The Environment and Health

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Objectives

- Environmental impacts on health
  - Educational
  - Socioeconomic
  - Behavioral
  - Mental
  - Physical
  - Spiritual

- Environmental Racism
- Environmental Justice
- Raising
  - consciousness
  - attitude
  - Action/behavior
  - Advocacy and activism
Environmentalism

- Genesis in the 1890’s
  - a progressive conservative movement
  - concerned with
  - leisure,
    - recreation,
    - wildlife and wilderness preservation,
    - resource conservation,
    - pollution abatement and
    - industry regulation
Environment

- Holistically
  - comprised of nature and its elements as well as socio-emotional, economic and physical attributes
- Nature prompts reverence and gratitude to God
- Includes where people live, work, play, go to school and place of worship,
- as well as how these things interact with the physical and natural world
Why should we look at the Environment and Health

- Health and well-being disproportionately threatened at
  - home,
  - work,
  - places of worship,
  - school,
  - and play
Why should we look at the Environment and Health

- Quality of life
- Years of healthy life
- “Globally, 23% of all deaths and 26% of deaths among children under age 5 are due to preventable environmental factors.”

“The World Health Organization (WHO) defines environment, as it relates to health, as “all the physical, chemical, and biological factors external to a person, and all the related behaviors.”

Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment.”
6 themes - Healthy People 2020 Environmental Health objectives

- Outdoor air quality
- Surface and ground water quality
- Toxic substances and hazardous wastes
- Homes and communities
- Infrastructure and surveillance
- Global environmental health

Outdoor Air Quality

- Linked to
- premature death
- Cancer
- Long-term damage to respiratory and CV disease
Number of Days Reaching "Unhealthy for Sensitive Groups" Level or Above on the Air Quality Index (Among 35 Major U.S. Cities for Ozone and PM$_{2.5}$ Combined)

Unhealthy air quality days vary year to year, influenced not only by pollution emissions but also by natural events, such as dust storms and wildfires, and variations in weather.

Air Quality Trends Show Clean Air Progress

Nationally, concentrations of air pollutants have dropped significantly since 1990:

- Carbon Monoxide (CO) 8-Hour, ↓ 78%
- Lead (Pb) 3-Month Average, ↓ 85% (from 2010)
- Nitrogen Dioxide (NO₂) Annual, ↓ 59%
- Nitrogen Dioxide (NO₂) 1-Hour, ↓ 51%
- Ozone (O₃) 8-Hour, ↓ 25%
- Particulate Matter 10 microns (PM₁₀) 24-Hour, ↓ 46%
- Particulate Matter 2.5 microns (PM₂.₅) Annual, ↓ 43% (from 2000)
- Particulate Matter 2.5 microns (PM₂.₅) 24-Hour, ↓ 44% (from 2000)
- Sulfur Dioxide (SO₂) 1-Hour, ↓ 90%
- Numerous air toxics have declined with percentages varying by pollutant

https://gispub.epa.gov/air/trendsreport/2020/#introduction
Six common air pollutants

EPA has established standards for six common air pollutants, which are referred to as “criteria” pollutants.

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen dioxide (NO2)
- Ozone (O3)
- Particulate matter (PM), and
- Sulfur dioxide (SO2)

https://gispub.epa.gov/air/trendsreport/2020/#air_pollution
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Other Issues in Environmental Health

- Climate Change
- Disaster Preparedness
- Nanotechnology
- Built environment
- Exposure to unknown hazards
- Blood levels
Environmental Risk Factor for Developing Type 2 Diabetes

- Walkability,
- air pollution,
- food
- physical activity
- roadways proximity
- Agent Orange
Type 2 Diabetes/Obesity

Some environmental factors associated with an increased risk of type 2 diabetes, insulin resistance, or obesity:

- Nutrition/diet (e.g., sugar)
- Low birth weight
- Pre-term birth
- Rapid early weight gain
- Less breastfeeding
- Stress
- Gut microbiota
- Vitamin D deficiency
- Maternal smoking during pregnancy
- Sleep disorders/shift work
- Air pollution
- Arsenic
- BPA
- Flame retardants
- Heavy metals
- PFCs
- Persistent organic pollutants
- Pesticides
- Phthalates
- Radiation

The strength of evidence varies. See text for details and citations.
Diabetes Control and Complications

A few environmental factors associated with an increased risk of higher blood glucose or complications in people with diabetes:

- Vitamin D deficiency
- Stress
- Viruses
- Diet/nutrition
- Air pollution
- Arsenic
- Heavy metals
- Persistent organic pollutants
- Dioxin

Numerous other factors also influence blood glucose control, such as exercise, hormone levels, etc.

The strength of evidence varies. See text for details and citations.
Environmental movement
Environmental Racism
Environmental Justice
Environmental Movement

- Late 1960’s and early 1970’s emerged from the black community with the Civil Rights Movement
- Concerned with social justice and equity issues
- Called attention to environmental racism and environmental justice
Environmental Racism

Robert Bullard:
“any policy, practice or directive that differentially affects of disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color”

Environmental Justice

Forthright action that assures “fair treatment and meaningful involvement of all people of color regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies”

» Robert D. Bullard
Environmental Racism

Benjamin Chavis

rational discrimination in:

- environmental policymaking
- enforcement of regulations and laws
- deliberate targeting of communities of color for toxic waste disposal and the sitting of polluting industries
- official sanctioning of the life-threatening presence of poisons and pollutants in communities of color
- history of excluding people of color from the mainstream environmental groups, decision-making boards, commissions and regulatory bodies.
Environmental Justice

- Benjamin Chavis
- The First National People of Color Environmental Leadership Summit
  - four-day Summit sponsored by the United Church of Christ’s Commission for Racial Justice
  - October 24th, 1991, almost 30 years ago
Principles of Environmental Justice

WE, THE PEOPLE OF COLOR, gathered together at this multinational People of Color Environmental Leadership Summit, to begin to build a national and international movement of all peoples of color to fight the destruction and taking of our lands and communities, do hereby re-establish our spiritual interdependence to the sacredness of our Mother Earth;

to respect and celebrate each of our cultures, languages and beliefs about the natural world and our roles in healing ourselves; to ensure environmental justice; to promote economic alternatives which would contribute to the development of environmentally safe livelihoods; and, to secure our political, economic and cultural liberation that has been denied for over 500 years of colonization and oppression, resulting in the poisoning of our communities and land and the genocide of our peoples, do affirm and adopt these Principles of Environmental Justice:
1. **Environmental Justice** affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.

2. **Environmental Justice** demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
3. **Environmental Justice** mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.

4. **Environmental Justice** calls for universal protection from nuclear testing and the extraction, production and disposal of toxic/hazardous wastes and poisons that threaten the fundamental right to clean air, land, water, and food.
5. **Environmental Justice** affirms the fundamental right to political, economic, cultural and environmental self-determination of all peoples.

6. **Environmental Justice** demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
7. **Environmental Justice** demands the right to participate as equal partners at every level of decision-making including needs assessment, planning, implementation, enforcement and evaluation.

8. **Environmental Justice** affirms the right of all workers to a safe and healthy work environment, without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.
9. Environmental Justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.

11. **Environmental Justice** must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.

12. **Environmental Justice** affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all to the full range of resources.
13. Environmental Justice calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.

14. Environmental Justice opposes the destructive operations of multi-national corporations.

15. Environmental Justice opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.
16. **Environmental Justice** calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.

17. **Environmental Justice** requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth’s resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations.
We are therefore responsible to and do something about

- Educating about
  - land based environmental threats
  - industrial/commercial-based environmental threats
  - transportation-based air hazards
  - home-based environmental threats
Action

- Move to concrete action
- What are you doing?
- Stewardship
- Advocacy
Black Church Food Security Network

https://blackchurchfoodsecurity.net/
AME Health Gardens and Black Church Food Security Net Initiative
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Bro. Stan Smith from Thomaston, Ga. and Sis. Lashawndra Robinson in Augusta, Ga., New Members to BCFN, ready to Get Started.