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On Transport and Trade Facilitation:

**Maritime Transport and
the Climate Change Challenge**

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Keynote Address

by

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Presentation by Martin Lees
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Mr. Secretary-General, Your Excellencies, Distinguished Guests, Ladies and Gentlemen,

I am greatly honored to have this opportunity to address you on the topic of
“Maritime Transport and the Climate Change Challenge.”

The sector of maritime transport, which constitutes the arteries of global trade, is already faced by many challenges relating both to the financial and economic crisis and to the issue of climate change. This timely conference provides a remarkable opportunity to develop an understanding of the connections between the two critical challenges of climate change and maritime transport so as to prepare the basis for effective policy and action. And this understanding must be properly related to the crisis in the world financial system which is now extending into the real economy with multiple impacts on world trade and transport.

You will be hearing during the conference from a number of renowned international experts. I will limit these brief introductory remarks to presenting first an overview of the very difficult international context we face and then suggesting some specific issues where climate change and maritime transport intersect.

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Policy makers, business leaders and leaders in civil society are confronted not only by a financial and an economic crisis but by an array of interconnected challenges in three principal fields: climate, environment and resources; poverty and world development; and in the world financial and economic systems. At a recent conference of legislators from the G8 and the G5 countries co-sponsored by Globe International and the Club of Rome in London, we summarised the present situat

“We face five parallel crises: financial, economic, climate, energy and ecosystems – all caused by the fundamental unsustainable use of resources, whether in the economy or in nature, combined with the real threat of peak oil.... The political response to the financial crisis and the outcome of the UN negotiations in Copenhagen will determine whether we continue on the path of unsustainable consumption and environmental degradation or begin the move to a new economic model with more efficient use of energy and resources, transformational investment in clean energy, and incorporating a real economic value for natural capital and ecosystems services.... We believe that climate, energy and ecosystems objectives are not only consistent with but fundamental to sustainable economic recovery.”

Let me first present an overall perspective to provide a context for my remarks:

It would be irresponsible to destroy the extraordinary, complex and beautiful web of species and ecosystems on which our existence depends, and it would be short-sighted and disastrous to destabilise the delicate balance of the climate and the oceans which have allowed our civilisation to prosper. But this is what we are doing, and at an accelerating rate.

The pressures of world population on the environment are unprecedented as is the level of concentration of greenhouse gases in the atmosphere. We are in uncharted territory and historical experience is an unreliable guide. Therefore, the fact that we have grown for so long and so fast does not guarantee that we can continue to grow indefinitely on a finite planet – as the Club of Rome pointed out 37 years ago.

We are dealing with systems and processes which are non-linear. We cannot expect the natural systems of the planet to adapt gradually to the injuries we are inflicting on them: they may change dramatically in unexpected ways. Thus, the underlying assumption that the process of global warming will be gradual and predictable is entirely unfounded in science. We have less time to negotiate, ratify and implement policies than we think: we must act urgently to avert the risks of catastrophic climate change. We are in fact, gambling with our future.

And, looking ahead, subject to recovery from the current financial crisis, the world economy is set to double in the coming decades. This would mean that some two billion people would join the world's middle class with the changes in consumption patterns and life styles and the additional environmental pressures that this would imply. This is simply not feasible on the present basis. We are already overusing the biological resources of the planet by around 30% per year: we are using up our biological capital, not living within our income. This constitutes a biological debt which we will leave to future generations, just as we will pass on to them the enormous financial debts which we are accumulating today.

We must find a new strategy for growth and globalisation which is less environmentally devastating, more responsible in the use of resources, more inclusive and fair – in short, which is more equitable and sustainable. This is the focus of a new programme of research and consultation of the Club of Rome which will define the elements of a New Path for World Development.

Your Excellencies, Ladies and Gentlemen,

We are confronted by enormous problems but let me now present a more positive perspective.

- We have until recently been committed to a path of economic growth, based heavily on material consumption, which is clearly not sustainable in the longer term. Impacts on the environment and the climate, rising inequality and polarisation between rich and poor, intensifying competition for vital resources and increasing imbalances and vulnerabilities in the global economy would inevitably lead to environmental breakdowns and to economic and political instability and conflict.
- The financial crisis and the consequent downturn in economic activity have in fact created a unique opportunity to re-orient the world economy onto a path which could avert the risk of catastrophic climate change, which could reduce the inequities arising from globalisation, and which could include those who are deprived and excluded from the benefits of economic progress. And we now have more positive conditions to move ahead. Public attitudes to consumption are changing; the arrogance of long entrenched dogmas is weakening, clearing the path for new ideas; and, with the election of President Obama, we may be entering a new, more positive era of international cooperation which is vital to the solution of the truly global problems we face.
- Let me add another positive perspective. It is a common tactic to present environmental and resource responsibility as negative and contradictory for economic growth. However, there are countless examples which demonstrate that responsibility in the use of energy and resources, and care to avoid environmental damage and to reduce emissions will create innovation and productive employment, will stimulate trade in environmental goods and services, will improve the longer term competitiveness and profitability of enterprises and will increase the real welfare and health of society.

We must restructure our economies onto a low carbon path, we must reduce ecological destruction and the overuse of biological resources and we must establish a more fair and inclusive process of world development and a more stable world economy. To do this, we must promote new values and behaviour; we must release the creativity and innovation of the private sector; we must mobilise the vast human potentials which are available: of knowledge, science, technology and innovation, of education and human creativity and of the information and communications society.

These are big challenges indeed. But they are also immense opportunities. If, in addition we have the persistence and vision to reform our long-established institutions and policies, then we could be at the dawn of a new economic revolution.

I will now very briefly outline the main challenges we face:

Climate, resources and environment.

In recent years, scientists have achieved a far deeper understanding of the processes driving climate change. The fundamental risk is that the growing concentration of greenhouse gases in the atmosphere will trigger a number of positive feedback processes which will accelerate warming further. The climate may then pass a “tipping point” beyond which our efforts to control the situation will be futile.

The consequences for our civilisation could be catastrophic in terms for example of sea level rise, degrading water resources and desertification, impacts on food production and extreme weather events. But, in spite of all the negotiations and efforts to date, greenhouse gas emissions continue to increase.

We must dramatically cut greenhouse gas emissions to preserve a viable climate and this is of course the focus of a process of the intense international negotiations supported by the IPCC which should lead to a new post Kyoto Treaty in Copenhagen in December. In this context, as will be discussed later on the Agenda, the maritime industry must make a significant contribution to the stabilisation of greenhouse gas emissions, as phrased by a recent top level scientific symposium, “at a safe level to avoid not only dangerous climate change but also dangerous ocean acidification.”

(An interesting, practical scheme will be presented on the Agenda, “The International Maritime Emission Reduction Scheme” which proposes a carefully considered mechanism to reduce international shipping emissions while generating finance for climate change adaptation.)

The scale of the global challenge is enormous and, as climate change accelerates, it is becoming increasingly urgent to act. This will require a radical re-conception and restructuring of our economies, including the processes of globalisation, on to a low carbon, sustainable path in a relatively short period of time: business as usual is not a viable option.

Climate change is not only a problem for the future: it is having its effects now, especially on the poor and disadvantaged across the world. Although the industrialised countries have been largely responsible for the concentration of greenhouse gases in the atmosphere, the impacts and risks affect the whole world.

However successful we may be in agreeing on binding long-term targets for mitigation, developing countries will be forced to adapt to the significant impacts which are already affecting their societies and economic prospects and their chances of achieving the Millennium Development Goals. In this, they must be able to rely on predictable sources of financing and technology from the industrialised world, so as to accelerate their mitigation and adaptation efforts

We also face a related crisis in the rapid destruction of ecosystems across the world. Humanity is, as I have said, now using each year around 30 % more ecological resources than the planet can produce. We are in fact, living in large part off our biological capital. This is clearly unsustainable. As the Millennium Ecosystems Assessment states: *“The bottom line of the Millennium Assessment findings is that human actions are depleting Earth’s natural capital, putting such strain on the environment that the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted.”*

The two issues, of climate change and ecosystems decline are essentially connected: terrestrial and ocean ecosystems together absorb around 45% of the emissions produced by humanity. As their absorptive capacity declines, they absorb less, thus accelerating warming. And, as warming accelerates, species and ecosystems decline. (A rise of 0.1°C in one decade can exterminate 15% of species in a given area, according to IPCC). In this perspective, the restoration of the ecosystems of the oceans must become a top priority, of immediate concern to the maritime industries.

These processes are intimately linked also to the availability of fresh water which is under growing stress across the world. And clearly, underlying this whole complex of issues is the critical question of the availability and utilization of energy. Recognising the importance of these linkages, the Club of Rome recently organized an international expert conference on: *“Managing the Interconnected Challenges of Climate Change, Energy Security, Ecosystems and Water.”*

The expansion and the structure of Western societies and of the global economy have been based for decades on the availability of cheap energy, particularly oil. The days of cheap oil are over as soaring worldwide demand cannot now be matched by parallel increases in supply. This has enormous direct and indirect implications for both developed countries whose economic structures are based on cheap energy and, most immediately, for developing countries whose economic prospects were hard hit by the dramatic increase in the price of oil in international markets – prices to which we will return as the global economy moves out of recession.

The greatest impacts are already experienced by the poor as energy costs are a key factor in the production and distribution of food. Thus rising energy prices – aggravated by the diversion of large areas of agricultural land to the production of crops for biofuels – are contributing to the dramatic escalation of food prices across the world which, in turn, is provoking unrest and instability in a growing number of countries.

Issues of sustainable world development

We also face crucial and urgent issues in the field of world development. Although the world economy is now of the scale of around \$66 Trillion per year, around 1 billion people live in poverty while over 2 billion people live on less than \$2 per day. And, as the prices of food and energy have increased, the living standards of the poor have deteriorated and poverty is now increasing. It is critical to recognize in practice that world population will increase to around 9 billion in the lifetime of our children, putting added pressures on the land, water, resources and environment, which are already under stress. The implications of this simple fact are largely overlooked in the turmoil of events.

If we cannot reduce the impacts of our activities on the climate and stop our destruction of the environment and if we do not address the inequities and exclusion of the present path of world development, we will not sustain progress or preserve world peace. And it is in this context that we now face the economic and financial crises which have erupted over the past year.

The financial and economic crises

To understand the nature of the crisis in the world economy, we must separate the short term issues from the fundamental issues. We know that the crisis was triggered by irresponsible lending in sub-prime mortgage markets, principally in the US and the UK, which led to a loss of trust and the freezing of credit markets.

But the scale and speed of the crisis have been aggravated because profound imbalances had been building up in the world financial system for many years: for example, the current account and public sector deficits of the US coupled with a minimal savings rate, the vast accumulated surplus of China and the huge financial transfers from oil consuming to oil producing countries. If we are to resolve the financial crisis, we must therefore recognize and correct its fundamental causes. Ad hoc, partial, short term and national measures will not be sufficient to re-establish the world economy on a sound basis.

We are in short, confronted by enormous challenges in the three related areas of climate and environment, poverty and development and finance and economics. They are essentially interconnected and cannot be resolved separately. We must now work together to define and implement a coherent approach which can lead us out of the present dangerous situation. We have achieved such radical change before, as we moved from agriculture to industry, from horses to cars, and from typewriters to computers. Just as we moved from manufacturing to services, we must now move from energy-intensive consumption to sustainable development.

This then is the broad global context within which I will now review briefly the potential impacts on the sector of maritime transport.

1. Changes in the demand for maritime transport

Perhaps the most immediate impacts on maritime transport will arise from the financial crisis and the widening economic recession, and from the introduction of carbon pricing on international trade. A decline in demand for maritime transport is already evident as ships are laid up in response to shrinking world trade. This will be the focus of discussion later in the conference.

I will make only one point here. We perhaps assume implicitly that, as the financial crisis eases and the world economy begins to recover, we will gradually return to the path of global economic growth which we have followed in the past.

We in the Club of Rome would not consider this a desirable outcome: for the reasons I have outlined, the path of growth would not be sustainable in the longer term. In my view, it is not only undesirable but it will not prove to be feasible in any case to return to past patterns of economic growth and therefore not to the past patterns of trade and maritime transport.

The profound changes taking place in factor costs, for example the price of energy which will resume its climb as the world economy recovers, coupled with the additional costs arising from measures to reduce emissions worldwide, will impact on the structures and distribution of production and of supply chains across the world. And this trend will be amplified by growing environmental awareness and concern prompting a reduction in excessive consumption and changes in consumer behaviour.

Thus, in my view, based on these transformations in the global economy, and because of changes in the structure of demand, future patterns of maritime transport are likely to be different from those at the present time.

2. *Impacts of Climate Change on the Oceans*

The second set of impacts will be those of climate change on the oceans. I will identify three which will inevitably affect maritime transport.

- First, the rise in sea level. This is driven by multiple factors, principally so far by glacier melt and thermal expansion of the oceans. In the future, sea level rise will be amplified by the melting of ice sheets in Greenland and the Antarctic. As the process of global warming accelerates, sea level rise will be substantially more than that envisaged in the 4th Assessment report of UNFCCC at Bali. A one meter rise would inundate vast areas of coastal land, much of it productive agricultural land, and would partly inundate hundreds of cities, including some of the world's largest. And sea level rise will contaminate groundwater in coastal areas.

These effects could lead to mass migration from coastal areas. They would also clearly have a major impact on ports and shipping. (If the Greenland ice sheet alone should melt, which is by no means excluded over this century as scientists better understand the dynamics of ice, this would raise sea level by around seven meters! And a 2°C rise in global average temperature, the hoped for target in the post-Kyoto negotiations, implies a 4°C rise a Greenland.

- Global warming is having evident impacts on ocean currents and weather patterns, including increasingly frequent extreme weather events, which also will have their consequences for maritime transport. This is clear today in the north Atlantic and the Arctic, where the area of arctic summer sea ice has dropped drastically, (by 22% in two years), triggering a number of systemic effects, enabling the opening up of new Arctic routes for maritime transport.

- Another key related issue is the impacts of pollution, warming and acidification on the oceans themselves. The impacts of human activities on the oceans, which are home to 90% of all life on the planet, are having devastating effects on marine life. Dead zones and pollution are increasing and coral reefs are degrading. A concerted international effort is urgently needed to control the present devastation of the oceans and to restore them to a sustainable condition.

These then are some of the connections between maritime transport and climate change and, in all these areas, the maritime transport industry, as a major interested and expert party, should play a central and leading role.

Thank you.