heavily reliant upon tourism. Our tourism depends heavily upon our environment because that is what tourists come to see: our pristine marine environment. As I am fond of saying: Our economy is our environment and our environment is our economy.

As a result of this economic reality, Palau has focused its environmental protection efforts on developing conservation areas. However, when Palau creates a conservation area it does not lock up the area and then throw away the key; instead, Palau locks up the area and then looks at the key, asking ourselves: "How can we use this key to improve our economic situation?"

Palau's first large scale effort at this sort of approach on the national level began in 2003 when we did two things: First, we developed the "Micronesia Challenge," which is an agreement between Palau, Guam, the Commonwealth of Northern Marianas Islands, the Federated States of Micronesia, and the Republic of Marshall Islands to preserve 30 percent of our marine environment and 20 percent of our terrestrial environment through the development of a Protected Areas Network. This was the first region wide effort at environmental conservation within Micronesia. Developed with the support of The Nature Conservancy, the Micronesia Challenge simultaneously encourages environmental protection and enhances Palau's economic situation by marketing our country as an environmentally conscious society and funneling financial resources to the Protected Areas Network in support our conservation efforts.

Second, in recognition of the importance of sharks to the marine environment, in 2003, Palau also signed into law a comprehensive ban on foreign commercial shark fishing and became the first country

in the world to ban shark fining. In 2009, Palau took that a step further and declared Palau to be the world's first "Shark Sanctuary." As you all know, sharks are known as "Apex Predators," the protection and economic opportunities of which is the topic of this morning's panel.

An increasing amount of scientific research indicates that Apex Predators are essential to any healthy marine environment. Through a diverse predatory diet Apex Predators regulate and maintain balance in marine ecosystems by switching its prey when a particular prey population low. This sort of natural selection "balance" then results in greater marine biodiversity. Moreover, through predatory intimidation Apex Predators can also affect the distribution of that biodiversity. In short, the protection of Apex Predators generally results in a greater diversity of fish and a broader distribution of healthier fish stocks.

Since the Republic has taken action to protect sharks two things have happened:

First, our marine environment has flourished with more sharks in the environment. Although it will take some time for the science to definitively back this up since we ust implemented these measures in recent years, with more sharks present in our marine environment, we are now seeing a greater diversity of fish spread out over a broader area. Our marine life is so abundant and diverse that divers do not fear the presence of sharks that they see because it is obvious to the divers that there are so many other things for the sharks to eat that divers have nothing to worry about.

Second, Palau has created a great marketing opportunity for itself as people around the world have began to equate Palau with Sharks. Once the divers get to Palau, they find that there are dives in Palau where a diver is almost guaranteed to see not one shark, but 2 or 3 or 5, which causes the marketing effect to feed upon itself as divers spread the word that Palau is the place to see sharks. The overall result is that Palau has effectively cornered the market as a tourist destination to see sharks, improved its environmental protection policy, and improved its overall tourism product with one sweeping nationwide environmental protection action: protecting sharks.

This is only the beginning of what a focus on protection of Apex Predators can accomplish.

As many of you likely know, some sharks are migratory, which is a part of the challenge in measuring their economic value to one nation. It is difficult for the Republic of Palau to enforce its economic share of a shark that migrates through its waters only to be caught in one area of the Pacific where it is finned, and then transported to be sold as shark fin soup somewhere in Asia. Thankfully, most of the world is catching on to the importance of sharks to the marine environment and the damage that the practice of widespread shark fining poses to our oceans.

However, there is another Apex Predator that is even more migratory than sharks, and far more economically valuable. I am talking about Tuna.

Most people do not think about Tuna as being an Apex Predator at the top of the food chain. That is probably because there is no Stephen Spielberg movie about Tuna eating people off of a beach. The fact of the matter is: Tuna ARE Apex Predators that are capable of providing the same benefits to a marine environment that sharks do. But the benefits to the marine life are only one part of the equation when it comes to protecting Tuna.

When I was growing up, we were able to catch Tuna that was the size of a small pony – 300, 500 pounds. I remember that when I was young my Grandfather once told me that the worst invention to happen to the environment is the Icebox, or a refrigerator, for those too young to remember what an Icebox is. If only my Grandfather were alive today to see all of the fishing technology that is available to fishermen now – the fish aggregating devices; Long-Lining vessels; Purse Seining vessels; satellites that tell you where to fish; and computers that tell you how and when to cast and close your purse seine.

Fishing for Tuna is no longer a part of the art of fishing that is handed down from father to son from generation to generation; it now capitalistic driven blood sport – how much Tuna can you catch, how fast can you catch the Tuna, and how much can you sell the Tuna for on the international market? And that would be fine if it was not the case that it is foreign commercial fishing vessels that come into Palau's waters to catch as much Tuna as they can, as fast as they can, in order to sell Tuna on markets in other counties for top dollar that Palau's people see very little of.

The key issue is that Palau, and other small Pacific island nations, must find a way to harness its economic potential from the Tuna that migrates through its territorial waters. This is our environment and these are our fish, at least when they are in our waters. Palau has the right – and the responsibility to its people – to protect its environment and to maximize its fair share of its resources.

When Prince Albert came to my country earlier this year, I announced an initiative to create the world's largest Marine Sanctuary by closing our Exclusive Economic Zone to foreign commercial fishing. If one half of making Palau a Marine Sanctuary is about environmental protection, then the second half is about maximizing the economic value of our marine life for the people of the Republic of Palau – whether through improved tourism or through increasing the economic value of marine life taken from Palau. When I announced our objective, I recognized two key issues that the Republic would need to resolve in order to accomplish this policy objective.

First, I said that our enforcement capabilities would have to be improved before we would be able to handle enforcing such a policy. Second, I said that Palau would need to find away to offset the inevitable revenue loss from pursuing a policy that would end foreign commercial fishing in the Republic.

As to the first issue, I am proud to say that the Republic has already taken positive steps to develop our enforcement capabilities. We are working with an Australian NGO to bring unmanned aerial drones to patrol our EEZ and we are working with the United States to enhance our joint capability to patrol our waters. Where a traditional bul and the will of a traditional Chief once worked to enforce environmental protection in the face of the technological development of the Icebox, technology must evolve for drones to enforce environmental protection in the face of fish aggregation devices and purse seine fishing vessels.

As to the second issue, the Republic is still developing international support for our Marine Sanctuary policy. Palau has already received strong support from the PEW Research Center, The Nature Conservancy, and Conservancy International. I am confident that more international support will develop as time goes on.

In addition, a remaining key economic issue for Palau will be how the Parties to the Nauru Agreement decide to handle Palau's policy objective. Palau sits in the Western most part of the Pacific and it is the farthest West signatory to the Parties to the Nauru Agreement – a major international agreement that governs fishing for Tuna in an area that accounts for over 65% of the Tuna caught in the Pacific.

There is some scientific research that indicates that Bluefin Tuna spawns primarily to the north of Palau's EEZ, and Yellowfin Tuna spawns primarily to the north of Palau's EEZ and in Palau's EEZ. Although it has not been proven to a scientific certainty, it appears that both Bluefin Tuna and Yellowfin Tuna – two of the most valuable species of Tuna – migrate from the western Pacific to the eastern Pacific through Palau's EEZ only during the time shortly after its spawning. Thus, it is only the youngest Tuna and the most vulnerable Tuna that pass through Palau's EEZ.

At the next meeting of the Parties to the Nauru Agreement, the Parties will continue to discuss the best way to maximize the value of our Tuna. One way to maximize our value may be for the Parties to the Nauru Agreement to support Palau in its quest to develop the world's largest Marine Sanctuary on the theory that, as young Tuna are protected as they migrate from west to east through Palau's EEZ, there will be more Tuna and larger Tuna available to catch in Papua New Guinea, the Federated States of Micronesia, the Republic of Marshall Islands, the Republic of Kiribati, the Solomon Islands, and the Republic of Nauru – all of which are Parties to the Nauru Agreement that lie to the east of Palau. More Tuna and larger Tuna available for catch should result in higher economic value per Tuna for the Parties to the Nauru Agreement.

The bul was once limited to a little hamlet within a state in Palau. Today, Palau has entire States declaring large protected areas under the umbrella of the Micronesia Challenge and I want to see my entire country to be a Marine Sanctuary free from foreign commercial fishing, but it is organizations like the Parties to the Nauru Agreement that have the potential to implement environmental protection policies that are environmentally sustainable on a global scale that have the capacity to maximize the economic value of our fish. Truly the power of the bul is growing.

And now I will cede the floor to our esteemed panel to discuss the protection of Apex Predators and the economic opportunities presented by their protection. I believe that Palau's efforts to protect sharks and tuna – two key Apex Predators of the Ocean – provides a strong starting point for our discussion. The Monaco Blue Initiative began as a part of Prince Albert's effort to promote the protection of an Apex Predator, the Atlantic Bluefin Tuna. The Republic of Palau supports the efforts of Prince Albert to protect the Atlantic Bluefin Tuna and the efforts of my country only serve to supplement the efforts of initiatives like the Monaco Blue Initiative. Let us now discuss what else we can do together in support of Prince Albert's Monaco Blue Initiative. »

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Concluding address: HSH Prince Albert II of Monaco

« President Tong, President Remengesau, Excellencies, Distinguished Guests, Ladies and Gentlemen, Dear friends,

At the end of this day, which once more has been extremely profitable, I would like, first of all, to express my gratitude to you.

Thanks to all of you who agreed to join us today – our discussions this year have once again provided valuable insight in quite a unique way on key issues concerning the ocean. A wide variety of views were expressed as well as many common objectives shared.

The discussions answered questions about the present and defined pathways for the future; they evoked ocean issues without ignoring the people who live around them.

I would like to express my sincerest thanks to you for all this and for your commitment, in my own name, on behalf of my Foundation and the Oceanographic Institute, and also in the name of all those who are concerned about these issues and who will find reasons for hope in our dialogue.

It is difficult to draw a single conclusion from such rich and diverse talks. From the status of large predators to marine protected areas, not to mention the exploitation of marine resources, the topics dealt with were varied and numerous. However, they outline a few common principles. I can summarise them in three words: creativity, continuity and complementarity.

First of all, creativity.

In this period of crisis, when it is often difficult to ensure that concrete measures for ocean preservation and environmental protection in general are adopted, I believe that we should be open to all new ideas, to all innovative solutions, even if incomplete or partial.

Contrary to political progress, which is fed by major laws and universal values, the environmental cause lives off pragmatism, in the noble sense of the word. It needs to conduct tests, to proceed by trial and error, to make adjustments – and sometimes even to fail – in order to identify the most relevant solutions.

We cannot resolve the situation of the oceans with a universal treaty or a single technical solution. There are too many interests at stake, too many diverse practices, too many different seas even, to be able to hope for a universal solution. Between the high seas and the coastal waters, between the ocean floor and the ocean surface, between the Antarctic and the Mediterranean, the problems are not the same and neither are the solutions!

This is even more so in that such issues evolve over time. Advances in our knowledge, still fraught with gaps as far as the seas are concerned, often lead us to reassess the situation. And technology itself moves so fast that we have to constantly adapt.

This is a constraint of course, as it forces us to continually recommence the task. But it also provides an opportunity, since so many productive ideas stem from this necessity to invent, for instance those we discussed today on blue growth. Could we have imagined such prospects only ten years ago?

We know that technology will continue to evolve and that is why our first task is to evolve with them!

The second requirement: continuity.

In this situation where we are continually inventing, it might seem that all our efforts will be contradicted tomorrow. I believe that it is precisely the opposite. Although ideas and solutions evolve, they obey a logic that remains and pursue goals which cannot be achieved in a few months, or even in a few years.

Therefore, just as we need to reassess our thoughts and actions, we also need to demonstrate perseverance in order to allow enough time to any ideas, inventions and projects to develop and reach their full potential.

Those of you who attended the previous editions of the Monaco Blue Initiative will have noticed that the topics we dealt with today already featured on the programme of previous editions. This does not mean that these are the only issues that currently affect the oceans. It simply means that our work requires time, that the dialogue is never finished, and that these issues need time to mature.

We were eager to make this coherence, this long-term insistence, one of the principles of the MBI. And I believe that the positive developments at the moment with regard to a species like the bluefin tuna, which has represented a substantial part of our work since 2010, are there to prove the merits of our determination.

In a similar vein, the remarkable efforts made here by the Oceanographic Institute to raise awareness of the plight of sharks deserve to be highlighted.

Finally, the third requirement: complementarity.

Once again, this is a trademark of the Monaco Blue Initiative which we were keen to pursue today by bringing together individuals and experts, who always gain from joint dialogue, to discuss common issues.

All of you here are an example of the virtue of dialogue, in which I believe more than ever before, especially the dialogue concerning environmental issues.

When dealing with topics that intermix the challenges, levels and players involved, we cannot dispense with open dialogue, in which all the stakeholders should be represented and able to assert their legitimate interests.

This is what our initiative sets out to do – not to impose any hierarchy between players, between interests, between points of view – insofar as they share the same conviction: the need to protect our seas and oceans more efficiently.

This is the basis of a method which I believe is essential, because this is the only way of guaranteeing that we won't stray along incomplete or ineffectual paths.

I am thinking for example of marine protected areas, exactly the type of topic for which the greatest synergy is necessary, at all phases of the process.

When it comes to creating a different way of living with the sea, of using its resources and building its future, it is essential that everyone be involved.

And I believe that this applies to all the challenges with which we are faced and which require individuals and companies alike to make major adjustments. That is why we need to alert, to explain and to convince unremittingly. That is why we need to unite.

This is what we are doing today by joining forces in order to find innovative solutions and to offer our oceans a future which is less bleak.

This is like a synopsis of the world; a world in which progress can only be made if everyone agrees to transcend their own interests, to break away from their individual habits, to look beyond the people around them and their time. We can only advance if we can see what unites us, beyond our differences - and if I may say so, beyond the seas...

I think that the presence amongst us today of the President of Kiribati and the President of the Republic of Palau, in addition to other eminent figures from various countries, provides the finest illustration.

"We come from many places, but we share a common future" said President Obama. These words of hope embody the challenge of this responsible century. They also sum up the ultimate goal of the Monaco Blue Initiative.

Thank you. »

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Summaries of the discussions

Introduction

With this 4th edition the Monaco Blue Initiative reached cruising speed as an effective platform for discussion among diverse marine stakeholders. The main themes – the status of large marine predators, namely bluefin tuna and sharks, and the role of Marine Protected Areas in ensuring sustainable ocean ecosystem management – built on those of previous editions for, as H.S.H. Prince Albert II noted in his keynote speech, one of MBI's strengths and founding principles was continuity.

"It means that our work requires time, that the dialogue is never finished, and that these issues need time to mature," he said. "I believe that the positive developments with regard to a species like the bluefin tuna, which has represented a substantial part of our work since 2010, are there to prove the merits of our determination," he added.

Robert Calcagno, CEO of Monaco's Oceanographic Institute, echoed this in his introductory remarks. Indeed, while humankind's "careless overexploitation of the oceans" has brought a number of large predator species to the brink of extinction, there is some good news: the improvement of the status of bluefin tuna and the expansion of Marine Protected Areas, he said.

Bernard Fautrier, Vice President and CEO of the Prince Albert II of Monaco Foundation, underlined MBI's uniqueness as a think tank bringing together economic, political, scientific and environmental professionals, affirming that "Together we're stronger in spite of our differences, and perhaps because of them."

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Session 1 : « Current Status of Large Predators: Protection and Economic Opportunities »

The session began with an inspiring speech by the President of the Republic of Palau, Tommy E. Remengesau. Ten years ago the small island republic took bold steps to protect apex predators in its waters, banning commercial shark fishing and becoming the first country in the world to outlaw shark finning. It is now pursuing the goal of creating the world's largest marine sanctuary by closing its entire Exclusive Economic Zone to foreign commercial fishing, Mr. Remengesau explained.

The country is already reaping benefits, in part by becoming the go-to destination for divers who want to see sharks. The establishment of the EEZ-wide MPA, largely to protect tuna, for which the islands are a spawning ground, would come with a price, and Palau is seeking ways to offset the economic losses from ending fishing in the area, President Remengesau said.

Sergi Tudela, Head of Fisheries for the Mediterranean at WWF, outlined the recent history of the bluefin tuna. While the species has been overfished in the Mediterranean since the 1970s, the big shift came in 1996 with the introduction of tuna farming, in which captured fish are placed in pens and fattened to the standards of the Japanese market. This new threat quickly increased pressure on wild stocks, which led the International Commission for the Conservation of Atlantic Tunas (ICCAT) to adopt a recovery plan for the species in 2006. The plan wasn't ideal – the quotas were twice what scientists advocated as sustainable – but it banned the capture of juveniles and shortened the season. Since then, the plan has been improved, largely thanks to Monaco, Mr. Tudela said.

In 2010 ICCAT set quotas at scientific levels of sustainability, introduced traceability and inverted the season management logic, from a one-month closure to an 11-month closure. The total catch has been reduced by approximately half in recent times, he said, and according to ICCAT's latest diagnosis, the fishery is recovering. "We have clearly averted what seemed to be imminent collapse. This is good news," Mr. Tudela affirmed, while noting that the speed and magnitude of the recovery was unknown because of inadequate data.

He cautioned against crying success prematurely. "The stock is in recovery mode. We need to keep up the pressure until we reach the maximum sustainable yield," he warned. But he shared his satisfaction when before the ICCAT meeting, French and Italian fishermen said they didn't want to increase quotas, as they had realized the value of catching less: prices were higher, and they were earning more. "In ten years of work, this was the most rewarding moment," Mr. Tudela said.

Dominique Leglu, Editor-in-Chief of French monthly Science et Avenir, highlighted the media's struggle to obtain reliable figures regarding the status of endangered species, with "different actors playing different games." "If we want to convince our readership that these issues are important we need good figures," she said. There is also the question of responsibility: "For bluefin tuna stocks, the news seems to be good. But we have to think about the effect of such an article."

Ms. Leglu noted that alongside quotas and other regulatory measures, technology now plays an important role in helping tuna stocks recover. Each authorized French fishing boat now has a sealed

Argos beacon indicating speed and direction, monitored by a satellite center. The ships have to declare their delivery point, which is verified, along with fish length and weight. This strict surveillance also ensures they will not tolerate cheating by other countries' ships: some 13 illegal Chinese ships were signaled in May of last year, she said.

Global consumers have a role to play, but they need to be informed. Of the 100 million sharks killed each year, almost 75% are killed for their fins alone, mostly for export to China, but the Chinese public is largely unaware of the practice, Ms. Leglu noted.

Charles Clover, Chairman of the UK's Blue Marine Foundation, suggested turning the conservation paradigm on its head and applying a financial logic to sustainability. Look at it as Bluefin, Inc., he proposed.

"If the bluefin tuna industry was a business, it would be congratulating itself, but also writing a business plan for the future," he said. Bluefin tuna is so valuable that overfishing is practically inevitable, so why not harness the extraordinary market value of bluefin tuna to help save it, he asked. This would mean getting private finance to invest in the future value of restored fisheries, enabling authorities to borrow against the future value of restored spawning stock to fund conservation measures. The value of stocks could treble in 15 years, he said, from the current ?29 million to some ?89 million annually, if current fishing levels were reduced by 25%.

Measures would combine high-tech monitoring with management tools such as buying out 25% of purse seiner capacity and establishing "fish banks," which could be Marine Protected Areas, he suggested. While all this would cost a lot initially – some ?65.8 million over a 15-year period – it would lead to a ?60 million annual increase in value thereafter, Mr. Clover claimed. While he recognized that such a scheme would require a great deal of political will, he said using the profit incentive was worth a try, since "until now, we have offered fishermen nothing but Puritanism and restraint."

Giuseppe Notarbartolo Di Sciara, President of Italy's Thetys Research Institute, spoke about the monk seal, "the poster child of human abuse of the Mediterranean." Once widely distributed throughout the area, it has been critically endangered for 16 years now, he said, due to a combination of deliberate killings, habitat loss and bycatch, among other causes.

Measures to protect the species have been a persistent failure, with no implementation of commitments, a lack of Mediterranean-wide coordination and continuity and insufficient attention to the human aspect of the problem, he affirmed.

Mr. Notarbartolo di Sciara has hopes for a plan to implement a participatory, ecosystem-based management scheme around the Greek island of Gyaros in the Cyclades, the monk seal's main reproduction zone in the Mediterranean. The key will be "getting fishermen to participate in protecting marine biodiversity while protecting their livelihoods," he said.

Bruno Genty, President of France Nature Environnement, reminded the gathering of the fundamental role of apex predators as indicators of ocean quality. For sharks, the health of coastal ecosystems, which the species used as nurseries, is crucial. And that health depends on practices on land, he noted, calling for the integration of coastal and high seas governance. All coastal communities should be required to include ocean conservation in their planning strategy, whether in terms of waste disposal, water supply or building issues, he suggested.

Strengthening scientific knowledge is also a priority: Mr. Genty supported creating an international ocean science group similar to the Intergovernmental Panel on Climate Change, or IPCC, which reviews and assesses the most recent scientific, technical and socio-economic information regarding climate change.

Bringing the discussion back to sharks, Robert Calcagno pointed out that unlike tuna, sharks have a very bad image. "We all remember 'Jaws.' People don't understand why sharks disappearing is a bad thing," he said. Statistically, sharks are not a particularly dangerous animal, he noted – they only kill about 10 people a year, as compared to 3,000 deaths from crocodile attacks. The Monaco Oceanographic Museum's current interactive exhibit and a new book aim to change popular perception of sharks and garner support for their protection, he explained.

Better scientific data could be gathered using new technologies for monitoring sharks, such as electronic tags, but sharing the sea with sharks also requires humility, Mr. Calcagno suggested. "It is illusory to think we can control and explain them. This is part of respecting the marine wilderness."

Sandra Bessudo directs Colombia's Presidential Agency for International Cooperation. As founder of the Malpelo Foundation for sharks, she spearheaded creation of the Malpelo Fauna and Flora Sanctuary 500 km off the coast of Colombia, which includes the largest no-fishing zone in the Eastern Tropical Pacific and was named a UNESCO World Heritage Site in 2006. Ms. Bessudo said public-private partnership and an exceptional degree of regional cooperation were crucial to protecting this MPA. One example is a bi-national committee between Colombia and Costa Rica to prevent illegal fishing, she said.

Silvia Earle declared that tuna should be seen as a unique animal, critical to the health and integrity of the ocean, instead of as "a dollar sign." "We can look at sharks and monk seals as creatures in their own right. Why not tuna?" she asked, noting that even engineers at MIT envy tuna for their efficient propulsion through water. "They are an engineering marvel, and all we can think of is eating them," she said.

Sergi Tudela suggested trying to shift tuna's image as a global icon for overfishing to a global icon of recovery. "If even the most hopeless case can react to good management, this is a very strong message for global fisheries," he said.

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SESSION 2 : « Perspectives for the sustainable exploitation of marine resources »

Miguel Bernal, Officer in charge of Fisheries at the GFCM Secretariat, noted three causes of depleted fish stocks: degradation of habitats, climate change and, above all, overfishing. It is a question of adaptation, he said: "Humans are the fastest species to adapt, developing new technologies for fishing, accessing new areas and new species. All the species can do is move or alter their rate of reproduction," he said. Even so, "as we've seen with bluefin tuna this morning, when we give them a little time and a little space, they do recover and adapt," he noted. **Lisa Speer**, Director of the International Oceans Program at the NRDC, emphasized the importance of integrated management, and said the high seas represented an opportunity in this regard. A new international instrument is in the works at the UN which would outline a legal framework for Marine Protected Areas in the high seas, she noted. The Arctic in particular provides the chance to implement a scientifically sound, ecosystem-based approach before industry begins exploitation, she said.

President and CEO of the World Ocean Council **Paul Holthus** agreed. To that end, his organization has created the Arctic Leadership Business Council, bringing together actors from shipping, fisheries, oil and gas, tourism and mining to study how to use Arctic resources responsibly and to engage with governments and NGOs.

Mr. Holthus cited a recent speech by Prince Albert II of Monaco, in which the Prince noted that "there is no point in creating a new ocean governance if it is done independently of the realities of the current economy," whether relating to transport, food or other activities. "We should encourage and facilitate the involvement of economic players in the use and governance of ocean resources," Mr. Holthus concluded.

Rupert Howes, CEO of the Marine Stewardship Council (MSC), agreed, and sounded a note of optimism. "Markets have a key role in demonstrating sustainability. There are many well-managed fisheries out there," he said, noting that the MSC has assessed and certified roughly 300 of them, representing 10% of the catch. The key is to empower consumers to make the best environmental choices, in turn putting pressure on the industry, Mr. Howes said.

François Simard, Deputy Director and Senior Advisor for Fisheries at the IUCN, presented an innovative ecosystemic approach his organization has developed, called "balanced harvesting." Rather than today's selective fishing, which targets a narrow range of species and individuals, the approach spreads targets over a broad diversity of species and sizes. This "vertical" harvesting allows the ocean ecosystem to maintain its natural balance and productivity and reduces negative impacts. While this is a promising direction for the future, Mr. Simard warned that "first of all, in any event, we have to fish less."

Arne Benjaminsen is Acting Secretary General at Norway's Ministry of Fisheries and Coastal Affairs. He emphasized that ecosystem-based fisheries management must be based on sound research to understand interactions among fish stocks.

Norway, whose herring, cod and mackerel stocks almost collapsed in the 1960s, took action to reduce its catch and as a result those stocks have largely recovered. Today, Mr. Benjaminsen said, quotas are historically high. He credited international cooperation, notably between Norway and Russia, with enabling the ecosystem-based management that has permitted North Atlantic cod's recovery. The two countries have had a common fisheries commission since 1975, which shares research and establishes quotas, he explained.

Miguel Bernal then shared his experience with international cooperation in the Mediterranean, where despite a great diversity of fleets and local economies, the regional fisheries organization manages to unite countries around common objectives. This year they have set up meaningful rules and agreed on a management plan, he said.

Moderator **Céline Cousteau** brought up the issue of illegal and underreported fishing. Norway's Mr. Benjaminsen said that all European states now cooperate to fight it. "You can't land unreported fish in any European or Moroccan port, and coast guards also cooperate," he noted. Alongside other partners, Norway and the Pew Foundation are financing an Interpol project to fight illegal fishing, he added.

Rupert Howes stated that good public policy and enforcement were necessary, but that the private sector could also act. One example is McDonalds – the restaurant chain now carries the MSC ecolabel on its Filet-o-Fish sandwiches, and works with its existing suppliers to make the changes necessary for them to earn MSC sustainability certification, Mr. Howes said.

Paul Holthus mentioned the World Ocean Council's efforts to scale up industry's role in collecting and sharing data. With up to 80,000 merchant vessels and 1,200 drilling platforms in the ocean today, whose companies also need data, it makes sense to work with them. To this end, the WOC has launched the Smart Ocean/Smart Industries initiative to improve and expand data collection, he said.

The discussion then turned to aquaculture. President & CEO of Novus International **Thad Simons** represents the input side of aquaculture, as a feed ingredient producer. He said his company was trying to help aquaculture to transition away from using fish to feed fish, toward nutritional supplements, as Novus has done with livestock for some time now.

The global population is expected to grow from today's 7 billion to 9-10 billion by 2050, and "we will need to produce as much food in the next 40 years as over the past 10,000" Mr. Simons affirmed. As there is no better source of protein than fish, "a lot of that will have to come from the sea," and the challenge for aquaculture is to raise fish in more sustainable conditions, Mr. Simons said. He bemoaned the lack of a policy framework for aquaculture, which he said was hindering investment.

Mr. Benjaminsen said Norwegian fish farming was at a crossroads. The problems of sea lice and escapes need to be addressed prior to further expansion of the industry, he said, which depends on biological research. A whole new veterinary research field is now developing in Norway to meet this need, and marine biotechnology could also support the industry, he noted.

François Simard warned that while aquaculture is one response to the planet's increasing food needs, and already represents almost half of all fish consumed, it presents challenges. For one, using fish to feed farmed fish is not sustainable at current levels, he said, and alternatives such as soy protein may have unforeseeable impacts on ecosystems. Micro-algae hold promise, however, as even reputedly carnivorous fish have proven able to thrive on such feed alone, he said. He echoed others' calls for an ecosystem-based development policy for the sector.

Mr. Howes added that fish farms should be held accountable in the same way wild fisheries increasingly were, and certified according to whether they were sustainable or not. The MSC is working towards implementing a consumer eco-label system for aquaculture similar to that for wild fish, he said.

Regional Coordinator of SIPAM and former GFCM Commissioner **Mohamed Hadj Ali Salem** warned that aquaculture was no miracle solution. Alongside the question of feed for farmed fish is that of space. In the Mediterranean, Tunisian fishermen and fish farmers have come to blows over the issue, he said.

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SESSION 3: Marine Protected Areas at the Heart of "Blue Growth"

Moderator **Sebastian Troeng**, Vice President of Conservation International, introduced the topic of integrating conservation with socioeconomic benefits by noting that the value of the ocean's "ecosystem services" is estimated at $21 trillion per year. The question is "how to use the interest without drawing down on our capital," he said.

CI has established a tool for measuring ocean health and setting sustainable standards for different uses of the ocean, called the Ocean Health Index. Of the 10 economic and social benefits the ocean delivers, MPAs contribute to the resilience of 7, Troeng noted, which makes them a very effective driver of "blue growth."

Purificacio Canals, President of MedPAN, said cooperation between fishermen and MPA managers was growing as the industry began to see the positive results of better management of the resource, including a higher market price for fish. "They are beginning to understand the value of quality over quantity," she said.

Tourism, and particularly diving, also benefits from MPAs, but it is important to continue to insist on sustainability to balance economic and social gains with preservation goals. Accessible communication is necessary to explain the need to consider the ecosystem as a whole. While the general public or tourism professionals may not see the point of vast sea reserves aimed at protecting posidonia, for instance, these marine plants play an important role in halting beach erosion, which is a tourism benefit, Ms. Canals noted.

Eric Banel, General Secretary of French ship-owners' group Armateurs de France, said French ship-owners have long worked with MPAs. Ship-owners mean not just tankers but also oceanographic research vessels and cruise liners, the latter two of which benefit from MPAs. It is important that MPA planners and managers sit down at the table with shipping professionals and negotiate, as they do with fishermen, he said, noting that the Pelagos sanctuary is a good example of such cooperation. Ship-owners have adopted best practices such as equipping vessels with systems to track and avoid collision with marine mammals.

The problem is that not all countries' ship-owners abide by the same rules, Mr. Banel said. Therefore his organization is now working at the European level to create an eco-label for shipping, such as that which exists for fair trade or sustainable fisheries, he explained. "Today there's no way to give added value to those who play by the rules. We strongly believe in this process," he said.

Jean-Yves de Chaisemartin, Mayor of Paimpol and a marine business owner, called MPAs "the most important starting point for integrating blue and green into our development." This requires strong local political will. The challenge when developing marine business projects such as in his field of micro-algae is to integrate conservation from the start. He cited three rules: conduct research to estimate the impact of projects, define and prepare measures to counter those impacts, and finally, go slowly. However, France's strict application of the precautionary principle discourages innovation, he said, adding that on the contrary, "developing business opportunities is the best opportunity for furthering knowledge" of the oceans.

Bruno Chabas is CEO of SBM Offshore, which supplies systems and services to the offshore oil and gas sector. Expansion of offshore oil and gas is inevitable, and the share of offshore oil will grow from today's 30% of all production to 45% in the future, he affirmed. MPAs are a helpful framework for getting the full range of marine stakeholders to sit down together well ahead of planned development to decide what to do and how to ensure the greatest benefit to all, Mr. Chabas said. He has experienced this himself in his work for a previous employer, who laid a pipeline to deliver gas to Florida in the middle of an MPA and manatee reserve off the Florida coast.

Indeed, said **Dan Laffoley**, Marine Vice Chair of the IUCN's WCPA, approaches to MPAs need to evolve. "We tend to focus on biology and physical processes. We also need to focus on socioeconomic arguments and address them early on," he declared. Mr. Laffoley identified a "skills gap" in the MPA community: "Marine socioeconomics is a massive opportunity. We need to equip environment ministers to be able to communicate with finance ministers."

Financing for MPAs also needs to be reconsidered, and approaches diversified or adjusted. In Bonaire in the Caribbean, for instance, while divers today pay a $10 annual fee, research has shown they are willing to pay between $61 and $100 to dive there. Just doubling the current fees would pay for that MPA's management, he said. Payment for "ecosystem services" is another avenue, which implies quantifying the benefits of protecting a marine ecosystem. And finally, Mr. Laffoley argued, though "it makes politicians nervous," more of the ocean needs to be protected because "size matters: when you scale up, costs may be bigger but the benefits are even bigger."

Francis Vallat, Chairman of the French Maritime Cluster, reminded us of the importance of working with fishermen and encouraging them to participate in forums such as the Monaco Blue Initiative.

France is No. 1 in the world for quality and safety in shipping, he said. “There are some dirty jobs, like transporting fuel. You had better have good operators for dirty jobs, and not dirty operators,” he affirmed, adding that his industry grouping has a good relationship with France’s MPA agency working on issues like noise at sea, mapping and renewable marine energies. “Sustainable development” is a term that contains two words, and “they go together – it’s not one against the other, even if we don’t always agree,” Mr. Vallat said.

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Synthesis & Concluding Remarks

Tony Haymet described the tone of the gathering as one of “cautious optimism.” While we’ve learned that we can save some fisheries, there are plenty of examples of ones that never came back, and “it’s fair to say from the scientific side, we don’t know what fisheries we can bring back from the grave, and which ones are dead apparently forever, so we should bear that in mind when we hear those wonderful success stories,” he warned. Mr. Haymet also regretted the gathering hadn’t really discussed ocean acidification, which is “a desperate problem for all of us.”

François Simard pointed out that the depletion of fish stocks is not only the result of overfishing but also of habitat degradation caused by other factors such as pollution, climate change and ocean acidification. It is necessary to find the means to allow nature to adapt to and recover from these changes to the ecosystem. Market forces are a crucial element, while MPAs are also an important tool for helping nature to adapt, and could play a role in fighting against ocean acidification, particularly in the high seas, he said. Finally, ecosystem-based management is imperative, but it requires better research, and is difficult to implement across regions due to differences among countries.

Imposing a moratorium on exploitation of marine resources in the Arctic until a common roadmap is drawn is a good idea, as is the use of eco-labels to raise consumer awareness and pressure, Mr. Simard said. This could be one way to limit the negative impacts of aquaculture, for instance. Regarding the Monaco Blue Initiative itself, its great value and key message is the importance of implicating all the different actors and understanding their activities, he noted.

Sebastian Troeng agreed that the presence of government, industry, science, NGO and cross-sector representatives is MBI’s great strength. This is an example to be followed: “to engage all stakeholders from the start, even if it can be tough to overcome some of the sectoral interest and the perceptions about the motivations of other stakeholders,” he said. “We all like to see ourselves as the good guys but that holds true for all stakeholder groups, and listening is a very important part of that stakeholder engagement process.”

Possible future paths include monetizing the concrete benefits of MPAs – whether to fishermen, tourists, cruise ships or conservationists – to offset long-term management costs; improving

communication as to the benefits of marine protection, and drawing on the best possible science to enable true sustainability, he said. MPAs in particular create the opportunity to involve multiple sectors to jointly develop innovative solutions and win-wins, and to manage trade-offs among sectors, Mr. Troeng affirmed.

Indeed, Prince Albert concluded in his speech, “this is what our initiative sets out to do – not to impose any hierarchy between players, between interests, between points of view – insofar as they share the same conviction: the need to protect our seas and oceans more efficiently.” Such open, sustained dialogue “is the only way of guaranteeing that we won’t stray along incomplete or ineffectual paths,” he said.

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