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The Societal Dimension of Climate Change

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Mr. Chairman,

First of all I should like to thank you and the Chilean Space Agency for inviting an “outsider” like me to take the floor in a conference made up of expert participants, specialists in outer space matters. And yet, your including me reflects probably your recognition of an important element of our contemporary agenda – the inter-disciplinary interrelatedness of the various agenda sectors and agenda affectednesses as well as the complementarity of the different policies and actions required to address these ever more complex challenges we face.

Climate change is a perfect example for our new agenda – it includes, on the one hand, the long term issue of global warming and the challenges of mitigating the threats profoundly affecting the conditions for future human life on earth and, on the other hand, has to deal with the more short term challenges of adaptation to the consequences of global warming and to the rising frequency and intensity of local disasters.

Climate change is typical for our new agenda also in its geographic projection. It is inherently global and yet also local both in its effects and in its origins. It presents another example of looking at the globe as – quoting Adlai Stevenson – “spaceship earth” and yet requiring the initiation of vision, political processes, action and resources allocation at the local level.

Climate change relates to the entire spectrum of our agenda, from environmental and sustainability issues, to economic development, social development and to the new global, regional, national and local security agendas including their societal dimensions. Climate change has tended to add a new element to the growing disintegration and inequity of our global society affecting the very key values on which our post-WWII international system was built, such as human rights and societal equity.

All these issues are interrelated and can be explained and addressed only in a new comprehensive way. This has conceptual, academic, political, policy and institutional consequences. Last year's first meeting of the UN Security Council on Climate Change and this year's initiative to address the human rights dimension of climate change in the UN Human Rights Council are just two examples of the institutional implications of the inter-sectoral breadth of the climate change agenda. And space is able to project its contribution into a large segment of this spectrum.

Allow me to briefly sum up some of the key conclusions of current research on the consequences of climate change on the challenges we are facing in the environmental, economic, social, societal and security agendas.

Warmer global temperatures are causing profound changes in many of the earth's natural systems. About 20-30 % of plant and animals species are likely to be at increased risk of extinction if global average temperatures exceed 1.5-2.5°C. A temperature increase of up to 3°C during this century would have largely negative consequences for water resources availability and food supply. Desertification will expand in African, Asian and even some Latin American regions. Agricultural productivity is expected to be dramatically reduced. There will be heightened water insecurity for over 1 bio people worldwide. Melting ice in the Arctic, Antarctic and in Greenland will cause sea levels to rise and flood coastal areas. Weather patterns will become more varied and intense causing natural disasters with storms, floods and excessive dry periods destroying agriculture.

The consequences of climate change for local, national, regional and also for the global economy are possibly equally disastrous with reductions of up to 20-30 %

of GNP, in particular in climate change affected economies which rely primarily on the agricultural sector. Global warming may eventually impede the achievement of the anyway rather modest Millennium Development Goals.

The impact of climate change on health has been addressed in several reports dealing with the expansion of malaria, diarrhoea, increased deaths of children due to reduced water supply and sanitation. Women will be particularly affected by climate change with the large majority of victims of natural disasters being women and children.

According to the UNHCR there are now already 24 million environmental refugees, a number to increase until the middle of the century to between 200 and 240 million. Climate induced migration has recently appeared prominently in European considerations of the impact of climate change.

All of these changes have to be seen in the broader context of human security. The concept of human security has been dealt with first in the framework of the Society for International Development and received prominent attention in the UNDP Human Development Report of 1994. This report offered the first conceptualisation moving beyond the traditional security concept of freedom from violence. Human security was to be understood as "safety from chronic threats such as hunger, disease, and repression as well as protection from sudden and harmful disruptions in the patterns of daily life". The seven key elements of human security were defined as economic security, food security, health security, environmental security, personal security, community security and political security. At least five of these seven elements of human security are affected by climate change.

The reports of the Commission on Human Security, of the High Level Panel on Threats Challenges and Change and the ensuing report "In larger freedom" of the UN Secretary General to the 2005 Summit Meeting underlined the profound changes taking place in the global security agenda.

In 1999 a group of 13 like-minded ministers of foreign affairs among them the foreign minister of Chile founded the Human Security Network. Chilean foreign policy thereafter actively contributed to the articulation and application of this new concept of human security in global discourse. In fact, the FIDAE Space Conference in 2002 dealt already with the pertinence of space technology for human security.

The different threats resulting from climate change are seen as typical for the new security agenda in which national boundaries have lost their protective role but where the human being and not states are the victim of insecurity while at the same time the individual citizen is a key perpetrator.

A number of think-tank reports have recently addressed the issue of climate change and the societal dimension of human security. Most prominent among them is the report of the EU High Representative and of the European Commission to the European Council of 3 March on "Climate Change and International Security" which inter alia addresses the threatening migration of climate change refugees to Europe. Several research institutions looked at the human security dimension of climate change, including the London based International Institute for Environment and Development and the United Nations University Institute for Environment and Human Security preparing reports on climate change and human security including the migration issue. The UNICEF Innocenti Research Centre in Florence, Italy and the Women's Environment and Development Organization looked at the human security effects of climate

change on children and on women. The Human Security Network will hold their Ministerial Conference this year in Athens addressing the human security implications of climate change.

According to the report of the High Representative of the European Union climate change is to be seen not only as causing direct threats to human security but as a “threat multiplier” in that it will impact on the current relational situation in societies and between societies in those areas of the world suffering already from disintegration and related political or even military conflicts. Weak governments may become failing governments under the stress of climate induced disasters, reduced food availability, water scarcity etc. Even though the EU paper does not mention the term “societal” it focuses in fact on the “societal” dimension of our current and future security agendas and their being increasingly affected by the consequences of climate change.

Allow me to briefly refer to the concept of “societal” which is to be seen as one of the key elements of our new global and local agendas.

The term “societal” has to be distinguished from the traditional concept of “social”. “Social” refers to the productive capacities of the human being and of communities, such as education, health, age, poverty and nutrition/hunger. “Societal” in turn addresses the relational qualities and capacities in a society, the sense of community, the perception of and capacity for otherness, the processes of exclusion, discrimination and humiliation and, related thereto the responses of rejection, hatred and violence including terrorism, organized crime etc. In its essence the term “societal” refers to the human dignity-related dimension of human development. “Societal” ultimately reflects the effectiveness of human rights in increasingly horizontally structured relations between citizens and between citizens and the state.

Our current security agenda to a considerable extent has become a “societal” agenda. More than 90 % of current conflicts and wars occur within societies. Burning cars in Paris and smashed shop windows in Temuco reflect a condition of societal fragmentation which in turn has led to processes of wall building among the ever more distant and increasingly inimical segments of our societies, to the “gating of society” and the related perceptions of insecurity.

Climate change not only affects the societal dimension of our local, national and global agendas. Ultimately, climate change is to be understood as the result of certain societal incapacities pertaining to both geographic or temporal spaces. In this sense climate change may eventually have an impact on global cohesion and peace.

It is a fact that global warming so far has been primarily due to emissions by industrialized countries while societies of developing countries have become the primary victims. Climate change is thus another though increasingly significant example of the culture of trans-societal, trans-national and trans-generational transfer of cost externalities. As such it is not projected into a political vacuum but is likely to affect existing patterns of conflict and violence, first at the local and regional level, eventually however also on a global scale.

The potential for conflicts at local level can be exacerbated by such factors as climate change induced crop failures, reduced agricultural lands, diminishing fish stocks and growing water crises with competing water needs. Already today one billion people lack safe drinking water and 2.5 billion lack safe sanitation. There has been talk about “water wars”. Even though the last water war occurred more than three thousand five hundred years ago between two city states in Mesopotamia the Darfur crisis has a certain natural resources scarcity

basis and has been quoted as the first water related military conflict in the wake of global warming.

The climate change induced migrations have a social but also a societal dimension. The EU has been told by the High Representative to prepare for a flood of climate change migrants. In this context global warming is considered as threatening and possibly severely destabilising the planet, rendering a fifth of its population homeless. Yet what to do with the global warming refugees? Can they be seen in a similar context as those refugees and asylum seekers whose fundamental human rights have been threatened by war or by repression.

The UN High Commissioner for Refugees has so far denied any responsibility for climate change refugees. There was no legal link possible to the Geneva Conventions, it was argued, and anyway, the resources of the High Commissioner were already overstretched. It was suggested that the issue of human rights and climate change the question of the status of climate change refugees should be included in the new international agreements on climate change.

At a recent conference on climate change and migration in Geneva the UN Deputy High Commissioner for Human Rights underlined the calamitous consequences of global warming and extreme weather conditions for the human rights of millions of people. Ultimately climate change may affect the right to food, to housing, to health and to life. Global warming therefore has to be addressed also from a human rights perspective.

This line of argument has been addressed already late last year by small island states who called on the United Nations to assess the link between failures to tackle climate change and the threats to the very existence of their islands in

terms of human rights. The Alliance of Small Island States stressed their human rights to live in a safe and sustaining environment. Climate change, it was argued, would undermine this right directly and fundamentally.

Up to now the discriminatory and damaging consequences of climate change have not yet really been perceived and articulated by the victim societies. The small island states have been first in this regard. This may change in the foreseeable future with respective new perceptions and emotional dispositions vis-à-vis the perpetrating societies. Global warming related acts of vengeance may be possible, terrorist acts against certain main contributors of greenhouse gases or general aggressiveness against members of climate change inducing societies. Climate change can thus contribute and further the current processes of societal disintegration. Climate wars will not be led by states but by individual perpetrators just as the climate changes have been caused by citizens and individual economic actors.

What's to be done and what could be the contribution of space technology to containing the societal consequences of climate change?

It will be important to first understand the fundamentally different societal dimensions of mitigation and of adaptation.

Mitigation addresses the long-term inter-generational dimension of cost-transfer with perpetrators and victims not really interacting except possibly in their minds. The societal dimension of reducing greenhouse gas emissions must be internalized by the current generation of perpetrators.

Adaptation in turn offers most important and realistic opportunities for containing the threatening global societal confrontation and disintegration.

There is an urgent need to support and strengthen adaptive capacities in climate change victim societies, provide cooperation and assistance in a spirit cross-identification and solidarity, the two dimensions fundamental to community building, in this case of building our global community.

Space technology should be part of these global community-building efforts addressing the consequences of climate change. Space based information and data should be provided free of charge to those regions most affected by climate change and by resulting extreme climate events and disasters. Space technology must leave the circle of space experts and reach the responsible structures of the state and the non-state partners of climate change governance.

Space-based information can enhance the capacity of emitting societies for understanding the consequences of climate change and enhance their capacity for solidarity and support for mitigation programmes.

It can, however, also enhance the threat assessment in affected societies and regions, improve the management of land and water resources including of internationally shared resource systems, protect urban settlements and enhance the capacity for adaptation. In conflict-ridden regions space technology can contribute to the understanding of their shared destiny, foment cooperation and the equitable use of the shared resources in particular if such approaches are supported by international cooperation programmes. In this sense, the space technology fostered awareness of the sharing of the threats of climate change may help in affirming a capacity for community and a sense for a common future and the Millennium Development Goals may become achievable.