Climate Change: People, Planet & The Developing World

Overview

Climate change is a profound multiplier of existing vulnerabilities. While driven predominantly by the historical emissions of industrialized nations, its most severe impacts are felt in **Developing Countries**, which have the least capacity to adapt. **Uganda** exemplifies this injustice: a minimal contributor to global greenhouse gases, yet facing acute threats to its people, economy, and natural resources from a changing climate.

The Global Context: Disproportionate Impact on Developing Nations

- **Historical Inequity**: Least Developed Countries (LDCs) account for less than 4% of cumulative global emissions but suffer the most.
- **Structural Vulnerability**: Heavy reliance on climate-sensitive sectors (rain-fed agriculture, natural resources), high poverty levels, and weak infrastructure limit adaptive capacity.
- **Funding Gap**: Promised climate finance from developed to developing nations ($100 billion/year) has been insufficient and largely as loans, increasing debt burdens.

Uganda: A Case Study in Climate Vulnerability & Resilience

National Profile

- **Emissions**: Contributes <0.1% of global GHG emissions. Per capita emissions 0.13 tons CO_2e (vs. 14.4 tons for USA).
- **Economy**: Heavily dependent on agriculture, which employs 70% of the workforce and contributes 24% of GDP.
- **Key Resources**: The "Pearl of Africa" relies on freshwater from lakes (Victoria, Albert) and rivers (the Nile), and its rich biodiversity.

Observed and Projected Climate Impacts

- **Temperature**: Mean annual temperature has increased by 1.3°C since 1960. Projected to rise further, increasing heat stress.
- **Rainfall**: Patterns have become more erratic - intense, destructive storms alternate with prolonged droughts. Traditional seasonal cycles are disrupted.
- **Water Resources**: Declining water levels in major lakes and rivers due to increased evaporation and variable rainfall, affecting hydropower (a key energy source) and water access.
- **Agriculture & Food Security**: Crop yields (especially for staples like maize, beans, coffee) are declining. Livestock face disease and heat stress. This directly threatens nutrition and incomes.
- **Health**: Increased incidence of malaria (spread to new highland areas), cholera from floods, malnutrition, and heat-related illnesses.
- **Ecosystems & Biodiversity**: Deforestation pressure continues. Wetlands are degrading. Vital ecosystems like the Rwenzori Mountains and Queen Elizabeth National Park are under threat.
- **Human Displacement**: Climate-related disasters (landslides in Bududa, floods in Kasese) are a growing cause of internal displacement and communal conflict over resources.

Uganda's Response: Policy, Adaptation, and Mitigation

National Policy Framework

- **Climate Change Policy (2015)**: Provides overarching direction for mainstreaming climate change into national development.

- **National Adaptation Programme of Action (NAPA) & Nationally Determined Contribution (NDC)**: Outline prioritized adaptation actions (e.g., climate-smart agriculture, water harvesting) and conditional mitigation targets.
- **Third National Development Plan (NDPIII)**: Integrates climate change as a cross-cutting issue.

Key Adaptation Actions (On the Ground)

- **Climate-Smart Agriculture (CSA)**: Promotion of drought-resistant crops (e.g., cassava, millet), agro-forestry, and efficient irrigation.
- **Renewable Energy Expansion**: Growth in solar PV for homes and institutions, and sustainable biomass solutions to reduce deforestation.
- **Ecosystem-Based Adaptation**: Restoration of critical wetlands and forests to enhance natural water regulation and buffer against floods/droughts.
- **Early Warning Systems**: Development of community-based systems for floods and landslides.

Mitigation Contributions (Global Benefit)

- **Afforestation/Reforestation**: Ambitious targets under the Bonn Challenge to restore 2.5 million hectares of degraded land.
- **Renewable Energy**: Hydropower development and investment in solar and geothermal potential.
- **Reducing Emissions from Deforestation and Forest Degradation (REDD+)**: Initiatives to conserve forest carbon stocks.

Challenges and Critical Needs for Uganda & Similar Nations

- **Inadequate Finance**: Accessing international climate funds remains complex and slow. Most adaptation is funded domestically or via project-based donor aid.
- **Technology & Capacity**: Need for improved climate information services, affordable CSA technologies, and technical expertise at local government levels.
- **Mainstreaming vs. Projectization**: Moving from standalone climate projects to fully integrating climate risk into all sectoral planning and budgets.
- **Population & Urbanization Pressure**: Rapid growth exacerbates demand on resources and complicates climate-resilient planning.

Conclusion

Uganda's experience underscores a central truth of the climate crisis: it is a profound injustice that destabilizes the development trajectories of the world's poorest nations. Effective global action requires:

1. **Drastic emissions cuts** by major emitters to keep 1.5°C within reach.
2. **Scaled-up, accessible climate finance** in the form of grants for adaptation and loss & damage.
3. **Support for locally-led adaptation** that empowers Ugandan communities, farmers, and policymakers to build long-term resilience.

Protecting Uganda's people and its rich natural heritage is inseparable from stabilizing the global climate system.