

Introduction to Environmental Justice

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(Key concepts, history, principles, and current challenges)

1. What Is Environmental Justice (EJ)?

Element	Description
Definition	The fair treatment and meaningful involvement of all people—regardless of race, income, nationality, or education—in the development, implementation, and enforcement of environmental policies.
Core Idea	No group should bear a disproportionate share of environmental harms (pollution, toxic waste, climate impacts) or be denied access to environmental benefits (clean air, water, green space).
Scope	Includes air and water quality, hazardous waste, land use, climate change, food safety, and access to natural resources.

2. Historical Foundations

Time Period	Milestones
1970s – Early Awareness	<i>Silent Spring</i> (1962) sparks modern environmental movement; focus initially on conservation rather than equity.
1982 – First Formal Use	“Environmental Justice” appears in a U.S. EPA report on “Environmental Equity”.
1987 – <i>United Church of Christ</i> Study	“Toxic Wastes and Race” reveals that minority communities host a higher density of hazardous waste sites.
1991 – EPA’s EJ Program	Creation of the Office of Environmental Justice; launch of the “Environmental Justice Screening and Mapping Tool” (EJSM).
1994 – <i>Bhopal Disaster</i> (India)	Global attention to how vulnerable populations suffer most from industrial accidents.
1999 – <i>Rio Declaration</i> (UN)	Principle 10 emphasizes participation of all peoples in environmental decision-making.
2000s – Climate Justice	Integration of EJ into climate policy (e.g., IPCC reports highlight disproportionate impacts on low-income nations).

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Time Period

Milestones

2010s – Global Movements

Fridays for Future, Standing Rock, and #StopEJ campaigns broaden EJ to climate and indigenous rights.

3. Fundamental Principles

1. **Equity** – Equal protection from environmental hazards and equal access to environmental benefits.
 2. **Participation** – Affected communities must have a voice in decision-making (early, meaningful, and transparent).
 3. **Precaution** – When scientific uncertainty exists, err on the side of protecting vulnerable groups.
 4. **Accountability** – Polluters and policymakers are responsible for preventing and remedying injustices.
 5. **Sustainability** – Solutions should meet present needs without compromising future generations, especially marginalized ones.
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4. Key Concepts & Tools

Concept	Explanation
Disproportionate Impact	Statistical overrepresentation of certain groups (by race, income, etc.) in exposure to pollutants or climate risks.
Cumulative Risk Assessment	Evaluates combined effects of multiple stressors (chemical, social, economic) on a community.
Environmental Justice Mapping	GIS-based tools (e.g., EPA EJSCREEN, CalEnviroScreen) visualize hazard hotspots and demographic data.
Community-Based Participatory Research (CBPR)	Residents collaborate with scientists to design and conduct studies that reflect local concerns.
Just Transition	Policies that shift to low-carbon economies while safeguarding jobs and livelihoods of workers in high-pollution sectors.

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5. Major Environmental Justice Issues

Issue	Typical Disproportionate Impacts
Air Pollution	Higher rates of asthma, cardiovascular disease in low