

Excellencies

Ladies and Gentlemen,

Dear Friends,

I.

I am greatly honoured to be among you today to talk about what is undoubtedly the major challenge of this new century. I would like to express my deepest thanks to Professor Gülay Barbarosoglu, rector of the Bogazici university, to Professor Orhan Yenigün and Ayen Erdinçler, director and vice director of the institute of environmental science who were kind enough to invite me, as well as all those in charge of your renowned establishment

I am sorry that Professor Pachauri is not with us as planned.

I have a deep respect for him as a discerning scientist and for everything he embodies through his career and work. I also have a high admiration for the remarkable work conducted by the IPCC, over which he presides, and which promotes public awareness of the dangers of global warming. Such awareness is one of the greatest challenges of our era - I will go back to that in a few moments. This work at the frontier of the science Professor Pachauri orchestrates, the policies he elucidates and the commitment he encourages, is in my view a model of what all action based on intelligence and education should be. It is also a model of what science which is accessible to human beings and aware of its responsibilities should be. Finally, it is a model of what coordinated and unbiased action could be, bringing together the very best from each country in order to serve the common good of humanity.

Whatever our individual circumstances, whatever our priorities or difficulties, the climate is a global issue which must unite us. It must unite us, drawing our attention to a shared planet and a common humanity. But it must also unite us so that we are able to implement concerted action, at all levels, across every continent.

In this respect, I believe that global warming, although it represents an unprecedented threat

to human history, can serve as a vehicle for breakthrough progress. It is such progress that I would like to talk to you about today.

Climate change and energy are at the crux of the two main issues that determine our life on Earth.

The first is our relationship with nature and the manner in which we are capable or incapable of maintaining this relationship over time, thus making it bearable for the generations who follow us.

The second issue, resulting greatly from the first, is our economic, technical, technological, but also political organisation: are we able to develop production methods that in the long-term do not become destruction mechanisms?

I am not a trained scientist and therefore only have a practical approach on this topic.

It is the approach of an activist for the environmental cause, which thanks to the education provided by my parents is something I have been since I was a young boy, which has led me to the many places where the Planet is endangered.

It is the approach of the head of an international NGO, the Foundation that bears my name, which has been working in the fields of climate change, sustainability, biodiversity and water since 2006, and has led to over two hundred projects worldwide.

Finally, it is the approach of a Head of State who, particularly concerned by these issues, has made them a priority in his action, not only at home, with voluntary measures to reduce greenhouse gas emissions, but also in his international policy.

It is therefore in the name of this three-pronged experience that I would like to talk to you today about climate change, its effects, and the ways of mitigating it, by means of appropriate energy policies, and - because it is sadly inevitable - ways of adapting to it.

The effects of human activity on our climate have for many years been difficult to see and even more difficult to admit. Their reality today is beyond debate - except among a few individuals whom I think we can now say are ill-intentioned, but who sometimes still lurk around a few lobbies of institutions in some countries.

We all know now that widespread greenhouse gas emissions into the atmosphere, caused by our industrial society and our frenzied consumption patterns, are directly responsible for

climate change. Consequently, in the Polar regions where I recently travelled, the decrease in the ice surface caused by global warming reduce the reflection of the sun's rays, and in turn is accentuating global warming. The melting permafrost, in addition to the damage it is causing to human infrastructure, to the foundations of buildings for example, releases methane that has been buried deep below ground from time immemorial, itself accelerating climate change. The acidification of the oceans, which fortunately absorb a huge quantity of the resulting greenhouse gases, is threatening the entire chemical and biological balance of the marine environment, and the rising sea temperatures increase even further the temperature of the entire planet...

These phenomena, which I have summarised here in abstract terms, already have very tangible effects in many regions of our planet. More importantly, contrary to other climate oscillations that our planet has undergone in the past which were not human-induced, those that we are facing today are occurring in an extremely short time scale.

In Bangladesh, thousands of families every year are the victims of the Himalayan snow melt resulting in overflowing rivers and receding coastlines.

In Africa, regions which are already fragile have experienced extreme weather events, often with fatal consequences for the populations.

In Oceania, intensified frequency of extreme weather events and increase in annual high tides in Asia.

In Europe, as in America, unusually intense rainfall and storms periodically hit regions that until now have been spared, killing the inhabitants - a reminder that nobody can now assume that they are safe from the changes affecting the Planet.

In the Polar region, where the sea ice is dramatically decreasing from year to year, the whole balance has been upset, both for the ecosystems and the indigenous people. People who have seen their lifestyle disrupted, not only by the direct effects of the global warming I have just mentioned, but also by the new appetites that the melting ice has opened up - whether it be shipping routes, until now unnavigable, or the exploitation of natural resources previously inaccessible.

Finally in the Mediterranean, a sea we share and of which I am particularly fond, all these phenomena are to be found, often with an intensified impact due to the characteristics of a semi-enclosed sea, a longer time period for the regeneration of resources, fragile ecosystems and increasingly strong anthropic pressures on certain areas.

This modestly sized sea, I would like to stress, is one of the Earth's major reservoirs of marine and coastal biodiversity, harbouring 28% of the world's endemic marine species, 8% of marine fauna and 18% of flora. Its climate, insulation and numerous islands partly explain this wealth, making it a major wintering, breeding and migration area.

This is why the ecological crisis in the Mediterranean can lead to serious consequences in geopolitical terms, starting with the impoverishment and weakening of the region's most exposed areas, mainly the southern shores, which are subjected to ever-increasing pressures. The resulting increased imbalance can only lead to rising tensions of all kinds, in particular regarding the fight for resources and migratory pressure...

Consequently the issue at stake with global warming is the entire balance of our planet, both in the Mediterranean and elsewhere. Climate, plant and animal balance of course. But above all human balance.

All of this, I have seen myself. I have clearly seen the dangers. And I have seen that, across the globe, climate change is already a reality for those making the effort to observe.

Across the globe, natural mechanisms are changing whilst tensions and pain increase, signs of our passivity in the face of a tragedy of which we sometimes feel we are the helpless onlookers.

Yet it is not too late.

What the IPCC has enabled us to understand beyond any doubt needs to be said and repeated: all these phenomena have one single cause - the action of humans, their greed to ruthlessly use natural resources, their thoughtlessness too with regard to future generations, in other words their own children...

Fortunately our knowledge of these phenomena extends beyond these empiric observations. Over the last few decades, science has carried out exceptional intelligence work, which has now enabled us not only to have a clear idea of the mechanisms at work, but also to understand their causes. And these causes, as is so often the case, can be found within us, in the folly of humanity too concerned with its own immediate needs to notice the long-term dangers.

Although we are now aware of the effects on our climate of our excessive consumption of fossil energies, and although these resources are becoming increasingly scarce, humanity continues to found its development on this basis, including by the exploitation of new deposits and new energies. Yet these new deposits, those for instance found in the High Seas or the Polar Regions, and these new energies, for example the gas located in the bedrock, and this is a question which is raised now in many European countries, present extremely important environmental risks.

Should we be surprised by this headlong rush, which in certain respects would appear to be suicidal? I don't think so. Rather, I believe that environmental issues should always be placed in a human context if we want to understand the deep processes involved.

That is why, before engaging in any discussions on climate change and its causes, we need to realise that the top priority is still human progress. Hope for an easier life, the desire to offer our children a better future, quite simply the need to feed ourselves, to keep warm, to travel... all this is at the root of these appetites whose dangers we are weighing up today.

Can we blame our contemporaries for seeking a better life, when sheer survival is so difficult for so many of them?

No, for humans, progress must remain the ultimate goal. But such progress must not be measured against the yardstick of selfish immediate interests. Such progress must not be limited to current generations but should be for those who live today and those who will live tomorrow, for those who live here and those who live on the other side of the world.

That is why, as we cannot accept the prospects of a hypothetical decline that nobody would wish for, and which would simply be tragic, neither can we accept this system founded on the predation of common resources and environmental damage.

We therefore need to build development based on the sound exploitation of nature and energy use, which will be helpful to the current generation and which respects future generations.

To achieve this, I would like to consider three paths of action which I am endeavouring to follow, with both the Government of Monaco and my Foundation. They concern clean energy which must be sustainable and used more efficiently, the establishment of binding international regulations and the implementation of local experimentation. This entails various registers and levels of action. I would like to explain them to you briefly.

The first path is the development of alternative energies. Wind, hydro, hydrokinetic, tidal, solar, geothermal, biomass and agro fuels: many complementary solutions are now at the core of essential economic dynamics which are under way in Europe as in China, in the United States as in Africa. All these energies benefit today from significant progress which, although they do not as yet enable us to contemplate the foregoing of fossil fuels, should encourage us to persevere in our efforts.

We know that the search for a clean, inexpensive energy, in sufficient quantities to be used by all, will be long. That is why we need to begin by intensifying initiatives, by exploring every solution. But things change very quickly. Just think that in some regions of the world for example, the combination of the decrease of prices of photovoltaic panels and the increase of their efficiency thanks to technological progress has already led to energy production costs that are competitive, without a grant, with the costs of traditional thermal power plants.

I would also like to talk about the importance of developing clean or zero-emission mobility.

Because the car represents for many of us progress and individual emancipation, but also because it is a major petroleum consumer, it has to be at the forefront of the development of new energy solutions. And this is increasingly so, as I see from year to year in Monaco, where we have been making major efforts for almost twenty years to promote electric and hybrid vehicles whose energy efficiency is much greater than combustion engines.

Indeed, a key aspect is energy efficiency, not only in mobility but also for example in building activities, and which consists first of all in the more efficient use of the energy resources available today. My Foundation is actively working on this, both through the promotion of simple principles and an exemplary approach within the premises it occupies.

By combining these two elements – innovative energies and energy efficiency – we can draw a high-performance model, considering the current technological possibilities. Building on this *mix* the Principality of Monaco, at its own level, but with its constraints, is aiming for carbon neutrality by 2050.

In the light of this objective, which for us is an extremely strong commitment, we support various projects that can open the way to productive and realistic solutions. Thus, we recently welcomed several emblematic initiatives that I would like to mention, all of which illustrate the fact that it is possible to travel around the world using only solar power - whether it is the

Planet Solar boat, Bertrand Piccard's Solar Impulse plane project or the SolarWorld GT car. All these initiatives I follow and support with much compassion, in the same way as I support the research work carried out on these topics.

Of course, we know that such innovation for the moment comes at a price. But isn't it our responsibility to look beyond this short-term vision which leads to plundering the planet to obtain the most polluting energies at a low cost? Is it not our duty to make the investment and effort necessary so that tomorrow these energies become affordable?

Alongside this first path of action to combat climate change, a parallel effort must be conducted to promote the establishment of more binding international regulations.

Climate change, we know, is a global phenomenon, which requires action on a global scale. The accumulation of greenhouse gases in the atmosphere produces effects over the entire surface of the globe - no matter where the gases were released.

Whatever solutions we implement to mitigate climate change, they can only be effective if they have world-level ambitions. Consequently climate change deeply modifies the scale of political action. It can no longer be limited to borders, or even to continents. It must take into account a wider responsibility, both geographical and historical, since it also includes future generations.

It is quite natural therefore that such issues should be dealt with in multilateral forums, first and foremost within the UN. This has been a priority in my action for many years, since the first UN Conference I attended was in Rio twenty years ago.

Since then, I have taken part in most of the major international meetings dedicated to climate issues. With determination, but also with clarity, I have seen changes that I believe are significant.

In twenty years, considerable progress has been made, not only with regard to growing awareness of the dangers linked to global warming, but also concerning the implementation of measures designed to address this issue. Let us not surrender to fatalism: policies currently implemented in Europe, as well as in major economies including China and the United States, would have been inconceivable a short time ago. And the global awareness we are witnessing is one of the milestones of the last few decades.

But these changes are not enough to truly reverse the current trend. If nothing more is done, it would be illusory to maintain global warming below 2°C, the level generally considered as the limit in preventing irremediable effects to the balance of the biosphere.

If we want to move further ahead and effectively combine the efforts of all, it is essential to set binding international standards, which alone are capable of prompting each of us to assume his/her responsibilities. These standards must of course take into consideration the situation of each country, of its history and its level of development. But they must be of a binding nature, failing which they will remain insufficient, inadequate.

Let us face it: these are high ambitions. The disappointment of the last summits devoted to the environment, and in particular the last one, which I attended in Rio in June, reminded us of the profound differences that exist between countries on these issues.

However, this difficulty should not stop us, on the contrary. It should spur us into continuing our efforts of conviction and force, with more determination than ever. In every country, we need to rally as many people as possible. Because it is most often thanks to scientists, citizens, civil society, NGOs and companies, thanks to their common needs and their refusal to throw in the towel, that changes to policy making in this regard are possible.

This is the last solution I wanted to talk about today: smaller-scale initiatives that can be conducted by one or several countries, even by decentralised authorities. This is not about taking global action against climate change but about trying to lessen some of its effects and come up with alternative ways forward.

At a time when many governments face major financial problems that limit their ability to act, when, above all, priorities overlap and, all too often, push climate issues into the background, such local action, close to people on the ground and the realities of nature, cannot be ignored. As I realised at the Rio+20 summit, where the local authorities played a vital, innovative and impetus-giving role, these decentralised power networks are a new and effective force. They can test out possible solutions. They can work out further levels of action. And above all they can involve local people, who are the life blood of this action. Because it is only with them that we will be able to move things forward. By taking their needs into account, harnessing their energy and enthusiasm, and offering them new perspectives.

Among the many innovative projects being conducted at local level nowadays, I would like to spend a few moments on the subject of smart grids, which provide a means of harmonising human requirements and the constraints of nature in real time. This innovative technology,

which relies on complex scientific principles and computer systems, is opening up some very ambitious possibilities for reducing energy consumption and optimising our use of resources. And I believe that we should be equally ambitious in developing this technology. Projects are already underway in many European cities and we are examining the possibilities for Monaco.

In time, smart grid technology will give us back some room for manoeuvre with regard to the causes of climate change. And, above all, we can prove to worried economies that green growth is not just a slogan but a promising means of creating wealth and progress – progress moreover that can be perceived by the people.

This is why it is essential to experiment, increase our experience and test as many solutions as possible. Of course, no single solution will solve the fundamental problem facing our civilisation. But each, on whatever scale, proves that it is still possible to tackle climate change and the most tragic thing now would be to give up.

Excellencies,

Ladies and Gentlemen,

Dear friends,

Climate change is a reality; it is not an inevitability.

At a time when pessimism prevails, when we realise the scale of the task and the difficulty in achieving it, I believe that we should not lose sight of the progress that has been made.

I spoke a moment ago of the work carried out by the IPCC and its impact on increased global awareness of the danger of climate change. More generally, I believe that we are living in a pivotal era from a philosophical point of view.

For the first time perhaps in the history of humanity, we can see issues emerging in our reasoning, including economic reasoning, that stretch beyond our immediate interests.

We know that this is an imperative that extends beyond climate issues alone. Because it is the entire direction of the world and its economy that we are being asked to rethink and reform: the real needs of humanity are at stake. progress of course, but also continuity.

In this respect, as the philosopher and political scientist Hannah Arendt wrote over thirty years ago, "The recent sudden awakening to the threats to our environment is the first ray of hope. »

It is this ray of hope that I wanted to share with you today.

Thank you.