



**Mains Marathon**  
**Compilation**

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## Analyze the significance of promoting cycling in urban planning to achieve sustainable transportation and social equity.

**Introduction:** Contextual Introduction

**Body:** Significance of promoting cycling for sustainable transformation & Social Equity

**Conclusion:** Way forward

In India, viewing cycling solely through the lens of transportation overlooks its profound significance as a catalyst for social justice, distinguishing it from the predominant discourse in the West, which largely revolves around decarbonizing transport. Cycling in India holds transformative potential, transcending mere transportation concerns to deeply impact people's lives in multifaceted ways.

### Sustainable Transformation

- **Reduced Traffic Congestion:** The number of cars on the road is declining as more people choose to ride bicycles. Everyone's travel times are shortened as a result of the improved traffic flow.
- **Reduced Emissions:** Bicycles have no emissions, in contrast to cars, which produce noise and air pollution. The result is a better and cleaner urban environment.
- **Space Efficiency:** When it comes to space, bicycles are far more efficient than cars. This liberates significant space for parks, pedestrian areas, or infrastructure related to public transportation.
- **Benefits for Public Health:** Cycling is a great way to increase cardiovascular health, lower your risk of developing chronic illnesses like diabetes and obesity, and enhance your mental health.

### Social Equity

- **High enrolment in schools:** Data collected on the implementation of bicycle distribution schemes (BDS) in Bihar, Karnataka shows that the BDS is associated with the enrolment of girls in class nine and girls appearing for secondary school certification exams.
- **Increased Women Participation in Work:** Data collected from Bengaluru shows that more women attended the workplace when they were given a bicycle, along with some training in comparison to those who did not afford a bicycle.
- **Accessibility:** Cycling provides a relatively inexpensive and independent mode of transportation. This makes it accessible to a wider range of people, including those who cannot afford cars or rely on public transport with limited reach.
- **Community Building:** Cycling infrastructure like dedicated lanes and bike paths can create safer and more pleasant spaces for people to connect and explore their city.

### Conclusion

It is recommended that state governments consider implementing BDS schemes and broaden their application to include urban areas. Cities should allocate resources toward developing dedicated cycling infrastructure such as cycle lanes, safe parking facilities, and repair centres. The widespread adoption of BDS schemes across various states in India reflects the significant demand for cycling.

## Evaluate the significance of black carbon emissions on environmental health and climate change, with a focus on India's challenges and strategies in reducing emissions from the residential sector.

**Introduction:** Contextual Introduction

**Body:** Impact of black carbon on health, climate change & challenges & strategies to deal with it.

**Conclusion:** Way forward

Black carbon or BC, emitted during incomplete combustion of biomass and fossil fuels, contributes to global warming and health risks. Exposure to black carbon is linked to heart disease, birth complications, and premature death. In India, the majority of black carbon emissions come from burning biomass in traditional cookstoves. According to a 2016 study, the residential sector contributes 47% of India's total black carbon

emissions. Industries contribute a further 22%, diesel vehicles 17%, open burning 12%, and other sources 2%.

### Environmental Health Impacts

- **Air pollution:** One of the main causes of air pollution is black carbon, which can cause cardiovascular illnesses, respiratory issues, and even early mortality. India has some of the world's most polluted cities, and part of the problem is Black Carbon emissions.
- **Reduced Visibility:** Elevated levels of black carbon can cause a major reduction in visibility, which can have an adverse effect on both general quality of life and transportation safety.

### Impact on Climate Change

- **Heating of the Atmosphere:** Black carbon warms the atmosphere by absorbing solar energy, hastening global warming. Even though it doesn't last as long as CO<sub>2</sub>, it has a big immediate impact.
- **Melting of Glaciers:** The deposition of BC on snow and glaciers lowers their reflectivity, or albedo, which speeds up melting. Sea levels are increasing as a result of this, endangering water supplies. A key worry is the effect on the Himalayas, which provide India with a vital supply of water.

### Challenges for India's Residential Sector

- **Burning biomass:** In India, burning solid fuels for cooking and heating, such as firewood and manure, is a major source of BC, especially in rural areas.
- **Brick Kilns:** Due to incomplete coal combustion, traditional brick kilns are one of the main sources of BC emissions.
- **Lack of Knowledge:** Adoption of cleaner techniques may be impeded by a lack of knowledge regarding the health and environmental effects of BC emissions.

### Strategies for Reducing Black Carbon Emissions

- **Promoting Cleaner Cooking Solutions:** Shifting towards cleaner burning LPG stoves and biogas plants can significantly reduce BC emissions from households. Eg, Pradhan Mantri Ujjwala Yojana (PMUY) provides free liquefied petroleum gas (LPG) connections to households below the poverty line. Encouraging local production of coal-bed methane (CBM) gas by composting biomass at the village level, can ensure every rural household access to clean cooking fuel.
- **Public Awareness Campaigns:** Educating the public about the health and environmental consequences of BC and promoting cleaner alternatives is essential.
- **Promoting Cleaner Energy Sources:** Encouraging the use of renewable energy sources like solar power for domestic needs can significantly reduce reliance on solid fuels.

### Conclusion

There is urgent need to prioritise black carbon reduction through initiatives such as the PMUY scheme that can help India become a global leader in addressing regional health concerns and help meet its Sustainability Development Goal of providing affordable clean energy to everyone and contributing to global climate mitigation.

**Evaluate the impact of construction sector growth on urban sustainability in India. Discuss the significance of adopting energy-efficient and sustainable building materials in mitigating environmental degradation. (250 words, 15 marks)**

**Introduction:** Give a brief context to the question

**Body:** Impact of construction sector on climate and significance of energy-efficient solutions

**Conclusion:** Way forward

India is currently experiencing an unparalleled construction surge, erecting more than 300,000 housing units each year. While this growth presents economic prospects and enhances living conditions, it also presents substantial environmental hurdles. The building sector, a significant energy consumer, is responsible for more than 33% of India's electricity consumption, exacerbating environmental degradation and climate change.

### Impact of the sector on urban sustainability in India

- **Degradation of the environment:** Construction uses a lot of resources, which results in deforestation, dust and debris contamination of the air and water, and a rise in CO2 emissions. Construction-related rapid urbanization causes habitat loss, changes in land use, and greater strain on natural resources and infrastructure.
- **Waste generation:** Waste from construction and demolition overwhelms landfills and puts pressure on waste management systems.
- **Increase Carbon Emissions:** Conventional construction practices often rely on energy-intensive materials like cement and steel, contributing to significant carbon emissions during the production and construction phases.

### Significance of adopting Sustainable solutions

- **Energy efficient Materials:** Utilizing recycled steel, fly ash bricks and prefabricated elements reduces energy consumption during production and construction. However, sustainability concerns of materials like Autoclaved Aerated Concrete (AAC) blocks, red bricks, fly ash, and monolithic concrete (Mivan) when tested show AAC blocks offer a better balance between embodied energy and construction time than red bricks and monolithic concrete.
- **Green building practices:** Integrating solar panels, rainwater harvesting, and energy-efficient appliances in buildings minimizes their environmental footprint. Initiatives like the Eco-Niwas Samhita (ENS) and the Residential Energy Conservation Building Code are steps in the right direction.
- **Reduce reliance on Conventional resources:** Utilizing renewable energy sources like solar panels and incorporating green roofs and rainwater harvesting systems can further enhance the sustainability of buildings and reduce reliance on non-renewable resources.

### Conclusion

In conclusion, achieving sustainable construction presents formidable obstacles, yet it remains indispensable for fostering a more environmentally friendly future. Through the reimagining of construction design and methodologies, the development of cutting-edge walling materials, and the promotion of a sustainability ethos, we have the potential to construct resilient, energy-efficient buildings that harmonize with environmental objectives and greatly enhance the well-being of communities at large.

### In the light of recent events, analyze the implications of using humanitarian aid as a political tool in conflict zones.

**Introduction:** Contextual Introduction

**Body:** Implications of using humanitarian aid as a political tool in conflict zones

**Conclusion:** Way forward

The recent example of humanitarian aid being used as a political tool in the ongoing conflict between Hamas & Israel shows that geopolitics trumps humanitarian concerns even at the cost of starving millions in the conflict zones. This stopping of humanitarian aid is a serious violation of international law which requires careful deliberation among international organizations and nation-states.

### Positive Implications of using humanitarian aid as political tool



- **Leverage for Peace:** Aid can incentivize warring parties to negotiate for access to affected populations, creating opportunities for peace talks. Eg, Ethiopia
- **Promoting Democracy:** Conditional aid tied to human rights improvements or democratic reforms can nudge governments towards better practices. Eg, Afghanistan

#### Negative Implications of using humanitarian aid as political tool

- **Human Suffering:** Reduction or cessation of humanitarian aid results in increased human suffering, including hunger, malnutrition, lack of access to medical care, and displacement. Vulnerable populations, including women, children, and the elderly, bear the brunt of these consequences.
- **Healthcare Crisis:** Humanitarian aid often supports healthcare infrastructure, including hospitals, clinics, and medical supplies. Cutting aid can lead to the collapse of healthcare systems, resulting in preventable deaths due to untreated illnesses, injuries, and lack of access to essential medications.
- **Food Insecurity:** Many individuals and families in conflict zones rely on humanitarian assistance for access to food. Cutting aid exacerbates food insecurity, leading to starvation and malnutrition, particularly among children.
- **Displacement and Migration:** Reduced aid may force people to flee their homes in search of safety, exacerbating the refugee crisis. This can lead to overcrowded refugee camps, strained resources in host countries, and increased risk of exploitation and violence for displaced populations.
- **Human Rights Violations:** Cutting humanitarian aid can contribute to human rights violations, including violations of the right to food, healthcare, and shelter. It may also lead to the denial of basic services and exacerbate existing inequalities and injustices within these conflict-affected populations.
- **Destabilization:** Lack of humanitarian aid can further destabilize conflict-affected regions, fueling resentment, radicalization, and extremism. It may also contribute to social unrest, conflict escalation, and prolonged instability, with broader regional and global implications.

#### Conclusion

It is essential for the international community to uphold its humanitarian obligations and provide sustained support to those most in need, regardless of political considerations.

**Critically examine the objectives and key features of the WHO Pandemic Agreement. Discuss the potential challenges and benefits of establishing a global framework for pandemic preparedness and response, with a focus on equity and access to medical products.**

**Introduction:** Contextual Introduction

**Body:** Highlight objectives, features, challenges & benefits arising from the agreement.

**Conclusion:** Way forward

The World Health Organization (WHO) is spearheading efforts to establish the world's first Pandemic Agreement.

#### Objectives and Key Features:

- **Strengthened Preparedness:** The agreement aims to improve national, regional, and global capacities for disease surveillance, early warning systems, and rapid response mechanisms.
- **Collaborative Research & Development:** Encouraging collaboration on research and development of vaccines, diagnostics, and therapeutics is a key focus.

- **Equitable Access:** The agreement seeks to ensure fair and equitable access to medical countermeasures (vaccines, treatments, etc.) for all countries, regardless of income level.
- **Improved Financing:** A crucial aspect is establishing sustainable financing mechanisms to support pandemic preparedness and response activities.

#### Potential Benefits:

- **Enhanced Global Response:** A unified framework can lead to faster and more coordinated responses to future pandemics, potentially mitigating their impact.
- **Investment in Preparedness:** The agreement can encourage countries to invest in robust public health infrastructure, leading to better overall health security.
- **Focus on Equity:** By emphasizing equitable access, the agreement can help ensure that developing countries are not left behind in future pandemics.

#### Challenges:

- **National Sovereignty:** Balancing global cooperation with national sovereignty could be a challenge. Countries may be hesitant to cede control over pandemic response measures.
- **Resource Allocation:** Ensuring equitable funding for preparedness efforts across all nations, especially low- and middle-income ones, will be crucial.
- **Intellectual Property Rights:** Balancing innovation with access is a complex issue. The agreement needs to address intellectual property concerns to facilitate technology transfer and affordable production of medical products.
- **Enforcement Mechanisms:** The effectiveness of the agreement will depend on strong enforcement mechanisms to ensure compliance from member states.
- **Vaccine Nationalism:** The agreement should discourage countries from stockpiling vaccines and other resources during emergencies.

#### Conclusion

The WHO Pandemic Agreement holds promise in enhancing worldwide readiness and responsiveness to forthcoming pandemics. Nonetheless, overcoming obstacles such as national sovereignty, resource distribution, and intellectual property rights will be pivotal for its effectiveness. Central to achieving a genuinely comprehensive and efficient pandemic response is the imperative of ensuring equitable access to medical products.

**Analyze the implications of internet shutdowns in India on the right to freedom of expression and information, particularly in the context of global internet freedom trends. Suggest measures to balance national security concerns with the protection of digital rights.**

**Introduction:** Give a brief context to the question

**Body:** Implications of internet shutdown and measures to deal with it.

**Conclusion:** Way forward

India has emerged as a global leader in internet shutdowns, raising concerns about its impact on freedom of expression and information. India has consistently topped the global list of countries imposing internet bans, with approximately 60% of all recorded blackouts worldwide.

#### Implications of Shutdowns on freedom of expression & information

- **Restricting Free Speech:** When people's access to the internet is blocked, it becomes harder for them to freely express themselves online, which muffles oppositional voices and prevents political dialogue.

- **Impact on Media and Journalism:** For information gathering, communication, and news distribution, journalists mainly rely on the Internet. Shutdowns undermine press freedom by interfering with their capacity to report on events and educate the public.
- **Economic Consequences:** Shutdowns affect digital services, e-commerce, and internet businesses, impeding socioeconomic progress and having an effect on economic activity.
- **Social Isolation:** When people's access to vital services, online groups, and communication with loved ones is impeded, it is a result of internet shutdowns that cause social connectedness to break down.

#### Balancing Security and Rights:

- **Stricter Regulations:** Implement clear and transparent guidelines for internet shutdowns, allowing them only under exceptional circumstances and with judicial oversight.
- **Targeted Shutdowns:** Instead of blanket blackouts, consider more targeted interventions like blocking specific websites or apps linked to incitement of violence.
- **Alternative Measures:** Explore less disruptive alternatives to manage unrest, such as blocking access to specific locations or communication tools for a limited duration.
- **Transparency and Accountability:** Authorities should publicly disclose reasons for shutdowns and their effectiveness. Independent bodies can review decisions to ensure accountability.
- **Promoting Digital Literacy:** Educate citizens about responsible online behaviour and empower them to critically evaluate information.
- **Investment in Infrastructure:** Invest in robust internet infrastructure and cybersecurity measures to mitigate security risks while preserving online freedoms.
- **Dialogue and Collaboration:** Foster dialogue between government authorities, civil society organizations, and technology companies to develop collaborative solutions that balance national security imperatives with respect for human rights.

#### Conclusion

Government should pay heed to the orders of SC in *Anuradha Bhasin v. Union of India* case, & try to balance national security concerns with the protection of digital rights that requires a multi-stakeholder approach, encompassing legal reforms, transparency, and investment in infrastructure to uphold democratic principles in the digital age.