

# Applying Earth observation data to support robust investment decisions in the face of a changing climate

In collaboration with Group on Earth Observations (GEO), Amazon Web Services (AWS), National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI)

Image credit: NASA

The Eye on Earth (EoE) Symposium 2018 was held from 22-24 October 2018 in Dubai, United Arab Emirates (UAE). The event gathered experts from different disciplines to discuss the use of data in support of sustainable development. The symposium was organized by the Environment Agency-Abu Dhabi (EAD), a co-founder of the Eye on Earth movement, in partnership with the UAE Federal Competitiveness and Statistics Authority and the Eye on Earth Alliance.

In a session chaired by Tanzeed Alam of Earth Matters Consulting, panellists Steven Ramage of the Group on Earth Observations (GEO) Secretariat, Jed Sundwall of Amazon Web Services (AWS), Michael Brewer of the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI), and John Firth of Acclimatise Group Ltd. discussed the application of Earth Observation (EO) data to support robust investment decisions in the face of a changing climate.

## OF COOPERATION AND ACCESS

Steven Ramage presented how GEO promotes science and technology to facilitate the use of EO for policy and decision makers around the world. A large part of this work is coordinating with all the GEO member countries in order to increase cooperation, as well as open data access and sharing. Many countries do not have suitable data at their disposal in order to make better decisions about how to address environmental challenges, including climate risks. Thus, the exchange with countries that do have good quality data can facilitate data access and make a significant difference. GEO also works to promote capacity building for the efficient use of EO data in decision making.

While GEO promotes the science and human networks that facilitate data access through cooperation, Amazon Web Services focuses on the technological side of things. Jed Sundwall shared that Amazon is looking to lower the cost of knowledge, explaining that if data is in the cloud, working with it is faster and cheaper. Nowadays, many customers rely heavily

on quick data access to develop and offer services. This can drive change all over because quick data access can reach a diverse user base that goes beyond academics.

## THE IMPORTANCE TO THE PRIVATE SECTOR

Michael Brewer spoke about the value of data NOAA's NCEI provides across all kinds of sectors, from agriculture and logistics to retail and finance. Many businesses, especially in the USA, use NCEI data to improve their bottom line. It helps them plan ahead and react quickly, be it delivery companies choosing their distribution hubs or farmers determining how much fertiliser to use, and even food retailers deciding what foods to stock in their shops – climate data from EO is an invaluable asset.

John Firth underlined this by presenting some of the work Acclimatise has been doing in the financial sector. Using EO data, banks can better understand and disclose on their physical climate risks. In light of our changing climate, this is of extreme importance because the safe margin within which investment decisions have been made in the past is shrinking fast and drastically. Having access to EO data and knowing how to interpret and extract information from it is crucial to understand how climate change is affecting our society.

## KEY TAKEAWAYS

- **We can make greater use of the extensive and readily accessible data provided by the EO community together with other socio-economic and environmental data.** Many potential users have little awareness about open data resources that exist and those resources are therefore under-utilised.
- **Use of EO data as such, is not the end goal, but more about how socio-economic and other data can be combined and analysed to better inform decisions.** The examples shared at the event have shown how building such 'bridges' can better inform investment decisions in different sectors, be it utilities, the agricultural sector or financial institutions.

- **It is key to consider the needs of least developed and middle-income countries in relation to EO data for climate risk assessment and management and adaptation.** Many developing countries lack skills and resources to access and make full use of EO data and services offered by major providers.
- **We need the power of EO data to enable actions to be taken by business and governments.** Successfully transferring open access data and information from the scientific community to decision-makers to inform policy and business decisions is crucial to support climate adaptation that requires bespoke, local-level solutions over multiple timeframes.
- **There is no straightforward solution to the challenges of availability and accessibility of EO data and how this can be overcome to address the climate challenge at the necessary speed.** It is important to accelerate the use of EO data (both space-based and in situ data) for timely adaptation action. There is no easy answer, but solutions involve the need to provide more open data, work collaboratively, and support investments in education and long-term co-design and co-production of knowledge, often badged as capacity-building.
- **Participants agreed that a major change is needed, where positive climate action is embedded in everyday habits and behaviours.** Communicating our knowledge of climate change in the language of the audience and tailored to their needs is essential. EO can play a major role in improving narratives and changing habits and behaviours by showing the changes taking place in our own communities. The recent IPCC 1.5°C report highlights there is a small window of opportunity to deliver the objectives of the Paris Agreement, by scaling up mitigation actions to transition to low-carbon economies and building resilience to the physical impacts of a changing climate. EO open access data can be used via visualisation and modelling tools to help governments, business (SMEs and corporates), financial services, NGOs and communities to understand and manage their risks, and influence behaviour change.

## FURTHER INFORMATION

Access the recording of the Eye on Earth Symposium panel discussion by going to <https://eye-on-earth.net/session-recordings/>

**Acclimatise** is a specialist advisory and analytics company providing world-class expertise in climate change adaptation and risk management. Acclimatise focusses solely on adaptation, bridging the gap between the latest scientific developments and real-world decision making to support the public and private sector.

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**Earth Matters Consulting** was established in December 2017 and provides advisory services in strategy, policy and communications for climate change, conservation and sustainability to government bodies, businesses and non-profit organisations.

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**Group on Earth Observations (GEO)** coordinates international efforts to build a Global Earth Observation System of Systems (GEOSS). It links existing and planned Earth observation systems and supports the development of new ones in cases of perceived gaps in the supply of environment-related information.

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**Amazon Web Services (AWS)** is a subsidiary of Amazon that provides on-demand cloud computing platforms to individuals, companies and governments, on a paid subscription basis. The technology allows subscribers access to a variety of compute power, database storage, applications, and other IT resources via the Internet.

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**National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI)** is the world's largest active archive of environmental data. NCEI hosts and provides access to over 35 petabytes of comprehensive atmospheric, coastal, oceanic, and geophysical digital data, freely available through the Internet.

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