EARTH OBSERVATION, RISK ASSESSMENT AND GLOBAL CHANGE:

IMPLICATIONS FOR THE INSURANCE AND AEROSPACE SECTORS

Overview

Global changes such as natural disasters, resource scarcity issues and climate change are at the nexus of a complex web of interactions among a vast range of both public and private sector stakeholders. Understanding, predicting, mitigating, and adapting to global change necessarily depends on long-term and continuous data acquisition combined with robust modeling and decision support tools. The entire chain of Earth observation capabilities – from data acquisition, to modeling to decision support – are critical to understanding, predicting and making business and policy decisions about such dramatic changes in the natural environment.

Therefore, the ability of not only governments but also the private sector to assess and manage the risks associated with the direct and indirect consequences of global change is critically dependent on Earth observations. Although such activities now have an increased potential for closer coordination at the international level, the future of global Earth observation is by no means certain. For example, the situation in the U.S, a leader in this field, is troubling at present. It is not certain that the U.S. will even be able to maintain its current Earth observation capabilities. The U.S. Government is not effectively organized to lead, plan, fund, and implement an Earth observation program configured to provide comprehensive support to decision makers on matters of global change.

To address these issues, the Center for Strategic and International Studies (CSIS) initiated a project on *Earth Observations and Global Change* to engage the public, private sector, and science communities in a reflection on the future of Earth observation. The project began a dialogue to examine and asses the role and value of Earth observation, the state of current systems, and the gaps between requirements and current and planned capabilities. CSIS is now studying the possible strategies at the national and international levels and among both public and private sectors to accomplish the vision for Earth observations as defined in the working group discussions, including recommendations for roles and responsibilities at both the national and international levels.

As part of this further investigation, CSIS and Chatham House (the Royal Institute of International Affairs) are co-hosting this event to examine the role and value of Earth observation data as a global public good. This event, held in conjunction with the Farnborough Air Show, will bring together high-level participants from the public sector, scientific community and relevant industries to promote discussion and debate amongst the full range of Earth observation stakeholders with a view to promoting informed thinking and forward planning on Earth observation policies.

Event Venue

To promote the coordination of Earth observation around the world, the Center for Strategic and International Studies and Chatham House (the Royal Institute of International Affairs) will be co-hosting an event *Earth Observation, Global Change, And Public-Private Sector Relations* on July 16 in London. This event will bring together, for the first time, global financial and investment community, aerospace industry, scientific and political leaders to start exploring ways that nations can work together to provide for the greater global public good by created with our Earth observation infrastructure.

July 16, Wednesday

13:30 – 14:00 Sign-in and registration

14:00 – 14:15 Opening Remarks

Speaker: **Dr. Robin NIBLETT**
Director, Chatham House

14:15 – 14:45 Keynote Speaker

The role of insurance in the matter of risk assessment and management for enterprises faced with the direct and indirect consequences of Global change provides a valuable perspective on the many complex relationships associated with Global Change. For Earth observations to be an effective tool for addressing Global Change, the entire range of Global change stakeholders must be engaged to discover the business, policy, and legal models that must be adapted and created to facilitate the goals of Earth observation public policy.

Speaker: **Ms. Lindene PATTON**
Climate Product Officer, Zurich Financial Services

14:45 – 15:15 Panel 1: Financial, Insurance and Reinsurance Communities

It is difficult to underestimate pervasiveness of influences on and impacts of Global Change. Earth observation is critical in managing and assessing the risks associated with Global change issues. These factors illustrate the sheer number of stakeholders to whom Earth observation is – either knowingly or unknowingly – of critical importance.

Speakers: **Mr. Barend VAN BERGEN**
Director, KPMG Sustainability
Mr. Trevor MAYNARD
Manager, Emerging Risks, Lloyd's of London
Mr. Man W CHEUNG
Principal Consultant & Service Leader, Modeling Analysis and Design, Marsh Ltd.

15:15 – 15:45 Panel 2: Scientific and Modeling Communities

At a more practical level, the ability to assess and manage risk associated with global change is strongly dependent on the accuracy and timeliness of input provided by Earth observation decision support tools, modeling, and data. Yet, even while the consequences of global change are projected to grow more severe, public policy failures may jeopardize the Earth observations infrastructure.

Speakers:

Dr. Shree KHARE
Lead Catastrophe Risk Modeler, Risk Management Solutions, Ltd.

Professor Sir David KING
Director of the Smith School of Enterprise and the Environment, Oxford University
previously Chief Scientific Adviser and Head of the Government Office of Science, UK

15:45 – 16:00 Tea Break

16:00 – 16:30 Panel 3: Aerospace and Space Industry Communities

By virtue of the importance of space-based observation and other sensors to Earth observation, the aerospace industry has an important role as stakeholder in discussion of global change. In particular, technological bounds of the current and future state future of Earth observation, can be well understood and addressed in the Earth observation public policy creation process, provided that the aerospace community is substantially involved at an early stage.

Speakers:

Dr. Alexis LIVANOS
Vice President, Northrop Grumman Corporation
President, Northrop Grumman Space Technology

Mr. Mike KEEBAUGH
Vice President, Raytheon
President, Raytheon Intelligence and Information Systems

16:30 – 17:00 Panel 4: Political and Policy Communities

The nature of Earth observation data and its utility in addressing issues of global change combine to suggest that there are a range of new legal and regulatory regimes and business and social models which will need to be explored. The ability to engage with a sufficiently broad range of stakeholders early and effectively in the policy creation process will be a key challenge for the public sector in addressing both Earth observation and global change.

Speakers:

Mr. Greg WITHEE
Senior Advisor to the Administrator of the National Oceanic and Atmospheric Administration and the Undersecretary of Commerce for Oceans and Atmosphere

Dr. Peter STOTT
Head Climate Monitoring and Attribution, Met Office Hadley Centre

Mr. Giovanni RUM
Senior Programme Officer, Disasters, GEONETCast, Science and Technology Committee, and Working Group on Tsunami Activities. Group on Earth Observations

17:00 – 17:15 Closing Remarks

Speakers:

Ms. Bernice LEE
Head, Energy, Environment and Development Programme, Chatham House

Mr. Vincent G. SABATHIER
Senior Fellow, Director of Space Initiatives, CSIS

17:15 – 19:00 Reception