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## Welcome to the U.S. Center!

The U.S. Center is the public outreach space the United States organizes to inform audiences around the world about U.S. actions on climate change, whether they are attending the UN Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP-22) in Marrakech or viewing programs through the web.

This public diplomacy initiative, made possible by input and support from multiple U.S. government agencies, academic institutions, non-governmental organizations, private sector entities, and other stakeholders, will highlight key climate programs and scientific research, underscoring the strong actions the United States is taking at home and the robust strategy it is pursuing abroad to combat this global challenge.

The U.S. Center, open from 10 a.m. to 6:30 p.m., is where visitors can participate in detailed discussions on key issues and view stunning and powerful Hyperwall data visualizations. The United States and international leaders in the fight against climate change will headline a varied series of panels during the two weeks of COP-22. Full details for scheduled events begin on page 5. All events will take place at the Center, located within the Marrakech COP-22 Blue Zone. We look forward to your visit to the U.S. Center, and we hope you will join us during COP-22.

### Web Streaming

Selected U.S. Center side events will be streamed live online. Online programming provides a virtual space for the interactive exchange of ideas, in which participants from anywhere in the world can congregate and discuss issues of concern.

[State.gov/uscenter](http://State.gov/uscenter) will serve as your one-stop destination for all information about live streamed and on-demand programming from the U.S. Center. Check the site daily for updates on upcoming events and recordings from previous sessions with leading climate change experts.

All U.S. Center streamed events are followed by question and answer sessions. Ask the experts your questions from anywhere in the world using [#AskUSCenter](https://twitter.com/US_Center) on Twitter. Don't forget to follow us on Twitter with [@US\\_Center](https://twitter.com/US_Center) and stay involved in the conversation!

Stay up to date with U.S. Center COP-22 programs on the following sites:

[www.state.gov/uscenter](http://www.state.gov/uscenter)

[twitter.com/us\\_center](https://twitter.com/us_center)

[youtube.com/theuscenter](https://youtube.com/theuscenter)



## NASA Hyperwall

You are invited to experience cutting-edge science visualizations presented to you by the U.S. Center. Come learn about the changes and trends taking place on Earth that have been observed from space; discover how people are using Earth-observation satellite data to address questions about water resources, agriculture, land use and land cover change, and urban growth; and see for yourself how full and open data policies in the U.S. provide essential information to decision makers, enabling them to make informed decisions on the places where we live and work.



The Hyperwall—a nine screen video wall—will display multiple high-definition images and data visualizations. These demonstrations will illustrate how international collaboration has led to various achievements and advancements in Earth-observation science, data sharing, and scientific research. A variety of topics will be presented during the 30-minute Hyperwall events.

## Hyperwall Event Descriptions

### Observing Climate from Space

NASA currently operates sixteen Earth observing satellite missions (many joint with other domestic and international agencies) and instruments that study all aspects of the Earth system (oceans, land, atmosphere, biosphere, cryosphere), with several more planned for launch in the next few years. Together, these missions collect global measurements to help scientists better understand Earth's climate, how it is changing, and the drivers of the change. NASA's climate related research encompasses a variety of topics including the temperature of the atmosphere and the oceans, the state of the ozone layer, air pollution and changes in sea ice and land ice.

### Water in the Earth System

Water is fundamental to life on Earth. NASA's Earth-observing satellites and instruments continuously observe our oceans and measure water throughout the atmosphere, on land, and beneath the Earth's surface. Data from these missions help advance our understanding of the global water cycle and improve forecasting capabilities for weather and climate, agriculture, freshwater availability, and natural hazards.

### Atmospheric Composition and Air Quality

Atmospheric chemistry plays a major role in Earth's climate and energy budget. NASA's Earth-observing satellites observe various atmospheric gases and aerosols throughout the atmosphere including carbon dioxide, carbon monoxide, nitrogen dioxide, ozone, water vapor, dust, and sulfates. These measurements help scientists understand the composition of the Earth's atmosphere and predict its future evolution.



## Human Footprints

More than seven billion people share our planet and place ever-increasing demands on its resources. To meet our needs, humans are altering environments and extracting resources from terrestrial, marine, and freshwater ecosystems. For decades, NASA's Earth-observing satellites and instruments have been observing human-induced as well as natural environmental changes including increases in deforestation and in urban growth, decreases in lake water levels, and a rise in global temperature. Environmental changes are interrelated and have positive and negative, as well as short- and long-term effects on Earth's climate.

## Changes at Earth's Poles

The vantage point of space provides a unique perspective to observe Earth's poles at local, regional, and global scales, as well as over time. Over the last decade, satellite data, often combined with data from other sources, have revealed that the Arctic is changing at rates faster than anywhere else on Earth. These changes are interrelated and have both long- and short-term effects on Earth's land surfaces, oceans, and atmosphere, ultimately impacting the Earth's climate system. These visualizations reveal changes taking place at both poles including sea ice minimum extents; ice loss in Greenland and Antarctica; elevation changes associated with the Pine Island Glacier; the collapse of the Larsen-B ice shelf; and a view of one of Alaska's most rapidly changing glaciers—the Columbia Glacier.

## Space Borne Observations of the Dynamic Earth

In order to study the Earth as a whole system and understand how it is changing, NASA develops and supports a large number of Earth observing missions. These missions provide Earth science researchers the necessary data to address key questions about global climate change.

## Connecting Space to Village

NASA's fleet of satellites provides freely-available information about Earth's land, water, air, and environment. Learn how NASA promotes efforts to discover and demonstrate innovative and practical uses of Earth science data and knowledge—from space to village.

## Observing Earth: From Observations to Models

The Earth system, like the human body, comprises diverse components that interact in complex ways. While scientists learn a great deal from studying each of these components individually, improved observational and computational capabilities increasingly allow them to study the interactions between these interrelated geophysical and biological parameters, leading to unprecedented insight into how the Earth system works—and how it might change in the future.

## Innovation Corner

The Innovation Corner of the U.S. Center is an area where short, rapid-fire talks will be given. Speakers will deliver presentations that focus on a narrow issue, allowing a deep dive into a subject in a short amount of time. To maximize engagement in this programming, there will be ample time at the end of each of these sessions for Q&A.

## Dynamic Planet

Global Imagination's Magic Planet™ is a digital video globe that allows users to view and explore dynamic digital images of the Earth, other planets and space. NASA's Magic Planet exhibit, "Dynamic Planet" is used extensively to help students and the public understand how NASA satellites contribute to a better understanding of our home planet, solar system, and the universe.

A new touchscreen interface, called the NASA Science Explorer, drives the spherical display, allowing users full control over the content while learning about a wide range of remote sensing data.





## COP-22 Schedule of Events

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### Monday, November 7

**Hyperwall Event:** Space Borne Observations of the Dynamic Earth

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** Using NASA's Environmental Measurements to Monitor Air Quality Trends

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 1:30 – 2:30PM

**Event Summary:**

The National Aeronautics and Space Administration (NASA) maintains a diverse constellation of Earth observing research satellites and sponsors research to develop satellite data applications across a wide spectrum of areas including environmental health; infectious disease; air quality, policies, and regulations; and the impact of climate change on health and air quality. During the event, NASA will present on their remotely sensed atmospheric measurements that have applications of societal benefit with a focus on the African continent.

**Hyperwall Event:** Water in the Earth System

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – Climate.gov

**Presenter:** National Oceanic and Atmospheric Administration (NOAA)

**Time:** 3:30 – 4:00PM

**Event:** 21st Century Regional Climate in a Warming World

**Primary Sponsor:** National Oceanic and Atmospheric Administration (NOAA)

**Time:** 4:00 – 5:00PM

**Event Summary:**

The National Atmospheric and Oceanic Administration (NOAA) is advancing the scientific understanding and prediction of climate through state-of-the-art numerical modeling of the Earth system. This event will highlight climate change including extremes in the 21st century, their evolution, and how advances in modeling can improve the information for impacts assessments. The research and products span the wide time scales of interest, with the spatial scales ranging from global to regional. This event will focus on Africa





with extensions to the rest of the world. Issues that will be discussed include: regional temperature and precipitation changes; intercontinental transport of pollutants affecting air quality and climate, and the global presence of dust; hurricanes and other storms affecting lives and property; and seasonal-to-decadal predictions of droughts and heat waves. The research comprises understanding the causes of changes in past climate from natural and human-influenced factors, projecting future change corresponding to technological and economic scenarios, and modeling the resulting changes in climate. The objective is to deliver credible, trustworthy, and actionable information to decision-makers in a wide variety of sectors (e.g., agriculture, forestry, health, coastal, river and ecosystem management, infrastructural protection), and enable the assessment of climate impacts to address the societal challenges of vulnerability, adaptation, and mitigation.

**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

## Tuesday, November 8

**Event:** Innovation Corner Presentation – Ocean Circulation and Climate

**Presenter:** Scripps Institute of Oceanography, University of California – San Diego

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Observing Climate from Space

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** How Morocco is Advancing Clean Energy and Climate Adaptation at Home

**Primary Sponsor:** U.S. Department of State and U.S. Agency for International Development (USAID)

**Time:** 1:30 – 2:30PM

**Event Summary:**

In this panel, speakers will explore some of the actions Morocco is taking to advance clean energy and climate adaptation within its own borders. Like countries across the North Africa and Middle East regions, Morocco is feeling climate change impacts. Changing precipitation and rising sea levels are posing new and growing risks to infrastructure, housing, livelihoods and critical water supplies. Most, if not all, countries have already experienced severe water shortages and drought. At the same time, this region enjoys bountiful potential renewable energy resources, most famously solar, and that is opening up new options for development. Panelists will discuss two decades of progress in Morocco's water sector as well as local research into new clean energy technologies that will help integrate solar power into Moroccan buildings.





**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – ClimateLinks.Org

**Presenter:** US Agency for International Development (USAID)

**Time:** 3:30 – 4:00PM

**Event:** State of the Climate and Climate Data Services: Climate Partnerships and Products for International Use

**Primary Sponsor:** National Oceanic and Atmospheric Administration (NOAA)

**Time:** 4:00 – 5:00PM

**Event Summary:**

Each year, the National Oceanic and Atmospheric Administration (NOAA) leads the production of the State of the Climate (SoC) report, an annual climate assessment, built with input from over 450 authors from 62 countries on every continent. This event will review major findings in the most recent State of the Climate report for 2015, emphasizing its collaborative nature, how it informs other international efforts to build climate monitoring and assessment capacities, and will highlight a compelling array of products, assessments and services aimed to enhance climate monitoring capabilities and adaptation and mitigation efforts in needed regions. The SoC series seeks to increase author participation from World Meteorological Organization (WMO) member countries and thereby increase geographical coverage for regional climate summaries, particularly in areas where there is currently a dearth of information, such as central Africa. Continued coordination among SoC authors and editors informs other international efforts to improve climate monitoring capacity, for example, a parallel effort by the WMO to generate an assessment of the state of the climate in Africa, because many of the participants and datasets were common to both efforts. To help address information gaps at more immediate scales, NOAA, the European Organization for the Exploitation of Meteorological Satellites, and Copernicus provide publicly-available products, assessments and services which support expanding African climate monitoring efforts. Together, these partnerships and products depict evolving environmental trends and extremes that can help decision-makers in sectors such as agriculture, resource management, health and transportation make better-informed choices in investments, infrastructure siting and construction, and anticipate environmental threats and opportunities.

**Hyperwall Event:** Space Borne Observations of Dynamic Earth

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM





## Wednesday, November 9

**Event:** Innovation Corner Presentation – The NDC Partnership Knowledge Portal

**Presenter:** World Resources Institute (WRI)

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** The Weight of Water: Applications of NASA's GRACE Satellite Mission for Hydrology and Water Resources

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 1:30 – 2:30PM

**Event Summary:**

Monitoring of the world's water resources is challenging due to limited large scale observations, particularly a lack of observations of water beneath the land surface. NASA's Gravity Recovery and Climate Experiment (GRACE) mission provides an unprecedented view of the regional net terrestrial water balance, with global coverage, over a now >10 year record. This event will highlight some relationships between terrestrial water storage and other water balance variables (precipitation and runoff), as well as applications of the GRACE observations in drought monitoring, flood identification and long-lead-time flood prediction. The use of satellite-based gravity to monitor the world's water resources is a relevant application that will be featured in this event. Additionally, the event will showcase recent work on measuring the land contributions to sea level rise, and on the potential for GRACE to inform land surface model design and storage behavior. Finally, the event will conclude with some future directions including SMAP and GRACE, and regional hydrological model development at JPL.

**Hyperwall Event:** Space Borne Observations of the Dynamic Earth

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – The Dynamic Planet

**Presenter:** NASA

**Time:** 3:30 – 4:00PM





Event: From the U.S. West Coast to the Ivory Coast: Building Scientific and Political Capacity to Respond to Ocean Acidification

Primary Sponsor: National Oceanic and Atmospheric Administration (NOAA)

Time: 4:00 – 5:00PM

**Event Summary:**

The United States is leading efforts around the world to expand capacity for scientists in developing countries to measure ocean acidification (caused by rising CO<sub>2</sub> in the atmosphere) and track its impacts such as erosion of coral reefs or loss of bivalve fisheries. The effect of high CO<sub>2</sub> on the oceans is a major reason why the UNFCCC is focusing on figuring out how to reduce temperature increases from 2° to 1.5° C. Several workshops have been held in the past year under auspices of the Global Ocean Acidification (OA) Observing Network to expand participation from African countries. This event will showcase those activities with testimonials from African scientists from Egypt, Namibia and South Africa about the importance of this work for building resilience to ocean acidification in the developing world. The event will end with a call to support an international political alliance focused on OA resilience issued by the U.S. Pacific Coast Collaborative. The international political alliance is teaming with the Global OA Observing Network to leverage political influence to expand resources for this important effort.

**Hyperwall Event:** Human Footprints

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

Event: Sourcing Sustainability: Bringing Together REDD+ and No-Deforestation Pledges

Primary Sponsor: U.S. Department of State

Time: 5:30 – 6:30PM

**Event Summary:**

Responsible commodity sourcing and “produce and protect” models have received a surge of interest among private sector actors, subnational governments, and NGOs working to enhance the sustainability of supply chains. At the same time, countries are making significant progress on implementing REDD+. This emerging sustainable sourcing model prioritizes commodities sourced from areas that are successfully implementing jurisdictional REDD+ programs, helping private sector companies meet their sustainability goals while providing a powerful incentive to jurisdictions to addressing deforestation and climate change.

A panel with participants from governments, the private sector, and NGOs will discuss progress made since COP-21 on developing the approach to preferential jurisdictional sourcing, highlight company plans to prioritize sourcing in areas with successful REDD+ programs, and focus on opportunities for scalable impact.





## Thursday, November 10

**Event:** Innovation Corner Presentation – How the U.S. Helps Reduce Disaster Risk

**Presenter:** U.S. Agency for International Development (USAID)

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Water in the Earth System

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** Integrating Climate and Air Quality – The Accra Megacity Partnership

**Primary Sponsor:** U.S. Environmental Protection Agency (USEPA)

**Time:** 1:30 – 2:30PM

**Event Summary:**

Urban environments are where people and pollution come together, with 80% of the world's city dwellers breathing harmful levels of air pollution. Some of this pollution is also contributing to climate change. A concerted approach is required to mitigate exposure and reduce the climate and public health impacts of this pollution. Many of the most rapidly growing urban areas in developing countries have limited data, resources and capacity, but experience significant health and climate impacts from air pollution. The United States Environmental Protection Agency and the Ghana Environmental Protection Agency are working together under the Accra Megacity Partnership to develop an integrated air quality action plan for Accra, with a focus on short lived climate pollutants. The project will develop and apply an approach that can be modified and applied in similar African cities. This side event will highlight this Partnership, which has developed as a model for integrated climate and air quality action planning as well as intergovernmental and donor cooperation.

**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – Exploring Pathways to Stay Within the Paris Temperature Limits

**Presenter:** Climate Interactive

**Time:** 3:30 – 4:00PM

**Event:** Taking the Clean Energy Transformation from Nationally Determined Contributions (NDCs) to Action

**Primary Sponsor:** BCSE





Time: 4:00 – 5:00PM

**Event Summary:**

With the Paris Agreement cementing both political will and domestic planning objectives for a low-carbon future, the private sector is emerging as a true leader and a prominent actor in the global movement to #ActOnClimate. In many ways, the 162 nationally determined contributions (NDCs) equals 162 clean energy roadmaps.

The time to maximize and utilize private sector expertise to take action on climate is now, as the energy sector is undergoing a global clean energy transformation. In 2015, global investment in clean energy topped a record high of \$329 billion. Clean energy technology costs are falling and innovative business and policy frameworks are taking root, but challenges in broad-scale deployment remain. Policy certainty, reliable investment and legal frameworks remain critical ingredients for a successful low-carbon energy sector to flourish.

This panel of U.S. clean energy companies offers its perspectives on NDCs and its practical experience deploying technology solutions to improve energy productivity, provide cleaner sources of electricity generation and transportation, and elevate the efficiency, quality of life and connectivity of the built environment, both in the United States and abroad.

**Hyperall Event:** Space Borne Observations of the Dynamic Earth

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

**Event:** Innovation Off-Grid Tech and Finance

**Primary Sponsor:** POWER AFRICA

**Time:** 5:30 – 6:30PM

**Event Summary:**

Achieving ambitious energy access goals requires significant public and private financing. This panel will discuss the new efforts to crowd-in the needed capital by improving the micro-grid risk profile through project and asset bundling, structured finance in the pay-as-you-go sector through Special Purpose Vehicles, as well as the bankability issues facing the sector. Additionally, the event will feature demonstrations of new technologies, including virtual reality, drone and solar developments that will soon be available to the African market

## Friday, November 11

**Event:** The Melting Arctic: A Glimpse into the Future of Global Climate Change

**Primary Sponsor:** U.S. Department of State

**Time:** 10:30 – 11:30AM

**Event Summary:**



	Monday	Tuesday	Wednesday	Thursday	Friday
	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov
10:00-10:30 AM		Hyperwall Loop			
10:30 - 11:30	C L O S E D				The Melting Arctic: A Glimpse into the Future of Global Climate Change - U.S. State Department
11:30 - 12:00 PM		Scripps - Ocean Circulation and Climate	WRI - NDC Tool	USAID Reducing Disaster Risk	Scripps - Ocean Deoxygenation
12:30-1:00	Space Borne Observations of the Dynamic Earth	Observing Climate from Space	Atmospheric Composition & Air Quality	Water in the Earth System	Observing Climate from Space
1:30 - 2:30	Using NASA's Environmental Measurements to Monitor Air Quality Trends	How Morocco is Advancing Clean Energy and Climate Adaptation at Home - USAID	The Weight of Water: Applications of NASA's GRACE Satellite Mission for Hydrology and Water Resources	Integrating Climate and Air Quality – The Accra Megacity Partnership - USEPA	
3:00 - 3:30	Water in the Earth System	Atmospheric Composition & Air Quality	Space Borne Observations of the Dynamic Earth	Atmospheric Composition & Air Quality	Atmospheric Composition & Air Quality
3:30 - 4:00	Climate.gov	ClimateLinks	Innovation Corner	Exploring Pathways to Stay Within the Paris Temperature Limits	NREL
4:00 - 5:00	21st Century Regional Climate in a Warming World - NOAA	State of the Climate and Climate Data Services: Climate Partnerships and Products for International Use - NOAA	From the U.S. West Coast to the Ivory Coast: Building Scientific and Political Capacity to Respond to Ocean Acidification - NOAA	Taking the Clean Energy Transformation from Nationally Determined Contributions (NDCs) to Action - BCSE	Unlocking Clean Energy Investment in Sub-Saharan Africa - USTDA
5:00 - 5:30	Atmospheric Composition & Air Quality	Space Borne Observations of the Dynamic Earth	Human Footprints	Space Borne Observations of the Dynamic Earth	Space Borne Observations of the Dynamic Earth
5:30 - 6:30			Sourcing Sustainability: Bringing Together REDD+ and No-Deforestation Pledges - U.S. State Department	Innovation Off-Grid Tech and Finance - Power Africa	LEDS Global Partnership: Advancing Country Leadership on NDC Action - NREL

# SCHEDULE



Sat	Sun	Monday	Tuesday	Wednesday	Thursday	Friday
12-Nov	13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov
		<b>Hyperwall Loop</b>				
		U.S. Support for Adaptation and the NAP Global Network - STATE/USAID	Innovative Adaptation: How African Leaders are Tapping State-of-the-Art U.S. Climate Science and Data to Build Resilience - NASA/USAID	Do I hear \$2 billion? Using Auctions to Attract Investment in Clean Energy & Other Projects - USAID	Launching the U.S. - India Clean Energy Finance Facility - The White House	Leading by Example: National Government Commitments to Sustainability - The White House CEQ
		WRI - NDC Tool	Innovation Corner	Renewable-powered Desalination Tech	NREL	Climate.gov
		Observing Climate from Space	Human Footprints	Human Footprints	Connecting Space to Village	Observing Climate from Space
		Unlocking Private Finance for Climate - From Talk to Action - Global Innovation Lab	Addressing Climate Change through Agriculture, Forestry, and Rural Energy - USDA	North American Mid-Century Strategies for Low-Emission Development - CEQ	U.S. States at the Forefront of Climate Action - Climate Registry	Carbon and Climate: What We Know and What We Need to Know - NASA
		Human Footprints	Connecting Space to Village	Observing Climate from Space	Observing Climate from Space	
		Innovation Corner	Innovation Corner	EPA Adaptation Resource Center (ARC-X)	ClimateLinks	
			Charting a Low-Carbon Course for the U.S. Economy - C2ES/EEI	Green Growth Climate Innovation - U.S. State Department	Enlisting the Market - Climate Fiscal Risk - The White House Office Budget Management	
		Observing Earth: From Observations to Models	Atmospheric Composition & Aerosols	Changes at Earth's Poles	Atmospheric Composition & Aerosols	
		Launch of the NDC Leaders Compact: Countries Leading the Way on Climate Action - USAID (6:00-7:00)	Promoting the Central Role of Women in Clean Energy Entrepreneurship and in Addressing Climate Change - wPower	Building a Climate-Resilient Nation: Lessons Learned and Future Opportunities - CEQ/USEPA	Making Agriculture Smarter, More Efficient and Resilient in a Changing Climate - USAID	



The Arctic is warming at twice the rate as the global average with profound consequences for the region and communities all over the world. This multi-media event will explain the most recent scientific understanding of climate change impacts in the Arctic, and extrapolate from the Arctic example the scientific and policy challenges that are on the horizon for the rest of the world. Speakers from the scientific and policy communities will also highlight the actions that are being taken to slow the pace of warming and respond to climate change.

Each speaker will present for 10 minutes followed by a moderated Q&A. Dr. Stephen Vavrus will discuss current scientific research on climate change and the Arctic, including the role of arctic climate change on worldwide weather and weather extremes. Deputy Special Envoy Karen Florini will provide an overview of U.S. efforts domestically and through the Arctic Council to drive down emissions of super pollutants, expand access to renewable energy, and enable communities to better prepare for and respond to climate impacts in the Arctic. Using the NASA hyperwall to show powerful visualizations of Arctic changes and NASA's ground-breaking research, NASA scientist Jack Kaye will explain the science behind a changing Arctic, the relationship with extra-Arctic impacts and gaps in the science that require further study.

**Event:** Innovation Corner Presentation – Ocean Deoxygenation

**Presenter:** Scripps Institute of Oceanography, University of California - San Diego

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Observing Climate from Space

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – Mapping Clean Energy

**Presenter:** National Renewable Energy Laboratory (NREL)

**Time:** 3:30 – 4:00PM

**Event:** Unlocking Clean Energy Investment in Sub-Saharan Africa

**Primary Sponsor:** U.S. Trade and Development Agency (USTDA)

**Time:** 4:00 – 5:00PM

**Event Summary:**

The lack of financeable power projects in Africa is a key constraint to scaling renewable power and establishing low-emissions development trajectories for the continent's many emerging economies. It's why Secretary Clinton launched the U.S.-Africa Clean Energy Finance (ACEF) initiative in 2012, and why President Obama launched Power Africa a year





later. Through ACEF and Power Africa, the U.S. Trade and Development Agency connects African energy project sponsors with U.S. companies to turn great ideas into viable, bankable projects. As the U.S. government's project preparation agency, USTDA sponsors pilot projects and feasibility studies to help provide the in-depth technical, economic and financial analyses necessary to drive down the investment risk in clean power ventures. USTDA also works with financiers to determine how to help structure clean energy projects to meet their investment requirements. African project sponsors will discuss the importance of project preparation to reaching bankability, as well as what more needs to be done in order to unlock the significant private financing interested in the market and achieve Africa's clean energy transformation.

**Hyperwall Event:** Space Borne Observations of the Dynamic Earth

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

**Event:** LEDS Global Partnership: Advancing Country Leadership on NDC Action

**Primary Sponsor:** National Renewable Energy Laboratory (NREL)

**Time:** 5:30 – 6:30PM

**Event Summary:**

Join the Low Emission Development Strategies Global Partnership (LEDS GP) for a side event on advancing climate-resilient low emission development and NDC implementation through peer-to-peer technical collaboration and exchange across countries, donors, and international and technical institutes. This event will highlight the experiences of developing countries leading efforts with the LEDS Global Partnership and the U.S. Enhancing Capacity for LEDS program to take ambitious climate action and enable replication of successful approaches in achieving NDC goals through economy-wide and sector-specific policies and finance measures and integrated planning processes. The event will discuss how others can access tools and other resources and draw on the experiences of fellow practitioners to advance action on low emission development and NDCs.

Saturday, November 12

CLOSED

Sunday, November 13

CLOSED

**Monday, November 14**

**Event:** U.S. Support for Adaptation and the NAP Global Network

**Primary Sponsor:** U.S. Department of State, U.S. Agency for International Development (USAID) and the NAP Global Network

**Time:** 10:30 – 11:30AM





**Event Summary:**

Over the last 6 years, U.S. support for adaptation has increased and evolved, and now focuses on three critical areas: 1) building capacity to plan for adaptation in all sectors and at all levels of governance 2) improving access to information for planning and decision-making, and 3) increasing access for financing implementation. Cutting across these three areas, the U.S. has also emphasized the importance of National Adaptation Plans (NAPs) and their role in facilitating a shift away from ad-hoc investments to more coherent and strategic approaches to reducing climate risk. Through our work on adaptation, the U.S., and developing and developed country partners, have identified the continued need for sustained coordination between adaptation practitioners in order to leverage and learn from each other's approaches, experiences, and programs—this led to the formation of the NAP Global Network at COP-20 in Lima. The Network is now providing direct support to developing countries to help them meet the Paris commitments on adaptation while also coordinating that support among donors. This event will showcase the evolution of U.S. support for adaptation and preview the collaborative work of the NAP Global Network and its partner countries going forward.

**Event:** Innovation Corner Presentation – The NDC Partnership Knowledge Portal

**Presenter:** World Resources Institute (WRI)

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Observing Climate from Space

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** Unlocking Private Finance for Climate – From Talk to Action

**Primary Sponsor:** The Global Innovation Lab for Climate Finance

**Time:** 1:30 – 2:30PM

**Event Summary:**

Implementing the pledges made through the Paris agreement will take significant finance. While progress has been made to unlock investment, there remain gaps. The Global Innovation Lab for Climate Finance is a public-private initiative that identifies, develops, and launches transformative climate finance instruments. It aims to drive billions of dollars of private investment into climate change mitigation and adaptation in developing countries. Since launching in 2014, the Global Lab and its initiatives have been endorsed by the G7 and attracted nearly USD 600 million for pilots. Success of the Global Lab has also translated into a new, 'India Innovation Lab for Green Finance' that recently concluded a first cycle.

Right now, the Global Lab is taking forward several initiatives from its last cycle, including: the Climate-Smart Lending Platform; the Oasis Platform; the Energy Efficiency Enabling Initiative, and the Water Financing Facility. It is also in the process of selecting and developing a next round of instruments, including several with strong potential to be deployed in Brazil. This panel discussion brings together high-level public and private sector actors from the Lab to share experience, solutions, and best practices for unlocking finance for the world's climate mitigation and adaptation needs.





**Hyperwall Event:** Human Footprints

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – The Dynamic Planet

**Presenter:** National Aeronautics and Space Administration (NASA)

**Time:** 3:30 – 4:00PM

**Hyperwall Event:** Observing Earth: From Observations to Models

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

**Event:** Launch of the NDC Leaders Compact: Countries Leading the Way on Climate Action

**Primary Sponsor:** U.S. Agency for International Development (USAID)

**Time:** 6:00 – 7:00PM

**Event Summary:**

U.S. Special Envoy for Climate Change, Jonathan Pershing, and USAID Assistant Administrator, Eric Postel, will co-host a discussion with high-level officials from several countries leading the way on climate action. Panelists from countries such as Colombia, Kenya, Mexico, Jamaica and Morocco, among possible others, will describe their country's major accomplishments in implementing their Nationally Determined Contribution. After this discussion, panelists will embark on a frank and open discussion of two critical questions: What are the key ingredients to success when it comes to implementing national climate change targets? What big lessons have forward-thinking countries learned along the way, for others following in their footsteps? Audience members are invited to participate in Q&A after the panel.

## Tuesday, November 15

**Event:** Innovative Adaptation: How African Leaders are Tapping State-of-the-Art U.S. Climate Science and Data to Build Resilience

**Primary Sponsor:** U.S. Agency for International Development (USAID)

**Time:** 10:30 – 11:30AM

**Event Summary:**

Dozens of leading African institutions are tapping state-of-the-art global climate science and data and building local capacity for climate services, as part of a broader adaptation strategy. This event will feature African leaders and institutions that are teaming up with NASA, USAID and other partners to access and use satellite data, geospatial information and climate models to better predict and prepare for climate changes. In one example, NASA and USAID are partnering with West Africa's Agrometeorology, Hydrology, and





Meteorology (AGRHYMET) Center on a major new \$12.5M program to help West Africa build lasting capacity to access and use climate information to increase resilience. More broadly, investments across Africa are supporting improved climate information services for adaptation at many levels: from food security work with local communities in Mali and Senegal, to met services in Ethiopia and East Africa, to broad research efforts to improve climate services.

**Event:** Innovation Corner Presentation – The Dynamic Planet

**Presenter:** National Aeronautics and Space Administration (NASA)

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Human Footprints

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** Addressing Climate Change through Agriculture, Forestry, and Rural Energy

**Primary Sponsor:** U.S. Department of Agriculture

**Time:** 1:30 – 2:30PM

**Event Summary:**

The agriculture, forest, and land use sectors offer a rare opportunity to mitigate climate change while also producing food, fiber, and energy. This session will focus on the U.S. Department of Agriculture's (USDA) Building Blocks for Climate Smart Agriculture and Forestry. The Building Blocks focus on voluntary, incentive-based conservation, forestry, and energy programs to reduce greenhouse gas emissions, increase carbon sequestration, and expand renewable energy production in the agricultural and forestry sectors. The panelists will discuss actions USDA is taking to encourage climate smart practices; partnerships with the private sector, research organizations, and civil society groups to leverage expertise and resources; and mechanisms to track greenhouse gas emissions in these sectors. This effort offers an innovative case study of how the multiple economic and environmental benefits of these practices can lead to a strong coalition of organizations that support their implementation.

**Hyperwall Event:** Connecting Space to Village

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – The Dynamic Planet

**Presenter:** NASA

**Time:** 3:30 – 4:00PM

**Event:** Charting a Low-Carbon Course for the U.S. Economy





Primary Sponsor: C2ES and EEI

Time: 4:00 – 5:00PM

**Event Summary:**

Since the White House launched the American Businesses Act on Climate (ABAC) effort, more than 150 companies have pledged to take actions to address climate change. This C2ES and EEI side event will highlight the range of current and planned actions ABAC members are taking to reduce their carbon emissions.

**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

**Event:** Global Launch of the wPOWER Hub Partnership Platform: Promoting the Central Role of Women in Clean Energy Entrepreneurship and in Addressing Climate Change

**Primary Sponsor:** wPower

**Time:** 5:30 – 6:30PM

**Event Summary:**

Lack of access to affordable energy is a key barrier to achieving prosperity. It is estimated that globally 1.3 billion people cannot access reliable, affordable energy. Inefficient lighting and cooking methods contribute to climate change through increased carbon emissions and degradation of natural resources and to nearly four million deaths per year from respiratory illnesses (source: WHO). Given that these practices disproportionately affect women and children, there is a strong rationale to integrating women into the entire clean energy value chain to drive growth in access and affordability. This event will launch the wPOWER Hub Partnership Program by bringing key stakeholders together to discuss the scaling of access to clean energy solutions implemented at the 'last mile' and the integration and supporting of women entrepreneurs living in energy-impooverished communities. The event will culminate in a networking reception to toast the launch of the wPOWER Hub Global Partnership Program.

## Wednesday, November 16

**Event:** Do I hear \$2 billion? Using Auctions to Attract Investment in Clean Energy & Other Projects

**Primary Sponsor:** U.S. Agency for International Development (USAID) and World Bank

**Time:** 10:30 – 11:30AM

**Event Summary:**

Across the globe, online auctions have mobilized billions of dollars in private investment for large-scale renewable energy, waste management, and other projects that curb greenhouse gas emissions. But how exactly do these auctions work? This session will feature an interactive auction game – bring your smartphone! – illustrating the concepts, mechanics, and efficiencies of auctions, followed by a panel of government and business





leaders discussing their real-world experiences in auction design and implementation. The panelists will discuss large renewable energy auctions in countries such as Mexico as well as smaller-scale auctions conducted via the World Bank's Pilot Auction Facility for Methane and Climate Change Mitigation. Industry experts will join auction hosts and bidders in debating what makes a successful auction, while trying to answer the billion dollar question: how can auctions be scaled up to mobilize still more investment in renewables, energy efficiency, methane capture and other projects that support commitments under the Paris Agreement?

**Event:** Innovation Corner Presentation - Renewable-powered Desalination Tech

**Presenter:** World Resources Institute (WRI)

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Human Footprints

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

**Event:** North American Mid-Century Strategies for Low-Emission Development

**Primary Sponsor:** White House Council on Environmental Quality

**Time:** 1:30 – 2:30PM

**Event Summary:**

The Paris Agreement invited Parties to submit mid-century, long-term low GHG development strategies to the UNFCCC by 2020. Earlier this year, President Obama, President Trudeau, and President Pena-Nieto announced the intention to release mid-century strategies by the end of 2016. Please join us for a high-level discussion on the progress the United States, Canada, and Mexico have made in developing their mid-century strategies, and their visions for deep decarbonization in the 21st century. As these strategies envision a low-emissions future for the North American continent, they provide a valuable example of the type of collaboration and ambition in long-term planning that will be crucial to achieve the ambitious goals that were agreed upon in Paris.

**Hyperwall Event:** Observing Climate from Space

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – ARC-X

**Presenter:** U.S. Environmental Protection Agency

**Time:** 3:30 – 4:00PM





Event: Green Growth Climate Innovation

Primary Sponsor: U.S. Department of State

Time: 4:00 – 5:00PM

**Event Summary:**

Morocco and the United States share a commitment to enhancing energy security and combating climate change through the transformation of our energy sectors. The U.S. and the Government of Morocco have been partnering on several policy, research and development activities to build the foundation for the implementation of Morocco's ambitious clean energy goals. This cooperation includes the Morocco Green Growth Climate Challenge, a competition that will challenge entrepreneurs, business leaders, and institutions to develop clean energy solutions to local challenges.

This event will highlight the interdisciplinary teams – local officials, university partners, and industry – which have developed winning solutions to the climate change related challenges facing Morocco's vulnerable ecosystem. The event will showcase awardee projects and initiatives, placing them in the context of U.S.-Morocco cooperation while underscoring the potential for subnational and non-state actors – in partnership – to make significant contributions to climate goals. Moreover, the panelists will emphasize how the winning solutions can be applied to the sub-Saharan Africa region.

**Hyperwall Event:** Changes at Earth's Poles

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

Event: Building a Climate-Resilient Nation: Lessons Learned and Future Opportunities

Primary Sponsor: White House Council on Environmental Quality and U.S. Environmental Protection Agency

Time: 5:30 – 6:30PM

**Event Summary:**

This event will share internationally-relevant U.S.-based examples of building community resilience to the impacts of climate change, and discuss opportunities for future action highlighted in the document "Opportunities to Enhance the Nation's Resilience to Climate Change Resilience," recently released by the Council on Climate Preparedness and Resilience. Building on the accomplishments of the Obama Administration, this document presents opportunities to guide sustained and coordinated action among Federal agencies in their continued efforts to advance climate resilience and empower stakeholders to work with Federal agencies on a shared resilience agenda. Panelists will speak to the three overarching themes of the document: 1) advancing and applying science-based information, technology and tools to address climate risk; 2) integrating climate resilience into Federal agency missions, operations and culture; 3) supporting community efforts to enhance climate resilience.

To illustrate the type of cross-cutting opportunities identified in this document, the event will also include a demonstration of the U.S. EPA's new online Climate Change Adaptation Resource Center (ARC-X). Unlike other resources already available to the public, this new interactive system enables users to access information and tools tailored specifically to





their needs – based on where they live and the particular issues of concern to them. The system provides users with an integrated package of information, including insights about the risks posed by climate change; relevant adaptation strategies; case studies illustrating how other communities have successfully adapted to those risks, links to available tools and technical assistance to replicate those successes; and funding opportunities.

## Thursday, November 17

Event: Launching the U.S. - India Clean Energy Finance Facility

Primary Sponsor: The White House

Time: 10:30 – 11:30AM

Event Summary:

U.S.-India Clean Energy Finance Initiative: Launch of \$20 million fund to provide project preparation support for Indian distributed solar power projects designed to leverage \$400 million in investment from OPIC and other investors, and provide clean and renewable electricity to underserved households. The event will highlight this cooperation, and include a panel of high level officials that are supporting the Facility.

Event: Innovation Corner Presentation – Mapping Clean Energy

Presenter: National Renewable Energy Laboratory (NREL)

Time: 11:30 – 12:00PM

Hyperwall Event: Connecting Space to Village

Primary Sponsor: National Aeronautics and Space Administration (NASA)

Time: 12:30 – 1:00PM

Event: U.S. States at the Forefront of Climate Action

Primary Sponsor: Climate Registry

Time: 1:30 – 2:30PM

Event Summary:

The implementation of U.S. NDCs rests largely on American states, but are states prepared and willing to take meaningful action on energy and climate? The international COP audience will have a rare chance to interact directly with high-ranking officials from a politically diverse set of U.S. states as they address the opportunities and challenges associated with shifting to a lower-carbon energy future. The panel will explore state initiatives associated with the U.S. Clean Power Plan, such as the National Energy Efficiency Registry (funded by U.S. DOE), regional collaborations such as the Regional Greenhouse Gas Initiative (RGGI) and the Pacific Coast Collaborative, and state action through complementary measures spanning energy efficiency, transportation, renewable energy and land use planning. The role of U.S. states in the international context, such as the Under 2 Coalition, will be discussed, as will state efforts toward GHG MRV capacity building and transparency.





**Hyperwall Event:** Observing Climate from Space

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 3:00 – 3:30PM

**Event:** Innovation Corner Presentation – ClimateLinks.Org

**Presenter:** U.S. Agency for International Development (USAID)

**Time:** 3:30 – 4:00PM

**Event:** Enlisting the Market – Climate Fiscal Risk

**Primary Sponsor:** White House Office of Management and Budget

**Time:** 4:00 – 5:00PM

**Event Summary:**

Office of Management and Budget Director Shaun Donovan will outline how the United States is working to bolster our understanding of climate risk, disclose that data for use by public and private sector decision makers, and reduce that risk through smart investments and commonsense standards. This event and subsequent discussion will highlight new analysis by the U.S. government to begin cataloging direct exposure to fiscal risk due to climate change. The analysis identifies these risks to the U.S. by identifying major areas of vulnerability, and quantifying the potential costs to the Federal government due to climate change. This analysis will be an important start of a conversation and area of targeted research that is long overdue not only in the United States but inside the finance ministries of most countries. This event will include a guided discussion by Director Donovan with private sector leaders on the fiscal risks posed to the greater global economy.

**Hyperwall Event:** Atmospheric Composition & Air Quality

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 5:00 – 5:30PM

**Event:** Making Agriculture Smarter, More Efficient and Resilient in a Changing Climate

**Primary Sponsor:** U.S. Agency for International Development (USAID)

**Time:** 5:30 – 6:30PM

**Event Summary:**

United States Agencies recognize that climate smart agriculture is smart business and are striving to incorporate a climate-smart approach into agricultural programs and initiatives. This event will highlight efforts to build partnerships with the private sector and civil society to expand domestic and international efforts toward creating a more climate-resilient and emissions-efficient global food system. Speakers will focus on three critical areas at the nexus of climate science and agriculture: (1) the business case for climate smart agriculture; (2) the importance of investing in and harnessing the latest science and





climate data to increase resource efficiency and resiliency in a warmer and more volatile climate; and (3) establishing policies to support climate smart agriculture.

## Friday, November 18

Event: Leading by Example: National Government Commitments to Sustainability

Primary Sponsor: White House Council on Environmental Quality

Time: 10:30 – 11:30AM

**Event Summary:**

As national governments work toward achieving NDCs, many are also demonstrating leadership by cutting their own carbon footprints and setting sustainability goals. This discussion will highlight how government actions to reduce GHG emissions from operations, expand procurement of renewable energy, increase efficiency, and deploy new technologies can drive sustainability and innovation inside and outside government. The event will also showcase national government commitments and sustainability strategies and explore opportunities for cross-government collaboration.

**Event:** Innovation Corner Presentation – Climate.gov

**Presenter:** National Oceanic and Atmospheric Administration (NOAA)

**Time:** 11:30 – 12:00PM

**Hyperwall Event:** Observing Climate from Space

**Primary Sponsor:** National Aeronautics and Space Administration (NASA)

**Time:** 12:30 – 1:00PM

Event: Carbon and Climate: What We Know and What We Need to Know

Primary Sponsor: National Aeronautics and Space Administration (NASA)

Time: 1:30 – 2:30PM

**Event Summary:**

Carbon-containing source gases (carbon dioxide, methane) are the largest anthropogenic contributors to greenhouse gas forcing of the Earth's climate. Advances in measurements and models are improving our knowledge of atmospheric concentrations, sources and sinks, fluxes, and biomass. Surface-based measurement techniques, airborne approaches, and satellite-based measurements are all adding to our knowledge. In the United States, significant efforts towards understanding carbon sources are made by several agencies, including NOAA, NSF, USGS, USDA, USAID, and NASA. While individual nations and existing international groups are working together to add to our knowledge, a new greenhouse gas emission activity being coordinated by the World Meteorological Organization is helping to engage more fully all the nations in the world in advancing our knowledge of carbon sources and sinks.



