Keynote Speech

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"The Power of Policy and Technology"

Your Imperial Highnesses, honorable Ministers, Excellencies, Ladies and Gentlemen, dear colleagues, I am very honored to have been able to listen to this morning's remarks of His Imperial Highness and his Excellency the Prime Minister at such a crucial juncture for both the global environment, the global economy, and also the nation of Japan. Let me also begin by thanking Juro Saito-san, the Chairman of the Global Environmental Action, for making this possible at such a perfect moment in time.

Let me also pick up his Excellency, the Prime Minister who made the connection to the Rio Earth Summit. It was ahead of the historic Summit in 1992, in fact, almost 25 years ago in 1991 that the first meeting of the "Eminent Persons' Meeting on Financing Global Environment and Development" offered an invaluable insight into how the world could not only address environmental sustainability, sustainable development, but also address the issue of financing.

Since then, this expertise has flourished to become the GEA, which is so well known and respected today. At the same time, the world's appreciation of the links between environment, economics, society and technology has also flourished, to create the historic 2030 Agenda laid down last month. Let me take this moment also to recognize the presence of the co-chair, His Excellency Ambassador Macharia Kamau who in New York together with his counterpart in many ways was the architect of this process and it is wonderful to be here with you, Ambassador, this morning and I am sure you will in far greater detail and excitement also be able to present why this agenda is so important to us.

It is also a moment in which the crucial climate change conference is still ahead of us, and Your Imperial Highness, you addressed the challenge that you all face. A challenge that I will try in my presentation this morning is to characterize less in the sense of just the threats and the risks that we face, which are very real, more dramatic, and more proven also by science and empirical evidence, in terms of cause and effect than ever before, but also, and this is perhaps the most important message of linking this very special year of 2015 with opportunity. The Prime Minister called it "opportunity for innovation". It is an opportunity for transformation, economic and ecological, and I will try to also address this morning why that is linked also to social transformation.

The year 2015, as many of you are aware, has been a very special year. In fact, it began in terms of the United Nations cycle of conferences here in Japan, with the Sendai Conference on Disaster Risk Reduction, bringing the world together around. First of all, the realization of the risks we face and the way we manage them, the precautionary steps we take, and how well we prepare, in large part, determine how severe the consequences are of disasters that we cannot stop from happening. Sendai was a very important moment also in the evolution of the concept of disaster risk reduction, but also

of disaster management.

The prospect of climate change, of global warming that we are already committed to, means that inevitably extreme weather events will be part of our future, both in terms of greater frequency and greater strength. And let us also be clear, with another three billion people joining us in the global population by the year 2050, bringing us to around 10 or 9 to 10 billion people means wherever we live, we live in greater concentration with greater infrastructure more exposed and, therefore, again learning to appreciate that the risk and the concept of risk management is perhaps one of the fundamental ways of looking at managing our economies and societies in the twenty-first century. The year 2015 also saw three other conferences: Addis Ababa on Financing for Development, the Summit in New York just a few days ago that adopted the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals. And then in a few weeks' time in Paris, perhaps the first test of this new 2030 Agenda, namely the Paris Climate Conference of the Parties.

In speaking to you this morning, I would like to convey to you both the dramatic nature that is the consequence of having waited for so long to begin to address these challenges. We are today a world of seven billion people in which we are still in many respects, if you were in business running a negative balance sheet on much of what we have as, what we call, the environment, which to some may be something that they may visit at the weekend outside the city or a green park, or access to water. But we are, in the year 2015, much more able to understand the term and measure, that the value of nature, of intact and functioning ecosystems of our ecological infrastructure. Isn't it fundamental to the future prospect of development? And interesting enough, not withstanding all the science and technology in progress whether a nation is a developed nation in the year 2015, a developing nation or an emerging economy that inextricable linkage with a sustainably-managed environmental base and infrastructure and the success of future economic development have become more obvious than perhaps you would have anticipated 50 years ago, when our notion was essentially one that, with progress, mankind's ability to become independent of nature was very much the vision with which we pursued development.

And yet here we are at the beginning of the twenty-first century and we are confronted with a pollution footprint in the atmosphere that is literally threatening the infrastructure, the well-being of our economies and nations. We are confronted on a more terrestrial sense with a loss of biodiversity and net loss of arable land to produce food. We have lost somewhere between 50 to 60% of all wetlands in the hundred years that we can look back to, as well as having halved the amount of forest that is on our planet in the course of modern development. These are perhaps, to some, the resources that we need to develop, but at a certain point, there is something that happens in nature and there is something that happens to the balance also of, for instance, the composition of our ozone layer. Many of you recall that over 35 years ago, it was in Nairobi, Kenya, the headquarters of the United Nations' Environment Programme, that scientists first convened in order to bring the attention of the world this phenomenon called "a hole in the ozone layer". And again, the story of this ozone layer is fascinating because its story is both the story of human ingenuity in the twentieth century, the tragedy of sometimes lack of knowledge and ignorance, and then the capacity to actually succeed if acted collectively on.

Chlorofluorocarbons, that little substance that was invented by a team of people working for the Ford Motor Company somewhere in the early part of the twentieth century, was a great breakthrough. It meant that cooling of car engines could suddenly be done at a far more effective and cheaper way, opening up the production of engines that would make cars far more accessible. A fantastic invention. So fantastic that CFCs in the next 50 years became omnipresent in anything from hairsprays to fridges to coolers, and then another 20 years later, we began to discover that the cumulative impact of the CFCs in our atmosphere was literally destroying that extraordinary thin layer of ozone that essentially allows life on this planet to thrive. At first, people would not believe in this scientific finding, it sounded like science fiction. Then when the evidence became incontrovertible there was a moment of great fear because the notion that we could repair the ozone layer seemed so inconceivable at that time, that many people were almost not prepared to try it.

I should mention this in particular with one of my predecessors, Mostafa Tolba, the Executive Director of UNEP at the time, who played the central role in promoting the development not only of the Vienna Convention but also the Montreal Protocol in particular, which allowed science, international commitments, technology, finance and the private sector to come together and accomplish what, to this day, is not only the most successful environmental treaty ever brokered by the United Nations - universal membership - but also, as of this year, we have scientific evidence that the ozone layer is not only by models recovering, it is actually physically now recovering, making this the most extraordinary ambitious planetary repair job ever undertaken.

But let us, for a moment, put that in the context of what we now face; the transition towards a low-carbon economy. A world of seven billion people, for instance, on the continent of Africa, where there is one billion citizens, 700 million of its people in the year 2015 do not yet even have access to electricity. Our economies are growing, our consumption footprint is growing, and yet we are, by virtue of the science that the IPCC has presented us, confronted with the challenge of achieving a transformation unprecedented in the modern history of humanity.

Somewhere, by the second half of this century, we need to have decarbonized our economies, decoupled our economic development from a carbon footprint to the point where we have a zero net emissions economy, meaning no more emissions than that which this planet can absorb, sequester and store. To some, again the reaction is "impossible!" Impossible for rich nations because of the cost of reconfiguring industries, the energy sector, the built-up infrastructure, our transport systems and the agricultural sector. And for poor countries, "ridiculous!" We have not even contributed to this problem and now we are supposed to decouple our economic growth with the extra cost from carbon emissions. But let me say to you today as we meet here in Tokyo, and again I want to thank you, Sir, for having brought us together at this moment. We are witnessing something quite extraordinary. History is being made and it is being made because human beings are not willingly ignorant.

Human beings can judge risks and human beings can make wise choices, sometimes choices that are very difficult ones. And I am very conscious as I stand here before you in Japan how you have been tested by earthquakes, by floods and natural disasters to have to confront not only the destructive power of these events, but also then the challenge to you as an economy, as a society, as a nation,

to rise to a challenge of not being defeated by these moments. It is for this reason that I believe my keynote address in your presence, also your Imperial Highnesses, is extremely meaningful to us in the United Nations and the United Nations Environment Programme, but hopefully also to people across the globe, who in a few weeks' time will witness either nations rising to the challenge of addressing something that if we do not act now, condemns the next generation, and the generation thereafter, and many generations thereafter to not having the choice any longer.

That is the extraordinary thing that also binds, as Secretary General Ban Ki-moon referred to it, the challenge of climate change to the broader challenge of sustainable development. In his words, we are the first generation that can essentially eradicate poverty, and we may be the last generation that by acting can avoid climate change beyond the limit that we have set ourselves as a goal, a world of two degrees. Our opportunities to act are growing by the day. In my speech, in my written speech that I have submitted to GEA, I provided many examples and I do not wish to take up too much of your time in this morning because citing too many different numbers and figures is not always the most enticing speech nor keynote address. But let me just dwell for a few moments on a few examples that illustrate to you the enormous momentum for change that is already under way.

If I take, for just an instance, the sector of energy. What has been happening in the field of energy is nothing short of an energy revolution in the last 10 to 15 years. In the world that 20 years ago considered renewable energy technologies, for instance, to be too expensive, maybe a twenty-second century technology, then technologically not capable of providing us with sufficient power to make it worthwhile, and then not compatible with the notion of a centralized grid. We now have, in just 10 years, witnessed every prediction from International Energy Agency to the World Bank and the United Nations' family for that matter, having gotten it completely wrong. In the year 2014, close to half of all new investments in electricity generating infrastructure around the world were renewable energy investments. That is, excluding large hydro, solar, wind, geothermal and biofuels to the tune of 270 billion dollars. Now this is a remarkable shift which demonstrates that the combination of technology, public policy, and markets including investment markets, can literally in a decade begin to change a global energy matrix.

Now renewables, because of obviously only having begun to increase on the scale over the last few years, are still in total terms, not by any stretch of the imagination, already the majority of energy generating capacity we rely on. But let me tell you again that those that say, well maybe it can provide 3 or 4%, there are many economies are already around the world today that produce more than 20 to 30% of their electricity through renewables, whether it is Denmark, Spain, Portugal, Germany, but also again in the presence of the Ambassador of Kenya, I want to put a particular emphasis on the story of renewable energy in Kenya.

Nine years ago it was Kenya's visionary green energy policy that began to change the entire pathway of Kenya in terms of future investments for its energy and electricity generating sector. In fact, it was so significant, that despite even international advice to the country, Kenya proceeded to invest in geothermal power, now in wind power and also in solar. As of this year Kenya has almost doubled its electricity generating capacity over the last eight years, virtually with renewable energy,

and over 50% of its electricity is now produced by renewables of the modern energy technology era. This is a developing economy in the heart of Africa on the equator, providing leadership that is exemplary, but also immensely empowering in making Kenya more independent from the fossil fuel markets generating jobs and even a business model of the pay-as-you-go system in the villages, where investors now install solar panels, villagers buy the charge from the corner shop and can literally light up their home for the first time in their lives.

These are revolutions that we see happening literally across the globe now. South Africa, again, in 2011 introducing a green energy policy and using a different part of the auction system, invested 10 million dollars in putting in place a new market for renewable energy investments. In three auctions, South Africa mobilized more than 14 billion US dollars in investment commitments towards new renewable infrastructure investment, thereby making it increasingly able to look beyond its very heavy reliance on coal, some of the dirtiest coal on the planet on which its energy sector was built. I could go on. There are many examples what I am trying to show to you is that it is no longer an issue of a developed or an emerging or a developing country. What we are learning is that technology is available if public policy creates through right conditions, markets are also able to respond to invest on the scale unthinkable just 10 years ago.

Similar pathways exist for us in the sector of transport and mobility. Many of you are familiar with the images around the world's major cities: heavy pollution and heavy traffic jams. We see in most developing economies again, a trend still being maintained where a largely public transport-based economy and society is moving towards individualized traffic. We need to largely learn lessons that in the rapidly growing metropolis of this world, our ability to decouple urbanization and also increase in income from investing into individualized transfer rather than expanding investing in public infrastructure, something that you and Japan have practiced for decades, is fundamental to also being able to avoid that we add the same population of vehicles that is already on the planet today in the next 30 years again, because that is the projection.

Much of the urban infrastructure that we will have in 2050 is yet to be built. This is also an extraordinary realization that as urbanization proceeds and progresses, not only in terms of rural-urban migration and concentration, but also in terms of the net growth of people, we will add half of the existing urban infrastructure in the world again in the next three to four decades. This is an extraordinary opportunity to build different buildings, to build better, as you refer to it here in Japan, and to reconceive of our cities as not a model of just concentration, but also of efficiency, of sustainable consumption, production of innovation, and of new models of providing fundamental services, be there in terms of mobility, air quality, access to energy.

Climate change and all of that which it implies, which truly speaks to virtually every sector now, of our economy today is increasingly becoming a driver for innovation, for new markets, for new products, for new ways of living, for new ways of producing, consuming, and yes, perhaps rediscovering also another of Japan's great exports in terms of concepts: the 3R concept. Quality of growth is how you refer to the vision with which you wish to pursue both Japan's own economic development in the coming years and also its engagement with its partners, neighbors, the global

community, maybe the African continent also, while the next year in Nairobi TICAD will take place for the first time outside Tokyo. Let me share with you that both in Japan's own interest, as much as in Africa's interest, but indeed in terms of any country's interest, it is vital that at this point in time we begin to redefine the response to climate change in terms of the sustainable development goals have set out and the Sustainable Development Agenda with its goals towards 2030 has said to demonstrate.

It is quite remarkable that despite all of the challenges we face in our world today, the divisions, the conflicts, the dis-functionality if you want, even with our multilateral system that is meant to bring us together on the things divide us. It is quite remarkable that in this year, all nations on Earth should in the United Nations General Assembly commit themselves to a common shared vision of our development, and not just in one paragraph of a rhetorical nature, but in 17 goals. Hundreds of targets and indicators. This is not an accident.

Your Imperial Highnesses, Excellencies, Ladies and Gentlemen, this is a moment in the history that is quite remarkable because it echoes to something that will either define us as a generation of success or failure. Sustainable development is not just a notion of abstract horizons and visions any more. It is a fundamental driver of the future success or lack of success of our nations and ultimately of our global economy. What it shows is an alignment of common priorities almost unprecedented, I would say, in the context of international action. The Sustainable Development Goals provide us, and provide the private sector and the financial sector, governments, parliaments, civil society with an interpretation of what the future is defining in terms of the actions of the present. It doesn't mean every country, every actor, every business will follow these. But let us also be clear in the face of everything that lies ahead of us, of the challenges, of what science tells us, of what we can witness in terms of disruption and conflicts and societies literally collapsing around the issues of inequity, lack of employment opportunities, lack of perspective, all of this is going to become a fundamental driver for transformation and for rethinking the way we wish to develop our societies, but also our so-called global economy.

A few weeks ago, in New York and as the Secretary General called it on that day, the "sacred hall" of the General Assembly, Pope Francis addressed the world and I am sure also in Japan, you have been struck by the ability of Pope Francis to articulate something that many of us feel at the moment, but not necessarily finding a way to express. A term that has always struck me as particularly poignant that he uses is that in this age of globalization you often talk about in terms of trade and economics and you know very material things, he coined the phrase of "globalization of indifference". Beware of it. Globalization of indifference is what threatens the cohesion of our societies, of our nations, and of our global community.

When you in Japan now think about the future pathway in terms of quality of growth, then I understand that to be the equivalent of what UNEP also referred to inclusive green economy pathways. A way in which we understand that inequality and inequity would tear societies apart, economies that cannot offer their youth, the prospect of employment, and we have many countries today with youth unemployment rates of 30 to 40%, will struggle to provide a development framework that will take them forward.

It is, therefore, the ability to bring the social, the economic, and the environmental dimensions together that allows not only the Sustainable Development Agenda but particularly also the challenge before us now in Paris to become not an abstract challenge, but a defining moment. I want to end by just referring also to the fact that in many respects what was in 1991 the topic, and I go back to the "Eminent Persons' Meeting on Financing Global Environment and Development", was prescient by its early understanding how critical finance would be. UNEP has for the better part of 20 years, and the UN system increasingly also, sought to understand how public finance and private finance can be leveraged in support of a development pathway that would require enormous investments in the years to come.

As you may have just heard in Lima, the World Bank and IMF annual meetings, the term of the day, if you wish, was we are moving from talking about billions to trillions. Now to some, that may seem esoteric, but in fact we are already planning to invest trillions in our infrastructure, in our energy sector and transport sector over the coming decade or so. The questions is, can we begin to encourage the financial and capital markets to invest not only in the economy of yesterday and today, but to begin to invest in the economy of tomorrow? A more low-carbon economy, a more sustainable economy, an economy which will allow us to create more jobs, but also to decouple economic growth from the pollution footprint in the atmosphere, or indeed from the ecological degradation on the ground and in the oceans.

UNEP's work with the finance sector is giving us great confidence that something very significant is happening in the world's financial institutions and insurance companies, with whom we have worked with over 20 years to develop responses, both from a public policy point of view, but also for the sector itself. In Lima, we have just presented a groundbreaking report in the presence of the governors of the Bank of England, of the Peoples' Bank of China, and of the governor of Bangladesh Bank. Just three amongst the growing number of financial regulators, central bank governors, who are looking for the first time at the issue of environmental change, whether it is through climate change or other perspectives, as being increasingly material to the stability and well-being of our financial systems and our economies in the future. It is indeed in China where, in the next five-year plan, there is a massive increase in green finance envisaged that will largely depend on whether financial and capital markets will rise to this challenge.

But we see similar trends emerging in many different countries. The Central Bank of Bangladesh, just two-three days ago announced that it will now use its foreign exchange reserves by investing deliberately in green bonds. Using, in a sense, central banks means to also be able to create greater opportunities, greater markets, and greater finance for investment in this agenda. It is in that context that I think we are beginning to see perhaps the final piece falling in place that we talked about in the early nineties. They needed the science to understand what is happening on our planet. We needed the technology, at least in part, to be able to respond to it. Thirdly, we had to discover and learn what other public policies, fiscal or planning or sectoral, that would enable these transitions to take place successfully. And perhaps we are reaching in that journey now the critical point where all of this is beginning to fall in place.

But without being able to address the issue of financing, we have no chance of moving forward. And that applies, interestingly enough, as much to developed economies as to developing nations; the latter simply having an even greater barrier to overcome, and thresholds. Our inquiry into the design of a sustainable financial system – and if you are interested in it, please do take a look at the unep. org website – has studied over the last two years, how central banks, financial regulatory authorities, have begun to try and incentivize the financial and capital markets in order to rise to this challenge. Because it is possible.

We have seen it in the economies such as Germany. The 14 billion dollars that I cited in South Africa, are 80% financed from private sector financial institutions and investors from within South Africa. There is enormous potential there. But we must make finance part of the overall approach with which we seek to enable the policies and changes that will allow us to look towards the coming three to four decades as truly a period of economic transformation, of innovation, and above all, of a way in which we can take the responsibility seriously that we have and hold today: that we are the generation that still has the choice, the means, and the ability to take this direction or that direction.

Your Imperial Highnesses, Excellencies, Ladies and Gentlemen, it is this outlook on the future that I believe many of you in this room share, but that we still have some way to go before we gain the confidence amongst our public, in our parliaments, and also amongst the financial and capital markets, that not only is change necessary, it is possible, and it is beginning to happen on a scale that should make us all have some sense of courage and hope rather than despair. And if you want to take Paris as the litmus test, then let me end by giving you one more fact.

We are literally witnessing history being made with the Climate Change Convention. As of this week, over 150 nations have submitted their national climate change plans, the so-called "Intended Nationally Determined Contributions", and as always in the U.N., we create these very complicated terms. What is unprecedented and unique about this moment is that over 150 countries accounting for over 87% of the world's carbon dioxide emissions, have now committed themselves to a decarbonization pathway. This is something we have worked for since the days of the Climate Convention being launched, since the days of Kyoto. It is an extraordinary act of faith, particularly by developing and emerging nations, I want to make that point. A particularly pronounced act of faith in an international community that has for so long argued that it cannot move forward because others are not willing to commit.

This excuse is gone. It is now, also for industrialized nations, for the richer nations of the world, to match this act of faith in a global process, that without which, we have no hope of being able to talk about the 2-degree world achieved through a synchronized and harmonized pathway of decarbonizing our economies. That is the challenge, but I hope that some of the examples I have provided you, I have also given you a sense of how extraordinary the opportunities are, how real they have become, and how scalable they are today. Thank you once again for the invitation, your Imperial Highnesses for the honor to address the meeting in your presence, and I wish you a most successful meeting here under the auspices of GEA, which has always inspired, and often ahead of time, the kinds of ideas that lead us forward today. *Arigato-gozaimasu*.