

JICA and Corridor Development in South Asia

13 February 2020

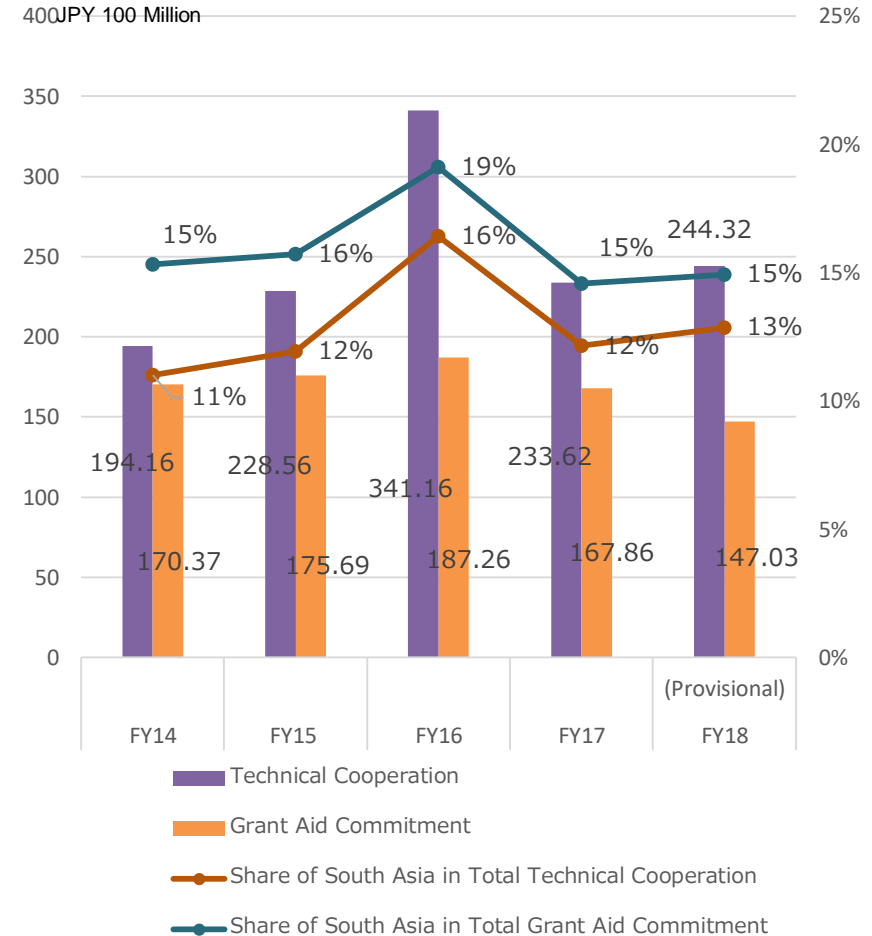
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JICA in South Asia

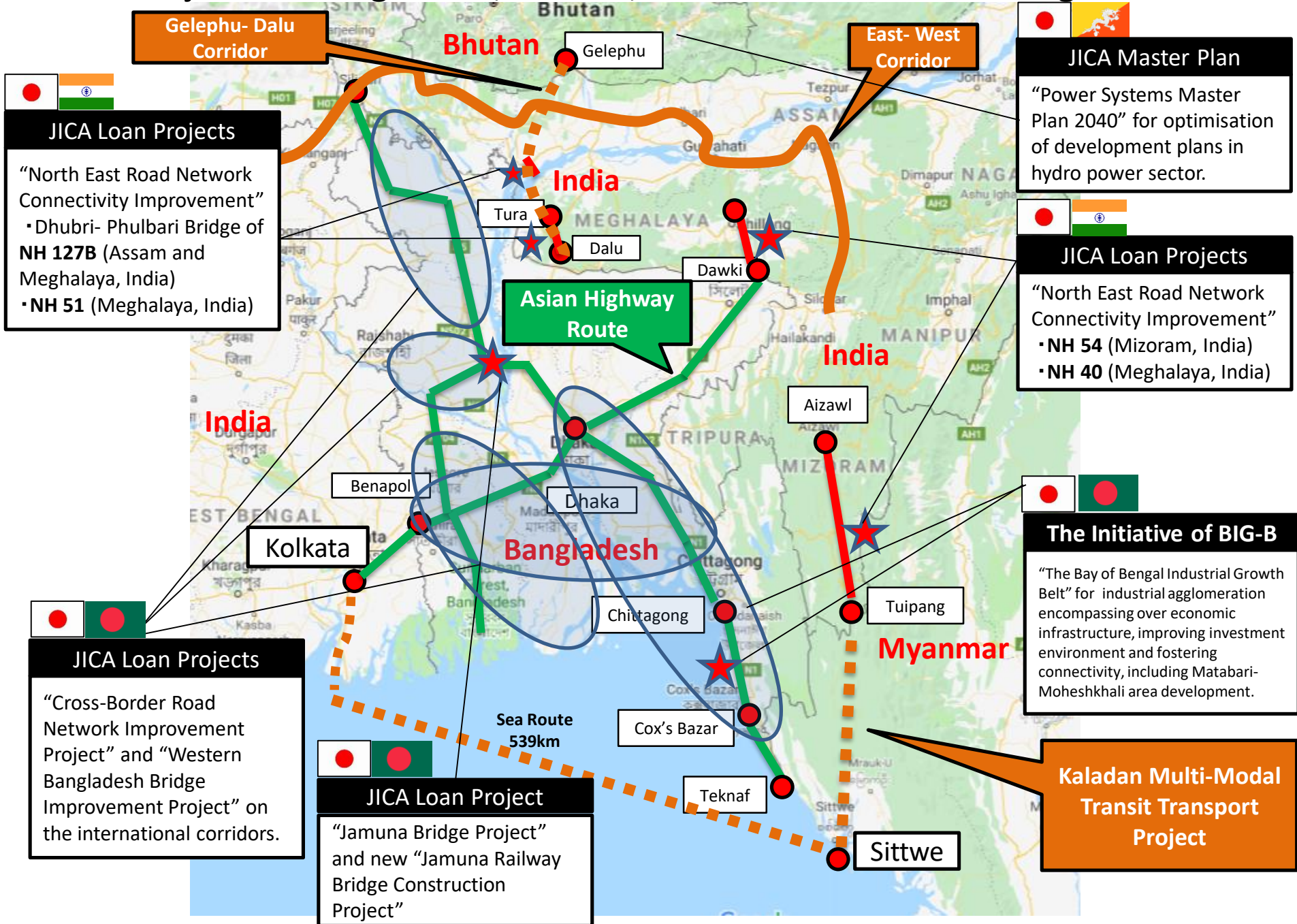
ODA Loans (FY2014-2018)



Technical Cooperation and Grant Aid (FY14-18)



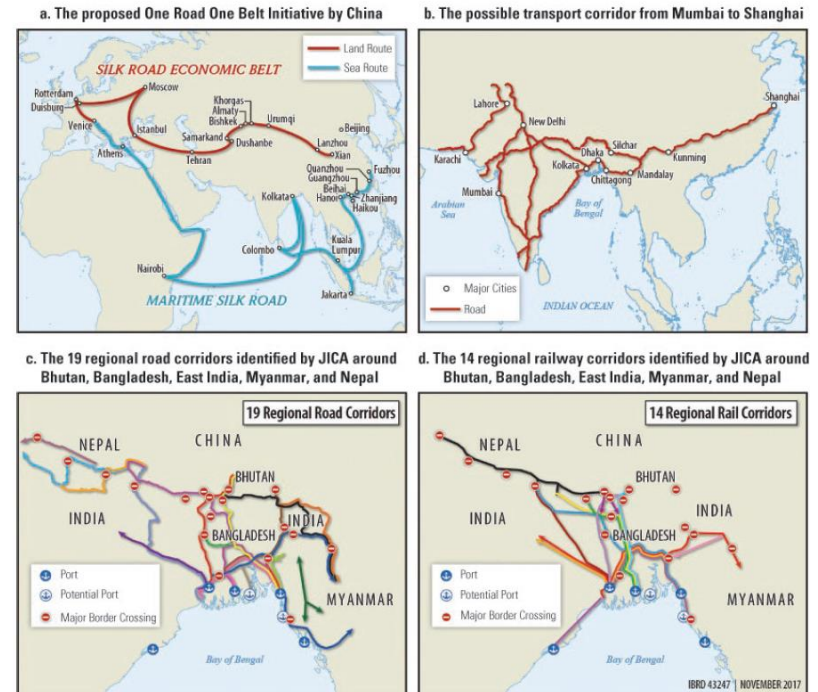
JICA Projects in Bangladesh, Bhutan, and the North Eastern Region of India



The WEB of Transport Corridors in South Asia (2018)



MAP 0.1 Many large transport investments are proposed across South Asia



Source: Corridor Study Team.

Proposed Framework: “FIT-2-DEEDS”

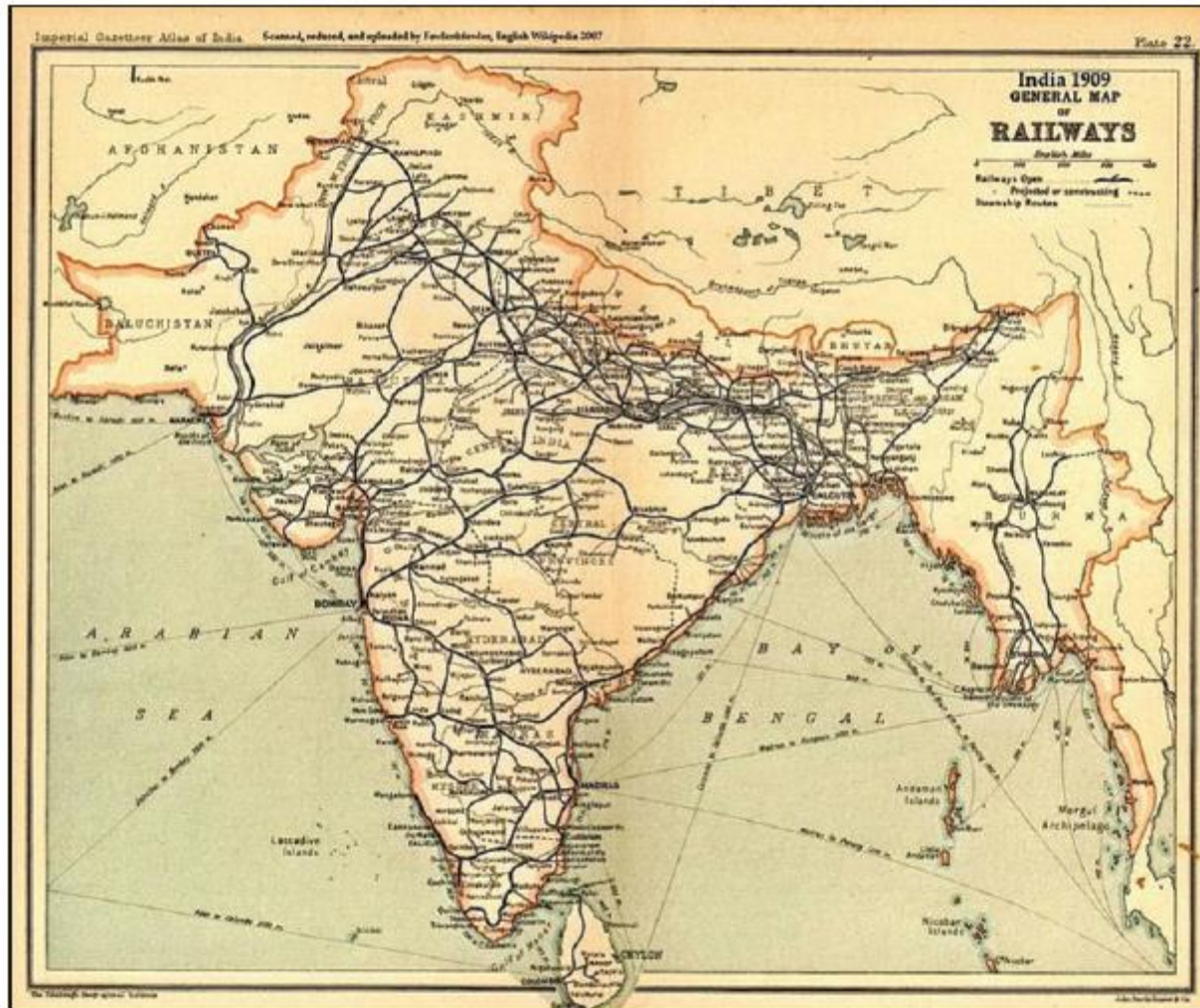
- The **F**low of expected results: the chain from corridor to benefits
- The **I**ntervention Design: supporting a fairer distribution of greater benefits
- **T**ypology of impacts: organizing multiple impacts into a hierarchy
- **2** sorts of complementary interventions: policies and institutions
- **Deed**: devising a viable financing strategy for a given design
- **Deed**: successfully managing the implementation of the program

Analytical Methodology :

- Network Analysis based on regional data sets, Reduced Form Regressions, Structural General Equilibrium Modelling, Spatial Econometrics, etc)

The WEB of Transport Corridors in South Asia (2018) Looking back the history...

MAP 1.5 Rail in India, 1909



The WEB of Transport Corridors in South Asia (2018)

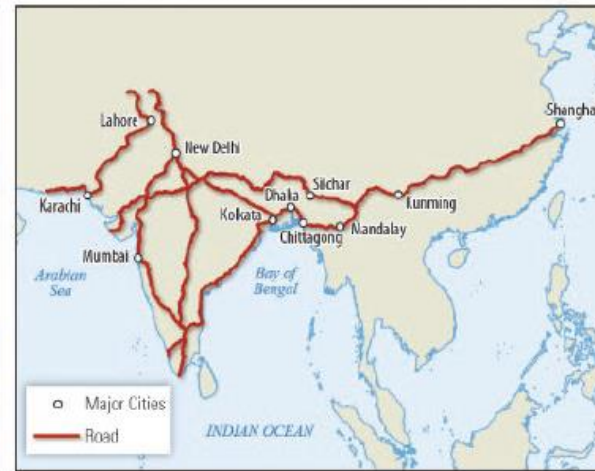
a lot of initiatives, old and new, continental and regional...

MAP 0.1 Many large transport investments are proposed across South Asia

a. The proposed One Road One Belt Initiative by China



b. The possible transport corridor from Mumbai to Shanghai



c. The 19 regional road corridors identified by JICA around Bhutan, Bangladesh, East India, Myanmar, and Nepal



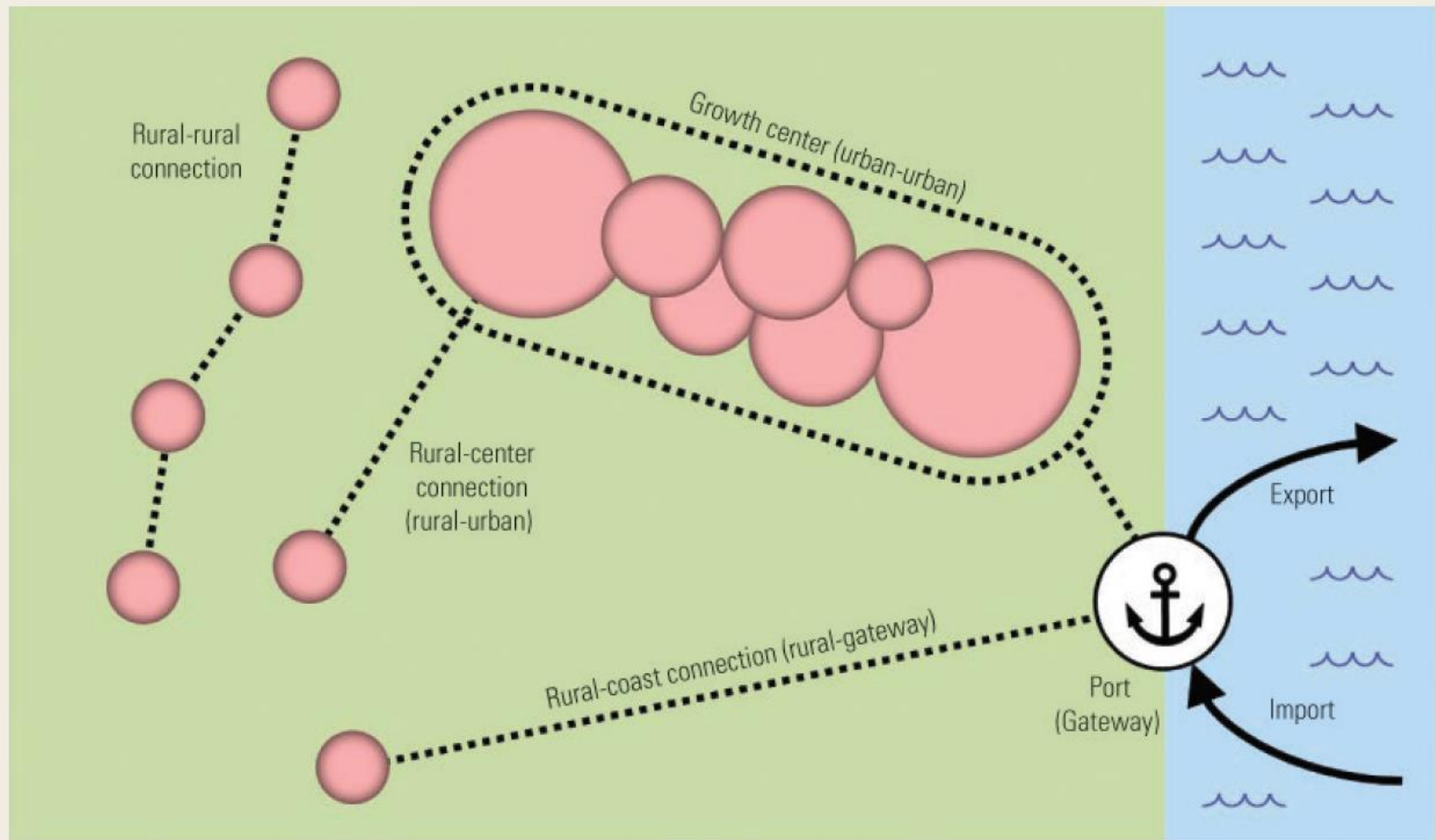
d. The 14 regional railway corridors identified by JICA around Bhutan, Bangladesh, East India, Myanmar, and Nepal



The WEB of Transport Corridors in South Asia (2018)

Types of Transport Corridors

MAP B0.1.1 Possible types of transport corridors (connections)



Source: Corridor Study Team.

Note: The size of the bubble corresponds to the size of the economy.

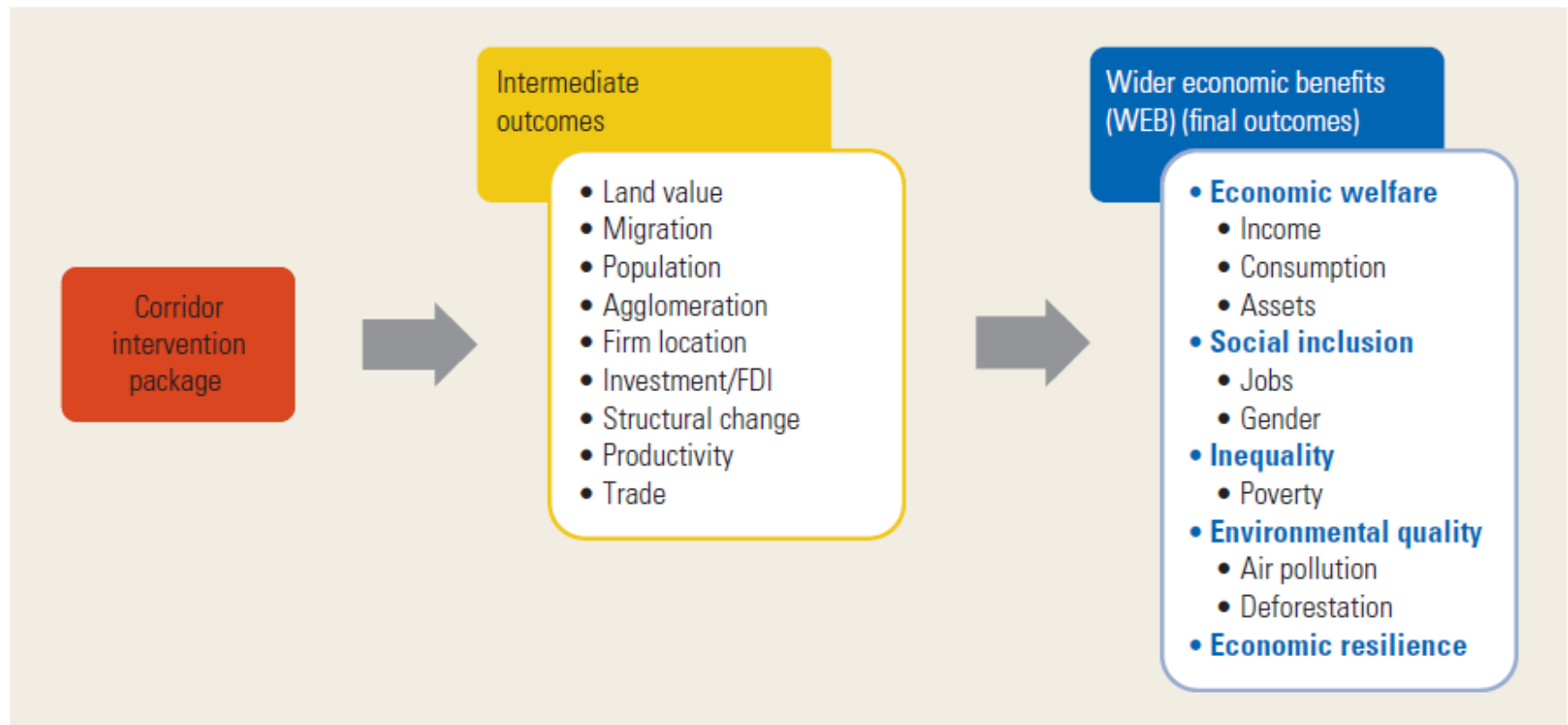
The WEB of Transport Corridors in South Asia (2018) Priorities among various projects and analytical framework

- Established framework:
 - Cost benefit analysis of *the projects* based on vehicle operating costs including time and environmental savings, increases in trade, reduction of traffic accidents, etc.
- Wider Economic Benefits (WEB) of connectivity:
 - Agglomeration effects, spill over and network effects, or the impacts of connectivity, especially of the group of interventions, are hitherto not well captured.
 - Improved availability of spatial data and spatial econometric methods paves the way for rigorous and comprehensive analysis.
 - Needs for complementary policy interventions, like trade facilitation services, ensuring market mechanisms, improved governance, access to social services, etc.
- Downsides:
 - Environmental impacts on health and carbon emissions.
 - Regional inequality. etc.

The WEB of Transport Corridors in South Asia (2018)

- Web of Transport Corridors for WEB (Wider Economic Benefit) -

FIGURE 4.1 The web of WEB: The final outcomes of a corridor intervention are achieved through many transmission channels and various intermediate outcomes

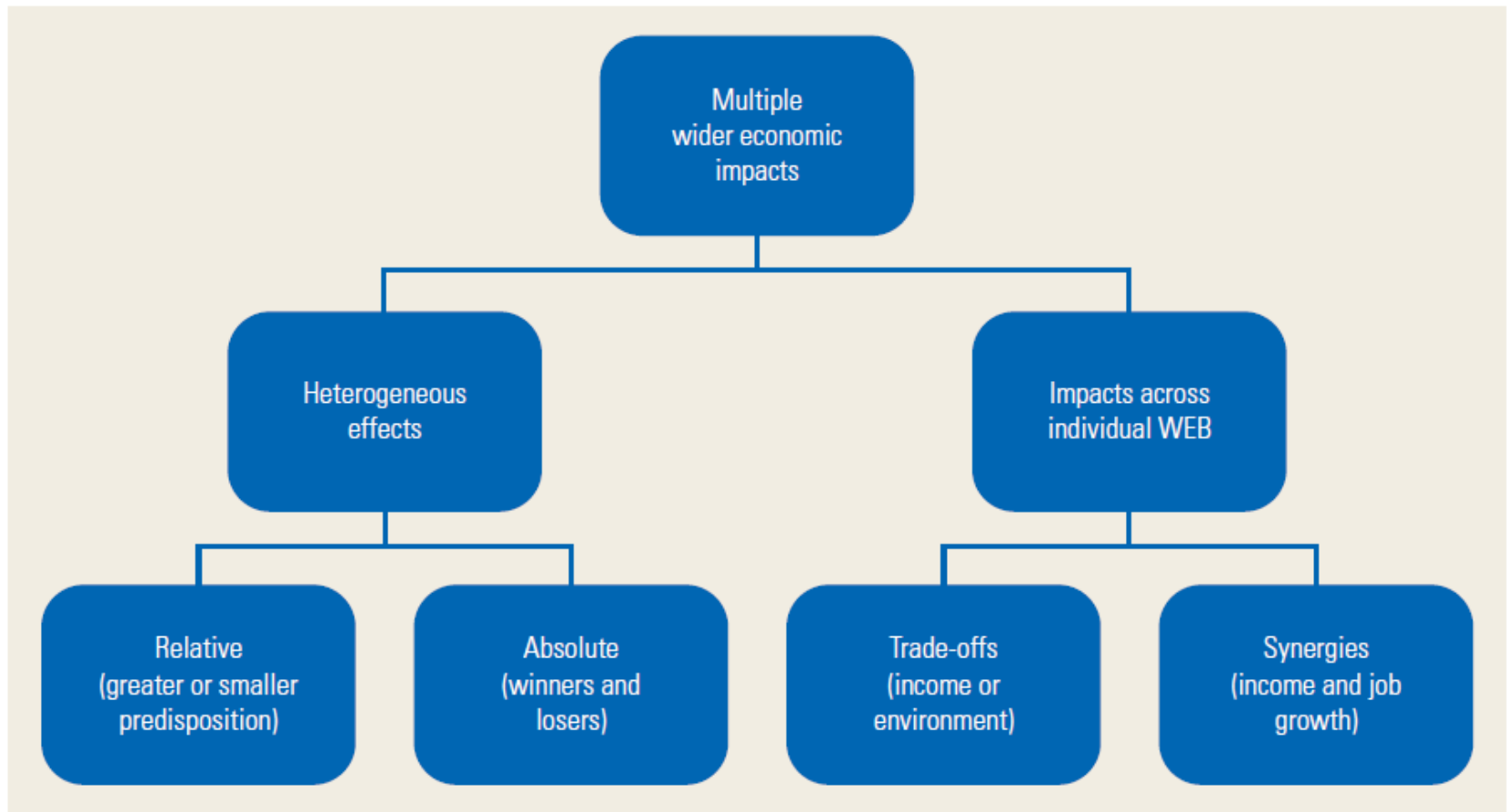


Source: Corridor Study Team.

Note: FDI = foreign direct investment.

The WEB of Transport Corridors in South Asia (2018)

FIGURE 4.3 The overall balance between beneficial or detrimental impacts of a corridor intervention package depends on a hierarchy of impacts



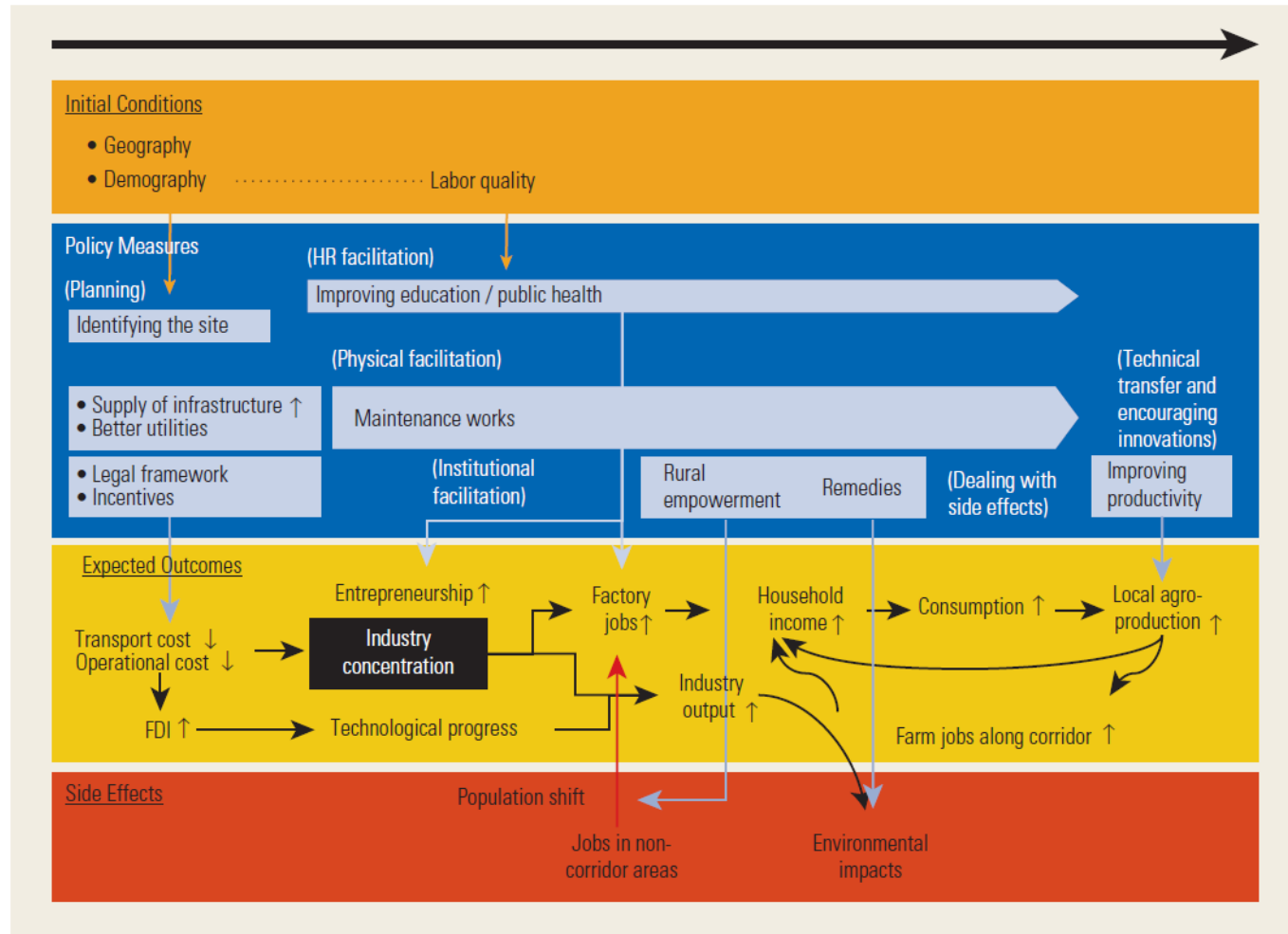
Source: Corridor Study Team.

Note: WEB = wider economic benefits.

The WEB of Transport Corridors in South Asia (2018)

Case studies: Viet Nam NH-5 Corridor

FIGURE 2.10 The NH-5 Corridor generated many expected and unexpected wider economic impacts



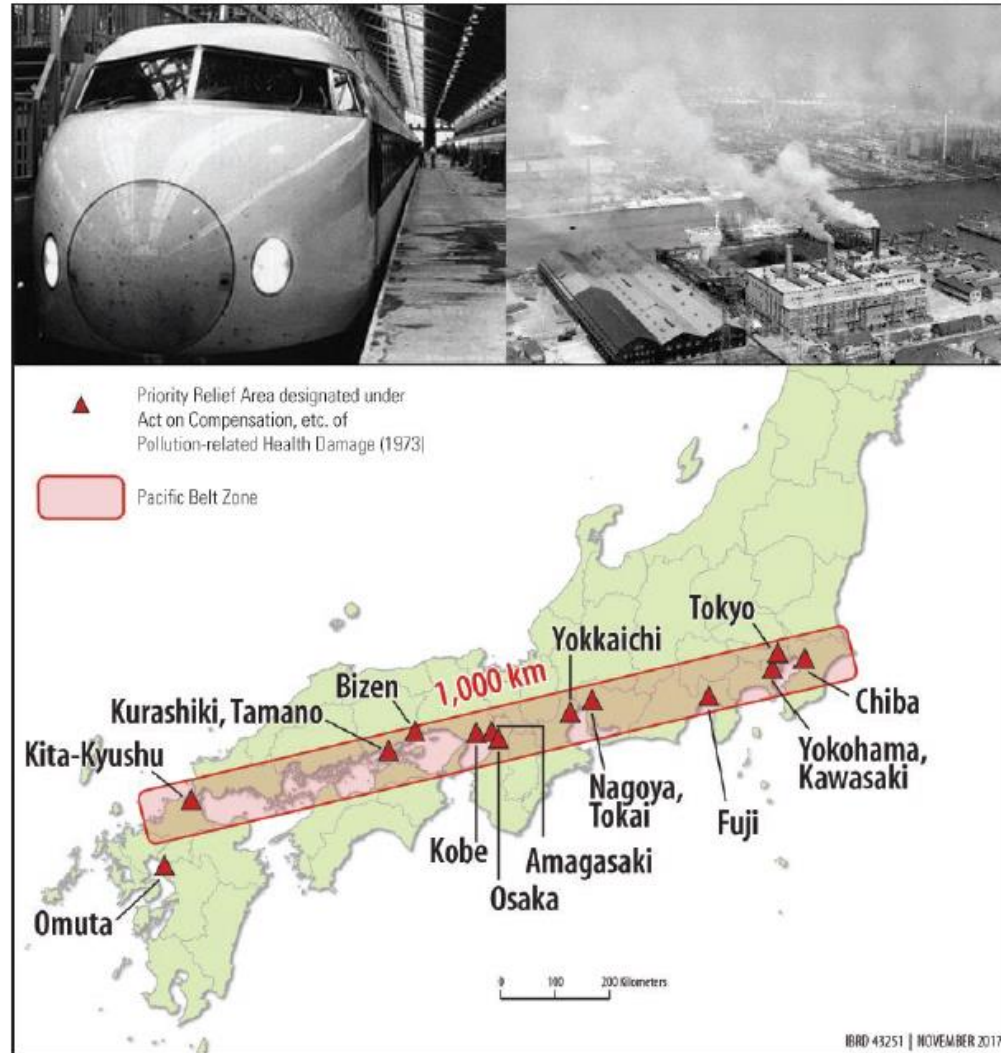
Source: JICA.

Note: NH-5 = National Highway No. 5.

The WEB of Transport Corridors in South Asia (2018)

Case studies: Japan's Pacific Ocean Belt and trade offs

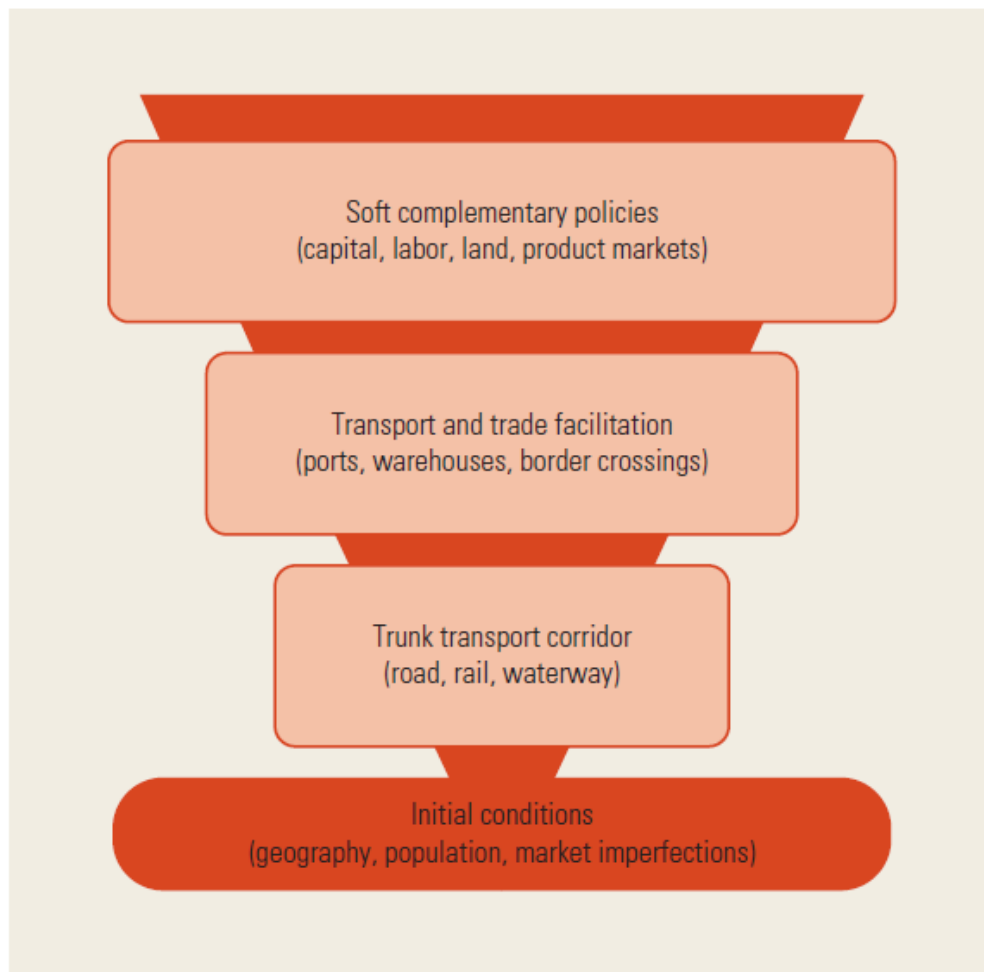
MAP 0.2 The trade-offs generated by the Pacific Ocean Belt in Japan yield valuable lessons



Source: Corridor Study Team. Photos by World Bank (upper left); Kanagawa Environmental Research Center, Japan (upper right). Used with permission; further permission required for reuse.

The WEB of Transport Corridors in South Asia (2018) infrastructure and beyond

FIGURE 3.1 The design of transport corridor projects respects initial conditions and can involve three levels of interventions



“Spotlights”

Short and handy case studies of corridor development and WEB

- “Financing Priority Transport Corridors in South Asia”
- “Private Investment in Corridor Infrastructure”
- “The Role of PPP in Developing South Asia's Corridors”
- “The Impact of Highways on Micro, SMEs: Anecdotal Evidence from Bhutan, Sri Lanka, and India”
- “Do Highways Help Women?”
- “Appraising Proposed Transport Corridors Using Spatial Econometrics”
- “Agriculture Finance and Technical Assistance to Enhance the Wider Economic Benefits of Transport Connectivity for Rural Areas”
- “Cross-Border Infrastructure Projects: Challenges and Lessons Learned from the Unrealized Sava Waterways Rehabilitation Program in Southeast Europe”
- “The Influx of Workers and Followers in a Transport Project: Lessons in Gender Risks from a Road Project in Uganda”

Some take-aways

- Importance of conceptual and analytical framework for corridor development and WEB and trade-offs or downside risks.
 - ⇔ Balancing with “geopolitics” or “strategic plans”.
- Fiscal space for infrastructure investment, O&M costs (and rehabilitation and replacement costs), and debt service
vs
much needed (and complementary) public expenditures for health, education, social safety nets, improved governance, etc.
- Prioritization of plans and initiatives: rigorous appraisal with a view to WEB.
- “Quality” matters a lot especially in:
 - Preparation (Master plans and feasibility studies)
 - Designing (engineering, social considerations and sustainability)
 - Financing (adequate risk allocation between public and private funding)
 - Procurement (transparency, timelines, lifecycle costing)
 - Implementation (timely execution, hands on management for capacity development “Learning by doing”)
 - Operations and maintenance.➔ G20 Principles for Quality Infrastructure Investment

G20 PRINCIPLES FOR QUALITY INFRASTRUCTURE INVESTMENT

- Principle 1: Maximizing the positive impact of infrastructure to achieve sustainable growth and development
- Principle 2: Raising Economic Efficiency in View of Life-Cycle Cost
- Principle 3: Integrating Environmental Considerations in Infrastructure Investments
- Principle 4: Building Resilience against Natural Disasters and Other Risks
- Principle 5: Integrating Social Considerations in Infrastructure Investment
- Principle 6: Strengthening Infrastructure Governance