

MR. KEENEY: THANK YOU, RICK, FOR THAT VERY
10 WARM INTRODUCTION. BY THE WAY, I WANT TO COMPLIMENT
11 YOU ON THAT SHIRT, THAT IS SPECTACULAR. RICK JUST
12 GOT THAT SHIRT A COUPLE OF MONTHS AGO WHEN HE WAS
13 COMMEMORATING THE INSTALLATION OF A TSUNAMI WARNING
14 BUOY IN INDONESIA. HE CAN TELL YOU WHERE TO GET ONE
15 IF YOU WANT ONE LIKE THAT.

16 ALOHA. GOOD MORNING. IT IS A GREAT
17 PRIVILEGE TO BE HERE TO REPRESENT NOAA'S LEADERSHIP
18 AS WE CELEBRATE THE ANNIVERSARY OF THIS CRITICAL
19 LONG-TERM GLOBAL OBSERVATION RECORD. BILL BRENNAN,
20 NOAA'S DEPUTY ASSISTANT SECRETARY FOR INTERNATIONAL
21 AFFAIRS AND ACTING DIRECTOR OF THE U.S. CLIMATE
22 CHANGE SCIENCE PROGRAM, SENDS HIS REGRETS. A
23 LAST-MINUTE COMMITMENT PREVENTED HIM FROM JOINING US
24 AT THIS CONFERENCE.

25 I'M PARTICULARLY PLEASSED TO BE HERE. MY
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1 BACKGROUND IS BASICALLY IN LAW AND POLICY. I WAS
2 LUCKY ENOUGH WHEN I WAS THE COMMISSIONER OF BOTH
3 CONNECTICUT AND RHODE ISLAND TO SERVE TWO YEARS AS
4 THE CHAIRMAN OF THE OZONE TRANSPORT COMMISSION AND
5 SPENT A LOT OF MY TIME ON IMPLEMENTING THE CLEAN AIR
6 ACT AMENDMENTS OF 1990, AND SO I WAS VERY EXCITED TO
7 BE ABLE TO COME OUT HERE. I HEARD ABOUT THIS
8 CONFERENCE. AS PEOPLE KIND OF STARTED TO FALL AWAY
9 THAT COULDN'T COME, I SAID, "THAT'S GREAT." GLAD TO
10 BE HERE.

11 SO 50 YEARS AGO THE U.S. WEATHER BUREAU,
12 PREDECESSOR OF NOAA'S NATIONAL WEATHER SERVICE,
13 SPONSORED A YOUNG SCIENTIST, CHARLES DAVID KEELING
14 FROM THE SCRIPPS INSTITUTE OF OCEANOGRAPHY TO BEGIN
15 TRACKING CARBON DIOXIDE IN EARTH'S ATMOSPHERE AT THE
16 TWO OF THE PLANET'S MOST REMOTE AND PRISTINE SITES:
17 AT THE SOUTH POLE AND AT THE SUMMIT OF THE MAUNA LOA
18 VOLCANO IN HAWAII.

19 WE ARE HERE IN THE SHADOW OF THE MAUNA LOA
20 OBSERVATORY TO CELEBRATE THE SUBSEQUENT 50 YEARS OF
21 GLOBAL CARBON DIOXIDE RECORD. I WANT TO ECHO THE
22 SENTIMENTS OF MY FELLOW SPEAKERS AND CONGRATULATE
23 DR. KEELING ON HIS VISION AND PERSEVERANCE.

24 THE RECORD STANDS AS A MODEL OF QUALITY AND
25 COMPREHENSIVENESS NECESSARY TO UNDERSTAND THE DRIVERS
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1 BEHIND CLIMATE CHANGE. THE ADHERENCE TO ACCURACY AND
2 METICULOUS QUALITY CONTROL PROMOTED BY DR. KEELING IN
3 THE EARLY DAYS REMAINS A KEY COMPONENT OF THE GLOBAL
4 SYSTEM TODAY. THE SYSTEM HAS PLAYED A CRUCIAL ROLE
5 IN ALERTING SOCIETY TO A MAJOR CAUSE OF OBSERVED
6 CHANGES IN OUR CLIMATE.

7 TODAY NOAA MAKES MORE THAN 250 MEASUREMENTS
8 AT THE SOUTH POLE AND MAUNA LOA OBSERVATORIES AND AT
9 THREE OTHERS IN AMERICAN SAMOA; BARROW, ALASKA; AND
10 TRINIDAD HEAD, CALIFORNIA. AT OVER 60 SITES AROUND
11 THE GLOBE, NOAA'S PARTNERS FILL GLASS OR METAL FLASKS
12 WITH AIR AND SHIP THEM TO OUR EARTH SYSTEM RESEARCH
13 LABORATORY IN BOULDER, COLORADO. THE SCIENTISTS,

14 MANY OF WHOM ARE HERE TODAY, ANALYZE THE SAMPLES FOR
15 CARBON DIOXIDE AND A HOST OF OTHER GREENHOUSE GASSES
16 AND MANY OTHER POLLUTANTS AND NATURAL COMPOUNDS.
17 TOGETHER WITH NOAA'S AIRCRAFT OBSERVATIONS, TALL
18 TOWERS, AND SATELLITE SENSORS, THESE OBSERVATIONS
19 SUPPORT NOAA'S MISSION TO UNDERSTAND AND PREDICT
20 CHANGES IN THE EARTH'S ENVIRONMENT.

21 WE, AT NOAA, ARE CHARGED WITH HELPING
22 SOCIETY UNDERSTAND, PLAN FOR, AND RESPOND TO CLIMATE
23 VARIABILITY AND CHANGE. THIS IS ACHIEVED THROUGH THE
24 IMPLEMENTATION OF A GLOBAL OBSERVING SYSTEM, FOCUSED
25 RESEARCH, AND MODELING TO UNDERSTAND KEY CLIMATE

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1 PROCESSES IN THE DEVELOPMENT AND DELIVERY OF CLIMATE
2 INFORMATION SERVICES. THE NOAA CLIMATE MISSION IS AN
3 END-TO-END ENDEAVOR FOCUSED ON PROVIDING A PREDICTIVE
4 UNDERSTANDING OF THE GLOBAL CLIMATE SYSTEM SO THE
5 PUBLIC AND POLICY MAKERS CAN INCORPORATE THIS
6 INFORMATION AND PRODUCTS INTO THEIR DECISIONS.

7 NOAA SCIENTISTS WORK WORLDWIDE TO OBSERVE
8 CHANGES IN THE GLOBAL CLIMATE SYSTEM; UNDERSTAND HOW
9 NATURAL AND HUMAN-RELATED ATMOSPHERIC AND OCEANIC
10 PROCESSES AFFECT CARBON DIOXIDE AND OTHER GREENHOUSE
11 GASSES; PREDICT, USING ADVANCED EARTH SYSTEMS MODELS,
12 HOW THESE PROCESSES MAY IMPACT CLIMATE CHANGE
13 PROJECTIONS; PROVIDE NEW INFORMATION ON HOW
14 ATMOSPHERIC COMPONENTS SUCH AS FINE-PARTICLE AEROSOLS
15 AND OZONE ALTER THE GLOBAL ENERGY BALANCE, AND FORCE
16 THE CLIMATE TO CHANGE; AND FINALLY, ALSO UNDERSTAND
17 AND PREDICT THE CONSEQUENCES OF CLIMATE VARIABILITY
18 AND CHANGE ON MARINE ECOSYSTEMS.

19 AS A RESULT OF ITS LEADERSHIP IN CLIMATE
20 SCIENCE, NOAA PLAYS A KEY ROLE IN U.S. CLIMATE CHANGE
21 SCIENCE PROGRAM, OR CCSP. FOR THOSE THAT DO NOT
22 KNOW, THE CCSP IS THE PRIMARY MECHANISM THAT
23 INTEGRATES THE ACTIVITIES AND PRIORITIZES CLIMATE
24 CHANGE RESEARCH PROGRAMS AND EXPENDITURES FOR THE
25 U.S. GOVERNMENT. THE CCSP IS COMPOSED OF 13 FEDERAL

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1 DEPARTMENTS, AGENCIES, AND WHITE HOUSE OFFICES, AND
2 LEVERAGES OVER \$1.5 BILLION ACROSS THE PARTICIPATING
3 AGENCIES. I THINK IT WOULD ALSO BE APPROPRIATE TO
4 RECOGNIZE THE CCSP RECENTLY RELEASED THE STATE OF THE
5 CARBON CYCLE REPORT, WHICH IS THE FIRST CARBON BUDGET
6 ESTIMATED FOR NORTH AMERICA. I KNOW THAT MANY OF YOU
7 ATTENDING THE CONFERENCE TODAY PARTICIPATED IN THIS
8 REPORT. IT IS AN OUTSTANDING ACHIEVEMENT AND
9 DESERVES RECOGNITION AS WE CELEBRATE THE 50TH
10 ANNIVERSARY OF THE CARBON DIOXIDE RECORD.

11 NOAA IS ALSO A PARTICIPATING AGENCY IN
12 INTERNATIONAL, NATIONAL, AND REGIONAL ACTIVITIES,
13 INCLUDING THE INTERGOVERNMENTAL PANEL ON CLIMATE
14 CHANGE, THE IPCC. AS MY FELLOW SPEAKERS HAVE
15 MENTIONED, THE IPCC'S "EFFORTS TO BUILD UP AND
16 DISSEMINATE GREATER KNOWLEDGE ABOUT ANTHROPOGENIC
17 CLIMATE CHANGE AND TO LAY THE FOUNDATIONS FOR THE
18 MEASURES THAT ARE NEEDED TO COUNTERACT SUCH CHANGE"

19 WERE RECOGNIZED THIS FALL WITH THE NOBEL PEACE PRIZE.
20 AND BY THE WAY, THERE WAS JUST A CEREMONY
21 ON MONDAY WITH PRESIDENT BUSH IN THE WHITE HOUSE, AND
22 SUSAN SOLOMON AND A FEW OTHERS FROM NOAA, I THINK,
23 WERE THERE FOR THAT CEREMONY TO RECOGNIZE SUCH A
24 GREAT ACHIEVEMENT.

25 MORE THAN 150 SCIENTISTS HAVE CONTRIBUTED
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1 TO THE IPCC'S EFFORTS OVER THE LAST 20 YEARS. AS YOU
2 CAN SEE, DR. SPINRAD MENTIONED 120 SCIENTISTS FROM
3 NOAA ALONE. WE NOW HAVE 150 TOTAL. I THINK THE
4 FIGURE MIGHT HAVE BEEN INCREASED IN THE LAST TEN
5 MINUTES. THERE'S A LOT OF PEOPLE INVOLVED IN THIS.
6 WE STILL HAVE MORE COMING ON AS WE GO ON.

7 WE'VE HEARD THIS BEFORE, BUT IT BEARS
8 REPEATING: THE IPCC FOURTH ASSESSMENT REPORT TELLS
9 US, WITH SOME OF THE STRONGEST STATEMENTS ON RECORD:
10 THAT WARMING OF THE CLIMATE SYSTEM IS
11 UNEQUIVOCAL;

12 MOST OF THE OBSERVED INCREASE IN
13 GLOBALLY-AVERAGED TEMPERATURES SINCE THE MID 20TH
14 CENTURY IS VERY LIKELY DUE TO THE OBSERVED INCREASE
15 IN ANTHROPOGENIC GREENHOUSE GAS CONCENTRATIONS;
16 AND CARBON DIOXIDE IS THE MOST IMPORTANT
17 ANTHROPOGENIC GREENHOUSE GAS.

18 AT NOAA WE CONTINUE TO EXAMINE HOW WE
19 CONDUCT OUR SCIENCE AND MAKE OBSERVATIONS TO ENSURE
20 SOCIETY HAS SCIENTIFICALLY SOUND INFORMATION TO
21 ADDRESS ISSUES SUCH AS GLOBAL CLIMATE CHANGE.
22 MITIGATION STRATEGIES TO REDUCE CARBON DIOXIDE AND
23 OTHER GREENHOUSE GAS EMISSIONS ARE CURRENTLY BEING
24 DEBATED, BUT THERE IS NOT DEBATE THAT OBSERVATIONS
25 AND SOUND SCIENCE WILL ALWAYS BE NEEDED TO NOT ONLY

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1 INFORM POLICY DECISIONS BUT ALSO TO UNDERSTAND HOW
2 EFFECTIVE OUR POLICIES ARE WORKING. NOAA AND THE
3 SCIENTIFIC COMMUNITY CONSISTENTLY AIM TO SERVE AS
4 HONEST BROKERS, PROVIDING RELIABLE INFORMATION AND
5 SOUND ASSESSMENTS.

6 I WANT TO ACKNOWLEDGE THAT THIS IS A BIG
7 WEEK FOR EARTH OBSERVATIONS. IN ADDITION TO THIS
8 CONFERENCE, MY BOSS, VICE ADMIRAL CONRAD
9 LAUTENBACHER, NOAA'S ADMINISTRATOR, IS ATTENDING THE
10 GROUP ON EARTH OBSERVATIONS' FOURTH SUMMIT IN
11 CAPE TOWN, SOUTH AFRICA. AS MANY OF YOU KNOW, THE
12 GROUP ON EARTH OBSERVATIONS, OR GEO, IS COORDINATING
13 EFFORTS TO BUILD THE GLOBAL EARTH OBSERVATION SYSTEM
14 OF SYSTEMS, OR GEOSS.

15 THROUGH GEO, NOAA WORKS WITH ITS FEDERAL
16 PARTNERS, MORE THAN 60 COUNTRIES, AND THE EUROPEAN
17 COMMISSION TO DEVELOP A GLOBAL MONITORING NETWORK
18 LIKE GEOSS THAT IS AS INTEGRATED AS THE PLANET IT
19 OBSERVES, PREDICTS, AND PROTECTS. GEO HAS
20 IDENTIFIED TEN SOCIETAL BENEFIT AREAS, ONE OF WHICH
21 IS ASSESSING, PREDICTING, AND ADAPTING TO CLIMATE
22 VARIABILITY AND CHANGE. THE ULTIMATE GOAL IS TO
23 PROVIDE THE RIGHT INFORMATION, IN THE RIGHT FORMAT,

24 AT THE RIGHT TIME, TO THE RIGHT PEOPLE, TO MAKE THE
25 RIGHT DECISIONS.

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1 BECAUSE OF THE CARBON DIOXIDE RECORD, WE
2 NOW UNDERSTAND HOW WE ARE CHANGING THE NATURAL
3 CLIMATE, AND THAT PROFOUND REALIZATION IS INFLUENCING
4 IMPORTANT DECISIONS ABOUT ENERGY ALTERNATIVES, LAND
5 USE, TRANSPORTATION, AND OTHER BEHAVIORS THAT WILL
6 SHAPE THE FUTURE FOR GENERATIONS.

7 THIS CONFERENCE IS AN OPPORTUNITY FOR OPEN,
8 STRAIGHTFORWARD DIALOGUE AMONGST SEVERAL SECTORS OF
9 SOCIETY, BUSINESS, POLICY, AND SCIENCE, AND REGIONAL,
10 NATIONAL, AND INTERNATIONAL INTERESTS AND BODIES.

11 I LOOK FORWARD TO HEARING MORE ABOUT THE
12 EFFORTS BEING MADE TO MANAGE CARBON DIOXIDE TODAY AND
13 WHAT EFFORTS ARE LIKELY FOR THE FUTURE AND WHAT
14 RESEARCH WILL BE NEEDED TO SUPPORT THEM.

15 THANK YOU. MAHALO.