

*American Geophysical Union Fall Meeting –Keynote speech for HSH the Prince
San Francisco, 12th December 2016*

Ladies and Gentlemen,

Dear friends,

I am delighted to be able to speak to you today on the occasion of this Fall Meeting.

The American Geophysical Union is a key reference for all those who are concerned with our Planet, its mechanisms and its future. Your strategy, which consists of getting as many researchers and institutions involved as possible in order to spread knowledge, gives greater consideration to many vital issues for which geophysics provides precious insight.

And your Fall Meetings which bring together so many eminent specialists provide a unique opportunity to discuss, learn and understand... but also to imagine and build our common future.

This approach, which makes scientific knowledge the cornerstone of all progress, is in fact a prerequisite for any action which is intended to be coherent and efficient for the benefit of this Planet.

Above all it is a prerequisite for the development of an objective and indisputable vision, alone capable of enabling us to join forces so that we can collectively move forward. Because action to promote the environment should be capable of involving as widely as possible all the stakeholders concerned, it should be capable of bringing people together regardless of any national or cultural differences, and above all beyond any divergences of interest.

At a time when we once again are hearing talk which questions the anthropogenic origin of global warming, this imperative is of particular importance.

Never has science had such a key and direct role to play. Never has it been at the heart of so many key issues for the direct future of billions of human beings.

Because through the issues raised by geophysics, through the issues raised by the study of the atmosphere and the ocean, solid earth, hydrology and space, it is indeed the future of Humanity which is at stake today.

I am not going to make a presentation here on topics which you know much better than I. However, in the name of this Humanity under threat today, I would like to try and shed light on the manner in which I think that humankind can take action to save the ocean.

And I would like to illustrate this by talking about the way I endeavour to act, with my own resources and tools - those of a Head of a limited size State but with assumed responsibilities, and of the head of an equally responsible Foundation.

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The Principality has in fact for many years linked its destiny to the knowledge and preservation of the seas. Over a century ago, my great-great grandfather Prince Albert I, was one of the founders of modern oceanography. He carried out many expeditions across the seas of the world, some of which led him as far as the Arctic. He was interested in studying ocean currents and mapped out its depths. He observed various marine species. And he established in Monaco and Paris institutions intended to support oceanographic science and to share his knowledge.

His legacy, over the last hundred years, has been embodied in various initiatives implemented by the Principality to promote knowledge and the protection of the seas. And in turn I endorsed this by creating ten years ago, shortly after my accession to the Throne, a Foundation devoted to environmental protection, highly active with regard to marine issues.

This Foundation gives me the opportunity to take action in addition to that of my Government. It enables me therefore to diversify and intensify our actions, by forging partnerships with public and private players, from scientific institutions, global and local NGOs to various businesses. This multi-level action is at the core of the strategy I wish to implement. It addresses the complex reality of the issues we face.

Moreover, as far as the ocean is concerned, these issues still remain widely unknown. You know better than I the extent to which our knowledge of the oceans is still insufficient, in particular in relation to the High Seas and the ocean floor, and their interaction with the climate. And you know how a lack of clear vision can sometimes limit our action.

The first requirement which needs to be addressed is therefore a requirement for knowledge.

It was in this sense that I submitted in January 2015 a request to the IPCC with a view to the establishment of a special report on the oceans. For two years this project was actively defended at every decision-making and validation stage. Last week I had the pleasure of hosting in Monaco the kick-off meeting for the scoping meeting of the special report on

climate change, the oceans and the cryosphere which was attached, in a timely manner, to the request of US representatives.

Thanks to this work, the international community will finally have the resources necessary to assess the knowledge we have concerning the way in which the oceans and the cryosphere are affected by climate change, the impact suffered by the populations, in particular islanders - and also the way in which we can try and address the situation.

This report should especially shed light on various points which today are poorly understood, especially everything relating to the ocean floor and the High Seas. Because we should not forget, in our approach, that the ocean is not only an expanse which covers two thirds of the Planet, but that it is also a huge and mysterious volume in which 97% of all biosphere is concentrated.

This special IPCC report should also enable us to gain a better understanding of the climate services provided by the ecosystems, which today are at the heart of the development strategy for marine protected areas, a subject to which I shall return shortly.

The complexity of these issues, their scope and their importance require the mobilisation of various knowledge, which the IPCC will be able to unite, I am sure, with the level of excellence that characterises it. Knowledge of climatology, chemistry and physics of course. But also of biology, zoology and human sciences, economics and social sciences.

Over and above the work carried out by the IPCC, the mobilisation of the scientific community, attention to its work and dialogue with its representatives is more than ever necessary.

My Foundation strives to work in close cooperation with many leading scientific institutions, and to support research programmes focused on the oceans, in particular within the context of global warming.

. Consequently, we are participating with IDDRI in Paris, in a study regarding the impact of global warming and ocean acidification, ocean ecosystems and coastal populations. We also support the missions carried out by the ship Tara, whose expeditions have resulted over the last few years in the collection and analysis of important data on carbon gas sequestration by marine micro-organisms or the degradation of Pacific coral reefs subjected to climate change.

These actions are in keeping with the tradition of the Principality of Monaco, which has for many years chosen to help and host international scientific institutions, especially those dedicated to ocean issues.

To take a recent example, it was in Monaco that the attention of the international community for the first time was drawn to the issue of ocean acidification. This was in 2009, thanks to the Declaration known as the Monaco Declaration, signed by one hundred and fifty scientists from twenty-six countries. Since then, the Principality is proud to have accommodated within the IAEA laboratory housed here, a coordination unit devoted to this key issue, about which sadly little is still known.

These committed efforts to promote science and the development of ocean knowledge are therefore an initial phase, which are directed towards a practical objective: to be able to implement concrete action for the protection of the seas.

The second component of such commitment, of my commitment towards the oceans, should indeed consist of carrying out concrete action to protect them as far as possible from climate change and its effects.

This action begins with local initiatives. The latter concern chiefly the development of marine protected areas, which in many respects are at the heart of these issues.

Whether it is preserving the ecosystems or restoring the ocean's capacity to absorb greenhouse gases, or promoting a better balance between the development of human society and the protection of the marine environment, I believe marine protected areas are one of the most workable solutions to ensure the future of our seas.

In order to reinforce existing areas more effectively and create new ones we need human and financial resources. That is why we set up, initially with France and Tunisia, a trust fund in order to develop them in the Mediterranean. But , I am also trying to persuade through my contacts with other political leaders of the interest of development of marine protected areas.

In this respect, the recent announcement by CCAMLR, concerning the creation of a large marine protected area in the Ross Sea is an extremely significant step forward.

I was personally involved in promoting this project for years. I can but welcome therefore the consensus reached between the United States and New Zealand, the initiators of the project, and Russia for its implementation. I hope that it will be followed by other similar

conservation measures, in particular in the Arctic and Antarctic Seas, where the dangers are particularly important, and where these conservation measures are more than anywhere else essential, due to the particular capacity of these areas to store carbon.

More broadly, I feel that it is necessary to promote the intensification and expansion of marine protected areas in a more homogenous and global framework, with more efficient coordination of initiatives and more resources, both financial and political.

There is no point in announcing protection measures if we do not have the capability necessary to deliver from an operational point of view. This is an issue being raised all over the world and which we need to work on; we must show no hesitation in turning to innovative solutions.

And it would also be worthwhile to opt for innovative technology, which may prove to be particularly valuable for the management of remote marine areas. Satellite surveillance, the collection and processing of data from ships sailing in the vicinity would considerably facilitate the management of these huge areas. We objectively do not have the financial and human resources necessary to oversee them properly using only traditional tools...

However marine protected areas also need political resources. In this respect, I think that the negotiations currently underway at the UN on High Seas biodiversity, or BBNJ, represent a key opportunity to complete and adapt the existing law. I have made a commitment in this sense.

This is another aspect of concrete action to promote the oceans and their preservation in the face of global warming: it is political action which needs to be implemented within multilateral organisations, in particular the UN.

Negotiations on BBNJ, just like the IPCC's special report, are testimony to a positive development. They supplement the special day devoted to ocean action held during the last COP22, or the adoption last year by the United Nations General Assembly of a sustainable development goal specific to the oceans: SDG 14. The conference concerning SDG 14 being held in New York next June will be another important milestone.

The oceans are complex political subjects, for which we are largely ill-equipped. Extending beyond borders, outside our old legal categories, falling under extremely diverse jurisdictions - depending on whether we are speaking about the environment,

shipping, fishing or science - today the oceans are suffering partly from our inability to provide them with appropriate collective solutions.

Consequently it is by ensuring that these solutions happen, which can only come about through a wide consensus between States, that we will be able to protect them from the many effects of climate change.

But this consensus itself requires a sense of awareness that unfortunately is often lacking. Although public opinion and leaders are changing, and although recent developments in various countries are proof of this, today we need to intensify this movement.

We need to make all of humanity understand that its future depends on the oceans. That the oceans have already been affected by climate change. That they may be much more so tomorrow. And above all that they are powerful allies for us in the face of climate change and its effects.

The third priority which we need to focus on, in addition to the development of knowledge and local and global action, is the mobilisation of governments, civil society and public opinion.

It was within this context that in 2010 the Monaco Blue Initiative was created, an informal think tank whose annual meetings bringing together political leader, NGOs, scientists and business leaders, provide an opportunity to discuss the future of our seas and to identify the solutions available to protect them.

And it is in this context, above all, that we need to make efforts to stimulate blue growth which we know is the only sustainable solution for preserved seas. It is up to businesses, and their clients, the millions of our contemporaries currently concerned about the future of our seas, to develop such growth.

But it is up to our political leaders to make this possible. And it is up to you, scientists, to shed better light on this matter.

In order to do this, we need strong measures of course, which include putting a stop to practices that contribute to sea degradation and global warming, such as the subsidising of certain particularly destructive and polluting activities, including fishing activities. Above all we need to develop sustainable use of the seas, by taking advantage of the enormous solutions they offer, for example in terms of the development of renewable

energies It is to this effect that we have developed heat pumps powered on sea water in Monaco, which have proved to be particularly efficient.

These are opportunities that we must all be aware of. Opportunities that all of us, at our own level, can help to promote. When 40% of the world's population lives less than 60 kilometres from the coast, and when by the end of this century 80% of humankind will be living on a coastal strip of 100 kilometres, this is a necessity but also an opportunity for everyone.

It is an opportunity for businesses, which will be able to find potentially infinite sources of growth. And for citizens and consumers, who will be able to benefit at last from a more abundant source of energy at a lower cost. And for the Planet, which will find the keys to a new stability with protected seas.

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Understanding, conservation, awareness: these are, Ladies and Gentlemen, the three priorities on which we relentlessly need to focus, something I have been endeavouring to do for years.

All three are based on a firm conviction: that it is not too late to act, that the inexorable decline of our environment and our oceans is not inevitable.

They also address a pressing need: to leave my children, our children, a Planet which is not irretrievably devastated. Because through the oceans which cover two thirds of its surface and guarantee its equilibrium, it is the whole planet which is at stake here, our planet which we have the supreme duty to protect.

As Jules Verne wrote, whose exciting tales about the Moon or the ocean floor, so many generations grew up with, "the sea is the vast reservoir of Nature. The globe began with sea, so to speak; and who knows if it will not end with it?" »

It is up to us today to prevent this end.

Thank you.