QUALITY INFRASTRUCTURE

FOR

QUALITY GROWTH

Seminar on Quality Infrastructure
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1. BACKGROUND

Several Commitments;

- Japan's Development Cooperation Charter (2015):
  "*Quality growth (inclusiveness, sustainability, resilience)* through HRD, infrastructure and establishment of regulations and institutions…"
- Japan's Partnership of Quality Infrastructure (2015):
  "ensure the quality of infrastructure to achieve sustainable development and to bring well-being and benefits to people,"
  "*quality infrastructure is easy to use and durable, as well as environmentally friendly and disaster resilient,*"
  "*quality infrastructure is indeed cost-effective in the long run*.
- G7 Ise-Shima Principle (2016):
  "promoting quality infrastructure investment so as *to promote strong, sustainable and balanced growth* and *to enhance resilience* in our society, as well as to contribute to the global efforts *for the SDGs*."

1. BACKGROUND (CONTINUED)

Quality of Works (Image Photos)

JICA's case

Non-JICA's case

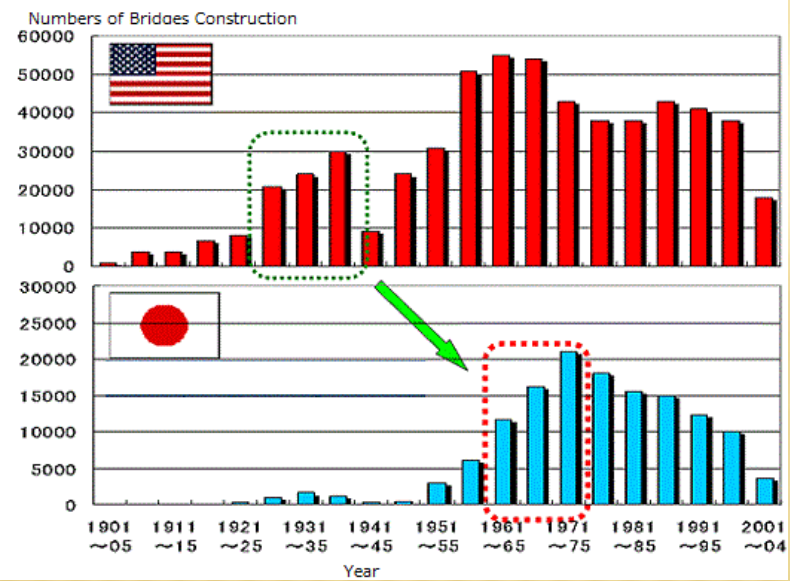
1. BACKGROUND (CONTINUED)

Quality of Works

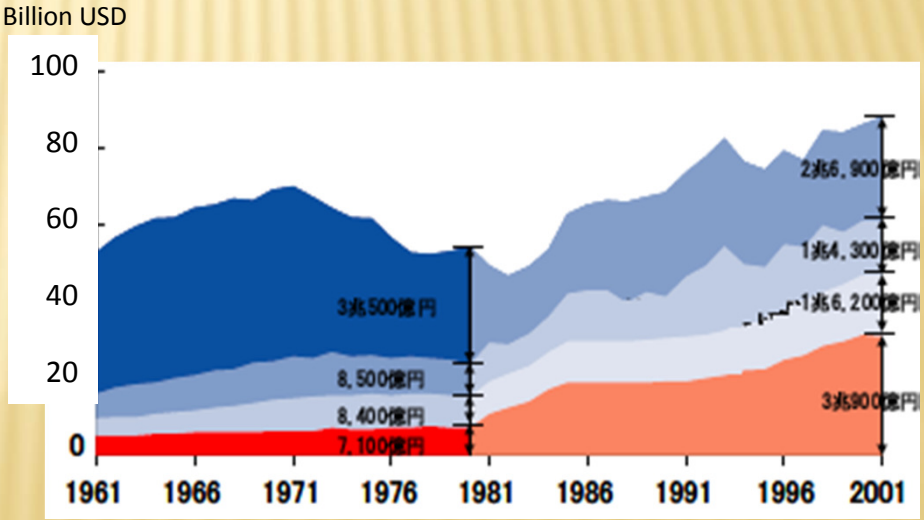
- ✓ (increasing aging infra.) x (risk of degradation) =
- ✓ US experienced “aged era” for bridges from 1980s, Japan entered from 2010s. (c.f. America in Ruins)
- ✓ **Massive future set-back cost may be derived.**

⇒ ***High quality infrastructure as a risk mitigation solution***

The transition of bridge construction in US and Japan



The cost for bridge maintenance in US



1. BACKGROUND (CONTINUED)

Build Back Better and Resilience (Image Photos)

JICA's case in the Philippines ～
Reconstruction after 2013 Typhoon "Haiyan (Yolanda)"

Damage after the Disaster

Reconstructed New School with the concept of "***Build Back Better and Resilience***"

2. POINTS OF QI

Salient Features

to be expected under “Quality Infrastructure (QI)”;

- *Stable / Reliable*
- *Sustainable*
- *Long-term / Resilient*
- *With a lot of Beneficiaries / Inclusive*

c.f. Guidebook on Quality Infrastructure Development and Investment (APEC 2014)

2. POINTS OF QI (CONTINUED)

Key Elements

for appropriate project *selection/prioritization*, *procurement* and *implementation* management:

- ***Life Cycle Cost***
  - VfM, Durability, Maintainability
- ***Envir. and Social Considerations***
  - PAP, Gender, Vulnerable Persons, Universal Service
- ***Safety Assurance***
  - Both in Construction and Operation Stages

c.f. APEC Guidebook (2014)

3. LESSONS LEARNED (JICA'S EXPERIENCE)

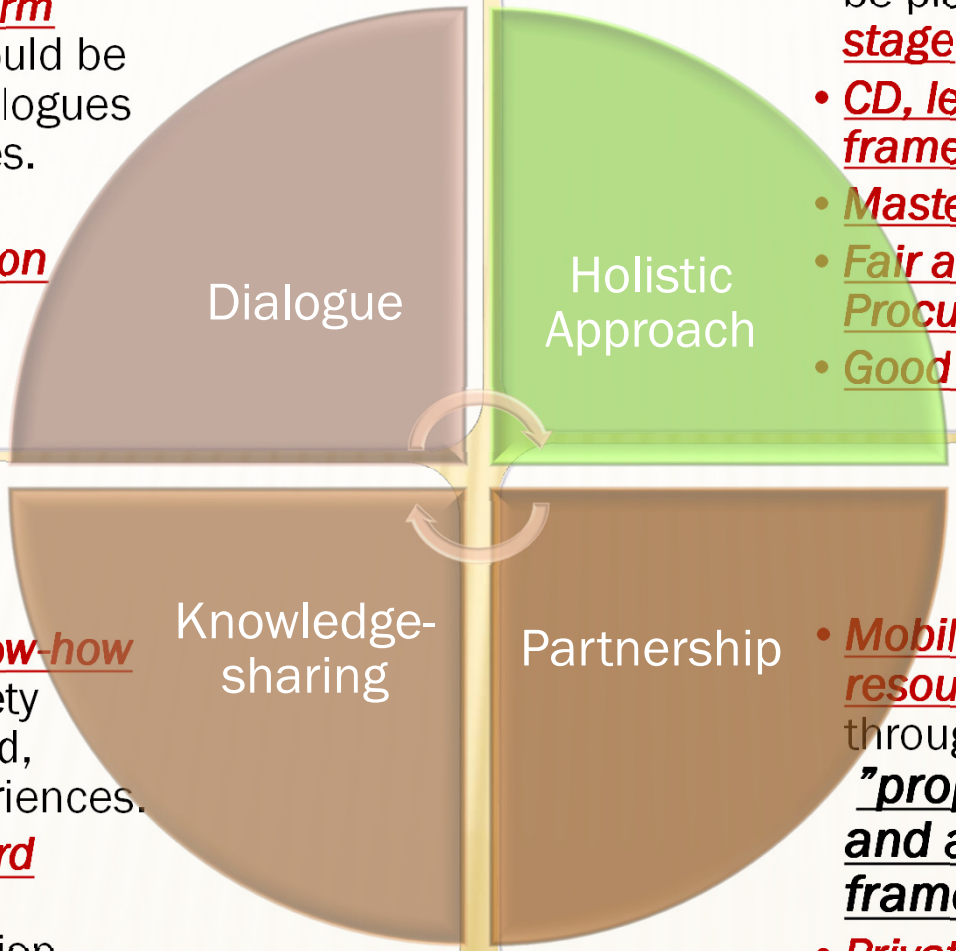
Lessons	Measures to Be Taken
Insufficient service delivery due to **failure in proper design, implementation and O&M** of the infrastructure	Concept of *VfM*, *durability* and *maintainability*, with *capacity development*
Negative environmental/social impacts	*Participatory approach* *Considerations for vulnerabilities with EIA*
Huge financing gap requires to be mobilized, especially from private sectors	*Better business environment* for *encouraging private sector involvement* (*)

(*) ***Proper and attractive risk sharing between P-P is the key.***

4. FOR QI MAINSTREAMING

- ***Alignment with national priorities*** and ***long-term vision/sequence*** should be ensured, through dialogues with partner countries.
- ***Project Selection/Prioritization***
- ***Value for Money***

- Wide-range support should be planned, ***from upstream stage***.
- ***CD, legal and regulatory framework dev.***
- ***Master Plan***
- ***Fair and Competitive Procurement***
- ***Good Quality of Works***



- ***Experiences and know-how*** of international society should be well shared, including bitter experiences.
- ***Appropriate safeguard policy***, for avoiding environmental pollution

- ***Mobilizing various financial resources and expertize*** through ***"properly risk-shared and attractive" project framework***
- ***Private sectors***, donors and CSOs.

5. EXAMPLES (JICA'S EXPERIENCE)

Delhi Metro

- Reliable operation: Synergy with tangible infrastructure construction support thru ODA loan provision and Technical Cooperation for Capacity Development of Delhi Metro Railway Corporation (DMRC). Japanese private sector involvement not only for construction but also in O/M management for optimization of LCC. Realization of timely and comfortable operation. **Social innovation** has been observed.
- Safety Assurance: Local contractors learned proper safety procedures through joint works with foreign contractors. Safety measures have been replicating widely.
- Environmental sustainability: Introduction of green technology ("power regenerative brake"). **Reduction of air pollutants thru modal shift promotion.**

Metro Manila

- **Catalytic role of ODA**: Enabled PPP arrangement, in which construction was managed by public utilizing ODA loan, while O&M was contracted out to private. **Proper and attractive risk sharing between public and private**.
- **Partnership with other donors**: IFC assisted proper bidding process for the O&M concession.
- **Alignment with national priorities based on the previous Master Plan**: One of 10 national priority PPP projects identified by the Philippine government. **Full utilization of the previous Master Plan**.

Olkaria (Kenya) Geothermal Power Plant

- **Capacity Development for reliable operation**: Synergy with tangible infrastructure construction support thru ODA loan provision and Technical Cooperation for Capacity Development of Kenya Geothermal Development Company.
- **Partnership** : Co-financed with WB, EIB and KfW for the construction of steam and water pipelines and transmission lines, which is effective not only for fund mobilization but also for **adaption of international standards for implementation and O/M** of the Project. Introduction of proven advanced technology / equipment for turbine.
- Environmental sustainability: Eco-friendly design of the pipelines.

5. EXAMPLES (JICA'S EXPERIENCE IN INDIA) (CONTINUED)

- Water Sector toward;

a. Loss Reduction against D/S Gap
b. Financial Sustainability

leakage detection for efficient water usage

e.g.

a. Goa's case after renewal facilities and CD (in Curtorim area) : NRW rate improved dramatically (18.0% ←45.1%)
b. Water tariff collection improved through CD and meter deployment. Strengthening O/M capacity technical cooperation is been implementing.

5. EXAMPLES (JICA'S EXPERIENCE IN INDIA) (CONTINUED)

- Sanitation Sector toward;

a. Public Awareness / Mindset Change
b. Introduction of New Technology

Community toilet operated by local NGO

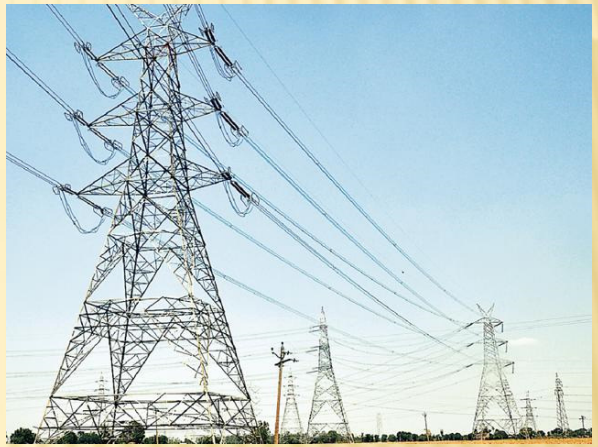
e.g. In alignment with "Swatchh Bharat" Policy

a. Environmental education widely conducted in collaboration with NGOs over thousands of schools.
   Approx. 1500 community toilets constructed under the situation of 50% open defecation rate.
b. Tech. and know-how of Japanese companies/local gov. widely introduced.

5. EXAMPLES (JICA'S EXPERIENCE IN INDIA) (CONTINUED)

- Power Sector toward;

  a. Loss Reduction
  b. Energy Efficiency



e.g.

a. Transmission system upgrading in Haryana
   (Transmission loss : 2.2% (lowest in India) ← 2.7%)

b. Over 200 Indian experts joined JICA training courses in Japan for "energy efficiency & conservation" in 10 years

Thank you!

धन्यवाद