Ministry of Public Works and Transport (MPWT)

Capacity Building Workshop on Rail Connectivity between South East Asia, North and Central Asia

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1. Background & Context

- Northern Line: Extends approximately 386 km from Phnom Penh to Poipet on the Thai border. Key stops include Pursat, Battambang, and Sisophon. As of 2025, passenger services operate between Phnom Penh and Battambang, with the section from Battambang to Poipet undergoing upgrades to facilitate international train services between Cambodia and Thailand.
- Southern Line: Covers about 264 km, connecting Phnom Penh to the coastal city of Sihanoukville. This line serves important stations such as Takeo, Kampot, and Kep. It is fully operational, accommodating both passenger and freight services.



2. Why Capacity Building?

Aging Infrastructure:

- Much of Cambodia's railway network dates back to the early 20th century.
- Although rehabilitation efforts have restored basic functionality, many tracks, bridges, and signaling systems remain outdated and prone to disruption.
- Single-track lines limit train frequency and speed, reducing efficiency and capacity.





Skill Shortages:

- There is a critical lack of trained personnel in areas such as railway engineering, safety management, signaling systems, and rolling stock maintenance.
- Limited technical training programs in Cambodia result in dependence on foreign expertise.
- Workforce development is not keeping pace with growing operational demands.

2. Why Capacity Building?



Lack of Modern Technology:

- Most operations still rely on manual processes or outdated equipment.
- Modern signaling, scheduling, and safety systems are largely absent.
- Limited digitization hampers real-time monitoring, freight tracking, and data-driven decision-making.



Strengthening ASEAN Connectivity

- Cambodia is part of the Trans-Asian Railway network.
- A modern rail system will help it serve as a vital bridge between Thailand and Vietnam, enhancing regional trade, tourism, and logistics.
- It supports ASEAN's broader goals for seamless, multimodal transport integration.

3.Key Capacity Building Areas







Infrastructure Development

Focus Areas:

- Upgrading **rail tracks** to support higher speeds and heavier loads
- Rehabilitating or constructing modern **train stations** with improved passenger services
- Replacing or reinforcing aging **bridges** and culverts to ensure safety and resilience

Why It Matters:

- Reliable infrastructure is foundational for efficient operations and safety
- Enables greater freight and passenger capacity
- Supports long-term economic and trade goals

3.Key Capacity Building Areas

Human Resource Training

Target Groups:

- Railway engineers (track design, maintenance, rolling stock)
- Train operators & conductors (safety procedures, signaling, customer service)
- Maintenance crews (electrical, mechanical, and civil skills)

Approach:

- Establish technical and vocational training programs
- Facilitate knowledge transfer through partnerships with countries experienced in rail operations
- On-the-job training and certification systems

Why It Matters:

- Skilled personnel are critical for safe, sustainable, and efficient railway operations
- Reduces dependency on foreign labor and improves job creation locally





3.Key Capacity Building Areas

Institutional & Policy Strengthening

Needs:

- Clear regulatory frameworks for public-private partnerships (PPPs)
- Strengthened railway governance and oversight institutions
- Development of safety standards and monitoring systems

Why It Matters:

- Ensures accountability, transparency, and sustainable investment
- Encourages private sector participation and long-term financing
- Aligns national development goals with ASEAN and international standards




KINGDOM OF CAMBODIA
Nation Religion King

Royal Government

Comprehensive Master Plan on Cambodia Intermodal Transport and Logistics System 2023-2033

(Unofficial & Transitional Translation)

August 2023

3.Key Capacity Building Areas

Technological Upgrades

Key Technologies:

- Modern signaling and control systems
- Digital ticketing and scheduling platforms
- Real-time monitoring and freight tracking systems
- Integration with logistics and customs platforms at borders

Why It Matters:

- Improves operational efficiency, safety, and user experience
- Enables predictive maintenance and data-driven decision-making
- Positions Cambodia for smart infrastructure and digital economy readiness



4.Ongoing Initiatives Funded projects (ADB, China, JICA)

Poipet–Phnom Penh Rehabilitation

- Full rehabilitation of the **386 km Northern Line**, completed with ADB and AusAID support.
- Tracks reopened for both freight and limited passenger service.
- Cross-border rail services with Thailand (via Poipet–Aranyaprathet) resumed in 2019 but are currently paused due to technical and policy alignment issues.
- Future upgrades planned to support higher speeds and more frequent operations.





4.Ongoing Initiatives Funded projects (ADB, China, JICA)

Southern Line Freight Modernization

- The **264 km Phnom Penh–Sihanoukville line** is being optimized for cargo transport.
- Key modernization steps include:
  - Upgrading bridges and tracks for heavier freight loads
  - Improved loading terminals at Sihanoukville Port
  - Partnership with Royal Railway Cambodia and private logistics operators to streamline rail-port operations
- Aims to reduce congestion on roads and improve export logistics efficiency.



4.Ongoing Initiatives Funded projects (ADB, China, JICA)

Cross-Border Connectivity

Thailand:

- Track connection at Poipet-Aranyaprathet fully restored.
- Awaiting operational and customs agreements for sustained international services.





Vietnam:

- No physical railway link yet.
- Would complete Cambodia's section of the Singapore–Kunming Rail Link under the Trans-Asian Railway project.

5.Opportunities Ahead

Regional Integration

- Connect with the Kunming–Singapore Rail Link to become a key bridge between China and ASEAN.
- Boosts Cambodia's role in international trade and regional mobility.

Dry Ports & Logistics Hubs

- Develop inland freight terminals to improve cargo handling and customs efficiency.
- Supports multimodal transport and attracts investment in logistics.

Electrification & Green Transport

- Shift from diesel to electric trains to reduce emissions and operating costs.
- Aligns with Cambodia's green development goals and unlocks climate funding.







6.Recommendations

Establish National Railway Training Centers

- Develop specialized institutions to train engineers, operators, and technicians.
- Focus on modern rail technology, safety standards, and cross-border logistics.
- Encourage international collaboration for curriculum development and expert exchange.

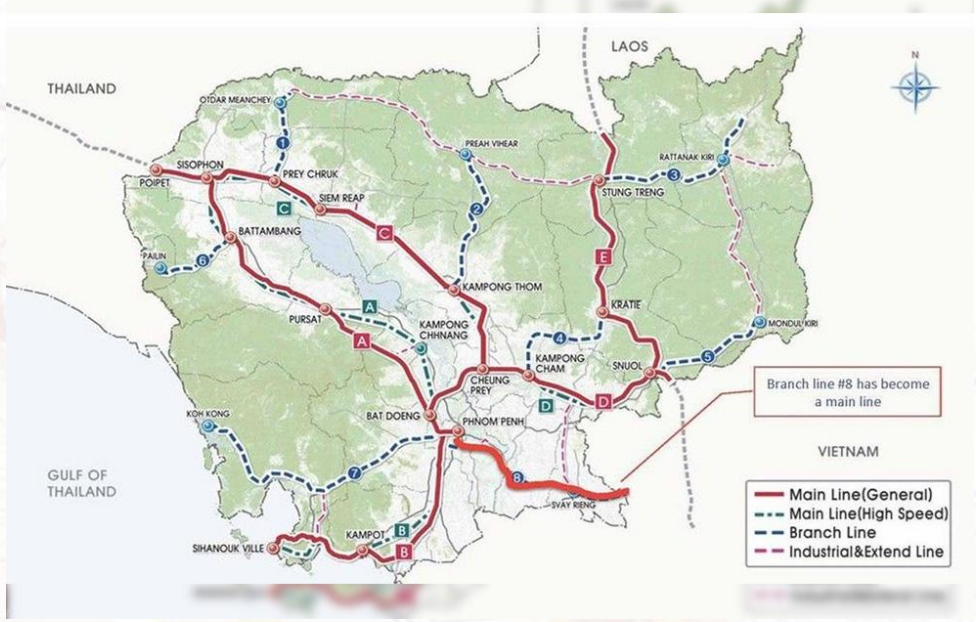


Strengthen Public-Private Partnerships (PPPs)

- Incentivize investment in infrastructure, logistics hubs, and passenger services.
- Develop clear legal and regulatory frameworks to support transparent, long-term PPPs.
- Align private interests with national mobility and economic development goals.



6.Recommendations





Upgrade to Standard Gauge (1,435 mm)

- Transition from the current meter gauge to standard gauge to align with regional networks.
- Enhance compatibility with Thailand, Vietnam, and China.
- Improve speed, safety, and cargo capacity.

7. Conclusion

Cambodia’s railway system is at a turning point—transitioning from outdated infrastructure to a modern, regional transport network.

Key takeaways include:

- Capacity building is critical—including infrastructure upgrades, skilled workforce development, and institutional reform.
- Strategic investments by partners like ADB, China, and JICA are revitalizing key routes and cross-border links.
- Opportunities lie in electrification, freight expansion, dry port integration, and full ASEAN rail connectivity.
- Achieving the 2030–2040 goals will require strong planning, financing, and coordination across sectors.

Thank you!

