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## BORDER DEVELOPMENT AND TRANSPORT FOR REGIONAL CONNECTIVITY

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### ABSTRACT:

*Border regions play a crucial role in fostering regional connectivity, economic growth, and cultural exchange. In the Indian context, with its vast and diverse geography, border development and efficient transport systems are paramount for enhancing connectivity and integration across regions. This abstract delves into the significance of border development and transport infrastructure in bolstering regional connectivity within India.*

*India shares borders with several neighboring countries, each with its unique socio-economic and geopolitical dynamics. These border regions often face infrastructural challenges, including inadequate road and rail networks, limited access to essential services, and underdeveloped economic opportunities. Addressing these challenges requires a comprehensive strategy that integrates infrastructure development, policy frameworks, and regional cooperation.*

**Keywords:** *Border, Development, Roads, Infrastructure, Government, India, China*

### INTRODUCTION:

Border development and transport infrastructure are pivotal components of India's regional connectivity strategy, playing a crucial role in fostering economic growth, cultural exchange, and geopolitical stability. With its vast and diverse landscape, India shares borders with several neighboring countries, each with its unique socio-economic characteristics and geopolitical significance. This introduction provides an overview of the importance of border development and transport infrastructure in India's regional connectivity agenda, highlighting the challenges and opportunities inherent in this endeavor.

Border regions serve as vital gateways for trade, commerce, and people-to-people exchanges, making them essential corridors for regional integration and cooperation. However, many of these border areas in India face infrastructural constraints, including inadequate road and rail networks,

limited access to essential services, and underdeveloped economic opportunities. Addressing these challenges requires a multifaceted approach that encompasses infrastructure development, policy frameworks, and regional cooperation mechanisms.

Investments in border infrastructure are critical for facilitating the seamless movement of goods and people across regions. Improved transport connectivity not only enhances trade and economic activities but also promotes tourism, cultural exchange, and social integration. Moreover, efficient transport systems play a vital role in facilitating the flow of resources, including humanitarian aid during emergencies or natural disasters.

### **BORDER AREA DEVELOPMENT PROGRAMME (BADP):**

BADP seeks to address the unique developmental needs and well-being of people living in remote and inaccessible areas near international borders, as well as to provide critical infrastructure and long-term livelihood opportunities through participatory convergence schemes.

In border regions, especially key areas, the provision of these services and opportunities would aid in mainstreaming the border population, integrating border areas with the hinterland, and creating a favorable atmosphere that would encourage people to stay in border areas.

State governments in 17 states, including Arunachal Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Rajasthan, Punjab, Sikkim, Tripura, Uttar West Bengal, Uttar Pradesh, and Uttarakhand, implement the Border Area Development Programme (BADP) in 396 border blocks across 111 districts.

The scheme provides funds to states for infrastructure, livelihood, education, health, agricultural, and skill development programs. Funds allocated/released to the State Government in 2014-15, 2018-19, and 2019-20 are listed below:

<b>Year</b>	<b>Allocation</b>	<b>Release</b>
2014-15	800.00	800.00
2015-16	990.00	990.00
2016-17	1015.00	1015.00
2017-18	1100.00	1100.0
2018-19	770.62	770.62
2019-20	825.00	

BADP has also launched a model village initiative, which comprises comprehensive development such as road connections, school facilities, health facilities, livelihood and skill development facilities, and so on in at least one village with a large population surrounded by five-six or more villages.

The communities are designated for development as Model communities after consultation

with stakeholders and taking into account inter-olia, strategic, and security considerations. Currently, 61 Model Villages are being developed along the land borders with financial support. Rs 2 crore per Model Village.

The Border Guarding Forces will prioritize the development of strategic villages with significant impact on national security. These villages will receive connectivity (road and mobile), livelihood, and skill development to ensure population retention and growth.

The Border Area Development Programme — Online Management System (BADP-OMS), which enables online submission of Annual Action Plans (AAPs) and online monitoring of works, was inaugurated on July 12, 2018.

#### **DEVELOPMENT OF BORDER AREAS:**

- **Infrastructure Development:** Invest in the construction and improvement of roads, railways, airports, and other transportation infrastructure to enhance connectivity with the rest of the country and neighboring countries. Upgrading infrastructure will facilitate trade, tourism, and socio-economic development in border regions.
- **Border Trade and Economic Zones:** Establish border trade and economic zones to promote cross-border trade, investment, and entrepreneurship. Provide incentives such as tax breaks, subsidies, and streamlined regulatory processes to attract businesses and industries to border areas. Facilitate customs clearance and trade facilitation measures to boost economic activity.
- **Tourism Promotion:** Promote tourism development in border areas by showcasing their natural beauty, cultural heritage, and unique attractions. Develop tourist infrastructure such as hotels, resorts, tourist information centers, and recreational facilities to attract domestic and international tourists. Encourage community-based tourism initiatives that benefit local communities and preserve cultural traditions.
- **Agricultural and Rural Development:** Support agricultural and rural development initiatives in border areas to improve livelihoods and enhance food security. Provide agricultural inputs, credit facilities, and technical assistance to farmers. Promote sustainable farming practices, crop diversification, and value-added processing to increase agricultural productivity and income levels.

#### **RECENT GOVT INITIATIVE WITH BORDER SHARING STATES:**

##### **INDIA & PAK**

- Following the terrorist attack in Pathankot, the MHA approved the deployment of the Comprehensive Management System (CIBMS) to develop an integrated security system at borders that provides all-around security even in adverse weather.
- The Center has agreed to send the Indian special forces unit National Security Guard (NSG) to reinforce counterterrorism operations by Commandos in Kashmir and educate J&K police and other paramilitary forces in room intervention, anti-terror skills, monitoring anti-hijack operations, and so

on.

### **China and India:**

- Building infrastructure: India and Japan are working together to quickly develop infrastructure projects in the Northeast in order to limit China. One such project is the Dhol-Sadiya bridge, which will reduce the time required for troops to traverse across the region.
- Forest clearance has not applied to Army infrastructure projects located within 100 kilometers of LAC.
- The Ministry of Defence has agreed to provide the Border Roads Organisation (BRO) administrative and financial authority in order to speed up the construction of border roads.
- The Chief of Defense Staff (CDS) was established.

### **Bangladesh and India:**

- The government has declared that the border states of Bangladesh and India will form the Border Protection Grid (BPG).
- A crime-free zone has been formed between the BSF border posts at Gunarmath and Kalyani, as well as the BGB border posts at Putkhali and Daulatpur.
- The installation of border surveillance tools to maintain a close eye, such as drones, searchlights, closed-circuit television cameras, and thermal imaging equipment.
- Additionally, the BGB and BSF have been educating the community about crime across the border regions.
- The Coordinated Border Management Plan (CBMP) aims to integrate the efforts of boundary Guarding Forces to prevent cross-border illicit activities and crimes while also maintaining peace along the Bangladesh-India boundary.

### **INDO-NEPAL:**

- To guarantee improved operational effectiveness, a new intelligence department in the SSB has been established at the Indo-Nepal and Indo-Bhutan borders.
- The formation of a Border District Coordination Committee to address matters of shared interest between district officials in the two nations.
- The Indian government has sanctioned the construction of 1377 kilometres of roads along the border with Nepal.
- Development assistance to Nepal in order to stop human trafficking because there aren't enough job opportunities there
- Kathmandu's Nepal Bharat Maitri Emergency and Trauma Center has 200 beds.

### **INDO – MYANMAR:**

- Thirteen new Integrated Check Posts (ICPs) would increase India's participation in SAARC nations such as Thailand and Myanmar. Such qualities may be forbidden by ICP while still allowing for

legal trade and commerce.

### **BHUTAN – INDO:**

- Bilateral cooperation: an India-Bhutan Group on Border Management and Security is a bilateral body at the secretary level.
- Working together with their troops to stop rebels from finding refuge on their territory.
- The Union Environment Ministry has given "general approval" to divert forest land for major border infrastructure projects along the eastern border with Bhutan, Myanmar, and Nepal.
- Establishing new border stations in Sikkim near the Bhutanese border at Doklam.

**Scheme for Border Infrastructure and Management (BIM):** The BIM Scheme, which is being carried out by BM-I Division, is a Central Sector initiative that consists of projects intended to develop the infrastructure of India's international borders. The program has been approved to cost Rs. 13,020 crore between 2021–2022 and 2025–2026. By implementing various projects for the development of border infrastructure, including border fences, border roads, border floodlights, border outposts (BOPs), helipads, and foot tracks along the country's international borders, the scheme seeks to improve security along the nation's borders. In certain border areas, where a physical fence is impractical, it also entails deploying technology alternatives.

### **GENERAL ISSUES RELATED TO BORDER INFRASTRUCTURE AND RECCOMENDATIONS IN BORDER MANAGEMENT:**

- During peacetime, the Ministry of Home Affairs should be in charge of border administration. However, given to the dynamic nature of the LoC and the requirement to have troops near to the LAC in ready for high-altitude operations, the army has constantly stationed substantial numbers for this purpose.

### **GP BHATNAGAR HAS IDENTIFIED THE FOLLOWING LACUNAE:**

1. Technological Infrastructure: Modern border management relies heavily on technology such as surveillance cameras, sensors, biometric systems, and databases for tracking individuals and goods. Lacunae in technological infrastructure might involve outdated or incompatible systems, gaps in coverage, or vulnerabilities to cyberattacks.
2. Customs and Immigration Procedures: Complex and inefficient customs and immigration procedures can create bottlenecks and delays at border crossings. Lacunae in this area might involve outdated paperwork requirements, lack of harmonization between neighboring countries, or inadequate staffing levels.
3. Security Measures: Borders must be secure to prevent illegal immigration, smuggling, and other illicit activities. Lacunae in security measures could include gaps in surveillance coverage, corruption among border officials, or lack of coordination with intelligence agencies.
4. Environmental Considerations: Border infrastructure projects can have significant environmental

impacts, such as habitat destruction, pollution, or disruption of migratory routes. Lacunae in addressing these considerations might involve inadequate environmental assessments or failure to implement mitigation measures.

### **RECCOMENDATION FOR BORDER MANAGEMENT:**

- **Invest in Infrastructure:** Enhance physical infrastructure at border areas, including roads, bridges, and border checkpoints, to facilitate smooth movement of goods and people. This should include modernizing existing facilities and constructing new ones where necessary.
- **Increasing the number of helicopter units** improves aerial observation and the capacity to quickly deploy troops to defensive positions.
- **Strengthen Border Security:** Increase border security measures through better training and equipping of border patrol forces. Improve coordination between various security agencies to prevent cross-border crimes such as smuggling, human trafficking, and terrorism.
- **Upgrade Technology:** Deploy advanced surveillance technologies such as drones, sensors, and satellite imaging to enhance monitoring and detection capabilities along the border. Implement biometric systems and databases for efficient management of immigration and customs procedures.
- **Enhance Inter-Agency Coordination:** Foster greater cooperation and coordination among different government agencies involved in border management, including customs, immigration, law enforcement, and intelligence agencies. Establish joint task forces and information-sharing mechanisms to address common challenges.
- **India's border management challenges** extend beyond external security threats.

### **BORDER INFRASTRUCTURE:**

The Shetkar Committee's three suggestions for border infrastructure were recently adopted and executed by the government.

1. **Investment in Physical Infrastructure:** Allocate resources for the construction and maintenance of roads, bridges, ports, and border crossings. Upgrading existing infrastructure and building new facilities will improve connectivity and streamline the movement of goods and people across borders.
2. **Utilize Technology:** Deploy advanced technology such as surveillance cameras, sensors, and biometric systems to enhance border security and monitoring capabilities. Implementing electronic border control systems, automated clearance processes, and online visa applications can expedite border crossings and reduce administrative burdens.
3. **Strengthen Border Security Measures:** Enhance border security by improving surveillance, intelligence gathering, and law enforcement capabilities. Invest in training and equipping border patrol forces, enhancing coordination among security agencies, and leveraging modern technology to detect and deter illicit activities such as smuggling and human trafficking.

## NEED FOR INFRASTRUCTURE:

- **Security:** India shares borders with multiple countries, including Pakistan, China, Nepal, Bhutan, Bangladesh, and Myanmar. Ensuring the security of these borders is paramount to safeguarding national sovereignty and territorial integrity. Robust border infrastructure is essential for effective border surveillance, monitoring, and response to security threats, including terrorism, infiltration, and smuggling.
- **Trade and Commerce:** Improved border infrastructure facilitates trade and commerce by enhancing connectivity and reducing transit times and transaction costs for goods and services. Efficient border crossings enable smoother movement of goods across international borders, promoting economic growth, and regional integration. This is particularly important for India's trade with neighboring countries under various bilateral and multilateral agreements.
- **Cultural and Diplomatic Ties:** Strengthening border infrastructure supports cultural exchanges, diplomatic engagements, and people-to-people interactions between India and its neighboring countries. Cross-border initiatives, such as heritage tourism, educational exchanges, and sister city partnerships, promote mutual understanding and friendly relations.
- **Transit Routes:** Some border regions serve as crucial transit routes for regional and international trade, energy transportation, and connectivity projects such as the International North-South Transport Corridor (INSTC) and the Bangladesh-Bhutan-India-Nepal (BBIN) Initiative. Developing infrastructure along these routes enhances their efficiency and attractiveness for trade and transit traffic.

## BORDER ROADS ORGANISATION:

Full form	Border Road Organisation
Established	7 May 1960
Ministry	Ministry Of Defence
Responsibility	Construction and maintenance of roads and infrastructures in India's border areas
Mottu	Shramena Sarvam Sadhyam (everything is achievable through hardwork)

The acronym "BRO" stands for "Border Roads Organization." The Border Roads Organization is responsible for road building and maintenance in border areas and other strategically important sites, especially with the objective of boosting connectivity, security, and infrastructure development in tough terrains.

1960s: Formation and Early Years.

The Border Roads Organization (BRO) was established on May 7, 1960, under the Ministry of Defense in India. Its primary goal was to construct and maintain road infrastructure in remote and difficult-to-access border areas. Initially, BRO focused on building roads, bridges, and tunnels to improve connectivity in strategic locations.

During the 1970s, BRO expanded operations and pursued ambitious initiatives.

- The organization addressed varied geographical problems, such as high altitudes, deserts, and dense forests.

- Road construction and upkeep were vital for both military and socioeconomic progress.

During the 1980s, BRO modernized and advanced its road construction and maintenance practices.

- The group used innovative engineering techniques and technologies to tackle challenging terrains and adverse weather conditions.

- These developments resulted in more efficient and lasting road infrastructure.

During the 1990s, BRO focused on improving strategic connections along the country's borders.

- Establishing all-weather road links to isolated border checkpoints improved mobility for military personnel and equipment.

- The organization's efforts.

2000s - Infrastructure Development and Community Impact:

- BRO projects benefited both military operations and local people.

- BRO's road infrastructure improved access to healthcare, education, markets, and essential services for rural communities.

- The organization's commitment to nation-building was evident in its contributions to security and development.

BRO's skill and capacity to operate in tough settings have made it an essential component of India's development and security objectives. Their efforts help to build infrastructure and improve communication in rural locations. The Border Roads Organization has historically played a crucial role in nation-building, linking remote regions and boosting national security.

Improved mobility for defense units in crucial locations.

### **Mission of Border Roads Organization:**

The Border Roads Organization (BRO) develops and maintains road infrastructure in crucial areas across India. BRO focuses on improving connectivity, security, and socio-economic development by building and maintaining roads, bridges, and tunnels. Its mission includes several key objectives:

1. **Improving Connectivity:** BRO intends to connect isolated and difficult-to-reach places, particularly border districts. The organization establishes road links to make these places accessible year-round, facilitating the transfer of troops, equipment, and goods.

2. BRO's roadways play an important role in ensuring national security. These highways connect military bases, border regions, and critical places, enabling quick and effective deployment of armed forces.
3. BRO's projects promote socioeconomic development in local areas. These projects improve access to markets, healthcare, education, and other important services, benefiting distant communities.
4. BRO's road connectivity promotes national integration by connecting remote districts to the rest of the country. It promotes national unity and cultural interchange across India.
5. Enabling Disaster Response: BRO's infrastructure supports disaster response and relief efforts. During natural disasters, these highways act as lifelines, transporting relief supplies and aid to affected areas.
6. Supporting Defense Forces: BRO provides all-weather access to border checkpoints and military installations, enabling defense forces to maintain alert and readiness along national boundaries.
7. BRO's projects promote balanced regional development by integrating formerly isolated communities into the mainstream. Improved connectivity drives economic growth and possibilities.

#### **RAMPING UP BORDER INFRASTRUCTURE SMART BORDER MANAGEMENT:**

- **Integrated Border Management Systems:** Adopt an integrated approach to border management that involves seamless coordination among different government agencies responsible for customs, immigration, law enforcement, and security. Implement interoperable systems and information-sharing platforms to streamline border processes, reduce duplication of efforts, and enhance collaboration.
- **Risk-based Screening and Automation:** Implement risk-based screening protocols and automated clearance processes to expedite legitimate cross-border movements while targeting high-risk individuals and cargo for closer scrutiny. Utilize data analytics, artificial intelligence, and machine learning algorithms to identify patterns, detect anomalies, and mitigate security threats more effectively.
- **Enhanced Surveillance and Monitoring:** Establish a comprehensive surveillance and monitoring network along the border using a combination of fixed and mobile sensors, aerial drones, satellite imagery, and unmanned aerial vehicles (UAVs). Monitor border areas in real-time, detect unauthorized crossings or suspicious activities, and deploy rapid response teams as needed.
- **Biometric Identification and Authentication:** Implement biometric-based identification and authentication systems for border control, including facial recognition, iris scanning, fingerprinting, and voice recognition technologies. Enhance identity verification processes to prevent impersonation, identity theft, and document fraud.

#### **CONCLUSION:**

In conclusion, border development and infrastructure play a pivotal role in driving regional

connectivity and fostering inclusive development in India. Throughout this discourse, we have explored the significance of investing in comprehensive strategies to address the infrastructural challenges and harness the opportunities presented by border regions.

Efficient transport systems and robust infrastructure are essential for facilitating the movement of goods, people, and ideas across borders, thereby enhancing trade, commerce, and cultural exchange. By improving connectivity with neighboring countries through initiatives like the India-Myanmar-Thailand Trilateral Highway and the Chabahar Port project, India can strengthen its regional ties and tap into new economic opportunities. Moreover, border development initiatives must prioritize the socio-economic upliftment of local communities, ensuring that the benefits of infrastructure projects are shared equitably. This involves providing access to education, healthcare, and employment opportunities, as well as preserving the cultural heritage of border regions.

However, border development efforts must also navigate environmental sustainability and geopolitical considerations. Balancing economic development with environmental conservation is crucial to mitigate ecological degradation and ensure the long-term viability of infrastructure projects. Additionally, fostering cooperative relationships with neighboring countries is essential for overcoming geopolitical tensions and promoting peace and stability in the region.

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