

Climate Justice Panel

October 8, 2014

10:00 am – 11:00 am

Moderator: Donald Ellisburg

Defining Climate Justice and its Impacts on Worker Health

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Executive Director

Deep South Center for Environmental Justice

cli • mate change

noun

- Sometimes referred to as **Global Warming**
- Defined in the Fourth Assessment Project as:
 - *a change in the state of the climate that can be identified by changes in the mean and/or variability of its properties, that persists for an extended period.*

IPCC Projections

The IPCC projects:

- the average increases in temperature and the concomitant increased concentrations of atmospheric CO₂
- will result in major alterations in the structure of ecosystems and in ecological interactions
- to the detriment of biodiversity and ecosystem-related goods and services
- and major environmental variations

Earthquake in Haiti 2010

A massive earthquake struck Haiti on Jan. 12 , 2010 killing more than 200,000 people and leveling 38% of the capital of Port-au-Prince. The magnitude 7.0 quake , the most powerful to hit Haiti in a century, was felt strongly in eastern Cuba, more than 200 miles away.



http://articles.cnn.com/2010-01-12/world/haiti.earthquake_1_earthquake-haiti-2010-peacekeeping-mission-president-rene-preval-haiti?_s=PM:WORLD

<http://www.cbc.ca/news/world/story/2010/02/27/chile-earthquake.html>

Flooding in France

2010

•On June 16, 2010, an Atlantic storm that killed at least 47 people on the western coast of France was declared a national disaster.

•According to Meteo France, the national forecaster, the region had not seen such floods since 1827.



The same storm also hit the western coasts of Portugal and Spain, then moved towards Germany, Belgium and the Netherlands.

green • house gas

noun

- a gas that contributes to the greenhouse effect by absorbing infrared radiation, e.g., carbon dioxide and chlorofluorocarbons.
- Greenhouse gases trap heat and make the planet warmer.
- Human activities are responsible for almost all of the increased levels of greenhouse gases in the atmosphere over the last 150 years.

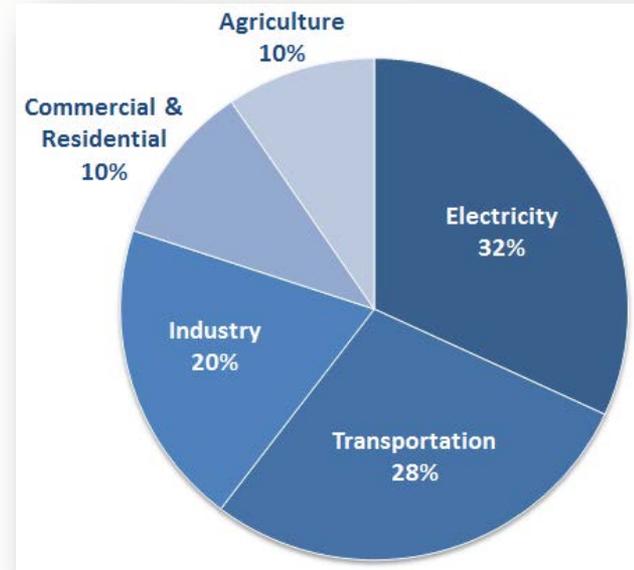
The Greenhouse Effect
The trapping of the sun's warmth in a planet's lower atmosphere due to the greater transparency of the atmosphere to visible radiation from the sun than to infrared radiation emitted from the planet's surface.

Overview of US Greenhouse Gases

US Greenhouse Gases 2012

- The largest source of greenhouse gas emissions in the United States is the burning of fossil fuels for electricity, heat and transportation.
- In 2012, US greenhouse gas emissions decreased compared to 2011 levels
- Why?
 - A decrease in carbon intensity of fuel consumed to generate electricity
 - A decrease in coal consumption
 - An increase in natural gas consumption and the use of hydro power

Total US Greenhouse Gas Emissions
by Economic Sector



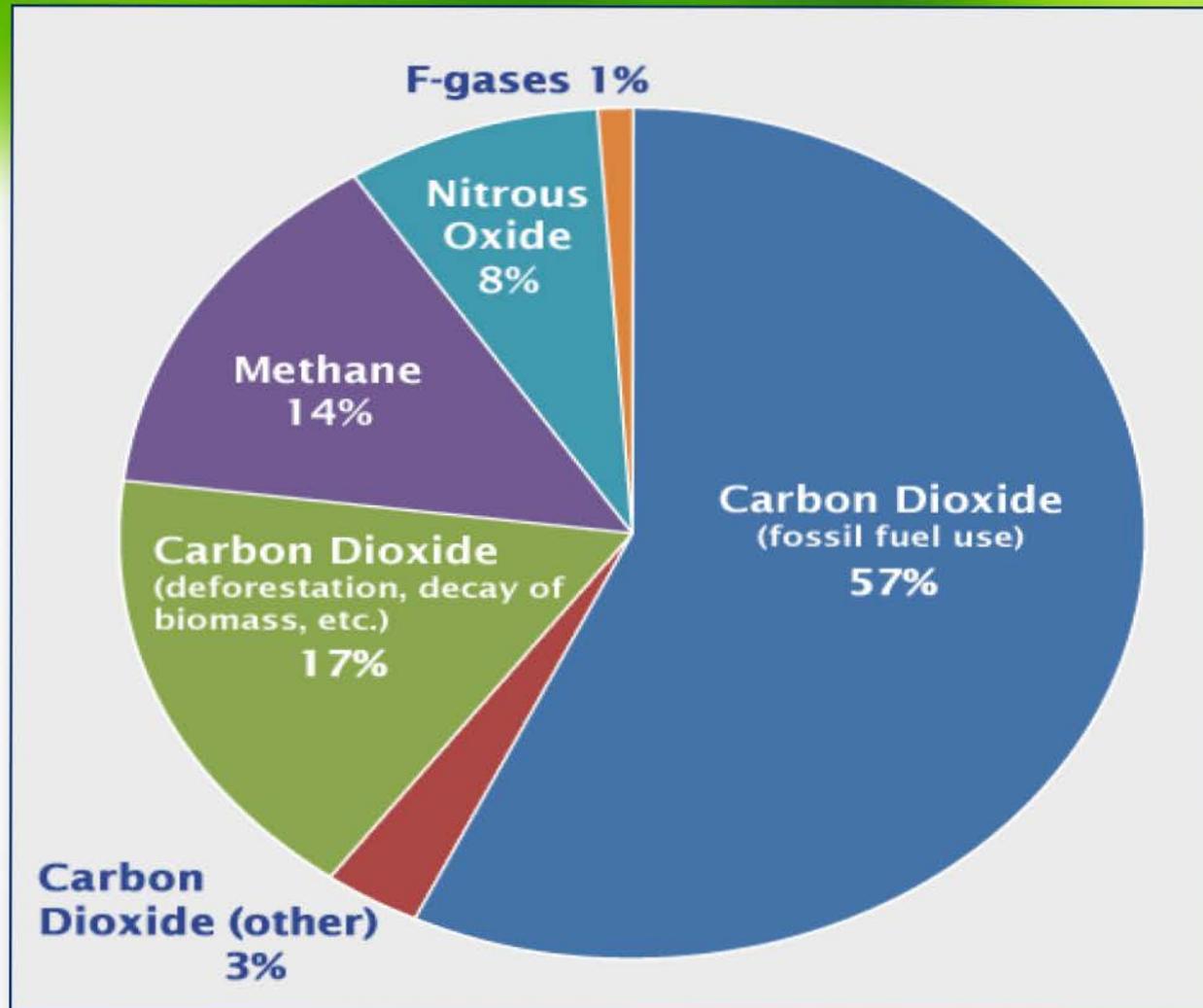
Source: *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012*

Greenhouse Gases Tied to Human Activity

Key greenhouse gases emitted due to human activities:

- **Carbon dioxide (CO₂)**
 - Fossil fuel use is the primary producer
- **Methane (CH₄)**
 - Agricultural activities, waste management and energy consumption are major producers
- **Nitrous oxide (N₂O)**
 - Agricultural products such as fertilizer is a major producer
- **Fluorinated gases (F)**
 - Industrial processes, refrigeration and the use of products which include:
 - Hydrocarbons, perfluorocarbons and sulfur hexafluoride
- **Black Carbon (BC)**
 - A solid particle or aerosol which contributes to warming the planet

Global Greenhouse Gas Emissions by Gas



Source: [IPCC \(2007\)](#); based on global emissions from 2004. Details about the sources included in these estimates can be found in the [Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change](#).

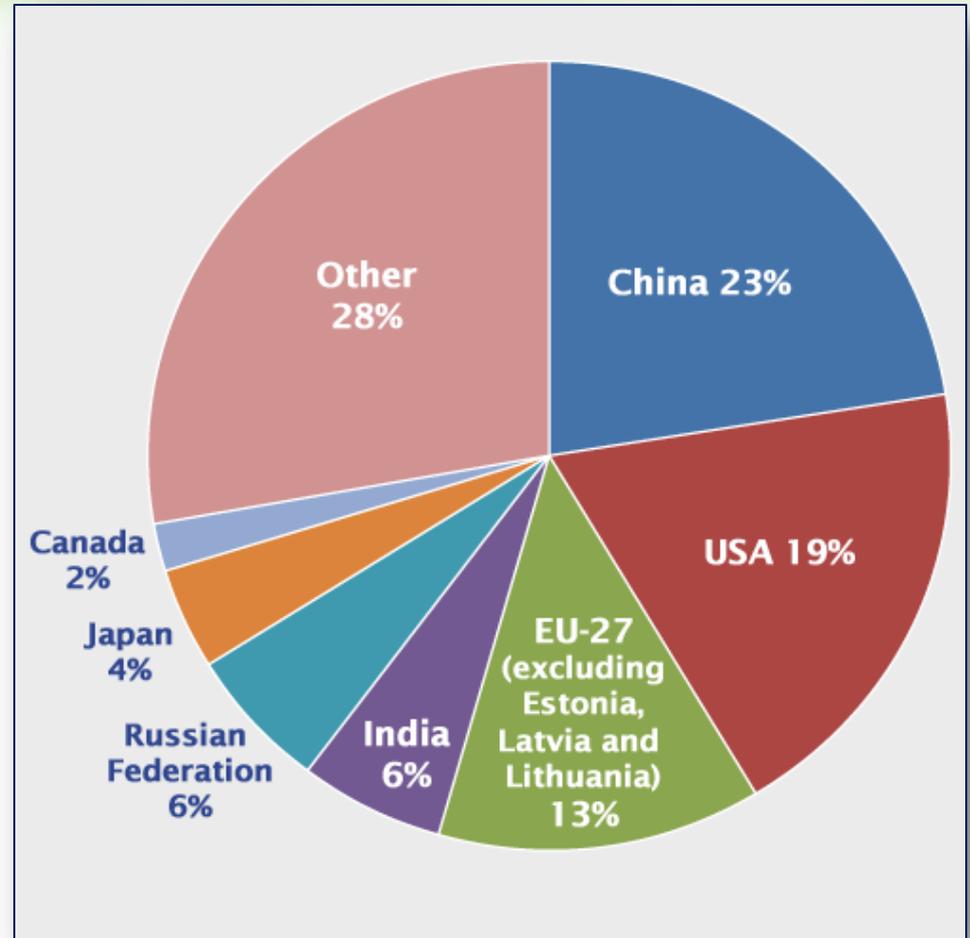
Greenhouse Gases

A Global Challenge

2008 Global CO₂ Emissions

from Fossil Fuel Combustion & Some Industrial Processes

- Developed countries and major emerging economies lead the world in total CO₂ emissions
- These uneven contributions to the climate change problem are at the core of the challenges the world community must face in finding effective and equitable solutions



Source: [National CO₂ Emissions from Fossil-Fuel Burning, Cement Manufacture, and Gas Flaring: 1751-2008](#).

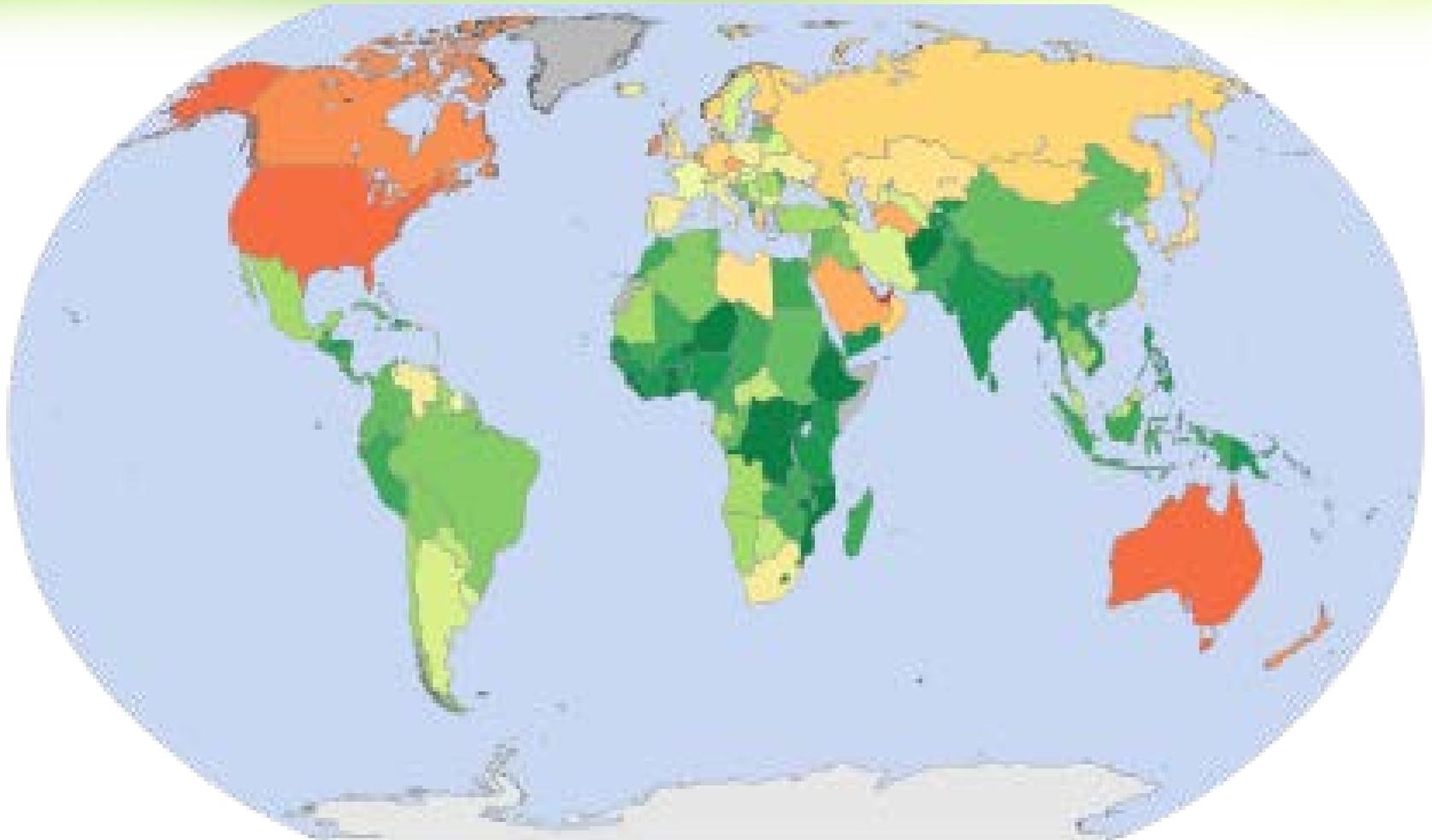
An Inequitable Result

While most of the dangerous gases that have built up in the atmosphere over the years may have come from the global North, it is the countries in the global South that bear the burdens of climate change resulting from the build up.

Countries Producing Greenhouse Gases

per capita emissions in 2000

not including land – use change



No data

0

54.7 tons CO2 per capita

Environmental Refugees

Climate Change Consequences

An Unfortunate Consequence of Climate Change...

Environmental Refugees

People who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption that jeopardizes their existence and/or seriously effects the quality of their life"



Faces of climate change



Environmental Refugees

In recent years, global climate change and desertification have threatened the livelihoods of many people, causing them to leave home in search of new means of sustaining themselves and their families.

50 Million by 2020



As of 1995, the last year in which a thorough assessment was undertaken, the number of environmental refugees was recorded at 25 million people.

That number is expected to double by 2020.



The Sad Truth in Numbers...

In 2012

- 32.4 million people were displaced by environmental disasters
- 98% of this displacement was caused by weather related disasters, particularly flooding
- Desertification affects between 100 and 200 million people worldwide
- In Northern Africa, the region most affected by climate change, an additional 50 million people may be displaced

When global climate change takes hold...

There could be as many as 200 million people overtaken by:

- **disruptions such as monsoon systems and other rainfall regimes**
- **droughts of unprecedented severity and duration**
- **sea level rising and coastal flooding**

Norman Meyers, Environmental Mitigation Expert

The Devastating Effects of Climate Change

The Islands of Kiribati

- The island where 94,000 inhabitants reside may be totally submerged in water by 2070
- A gradual resettlement program relocating citizens to neighboring New Zealand is taking place

Bangladesh, India

- Rising sea levels and resulting floods have caused people to flee across the border into neighboring India

Sudan

- Droughts have reduced sources of water for consumption and traditional agriculture
- Conflicts over limited resources abound



in Kiribati, engineers and scientists are attempting to come up with ways to support a growing population on less land known as "Lily pad," a floating Ecopolis for climate change refugees.



Climate change not only threatens the coast but also the inland communities of Bangladesh.



Disruptions in rainfall or other temperature-driven phenomena contribute to dangerous instability due to crop failures or other phenomena in Sudan.

Climate Change Related Migration

- Causes a number of political, military and economic problems for communities to which refugees flee, the surrounding area and the international community
- Countries from which refugees flee are likely to demand compensation from countries believed to have created the problem

Is this Climate Justice?

Climate Justice

- Climate justice is generally used as a term for viewing climate change as an ethical issue and considering how its causes and effects relate to concepts of justice, particularly environmental justice and social justice.
- This can mean examining issues such as equality, human rights, collective rights and historical responsibility in relation to climate change.
- Recognizing and addressing the fact that those least responsible for climate change experience its greatest impacts is seen by many as being central to climate justice.
- The term is also used with reference to legal systems, where justice is achieved through application and development of law in the area of climate change.

Climate Change Impacts

On Occupational Safety and Health

Impacts of Climate Change on Occupational Safety and Health

- **The impacts of climate change on public health, the environment and human activities are relatively well documented.**
- **This is not the case for its impacts on workers and work environments.**

7 Climate Related Global Hazards for Workers

Although the literature is scarce on the subject, the Schulte and Chun study of 2009 identifies seven climate related global hazards for workers:

1. Increased ambient temperature
2. Air pollution
3. Exposure to ultraviolet radiation
4. Extreme weather events
5. Communicable vector-borne diseases
6. Industrial transitions and emerging industries
7. Changes in the built environment

Contexts

↑ Greenhouse gas (GHG) emissions

Energy policies

Local conditions and socio-economic circumstances

Urbanization/ Deforestation

CLIMATE CHANGE

Hazards/Exposures

Environmental changes

↑ Ambient temperature

↑ Air pollution

↑ UV radiation

↑ Extreme weather events

↑ Vector-borne diseases & expanded vector habitats

↓
↑ Hot days

↓
↑ Greater exposure to ozone, airborne particles, and volatile organic compounds

↓
Pulmonary toxicants

↓

↓
↑ Clean-up activities

↓
Plants/Insects
↓
Pathogens, moulds, and allergens

Changes in the industrial and built environments

Emerging industries

Changes in the built environment

↓
Job insecurity

↓
New hazard scenarios

↓
More tight buildings

↓
↑ Exposure to radon

Occupational Health Effects

↓
Heat stress and thermal constraints
↓
Fatigue

↓
Cardiovascular/respiratory problems and diseases

↓
Skin cancer

↓
Immune system dysfunction

↓
Eye effects

↓
Mental stress

↓
Traumatic injuries

↓
Death

↓
Infectious diseases

↓
Dermatitis

↓
Allergies/ Asthma

↓
Mental stress
↓
Musculoskeletal disorders

↓
Cardiovascular disease
↓
Emerging, still-unknown effects

↓
↑ Lung cancer
↓
Tight building syndrome

Figure 1 – Conceptual framework of the relationship between climate change and occupational safety and health (adapted from Schulte and Chun, 2009).

Schulte and Chun 2009

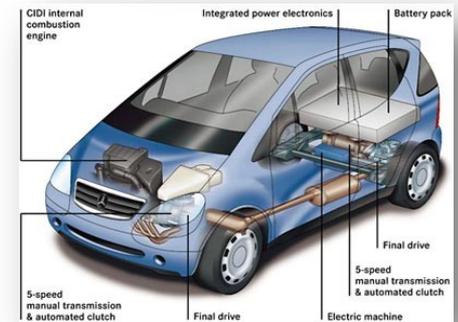
Climate change may increase the prevalence, distribution and severity of known occupational hazards, but there is no evidence that it will lead to unique or previously unknown hazards.

Transition to a Greener Economy Is Necessary

Climate change discourse recommends transitioning to a greener economy:

- clean energy
- hybrid cars
- energy efficient buildings,
- green jobs

as a solution to the dual realities of climate change and economic stagnation.



The Transition Has Already Begun...

In 2010, more than \$211 billion was invested in renewable energies

More than was invested in fossil fuels

More solar was installed, up 130% from 2009

Photovoltaic (PV) installations are expected to rise taking global capacity to 50GW, the equivalent of nearly 15 nuclear reactors.

Achim Steiner, "Toward a Green Economy,"
The Mercury November 28, 2011



Reducing Greenhouse Gases

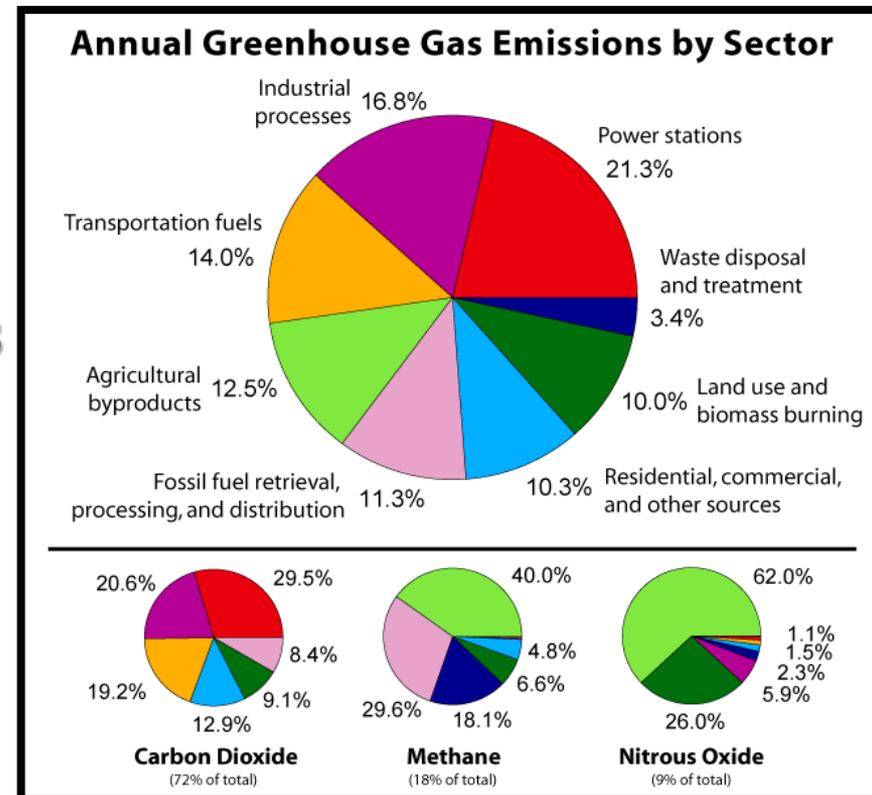
Currently, there are 60 regional and local governments taking significant action in reducing greenhouse gases

For example

Quebec, Canada

Sao Paulo, Brazil

are attempting cuts of 20% below 1990 levels by 2020.



Renewable Energy: A Job Creator

The transition to renewable energy will create green economy jobs:

There are 1.3 billion unemployed and underemployed people worldwide

½ billion young people will join the workforce over the next decade.

Green Economy Map
Industries and Sectors within the Green Economy



Achim Steiner, "Toward a Green Economy," *The Mercury* November 28, 2011

<http://greenbydesignhawaii.wordpress.com/2011/01/04/state-ends-year-optimistic-about-green-job-growth/>

For Example...

Employment from renewable energy jobs in Germany is predicted to rise to between 500 and 600 thousand jobs

China's renewable energy job target for 2020 is to create 800 thousand in the field of solar energy alone.



One Solution: Job Creation



Utilizing the transition to a green economy for job training and placement in minority and poor communities to minimize the impacts of climate change and level the playing field for opportunities is one way to ensure that the transition is equitable.

**Post Katrina
52% of African
American
males are
unemployed**

A Louisiana Solution...



Coastal Protection and Restoration Authority (CRPA)

Responsible for:

**Oversight of levee districts
in the Louisiana Coastal Zone**

**Dispersal of funding from the
Louisiana Coastal Restoration
Trust Fund**

**Used exclusively for wetland
restoration and hurricane
protection projects**

2010 Louisiana Barrier Island Plan

- **Designed to protect Louisiana coastal islands from the oil spilled from the Deep Water Horizon well in 2010.**
- **The restoration and protection of the barrier islands represents an opportunity created by the disaster.**

The bigger the disaster...



the bigger the opportunity.

The Coastal Restoration Master Plan

The projects in the plan strike a balance between providing:

- immediate relief to hard hit areas and
- laying groundwork for the large scale efforts that are essential
- to protect communities and sustain the coastal landscape.

The Master Plan will guide the state's coastal investments for the next 50 years.

The aim is to drive effective and targeted action to save the coast.

Master Plan Objectives

Reflect the key issues affecting people in and around Louisiana's coast

Seek to improve flood protection for families and businesses,

Recreate the natural processes that built Louisiana's delta, and

Ensure that the coast continues to be both a Sportsman's Paradise and a hub for commerce and industry.

Flood Protection

Reduce economic losses from storm surge based flooding to residential, public, industrial, and commercial infrastructure.



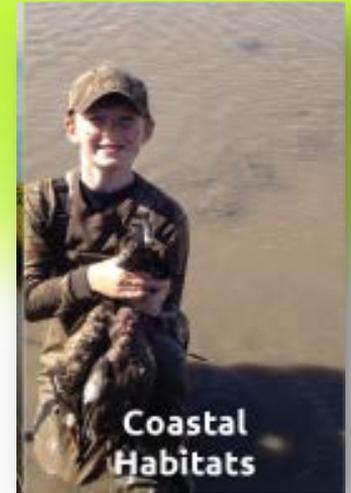
Natural Processes

Promote a sustainable coastal ecosystem by harnessing the natural processes of the system.



Coastal Habitats

Provide habitats suitable to support an array of commercial and recreational activities coast wide.



Cultural Heritage

Sustain, to the extent practicable, the unique cultural heritage of coastal Louisiana by protecting historic properties and traditional living cultures and their ties and relationships to the natural environment.



Working Coast



Promote a viable working coast to support regionally and nationally important businesses and industries.

Benefits of the Master Plan

- Includes a wide variety of project types distributed throughout the coast
- Improves flood protection for every community in coastal Louisiana
- Invests in restoring barrier islands, headlands, and shorelines as first lines of defense against storms
- Reduces future risk of damage from flooding throughout Louisiana's coast by \$5.3 billion to \$18 billion annually

Disaster into Opportunity



Disaster can indeed turn into opportunity.

- **1 in 12 construction jobs in Louisiana results from coastal restoration efforts.**
- **Between 17 and 36 jobs are produced for every million dollars invested.**

Types of Jobs Expected to be Produced

- Coastal engineers
- Geologists
- Boat captains
- Welders
- Equipment operators

However:

Not all jobs needed to protect and restore the coastal islands of Louisiana require a 4 year or professional degree.



Minority Worker Training Programs

**A DSCEJ
Solution...**

DSCEJ Minority Worker Training Program

PREVIOUS TRAINING SITES

Ft. Lauderdale, Florida

Baton Rouge, Louisiana

West Dallas and Houston, Texas

Hattiesburg, Mississippi

Shreveport, Louisiana

Biloxi/Gulfport, Mississippi

Atlanta, Georgia

CURRENT TRAINING SITES

Detroit,
MI
Training
Site

New
Orleans, LA
Training
Site

Houston,
TX
Training
Site

Savannah,
GA
Training
Site

Green vs Just Development

Green Sustainability

- Minimize negative impacts to future generations

Just Sustainability

- Minimize negative impacts to existing vulnerable populations

A Green Economy is Necessary to Help Mitigate the Effects of Climate Change

- The worldwide transition to a low carbon resource efficient green economy must be the goal of humanity for sustainability.
- We must however, ensure that with progress toward a green economy, a major priority of the transition is a just transition for workers and the previously underserved and vulnerable communities to which we strive to bring equity.

Training and Cleanup Efforts

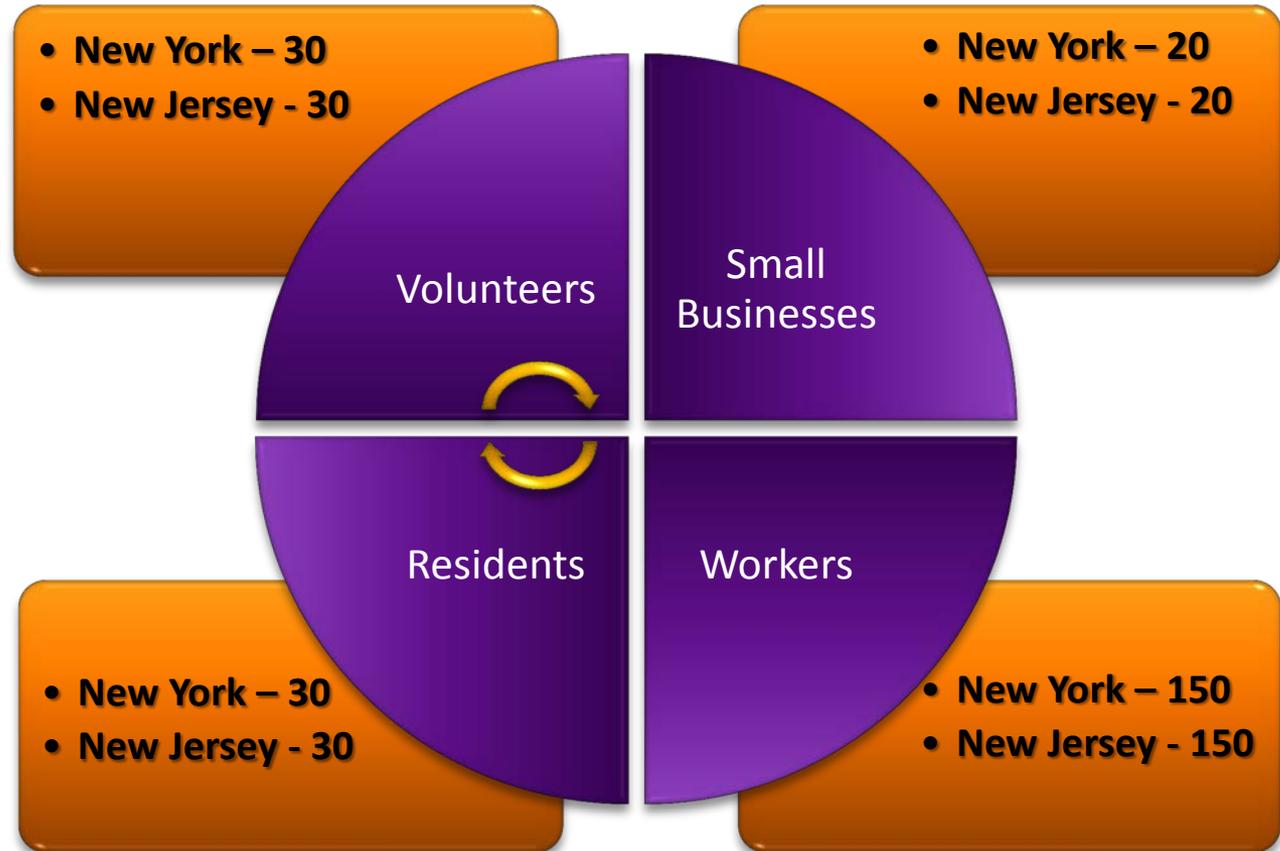
Hurricane Sandy

Training in Harlem, Far Rockaway, NY and Newark, NJ

**In total, 367
individuals
were trained
during thus far
in our work
with the
communities
devastated by
Hurricane Sandy**



New York and New Jersey Training Population



**Small
Businesses
Volunteers
Residents
Minority and
Immigrant
Workers**

HBCU Climate Change Initiative

HBCU Climate Change Initiative:

Growing HBCU Voices on Climate Change

Organizes students around activities to promote:

environmental awareness and innovative solutions for sustainable and healthy living.

Activities focus on climate change and global warming, green chemistry, clean production, green jobs and careers, food security, recycling, carbon foot printing and energy audits for greening campuses.

HBCU Climate Change Initiative

Activities

COP 17 – Durban, South Africa

December 2011



A delegation of 12 including 6 students from HBCUs travelled to Durban, South Africa to participate as delegates at the United Nations Climate Summit (COP17) Nov. 28-Dec. 9, 2011.

A Global Warming Climate Justice training was held at Dillard University on Nov. 18th and 19th of 2011 to prepare the delegates for the Summit.



RIO+20 United Nations Conference

The DSCEJ took a delegation of 6 to Rio De Janeiro, Brazil in June of 2012 for the United Nations Conference addressing environmental and sustainability issues using a global framework.

Our student delegates from Dillard University and Texas Southern University gained valuable world experience during their participation in its events.

Their participation serves as a stepping stone to providing a legacy for those who will follow in their footsteps.



2013, 2014 & 2015



HBCU Student Climate Change Conference

Purpose of the Conference

To educate minority students on climate change theory and experience as it relates to racial, social, public health, and economic disparities in the wake of weather related disasters.

11 HBCU's Participated

The following HBCU's participated in either or both the 2013 and 2014 conferences:

1. Dillard University
2. Florida A & M University
3. Grambling State University
4. Howard University
5. Meharry Medical College
6. Morgan State University
7. Savannah State University
8. Southern University Baton Rouge
9. Spelman College
10. Tennessee State University
11. Texas Southern University

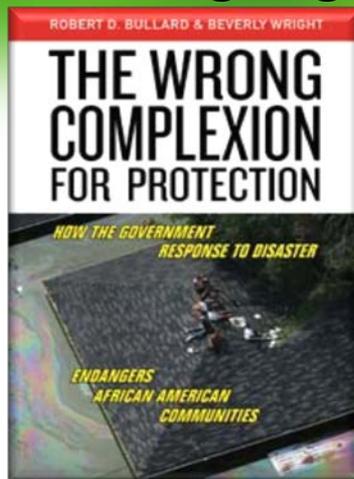
A graduate of Tennessee State University studying at Vanderbilt University also participated in 2014.

2013 Conference Activities

HBCU Student



Book Signing



STEM Student Sessions

Poster Session



Keynote Speakers

Plaquemines Parish



Toxic Tour

Roundtable



Experts

Damu Smith



Award

2014 Conference Activities

HBCU Student



Poster Presentations

Webinars



Keynote Speakers



Lower 9th Ward



Community Tour

Expert



Presentations

Student



Panels

Damu Smith

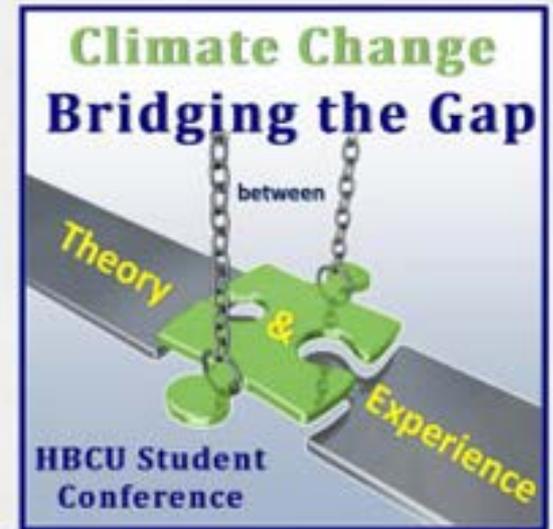


Award

Save the Date...

DILLARD UNIVERSITY
DEEP SOUTH CENTER FOR ENVIRONMENTAL JUSTICE
Presents

3rd Annual HBCU Student Climate Change Conference



March 26 – 28, 2015

To be held at



2601 GENTILLY BLVD.
NEW ORLEANS, LA 70122

For more information visit www.dscej.org or email us at
mwilliams@dillard.edu



Featuring
National Expert Panelists
Student Poster Sessions
Coastal Community Tour

Co-sponsored by



and



Join us for this exciting conference

September 21, 2014

The People's Climate March

The People's Climate March

Over 400,000 people gathered for the People's Climate March on Sunday, September 21, 2014 to send a message to the world that now is the time for our nation to take responsibility in reducing greenhouse gas emissions.



HBCU Students Engaged

PEOPLE'S
CLIMATE
MARCH

- HBCU Climate Change Initiative student and faculty delegation
- 105 representatives from:
 - Dillard University,
 - Florida A & M University,
 - Grambling State University,
 - Howard University
 - Lincoln University
 - Southern University Baton Rouge
 - Spelman College
 - Tennessee State University
 - Texas Southern University and
 - Xavier University of Louisiana.



***Learn More
About the Work of
The Deep South Center
for Environmental
Justice***

Two Must Reads

from Westview Press

RACE, PLACE, AND ENVIRONMENTAL JUSTICE AFTER HURRICANE KATRINA

Struggles to Reclaim, Rebuild, and Revitalize New Orleans and the Gulf Coast



FOREWORD BY MARC H. MORIAL

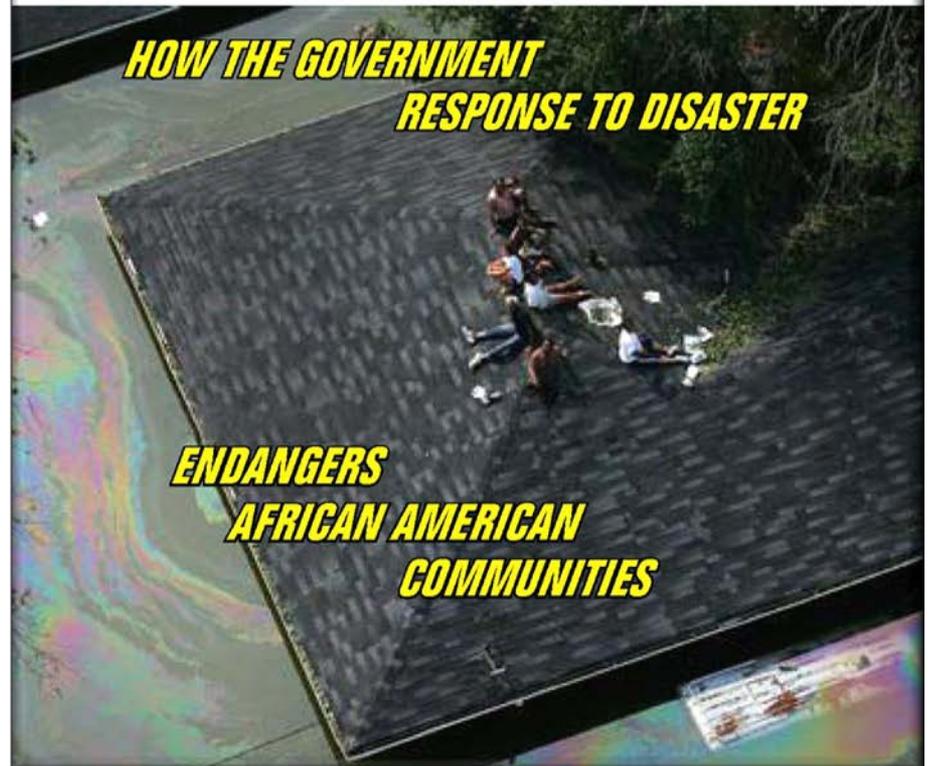
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ROBERT D. BULLARD & BEVERLY WRIGHT

THE WRONG COMPLEXION FOR PROTECTION

*HOW THE GOVERNMENT
RESPONSE TO DISASTER*

*ENDANGERS
AFRICAN AMERICAN
COMMUNITIES*



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